

TOWARDS
EXCELLENCE
IN MODERN
HEALTH CARE

*- A values based perspective
with practical guidelines*

Dr.Hiramalini Seshadri

TOWARDS EXCELLENCE IN MODERN HEALTHCARE

- a Human Values based perspective with practical guidelines

By Dr. Hiramalini Seshadri

Editor Dr. Divya Seshadri

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Title: **TOWARDS EXCELLENCE IN MODERN HEALTHCARE –**
 a Human Values based perspective with practical guidelines

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Second Edition

2020

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DEDICATION

OFFERED WITH LOVE,

TO GENERATION-NEXT

OF MEDICOS, DOCTORS & HEALTHCARE

PROFESSIONALS,

AS THEY PURSUE EXCELLENCE IN

HEALTHCARE,

BASED ON HUMAN VALUES

CONTENTS

Foreword I.....	1
Foreword II.....	7
Message.....	9
Preface.....	12
CHAPTER 1 What Ails Modern Medicare Globally?.....	16
CHAPTER 2 Indian Healthcare: Challenges, History & Innovation.....	64
CHAPTER 3 Health Report Card of Doctors and Nurses.....	109
CHAPTER 4 A Prescription for Healthcare Professionals & Healthcare Systems.....	137
CHAPTER 5 Healings and Experiences Beyond our Current Scientific Understanding.....	184
CHAPTER 6 What They Don't Teach You in Medical College.....	256
CHAPTER 7 Human Values, Scientists of Consciousness & How to Grow Excellent Care Teams.....	391
CHAPTER 8 Psycho-Spiritual Strategies; More Ways to Individual Excellence & Honing your Healing Power.....	445
CHAPTER 9 What the Future holds.....	533
References.....	573
Tribute to Prof KVT.....	610
Acknowledgements.....	616
About the author.....	618

FOREWORD I

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Before we move to the foreword proper, a small introduction is in order here.

In the year 2000, Professor K.V. Thiruvengadam penned the foreword for a book titled 'The Sai-ence of Medicine' - which is the actually the fore-runner that has led to this book. It was hugely popular, particularly among junior doctors and medicos, and went into a few editions. The hand of providence - that is how I see it - both the first printed edition and this updated, revamped second edition of this book are

blessed to have forewords from him; a fact made all the more poignant, as he left this world on October the 3rd, 2020 at the ripe age of 94, active in teaching and patient care to the end! A Tribute to him follows, at the end of this book - a fitting finale for this book on the practice of values-based medicine and healthcare - for he was a veritable example of it!

He penned and I quote –

"I am delighted that the natural successor to the book, 'The Sai-ence of Medicine - where Modern medicine meets Spirituality', which came out in the form of 'Towards Excellence in Modern Healthcare - a value based perspective with practical guidelines', is going into its second global e-edition. Deservedly, the first edition of the book, on the basic philosophy and spiritual foundations of the practice of modern medicine and healthcare in particular, by Dr. Hiramalini, has received wide reading.

The second edition will no doubt receive wide appreciation and will be a guide for individuals for leading a healthy, spiritual and useful life.

Modern Medicine is being increasingly turned into a 'scientific technology' - with very impressive advances in the tools employed in diagnosis and treatment... While these advances are welcome, there is a great danger that the vital doctor-patient interaction, which itself has a powerful therapeutic effect, may be lost... People complain that doctors are fast becoming impersonal organ centred technicians; while patients are reduced to a bag of organs attended to and 'scanned' by various specialists in factory conveyor belt style. Indeed there could be no greater tragedy than this, for health is not merely the absence of disease, but total physical, mental and spiritual well-being; and the primary duty of a doctor, no matter how

specialized he is, is to restore wellbeing as holistically as possible, to the patients under his care.

This book urges, and rightly so, that we stem this decadence that has crept into the practice of medicine, and restore it to the pristine pedestal of a loving and caring relationship that brings the gift of health to patients. Now it is a do-or-die situation in the healthcare scene. Modern medicine and healthcare have no choice but to integrate human values based on the principle that all is one, if the nobility of the profession and healthcare as a noble service are to be redeemed.

Dr. Hiramalini, the author of this book was one of my finest students; a brilliant physician and a writer, who had the good fortune to render free medical service at Sai Baba's hospitals. With her deep spirituality and devotion to her spiritual teacher, she has expressed in this book what she learnt from that experience; her views on the various aspects of the healing sciences and the relationship between the mind, Consciousness and attitude.

The initial chapters update us on the problems of the medical fraternity, in the demanding discipline of healing, implying that love as an attitude, is imperative in the discharge of duties to the sick. Baba preached love as a dominant component of therapy. The book presents a bird's eye view of healthcare for population groups in the West, India and the East; in the developed world and the developing world; as well as projects the problems that changing demographics, like a greying global population, will result in, in the future.

The chapter on the scientific understanding of Consciousness and stress related illnesses is illuminating and medical students, doctors and healthcare personnel alike will find it informative. That we are not alone in the universe has been on the minds of all scientists for some time now, and the author's references to incidents

documented in this frontier realm are thought provoking. The advances in quantum physics with relevance to human physiology have been clearly and cogently brought out; and these advances portend radical change in the realm of therapeutics in the future.

Spiritual healing finds special mention in the book; and such instances from many spiritual and religious traditions add to the value of the book; they open our eyes to the essential oneness of all human experience. Unfortunately this is not given importance in the training of medical personnel; a lacuna, that she urges, be filled. The walk down history lane, and the inclusion of the great experiential scientists of Consciousness of both the past and contemporary times is a welcome addition. Healing has always been considered a prerogative of the Divine which elevated the position of the Physician in the eyes of their fellowmen.

It is only fitting that Physicians and medical personnel in training get some knowledge of the human experience of divinity and healing. Taking a step out of the box, the author incorporates the contributions of both the scientists of the objective world as well as the experiential scientists of Consciousness, as the author rightly terms the spiritual Masters, to bring out a practical solution to the morass that modern medicine finds itself mired in today. Medical textbooks give short shrift to this important area; the information given in this book therefore is most valuable.

Practical solutions like self-assessment questionnaires to incorporate human values into the practice of medicine and into healthcare teams which can help the care team function with greater cohesion and psycho-spiritual strategies that could help harness the healing powers of the mind and empower the patients to become

active participants in the healing process, are great USPs of this book. Attributes that help deliver healthcare in the right spirit are brought out elegantly.

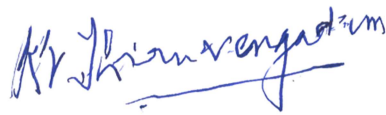
The chapter on psycho-spiritual strategies, which have been successfully used by the author and her husband, Dr Seshadri Harihar, a Psychiatrist, to complement conventional medical management of diseases, should prove useful for all practitioners of medicine. The book shares with us their rich experience in this area.

It is also perhaps time to carefully incorporate the best therapeutic practices of ancient systems of medicine, which we are better aware of today thanks to the world wide web and better methods of communication, after due study. Only then can modern medicine and healthcare rise to be the meaningful, caring, crest jewel of the healing arts that it should be. No more can modern medicine continue to be in an ivory tower of isolation.

The author refers to Baba's views on medical education. One is reminded of Rabindranath Tagore's introduction of a novel educational system - Shanthi Niketan. In the last chapters of the book Dr. Hiramalini refers to big pharmaceutical companies, medical education and treatment policies. One cannot but agree with her that a conscious attempt has to be made to move from head based medicine to heart based medicine.

The book is eminently readable because of its high spiritual yet practical character; and the author, true to the teachings of Baba, has excelled herself in presenting this valuable book interspersed with practical nuggets that can truly elevate the practice of medicine and modern healthcare systems to a more humane plane. As a Physician and Teacher of Medicine, I would unhesitatingly recommend this book to all doctors, for it tempers the practice of medicine with the wisdom of

spirituality. Students preparing to qualify to become doctors will particularly benefit from the message that this book gives - to combine humaneness with a scientific approach to the healing art. This book is of value to all those medical personnel who are desirous of pursuing their profession in an ideal manner, with competence, character and compassion. It is not just another book to read; but one that inspires, informs and educates; indeed it may even transform your attitude to life."



Prof. K.V. Thiruvengadam, Chennai

May 20th, 2020

FOREWORD II

In today's ever-changing world of medicine, any book that brings the healthcare professional back to his or her roots and core human values is truly a Godsend. The paradigm in the world of medicine has shifted too far over to a business model, with financial gain being of utmost importance. Where did we lose our way? How do we find our way back? Is there the ability to be a compassionate healthcare worker in an ethical healthcare system? This much anticipated second edition e-book by Dr. Hiramalini Seshadri, edited by Dr. Divya Seshadri, brings both a sobering perspective and bright future possibilities to these questions in her unique conversational writing style. There is something for all to be gleaned from this book.

While there are many different types of medical and healing practices globally, eastern philosophies are merging into “mainstream” medicine, and it would be much too casual to state that the east is meeting the west, just as much as it would be to say that the west is meeting the east! What was eschewed and ridiculed in the past, has found its way into mainstream healthcare – a few examples being incorporating mindfulness, acupuncture and yoga into our medical practices. Merging all of these philosophies creates a holistic way to help heal our patients, rather than via a one-sided scientific approach with medications and procedures.

Does the way a patient feels make a difference – do they feel isolated, do they feel alone, do they feel informed? In this technological era, spending that face-to-face quality time with the patient is more important than ever.

Scientific medical advances are awe-inspiring and amazing, from minimally invasive robotic surgery, stem cell technology, to oncologic cell mediated chemo and brachytherapy. There has never been a time in history where there has been such a large dichotomy between cutting edge technology for the affluent and a lack of basic healthcare to the less fortunate.

There is a way to return to the path of being a healer, helper, and advocate for our fellow man around the world. This e-book helps us get back to that path by allowing us to review and acknowledge our current milieu and aim for a meaningful future. *The keys to this: Compassion and Love.*

Medicine should not be practiced within silos; it should be global and collegial and there is no better way to do this by incorporating love and compassion into the practice of medicine. The attitude of the healthcare worker and team is ultimately equally important, and there are no menial tasks within that team. A simple smile goes a long way. Every interaction is important with the patient being the central focus.

I ask the reader to strip themselves of the modern medicine mould for an instant, listen to their heart as they try to focus on what is really important on a day-to-day basis, and strive to follow that from here on out.

The recent COVID-19 pandemic has changed the way we think, act and care for our patients and that has amazingly been incorporated into this second edition. The pandemic is something that can teach us all a lesson going forward. Life is fragile, our patients are our kith and kin, and it is up to us to get back to what medicine is meant to be: healing our fellow man and hopefully in the process making ourselves a little better.

Shaun Setty, MD

Pediatric Cardiac Surgeon

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Dec. 1, 2020

MESSAGE

Professor Yeoh Kian Hian

MBBS(HK), FRCS(Edin), FRACS(Aust)

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I am very happy to note that this unique book, "TOWARDS EXCELLENCE IN MODERN HEALTHCARE - a Human Values Based Perspective with Practical Guidelines", which first came out in 2018, as a limited edition in printed format, is on popular demand, going into an e-Edition to be made available globally to all, totally free of cost.

COVID-19 has underscored, as never before, healthcare as a priority issue for humanity; and such a book with practical guidelines for individual and team excellence in healthcare is the apt prescription for an ailing system. Human Values based Healthcare is an idea whose time has come, in these pandemic times.

I sincerely hope young doctors in training and other healthcare professionals get to read this book as it covers not just healthcare, but cutting edge Consciousness research and much more - what they do NOT teach in medical school, to put it in a nutshell. As one trained in western medicine but touched beyond measure by an eastern Master, and as one who has experienced the power of a Master's omnipotent love myself, though I scarce understand it, I definitely endorse the suggestion that the medical curriculum includes the therapeutic power of love and its derivatives. If human beings can unlock infinite potential by going inward, as the book reveals, surely medical science has to give it pride of place in research and in practice.

We must dare to dream the impossible dream. As a doctor and teacher of medicine in the ninth decade of life, I have been dismayed by the steady erosion of values and dehumanisation of medicine that I have been witness to. I therefore find it heartening to note that the younger generation is stepping forth to stem the tide.

Dr. Hiramalini, the author, represents to me, generation next; and the bright young editor, Dr. Divya Seshadri, represents generation next-next. Dr. Hiramalini whom I have known closely, for the past few years, has been blessed with a distinguished academic record and a brilliant career; and combines the right qualities of heart and head. She has had the experience of working in different sectors of healthcare - in rural Kerala, in leading corporate hospitals, in private practice in the metropolis of Chennai, in charitable settings, in the unique Sri Sathya Sai hospitals which have no billing sections, and in elder care; and she has experienced the healthcare systems in the West, India and in South East Asia. So she is ably qualified to write on this topic.

I have always enjoyed reading Dr. Hiramalini's books for her lucid writing style and their sheer readability. This book combines the well-researched and scientific, with the absorbing appeal of humility, wonder and curiosity; a rare combination.

Books on medicine and healthcare, these days, tend to dwell more on the high tech and scientific; and hardly at all on compassion, or on ways to make such high cost, quality healthcare accessible to all. In that context, this book is like a breath of fresh air. It uncovers the truth that human values based compassionate healthcare is necessary not just for patients, but for the well-being of doctors and nurses too. Most importantly, it also suggests practical solutions; and gives examples of how compassionate good quality healthcare for all, CAN be made eminently affordable

and even totally free of cost to beneficiaries, as some time tested but rather lesser known healthcare systems set up by brave pioneers have shown.

Out of the box, solution-oriented discussion and debate to end the unease and unrest that plague modern healthcare is quite the need of the hour. I see this book as a timely step in that direction; and I heartily recommend the book to all in the profession of healing; and to all interested in creating a more just, humane and caring society.

A handwritten signature in black ink, appearing to read 'K.H. Yeoh', with a horizontal line underneath.

Prof. K.H. Yeoh

December 9th 2020

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PREFACE

It is 18 years now since my Master, Sri Sathya Sai Baba, flagged off the idea of this book. It was Doctors Day on Saturday, July the 5th, 2003. Baba decided to honour the surgeons who operated on him. Just as at a wedding, besides the couple, all the guests also are served a feast, the compassionate Master honoured not just those two surgeons, but all of us - the entire team of Whitefield General Hospital doctors; and we lady doctors got a special bonus - silk sarees from him at his famed Trayee Brindavan residence.

My husband was old hat at the ambience of Trayee for as a male of the species he was privileged to attend the glorious Trayee teaching sessions of the Master. But for me it was a first. Master made me feel so welcome and at home; and I opened my heart out. I told him how there was such a demand from my registrars and house surgeons for a proper reference book on spiritualising medicine; on healthcare with human values. They had all loved the book, "The Sai-ence of Medicine - where Modern Medicine meets Spirituality" which the Master had inspired; and now they wanted more.

He smiled encouragingly with great love and said "Yes! We must write...", when I submitted that I would be his pen. Then he seemed to be looking into the unknown and said softly, "But wait..." So I waited.

Fifteen years later, at Singapore, the Master gave the green signal to write and the Publications Trust under him, published a limited run first edition which was well received. Presently the Institute of Human Values with a global canvas came up at the University of Human Excellence set up by him in Gulbarga, India. Among four flagship certification courses open to all worldwide, online, and totally free of cost, is one on Compassionate Healthcare.

Through illustrious cardiac surgeon, Dr. Shaun Setty, an active member of the international drive launched by Master, to provide free heart surgeries for children with congenital heart disease, the opportunity has now come, for the book to go into an updated, second, e-edition for a global audience, as companion reading material for the compassionate healthcare course.

"All things happen in the fullness of Time", Master used to say; and so it has been with this book. I see it as providential arrangement, that my Guru, Prof K V Thiruvengadam was destined to write the Foreword for "The Sai-ence of Medicine" 20 years ago, for the 1st print edition of this book and for this 2nd

e-Edition; a fact made all the more poignant for he left us at the ripe age of 94 on October 3rd 2020.

Prof Yeoh of Singapore, one who has walked the talk of human values in medical practice in his time - for six decades - has most graciously sent messages for both editions; and Dr Shaun Setty of the USA, who graciously contributed a second edition foreword as well, ensured that the updated version was in sync with a global readership.

Generation next is gifted with online expertise; Editor, Dr Divya Seshadri's superb editing skills, painstaking effort and meticulous attention to detail have ensured that this book measures up to international standards and makes for a truly crisp read. Thus it is a joint labour of love that has brought this 2nd e-edition of the book, on your screen; and now it is over to you, dear Reader!

These pandemic times have brought healthcare into focus as never before. The first edition of this book, which came out in 2018, during the calm before the storm so to speak, was considered by some, to be an unusual book; perhaps a bit too Utopian in a world of healthcare increasingly dominated by big pharma, and for-profit healthcare systems driven by cold economics. But these pandemic times,

have exposed the vulnerability of our healthcare systems, even in the richest of nations.

Cataloguing the challenges we face today in modern healthcare, this book humbly puts forth some possible solutions. Moving on to the practice of modern medicine, at the risk of raising a few eyebrows, it dares to discuss ‘forbidden knowledge’, such as ‘miraculous’ healings; and focuses on out-of-the-box thinking and on frontiers of knowledge, both of which, as of now, are kept out of medical schools. If this book inspires the younger generation, to seriously take up the study of the variables beyond Newtonian physics that govern the outcome of modern medical therapies; if it drives them to truly research healings that defy our present scientific understanding instead of ignoring them or belittling them; if it urges them to study the impact of love, truth, and their derivatives in the practice of modern medicine, and nudges them to go within and experience their own expansive identity and thereby find a greater meaning to life as a doctor, this book would have served its purpose.

Going beyond individual excellence the book documents this author’s humble foray into developing a simple strategy for ‘Team Excellence’- which is the cornerstone of healthcare in the 21st century. No more are doctors stand-alone providers. Healthcare has evolved into a delivery system by ‘Care Teams’. The book introduces a simple questionnaire and rating scale method to facilitate ‘Team Excellence’, using age old, time tested yet oft forgotten human values pathway.

COVID-19 has brought into the limelight, traditional systems of medicine, which focus on cultivating positive immune health; for we have no cures for all possible sicknesses. But boosting immune health can prevent sickness of all kinds. Improving natural immunity through right nutrition, and by using traditional herbs rather than attempt to artificially shore up immunity with countless vaccines with all their possible adverse effects not to mention high cost, is an area that calls for serious debate.

An idea, whose time has come, seems to be the concept of ‘Integrated Medicine’; which attempts to combine the best of traditional systems of medicine and modern medicine. Despite opposition from orthodox modern medical bastions, the public have from direct experience, understood that *Siddha* and *Ayurvedic* formulations are effective anti-viral shields even against a pandemic like COVID-19. States with an open mind, like Tamilnadu in India, have in fact made the dispensing of such preventive formulations, government policy; to the great benefit of citizens, as reported in the national media. Practical ‘Integrated Medicine’ has found a place in Tamilnadu thanks to the pandemic!

In fact the little virus has forced the whole planet to wake up; and focus on health and healthcare! Curiously, this turn of events has coincided with this second edition of the book. All change begins with a thought; and this totally free to read e-edition is a sincere exercise to disseminate some noble thoughts on healthcare from our collective conscience. As the Rig Veda says, “Let noble thoughts come to us from all directions” – (Rig Veda 1.89.1).

Even so, as a senior physician of some forty plus years in medicine, my hopes are pinned on the youth; on the young medicos and junior doctors of today. May this book be the fore-runner of many more to come, on excellence in medicine and healthcare; penned by a more aware, more enlightened and more idealistic, generation next.

That will be the real game changer.

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Dec 11th, 2020

Chennai, India.

Chapter 1

WHAT AILS MODERN MEDICARE GLOBALLY?

Outline:

Brief look at healthcare systems and what ails them in the USA, Canada and UK; New challenge of the developed world – Loneliness; 2020 Global health challenge – COVID pandemic; Overview of healthcare systems, their challenges and some success stories around the world – Europe, Australia, Japan, Singapore, Soviet Union, South America, Cuba, China, South-East Asia , Africa, the Pacific isles – a silver lining; New challenges of a greying planet; Elder care challenges, Child healthcare challenges in Africa and India; Need for human values in healthcare

While this 21st century has witnessed amazing advances in stem cell research, reproductive medicine, imaging sciences and so on, sadly, it has also witnessed a steady erosion of faith and trust in modern medicine in the public at large. Let us check out healthcare systems starting with the affluent west.

What ails the US Healthcare System?

The over three decades old respected journal, The Physicians Weekly dated Dec 18, 2017 quotes Dr.Linda Girgis of New Jersey, who has been recognized and conferred awards for being a ‘Compassionate Physician’. She writes, “*The doctor-patient relationship is sacrosanct. There is no relationship where the bond of trust should be so strong, outside of matrimony. As physicians, patients rely on us to*

help them make life-saving decisions. And we need patients to be honest with us so that we can give the highest quality medical advice. Yet, there has been an erosion of trust in this relationship over recent years. Doctors are no longer held in such high esteem as they were decades ago... The public is losing their trust in us. They see us as driven for profit. They feel we don't listen to their concerns anymore and don't care what they want or need.”¹

After being the former editor of The New England Journal of Medicine, Marcia Angell, sadly concluded that it was no longer possible to trust much of the literature that was published or rely on the authority of physicians or medical guidelines. The battle we face in healthcare is one of “*truth versus money*”, according to her.²

A basic dictum is, the fewer the people in between the doctor and the patient, the better. But in these days of ‘managed healthcare’ and ‘health insurance’ the patient has to pay to support a huge juggernaut of middlemen. Not just the extra cost, it skews the therapeutic process and strikes at the very sacred doctor-patient relationship. To quote Girgis, “...*Third parties are often making decisions. For example, they dictate their own formularies, and we often have our hands tied as to what medications we can prescribe. (Patients) don't realize that doctors are limited in prescribing habits, and we are not withholding the best medications. Outlier doctors have been gaming the system. Most doctors truly put patients' care first, before profit. But there are a few who inappropriately use their medical degrees for profit. These doctors make us all look bad.*

There are many mandates imposed on us that affect patient care. One example is meaningful use. Doctors now have to document many metrics, inputting data into our EHR systems, in order to meet requirements. Patients take this lack of eye-to-

eye contact as a sign that we are more interested in their digital record than them. They feel we are no longer listening to them. They don't realize that we don't want to be doing this. It has been imposed on us from on high, and we will be penalized if we don't.

Healthcare Maintenance Organisations have greatly cut reimbursements to doctors. In order for practices to stay afloat financially, we have to see more patients. We need to find more and more room to see these extra patients if we want to stay afloat. Patients feel this and take it as an indication that we are pushing them through for profit and don't care about them.”¹

The US health system, according to well-known healthcare researcher, Reid, has a varied mix of healthcare models operating simultaneously. To complicate matters each of the 50 states mandate and govern their own state healthcare funding/plans. In a nutshell there are four kinds of healthcare systems, which means that different Americans can get different kinds of treatment. The members of America's armed forces and the veterans get free treatment at the Veteran's administrations (VA) hospitals around the country. The Beveridge model - named after the daring reformer who designed the National Health Service of the UK - is followed, wherein, in this system, healthcare is provided and financed by the government through tax payments, just like the police force or the public library.

Americans, over the age of 65, get a model that uses private-sector providers, but payment comes from a government-run insurance program that every citizen pays into. This system can be cumbersome at times. Similarly, children, especially those with complex issues are covered by each state's own insurance for children. However there are times that things fall through the cracks.

Most working Americans, the bulk of the population, get health insurance from their employer, which also means that joblessness can mean no health coverage! For the estimated 15 percent of the US population who have no health insurance, the United States is “Cambodia or Burkina Faso or rural India, with access to a doctor available if you can pay the bill out-of-pocket at the time of treatment or if you’re sick enough to be admitted to the emergency ward at the public hospital.”, writes Reid.³

Before ‘Obamacare’ became legislation, this figure was as high as 18% of the American population. This segment that had no health insurance consisted of mainly of poor Whites, Blacks and Hispanics. After ‘Obamacare’ it came down to 12% but with roll backs the figure is climbing up again. The United States is unlike other developed countries because it maintains so many separate systems for separate classes of people. All Americans are NOT equal, it seems!

The Canadian Model:

A government-run insurance program that every citizen pays into, pays for healthcare of citizens in Canada. Since there’s no need for marketing, no financial motive to deny claims and no profit, these universal insurance programs tend to be cheaper and much simpler administratively than American-style for-profit insurance.

The single payer tends to have considerable market power to negotiate for lower prices; Canada’s system, for example, has negotiated such low prices from pharmaceutical companies that Americans have spurned their own drug stores to buy pills north of the border. National Health Insurance plans also control costs by

limiting the medical services they will pay for, or by making patients wait to be treated. Waiting for treatment is considered a “problem” in Canada. Many who are fed up with waiting are now choosing to use ‘medical tourism’ options in countries like India.

Healthcare in the UK:

Across the Atlantic the healthcare scenario is no better. In the UK, cardiologist and writer Aseem Malhotra, well-known for his incisive analysis of current healthcare challenges, penned in The Guardian, *“Why has the public lost trust in doctors? The lack of the medical profession’s awareness of the true extent of biased reporting and scientific fraud is underpinned by universities’ and medical journals’ reliance on the belief that research they produce is ethical and accurate. In evidence submitted to the parliamentary science and technology committee, cardiologist Peter Wilmschurst points out they are “as likely to admit the full magnitude of research misconduct as church leaders are to confess the extent of child abuse by priests”. While the words ‘evidence-based medicine’ are considered sacrosanct in this 21st century, the ‘evidence’ itself, of late, is not trusted...”*

Malhotra continues, *“...One prominent Dutch physician, whose work is alleged to have influenced European of Society of Cardiology guidelines on the use of beta blocker drugs in non-cardiac surgery, was dismissed from Erasmus University for “violations in academic integrity”, including using “fictitious data” in research. A study carried out by Darrel Francis at Imperial College estimated that these guidelines increased patient mortality by 27%, resulting in 800,000 excess deaths over eight years across Europe. Pharma companies are not legally bound to sell patients the best treatment, but they are obliged to provide profit for shareholders.*

*Between 2009 and 2014, the industry received fines totalling \$13bn for criminal behaviour that included illegal marketing of drugs, hiding data on harms and manipulation of results.” As pointed out in a recent BMJ editorial, few systematic changes have occurred to prevent such problems occurring again”.*²

In the USA and UK, where big pharma has always ruled, profit has always been the main motive. Profiteering invariably occurs at the cost of trust. The crisis of trust has now reached grassroots level, says Malhotra, with a report from the Academy of Medical Sciences revealing more than four in five GPs – and two in three members of the public – don’t trust drug company-sponsored research. *“Could this be a tipping point for real change to wind back the harms of too much medicine contributing to the unnecessary deaths and harm to millions across the globe?”*, queries Malhotra. Apparently, 20-50% of more than 3 trillion dollars of healthcare activity in the United States is inappropriate, wasting resources and/or harming patients. Peter Gøtzsche, co-founder of the Cochrane Collaboration states that *“side effects from prescription medications are the third most common cause of death after heart disease and cancer...”*²

Newspapers and TV also tend to portray doctors in a bad light. Doctors arrested for fraud or harassment make headlines. There are so many more amazing stories of heroic good doctors, but good news never makes it to the news. So, the general public gets to see only the bad; and they could view all doctors negatively.

Britain’s National Health Service was once its pride and all citizens enjoyed free treatment. The cost of healthcare forced the government to bring in ‘managers’ to cut costs and simultaneously private players were encouraged. Long waiting lists for surgeries tempt many Britons, especially the elderly to opt for treatment in other countries like Spain and of late, India where medical tourism is booming.

New Health Challenges Faced by the UK and the USA:

The UK and USA have newer health problems too; like the disease of ‘loneliness’. A doctor gave a bird’s eye view of the problem in 2018 as follows:

“Recently the Conservative government in the United Kingdom (UK) announced that it was appointing a Minister of Loneliness. The announcement was greeted with humour on both sides of the Atlantic, but as more serious commentators pointed out, “loneliness is a real and diagnosable scourge.”

Almost every Tuesday afternoon for the past few years, a patient in my practice, Anne, attends for a short visit, usually less than 15 minutes. Most of the time it is a chance to touch base about minor health concerns—a rash here, an ache or a pain there, some recent weight gain that concerns her—but the most important part of her appointment comes before or afterward, when she has a social visit with another patient of mine whom she has come to know and like.

Their unlikely friendship began with the mutual discovery that they were both there to see me. Although they do not socialize outside the waiting room, it is a friendship nonetheless, as they catch up on events since the previous visit. They share a laugh and often conclude their visits with a brief hug. It might be the only nurturing physical contact with another human being that Anne receives all week. For like many older people, Anne lives alone, is estranged from her family, and lives with a chronic mental illness. As one of my colleagues would put it, she has a low family Apgar score.”⁴

The Loneliness Report (UK):

At the end of 2017, a UK government commission issued the results of a year-long investigation into the prevalence of loneliness in the UK, conducted with the help

of more than a dozen non-profit organizations. According to the report, 9 million Britons suffer from loneliness—14% of the population. Among the more vulnerable, such as the elderly and those living with disabilities, the rates are much higher.

Loneliness has been defined as the perceived sense of isolation. It has been proposed that in the course of human evolution, loneliness has served adaptive ends, fostering connection and reconnection with others, ensuring our safety and long-term survival.

Increasingly, loneliness is recognized as being an important social determinant of health. In late childhood and early adolescence loneliness results in impaired sleep, symptoms of depression, and poorer general health. These same effects are seen across the lifespan, but also with increased doctor visits in adolescence and increased emergency department use in early to middle adulthood. Among older people like Anne, loneliness is common (prevalence ranges between 28% and 63%) and is recognized as a serious public health issue associated with increased cognitive decline, dementia, likelihood of nursing home admission, healthcare use, and mortality in later life. Loneliness in older people is not just a health issue in Western countries like the United States, Canada, and the UK. Loneliness among the elderly in countries like China might be as high or higher.

What can be done to reduce loneliness among the elderly and mitigate the adverse health effects? Few interventions are effective, but those that offer social activity or support within a group format.⁷

Could social contact with a family physician reduce loneliness? There is evidence that socially isolated people seek physician visits for social, not medical, reasons.

In a survey of GPs in the UK, respondents estimated that between 1 and 5 patients a day visited their practices because they were lonely.

Perhaps it is not just the doctor visit that makes our patients feel connected; perhaps it is the connections formed in the waiting room that count the more.”⁴

The Loneliness Numbers:

To quote from an article published by the Independent, research into the issue has brought out statistics as follows:

‘People of all ages are at risk from diseases brought on by loneliness, new data has revealed. According to figures published by the Office for National Statistics, 2.4 million adult British residents – of all ages – suffer from chronic loneliness.

That number, combined with research highlighting the medical dangers posed by loneliness, could see the condition being recognised as the UK’s most dangerous health issue. Both Cacioppo and the Cox Commission, which was wound up last month, believed the number of adults suffering from loneliness in the UK is even higher than the ONS suggests – at up to 9 million adults. Analysis of 300,000 people in 148 studies found that loneliness is associated with a 50 per cent increase in mortality from any cause. This makes it comparable to smoking 15 cigarettes a day, and more dangerous than obesity.

As the lead researcher of the analysis, Julianne Holt-Lunstad, comments: “Loneliness significantly increases risk for premature mortality.”⁵

The situation in the USA is grim too; to quote a media report:

“An AARP loneliness study published in 2010 and now being updated reported that approximately 42.6 million U.S. adults ages 45 and older were suffering from

loneliness. A 2018 Cigna survey indicates that Generation Z, adults between ages 18 and 22, may be the loneliest group of Americans. Additionally, census data reveal that more than one-fourth of Americans live alone and more than half are unmarried, with marriage rates and the number of children per household steadily declining.

*It's clear that being alone and unhappy about it "are risk factors for early illness and death that need to be discussed more openly and for which solutions must continue to be developed," says Lisa Marsh Ryerson, president of the AARP Foundation.'*⁶

No insurance covers 'loneliness'! The 'loneliness' epidemic with its costly fall-out in terms of disease, has served to highlight one vital fact - healthcare can no more be the prerogative of healthcare providers and insurance companies. A caring society, government and institutions have to come together to improve public health infrastructure and find solutions to the peculiar causes that derail health and well-being in our 21st century society.

2020 Global Health Challenge - the COVID-19 Pandemic:

While in 2019 the 'Loneliness Epidemic' hogged the headlines, in 2020, the COVID-19 pandemic, that great leveller, has held all the world's attention. COVID-19 has also shown the weaknesses of the world's most expensive private healthcare system backed up by private insurance. The for-profit US healthcare system was overwhelmed by a virus. In contrast the humbler not for profit healthcare systems of Cuba, Germany, Kerala state in India and so on, seem to be

able to cope much better. It is time to debate whether healthcare should be driven by profit at all.

The COVID-19 pandemic has also put the spotlight on big pharma. While big pharma is all agog about finding a vaccine or a new expensive ‘biological’ to battle COVID-19, the supporters of big pharma hardly mention the importance of building immune health through nutrition. Reports such as the one in The Los Angeles Times carried about the recovery of an ER doctor who was dying, after he was given an experimental cocktail of a biological with high dose Vitamin C and reports from New York doctors about the effectiveness of high doses of Vitamin C are not cited.^{7,8} One does not see any attempt on the part of doctors either to share with the public, the vital information that Vitamin D, Vitamin C, Vitamin A, vitamin B complex, zinc, iron protein and so on can boost immune health and may well prevent COVID infection or even nip it in the bud. All the talk by doctors and pharma seem to be on biologicals and vaccines.

Perhaps it is time to debate whether pharma should be brought entirely under the non-profit public domain. Then, research would be on areas that public health challenges warranted; on preventive measures, nutrition, non- pharmacological therapies and the like which will not rake in the moolah; but will definitely help improve human health. Simple cheap effective formulations will be made and be available; instead of the crass promotion of expensive medicines which is the order of the day now. I still remember how as a junior doctor, I found how very useful charcoal tablets were, for dyspepsia; and they were dirt cheap. But there lay the rub; pharma was not interested in making that inexpensive a medicine! So it is simply not available these days! Perhaps it is also one reason why acupuncture based anaesthesia which scores high on safety, has not been popularised yet. It could spell hara-kiri for the high cost global anaesthetics industry; and naturally

one cannot expect them to support acupuncture. Survival instincts drive the pharma world. Only in a not-for-profit altruistic milieu can real pro-health, economical formulations that benefit the common man emerge.

Healthcare in the period ‘BC’:

COVID-19 has put healthcare and systems of healthcare and medicine, in the limelight, all over the planet. Indeed, healthcare as we know it is certainly poised to change in the post COVID-19 world. In fact, it is expected to change so much, that the days before the pandemic have been dubbed ‘BC’ by the media, i.e., ‘Before COVID’!

Let us take a bird’s eye view of healthcare across other countries on the planet, in the time period, ‘BC’; i.e., before COVID.

Healthcare Challenges faced by Europe, ‘BC’:

Let us see how ‘developed’ Europe is faring healthcare wise. The Nordic countries have universal healthcare; the government ensures access to quality healthcare for all citizens. In Europe, countries are grappling with finding out the right balance between universal government-based healthcare and private for-profit healthcare. But what is emerging as a consensus, is the importance of public health and preventive care.

WHO, Europe reports that alcohol consumption, tobacco consumption and obesity remain the main causes of morbidity. Obviously, health education, preventive care and primary care are the only ways forward.⁹ That alcoholism and increased smoking are risk factors are intimately connected with stress, poor emotional and spiritual health, are unavoidable facts.

That Preventive care is the way forward, was proven by the Karelia experiment; preventive action on lifestyle, helped the population of North Karelia move on to good cardiac health while at one time it used to be the ‘heart attack capital’ of the world.^{10,11} With the influx of refugees, climate change, economies not doing as well as before, increasing unemployment, escalating costs of tertiary care and elder care, increasing disintegration of the concept of family and increasing single parenting, increasing teenage problems, increasing prevalence of depression, addictions including social media addictions, the commercially fuelled invasion of fast foods and processed foods, a ‘natural, healthy lifestyle’ has become a distant dream.^{12–19}

European countries are no more the utopia they were once considered. They are looking for better solutions. Leaders of civil society the world over, are seriously looking at learning from the ‘Cuba Model’.²⁰ (More on Cuban healthcare later in this chapter)

Australian Healthcare:

A breath of fresh air has been from Australia where the Public Health System holds sway, rather than privatised medicare. Hardie and Critchley wrote in the Medical Journal of Australia in 2008, “...*Public perceptions of Australian medical professionals, institutions and systems are generally positive. This sample did not endorse an individual-user-pays private health system, but strongly favoured a universal public health system that is collectively funded by the public...*”²¹ In other words, healthcare had to be a service funded by the public and operated on trust by doctors and other healthcare personnel; NOT a for-profit commercial enterprise.

The Japanese Healthcare System:

The Japanese experience supports the finding that universal healthcare as national policy seems to foster better faith and trust in the healthcare system. Healthcare watchers have often commented on how the Japanese system of healthcare seems better than the American system.²² The Japan Times in 2017, reported, “...*In Japan, healthcare has long been likened to air and water — givens often taken for granted*”. Like all other developed countries except the United States, Japan has universal coverage, which means everyone is covered by the public health insurance program.²³

The government has long boasted that Japanese healthcare is first-class, affordable and helps extend its high life expectancy rates. In 2018, tiny Hong Kong followed by Japan were ranked top in the world in this category, with the average life span hitting 83.7 years.²⁴

Under the Japanese system, everyone must join a public insurance program through their employer or municipal government and pay a monthly premium that is determined by income. In exchange, they receive access to government-approved medical procedures and prescription drugs, for which they pay 30 percent of the cost or less.

Though premiums have risen over the years, medical services have been affordable for most people. Unlike in the U.S., stories of people going bankrupt due to medical bills are unheard of — at least so far.

A World Bank study a decade ago had stated, “...*Japanese universal public health insurance which is largely based on a fee-for-services payment system has functioned well so far. There are several key factors for the success of this program such as social solidarity and infrastructure for the utilization review.*

However, people's demand on health services has increased over the years and as a result, reform is under way to provide more diversified and quality-oriented health services.

The centralized system is viewed as less suitable for coping with these more recent issues related to the quality of healthcare. While the private sector has established an important infrastructure that delivers health services and maintains public health, its role is relatively small in terms of health service financing.”²⁵

The Singapore Model:

The Asian ‘First World’ city-state of Singapore ensures that the best of medical care is available to its citizens by having primary care networks as well as hospitals which are run on a not-for-profit basis. For those who seek private medical care they have a thriving system of private clinics and hospital services with their insurance partners. The average citizen is assured of world class healthcare at subsidized affordable rates. To quote the Ministry of Health this supports both the government led and private healthcare partners with a cost-conscious mindset,

“Ensuring Safe and Quality Care:

Singapore's Ministry of health (MOH) works with the local healthcare institutions to ensure safe and quality care for patients. We work closely with healthcare institutions through a multi-pronged approach, including:

- 1. Facilitating the sharing of best practices from investigation of root causes that contributed to serious adverse events across institutions. This is to promote learning and the prevention of occurrence of similar incidents across the healthcare system.*

2. *Working with National Committees to improve patient safety.*
3. *Programmes to support the drive towards large-scale and systematic spread of quality improvement initiatives within the healthcare system.”²⁶*

The Ministry of Health website further states, *“The Government has restructured all its acute hospitals and specialty centres to be run as private companies wholly-owned by the government. This is to enable the public hospitals to have the management autonomy and flexibility to respond more promptly to the needs of the patients. In the process, commercial accounting systems have been introduced, providing a more accurate picture of the operating costs and instilling greater financial discipline and accountability.*

The public hospitals are different from the other private hospitals in that they receive an annual government subvention or subsidy for the provision of subsidised medical services to the patients. They are to be managed like not-for-profit organisations. The public hospitals are subject to broad policy guidance by the Government through the Ministry of Health.”²⁷

Health Challenges and Medicare in states of the former USSR:

To quote from a comprehensive book on European healthcare systems -

“The countries of the former Soviet Union (FSU) over the last 20 years have experienced an impressive transformation. Fundamental change has occurred in almost all aspects of political, economic and social spheres. The market economy and new freedoms have generally positively impacted citizens’ lives but access and financial protection within the national health systems as well as health status of

the population more generally have not kept pace and are still considerably worse than in other countries of similar economic performance.

Health and social protection systems were slow to adapt to the rapid epidemiological and demographic change, characterized by a preponderance of non-communicable diseases, health issues linked to lifestyle choices and challenges related to an ageing population. At the same time, as in most countries of the former Soviet Union, once the economy opened and information started to flow more freely, consumer expectations started to rise across the board.

In the health sector, this resulted in high growth rates of private health expenditure, mostly related to high-end tertiary care services, branded pharmaceuticals and the use of expensive medical technology – often with a limited evidence base. Those who could not afford high formal and informal out-of-pocket (OOP) expenditure were increasingly at risk to either forego or postpone necessary medical interventions.

When confronted with a catastrophic health event, the middle classes and the poor often experienced the impoverishing effects of a health system lacking social solidarity, such as proper mechanisms of risk pooling and strong regulation as part of functioning health insurance mechanisms. The public health domain also suffered a significant deterioration during the transition years.

Lack of funding, the adherence to an outdated paradigm of infectious disease control and limited opportunities for modern public health training and research undermined the effectiveness of population-based interventions. In many countries of the FSU the notion of individual and population health is still seen through the lens of medical care for diseases only, hence missing opportunities for leveraging cross-sectoral interventions to improve health status.- in other words, the

importance of public health measures, preventive medicine and primary care has been missed.

Political leaders are often not cognizant of the importance of social determinants of health when considering policy and are often reluctant to use a Health in All Policies approach. The growing influence of powerful lobbies often combined with corrupt and unclear practices also contributed to a lack of progress with reforming and modernizing the health.”²⁸

Healthcare in South America and a World Bank report

South American healthcare systems paint a happier picture. They have been embracing universal health coverage with great success. A 2013 World Bank report highlighted nine Latin American countries for their healthcare success. To quote from the report -

“Whatever path countries choose, universal health coverage is key to prevent people from falling into poverty due to illness, and to give everyone the opportunity to live healthier, more productive lives - regardless of ability to pay,” explains Nicole Klingen, Acting Director for Health, Nutrition and Population at the World Bank.”²⁹ South American countries have been following such a policy and the benefits are showing.

*“Since 2005, the Maternal and Child Health Insurance Program, Plan Nacer in **Argentina**, more than one million previously uninsured pregnant women and children now have basic health insurance and secure access to services, according to the study.*

*The tax-funded Unified Health System overhauled **Brazil**'s health system, creating a coordinated national service to which all Brazilians are entitled. Investing heavily in primary care, the Family Health Strategy in particular has been the conduit for important reforms, offering families access to the health system via home visits, health promotion activities and communities*

*Through its Social Health Insurance program, **Chile** offers nearly universal health coverage to its 17 million inhabitants. Since 2005, all Chileans have had access to a basic package guaranteeing treatments for up to 80 health problems, setting upper limits to waiting times and out-of-pocket payment for treatments.*

*In 1991, **Colombia** established the right to healthcare within its constitution. More than 20 years later, access to healthcare services in the country has improved considerably thanks to a subsidized national health insurance system. By making the central government responsible for providing healthcare services, the study notes that this subsidized regime has been a “pillar of Colombia's effort to achieve the right to healthcare.”*

*Healthcare improvements in **Costa Rica** have put the Central American nation firmly within the region's top performers thanks to its focus on primary healthcare. Today, life expectancy and infant mortality rates are comparable to those of OECD countries in Europe.*

*Access to healthcare is enshrined within the constitution in **Guatemala**. Formal agreements established in 1997 with NGOs working in the country now enable Guatemala to provide basic health and nutrition services to 4.3 million people and serve the needs of 54% of the rural population, focusing particularly on those of women and children.*

*Once a model for healthcare in the Caribbean, low economic growth means **Jamaica** now faces the challenge of improving healthcare access within its budgetary constraints. Despite abolishing fees and setting up a national health fund in the past decade, the case study highlights mixed results towards achieving universal health coverage.*

*Now covering over 50 million people, **Mexico**'s Popular Health Insurance (PHI) is open to all those without access to social security. A pillar of the country's 2003 health reforms, the insurance package eliminated user fees and today includes over 200 primary and secondary level treatments.*

*Over the past two decades, **Peru** has made a major effort to expand health coverage, however, as the study notes, inequity remains in rural areas and among indigenous populations. Eliminating fees for certain basic healthcare services, the Comprehensive Insurance program is credited with significantly reduce maternal and child mortality in the country.*"²⁹

Healthcare in Cuba:

Cuba merits a special mention. There is only one government run totally free healthcare system in Cuba and its success has been so overwhelming that Cuba has health indices that are the same as the USA, which spends so much more on health and yet so many poor Americans have no access to quality healthcare. There is no alternative, private-payer health system. To quote from an article published in NEJM,

"Family physicians, along with their nurses and other health workers, are responsible for delivering primary care and preventive services to their panel of

patients — about 1000 patients per physician in urban areas. All care delivery is organized at the local level, and the patients and their caregivers generally live in the same community. The medical records in cardboard folders are simple and handwritten, not unlike those we used in the United States 50 years ago. But the system is surprisingly information-rich and focused on population health.

All patients are categorized according to level of health risk, from I to IV. The community clinics report regularly to the district on how many patients they have in each risk category and on the number of patients with conditions such as hypertension (well controlled or not), diabetes, and asthma, as well as immunization status, time since last Pap smear, and pregnancies necessitating prenatal care.

Every patient is visited at home once a year, and those with chronic conditions receive visits more frequently. When necessary, patients can be referred to a district polyclinic for specialty evaluation, but they return to the community team for ongoing treatment. House calls and discussions with family members are common tactics for addressing problems with compliance or follow-up and even for failure to protect against unwanted pregnancy. In an effort to control mosquito-borne infections such as dengue, the local health team goes into homes to conduct inspections and teach people about getting rid of standing water, for example.

This highly structured, prevention-oriented system has produced positive results. Vaccination rates in Cuba are among the highest in the world. The life expectancy of 78 years from birth is virtually identical to that in the United States. The infant mortality rate in Cuba has fallen from over 80 per 1000 live births in the 1950s, to less than 5 per 1000 — lower than the U.S. rate. The improved health outcomes are largely the result of improvements in nutrition and education, which address

the social determinants of health. Cuba's literacy rate is 99%, and health education is part of the mandatory school curriculum.”³⁰

Cuba’s Contribution to the World in Battling Disease:

An article by Dr. Judy Stone, published in Forbes Magazine, was all praise for the Cuban health system. Not only does Cuba have an efficient and effective healthcare system, it has been in the fore front of medical aid to all countries in times of need. Cuba stepped up and promptly sent healthcare workers to fight Ebola in West Africa. Dr. Stone writes, “*Cuba has a long-standing history of international volunteerism and medical diplomacy, via its “ejército de batas blancas” (army of white coats). Cuba has 50,000 healthcare workers deployed throughout the world, both in underserved areas and as emergency response teams.*

For example, Cubans have provided cataract surgery and treatments throughout South America, restoring vision to almost 3.5 million over the years, in exchange receiving political capital, oil subsidies, and funding. They have provided care as well in fighting malaria in Africa, and were ready to help in Haiti after the earthquake and subsequent cholera epidemic. In fact, Ban Ki-moon, Secretary General of the United Nations, stated, “They are always the first to arrive and the last to leave. They remain in place after the crises. Cuba can be proud of its healthcare system, a model for many countries.”³¹

“... training physicians for underdeveloped countries has been a major goal for Cuba; providing almost 2000 students/year with free medical education at Escuela Latinoamericana de Medicina (ELAM) has again hugely successful for them politically. According to Dalhousie University’s Robert Huish, Cuba sends more

doctors to assist in developing countries than the entire G8 combined—20 percent of its 68600 physicians.

Their volunteerism was recently on display with their response to the Ebola epidemic in West Africa. While the US formally sent ~170 CDC workers, in addition to the volunteers from Doctors Without Borders and missionary groups, Cuba promptly sent 300, with thousands more readying, providing the largest force of any country. This is a particularly impressive commitment, given that Cuba's population (in thousands, in 2012) was only 11,271, compared to that of the US, of 317,505.”³¹

The 2020 COVID-19 pandemic also saw Cuban doctors and healthcare workers reach out to affected countries.

Prevention - A Cornerstone of Cuban Health Policy:

Dr. Stone further writes, “*One of the key differences between the US healthcare system and that of Cuba is that the US, as many western countries, focuses on treating disease, rather than preventive medicine. This is an enormously profitable system for manufacturers of diagnostic and radiologic tests, as well as for expensive medicines.*

In contrast, Cuba's health system is strongly focused on prevention, using low-tech means extraordinarily effectively. Education is a priority, and there is almost universal literacy. Health and sexual education are promoted; contraceptives are free. Universal healthcare is free, and everyone has a family physician and nurse.

How has this affected outcomes? At what cost?

The US ranks 3rd in healthcare expenditures, spending 17.9% of its GDP on health (2011). In contrast, Cuba only spent 10% of its GDP, putting it on par with Norway, Sweden, the United Kingdom, and Canada.

What does the US gain for its vastly greater financial investment? Not so much, it seems. Infant mortality is lower in Cuba and the under 5-year-old mortality rate is quite low. Life expectancy is almost identical in the two countries. This is achieved despite huge disparities in wealth.”³¹

A Medical Student’s Assessment of Cuban Healthcare:

An illuminating article by a medical student identified the key element of Cuba’s successful healthcare system - the Family Doctor and the continuity of care that people receive. The paper states, “*The Cuban example suggests that the key to creating a healthy population is in primary care. Imagine the potential outcomes if the United States could combine its already outstanding training, facilities, and technology with the understanding of primary care as found in Cuba.*”³²

Healthcare in China:

Let us move on now to the most populous countries of the world - China. Before the economic reforms of the eighties all Chinese citizens had health cover. But after the economic reforms, a city-based social health insurance scheme replaced insurance provided by cooperatives and employers. Vast numbers of rural and urban workers were no longer insured; even today, low income and rural households have the least protection. As per the 2003 National Health Services Survey, only around 55% percent of urban residents and 20% percent of rural

residents had insurance. In both urban and rural areas, the well-off tended to be insured while the poor had no insurance.³³

The very limited government funding keeps doctors' earnings low. In a bid to earn a bit more, doctors overprescribe drugs and high-tech services, making healthcare services largely unaffordable to uninsured poor. China's 2003 national health services survey in Heilongjiang province showed that over 60% of people who needed outpatient care simply did not go to the OPD as they could not afford it. Among those who did, over 40% who were advised admission opted not to; as they could not afford the charges.³⁴ Increased healthcare inequalities consequent to rapid healthcare cost escalations now represent a major crisis within the sector according to researchers Yip and Mahal.³⁵

Private Healthcare in China:

The private hospitals that have come up in China modelled on corporate hospitals have run into big problems. A study by Tucker and Cheng revealed the following: *"...One of the most prominent forces driving patient–physician mistrust was a patient perception of injustice within the medical sphere, related to profit mongering, knowledge imbalances and physician conflicts of interest. Individual physicians, departments and hospitals were explicitly incentivised to generate revenue without evaluation of caregiving."*³⁶ In other words, integrity and principles are sacrificed to make money.

The researchers felt that *"Physicians did not receive training in negotiating medical disputes or humanistic principles that underpin caregiving."* Patient–physician mistrust precipitated medical disputes, which resulted in violent clashes. The blind pursuit of financial profits at a systems level had eroded patient–physician trust in China. Apparently only one hospital, that had implemented a

primary care model embodying health reform goals showed improved patient–physician trust.³⁶

They recommended restructured incentives, reformed medical education and promoted caregiving to restore trust. Moving back to quality caregiving and moving away from entrenched profit-focused models was the only real way forward, according to the paper. Only a MORAL health system was acceptable to the public. Mere regulatory and legal responses were not enough.³⁶

Health Challenges and Healthcare in South East Asia:

NCDs and climate change induced loss of nutrients are the bane of South East Asia. A WHO report states, *“Noncommunicable diseases (NCDs) — mainly cardiovascular diseases, chronic respiratory diseases, diabetes and cancer — are top killers in the South-East Asia Region, claiming an estimated 8.5 million lives each year. One third of these deaths are premature and occur before the age of 70 years, thus affecting economically productive individuals. The four ‘major’ NCDs are caused to a large extent by four modifiable behavioural risk factors: tobacco use, unhealthy diet, insufficient physical activity and harmful use of alcohol. NCDs disproportionately affect the poor, impoverish families, and place a growing burden on health-care systems.”*³⁷

Climate Change caused by the Irresponsible Rich affects the Health of the Poor:

Newer issues like climate change caused by the irresponsible lifestyles of the developed world are all set to increase the disease burden of developing countries

like South East Asia and underdeveloped areas like sub-Saharan Africa which are already reeling under the impact of high disease burden. A Stanford research study reports, *“we estimated that zinc and iron deficiencies would induce 1,072.9 million disability-adjusted life years (DALYs) globally over the period 2015 to 2050 (95% credible interval [CrI]: 971.1–1,167.7). In the presence of increasing carbon dioxide concentrations, we estimated that decreasing zinc and iron concentrations of crops would induce an additional 125.8 million DALYs globally over the same period (95% CrI: 113.6–138.9). This carbon-dioxide-induced disease burden is projected to disproportionately affect nations in the World Health Organization’s South-East Asia and African Regions (44.0 and 28.5 million DALYs, respectively), which already have high existing disease burdens from zinc and iron deficiencies (364.3 and 299.5 million DALYs, respectively), increasing global nutritional inequalities.”*³⁸

Healthcare Challenges of Africa:

From the better served countries let us move on to the continent where healthcare is a distant dream for most people - Africa. In Africa, communicable diseases maim and kill widely even today. A year 2008 review states, *“Out of 58.03 million people who died globally in 2005, 10.9 million (18.8%) were from the WHO African Region.*

The majority of deaths (64%) that occurred in the Region resulted from HIV/AIDS (19%), lower respiratory infections (10%), malaria (8%), diarrhoeal diseases (7%), cerebrovascular disease (4%), ischaemic heart disease (3%), tuberculosis (3%), measles (3%), low birth weight (2%), birth asphyxia and birth trauma (2%) and maternal conditions (2%).

Even though effective public health interventions that could have prevented most of deaths exist, coverage is low due to weak and under-resourced health systems. Some of the weaknesses can be attributed to challenges related to leadership and governance; health workforce; medical products, vaccines and technologies; information; financing; and services delivery”³⁹

Africa’s Health problems - a Challenge bigger than COVID-19:

A 2018 article continues to paint a bleak picture about the disease burden in Africa; it states -

“The African continent has 25% of the global disease burden, but only 3% of the world’s health workers and less than 1% of the world’s health expenditure. The burden of disease in Africa has historically been dominated by acute and infectious diseases such as malaria, diarrhoeal diseases, lower respiratory tract infections, tuberculosis and measles. Over the last 25 years, however, chronic communicable and non-communicable diseases, such as HIV/AIDS, ischaemic heart disease, stroke and diabetes have become major contributors to the burden of disease.

Additional contributors include newer threats such as Ebola and global warming, conflicts and displacement of persons, issues of gender and poverty with high rates of interpersonal violence, disadvantage for women in education and earnings and continued high risks during pregnancy and childbirth.”⁴⁰

As for healthcare, though the African countries are so rich in minerals and oil, the fact is that the wealth of the African nations is very badly managed. **What matters is NOT how much wealth a nation has, but how it is managed.**

The political, administrative and academic leadership of African countries seem to be ineffective in achieving a sustained implementation of pro-people policies; and

the political instability in many countries, frequent wars and ethnic violence add to the problems; and the net result is that the poor in Africa are in a worse situation today than in any other time in the past. What does it mean to be poor in Africa? To quote Jordana Packtor,⁴¹

1. ***Seventy-five percent of the world's poorest countries are located in Africa, including Zimbabwe, Liberia and Ethiopia. The Central African Republic ranked the poorest in the world with a GDP per capita of \$656 in 2016.***
2. ***According to Gallup World, in 2013, the 10 countries with the highest proportion of residents living in extreme poverty were all in sub-Saharan Africa. Extreme poverty is defined as living on \$1.25 or less a day. In 2010, 414 million people were living in extreme poverty across sub-Saharan Africa. According to the World Bank, those living on \$1.25 a day accounted for 48.5 percent of the population in that region in 2010.***
3. ***Approximately one in three people living in sub-Saharan Africa are undernourished. The Food and Agriculture Organization (FAO) of the United Nations estimated that 239 million people (around 30 percent of the population) in sub-Saharan Africa were hungry in 2010. This is the highest percentage of any region in the world. In addition, the U.N. Millennium Project reported that over 40 percent of all Africans are unable to regularly obtain sufficient food.***
4. ***In sub-Saharan Africa, 589 million people live without electricity. As a result, a staggering 80 percent of the population relies on biomass products such as wood, charcoal and dung in order to cook.***
5. ***Of the 738 million people globally who lack access to clean water, 37 percent are living in sub-Saharan Africa. Poverty in Africa results in more***

than 500 million people suffering from waterborne diseases. According to the U.N. Millennium Project, more than 50 percent of Africans have a water-related illness like cholera.

- 6. Every year, sub-Saharan Africa misses out on about \$30 billion as productivity is compromised by water and sanitation problems. This amount accounts for approximately five percent of the region's gross domestic product (GDP), exceeding the total amount of foreign aid sent to sub-Saharan Africa in 2003.*
- 7. Due to continuing violence, conflict and widespread human rights abuses, the United Nations High Commissioner for Refugees (UNHCR) reports that 18 million people are of concern to the agency, including stateless people and returnees.*
- 8. Fewer than 20 percent of African women have access to education. Uneducated African women are twice as likely to contract AIDS and 50 percent less likely to immunize their children. Meanwhile, the children of African women with at least five years of schooling have a 40 percent higher chance of survival.*
- 9. Women in sub-Saharan Africa are more than 230 times more likely to die during childbirth or pregnancy than women in North America. Approximately one in 16 women living in sub-Saharan Africa will die during childbirth or pregnancy; only one in 4,000 women in North America will.*
- 10. More than one million people, mostly children under the age of five, die every year from malaria. Malaria*
- 11. Deaths in Africa alone account for 90 percent of all malaria deaths worldwide. Eighty percent of these victims are African children. The U.N.*

Millennium Project has calculated that a child in Africa dies from malaria every 30 seconds, or about 3,000 each day.” – Jordanna Packtor.⁴¹

Healthcare in Africa

Africa (including southern Africa) is mostly an agrarian society. Yet more hungry people live in Africa than in any other continent!

Grigorov reviewed healthcare in Africa in 2009. To quote him,

As Moeletsi Mbeki states in his book, *Architects of Poverty*, ‘...*the great majority of Africans are today experiencing less security and comfort. In fact, in many instances they face hunger, homelessness, the threat of violence, actual violence, disease and starvation.*’

“Irrespective of trumpeting otherwise in the press, inequality in Africa has risen significantly in the last 30 years. The number of Nigerians living below the poverty line has increased from 19 million in 1970 to 90 million in 2000. In 1970, the top 2% of the population earned the same as the bottom 17%. By 2000 the income of the top 2% was equal to the bottom 55%.”⁴²

As Mbeki says, to understand the difference is to compare Nigeria with China – *“The GDP of Nigeria halved for the period that China managed to lift 400 million above the poverty line. Just as a matter of interest, Equatorial Guinea pumps more oil per capita than Saudi Arabia, and compare the difference in poverty in those two countries.”⁴³*

In other words, **what matters is NOT how much wealth a nation has, but how it is managed.** The truth is that just the provision of potable drinking water, food, electricity, sanitation and anti-mosquito measures, education of women and basic primary health facilities can totally change the health of Africans for the better.

There is something radically wrong; Africa that accounts for over half the diamonds produced in the world, more than a fifth of the world's gold, over a tenth of the world's oil seems to be the most deprived region in the world in terms of health indices. It only shows the exploitation of a hapless people by callous rulers and foreign mercantile forces with all of civil society turning a blind eye as it were.

A Report on African Healthcare:

Apathy of governments is a prime factor. Private healthcare providers hold sway; the poor suffer. Government provided healthcare seems grossly inadequate. To quote from Grigorov's review, *"The McKinsey Quarterly of March 2008 pointed out that in 2005, of the total health expenditure in Africa of \$16.7 billion, 60% was privately financed, and half of that expenditure went to private providers."*⁴³

Furthermore, they found that the poor also depend on the private sector.

"In Ethiopia, Nigeria, Kenya and Uganda, the World Bank found that more than 40% of the people in the lowest economic quintile received healthcare from private, for-profit providers. The private-sector role in countries like Uganda and Ghana is 60%, in Namibia it is 10%."

*The authors of this report predict that the private healthcare expenditure in sub-Saharan Africa will double by 2016 to \$35 billion per year. This equates to a current value of R300 billion, or nearly half of the GDP of South Africa."*⁴³

People also seem to prefer to go to private healthcare providers, even though government healthcare centres are there.

The paper adds, *"In research conducted in Tanzania, it was noted that generally, the public prefers private rather than public providers (75% of the patients), citing convenience and quality of care among other benefits. Private institutions are*

better supplied with medicines than their government counterparts.”⁴³ As can be expected the pure profit driven private sector is fraught with unethical business practices, counterfeiting and inconsistent care

An Emerging Silver Lining - Healthcare in the Pacific Isles:

Moving on from large nation states we reach the tiny islands of the Pacific. Fiji is a good example. Universal Health Coverage (UHC) is the dream of all developing nations. The 70th Anniversary of WHO in 2018 was the 40th Anniversary of the Fijian health system which is committed to reach UHC.

Fiji Shows the way:

The words spoken at that celebration are relevant for the whole world. I quote from a 2018 media report -

“Dr. Corinne Capuano, WHO Director of Pacific Technical Support and Representative for the South Pacific, commends Fiji: ‘I welcome very much that Fiji puts special emphasis on Primary Healthcare during this years’ celebration, because we believe that reinvigorating Primary Healthcare is for Fiji and the Pacific Island Countries the way forward to achieving Universal Health Coverage’.

Universal health coverage is beneficial and already happening. But we can do more and better.

At least half the world’s people don’t receive the essential health services they need. About 100 million people are being pushed into extreme poverty (<\$1.90 a day) because of payments for health services. As a result, children have to abandon school and dreams of a career so tuition money can pay a family

member's medical bills. Others leave jobs – or cannot get jobs – because they have to take care of a sick family member.

Over 800 million people (almost 12 percent of the world's population) spend at least 10 percent of their household budgets on health expenses for themselves, a sick child or other family member.

On World Health Day, the World Health Organization is calling on world leaders to live up to their commitments and to action on them.”⁴⁴

Globally, countries are approaching universal health coverage in different ways. Of Fiji, the Minister for Health & Medical Services, Hon. Rosy Akbar said, “ *Good Primary Healthcare that integrates the delivery of essential public health and clinical services at both the facility and community levels should be the triggering point for change.*”⁴⁴

2020 has seen Fiji truly show the way forward by becoming an example of NGO, Government and UN participation to build health in the Pacific isles. I quote an article I got to pen about this wonderful partnership in Fiji.

Sathya Sai Sanjeevani Heart Hospital sans billing section set to open in Fiji

By Dr. Hiramalini Seshadri July 09, 2020 21:26 IST

For over half a century, state-of-the-art medical care, delivered with compassion and totally free of cost, has been the hallmark of Sathya Sai hospitals.

The first overseas, tertiary care child heart hospital is all set to open in Suva, Fiji, under the aegis of Sai Prema Foundation, after the COVID-19 restrictions eases. The hospital will be inaugurated by Fiji's Prime Minister Voreque Bainimarama.

Begun in 2016, Sai Prema Foundation, among many noteworthy health initiatives, arranged for the Sathya Sai Sanjeevani team from India to fly over and conduct surgeries on children with congenital heart disease in Fiji, for free.

The Sathya Sai Sanjeevani also offered to build a local capacity in Fiji by training medical personnel for free, in India. Sai followers world over chipped in, and the \$ 25 million children's heart hospital in Fiji has become a reality. Equipment installers are waiting for Fiji's borders to open after COVID-19 restrictions.

Meanwhile, the United Nations Development Program (UNDP) has signed an MoU with the Sai Prema Foundation, offering the Foundation access to UNDP's technical support. This will strengthen the Foundation's ongoing initiatives, such as developing an online medical record system for a more effective treatment of patients in rural Fiji, increasing awareness of congenital heart disease in the Pacific isles, expand the Foundation's national feeding project for the needy and rural outreach medical project among others.

Levan Bouadze, resident representative of UNDP Pacific Office in Fiji, said, "UNDP is pleased to be collaborating with Sai Prema Foundation to combat the increasing prevalence of congenital heart disease (CHD) in the south Pacific through the Children's Heart Hospital."

Said renowned singer and director of Sai Prema Foundation, Fiji, Sumeet Tappoo, "This hospital will give the gift of life to children suffering from congenital heart disease. There will be no billing counter. All surgeries and procedures will be completely free of charge"

Over 2,500 children are born annually in the Pacific isles with heart defects. Currently, there are no pediatric cardiac facilities available in Fiji or the Pacific

isles. All Pacific island nations will collaborate with UNDP, Ministry of Health, Government of Fiji, and Sai Prema Foundation to combat congenital heart disease, through a human rights-based approach, integrating citizen participation, voice and agency, focusing on the most marginalised and vulnerable.

The Indian healthcare model is indeed, making waves in the south Pacific!”

This Fijian way seems the right way forward for the world.

Logically, we ought to go on to study the Indian healthcare scene next. However, since there is so much I want to share, it deserves a separate chapter. So, let us now look at some healthcare challenges specific to our times, the world over, India included.

New Challenges of a Greying planet:

With people living longer and birth rates falling, greying of the population is a problem that developed countries have to brace themselves for. Healthcare costs for the burgeoning population of the elderly, particularly the ‘older elderly’ is a global issue.

Elder Health in the West:

In the USA it is estimated that the number of elderly will increase from, from 35 million in 2000 to more than 80 million in 2050. In the UK, the 2017 report entitled, “Briefing - Health and Care of older people in England-2017” says that

the numbers of older people aged 85 and beyond are projected to grow exponentially in the next twenty years, doubling by 2036.⁴⁵

While increased Life Expectancy is welcomed, unfortunately, Disability Free Life Expectancy has not increased.⁴⁵ Preventive Care therefore becomes very important - preventing osteoporosis, obesity, habit changes so that one does not end up with chronic obstructive airways problems or liver problems, retaining one's mental acuity and so on. If such issues are well taken care of during the sixties the chances of being disability free in one's eighties are better. But even in the most developed countries such preventive care is not available.

Elder Health in the East - China:

Moving on to China, the WHO Report on Ageing reports that the number of elderly in China's population has grown substantially over the last 20 years. Their one child policy is leading to an imbalance in population; too many old people and not enough young people to care for them. By 2000, Chinese aged 65plus numbered 90 million, and were projected to number well over 300 million by 2050. The oldest-old numbered 12 million in 2000 and, by 2030, could number over 40 million.

As of now only 2% of China's elderly are in institutions.⁴⁶ The rest live in the community / family. But as the parents of the one-child-norm rule age, China is bound to face a human resource crunch to care for the elderly. The husband has no siblings to help care for his parents and the wife has no siblings to help care for hers; and children need caring too. So suddenly you have just 2 adults to care for four elderly besides their own children - a real challenge indeed!

Elder Health in India:

India has an ageing population that will triple by 2050 but there is a gender challenge as well - women live longer. Between 2000 and 2050, the population of 80-plus people would have grown 700% “with a predominance of widowed and highly dependent very old women” and so “the special needs of such oldest old women would need significant focus of policy and programmes”, according to a lead article in The Wire, 2017.⁴⁷ So we will have an ageing population of women to care for. By 2050 a fifth of India’s population will be 60 plus in age. India’s special challenge is that the vast majority of the elderly will be in rural areas. The problems of “*income insecurity, lack of adequate access to quality healthcare and isolation are more acute for the rural elderly as most areas lack proper roads and transport access*”, to quote The Wire.⁴⁷ As per the 2011 Census, it said 71% of all old people resided in rural India.⁴⁸ Augmentation of access to and provision of Ophthalmic, ENT and Orthopedic services besides General Medical or Geriatric Health Services, for this ageing population which is bound to be outside the health insurance net will be the challenge for civil society and the government.

Elder Care Facilities:

Facilities apart, that kindness, love and compassion which add life into years rather than efficient fall-prevention which adds but years into life is most vital in Elder Care, was brought out most elegantly in an exhaustive report by the Lien Foundation of Singapore. Radha Basu who did the study, surveyed over 50 Nursing Home operators both in the private sector, government sector and voluntary welfare organisations’ sector highlighted this very issue by concluding

that the Nursing Homes seemed to be “*Safe but Soulless...*” Spiritualising Elder Care seems the need of the hour.⁴⁹

The Business of Elder Care:

Nevertheless, due to rising demand, running elder care homes has become big business in many developed countries. One would think that the quality of care might be better in expensive private elder care homes; but not so! Studies have shown interesting results. A paper cited even in 2019, found that attrition or turnover of staff was higher in ‘for-profit’ homes and that increased turnover resulted in more profit for the home. To quote the author,

*“The fact that turnover has persisted for decades is an indication that for the majority of nursing homes it is part of their cost minimizing strategy. Our finding only confirms this. It is important because higher turnover negatively impacts quality of care.”*⁵⁰ An Upjohn Institute study of 2016 found “*suggestive evidence that turnover results in lower quality in other dimensions and may increase mortality*”.⁵¹ High staff turnover rates are bad for the elders; as continuity of care and personal relationships with the staff, which are all important, are disrupted. The Mukamel study found that “*For-profit, and chain affiliated facilities were found to have higher turnover rates compared with non-profit and free standing facilities respectively.*”⁵⁰

Not-For-Profit Homes better than For-Profit Homes?

A systematic review and meta-analysis of the evidence in the BMJ 2009 also concluded that, “*...on average, not-for-profit nursing homes deliver higher quality care than do for-profit nursing homes.*”⁵²

In common layman's lingo it means that though for-profit elder care homes are bound to be run efficiently, all the managers are steely eyed on the bottom line for if they do not deliver, their jobs may be at stake. So, their stress levels are bound to be high. This 'drive for efficiency' filters down through the supervisors to the grass roots staff - the nursing aides and healthcare attendants who do the hardest work - the REAL hands-on care of the elderly with all their physical problems and emotional outbursts - a very tough job.

In the salary pyramid these grassroots workers however are the ones paid the least. Low salaries, high demands on the job front and relentless stress to perform accelerates burnout at this level and people simply quit. The economics of high attrition, however, is that when attrition is high, money is saved by the home. One way the management looks at things is 'better to let the burnt-out staff go and get some fresh ones'. However, continuity of care, etc, can suffer. As some of the studies mentioned earlier point out, elder morbidity and even mortality may rise.

In contrast, in a not-for-profit set up, the management is driven by altruistic motives. The managers, while they need to avoid waste, are not driven to maximize profit. They are less stressed out. So down the chain of command too, stress levels are lesser. Supervisors need to just ensure that standard operating procedures are followed, and elder AND grass root worker comfort and cheer get greater importance than the bottom line of money saved/made. Costs therefore in not-for-profit homes may be marginally higher but overall happiness levels of the workers must be better for their attrition rates are lower than the for-profit homes.

Therefore, just as in general healthcare, non-profit enterprises, whether, public, private or public-private partnerships seem the better model on nation-wide scaling. Since passion for such work increases compassion levels, as the Singapore

model shows public-private partnerships do better in elder care than pure government old age homes where all who work there, top management to bottom, look at it as just another job. Persons passionate about elder care, running the elder care homes with government support deliver the goal of compassionate elder care better.

An Ideal Elder Care Facility: By 2030, Singapore is set to become a “super-aged society” like Japan, with one in four considered a senior citizen. The elderly here are set to nearly triple in number in under 20 years, a change that took nearly a century in Europe.⁴⁹

One Elder Care Home that successfully weaves in scientific care with spiritual inputs is the SWAMI Home of Singapore, which importantly was not part of the survey. The multi-faith non-denominational Sunshine Welfare Action Mission (SWAMI for short), a not-for-profit home was started by a motley group of idealistic youngsters who three decades ago went to Sai Baba of India and asked him what they had to do to grow spiritually. He said that as human beings they were to transform into humane beings by “*doing selfless service with Love, sans any fanfare or expectation*”; and the elder care facility follows that instruction even today! SWAMI home today is an ideal home; it is essentially a space that helps those working there, transform into humane beings; the service however wonderful, is considered incidental and never advertised. Little wonder why the Lien Foundation study missed including them.

The Challenges due to Urban Migration in developing countries:

That sons and daughters are forced to leave the villages in search of employment worsens the loneliness issue in developing nations. An interesting aside is that in

India, burgeoning mobile phone usage has been a great help. It is a common sight in Indian villages to find the elderly talking daily to their children in faraway towns and cities. The family system, fortunately, is still strong in rural India. Migrant adults still feel they are responsible to send home money to the elderly parents and siblings in the village. Within their accessibility and affordability, they do whatever is possible. That truly world-class healthcare is today available in India is a fact. But that it has become so costly and therefore beyond the affordability of the majority is a shame.

Child healthcare in Today's World:

What about the next generation? A 2019 UNICEF report says, *“The world made remarkable progress in child survival in the past few decades, and millions of children have better survival chances than in the 1990s. One in 26 children died before reaching age five in 2018, compared to 1 in 11 in 1990.”*⁵³

Despite global progress in reducing child mortality over the past few decades, the picture is not rosy everywhere. To quote from an article posted on the WHO website in 2019, *“Sub-Saharan Africa remains the region with the highest under-5 mortality rate in the world, with 1 child in 13 dying before his or her fifth birthday, 15 times higher than in high income countries. Two regions, Sub-Saharan Africa and Central and Southern Asia, account for more than 80 per cent of the 5.3 million under-five deaths in 2018, while they only account for 52 per cent of the global under-five population. Half of all under-five deaths in 2018 occurred in just five countries: India, Nigeria, Pakistan, Ethiopia and the Democratic Republic of the Congo. India and Nigeria alone account for about a third.”*⁵⁴

The leading causes of under-five deaths are preterm birth complications, pneumonia, birth asphyxia, congenital anomalies, diarrhoea and malaria. Nearly half of these deaths occur in newborns. The WHO opines, *“More than half of these early child deaths are preventable or can be treated with simple, affordable interventions including immunization, adequate nutrition, safe water and food and appropriate care by a trained health provider when needed.”*⁵⁴

Infant and child mortality in India:

India has twice the childhood mortality rate of developed countries. On its own, India contributes to 19% of all under-5 deaths and 24% of all neonatal deaths in the world. On the brighter side, infant mortality rate (IMR) and under-5 mortality rate (U5MR) have been declining. U5MR reduced from 114 per 1000 live births in 1990 to 39 in 2016 at an annual rate of 3%, while IMR reduced from 81 to 34 per 1000 live births between 1990 and 2016.⁵⁵ However, this progress has not happened evenly across the country with stark intra-state and inter-regional disparities.⁵⁶

To look briefly look at some of the factors responsible for child mortality

Nutrition

Maternal and child malnutrition both contribute. Poor nutrition among pregnant women increases neonatal mortality. Underweight anaemic unhealthy mothers tend to have underweight babies. Malnourished children have a higher risk of death from common childhood illness such as diarrhoea, pneumonia, and malaria. The WHO reports that nutrition-related factors contribute to about 45% of under-5 deaths.⁵⁴

Safe drinking water:

IMR and U5MR are found to be consistently lower among children living in families who accessed drinking water from a safe source as compared to those who accessed drinking water from an unsafe source.⁵⁷

Sanitation and importance of hygienic toilets

IMR and U5MR are consistently lower among children living in families with access to an improved toilet as compared to those who do not have such an access.⁵⁷ More than 500 million Indians defecate outdoors, particularly in poor, rural areas, leaving them exposed to diseases.⁵⁸ Sadly this number is increasing. India, the world's second-largest country by population, has the highest number of people (732 million) without access to toilets, according to a new report by WaterAid, titled “Out of Order: The State of the World's Toilets 2017”. This report further stated that a staggering 355 million women and girls lack access to a toilet. In India - if they were all to stand in a queue, it would stretch around the Earth more than four times!⁵⁹

Maternal-education-levels:

In districts where the mothers were illiterate and uneducated IMR and U5MR were higher.⁶⁰

Lack of access to immunisation

Immunisation against diseases is again beyond the reach of many toddlers and children in rural India. When it comes to the health of children aged between 5 and 12, in the developed countries effective school health programs, screening programs and easy access to healthcare ensures good health for children. In India there are not enough primary schools to begin with. Poverty, illiteracy among

women, alcoholism among men, child labour, poor housing, poor nutrition, unsafe drinking water, poor sanitation, the lack of toilets... AND inadequate healthcare facilities compound the situation.

Opulence in Healthcare – glaring inequalities

Interestingly, in India today, both extremes are present when it comes to maternal care and infant / child healthcare. Basic services are available through Primary Health Centres and Government hospitals either free of cost or at subsidised rates. Yet even these services are not accessible to many in the rural milieu. On the other hand, we also have five star ‘exclusive’ ‘birthing centres’ set up by the corporate sector forays into healthcare, where even a normal delivery could cost well over a hundred and fifty thousand rupees! Such exorbitantly costly obstetric services are usually made use of by corporate executives whose companies cover the cost or the ultra-rich, film stars and the like.

Corporate moguls and managers are in the business of making money. The Times of India in 2013 carried an article on the proliferating ‘boutique birthing centres’ in Indian cities.⁶¹ The Chief Executive Officer of a corporate hospital chain is quoted stating that “boutique” birthing centres are a trend being fuelled by higher disposable incomes, rising number of nuclear families, and the disposition to stop with one child or two.” These centres as opposed to maternity homes of yesteryears are advertised as ‘celebratory centres’ rather than hospitals, offering fashion shows and beauty pageants to the mothers-to-be as part of the antenatal care package, fancy baby showers and so on.

Just to build one such 35 bedded luxury unit it costs INR 200 million. A corporate healthcare provider invested 1000 million in such a venture.⁶² In stark contrast,

according to the World Health Organization (WHO), 61 percent of births in India take place at home, and the majority of these are not even attended by a skilled birthing assistant due to affordability issues.^{63,64} The economics of healthcare makes dismal reading. A study by PGI Chandigarh doctors published in 2016, on the overall annual cost of delivering services through public sector primary and community health facilities in three states of north India was a mere INR 8.8 million.⁶⁵ Getting back to the luxury obstetric healthcare centres, if at least part of the profits made by such ventures can be ploughed into basic obstetric, neonatal, infant and child healthcare services for the needy it would make some sense. Otherwise, the disparity seems rather unethical.

To put things in perspective, the same 1000 million rupees could answer the toilet needs of say, the entire city of Bhubaneswar. The UNICEF and WHO studies have related maternal and child morbidity to poor sanitation and lack of toilets. For the same 1000 million rupees, instead of building luxury birthing beds that serve less than a 1000 wealthy women and babies, one could build toilets and improve the general health of 800,000 plus people!

In a free economy, investment in ‘boutique birthing centres’ and ‘VIP Check Ups’ makes business sense. But should healthcare be a mere business? Should healthcare become a business venture that essentially lines the pockets of the rich by providing healthcare services for the few who can afford such, exorbitant fancy/luxury healthcare services? The nation seems strapped when it comes to catering to basic healthcare needs of ordinary citizens; a single Primary Health Centre caters to 20 to 30,000 people depending on the terrain. Less than INR 200 per person is spent on healthcare delivery! This disproportionate state of affairs must rankle the conscience of civil society.⁶⁶

The Wealthy need to be Custodians of Wealth:

As Gandhi advocated, the wealthy need to consider themselves custodians of the nation's wealth and must feel urged from the heart to invest in Private-Public partnerships and voluntary welfare healthcare organisations that work efficiently, pay the staff well, deliver quality healthcare services and function on a not-for-profit basis. If at least part of the profits of luxury healthcare facilities can be ploughed back into providing basic healthcare for the ordinary citizen one can justify their existence.

Doctors Are Fallible too!

Sadly, in a world where success is equated with wealth, doctors too succumb to chasing this 'success'. The high tech equipment and the ability to practice state of the art medicine that they were taught at medical college make corporate hospitals attractive to cerebral minded young doctors. Added to this is the high visibility in the media and society that working in dazzling corporate hospitals brings. Fame and fortune are an irresistible combination and so young specialist doctors, being after all human, gravitate to the inviting corporate hospitals in the private sector.

The ONLY solution to this is turning out doctors wedded to human values; turning out an educated intelligentsia wedded to human values. Education in human values right from kindergarten through school to college is the need of the hour.

The Horrific that can happen when Human Values are given Short Shrift:

The COVID-19 pandemic has blown the lid on inhuman, dangerous research. Allegedly despite government orders banning research on gain of function in chimeric viruses such dangerous research was continued by funding such research

in countries under governments which had ‘soft’ policies on the matter.⁶⁷ Thus, allegedly, a human-values-based governmental decision was overturned by ambitious, reckless, senior doctors. Alleged motives range from a desire for further name and fame to ruthless power play and financial gain from sickness which would then necessitate creation of mandated medicine and vaccines!

One hopes that these allegations prove wrong; one fervently hopes that s investigations will surely prove that our medical fraternity is not ruled by such cold, calculating, heartless seniors. However, the age-old common-sense dictum - no smoke without fire cannot be ignored. At least in future, such things simply must NOT happen in the world of healthcare. And this can be so ONLY if the next generation of doctors receives medical training that is truly grounded in human values.

Let us now move on to study the Indian healthcare scene; over to chapter two!

* * *

CHAPTER 2

INDIAN HEALTHCARE: CHALLENGES, HISTORY & INNOVATION

Outline:

Healthcare at crisis point; healthcare changes from service to industry; the poverty challenge; history of healthcare in post-independence India; healthcare models- big business, not-for-profit, traditional systems, AYUSH; heart hospitals and Indian hospitals abroad; the traditional Indian philosophy of free healthcare; corporate for-profit healthcare; the Govt. of India healthcare program; the 5-A challenges; resurrection of traditional medical systems & concept of free healthcare; Ayushman Bharat Yojana; Indian healthcare & COVID-19; the baffling Sai model - an NGO offering totally free quality primary, secondary & tertiary healthcare with compassion; the economics of free healthcare; Mountain to Mohammed - healthcare on wheels by NGOs and corporates.

A Healthcare Crisis:

In 2017, Kane and Calnane reported on the healthcare situation in India in the International Journal of Health Policy Management, “...Over the last few years, the medical profession in India has been in a protracted state of crisis. Doctors across the country have been exposed and indicted on counts of corruption, professional negligence, taking kickbacks, and illegal dual practice, both in the court of law, and in society at large.”⁶⁸

The statutory body responsible for stewardship of the medical profession is the Medical Council of India (MCI); its mandate is to oversee medical education, professional and ethical standards in the medical profession, and the registration of medical doctors in India.

With multiple and ever serious allegations and indictments related to corruption, incompetence and dereliction of duties in checking the misconduct amongst doctors, the MCI is at the heart of this crisis. In a dramatic turn of events, a recent Parliamentary Committee report on the functioning of the MCI noted that “*the Medical Council of India ... has repeatedly failed on all its mandates over the decades, and that the state of the medical profession is perhaps at its lowest ebb*”.⁶⁸

In an exceptional move, on May 2, 2016, the Supreme Court of India also intervened using its rare and extraordinary powers under the Constitution, to set up a three-member committee headed by a former chief justice of India, to oversee the process of overhauling of the regulatory framework of the medical profession.

In their judgment, the Supreme Court of India, added that “*the need for major institutional changes in the regulatory oversight of the medical profession in the country is so urgent that it cannot be deferred any longer.*” The parliamentary committee tellingly added that “*respect for the profession has dwindled and distrust replaced the high status the doctor once enjoyed in society.*”⁶⁹

As an Indian writing on healthcare based on my largely Indian experience, I propose to dilate a bit more on post-independence India’s healthcare systems; after we take a bird’s eye view of the global scenario.

From Healthcare Service to Healthcare Industry:

Over the past three decades, healthcare in developing countries, with governmental support, has been turned into an industry by businessmen seeking big profits. India itself is a good example. Many patients from developed nations are heading to India for treatment as the costs are so much lower in India when compared to the developed West. As Business Insider in 2014 reported, the cost of certain Indian medical procedures can be up to 90 percent lower than in the United States, making it one of the cheapest places for treatment. While most patients come to India from the Middle East, Africa and other parts of Asia, interest from America is growing. *"On a single heart operation they can save \$50,000 to \$70,000"*, said Patients Beyond Borders CEO Josef Woodman.⁷⁰

The warmth, traditional Indian hospitality and friendliness of Indian doctors and nurses - endears patients to India and by word of mouth many westerners are opting to experience literally, Indian hospital-ity! The 'Healthcare Industry' has found favour with the government as it has reversed the brain-drain at least in the medical field, brings in foreign exchange, creates jobs and has revived national pride in the competence of Indian doctors; that Indian doctors are second to none.

A sad fact is that though the Indian 'Healthcare Industry' is thriving and is poised to grow beyond measure making India the Medical destination of the World, even this so-called "low cost" treatment is unaffordable for the average Indian! Indeed, many specialist surgeons in India's Corporate hospitals, end up treating more foreigners than Indians; and this has made some of them opt out and move into the not-for-profit healthcare sector.

Healthcare and Poverty:

Poverty makes healthcare a real challenge in India. I quote from a 2012 study on the need for a Universal Health Insurance Program in India including a review of the present scenario and challenges to be overcome:

“Majority (71%) of healthcare expenditure is drawn from out-of-pocket (OOP) at time of service utilisation which has catastrophic implications for the household. A recent report shows that percentage of persons below poverty line (BPL) at 1\$ per day in India increased by 3.7% after the OOP expenditures were accounted for. Furthermore, healthcare costs for outpatient and inpatient care are inflating by 15% and 31%, respectively. Thus, the moral ground of protecting India's poor from spiraling costs of healthcare forms an imperative argument to analyze the current financing system and institute a robust risk pooling mechanism.”⁷¹

Indians of all income levels, and especially the poorest, face quite prohibitive cost; *“Twenty eight percent and 20% respondents in rural and urban areas, respectively, who did not access health services for an ailment during the past 15 days, cited financial problem as the reason for their non-utilization of healthcare.”⁷¹* It is not unusual for one hospital stay costing more than a year's worth of income for a poor family.

Private Health Insurance (PHI) can at best be a top-up option for those who can afford it; and not one for the whole country. The paper further points out, *“There is abundant theoretical basis (moral hazard and supplier-induced demand) and empirical evidence from other countries that private insurance drives up healthcare expenditure. Moreover, in Indian context, where PHI mainly contracts with urban-based corporate hospitals, it is likely to increase cost. Private insurance based on profit motive is theoretically difficult, if not impossible, to*

operate in healthcare market in view of problems of information asymmetry leading to adverse selection, moral hazard, and supplier-induced demand."⁷¹

A Corporate Initiative:

One laudable initiative of the corporate health sector is the Aragonda model of Health Insurance promulgated by the Founder of the Apollo Hospitals chain, Dr. Pratap Reddy at his village Aragonda, in Chittoor district. *"The scheme was based more on emotion than on logistics, for as far back as in the year 2000, the Chairman of the Apollo Hospitals group had successfully implemented the 'one rupee a day' health insurance programme covering all the inhabitants of his native village of Aragonda in Andhra Pradesh."*, writes author, Umanath Nayak.⁷² Group Medical Director Anupam Sibal termed this 'a rudimentary insurance scheme'. The villagers get free outpatient treatment and free telemedicine consultations. If needed they get in patient treatment as well at the well-equipped secondary care hospital and bills up to Rs. 30,000 are written off. All at the cost of 1 rupee per day.⁷³ Apollo has also launched Telemedicine services connecting the doctors at Aragonda and other rural areas in Andhra Pradesh with the doctors at the Apollo Tertiary Care hospitals in Chennai and Hyderabad.⁷⁴

Indian Healthcare - a Look at the Past Seventy Years:

Perhaps, this is the right context to trace the development of modern healthcare in post-independence India in some detail, as well as look at some forays by Indian healthcare entrepreneurs into the world. The history on healthcare in post-independence India not only makes for fascinating reading, but in a sense mirrors

the global changes in healthcare. India being a free democratic country, all forms of healthcare got a chance to be tried. In that sense studying the Indian story gives a glimpse of the global healthcare story.

Post-Independence evolution of Hospitals in India:

After independence India witnessed a gradual change in its medical infrastructure with the establishment of the Darbhanga Medical College in 1946 in Bihar. In 1956, the government passed an act in parliament to establish institutes of national importance in India. In accordance with this act in 1956 the All India Institutes of Medical Sciences (AIIMS) was founded with its first college in New Delhi. In 1962 another institute of national importance in the form of the Postgraduate Institute of Medical Education and Research was established in Chandigarh. Over the past 70 odd years the number of government run medical colleges has risen to 350 plus including 14 All India Institute of Medical Sciences (AIIMS) campuses with more in the pipeline.

There are also over a thousand private medical colleges which are recognized by the Medical Council of India (MCI). Except for a handful of colleges in the private sector, like CMC Vellore, St John's Medical College, Bangalore and CMC Ludhiana, these colleges charge very high fees and until recently collected huge under-the-table 'donations' for medical seats leading to a devastating commercialisation of the medical education sector. In fact, studying abroad worked out cheaper and a whole industry has developed, which helps Indian students get admission abroad to medical colleges. These companies involved in the 'medical college admission industry'- (for want of a better name), even make arrangements for hostel accommodation and travel arrangements for the students, for a fee.⁷⁵

As early as in 1957, in a remote hamlet called Puttaparthi, a little known, self realised spiritual teacher, Sri Sathya Sai Baba, called Baba for short, started a secondary care Hospital without a billing section. Baba believed that quality free healthcare and education were the basic rights of a human being and that it was the responsibility of civil society to provide for it. The experiment he started in 1957 has been an unqualified success and today totally free quality primary healthcare centres including mobile clinics, secondary hospital-based care and tertiary care hospitals are successfully being run by ordinary folk following Baba's teachings, all over India and in many other parts of the world, their USP being - NO BILLING SECTION!

Baba's healthcare system has also successfully completed a national program in an African country! The Sai-Net program in Kenya where insecticide treated Sai mosquito nets were distributed by Sai volunteers achieving unprecedented coverage of the vulnerable population reduced malarial deaths by half in many areas.⁷⁶ It has all been done without any fanfare; for Baba, their teacher, believed that the establishment of such centres of selfless service was primarily a spiritual exercise for the transformation of those running them and those working there. These centres were to help them transform into humane beings - who were humble, put others before self and did not even entertain any sense of doership.

They have been operating so quietly that there is hardly anything written about these medical centres in medical journals. A journal search drew only one 2015 paper and one in-house paper presented at a conference, on the topic.^{77,78} More about this unique Sai Model of healthcare will be covered in this chapter, after the governmental and other healthcare endeavours are covered.

Health Services in India:

Getting back to health services, with the aim to eradicate cataract related blindness a network of Eye hospitals in the form of Aravind Eye Hospitals was initiated by Dr. Govindappa Venkataswamy in 1976 and a similar hospital, Sankara Nethralaya was started in Chennai in 1978. Aravind eye hospitals were established in different regions of South India like Tamil Nadu, Madurai, Theni, Tirunelveli, Coimbatore, Pondicherry, Dindigul, Tirupur, Salem, Tuticorin and Udumalpet. By 2012 the hospital had treated over 32 million patients and around 4 million surgeries had been performed. The majority of these surgeries were cheap or free making it the world's largest and most productive eye hospital.⁷⁹

The Sankara Nethralaya also has expanded to other regions and is synonymous with quality affordable ophthalmological care and draws patients from all over South and South East Asia.⁸⁰

Large multispecialty private hospitals first began in Bombay, with the Lilavati Hospital and Research Centre established in 1978 by the Lilavati Kirtilal Mehta Medical Trust. In 1997 Lilavati hospital was started by the same trust with 314 beds, 12 operating theaters, 300 consultants, intensive care unit (ICU), and 1,800 staff members to provide care for 300 in-patients and 1,500 out-patients daily.⁸¹

In 1973 at Thiruvananthapuram, Kerala another institute of national importance was founded by Chithra Tirunal Balarama Varma as an autonomous medical school in India. The renowned institute is controlled by Department of Science and Technology, Government of India.⁸²

Healthcare Becomes Big Business:

In 1983, in Chennai Apollo Hospitals Enterprise Limited an Indian chain of for-profit, corporate hospitals was started by Dr. Prathap C Reddy. The hospital has received accreditation by Joint Commission International, America and National Accreditation Board for Hospitals & Healthcare Providers hospitals. The hospital is famous for providing quality healthcare services to patients and has over 43000 employees across India.⁸³ The Ford Hospital and Research Center was established in the year 2008 in Bihar. The hospital is famous for its state-of-the-art facilities in cardiac care, surgery and rehabilitation. The hospital has expanded to more than 105 beds and is one of the largest private hospitals in Bihar.⁸⁴

Hospitals soon became lucrative businesses as well as conferred great clout and power in the political and social arena too on the managements of these hospitals as all the mighty and powerful in the land sought treatment at these hospitals. This lured many investors into the ‘medical industry’, patterned after the US for-profit model of healthcare, with private insurance partners thrown in.

Cost of medical treatment in these hospitals skyrocketed and became far beyond the purview of the average Indian though for Westerners, due to the exchange rate, it was dirt cheap; and soon India became a medical destination of the world. Medical tourism became an industry. The Fortis group, Columbia Asia group, Gleneagles group and others are other leaders in the fray.^{85–87}

Not-For-Profit Modern Healthcare Initiatives:

Alarmed by the rise in cardiovascular problems that made quality tertiary care necessary, which the common man could not afford, in 1998, Mata

Amritanandamayi started the Amrita Institute of Medical Sciences in Kochi and today it has a formidable presence in other parts of the country too as a non-profit centre for affordable, world class compassionate tertiary care. To quote their website, *“Healthcare with a Heart : Our founder, Sri Mata Amritanandamayi Devi (known as AMMA), envisioned creating a not-for-profit top hospital in Kerala, India where the poor could have access to advanced medical care in an atmosphere of love and compassion. Amrita Institute of Medical Sciences is now a world-class institution of medicine, academics, and research.”*⁸⁸

Traditional Medical Systems:

Globally, since time immemorial, each and every society has had its unique way of indigenous health practice system in order to treat various ailments. The induction of modern healthcare services has posed immense threat to indigenous health practices due to their potential speedy therapeutic effect. Modern medical fraternity tended to look down upon the traditional medicinal systems; and many of them are disappearing, displaced, and undervalued by the people.

However, traditional medical systems (TMS) have been playing the major role for the rural poor and act as a natural boon in the developing countries. Besides, there is a world-wide resurgence for TMS due to its user-friendly nature and the intrinsic side effects of modern medicines. In India, a homeland of traditional medicine, it was known as the Indian System of Medicine, consisting of *Ayurveda*, *Siddha*, *Unani* and Homeopathy. Lately Yoga - a most important Indian system for physical, mental and spiritual health has been added to this list making it AYUSH.

Ministry of AYUSH:

In March 1995, The Ministry of *Ayurveda*, Yoga and Naturopathy, *Unani*, *Siddha* and Homoeopathy, abbreviated as AYUSH was initiated by the Department of Indian Systems of Medicine and Homeopathy (ISM&H) for development, education and research in *Ayurveda*, Yoga, Naturopathy, *Unani*, *Siddha*, Homoeopathy, Sowa Rigpa (Traditional Tibetan medicine) and other Indigenous Medicine systems.⁸⁹

Heart Health in India:

With heart disease becoming a national disease, cardiac hospitals were set up by the private sector entrepreneurs - in Chennai the Madras Medical Mission, Frontier Lifeline Hospital, in Gujarat the Krishna Hospital etc. In 2009 Kokilaben Dhirubai Ambani a multi-bedded multispecialty hospital was established in Mumbai, Maharashtra. The hospital has state of the art medical facilities and provides world class services in areas of surgery, cardiology, paediatrics, obstetrics and gynaecology, oncology, neurology, nephrology etc.⁹⁰⁻⁹³

Narayana Hridayalaya and Narayana Health, set up by Dr.Devi Shetty, deserve a special mention for the impact they have made in highlighting Indian competence in value-for-money tertiary care. In many countries, healthcare is prohibitively expensive. For example, heart surgery is only affordable for less than 8 per cent of the world's population. "For 92 per cent of people living on this planet, heart surgery is a distant dream," Dr.Devi Prasad Shetty. At Narayana Health, they believe that 'quality' and 'affordability' aren't mutually exclusive when it comes to providing healthcare.^{94,95} However, the hard fact is that most of India's poor people cannot afford even Narayana Hridayalaya treatment.

But they do try; the economics is so worked out that no patient is turned away on financial grounds. Around half the patients get a 15% discount and the very poor get free treatment. Narayana Health has one of the world's largest telemedicine networks, connecting 800 centers globally. The system has treated more than 53,000 patients through telemedicine programs, increasing Narayana's reach without requiring investment in physical infrastructure. Mobile outreach vans, meanwhile, increase access to diagnostic and consultation services in semi urban and rural areas of India.

Indian Hospitals Go Global:

The most eye-catching innovation from Narayana Health is their international subsidiary in the Cayman Islands. Compared to the USA, the average cost of open-heart surgery, at Narayana Health, in India, is much lesser. What costs \$2,000 in India, costs fifty times more in the USA! Narayana Health in the Cayman Islands delivers cardiac and other tertiary care at a quarter of the costs in nearby USA. Narayana Health is all set to 'disrupt' the colossally costly US healthcare system.

To quote from an article featured in Harvard Business Review,

“By almost any measure, American healthcare costs are out of control but the system refuses to change. What if you could provide excellent care at ultra-low prices at a location close to the U.S.? That's what Narayana Health (NH) did in 2014 by opening a hospital in the Cayman Islands — Health City Cayman Islands (HCCI) — which was close to America but outside its regulatory ambit.

As we explain in Reverse Innovation in Healthcare, Narayana Health's founder, Dr. Devi Shetty, wanted to disrupt U.S. healthcare with this venture, set up in

partnership with America's largest not-for-profit hospital network, Ascension. "For the world to change, America has to change," said Shetty; "So it's important that American policy makers and American think-tanks can look at a model that costs a fraction of what they pay and see that it has similarly good outcomes."

*Narayana Health brought innovative practices honed in India to HCCI to offer first-rate care for 25-40% of U.S. prices. To be sure, this was not as cheap as NH's services in India, where prices were 2-5% of U.S. prices, but HCCI's prices are still a whopping 60-75% cheaper than U.S. prices, and even at those prices it could be extremely profitable as patient volume picked up. Three years after its launch, HCCI had seen about 30,000 outpatients and over 3,500 inpatients. It had performed almost 2,000 procedures, including 759 cath-lab procedures."*⁹⁶

The article concludes by pointing out "U.S. healthcare providers can afford to ignore experiments like HCCI at their own peril. Robert Pearl, CEO of Permanente Medical Group and a clinical professor of surgery at Stanford University put it well: "Ask most Americans about obtaining their healthcare outside of the United States, and they respond with disdain and negativity. In their mind, the quality and medical expertise available elsewhere is second-rate. Of course, that's exactly what Yellow Cab thought about Uber, Kodak thought about digital photography, General Motors thought about Toyota, and Borders thought about Amazon." Hopefully U.S. healthcare will not underestimate the disruptive threat from new entrants."

⁹⁶

Competition to keep Healthcare Providers on their toes:

Bhalerao and Deshmukh comment in their research paper, "It is difficult to imagine a society without hospitals. Hospitals have always been a source of relief and

motivation for the sick and will continue to. Hospitals all over the world have seen a great evolution from the basic structure of simply having three elements viz. the Doctor, the Patient and the Medicine to the present state where witnessed by modernization in medicine and infrastructure along with the methods of diagnosis.

This would continue and hospitals in the future would continue to emerge as centres of excellence in human healthcare and rehabilitation to meet the growing needs of the modernized world. Similarly, this growth would also continue to emerge in fierce competition among various multispecialty hospitals in individual countries and among different nations.

It would not be wrong to mention at this point about Darwin's theory of survival of the fittest that only those healthcare centres with excellence in humane healthcare and service quality will dominate.”⁹⁷

How The Indian Way of Free Healthcare Changed Over The Years:

This author however feels that in India we need to seek Indian solutions. We have a 9000-year history of providing free quality medical care at every time period of history- the pre-historic antediluvian times, through the times of the great Pandyas and Cholas, through the Buddhist period of before Christ, through the times of Ashoka the Great, Harshavardhana and so on, throughout the magnificent munificence of Islam towards the sick and needy, practiced by the Khiljis, Tughlaqs and the great Moguls.

The arrival of Western medicine saw the establishment of government hospitals and Christian missionary hospitals, where again treatment was given free of charge

to the poor and needy. Private practice and fee for service, nevertheless governed by compassion, which means only the rich were charged and the poor were treated for free, started in the Mogul times and continued through the British occupation, amid practitioners of various systems of medicine. In fact, a popular Indian common man's belief, was that unless you paid your doctor his fee you would not get well! The readiness of the common man to pay coupled with the doctor's compassionate attitude to charge only those who could afford, made for an affordable compassionate medical system. This continued through post-independence times till about the nineteen eighties.

The Major Change - the 1980s:

Around the nineteen eighties, a major change occurred.

The concept of healthcare being a for-profit industry as opposed to a non-profit service gained ground. The major reason for this was the development of high-tech high cost medicare which meant that hospitals needed high investment which only businessmen could venture into. Until then private hospitals were usually set up by doctors with small investments, with the aim being rendering service, paying the staff reasonably and paying off loans on equipment.

With the entry of big business, hospitals began to be looked at as revenue generating sources and in a sense, doctors also became just part of the investment in equipment. The ideal of service above all else was replaced by the bottom line of profit. Quality of service just had to be enough to keep patients flowing in, i.e., the cash flowing in. To this end brand image, advertising - every strategy was employed.

Private insurance partners and capturing the pharmaceutical retail market added to the profit margins.

All this was fine for the rich. But the poor and disadvantaged did not benefit. In a sense they lost out; for good doctors now flocked to these swanky private hospitals; as did the wealthy and powerful of the land, for treatment. The government hospitals received less visibility, less attention and the common man who depended on government and charitable hospitals lost out in the bargain.

Healthcare under The Government of India:

The milestones since the eighties, in India's healthcare system in a nutshell, are as follows:⁹⁸

1970 Launch of Balwadi program to provide nutritious food to children between the ages of 3-6 years and residing in village areas.

The government also introduced the Indian Medical Central Council Act , which would help standardise *Ayurveda* practise as well as education and curriculum.

1975 The Integrated Child Development Scheme (ICDS) was launched to provide nutrition to children and improve their health.

1985 Launch of Universal Immunization Programme, which consisted of providing preventive vaccination to children and adults against diseases like Tuberculosis, Whooping Cough, Measles, Polio, Hepatitis B, Pneumonia, Japanese Encephalitis, Diarrhea, Tetanus, and Diphtheria. These efforts led to the eradication of Polio virus in India.

1995 Establishment of the AYUSH department to help promote *Ayurveda*, Yoga and Naturopathy, *Unani*, *Siddha*, and Homeopathy.

Launch of Pulse Polio program to prevent development of Polio in children.

1997 Launch of a revised Tuberculosis Program to provide effective healthcare to patients

2005 Launch of the National Rural Health Mission. Additionally, the Ministry of Health and Family Welfare launched the Accredited Social Health Activist (ASHA) program to create health activists from the communities.

The Government of India also launched the Janani Suraksha Yojana to prevent maternal and neonatal deaths.

2009 Launch of Rashtriya Swasthya Bima Yojana (RSBY), to provide quality yet affordable healthcare to the underprivileged.

2011 Launch of National Program for Healthcare for Elderly was launched to make primary healthcare affordable for, and accessible to the elderly.

2014 Launch of mission Indradhanush to immunize and prevent the development of Pertussis, Diphtheria, Hepatitis B, Tetanus Tuberculosis, Measles, and Polio.

Additionally, the GOI also launched Tuberculosis Mission 2020, with the aim of eradicating TB in India.

2018 Launch of Ayushman Bharat Yojana, a comprehensive, pan India health insurance scheme to make quality healthcare accessible to the poor.

In India, the biggest challenge is the non-availability of quality healthcare to the common man, particularly in rural areas. The Indian population is concentrated

more in rural areas. Hospitals and healthcare centers are concentrated more in urban centers. The following challenges were listed in a paper as five “A’s”:⁹⁹

1. *Lack of AWARENESS about health-related matters, particularly among women is an important factor.*

*What is encouraging is that efforts to enhance awareness levels have generally shown promising results. For instance, a review on the effectiveness of interventions on adolescent reproductive health showed a considerable increase in the awareness levels of girls with regard to knowledge of health problems, environmental health, nutritional awareness, and reproductive and child health following intervention.*¹⁰⁰

The message is clear – we must strive to raise awareness in those whom we work with and must encourage the younger generation to believe in the power of education for behavior change.

2. *Lack of ACCESS to healthcare is another challenge.*

*A study in India in 2012 found that in rural areas, only 37% of people were able to access inpatient facilities within a 5 km distance, and 68% were able to access out-patient facilities.*¹⁰¹ *Even if a healthcare facility is physically accessible, the quality of care offered in many places leaves much to be desired. While the National (Rural) Health Mission has done much to improve the infrastructure in the Indian Government healthcare system, a 2012 study of six states in India revealed that many of the primary health centers (PHCs) lacked basic infrastructural facilities such as beds, wards, toilets, drinking water facility, clean labor rooms for delivery, and regular electricity.*¹⁰¹

3. *Absence of TRAINED MAN POWER is yet another challenge. A 2011 study estimated that India has roughly 20 health workers per 10,000 population, with allopathic doctors comprising 31% of the workforce, nurses and midwives 30%, pharmacists 11%, AYUSH practitioners 9%, and others 9%.¹⁰² This workforce is not distributed optimally, with most preferring to work in areas where infrastructure and facilities for family life and growth are higher. In general, the poorer areas of Northern and Central India have lower densities of health workers compared to the Southern states.¹⁰³*

While the private sector accounts for most of the health expenditures in the country, the state-run health sector still is the only option for much of the rural and peri-urban areas of the country. The lack of a qualified person at the point of delivery when a person has traveled a fair distance to reach is a big discouragement to the health-seeking behavior of the population

Considering that the private sector is the major player in healthcare service delivery, there have been many programs aiming to harness private expertise to provide public healthcare services. The latest is the new nationwide scheme proposed which accredits private providers to deliver services reimbursable by the Government.

4. *Lack of AFFORDABLE healthcare is a major challenge; but the present government has taken a bold step to address it, as we shall see.*
5. *Lack of ACCOUNTABILITY is a big issue. Only the right kind of education that emphasises human values for the next generation can really address this issue.”*

Inadequate infrastructure such as potable drinking water, housing, toilets and inadequate public health compound the problem. The rise of communicable

diseases as well, as non-communicable diseases, especially those related to lifestyle add to the woes.

Resurrection of Traditional Indian Systems of Healing:

As we saw in the timeline earlier, India woke up to the fact that it has priceless treasures in the form of indigenous health and healing systems including *Siddha*, *Ayurveda*, Yoga, *Unani* medicine and Naturopathy only in 1995. All of these and Homeopathy today come under the AYUSH branch of the Union Ministry of Health.

It is only in the past two decades, thanks to the efforts on individual *Siddha* researchers like late Dr. Mandayamkumar¹⁰⁴ who painstakingly translated some palm leaf manuscripts that he had, into English, the support of modern medicine stalwart, late Dr. Deivanayagam^{105,106} the Govt. of Tamilnadu and the Central Govt. which included *Siddha* medicine under AYUSH, that the history and antiquity of the *Siddha* system has come to light and the amazing scientific understanding the ancient *Siddhars* had about the human body, wellness, disease, diagnosis, treatment grounded in sterling medical ethics has become available.

Late Dr. Deivanayagam, a leading Chennai based allopathic Professor of Medicine, late Mandayamkumar, Thas, Somasundaram and other *Siddha* researchers have contributed greatly to bring out the relevance and possible benefits of *Siddha* treatment in the 21st century for various diseases such as HIV infection, Chikungunya, Dengue fever and chronic psychiatric ailments.^{105,107,108} In the context of COVID-19, the *Siddha* formulation, ‘*Kaba Sura Kudineer*’ has been used in Tamilnadu with success by *Siddha* physicians.^{109,110} The AYUSH department has also come out with a list of traditional Indian Medicine herbal

preparations that could be useful in preventing COVID-19 infections from getting worse. Many of the herbs have anti cytokine activity and could prevent the cytokine storm that makes COVID-19 deadly. The modern medical establishment sadly, tends to discredit claims of traditional medicine practitioners. Research on the effectiveness of these preparations against COVID-19 has shown promising results.

The government of India and the governments of the southern Indian states, particularly the Governments of Tamilnadu and Kerala, having recognized the value of ancient systems of medicine have done a lot to revive the *Siddha* system of medicine and *Ayurveda*.

From the traditional family inherited practice, the *Siddha* system of medicine, *Ayurveda* and *Unani* have developed into part of Indian medical science. Today there are recognized medical colleges, run under the government universities, where these indigenous systems of medicine are taught. However, in the case of *Siddha* Medicine, most of the practicing *Siddha* medical practitioners are traditionally trained, usually in families and by gurus (teachers).

The Traditional and Modern Systems can Complement Each Other:

In this 21st century, modern medicine has become the main medical system of the country accepted by the vast majority. The government of India too, therefore, considers the modern medical approach to be the right one to create better health in the nation. This of course is being challenged - and rightly so - by leaders like Sadguru Juggi Vasudev who point out that only right living and Yoga can provide a sustainable solution to the lifestyle disease epidemic that has engulfed India over

the past thirty years. Curative modern medicare alone can never be a lasting sustainable solution.

In a medical emergency, no doubt, modern medicine is the most useful. But in the realm of preventive medicine and promotion of health, as well as in managing chronic conditions like lifestyle diseases, there is a lot that traditional practices like yoga and meditation can offer; a lot that traditional systems of medicine such as *Siddha* and *Ayurveda* can offer.

The wise approach would be to use traditional systems of medicine and health practices to complement modern medicine.

THE BIGGEST FREE HEALTHCARE SYSTEM IN THE WORLD - *Ayushman Bharat Yojana* (ABY):

The most ambitious healthcare scheme launched in the history of free India is the *Ayushman Bharat Yojana*, popularly dubbed 'Modicare'. A recent review presented it to the medical world as follows:

For a healthy, capable and content new India, it has two main goals. A network of health and wellness infrastructure across the nation is to deliver comprehensive primary healthcare services. Secondly, a health insurance cover is to be provided for at least 40% of India's population which is deprived of secondary and tertiary care services.

Implementation of ABY:

Health and Wellness Centres are to be developed in the primary health centre or sub-centre in the village. They will provide preventive, promotive, and curative

care for non-communicable diseases, dental, mental, geriatric care, palliative care, etc. These centres are to be equipped with basic medical tests for hypertension, diabetic and cancer; and will connect to the district hospital for advanced tele-medical consultations. The government plans to set up 1,50,000 health and wellness centres across the country by the year 2022.¹¹¹

A Lancet Review

WHO Consultant, Brundtland, wrote in the Lancet, *“On Sept 23, 2018, the Prime Minister of India, Narendra Modi, launched extensive health reforms... India must invest heavily in primary healthcare (PHC) services, where health returns are greatest... During our visit, we were pleased to learn that a key pillar of India's Ayushman Bharat UHC reforms will focus on PHC, by creating 150 000 health and wellness centres. These will provide universal free PHC services, including free medicines and diagnostic services. Having visited a Mohalla clinic in Delhi, which is providing these types of services, we commend this initiative and believe that these centres could provide a strong foundation for a PHC-led route to UHC in India.”*¹¹²

The Pradhan Mantri Jan Arogya Yojana:

“The other pillar of the reforms is Pradhan Mantri Jan Arogya Yojana (PM-JAY), a health insurance scheme that will provide more than 100 million poor households (approximately 500 million people) with financial protection against inpatient hospital care, in both public and private hospitals.

Each family will be entitled to almost US\$7000 worth of care each year, with a benefit package skewed towards surgical and diagnostic procedures. This health insurance scheme is already being dubbed Modicare with beneficiary households being told by the Minister of Health that they will be issued with gold cards.

There is no doubt this programme will be popular because poor people previously excluded from India's health system will be given access to some of the best hospitals in the country.”¹¹²

Concerns about AB-PMJAY

Brundtland expressed some legitimate fears – “*Our concern though is that in creating this surge in demand India's UHC reforms will become unbalanced and favour expensive inpatient hospital care rather than more cost-effective primary care...*”

“...given the eye-catching cap of INR 500 000 worth of hospital care per family per year, there is a likelihood that many households will see this as their annual entitlement, which they ought to spend. India's poorly regulated private hospitals will be only too pleased to meet this demand, but as previous hospital insurance schemes have shown in India, this could result in people being given expensive diagnostic and surgical procedures they don't need. Furthermore, it is likely to prove difficult to introduce gate-keeping functions into primary care services once people are given instant access to tertiary care.”¹¹²

One cannot but agree with Brundtland more when he says, “*There is a risk that India's new health reforms could distort public spending towards tertiary care.*”¹¹²

Healthcare budgeting is tough even for the richest of countries. “*One only has to look at the USA, which spends 17·2% of its national income on health but is still to reach universal health coverage (UHC). Meanwhile, some of India's neighbours, such as Thailand and Sri Lanka, have become known as global UHC success stories, largely because they have invested in universal free services, with a much greater focus on primary care.*”¹¹²

The right way forward seems to be increased public investment in the planned *Ayushman Bharat* health and wellness centres. Surely then, can India reach UHC by 2030.

Reaching the Goal of Universal Healthcare:

The crux of the matter is that we need to highlight and do all we can to promote wellness, instead of highlighting sickness cure. The bulk of our resources must go into providing access to preventive healthcare and primary healthcare to all, with maximum publicity and visibility for these schemes. Indeed, providing secondary and tertiary care through UHC for 40% of the population is laudable but without the thrust and emphasis on preventive and primary care we will miss out our primary goal- the overall improved health of our citizens.

Although the development of preventive care and primary care infrastructure will be resource and time intensive there is no short cut; the main emphasis HAS to be on prevention of sickness. Of course, when people fall ill there must be access to quality affordable care near home. But wellness and prevention of illness must be our top priority rather than allow people to fall ill and arrange for cure.

ABY Seems to be Winning:

There is no perfect decision. Success is all about taking a decision and making it right. Though it is too early to pass opinions on the Ayushman Bharat Yojana, it has made a start; and for the beneficiaries definitely it would have been a Godsend. So, let me end on a happy note. I quote a Republic Day 2019 write-up on the health of the nascent Ayushman Bharat program -

“The Modi government’s ambitious health insurance scheme, Ayushman Bharat, Pradhan Mantri Jan Aarogya Yojana (AB-PMJAY) on Monday completed 100 days after its launch on 23 September 2018. In this period of time, under AB-PMJAY, the ministry of health and family welfare issued at least 41,45,727 e-cards to the beneficiaries. As on 1 January 2019, over 6,95,310 patients were admitted in various empanelled private and public hospitals across India.

We are now focusing on deepening the scheme in “greenfield” states, ensuring that no fraud or abuse takes place, assuring the quality of services and keeping our Information Technology (IT) system safe and robust,” said Indu Bhushan, CEO, AB-PMJAY.

Greenfield States are those, where there was no health insurance scheme earlier such as Uttar Pradesh (UP), Bihar, Haryana, (Madhya Pradesh (MP), Himachal Pradesh (HP), Jammu & Kashmir and Jharkhand.

The government has already approved a claim amount of ₹ 537 crore in last 100 days. Currently, 15,972 hospitals have been empaneled under the scheme and at least 59,219 hospitals have applied for empanelment under the scheme.

Dubbed “Modicare”, AB-PMJAY provides an annual health cover of ₹ 5 lakh per family to about 500 million economically deprived people based on the Socio Economic Caste Census (SECC) data.”¹¹³

Healthcare must be Free for All - India’s Message:

It is heartening to note that, despite the Mecca of modern medicine, the USA, emphatically adopting the private health insurance model as ‘ideal’ and dismissing the concept of free healthcare as absolutely quixotic and impractical, in keeping

with India's ten-thousand-year-old tradition of ethical practice of medicine where the poor and disadvantaged were always treated free, the government of India has decided to provide free healthcare for all.

The COVID-19 Pandemic and India:

The COVID-19 pandemic has drawn global attention to India. Somehow, despite its gigantic population and gigantic problems, at the onset of the pandemic, the Government of India somehow headed the right way; a national lockdown was imposed. This helped India buy valuable time; and helped the country put things in place to successfully face the astronomical COVID numbers to come. The country managed to scramble and create indigenous testing kits and thanks to a timely Lockdown, was able to chalk out containment strategies.

India has also in an unexpected manner become the 'pharmacy' of the planet as the largest manufacturer of hydroxychloroquine, an inexpensive and apparently effective anti-COVID19 drug. The traditional systems of medicine, both *Siddha* and *Ayurveda* also came up with evidence that they had effective COVID-19 shields and preparations to counter mild and moderate cases. Perhaps it is the younger age of the population; perhaps it is dirt and BCG challenged improved immunity; perhaps it is Indian vegetarian spice rich cuisine related enhanced immunity; combined of course with compliance to timely government regulations on social distancing; anyway, the heartening fact is that somehow India has been able to handle Covid-19 better than many developed countries; posting better mortality and morbidity figures.

The Baffling Totally Free-of-cost Sai System of Healthcare:

Now let us look at a most baffling, utopian healthcare model developed in India- the Sai model. The Sai model of healthcare is utopian and yet the amazing fact is, that it seems to be working. It has stood the test of time. The U.S.P. of these hospitals and clinics is that the healthcare received is world class and humane but that there is no billing section at all! All services are free for all.

Baba believed that free, humane, quality healthcare, free, humane, quality education and free, potable water was the birthright of every human being. Not just that, he proved during his lifetime, that all of these goals were achievable by setting up totally free state of the art primary, secondary and tertiary care hospitals, totally free educational campuses including a university where the best of value based and secular education was imparted and built potable water supply systems in many areas of Andhra Pradesh not to mention the water starved megalopolis of Chennai - something even the government could not do!

When asked the secret of his success, he replied that when one identified with The One Supreme, then all the Universe itself conspired to ensure success. Anyone who loved all selflessly as one's own self, as he did, could achieve all that he did, Baba used to say. Man minus selfishness was divine and could command divine powers, he used to teach. Indeed, his life itself was testimony to that statement. *"My life is my message,"* he used to say.

He advocated that the well-off practice a 'Ceiling on Desires' and that the money thus saved be used voluntarily to help the needy. He reminded one that this stay on planet earth was a transient journey and the best insurance for peace of mind and happiness was to love all and serve all as the TRUTH was that there were no

‘others’; all were part of one. Quantum physics has arrived at the same conclusion as we shall soon see.

As he believed that these lofty goals were absolutely achievable on a global scale, in his later days he used to urge people to duplicate him after his time, He often foretold, *“Your life will be my message.”* And indeed, so has it come to pass. Ordinary people who follow Baba’s teachings, have taken to heart his message of a ‘ceiling on desires’, save up and contribute to the building and running of these totally free healthcare initiatives all over the globe. Contributions come in the millions from many worldwide; I personally know some professionals who have mortgaged their homes to take loans to support the service projects; vast number of ordinary folk find ingenious ways of saving money and contributing - by walking instead of taking transport, by cutting TV channel connections and so on. Youngsters forego eating out or splurging on movies and so on.

State-of-the-art Tertiary Care Hospitals Sans Billing Section:

Doubting Thomases used to say that though Baba’s starting state-of-the-art tertiary care hospitals sans billing sections was laudable, their long term sustainability was doubtful. Not only do the two totally free tertiary care hospitals in South India continue just as before, but three tertiary care hospitals offering totally free pediatric cardiac care, have come up, is worthy of attention. Dr. Ashish Katewa, a Cardiac Surgeon within the Sri Sathya Sai Sanjeevani Hospital system, wrote of the Sathya Sai Sanjeevani Model of Healthcare, in India Med Today as follows:

“The Sri Sathya Sai Sanjeevani Hospital was set up in Naya Raipur in the central state of Chhattisgarh, in November 2012 and its purpose was, to increase and expand access to cardiac care. The hospital started as an adult centre of care.

However, in recognition of the national burden of congenital heart disease, and the large number of children being brought to the hospital from Chhattisgarh and neighbouring states, it was renamed as the Centre for Child Heart Care in 2014. It became the first exclusive pediatric cardiac care hospital in the world.

Sri Sathya Sai Sanjeevani does not have a billing counter; and provides consultations, diagnostic services, surgical and interventional treatment free of cost. In addition parents are provided rent-free accommodation and meals free on the campus. The hospital since its inception has provided consultations for 21,000 patients and operated on 4500 children with congenital heart defects. It receives patients from all over the country and so far, from seven other developing countries. The location in Naya Raipur is ideal as it is accessible to patients from Chhattisgarh, Jharkhand, Odisha, Madhya Pradesh, Vidarbha, Bihar and Eastern Uttar Pradesh. These states are most underserved with poor human development indices.

The surgical outcomes are one of the best in the country and comparable with the best centres in the world. The survival rate following surgical procedures has been 98.7% over the last two years. The entire spectrum of congenital heart disease is catered to, ranging from simpler septal defect closures to most complex pediatric cardiac procedures. The centre is open to peer review and international scrutiny and uploads its surgical data on the world database for pediatric and congenital heart surgery. It is one of the only four centres from India currently doing so.

Is This Model Sustainable?

As discussed earlier the field of pediatric cardiac care is the most resource intensive specialty of medicine and providing this care for free is unthinkable. It is natural to question the sustainability of this model. If I were to answer this

question philosophically, I would argue that this model follows the eternal law of the universe - 'What goes around comes around.' The power of goodness is self-perpetuating. If one walks steadfastly on the path of goodness without compromising on the core values, help comes from all corners. Having said that, one cannot ignore the laws of economics. At the end of the day, bills have to be paid. I will discuss briefly on the sustainability of this model.

A compact, highly skilled, multi-tasking team, forms the core of a free model. A carefully chosen team can improve the efficiency and keep the headcount down.

Cutting Costs, But Not Corners

When hospitals start to look for ways to reduce healthcare costs, without lowering care quality, they may run the risk of overlooking several cost cutting opportunities like outsourcing laboratory, blood bank and radiology services. Sri Sathya Sai Sanjeevani does just that. In addition the hospital has developed a motivated team of volunteers who help out in various processes. The hospital also has committed selfless benefactors and government support.

The Way Forward

It will be foolhardy to assume that a handful of such hospitals doing free service can solve the humungous problem in pediatric cardiology. The real impact that such hospitals can make, is by training personnel who can then go elsewhere, and start new cardiac units as a value-add to existing units. High operative volumes enable shortening of the learning curve. Our aim is not only to operate on as many children as possible, but also to train enough manpower to constitute a pediatric cardiac care team every couple of years. Sanjeevani can be a Banyan tree whose seeds will take root elsewhere, which will grow into new pediatric cardiac units.”¹¹⁴

The Future of Sai Healthcare:

A second Sanjeevani hospital in Northern India, near Delhi, and a third in Navi Mumbai are operational while a fourth is to come up near Kolkata in the East. At the Sathya Sai Pediatric Cardiac Care hospitals, the children with congenital heart problems receive on discharge after surgery, a 'Gift of Life' certificate and they are mentored for life. Baba echoes Gandhi's belief that there is enough in this world for everyone's need but not for everyone's greed. Pundits of healthcare economy who used to dismiss Baba's efforts as too idealistic to last are amazed to find that the totally free secondary care hospital set up by Baba 60 years ago and the tertiary care hospital set up 25 years ago are still up and running, providing quality humane care without a billing section. What is more, new hospitals are coming up on the same model of providing totally free quality humane healthcare for all even without insurance! In fact, a totally free Sai Sanjeevani Medical Centre has started up even in the USA; in the underserved state of Mississippi.

The Maths of Money:

Just to put things in perspective, the tertiary care hospital at Puttaparthi, the Sri Sathya Sai Institute of Higher Medical Sciences cost Rs. 200 crores to construct and the interest on a corpus fund of Rs. 100 crores helped run it. Let us assume 200% increase in costs due to inflation, which brings cost to build and run one such tertiary care hospital, to Rs. 900 crores, i.e., less than fifteen million US dollars. One of the Harry Potter movies grossed one billion dollars in under six months. With just the proceeds of one such movie sixty-six such hospitals can come up! Just to counter terrorism, the USA spends sixteen billion dollars a year.

That amount can help build and run more than a thousand such free hospitals; and perhaps holding out such an olive branch of peace and love, will counter terrorism better than any number of missiles. Why look to other countries? The Indian Premium League cricket tournament in 2015 raked in Rs11.5 billion, i.e., 182 million US dollars.¹¹⁵ That itself can help build and run a dozen such free hospitals in India! Amir Khan's film 'Dangal' raked in Rs. 2000 crores in just China alone!¹¹⁶ It is all a question of priority. Humanity CAN afford it; provided it thinks and acts humanely.

Baba's hospitals have been called temples of healing; for all who go there, patients, doctors, nurses, paramedics, volunteers, they all come back with joy and peace of mind. What Jesus said, "In the giving do you receive", they directly experience.

Healthcare in the Global Village:

With travel becoming cheaper and connecting the shrinking world, those who live in the developed world and can afford to travel have more choices in healthcare these days; at least in the 'BC' (before COVID) days!

Sometimes it is not just cost; not even high-tech excellence; but the love and care provided by hospitals, doctors and nurses that counts. An insight into what grows a patient's faith and trust in the healthcare provider, was provided by an interesting study on British elders who opt to live in sunny Spain. Despite UK being a hub for advanced medicare these British elders PREFERRED to be treated in not-so-famous-a-medical-destination, Spain.

An interesting study by a Sociologist-Public Health Specialist team reported in 2015 thus, "*....As older citizens, our interviewees talked about the respect and*

*care they had from all staff they encountered: doctors, nurses, receptionists, and cleaners were all described as physically demonstrating care through touch, and treating them with genuine empathy. This compared unfavourably to the UK, where they felt older people were marginalised in healthcare, and treated as ‘numbers’ not people.”*¹¹⁷ Southern Europe, where the people and the weather were warmer, was a preferred destination for many Britons for medical treatment.¹¹⁸ Alongside this warmth were very visible indicators of efficiency at the level of the institution. A key one was high levels of cleanliness observed in hospitals. Clean tranquil surroundings, friendly caring nurses, warm ready-to-help staff and competent, confident and compassionate doctors win over patients in a manner no cold institution, no matter how hi-tech or competent, can ever hope to.

Just how important the doctor’s love for the patient mattered, was driven home once by a wag who wryly commented on the success of Dr.X, a charismatic, humble, leading physician of Chennai thus - *“People prefer to die under the care of Dr.X rather than survive under someone else!”* Such was the love patients had for Dr.X, thanks to his genuine warmth and kind bedside manner.

The Bottom Line - The Real Challenge:

What ails medicare then, primarily, seems to be the conversion of healthcare from a caring service into a calculating industry where the bottom line is money. Insurance helps only those who can afford it. And even if one can afford it, the way insurance looks at matters medical is weird. I once had a patient who was denied his claim as his appendicitis was managed conservatively - without surgery. The insurance company said that since he had not been operated upon he could not get his claim! There is also the story of the insurance accountant who worked out

that the cost of a hemi thyroidectomy had to be just half the cost of a total thyroidectomy! The gist of the story is that patients suffer; and so do doctors and nurses as we shall see next. Only the middlemen - the big investors who own corporate hospitals, the managers who increase profits and insurance companies - all new entrants on the healthcare scene seem to benefit.

A Silver Lining:

Amid all the dark clouds that hang over the global healthcare system, there is nevertheless hope; as shown by this silver lining. I quote below, a paper that I wrote and is in print. It describes unique rural healthcare services offered by various noble minded private organisations in India. In fact, it seems to me that healthcare on wheels for underserved rural populations may quite be an idea whose time has come. What has been working well for unserved rural India, may well be the answer to solving the healthcare challenge in other unserved / underserved parts of the globe. My hunch is that this is an easily duplicable model that works, which any group committed to human values-based healthcare in any unserved part of the globe can take up. I quote parts of the paper:

“HEALTHCARE DELIVERY ON WHEELS IN INDIA – focus on a successful Indian model

Challenges of Rural India:

Lack of access to affordable, quality medical care is a challenge in rural India. For the 700 million people of India's 636,000 villages, there are only 23,000 primary healthcare centers. These centers are invariably understaffed and 66% of

rural Indians have no access to critical medicines. 31% of Indian villagers travel over 30 kilometers to seek healthcare.

Historical Aspects of Healthcare on Wheels:

Historically, a health service on wheels in rural India, began in 1906. Taking a small team out in a bullock cart to unserved villages, Dr. Ida Scudder of Vellore would conduct 'roadside clinics' under any shady tree for all comers. Today it continues as the Outreach Program of the Christian Medical College, Vellore.

Master social entrepreneur, Sai Baba, in 1956, gave a 'medical van' to the doctors of the first hospital he founded in Puttaparthi. It took curative services, education on hygiene, dental care, nutrition and sanitation to nearby villages regularly on Thursdays and Sundays.

The First Proper Hospital on Wheels:

In 2006, Baba started a model hospital on wheels, with state of the art facilities. Siemens India had developed a healthcare-on-wheels bus. An effective high power supply generator was added and laboratory facilities on board, enhanced. The Mobile Hospital was to offer every medical service to the villagers other than surgeries which required general anaesthesia, The guidelines were:

1)- CONSISTENCY was a must. The mobile hospital functioned REGULARLY two weeks a month.

2)-'SKILLED MANPOWER', The idea was to provide the best of services and not a second rate one. One had to provide what the rural poor wanted, and not just what they needed. In India, the credibility of the project is measured by the eminence of people manning the project. Baba's team-lead began with just two or three really

eminent and well known doctors. As time progressed, people realised that this service was transparent and had a pure motive. There was a greater buy-in by likeminded professionals. The mobile hospital made a palpable difference to the lives of rural folk. Their overwhelming love and gratitude bowled over the participating professionals. Word went around and there were always enough doctors volunteering their services.

3)- ON-BOARD DIAGNOSTIC SYSTEM included an ultrasound with colour Doppler, 2D echocardiogram, digital x-ray and clinical pathology and biochemistry laboratory.

4)- A WELL STOCKED PHARMACY provided a month's supply of free medicines to those with chronic ailments as medicine buying capacity of the rural poor is virtually nil.

5)- DIVINE TRIANGLE - A concept conceived by Baba, it had a Curative side, a Preventive side, and a spiritual base, i.e., positive thinking and reinforcing the innate faith in God that villagers had, which in turn improved expectation of recovery, and practically reflected as improved treatment outcomes. The doctors were expected to counsel patients on the pro-health power of positive thinking. This was loved by the villagers.

The 1st to 12th of every month was fixed for curative services and the last day of every month, for preventive service. The area within a radius of 50 kilometres around Puttaparthi consisting of Six mandals (wards), was sub-divided into nodal points. A nodal point village was the centre point of about 40 to 50 villages. There were fixed dates for visiting each nodal point. On the same date, every month, they visited the same nodal point.

Setting up the Hospital:

A day before the clinic, volunteers, reached the local school compound, where the mobile hospital bus would park. The villagers were drawn out by screening videos of Indian epics, sports and cartoons, and by singing multi faith devotional songs. This was followed by an interactive health education session. By combining available rooms of the village school with tents and the bus, literally overnight, a hospital came up, powered by the generator aboard the bus.

The ‘hospital’ offered outpatient consultation, investigations, minor surgical procedures, and dispensing of medicines. Complicated cases were referred to the general and tertiary care hospitals at Puttaparthi with the doctors and volunteers taking total end to end responsibility. The intent was to genuinely serve with a heart realising that one had to be grateful to the villagers for giving one a chance to serve. The villagers loved the mobile hospital and dubbed it ‘our hospital’; many became volunteers.

Praise:

A 2015 report stated: “....The Mobile Hospital is not only a state-of-the-art rural outreach service but also a state-of-the-heart caring and loving service”.

By 2017 the Puttaparthi Mobile Hospital had treated 873,367 patients, performed 56,786 diagnostic procedures, 209,263 biochemical tests, 21,355 X-rays, 25,823 ultrasounds and 9,608 ECGs- all totally free of charge. In 2013 the Puttaparthi Mobile Hospital won the CNBC - INDIA Award for INNOVATION in the field of Healthcare.

Duplication of the Successful Model:

Copying the Puttaparthi model, the Sathya Sai Global Health Mission, duplicated similar successful mobile clinics in Sri Lanka, Indonesia, Africa and South America. The successful Puttaparthi mobile hospital model was copied by Sai volunteers nationally too.

The Sathya Sai Mobile Hospital-Chennai, since 2014 catered to over 150,000 people in 12 sub-urban and village areas within a 50-km radius of Chennai city on Fridays, Saturdays and Sundays .through 395 mobile hospital camps. 80,860 patients received medicines regularly. In 2016, the Chennai Mobile Hospital received the Poornaratna Award for Excellence in Healthcare.

In Andhra Pradesh, 12 more mobile hospitals serve 12 districts. From 2008 to 2018, 52 Medical Vans operating in Maharashtra and Goa; served approximately 5.35 million patients in 27 districts covering 95 villages and slums. 2012 to 2015, the Sathya Sai Organization of Delhi NCR, with three medical vans reached out to 24,000 patients. In 2015, a special ‘Mother & Child Care Service Van’ began healthcare services to women during pregnancy and after delivery. The Sri Sathya Sai Organisation of Kerala, home to the Sri Sathya Sai Institute of Primary Healthcare, also operates mobile medical vans. Through mobile and fixed services, the institute serves a 100,000 people.

All services rendered by the Sai volunteers the world over, are provided totally free of cost to beneficiaries.

Sai Students Take the Torch Forward:

Today, Baba’s students have upgraded the healthcare on wheels program. Focusing on total rural development, a ‘SAI WHEELS bus’, for Societal Advancement & Improvement by Water, Healthcare, Educare, Energy, Love &

Service has been developed. Powered by solar energy with a battery backup option, equipped with the latest medical devices and applications, the SAIWHEELS bus also hosts a functional classroom, mobile library, hands-on science lab, few computer stations, and a high definition TV monitor that provides access to online educational media. A SAIWHEELS pilot project bus operates regularly in villages clustered around the hamlet of Muddenahalli, near Bengaluru.

The SAIWHEELS bus also has smart-stethoscopes donated by HD Medical of Silicon Valley, that enable health workers detect congenital heart diseases- the commonest congenital anomaly in India. (142, 143) Through a smart phone the data is sent to cardiologists at the base hospital.

The Aarogya Vahini Initiative:

The Aarogya Vahini Trust, West Bengal, began in 2017, with the goal of creating an NCD-free rural zone within 60 to 70 kilometers of Kolkata. Operating one Mobile Medical van 5 days a week across 20 nodal points, they started NCD screening. Those at risk, were investigated and given medicines free of cost for a fortnight at a time. Trained community health workers, communication points between the Aarogya Vahini team and the population served, ensured attendance at camps and follow ups. Impressed by this work, Prashanthi Cancer Care and Tata Trust donated a hospital on wheels bus each to Aarogya Vahini.

Aarogya Vahini screens for:

- Hypertension by blood pressure measurement*
- Diabetes by random blood sugar measurement*
- Breast cancer (>30 years of age) by Clinical Breast Examination*
- Cervical cancer (>30 years of age) by Visual Inspection of cervix with 5% acetic acid (VIA) and colposcopy*

- Oral cancer (> 30 years of age) by oral examination
- Ophthalmic conditions like Cataract, Glaucoma, etc.

The Mobile Hospital:

The mobile hospital has a consultation room for history taking, vitals recording & examination; a clinical pathology and biochemistry lab, optometry and ophthalmological equipment, Women Wellness checkups & Counselling areas, stations for dental care & education and oncology screening. A project director, MBBS doctors, specialists for consultation, medical social worker, epidemiologist, community nurse, lab technician, phlebotomist, pharmacist, medical records officer, driver, housekeeping staff and volunteers man the service.

Networks and Command Centre

Networking with renowned tertiary care centres, Aarogya Vahini facilitates specialty consultation services through telemedicine. The three mobile medical units through 20 nodal points, cover 5 to 6 lakhs population monthly. Around 6000 children and adults are screened monthly. The command centre is Aarogya Vahini's Amrutham Multi Speciality OutPatient centre, Kolkata, which offers totally free of cost consultations, investigation support and pharmacy services for the people of West Bengal and North-Eastern States. It also facilitates the post-operative care plan for rural families and skill development for field healthcare workers. Annually around 28000 patients are seen at Amrutham..

Arogya Bandhu Concept:

Thus Aarogya Vahini Trust touches 100000 lives a year as of now. By networking with like-minded institutions, over 100 surgeries and over 120 cataract surgeries were facilitated at no cost to the patients, in the first year of operations. Pre and

post-operative care for patients is handled by 'Aarogya Bandhus', - inspired volunteers who are trained to become 'Health Companions' for the poor. Aarogya Bandhus handhold the patient and family through the pre-op, post-op and rehabilitative phases of the care spectrum. Logistics for the patients post return from other cities are also facilitated. No financial transactions and revenue generation is involved at any point in Aarogya Vahini operations. All services are rendered totally free of cost to the beneficiaries.

CSR by Wockhardt and other Companies:

The internet lists many more players in the field of healthcare delivery on wheels.

The Mobile 1000 program of Wockhardt won the 'Inclusive India' award for best social work in the area of primary healthcare for providing regular and concentrated health-related activities in villages, promoting health-seeking behavior. Besides Wockhardt, companies like Tata, Bajaj Auto, Hindustan Petroleum, Indian Oil and others have started healthcare services on wheels. NGOs like Help Age India, the Hans Foundation, Hope Project and many others run healthcare services on wheels too. In 2016, healthcare informatics company, CTIS, collaborating with the Johns Hopkins Center for Clinical Global Health Education, dispatched a custom-designed mobile healthcare van to Byramjee Jeejeebhoy Government Medical College, Maharashtra. Review of performance is awaited.

Significantly, all of these ventures, providing varying levels of basic healthcare, across various geographical terrains of the sub-continent, have been successful. They have been welcomed by the people served and the local governments. What these numerous successful models prove is that through public-private partnership, comprehensive healthcare delivery on wheels is an option to be seriously

considered as a way of reaching healthcare to underserved and unserved areas in India. What is most important and needs to be done as a matter of urgency, is for all the various stake-holders with the common goal of providing access to quality healthcare to the needy in unserved areas, to come together to brainstorm, maximize capacity and efficiency so that an effective country wide deployment of such services is achieved.

Advocacy and Networking to build Capacity - an example:

AVPN, Singapore, is a unique funders' network. an advocate, capacity builder, and platform that cuts across private, public and social sectors embracing all types of engagement to improve the effectiveness of social investment by members across the Asia Pacific region. In 2018, under AVPN, individual organisations working to fight malnourishment among Indian children, brain-stormed, learnt from each other and developed best practices and ways to maximize utilization of resources.

The need of the hour is that similarly, all agencies providing healthcare delivery on wheels in underserved areas need to meet along with governmental participation in a mutual learning and cooperation exercise, under an AVPN-type umbrella. Such an engagement can also help scale up services to a comprehensive, sustainable healthy village development program akin to the SAI WHEELS model, for we know today, that unless health related infrastructure such as nutrition, water, sanitation, children's and women's education are built up, no real lasting improvement in health is possible. Developing mobile applications and software to monitor such an integrated rural healthcare and development system on wheels will be paramount, as the operations scale up in size to a national level in both area and population covered."¹¹⁹

Overcoming the ‘5 A’ Challenges of Rural India:

Through a national level public-private partnership of trained personnel and using a healthcare on wheels model, all the challenges faced by rural healthcare delivery, alluded to earlier in this chapter, can be addressed.⁹⁹ The Puttaparthi-Chennai-Maharashtra-NCR-Delhi models, the Mobile 1000 initiative, Aarogya Vahini and others described in the paper quoted above, prove that a philanthropy-based approach does work. As this e-book goes to press Aarogya Vahini has expanded its services to the states of Jharkhand and Assam and the public, governments and media have received the service with great enthusiasm. The above paper’s take away is this – healthcare services on wheels for rural India is an idea whose time has come.

A fact that merits mention, is that even in these COVID-19 pandemic days, both the Sai Sanjeevani hospitals as well as the Aarogya Vahini mobile healthcare services, have resumed functioning with due government approval, maintaining all the norms of safety and social distancing, providing much needed healthcare to the needy. Committed to selfless service with love, these health warriors redeem one’s faith in humanity.

Lessons learnt:

Viewing the healthcare scenario in all the countries of the world at large at large, and after reading about the services rendered by Sai Sanjeevani hospitals and particularly, Aarogya Vahini, a David in the challenging world of healthcare for the rural unserved, a retired Professor of Medicine observed, “*In the final analysis,*

a not-for profit approach driven by passion and compassion, is the one which seems to be better for any nation's healthcare system.”

COVID-19 has exposed the fact there is something radically wrong with the modern healthcare systems of even the developed west. It is time to debate and revamp the entire healthcare system of the planet. All stakeholders need to be involved. Public health, preventive care, nutrition, traditional systems of medicine, non-medical preventive strategies of the East such as *chi gong*, *yoga*, meditation and the like need to be given their rightful place in modern medicine and modern healthcare. Healthcare delivery systems such as healthcare on wheels also need to be recognized as effective ways of reaching out to underserved populations; especially in Africa, this may well be the way forward. A partnership between committed institutions, society at large and governments in a genuine do-good effort sans profit motives, combining healthcare on wheels and public health initiatives seems to be the right first step in the deprived areas of the globe. We have to be the keepers of our brothers when it comes to health. Healthcare can no longer be an industry that profits but a few stake holders. All of mankind must profit from it.

If we are to achieve that goal, we have to go beyond materialism; for therein lies the solution. We have no choice but to turn to spirituality and human values, for guidance.

* * *

Chapter 3

HEALTH REPORT CARD OF DOCTORS AND NURSES

Outline:

Alarmingly high suicides, shorter lifespans, addictions and burnout among doctors, & nurses; tuberculosis, poor nutrition, depression, substance abuse & suicides in medicos; dehumanisation of medicine; ethical violence; importance of spiritual grounding & death education in healthcare with examples; inspired primary, secondary & tertiary healthcare, inspired students & inspiring hospitals in India; an inspiring healthcare model overseas; COVID-19 highlights need for spiritual wellbeing.

If globally, modern medicare on the whole seems to be ailing, let us see how doctors and nurses are faring individually.

Suicides among Junior Doctors:

In 2017, Wikipedia reported that suicide was the second-leading cause of death for medical residents - and the leading cause of death for male residents. Further, the suicide mortality rate among doctors, was significantly higher than the general population. Female physicians were at higher risk of attempting suicide than men, showing rates over 250% higher among women. Male doctors had a mortality-by-suicide rate which was 70% higher than that of the general population.¹²⁰

The situation in India is alarming. According to evidence, doctors are about 1.87 times as likely to commit suicide as those in other areas of work. There has

recently been an increase in the rate of suicides among medical professionals (students and doctors). In India, about 37.8% of suicides happen in the age group of 15 to 29 years and 51% of these are committed by students and young professionals - who should have lived to be the bright future of their country. In a study conducted in 1996, and again in 2005, it was found that committing suicide is more likely in female physicians than their male counterparts.¹²¹

Doctors Do Not Live As Long As Their Patients!

While young doctors in the making are taking their own lives, seniors in the profession simply seem to be dying too early. A headline in the popular Pune publication, DNA screamed - “DOCTORS DO NOT LIVE AS LONG AS THEIR PATIENTS!!!” The paper reported, *“The men and women who help us stay fit and live longer are themselves succumbing to stress, sedentary lifestyles and dying of cardiac arrests.*

An observation by the Indian Medical Association’s (IMA), Pune chapter, says that an Indian doctor’s average lifespan is 55-59 years, almost 10 years lesser than that of the general population. It was based on the analysis of the association’s social security scheme (SSS) with 5,500 doctors from Maharashtra and over 11,000 from across the country registered.

IMA Pune chapter’s president Dr. Dilip Sarda told DNA that their data of the last five years indicated that doctors’ lifespan was pointing to an alarming trend. “An average Indian lives up to 69-72 years whereas a doctor lives only up to 55 to 59 years which is shocking. It was noticed that most early deaths were due to cardiac arrest” he said. According to Dr. Sarda, every year, 12 to 15 doctors in Maharashtra and around 30 doctors across the country lose their lives in this age-

group. Stress, sedentary lifestyle and a lack of exercise were the main causes of early death.”¹²²

A detailed 2008 study by Ramachandran et al reported that doctors, when compared with others, had significantly higher ($p < 0.001$) prevalence of impaired glucose tolerance - 10.7% versus 7.4%, hypertension - 35.6% versus 27.0%, obesity - 55.5% versus 35.8%, metabolic syndrome - 29.0% versus 24.8%).(5) Undetected cases of diabetes and hypertension were similar in both groups. Use of alcohol was more common among doctors.¹²³

Burnout Epidemic among Doctors:

The crisis facing doctors has reached epic proportions. The New York Times in a lead article in 2009 stated, “...anywhere from one out of every three to more than half of all doctors is suffering from burnout, with potentially devastating clinical implications. Doctors who are burned out are more likely to depersonalize their patients and treat them as objects rather than as individuals suffering from disease. They are less professional, exhibit less empathy and are more prone to making errors. And these physicians are also more likely to become depressed, commit suicide and leave a profession that is already facing severe shortages in specialties like primary care.”¹²⁴

Suicides among Nurses:

Nurses don't seem to fare any better. A 2017 article in nurse.org of the USA states, “...nurses are four times more likely to commit suicide than people working outside of medicine...”¹²⁵

Higher Suicide risk among Females:

A 2016 article in the Medical Journal of Australia says, “...*Female doctors and nurses at least three times more likely to commit suicide...*”¹²⁶

Headlines in the Independent in 2000 highlighted the alarming state in the UK; it read, “...*Nurses and doctors are more likely to take their own lives than anyone in Britain, show figures disclosed yesterday. The Liberal Democrats, who obtained the figures, said doctors were almost twice as likely to take their own lives and nurses were at 50 per cent greater risk. But 90 per cent of nurses are female and when compared with the female population, their suicide rate was almost four times the average...*”¹²⁷ Seventeen years on, the situation was no better. A 2017 March article in the Daily Mail online version stated, “...*Nurses are more at risk of suicide than any other health professional: Female health workers are 23% more likely to kill themselves than any other women.*”¹²⁸

No statistics are available regarding nurse suicide rates in India; but going by the rising stress rates they are bound to be on the rise. In fact, there are hardly any Indian studies on the health profile of our nurses. Going by newspaper reports, life for nurses in India is tough due to high stress jobs such as in ICUs, time-poor high stress effect of computerisation and the need to key in all reports which cut into actual patient care time, increasing medicolegal cases, increase in sexual harassment in the workplace, and so on. Proper research into these areas is warranted to improve the working conditions of nurses who are the backbone of the healthcare system.

Poor Mental Health & Addictions among Medicos:

Medicos in India do not present a good picture of health either. A 2008 study by Kumari in the Indian Journal of Community Medicine shows alarmingly high smoking rates among medicos with hostellers smoking more than day scholars.¹²⁹ Concerns about unacceptable levels of mental health problems in medical trainees have been voiced for decades. A 2016 issue of the Journal of the American Medical Association carried a comprehensive review article examining the prevalence of depression, depressive symptoms and suicidal thoughts among medical students. The pooled findings of 195 studies from 47 countries demonstrated that the mental health of medical students is a significant global problem. Overall, around a quarter of students screened positive for symptoms of depression, and one in ten reported suicidal thoughts. The authors said that these estimates are around two to five times higher than those reported in the general population.¹³⁰

Increased TB Risk Among Medicos:

Physical health among medicos, particularly in India seems to be bad too. A Pune study reported in 2016 that though their findings were consistent with those of previous studies, showing substantially elevated risk among medical trainees, an alarming two-fold higher TB incidence among medical trainees was found compared to figures indicated in earlier studies. Another study from India reported a 4-fold higher prevalence of TB infection among older medical students, they added.¹³¹ An online article in 2016 which did a meta-analysis of the prevalence of latent tuberculosis among health workers in high burden countries revealed a significantly high prevalence among medical and nursing students.¹³²

Poor Nutrition Common among Medicos:

Studies on the dietary habits of medicos from the Middle East, Europe and the USA reveal that their meals were irregular and poor in nutritive content. Medicos also had inadequate knowledge about nutritional needs and the nutritive values of foods. A poor commentary indeed, on those training to be the custodians of the health of their fellowmen.^{133,134} A student BMJ survey of 2017 found that one in 10 medical students exceeds weekly alcohol consumption guidance.¹³⁵

Alcoholism & Substance abuse risk High among Medicos:

The respected journal Academic Medicine, in 2016 reported that approximately one-third of medical school students meet criteria for alcohol abuse or dependence — double the rate of their age-matched non-med student peers — with burnout and high educational debt primarily to blame, new research shows.¹³⁶

In India, a study done by Chandigarh Medical College on medical students in 2009 showed that 71.95% students started consuming alcohol after admission in the medical college. Of the 168 medicos 56% had imbibed alcohol at least once and 41% had problem drinking. Thirty seven percent were found to be clinically depressed, anxious, or experiencing psychiatric disturbances and such students had a greater frequency of alcohol consumption. The study warned that alcohol abuse amongst medical students should be taken more seriously because their own attitudes towards substances may influence their professional behaviour.¹³⁷

A shocking revelation made by a 2016 paper published in the Indian Journal of Medical Research was that nearly one-fifth of medical students abuse at least one

substance despite knowing the ill effects with the main predisposing factor being the psychological stress.¹³⁸

Physician Burnout & the Dehumanisation of Medicine:

That the mental health of doctors today is deteriorating too rapidly for comfort is a fact. As two Lancet landmark articles of 2009 and 2011 pointed out, “*There are many signs that being a physician today is not good for your health: rates of anxiety, depression, and suicide are higher among physicians than in the general population.*”^{139,140}

The dehumanization of medicine is an important aetiological factor. As Cole and Carlin point out in The Lancet, “*new technologies have altered the relationship between doctor and patient; specialised physicians know more and more about less and less; doctors treat diseases rather than people; medical schools teach the science but ignore the art of medicine; medical technology has outpaced moral understanding; and hospitals have become cold, impersonal mazes. This critique of dehumanised medicine and its ethical quandaries helped give rise to the development of bioethics and the medical humanities.*”¹³⁹

They continues, “*Job stress among generalist physicians in the USA is directly linked to measures of poorer physical and mental health. In the USA, about 15% of physicians will be impaired at some point in their careers, which means that they will be unable to meet professional obligations, in some cases due to mental illness, drug dependency, or alcoholism. One index of these problems—burnout—has received a great deal of recent attention. Indeed, numerous studies in US health science centres have confirmed what everyone has known for years—*

*namely, that rates of burnout among medical students, residents, and faculty are a cause for concern.”*¹³⁹

The 2003 Annual Meeting of the European Forum of Medical Associations with representatives from over 40 countries and World Health Organisation (WHO) called for more attention to physician burnout. Australasian emergency physicians and hospital consultants have been found to have high rates of burnout. Among Japanese physicians burnout has been called a “catastrophic collapse of morale”. A South American study reports that cardiology residents in Argentina suffer from burnout. This list is endless. Burnout is usually identified by three major symptoms: emotional exhaustion, depersonalisation, and decreased sense of self-efficacy. *“But burnout, we believe, is also a euphemism for what many physicians experience as a crisis of meaning and identity”*, says the Lancet article.¹³⁹

In developed countries the context of a *“technocentric, dehumanised, and financially driven environment, often within a broken and unjust system of healthcare is the culprit”*, continues the article.¹³⁹ *“Those who work in academic health centres face the stresses of marketplace restructuring of healthcare, a shrinking safety net, more indigent patients to care for, and increasing competition for research funding.”*¹³⁹ In fact, pure research is a risky career option as you may suddenly find yourself jobless.

The Concept of Ethical Violence:

In developing countries, doctors are overwhelmed by patient numbers, inadequate resources, a shortage of health workers, and weak health-care systems. Theodor Adorno in *Problems of Moral Philosophy*, called attention to a cruel aspect of collectively enforced morality. In his view, any set of ethical maxims or rules must

be appropriable by individuals “in a living way”. When an ethical norm “turns out, within existing social conditions, to be impossible to appropriate”, the result is ethical violence.¹⁴¹ For example, in many countries, the Government expects all patients who turn up at the outpatient department to be seen and treated the same day; a laudable aim. But the poor junior doctor who is therefore expected to see over a hundred patients to their satisfaction, in the OPD is forced to take on an impossible task. In Adorno’s words the junior doctor becomes a victim of ethical violence.

Be it developed countries or developing countries, the seats of learning or medical colleges, are filled with many people of goodwill, integrity, and commitment, who strive to provide compassionate and ethically sound care, teach and mentor students, maintain scientific standards of practice, keep current with the most recent literature in one's field, and undertake biomedical research. These are all good and necessary activities. Yet, as Cole and Carlin lament, “...*current conditions can limit the ability of physicians to live up to these requirements and ideals, which in some individuals creates a cognitive dissonance that leads to cynicism, disillusionment, self-doubt, dis-ease, and a retreat from ideals. When institutions do not acknowledge the gap between ideals and the various limiting conditions of work, they unwittingly allow ethical violence to undermine health and wellbeing.*”¹³⁹

This results in ‘burn out’, which has been defined by Christina Maslach and Michael Leiter as “*the index of dislocation between what people are and what they have to do.*” It represents “*an erosion in values, dignity, spirit, and will—and erosion of the human soul.*”^{139,142}

In short, doctors literally are forced to sell their souls as they cannot fight the system. Doctors therefore not only lose out on their physical and mental health, but unless they have the protection of proper spiritual grounding, doctors are apt to lose their spiritual health as well.

Elder Care - A Setting That Accelerates Burnout:

A new challenge facing doctors and nurses is a career in caring for the aged. In the Indian tradition, ‘jara’ and ‘nara’ which refer to ageing and the morbidities of ageing are the stark realities of worldly life. Adi Shankara, the eighth century philosopher saint therefore urged that spiritual education in one’s youth, leading to one identifying oneself with the immortal untouched *Atman* rather than the transient body subject to ageing, morbidity and mortality was of prime importance. Grasping this concept at a younger age could prevent one from falling victim to depression, burnout and the like in old age - the surest recipe for rebirth into this same mad circus. At old age homes, along with the elderly, the doctors and nurses caring for them, too, seem to be falling victim to these maladies.

Elder care is becoming an increasing part of the healthcare portfolio of all nations thanks to the sheer increase in numbers of elderly globally. A 2018 study of burnout rates and patterns among physicians working in post-acute and long term elder care in the USA, Canada and the Netherlands showed disturbingly high burnout on all factors on the Maslach Burnout Inventory with the USA physicians having more emotional burnout while in all the countries depersonalization and decreased sense of personal accomplishment loomed large.¹⁴³ In colloquial language ‘job satisfaction’ was indeed, poor; not just that it was taking a great toll

on the physicians. Burnout and attrition or turnover rates of caregivers, including nursing staff, is also higher in elder care set ups than in hospitals.

Overall, the report card of health professionals does not look good. From being venerated, almost worshipped members of society in the in the early and mid-twentieth century, doctors have reached a position where many of them vow that they would never want their children to be doctors. Nurses and other healthcare professionals also do not post a good health report card. Is there a solution at all to this malaise?

Is Lack of Spiritual Education The Cause of These Problems?

These ominous reports demand that we do some soul searching. Why are medicos, doctors and nurses, the so-called cream of society opting out of life? Despite being ‘so very busy’, is there a loneliness that gnaws at the heart? As Deepak Chopra remarked in a recent article, “... *the most damaging spiritual trend in modern society is the desperate urge to flee from ourselves.*”¹⁴⁴ Why are medicos adopting maladaptive behavior strategies? Is it because there is a perceived seemingly unbridgeable gulf between expectations and reality? Is it the heavy medical curriculum that demands tremendous physical and mental effort and the spectre of heartless examinations and examiners? Or is it the slow realization that constantly dealing with sickness is no fun? Is it the fact that the encounters with death that medicos and doctors are exposed to much more than the average person, are too very chilling to the sensitive young mind? Till one gets ‘desensitised’ and develops that tough ‘life’s like that; you can’t do nothin’ attitude?

Though the makers of medical curriculum are yet to standardise and include spiritual education as a part of medical education, individual doctors who have

studied these disturbing trends or experienced the pain themselves, are coming out with strong suggestions that spiritual education and spiritual caring of a patient needs to be taught in medical school; and not just to medicos; to all healthcare professionals in training. Puchalski whose definition of spirituality is accepted widely by peers defines it thus - *“Spirituality is a dynamic and intrinsic aspect of humanity that refers to the way individuals seek and express meaning, purpose, and transcendence, and is often tied with the feeling of connectedness to the moment, self, family, others, community, society, nature, and the significant or sacred. Spirituality is expressed through beliefs, values, traditions, and practices.”*¹⁴⁵ She is a proponent of the movement to include spiritual education as part of training of medical students.

There is a fair amount of literature on the subject. Willemse et al in a thought provoking paper point out that especially in the intensive care unit, spiritual care becomes very important as it affects the ‘Quality of Life’ of both the patient and relatives and the ‘Quality of Care’ as well.¹⁴⁶ In fact, all doctors will agree that the doctors and nurses too would benefit greatly from such an approach; for losing a patient can be one of the most traumatic of experiences. Doctors and nurses see more deaths than most normal people and there is nothing in their education or training that prepares them for it!

The Need for Death Education:

Dr. Karen Wyatt, a doctor who experienced the pain herself (her father had committed suicide) has started a unique ‘End-Of-Life-University’ and ‘Death Education’ for all ages.¹⁴⁷ In India, traditionally, death is an everyday topic of discussion. The birth of a son was celebrated mainly as a thanksgiving to

providence for sending down someone to light one's funeral pyre and assist with necessary rituals to assist in an easy journey to the next dimension. Children were taught early in life that at death was like changing clothes; one changed the worn-out body for a new one. Children learnt early in life that one's lot in life was decided by one's own actions in lives gone by; a sense of 'deservedness' made acceptance easier. The concept of life before life and life after life with the controls in one's own hands to make a better future, empowered one, in a sense.

Modern medicine of course does not accept such notions as they cannot fit into the 'evidence based' mould as yet, Medical College therefore often challenges and weakens the Indian medico's, traditional beliefs; and with nothing else to replace those, often anomie results; with disastrous consequences. 'Eat, sing and be merry; for tomorrow you may die' thinking leads to maladaptive responses to stress. Dr. Wyatt echoes the Indian ethos of not shying away from discussing the only thing certain in life - death. Says she, "*We need death education for parents, so that they can help their children learn about death. We need death education in high schools and colleges, medical schools and hospitals, churches and workplaces.*"

Spiritual Grounding Spurs Sacrifices & Success!

The silver lining seems to be, that in this desert of discontent there are some oases of hope. I now relate accounts of the lives of medical professionals touched by the spiritual; by a sense of meaning, purpose, and transcendence; by an atmosphere that creates "a feeling of connectedness to the moment, self, family, others, community, society, nature, and the significant or sacred." , as Puchalski would put it. The following experiences are food for thought. Duplicating them perhaps is the way forward for doctors, nurses and other healthcare professionals.

One of the illustrious alumni of my alma mater, the Christian Medical College, Vellore (CMC Vellore), Dr. Vijay Anand Ismavel, is a medical missionary. He blogged thus, *“Is Medical Mission work a sacrifice? We are called to be ‘living sacrifices’ – meaning that we offer ourselves to a life of obedience to God. Medical mission work (especially in remote rural areas) is front-line work and not easy. However, in the light of the words of the Bible, I would say that the trials and difficulties are ‘temporary and trivial inconveniences’! We should not dwell on sacrifice as it makes people into ineffective self-styled martyrs!”*

Can Medical Mission work be professionally challenging? I have heard many people say that mission hospitals (especially remote rural ones) treat only diarrhea and ear discharge! When I completed my M.Ch in Pediatric Surgery at CMC Vellore, there were people who even asked why I wasted a M.Ch seat which could have been given to someone who was more likely to use it! I would like to say that I have seen and operated on some of the most professionally challenging conditions at Makunda. Since CT scans, nuclear scans and the services of other experts are often unavailable in these locations, missionary doctors need to innovate to be able to treat patients cost effectively with what is available. I have operated on a teratoma in the right middle lobe of the lung (middle lobectomy with composite resection of two overlying ribs), ectopia cordis (unfortunately, this patient died), 35 kg ovarian tumor, retrograde jejuno gastric intussusception, intra-abdominal cocoon (several cases) and so on. There have also been challenging medical as well as other specialties’ cases. All these years, I was the only full-time pediatric surgeon in the states of Mizoram, Tripura, Meghalaya, Manipur and southern Assam – so there are certainly a huge variety of patients who need treatment (and who cannot go elsewhere because they are poor), it is only logical to conclude that professionally, medical missionaries are in for exciting opportunities.

Is it not difficult to be in a 'vulnerable' situation? Humanly speaking, it is. However, I would say that from a spiritual perspective, this is the greatest factor in favor of Medical Missions. Vulnerability is a blessing in disguise – how else will we see God at work? God specialises in helping us as we face circumstances beyond our control. Miracles do not happen when we are in control of situations. When all else fails and we totally depend on God, we see Him at work. It is an exciting experience to see God at work and see Him build up His kingdom and be partners in this great ministry.

Can work focused on the poor be self-sustaining? When we re-started Makunda, we were told that it was impossible to work primarily for the poor on a self-sustaining basis and that all successful mission hospitals subsidise treatment of the poor by treating the rich at higher rates. However, we decided to be a hospital primarily for the poor with no special facilities for the rich as a part of our 'pro-poor' branding strategy. All patients wait in the same queues irrespective of their social class or wealth and the same general wards are used to admit them. Charges are low and charity is liberal – the hospital is flooded with patients and high capacity utilisation leads to high efficiency and lowered costs. God has blessed the work and we have been able to invest in new equipment and buildings, start a new school, the branch in Tripura and nursing school without major grants (the external funding received each year was less than 1 percent of income for many years). When we treat the poor who cannot afford to pay, God pays their bills – often in ways that money cannot buy – by giving us satisfaction, contentment and wealth in heaven.

Why is there a high attrition rate in mission hospitals? Work in mission hospitals is not easy and not for everyone. There is peer-pressure from families and friends. People look for comforts and sometimes are unable to adjust to life in mission

hospitals. Many are short-term and do not want to stay on to solve local problems. There is a high attrition rate in Medical Mission work all over the world – maybe <10 per cent of new staff stay on long-term. However, most staff leave after tasting God at work and often say that the best years of their lives were at the mission hospital!

What should be done to revive and revitalize Medical Missions? I feel that Medical Mission hospitals require a transition to effective and efficient governance mechanisms, without losing the vision of the founding fathers. They may need repositioning due to changing contexts – laws have changed and the world has changed. For this to happen, highly committed people should be willing to stay till they see change. It is a call to persevere – changes may take years to happen. Objective stock-taking exercises, strategic planning and an excellent system of accountability, transparency and integrity based ‘checks and balances’ is essential... ”¹⁴⁸

Another Example of the Spiritual Path to Success:

The Sathya Sai hospitals seem to be the answer sent by providence to Dr. Samuel’s prayers. Baba was a great admirer of Dr. Ida Scudder (founder of CMC, Vellore) and often spoke to us doctors about her faith in God and commitment to the dictum ‘Service to Man is Service to God’, something that he taught us all to follow, by example. Dr. Ida Scudder was the pioneer who took healthcare to the poor in the rural areas by starting the famous ‘Roadside Mobile Clinics’ in the early nineteen hundreds. Baba started similar mobile clinics a hundred years down the line. Dr. Scudder would have been pleased; for Baba’s mobile hospitals were equipped with

all she would have wanted - and above all, were laden with the same compassion she had.

Baba's CMC Vellore connection continued with his hand-picked senior doctors for the first tertiary care hospital he started - he chose Dr. HS Bhat and Dr. Prema Bhat, both of whom had spent all their lives working at CMC and were mentored by 'Aunt Ida' as they called Dr. Scudder. This scribe was fortunate to study at the CMC. Being a residential college, I used to spend a lot of time at the little library of Scudder Auditorium that housed many of Dr. Scudder's own books. Many of the books had 'Hill Top' Kodi (Kodi - short for Kodaikanal, a hill station in South India), written in her own hand. By a curious turn of providence this bungalow, 'Hill Top', at Kodi was bought by Baba's Trust and after his exit from the physical it is at this very same bungalow that Baba Retreats continue even now. Teachers, students, and spiritual aspirants gather for the annual spiritual retreat. In 2016, I got a chance to be part of the Retreat. To be at Aunt Ida's 'Hill Top' Kodi home for a Baba Retreat, was a rare serendipity indeed!

Inspired Primary & Secondary Care:

Another example of spiritually inspired healthcare is revealed in the 2015 report of the Sri Sathya Sai Mobile Hospital of Tamilnadu. It was flagged off in September 2014 thanks to a group of people who totally inspired by the teachings of Baba, i.e., Love All, Serve All. Together, they provided regular quality primary healthcare with compassion to 12 villages covering over a 100,000 people; all totally free of course. Those who required secondary care or tertiary care were referred to the hospitals which have free beds for patients referred by the Sathya Sai Service Organisation. Volunteer doctors in turn treat / operate on them for free.

The inspired performance won them the Award for Excellence in Healthcare by the Poorna Ratna forum.¹⁴⁹

Inspired Tertiary Care:

“Providing totally free primary healthcare and secondary care may be possible; but providing tertiary care totally free is a pipe dream”, used to be the refrain of all healthcare pundits.

What is amazing is how two tertiary care hospitals – one in rural Puttaparthi and another in urban Whitefield have been providing world-class tertiary care with love and compassion, TOTALLY FREE OF COST, for a quarter of a century. When editor of Swiss Med, Felix Wust queried how a tertiary care hospital that did such a high volume of cardiac and neuro surgeries could survive without a billing section, Dr. A.N.Safaya, the then Director of the hospital said, *“I expected this question. The free treatment is mainly possible due to donations – small and large donations – made by the devotees of Sathya Sai Baba from all over the world. These donations go into a Trust which is called the Sri Sathya Sai Medical Trust. This Sri Sathya Sai Medical Trust has a certain amount of money placed in the banks as its corpus fund that supports the day-to-day activities of both our hospitals. The two hospitals require about 2 crores of Rupees every month. Of course, a rigid cost control, cost engineering and continuous innovation help us cut the costs. In addition to these donations, some people make contributions (in kind) for a particular purpose.”*¹⁵⁰

Observing this amazing tertiary care hospital sans billing section, set up at Whitefield, Bangalore in 2001, the Bangalore bureau of pharmabiz.com commented thus in 2002, *“According to a World Health Organisation’s (WHO)*

Medical Information Accreditation report, the Sri Sathya Sai Institute of Higher Medical Sciences at Whitefield in the outskirts of Bangalore, which specializes in cardiology and neurology surgeries and treatment, has one among the lowest rates of mortality, morbidity environment and hospital acquired infection. The Hospital has also been recognized by the National Board of Examination (NBE) to admit PG students in cardiology and neurology for practical training.” (32)

Doctors working at the tertiary care hospital set up at Whitefield were interviewed by the Radio Sai Team. Talking about the ambience and experience of working in the Hospital, the common refrain of every doctor who has served or is currently serving is - *“This is a totally different place to work. It is very humbling”*.¹⁵⁰

Dr. Hegde, a very distinguished Neurosurgeon of India who headed the Department of Neurosciences in the Whitefield tertiary care hospital, said, *“We do what is best for the patient. The economic factors do not influence the patient management decision....there is none of the all-too-common feeling of helplessness that poor patients have when they are unable to afford treatment.”*

These institutions are living examples of the power of compassion; and even the best commercial medical set ups cannot hold a candle to them. The satisfaction and joy that healthcare professionals who work in such a spiritually charged compassionate set up, are unmatched.

Inspired Students:

Students from the Sathya Sai Educational Institutions who work as Technical Support Officers are the like the oil that keeps the wheels of the hospital running no matter what. Of them the team reported, *“Technical Officers - The Unsung*

Heroes - Yes, it is the loving care of doctors, nurses, ward boys and volunteers which makes the Hospital what it is - but it is not only them. There is another group which remains in the backstage just like the inconspicuous yet crucial group in a great musical extravaganza working on the sets, on the logistics, the costumes, the lights, the cameras, etc...whose services are vital and basic for the performance to click. This hallowed group is the band of Technical Officers, all former students of Baba's Institute, who were sent by Baba to premier healthcare institutions and trained on different operations of the Hospital before the Hospital actually started.

It is they who handle all the support services of the Hospital, be it maintaining the stores, pharmacy and accounts; or, monitoring and constantly upgrading the IT deployment in the Hospital; or, refining and simplifying the procedures of the Hospital with optimum patient welfare as the sole objective; or, assisting the surgeons in the theatre working as perfusionists; or, managing the crowded outpatient departments of the Hospital which handle more than 300 patients every morning; or maintaining all the expensive medical equipment in the Radiology department and other Laboratories as well as other infrastructure like generators, etc.; or even doubling up as Public Relation Managers, Administrative Officers, etc. All of them keep themselves abreast of the latest happenings in their areas of work and one of them has even contributed a chapter to a text book on Radiology, a field which he was first acquainted with five years ago, when he joined the Hospital after his post-graduation. They are Baba's Messengers, the chosen Instruments of His grand Mission. In fact, they are like so many wheels working in clockwork precision, safeguarding the running of the great Hospital.

*What motivates these post-graduates to forsake good careers and work in the Hospital? You ask them and they will say, “It is our love for Swami and the satisfaction of being a part of His glorious mission.”*¹⁵⁰

When one is part of something that one views as much greater than one’s own name and form, one eventually ends up actualising the role; one is no longer just working for one’s bread and butter; but for the joy of one’s soul. All-time greats from the world of modern medicine and healthcare have visited these tertiary care hospitals which continue to provide the best of care, with compassion- and sans billing section. The observations of these men of science are worth recounting.

A Duke University Review:

Dr. Mitchell Krucoff from the Duke University Medical Centre, said, *“What we saw was the highest level of technology, with some equipment even newer than the equipment we use at Duke Medical Centre. But the technology was dwarfed by the context into which everything in the Hospital dwelled – healthcare in God’s service. Like shining stars in the darkest of nights, Baba’s Hospitals in Puttaparthi and Bangalore not only live the answer to that question in the free care they deliver every day, but also as examples of how much God is ready to teach us about the alleviation of human suffering through optimal medical care.”*¹⁵⁰

A Review From Down Under:

The report quoted Dr.Nandana Chandran, Head of Neurosurgery at a Canberra Hospital, who worked for a while at the Whitefield hospital. Said he,

“I walked into the ward the other day after we did some major cases and I was amazed at the state of recovery of the patients; it was far ahead of what I would normally see. This is no exaggeration. This is purely something very striking in this place. People recover that well. I am sure it is all the Grace of Swami. I come from an environment where medicine is largely driven by money. And, here you see for the first time somebody who can walk in and have the most highly advanced, technologically sophisticated service available with no worry about any money... I must confess that we don't have some of the equipment in the Theatres here, in many of the Hospitals in Australia. So, it is really amazing to see this degree of technology available for our patients, who have to pay nothing at all. It is really very, very rewarding.”¹⁵⁰

Inspiration is Infectious:

2017, that is six years after Baba left the physical, saw the commencement of paediatric cardiac surgeries at Sri Sathya Sai Sanjeevani International Center for Child Heart and Research, Baghola, Palwal District, Haryana, which in the Sathya Sai tradition is again a hospital sans billing section. Dr. Smt Munesh Tomar, MBBS, MD, FNB, a gold medallist from King George Medical College and recipient of several awards, who was previously Head of Department, Paediatric Cardiology at Medanta, Gurgaon, currently the Head of the Department of Cardiology at Sri Sathya Sai International Centre for Child Heart Care and Research told Swami that in her entire career this was the first time she was seeing something like this and experiencing this kind of love.

She humbly accepted the fact that ever since she joined the hospital as the Head of Department of Cardiology, she has been at peace for she is no more restricted by

the financial constraints, and thus is able to serve all the poor and the needy children. In the absence of health insurance for babies with congenital heart diseases, only 10% cases were finally operated upon, as most of the others could not afford to pay for operations which used to cost between Rupees 2-4 Lakhs on an average.

Dr. Munesh said, *“What I used to do in six months, I have done in the last ten days. Keeping this aim and mission of ‘Love all and Serve all, we will march forth. A patient expects a transparent treatment. To me, this is not a job, it is a mission!”*¹⁵¹

This Hospital maketh its Doctors & Nurses!

We have all heard repeatedly; “It is the Doctors who make a hospital...” But let us see how a hospital has been literally making Great and Good doctors and Nurses out of ordinary folk. It seems that just working in such a setup of idyllic idealism, affects the mind set of doctors and nurses. Let us read the experiences shared by doctors and nurses working in these hospitals. Dr.Ashish Katewa who heads Cardiac Surgery at the Sri Sathya Sai Sanjeevani Hospital at Raipur, had this to say. *“To me this Hospital is a Holy Grail of sorts. In a country where the availability of affordable healthcare is scarce, this Institution makes it possible for a Cardio-thoracic surgeon like me to serve the needy in our Country. I am touched every time I witness parents who become stress free after coming here since they are not plagued by monetary reasons and are able to completely participate in the Healing Process.”*¹⁵²

Dr. Yogesh Sathe Pediatric Cardiologist says, *““I feel very lucky to be part of this Institution that embodies Baba’s tenet – Love All, Serve All, thus ushering further His Divine Mission of providing Quality Child Heart Care Totally Free of Cost to*

*All. Professionally, the Hospital manages and treats a wide spectrum of congenital heart conditions, including some very rare conditions. The journey is an exciting one and I truly look forward to the many more special moments awaiting me.”*¹⁵³

In the words of Dr. Bal Swaroop Sahu, Anaesthetist, “*“Sri Sathya Sai Sanjeevani Hospital was like an answer to my search as I always had a keen interest in contributing significantly in my area of work. Having been here for close to 2 years, I find that the most unique aspect of the Hospital is the Doctor – Caregiver relationship filled with mutual love and faith. I get immense internal satisfaction in the joy and smiles I see when children get discharged from this Temple of Healing”*”¹⁵²

A Dentist who is part of the large-scale health screening and treatment of children, Dr. Nikhil Shukla adds, “*The Divine Child Health Program has been such a learning for me. It made me confront the truth of how so many children of our country suffer immensely from very common conditions due to inaccessibility of basic healthcare services including diagnostics and treatment. The program has helped us bridge the gap between prevalent health needs and availability of healthcare services.*”¹⁵⁴

Sister Grace, who has worked in many Christian Mission Hospitals says however, that it was at Sanjeevani that she truly felt the spirit of Christ. That all services were totally free, that even the parents were given free boarding and lodging, the all-faith character of the place, the sheer love and humility that seemed so contagious that everyone ‘caught’ it, made her feel that Jesus was around!¹⁵⁵

The Sathya Sai model of totally free healthcare, which Baba started during his lifetime, has extended not only to other parts of India, but to other countries as well. In Nigeria under the leadership of Father Charles Ogada, a Catholic Priest

who started the Spiritan Self Awareness Initiative, a 30,000 square foot primary and secondary care hospital has been established. A Catholic by personal faith, Father Charles believes in the essential Oneness of all Faiths. Said he at a multi-faith spiritual retreat, *“True understanding of spirituality can only come if we step outside the boundaries of our preferred religion and look for the one golden thread of Truth that runs through all faiths.”*¹⁵⁶

Replication of Compassion an Ocean Away:

In Fiji similar work and a health-on-wheels program is on under the aegis of the Sai Prema Foundation.¹⁵⁷ In Sri Lanka the same totally free healthcare model has been adopted by the Ashram at Batticaloa which incidentally is home to 30,000 war widows.¹⁵⁸ In Malaysia, a totally free Dialysis Centre has been inaugurated at Kuala Lumpur on the 1st of February 2018.¹⁵⁹ To help fund the running costs of the centre a Sai Ananda Café serving *saatvik* food with love has been launched at the Batu Caves area!¹⁶⁰

At all these places doctors, nurses, paramedics and volunteers supporting them, find themselves putting in an inspired performance! They all feel that working at such a totally free set up that combines quality care with compassion touches and indeed, transforms one almost magically to be more compassionate, humbler and kinder; something that medical school and working in run of the mill hospitals cannot do.

C Sreenivas, the Chairman of the Sri Sathya Sai Health and Education Trust, who heads this revolutionary global healthcare initiative put it very succinctly, *“These hospitals and clinics are Temples of Transformation for all of us associated with them...”* the experiences of these fledgling healthcare initiatives are like a breath of

fresh air. The message that comes through is that health professionals, when given a chance to work unfettered by financial blocks, when allowed to open out their hearts and work in a milieu of love and compassion, are able to rediscover and enjoy their true roles in healing. That it is happening, albeit in a small way, in places the world over, is heartening.

A healthy mix of a modicum of missionary spirit, Gandhian economics and the simple message of Baba - LOVE ALL, SERVE ALL - seems to be able to redeem the health and happiness of medicos, doctors, nurses and other healthcare professionals, not just in India, but globally.

These COVID-19 times bring Compassion into Sharp Focus

During the bleak COVID-19 times, when doctors, nurses and other healthcare professionals seem weary and defeated as it were by the onslaught of a virus that kills so mercilessly, turning hospitals and intensive care units into harrowing battle fields, the need for a spiritual dimension to healthcare becomes all the more important. Otherwise, doctors, nurses and paramedics may themselves succumb to doomsday thinking.

Deepak Chopra has some practical, candid advice for all virus-battle-weary fellowmen. Says he and I quote, *“There are three levels of response to the COVID-19 outbreak: how it affects us physically, mentally and spiritually.”* After touching on the all too familiar physical do’s and don’ts, he speaks of the mental level. He says, *“The second effect, on our psyches, is being experienced personally but with only fitful answers and advice. The best advice in the mental area is meditation and yoga, relaxation techniques and paying attention every day to finding not just*

relaxation but joy and comfort in your life. The virus makes the need for a positive psychological response more urgent, and the good news is that meditation and yoga are good for anti-stress, which is connected to a strong immune response.”

Then he moves to an area that is a gray zone for most people, particularly doctors - the spiritual. He candidly throws light on the ‘symptoms’ of being ‘spiritually ill’. He says, *“It is the third area, the spiritual effect of the outbreak, that is being neglected, even though the presence of death, whether we want it to or not, evokes concern about the state of our souls. Spiritual well-being is alien to many people’s daily lives, and with the decline of organized religion, millions of people experience a sick soul, however you want to define it - weariness of heart, existential dread, a sinking feeling that nothing really matters - without finding a way out.”*

Chopra then provides simple spiritual solutions. Knowing that the medical equivalent of the ‘establishment’ will be the first to gun down the suggestion that modern medicine needs a dose of spirituality, and knowing that many academic doctors absolutely grounded in physicality are literally allergic to the idea of spirituality, he packages the ideas in common sense that even doctors cannot but agree upon. Says he, reassuringly, *“Don’t spend more than a few minutes diagnosing these feelings; everyone is experiencing them. Nor is it necessary to enter into metaphysical speculation about what life is all about. Instead, you can improve the state of your soul in the following ways:*

- *Having a sense of meaning and purpose.*
- *Loving and being loved.*
- *Self-esteem, a sense of your own worth.*

- *Tapping into inner peace and joy.*
- *Being of service to others.*
- *Generosity of spirit.*

We don't need to apply the words "religious" or "spiritual" to these modes of healing. They are based on long traditions, both Eastern and Western, which have examined and understood the human condition. More to the point, they are practical. They give you a sense of control over your life. By bringing you closer to your soul, spirit, higher awareness or deeper self (choose any term you prefer), these things reverse the most damaging spiritual trend in modern society: the desperate urge to flee from ourselves."¹⁴⁴

Is there any way we can get to developing such a balanced outlook even as we train as healthcare professionals? So that at least the next time around, we are not caught on the wrong foot should such a sudden disease crisis overwhelm us?

We shall look at some possible answers in the next chapter.

* * *

Chapter 4

A PRESCRIPTION FOR HEALTHCARE PROFESSIONALS & HEALTHCARE SYSTEMS

Outline:

Why the stress; possible solutions; Vipassana derived mindful meditation; researched benefits of meditation; spirituality & religion are pro-health; meditation in the USA & Australia; 2009 landmark study on mindfulness meditation; Yoga in the USA & inspired selfless service; Yoga benefits medicos and junior doctors; 40 minute Yoga for fitness; concept of integrated medicine; religion vs spirituality; WHO on spirituality in health; US public opinion brings spirituality into medical establishment; institute for spirituality & health; tardiness of Indian medical establishment to accept Indian concepts; Harvard on benefits of Yoga & meditation; Yoga prevents and treats burnout; meditation helps surgical trainees; Yoga, Pranayama, meditation help distress in COVID times; crisis in the senior Indian and global medical establishment; practical prescriptions from the east and west; the Dharma of healthcare; love heals.

What is the solution to this malaise that seems to be afflicting doctors, nurses and the healthcare team globally? Basically, there seem to be two issues; one, the overwhelming stress that doctors and other healthcare professionals face due to so many factors on the work front; and secondly, the financial stresses that essentially both doctors and patients face, in these days of managed care, particularly in for-profit health maintenance organisations / hospitals.

Just Why Are Doctors Getting So Stressed Out These Days?

The heightened workplace stress that healthcare professionals, particularly doctors face, primarily due to the rapid changes that have come about in the practice of modern medicine, can be summarised as follows:

- 1) The increased time period taken in this age of specialisation, to get one's qualifications as a specialist doctor adds to stress. Time was when training to be a doctor in India was just five years after pre-university or class eleven and a year of internship. Not anymore; it is five years for the undergraduate degree, a year of internship, three years for post-graduation and another two or three years for specialization which works out to twelve years minimum. Practically speaking, admission to each course itself takes a year or two, which means one ends up studying for sixteen to eighteen years or more! The time period for residency training in the USA can be very prolonged as well and begins after a 4 year undergraduate degree and 4 years of medical school. Most specialists enter the threshold of their careers only around age thirty-five. Invariably, marriage and starting a family also happens concurrently. The stress of chronic sleep deprivation thanks to being on 24 hour duty a lot of the time, examinations, marriage and raising children - all in parallel, maximize Work-Life imbalance and concomitant stress.
- 2) The newer innovations in medicine leading to caring for extremely high-risk patients in acute care and emergency set ups – e.g., ICU patients, acute renal failure patients, acute MI patients needing interventions, acute CVA patients needing interventions, patients on chemotherapy, organ transplant patients and so on, aggravate stress levels.

- 3) Caring for chronic morbidities like comatose patients and those on long term life support, care of the extremely aged with dementia, Alzheimer's disease and the like, caring for the neurologically disabled, caring for those bedridden with chronic debilitating auto-immune diseases, etc can be most challenging to say the least. Though they don't voice it, many sensitive doctors wonder within whether euthanasia would not be kinder. It leads to depersonalization and a deep inner dissatisfaction. Science has no answer to these problems. Only spirituality can help one come to terms with this suffering that is perceived as 'doctor prolonged'.
- 4) Suffering perceived as 'doctor made' arouses feelings of guilt and despair among doctors. This happens when they are faced with patients seeking help for the miserable untoward effects of prescribed drugs. Patients ending up with chronic side effects of drugs like steroids, anti-inflammatory medication, immunosuppressants, biologicals, chemotherapy and so on demoralise young doctors who wonder which is worse - the disease or treatment.
- 5) The IT revolution and data hungry health maintenance organisations want doctors to key in every little bite of data. So instead of spending time with the patient and reassuring him/ her and creating that priceless doctor-patient bond which truly is the secret of healing, as we shall see, doctors end up not even making eye-contact with the patient as they are busy typing in details, in the OPDs much to the dissatisfaction of patients. The doctor too misses out on the priceless job satisfaction of yesteryear, associated with listening to the patient patiently and reassuring the patient. The computer steals patient time; the hapless doctors have no choice but to obey the management. In one hospital in India the management threatened to

withhold doctors' fees if data was not keyed in. Why this hunger for data? To attract pharmaceutical company sponsored research which pays medical institutions handsomely. The investors and shareholders of huge corporate hospitals benefit and so do the drug companies, who quote this research and generate huge markets for their products.

- 6) Sacrificed at that altar of profit, lies the wonderful doctor-patient relationship; the relationship that switches on healing within the patient and gives the sublime satisfaction to doctors. No profit alas can make up for that loss.
- 7) The increasing costs of medicare and patient dissatisfaction and mistrust have resulted in all-time high litigation rates. The IT revolution results in patients and relatives becoming 'google-doctors' and challenging their doctors as it were. So, the practice of medicine becomes more like the practice of a defence lawyer! Where compassion and understanding reigned in yesteryears, today fear and 'defensive medicine' reign; the ideal recipe for stress.

Any Solutions?

Is there any solution to this inexorable escalation of stress in a modern doctor's life? As you read on, you may find that this chapter seems to be full of America and American points of view. Well, whether we like it or not, what America does today, the world does tomorrow; especially in the modern medical firmament; as far as the medical fraternity goes, Americans have become the self-appointed keepers of our conscience! So, you must excuse this chapter's tendency to be US oriented! The heart of the matter however, is - you will find that the USA is

actually ‘rediscovering’ ancient Eastern (read as Indian) practices! It is a sad commentary on our times that the modern Indian medical establishment that kowtows to the West accepts India’s own priceless pro-health heritage, only when it comes disguised in Western packaging! As the Indian villager would shrug his shoulders and sigh - it is the *Maya* of *Kali Yuga* (the dense iron age effect that clouds our minds and intellects)

***Vipassana* Meditation rediscovered - Mindfulness based Stress Reduction:**

Since the late seventies interest in meditation as a tool for stress reduction has interested Western doctors. In 1979, an MIT-trained molecular biologist, Jon Kabat-Zinn, decided “to turn a transformative meditation retreat experience into a field of study”. Kabat-Zinn worked with the Department of Medicine and the hospital administration at the University of Massachusetts (UMass) Medical Center. He created a revolutionary new program called, “Mindfulness-Based Stress Reduction (MBSR)” that helped in a number chronic health conditions and particularly chronic pain.¹⁶¹ When Kabat-Zinn’s first research article on mindfulness and the treatment of pain came out in 1982 the results grabbed attention across the medical world.¹⁶¹

Oncologists Rediscover the Amazing benefits of Eastern Meditation Practices:

Similar positive results were posted by others too. Down under in Australia, Dr.Meares treated terminally ill cancer patients with these simple Eastern methods and to everyone’s amazement they lived much longer than their oncologists expected them to!¹⁶² Conservative Oncologists did not pay much attention to the findings of Dr.Meares. In the USA, conventional Oncosurgeon Dr. Spiegel, used to

get irritated as his name used to be confused with that of Dr. Bernie Siegel, who believed in “*new-fangled ideas such as love heals*”. To disprove such notions Spiegel started a prospective study where post-surgery patients were randomly allotted to just conventional treatment or conventional treatment plus group therapy, prayer and the like. Five years down the line when the results were studied, Spiegel says, he almost fell out of his chair for the patients who received group therapy and participated in prayers and the like had a 50% higher survival rate!

Today, even oncologists acknowledge research findings that show that meditation causes changes at the cellular level that can prevent cancer recurrence. A 2015 issue of the highly respected journal *CANCER*, carries results of a breakthrough Canadian study conducted by researchers at the University of Calgary, (Alberta) and Alberta Health services concluded that meditation may be a powerful complement to treatment plans aimed at altering the cellular activity of cancer survivors.¹⁶³

The study was one of the first to suggest scientifically, that a mind-body connection does exist. The study included 88 breast cancer survivors who, after they completed treatments for at least three months, met weekly for 12 weeks of mindfulness-based activities. The participants attended group discussions along with meditation and *Yoga* sessions and committed to practicing meditation and *Yoga* at home for 45 minutes daily.¹⁶³

What Meditation does to Telomeres:

Following the study of this group, researchers found that the telomeres that determine how quickly a cell ages – stayed the same length in cancer survivors

who meditated or took part in support groups over the three-month period. On the other hand, the telomeres of a control group of cancer survivors who didn't participate in these groups, shortened during the three-month study. Shortened telomeres are associated with several disease states, as well as cell aging, while longer telomeres are thought to be protective against disease.¹⁶³

What excited researchers most, was that they were able to demonstrate over a relatively short period of time, that a consistent mindfulness practice could influence cell behavior in such a potentially powerful way. In fact, today, Roswell Park Cancer Centre, Sloan Kettering and other leading centres offer MBSR to their patients to improve quality of life and prevent recurrence of cancer. Besides cancer, MBSR benefits have been reported in an array of clinical conditions such as depression, recovery after brain injury, anxiety disorders, substance abuse, diabetes, psoriasis, irritable bowel syndrome, post-organ transplantation, Parkinson's disease and so on. A Roswell Cancer Centre website write up states, *"More than 3,000 scientific studies have been conducted on the benefits of meditation, and include positive outcomes for the treatment of depression, anxiety, lack of concentration, high blood pressure, inflammatory disorders, asthma, PMS, Arthritis, Fibromyalgia and more."*¹⁶⁴

Effects of Meditation on Brain Grey Matter:

An interesting Italian study correlated measurable increase in brain grey matter, and improvement in distressing psychological parameters with mindful meditation even in the short term! The paper states, *"Here we analysed several morphometric indexes at both cortical and subcortical brain level, as well as multiple psychological dimensions, before and after a brief -8 weeks- Mindfulness Based Stress Reduction (MBSR) training program, in a group of 23 meditation naïve-*

subjects compared to age-gender matched subjects. We found a significant cortical thickness increase in the right insula and the somatosensory cortex of MBSR trainees, coupled with a significant reduction of several psychological indices related to worry, state anxiety, depression and alexithymia.

Most importantly, an interesting correlation between the increase in right insula thickness and the decrease in alexithymia levels during the MBSR training were observed. Moreover, a multivariate pattern classification approach allowed to identify a cluster of regions more responsive to MBSR training across subjects. Taken together, these findings documented the significant impact of a brief MBSR training on brain structures, as well as stressing the idea of MBSR as a valuable tool for alexithymia modulation, also originally providing a plausible neurobiological evidence of a major role of right insula into mediating the observed psychological changes.”¹⁶⁵ Recent research points to beneficial effects on the white matter of the brain too with mindful meditation.¹⁶⁶

Having seen such results, many doctors are also encouraging patients to incorporate this ancient practice into their lives to promote well-being, positive outlooks and even faster recoveries. Research has shown that eight weeks of mindfulness meditation may elevate serum serotonin levels resulting in a significant decrease in depression, anxiety and stress as well as decreased acute or chronic pain.¹⁶⁴

Pro-Health Effects of Spirituality and Religion:

It has been proved beyond doubt that involvement in spirituality and religion are pro-health activities. Jeff Levin, a social epidemiologist, notes that more than 1600 studies have been conducted examining the correlation between religious and

spiritual participation and health. The evidence is overwhelming. Findings persist regardless of religious affiliation, diseases or health conditions, age, sex, race or ethnicity, or nationality of those studied. This finding is positively correlated with education. People who have a strong educational background believe that these kinds of practices and principles are important for health and well-being.^{167,168}

It's clear from the correlational studies within the epidemiology data that positive relationships exist between religious and spiritual practice and health outcomes on a variety of different conditions. That incorporating spiritual practices and faith in religion and scriptures is pro-health has been brought out by many studies.

Going into the details of each of these is beyond the purview of this book. But the point is, that what helps patients must certainly help doctors! MBSR promises to be a powerful no-cost tool to help reduce stress levels in doctors and improve their quality of life. Led by common sense, rather than waiting for the results of double-blind studies, both governmental and non-governmental organisations in the USA have been quick to adopt the benefits of MBSR.

The American Public embraces Meditation practices:

Just to illustrate how well the Indian practices of meditation and *Yoga* have been received by ordinary citizens in the USA, let me quote Peggy Gaines, a nurse turned certified meditation instructor. She discovered the value of meditation when devastated by a family crisis - her 18 year-old son was diagnosed to have a malignant brain tumour. It was meditation that helped her face that challenge. Writing about the popularity of meditation, she pens in her website and I quote, *“Training programs in mindful meditation have started to appear in public and private K-12 schools. As well as other new arenas like the US Military,*

where soldiers started to undergo a mindfulness-based mind fitness training called M-fit. Meditation even appeared in US prisons, where psychologists offered different kinds of meditation to prisoners as a way to deal with the stress of living behind bars... ”

“...Outside of government run organizations, meditation also leaked into the private world. Corporate leaders like Steve Jobs and Google execs were embracing meditation long before it became mainstream. And the practice trickled down from industry giants and Silicon Valley to the rest of the working world. Most recently, meditation started to gain recognition in the realm of sports. It’s well known that Michael Jordan and his 1990 Chicago Bulls teammates meditated on their road to winning NBA championships. And the practice gained unprecedented steam in the 2010s when teams like the 2013 Super Bowl Champions Seattle Seahawks claimed that they used meditation and mantras like “Quiet your mind” and “Focus your attention inwardly.”

“... After successfully launching meditation programs in public schools, expect to see more in the classroom. It’s also spreading to companies of all sizes as well as in doctor’s offices all across the country. So, in just 40 short years, meditation has gone from an unknown Eastern practice to a part of life for millions of Americans. This rapid growth is a testament to the power of meditation. It’s also a sign of how embracing a simple practice can make every person better in seemingly limitless ways.”¹⁶⁹

Cancer Survivor Vet who attributes Recovery to Meditation & Nutrition:

Dr. Gawler, an Australian Vet and cancer survivor who attributes his survival to meditation and nutrition, echoes Gaines as he states in his website, “*You may be*

taking up meditation to manage stress or to heal physically or mentally, to find more peace and balance in your life, to be more efficient at work or to perform better at sport, or to be a nicer person. Around 7,000 research articles confirm that all these outcomes can follow with the regular practice of meditation. It makes good sense to begin meditation with any of these intentions in mind. While meditation has a myriad of well-proven benefits for our health, our healing and our wellbeing, the real gift of meditation is that it helps us to get to know ourselves better. And in doing so, meditation brings a deep confidence and contentment. A sense that we are fundamentally okay, that life makes sense... And what we are left with is a natural good humour and an easy smile; the essence of meditation.”¹⁷⁰

Gawler’s last sentence is something most health professionals yearn for.

Mindfulness Benefits Primary Care Physicians - 2009 Landmark Study:

A fortuitous 2009 study brought mindful meditation into focus as a tool to help doctors de-stress. In 2009 the Journal of the American Medical Association published the results of a study examining the effects of a year-long course for primary care physicians on mindfulness, that ability to be in the zone and present in the moment purposefully and without judgment.¹⁷¹ According to Dr. Krasner, lead author and teacher of Medicine at the University of Rochester, seventy physicians enrolled and participated in the four components of the course — mindfulness meditation; writing sessions; discussions; and lectures on topics like managing conflict, setting boundaries and self-care.

The effects of the sessions were dramatic. The participating doctors became more mindful, less burned out and less emotionally exhausted. But two additional findings surprised the investigators. Several of the improvements persisted even

after the year-long course ended. And those changes correlated with a significant increase in attributes that contribute to patient-centered care, such as empathy and valuing the psychosocial factors that might affect a patient's illness experience.¹⁷¹ So training in mindfulness and meditation definitely helps.

A Brief History of *Yoga* in the USA:

Yoga is a practice that over the past half century has found wide acceptance in the West, particularly the USA, as a valuable pro-health measure. Historically, it was in 1920 that Paramahansa Yogananda came to address a conference of religious liberals in Boston. He had been sent by his guru, the ageless Babaji, to "spread the message of *Kriya Yoga* to the West". Today Encinitas is the global headquarters of the Self Realisation Fellowship started by him that teaches *Kriya Yoga*. In 1947, the year of Indian Independence, Theos Bernard and Indra Devi independently brought *Yoga* to the USA. Bernard published *Hatha Yoga: The Report of a Personal Experience*, which is still a major resource book for *Yoga*, and Indra Devi opened a *Yoga* studio in Hollywood.¹⁷²

Along with *Yoga* and meditation, the Indian way of thinking also reached the West. Richard Hittleman was a student of the Indian spiritual master, Ramana Maharshi, along with Dr. Paul Brunton, in the late 1940s and regarded Maharshi as his guru. Hittleman's chief teaching was that ultimately all is only divine SELF (*Atman*) - the blissful mind of God - and that this divine selfhood was present in all people, to be realized through meditation and other *Yoga* techniques. Hittleman wrote: "*Self is another word for 'God'. This is the God who is the absolute, immutable, without qualities, pure awareness, without beginning or end.*"¹⁷² *Yoga* for better physical health was the bait he used to draw American youth to get interested in *Vedanta*

and Indian thought. To make it more acceptable to young Americans, he presented a non-religious *Yoga* for the American mainstream, with an emphasis on its physical benefits. He hoped that the youth, particularly students would then be motivated to learn *Yoga* and meditation and thereby develop a taste for the philosophy underlying those traditions.

Disciples of Swami Sivananda, Swami Vishnudevananda and Swami Satchidananda popularised the Sivananda brand of *Yoga*. Swami Vishnudevananda, founded the Sivananda *Yoga* Vedanta Centers, headquartered in Montreal. In 1966 Swami Satchidananda, another of Swami Sivananda's disciples, arrived in New York for a couple of days and ended up staying permanently. His Integral *Yoga* Institute now includes an ashram in rural Virginia and over 40 branches worldwide.

Reports freelance writer Holly Hammond, “*Maharishi Mahesh Yogi's Transcendental Meditation centres which came up in the sixties, grew by the turn of the century to have 40,000 teachers and more than four million practitioners, with 1,200 centers in 108 countries. In 1966 Amrit Desai founded the Yoga Society of Pennsylvania, and later Kripalu Yoga Ashram. Swami Rama amazed researchers at the prestigious Menninger Foundation in 1970 when tests showed he could control his autonomic nervous system functions including heartbeat, pulse, and skin temperature.*”¹⁷²

“*Ram Dass, a former Harvard professor left on a pilgrimage to India in the late '60s as Richard Alpert; he returned with a guru and a new identity*”, continues freelance journalist Holly Hammond. His 1970 tour of college campuses helped popularise the spiritual quest as a lifestyle for a new generation of seekers. In 1974, Ram Dass created the Hanuman Foundation, a non-profit foundation

meant to embody the spirit of service inspired his Guru, Neem Karoli Baba. The Hanuman Foundation developed the Prison-Ashram Project, directed by Bo and Sita Lozoff, which helped prison inmates grow spiritually during their incarceration.¹⁷²

Eastern Spirituality spawns Compassionate Community Projects in the West:

At the risk of digressing let me continue to narrate how this seed of Eastern spirituality grew into novel compassionate community projects in the West. The Dying Project, conceived with Stephen Levine, helped many bring awareness and compassion to the encounter with death. Also, as part of the Hanuman Foundation, Dale Borglum founded and directed the Dying Center in Santa Fe, the first residential facility in the United States whose purpose was to support conscious dying. The Prison-Ashram Project, now called the Human Kindness Foundation, continues under Sita Lozoff in North Carolina and the Living/Dying Project, now a separate non-profit headed by Dale Borglum in the Bay Area, provides support for transforming the encounter with life-threatening illness into an opportunity for spiritual awakening.

Despite suffering a stroke and other health challenges, Ram Dass continues to influence youth to do good, through his pod casts and as a co-founder and advisory board member of the Seva Foundation (“seva” means “service” in Sanskrit), an international service organization. Seva supports programs designed to help wipe out curable blindness in India and Nepal, restore the agricultural life of impoverished villagers in Guatemala, assist in primary healthcare for American Indians, and to bring attention to the issues of homelessness and environmental

degradation in the United States, along with other nations. Ram Dass's book *Be Here Now* can well be considered the precursor of today's mindful meditation.

***Yoga* gains Acceptance as a Component of Medical Care in the USA:**

Getting back to *Yoga*, over the last few decades, *Yoga* has become an accepted component of medical care. A growing number of healthcare practitioners are turning to the ancient practice as a way to help their patients feel better. *Yoga* therapy is now recognized as a clinically viable treatment, with established programs at major healthcare centers, such as The University of Texas MD Anderson Cancer Center, Memorial Sloan Kettering Cancer Center, Cleveland Clinic, and many others.

In 2003, there were just five *Yoga*-therapy training programs in the International Association of *Yoga* Therapists (IAYT) database. Today, there are more than 130 worldwide, including 24 rigorous multi-year programs newly accredited by IAYT, with 20 more under review. According to a 2015 survey, most IAYT members work in hospital settings, while others work in outpatient clinics or physical therapy, oncology, or rehabilitation departments (and in private practice).^{173,174}

The healthcare world's increased acceptance of *Yoga* therapy is partly due to a significant body of clinical research that now documents *Yoga*'s proven benefits for a range of health conditions, including back pain, anxiety, depression, and insomnia, as well as its ability to help reduce risk factors for cardiovascular disease and hypertension. *Yoga* has even been documented as a way to alleviate the side effects of cancer treatment.

Yoga researcher Sat Bir Khalsa, PhD, an assistant professor at Harvard Medical School and co-author of the Harvard Medical School Guide e-book *Your Brain on Yoga* says that the quantity and quality of clinical trials involving *Yoga* have been increasing exponentially. More than 500 research papers on *Yoga* therapy have been published in peer-reviewed journals, including the randomized, controlled, double-blind studies- modern medicine's gold standard. There is now a professional-level medical textbook too - *Principles and Practice of Yoga in Healthcare* (Handspring Press, 2016), co-edited by Khalsa; Lorenzo Cohen, PhD; Shirley Telles, PhD; and *Yoga Journal's* medical editor, Timothy McCall, MD. *"The book's publication is an indication of how far Yoga and Yoga therapy have come,"* McCall is quoted as saying.¹⁷⁵

Yoga therapy has grown thanks to the acceptance it has received in the public mind. According to the Centers for Disease Control and Prevention's National Health Interview Survey, in 2002 only 5 percent of the US population actively practiced *Yoga*. By 2012, that number had nearly doubled, reaching 9.5 percent.¹⁷³ At the same time, more practitioners believe *Yoga* improves their health: In 2004, only 5 percent of readers surveyed by *Yoga Journal* said they did *Yoga* for health reasons; in the 2016 study by *Yoga Journal* and *Yoga Alliance*, more than 50 percent of all respondents cited health as a motivator.¹⁷⁶

Yoga for Medicos & Junior Doctors:

Going by the above reports, *Yoga* must be a good thing for health professionals too. Noting the benefits *Yoga* can give, a 2017 paper gives a brief practical plan that can help medicos and doctors as a measure in self-care.¹⁷⁷

Various practices of *Yoga* have been found beneficial to attenuate stress and enhance functionality among medical students. *Yoga* practices are found to reduce perceived stress, anxiety, markers of stress such as cortisol, improved general health and well-being, physical and physiological health, improved cognition as well as cultivation of positive emotions such as empathy, compassion, and self-regulation. There is evidence of a reduction in work-related stress and better autonomic balance with the practice of *Yoga* in health professionals. Besides psychological benefits, *Yoga* promotes physical health such as better autonomic balance, enhanced respiratory endurance, auditory and visual reaction times as well as muscle strength.

Multiple Studies showing Benefits of *Yoga* among Medicos:

Few research studies showing the beneficial effects of *Yoga* among medical students are listed in the table below.¹⁷⁸

Authors	Year	Sample size	Intervention	Findings
Bond <i>et al.</i>	2013	27	<i>Yoga</i> and meditation	11-week <i>Yoga</i> -based program increased self-regulation, self-compassion, and empathy and reduction in perceived stress
Erogul <i>et al.</i>	2014	58	MBSR for 8 weeks	MBSR intervention improves perceived stress and self-compassion

Warnecke <i>et al.</i>	2011	66	8 weeks practice of mindfulness meditation	Mindfulness practice reduced stress and anxiety in senior medical students
Simard and Henry	2009	14	16-week <i>Yoga</i>	Improvements in overall health, perceived stress, and depressive symptoms
Chen <i>et al.</i>	2013	60	Mindfulness meditation 30 min daily for 7 consecutive days	A brief course of mindfulness meditation was found to be beneficial to reduce anxiety and lowering blood pressure
Shapiro <i>et al.</i>	1998	NA	8 weeks practice of mindfulness meditation	Reduction in self-reported state and trait anxiety, overall psychological distress and depression, an increase in overall empathy, and spiritual experiences
Malathi and Damodaran	1999	50	<i>Yoga</i>	<i>Yoga</i> reduced basal anxiety as well as prior to examination
Turakitwanakan <i>et al.</i>	2013	30	Mindfulness meditation	Mindfulness meditation reduces serum cortisol levels and produces statistically non-significant improvement

				in GHQ scores
Bansal <i>et al.</i>	2013	82	45 min of integrative practice for 1 month	Improvement in general and mental wellbeing following the intervention
Malathi <i>et al.</i>	1998	75	<i>Yoga</i> and relaxation	<i>Yoga</i> and relaxation attenuated heart rate, blood pressure, and galvanic skin resistance in response to the stress of examination and enhanced reaction time
Madanmohan <i>et al.</i>	1992	27	<i>Yoga</i> for 12 weeks	<i>Yoga</i> improves visual and auditory reaction time, respiratory endurance, and muscle strength
Saoji <i>et al.</i>	2016	42	Mind sound resonance technique	Single session of meditation improves performance in the cognitive tasks

MBSR = Mindfulness-based stress reduction, GHQ = General Health Questionnaire (table taken from 2016 article by Saoji¹⁷⁸)

Yoga Helps at Exam times!

To quote from Saoji's article, "...*One of the most important stressors among medical students is the examination. Malathi and Damodaran et al. have found*

Yoga to be beneficial in modulating the response to stress during the examination. In addition, studies indicate that Yoga could enhance the examination performance and reduce anxiety. Another important area of concern brought out by Fares et al. is the lack of self-care behavior among medical students. Yoga and mindfulness-based practices have demonstrated beneficial impact on the self-care behavior in counselors, who encounter similar health issues of that of medical students.”

“...From the review of existing scientific literature on the application of Yoga in medical students, it is evident that Yoga is a self-practiced, low cost, safe, efficacious as well as acceptable tool benefitting the target population. There are positive outcomes for the medical students in their physical, psychosocial, and emotional health. The practices that are safely used in the well-being of student community include asana (physical postures), Pranayama (breathing practices), (meditation), mindfulness-based stress relaxation, and mind sound resonance technique (MSRT). These techniques were used either as standalone modality in a combination or even as an adjunct program within the frame of medical curricula.”¹⁷⁸

The Modern Indian Healthcare System & Yoga:

The possible mechanisms involved with the beneficial effects of *Yoga* among medical students include autonomic balance, relaxation, better emotional status, and self-care behavior.¹⁷⁸ Surely in India, the motherland of *Yoga*, considering the current evidence in the field, which indicates the beneficial effects of *Yoga* on the physical, psychological, emotional, spiritual, and overall well-being of medical students, *Yoga* should be incorporated into the medical curricula for the health benefits of doctors-in-the-making, the medical fraternity, and community at large.

Until then at least in centres of healthcare that profess to be ‘excellent’, *Yoga* should become part of the training for the healthcare team starting with doctors and nurses. It is heartening to note that some hospitals, like the Sri Sathya Sai Sanjeevani Centre for Child Heart Care in Raipur, have such a programme running for all the staff.

Forty Minutes of *Yoga* for Fitness!

The possible inclusions in such program could be the practice of simple *asana*, *Pranayama*, meditation, and mindfulness-based relaxation. The following module is proposed to be incorporated for medical students keeping in mind the existing literature on *Yoga* for medical students:¹⁷⁸

- *Shithilikarana vyayama* (loosening exercises) - 5 min
- *Suryanamaskara* (sun salutation) - 5 min
- *Asana* (physical postures) - 15 min
- *Pranayama* (breathing practices) – 10 min
- Meditation/relaxation – 10 min
- Mindfulness-based relaxation/*Yoga nidra* (psychic sleep)
- MSRT or cyclic meditation – once a week.

A study on how *Yoga* can benefit nurses was done by Gina Alexander et al. They did a pilot-level randomized controlled trial to examine the efficacy of *Yoga* to improve self-care and reduce burnout among nurses. Compared with controls ($n = 20$), *Yoga* participants ($n = 20$) reported significantly higher self-care as well as

less emotional exhaustion and depersonalization upon completion of an 8-week *Yoga* intervention.¹⁷⁹

Integrated Care gains Acceptance:

Even at the turn of the century, anything even remotely spiritual or religious used to be generally viewed as ‘unscientific’ and ‘reactionary’ by the medical fraternity. But that has changed now. *“We need to incorporate interventions such as meditation, Yoga, tai chi, reiki, arts and music into the medical world,”* says Fernando Camacho, Oncologist who is spearheading a movement to integrate spirituality into medical care. He has integrated such modalities to the benefit of his patients at Montefiore Einstein Center for Cancer Care.¹⁸⁰ *“By offering activities such as drum circles, mindfulness meditation and peer counseling, hospitals can become more spiritual places, where our patients and staff alike can most calmly and confidently take on each task ahead”*, adds Camacho. As Dr. Camacho explains spirituality is different to ‘religiosity’.¹⁸⁰

Health Spirituality & Religion- a Landmark 100 Year Meta-Analysis:

A landmark 2012 paper in ISRN Psychiatry, involving a meta-analysis of the studies of the past century on the impact of spiritual and religious practices on health states, *“...The majority of studies report significant relationships between Religiosity/Spirituality and better health.”* The author, Koenig of Duke University adds, *“... The field of religion, spirituality, and health is growing rapidly, and I dare to say, is moving from the periphery into the mainstream of healthcare. All health professionals should be familiar with the research base described in this*

paper, know the reasons for integrating spirituality into patient care, and be able to do so in a sensible and sensitive way. At stake is the health and well-being of our patients and satisfaction that we as healthcare providers experience in delivering care that addresses the whole person - body, mind, and spirit.”¹⁸¹

Since religion is such a sensitive issue in the Indian sub-continent, it is imperative that healthcare institutions and healthcare professionals understand the difference between religion and spirituality.

What’s the Difference between Religion & Spirituality?

The IRSN paper mentioned earlier, attempts to spell the differences between ‘Religiosity’ and ‘Spirituality’. However, the differences are best depicted by a Jesuit and French theologian and paleontologist Dr. Teilhard de Chardin who built an integrated vision of science and mysticism. Said he and I quote,

“Religion is not just one; there are hundreds. Spirituality is one.

Religion is for those who sleep. Spirituality is for those who are awake.

Religion threatens and frightens. Spirituality gives inner peace.

Religion speaks of sin and guilt. Spirituality says, “Learn from error.”

Religion speaks of a God; it is not God. Spirituality is everything; and therefore it is in God

Religion represses everything and in some cases it is false. Spirituality transcends everything; it brings you closer to your truth.

Religion is for those who need someone to tell them what to do and want to be guided. Spirituality is for those who pay attention to their inner voice.

Religion invents. Spirituality finds.

Religion does not tolerate any question. Spirituality questions everything.

Religion is human; it is an organization with men's rules. Spirituality is divine; without human rules.

Religion is the cause of divisions. Spirituality unites.

Religion follows the precepts of a sacred book. Spirituality seeks the sacred in all books

Religion feeds on fear. Spirituality feeds on trust and faith.

Religion lives in thought. Spirituality lives in consciousness.

Religion deals with doing. Spirituality deals with being (the Self)

Religion feeds the ego. Spirituality transcends the ego

Religion fills us with dreams of glory in paradise. Spirituality helps us live in the glory and paradise here and now

Religion lives in the past and future. Spirituality lives in the present

Religion makes us believe in Eternal Life with God after death.

Spirituality makes us aware of God within us eternally through life and death life.

*We are not human beings going through a spiritual experience. We are spiritual beings going through a human experience”.*¹⁸²

WHO - Spirituality in the Definition of Health:

In 1998, the World Health Organisation declared that health was not just confined to the physical, mental and social areas. *“Health is a dynamic state of complete physical, mental, spiritual and social well-being and not merely the absence of disease or infirmity”* stated the WHO. The twenty-first century has seen a resurgence in the positive role of spirituality in health and the dimension of spiritual well-being is seen by many physicians as vital for health. Francesco Chirico in a 2016 paper stated, *“Moreover, spirituality, personal beliefs and religiousness are not synonymous. Spirituality has received much interest in healthcare services; it can improve strategies for managing stress and can positively influence immune, cardiovascular (heart and blood vessels), hormonal, and nervous systems. For this reason, it may be implicated in a wide range of physical and mental health conditions, and I believe it’s time to review the WHO’s health definition, adding to it the ‘spiritual well-being’ dimension.”*¹⁸³

US Public Opinion on Spirituality Influences the Medical Establishment:

Bodies governing medical education in the West woke up to the need to make Spirituality part of medical education responding to overwhelming public opinion. In the USA, a 2000 Gallup poll, showed that 91% reported a belief in God or a universal spirit, while 83% asserted that, “God is highly important in my life.” In another poll of 1,000 U.S. adults, 79% of respondents believed that spiritual faith could help people recover from disease and 63% felt that physicians should ask patients about their spiritual beliefs.¹⁸⁴ Journal of General Internal Medicine 2006 reports that, *“To address these concerns, governing bodies for medical education, such as the Association of American Medical Colleges, have recommended that*

*spirituality and religion be incorporated into medical training.”*¹⁸⁴ According to a 2016 article, more than 75 percent of U.S. medical schools now include some recognition of spirituality in their curriculum or offer additional programming to students who are interested. Competencies around spirituality are now woven through many curricula - so that, for instance, students may learn to take a patient's spiritual history along with taking a medical history.¹⁸⁵

The concept of spirituality is not the same as religion, however. A popular working definition of spirituality is the search for meaning and purpose; the connection to others, self, nature; and the significant or sacred.¹⁸⁵

Institute for Spirituality & Health - a First in the USA

Thanks to increasing public and media support as well as increasing support from doctors an Institute for Spirituality and Health has been set up by Dr. Christina Puchalski, a palliative care doctor. The George Washington Institute for Spirituality and Health (GWISH) has been a crusader to include spirituality as a course in medical undergraduate studies. Workshops to frame a curriculum including spirituality in medical training are also being increasingly held.^{184,185}

In a 2002 issue of the *Annals of Behavioural Medicine*, Larimore et al presented significant evidence that “...*(a) there is frequently a positive association between positive spirituality and mental and physical health and well-being, (b) most patients desire to be offered basic spiritual care by their clinicians, (c) most patients censure our professions for ignoring their spiritual needs, (d) most clinicians believe that spiritual interventions would help their patients but have little training in providing basic spiritual assessment or care, (e) professional associations and educational institutions are beginning to provide learners and*

*clinicians information on how to incorporate spirituality and practice, and (j) anecdotal evidence indicates that clinicians having received such training find it immediately helpful and do apply it to their practice.”*¹⁸⁶ A 2016 paper emphasizes that inclusion of spirituality as part of medical curriculum should be longitudinal throughout the period of study; should focus on self-care, care of patients and on its benefits for the care team as a whole.¹⁸⁷

The Modern Medical Establishment in India sadly only Apes the West:

Sadly, in India which is the cradle of spirituality there is no mention of any education /training in spirituality in the Graduate Medical Education Regulations published by the Medical Council of India in 2017. In a 2007 issue of the Journal of Postgraduate Medicine, Chattopadhyay laments that India has not realized the health-value of Indian spiritual traditions while the West has!¹⁸⁸ Along with prayer, meditation and *Yoga*, *Ayurveda* is now included in the broad category of complementary and alternative medicine (CAM) in the technologically developed countries like the United States.

Interestingly, there has been an appreciable change in attitude, from outright rejection to humble appreciation, toward these traditional indigenous or complementary and alternative systems of medicine. Many US medical schools now offer courses on CAM as part of their training of medical graduates. Complementary and alternative medicine is also integrated with modern Western medicine in medical education and practice in Cuba. Sri Lanka has sustained traditional medicine like *Ayurveda* in its comprehensive National Health Policy.¹⁸⁸

Lone Voices in the Wilderness.

A) - Prof Chattopadhyay

Though the Medical Council of India seems to have adopted the ostrich policy when it comes to Spirituality in Medical Education, Chattopadhyay, Erasmus Mundus Master of Bioethics Fellow, Department of Ethics, Philosophy and History of Medicine, University Medical Centre Nijmegen, in the Netherlands and author of the much quoted article in the Journal of Post Graduate Medicine on the need to integrate spirituality into the medical curriculum, urges teachers in Indian Medical Colleges to make medical education more holistic.

Writes Chattopadhyay, “In this time of erosion of values and virtues, the meaning and purpose of value-free scientific medical education really needs to be questioned. It is desired that tomorrow's physicians would be trained to take care of patients holistically and address their needs in the physical, mental and spiritual realms of life. Incorporating religion and spirituality into health and medicine - both in education and practice - could help make medicine more holistic, value-based and compassionate in nature. Without waiting for a major structural change in the curriculum, clinicians can start teaching the medical students about being respectful toward patients' religious beliefs, the art of taking spiritual history, integrating Yoga, prayer and other practices with clinical care and thus make positive quality changes in the ethos of medicine in India.”¹⁸⁸

“...religion and spirituality do play important roles in the lives of millions of Indians of different faith traditions and cultures. Both religion and medicine share the common values of care, compassion and service. Religious beliefs and spiritual practices may provide the physicians with new avenues for achieving better health outcomes e.g. advising a patient who is Vaishnava (devotee of Vishnu, follower of

Krishna or path of devotion) or Islamic background to stay away from smoking or alcohol addiction. Addressing the religious concerns and spiritual needs of patients whose religious and cultural backgrounds differ from those of the physicians would certainly improve physician-patient relationship... ”

“...Last but not the least is the important role that religion and spirituality can play in the lives of healthcare professionals of the present and future. As the medical students progress through their medical training program, many of them show declining idealism, cynicism and growing apathy toward the medical profession. Practicing medicine also takes a toll on life. Physicians at some point of their professional lives may have feel burnt out and depressed, experience lack of motivation, harbor suicidal thoughts, face mental and physical illness and turn to alcohol and drug abuse. Physicians have been using religion and spirituality as a wellness-promotion practice for their own wellbeing. Daily spiritual practices might help mitigate physical, cognitive and emotional forms of burnout in medical and mental health practitioners. Thus, healthcare professionals may also find religion and spirituality not only important in the lives of their patients, but also significant for their own renewal and healing process.”¹⁸⁸

B) Prof Singh and associates:

A decade later Singh et al pointed out in the Indian Journal of Psychological Medicine that, “...Ongoing research in medical education and curriculum design points towards the inclusion of competence, communication and training in spirituality. There are structured and reliable instruments available for assessing the relationship between spirituality, religion and health in research settings...”¹⁸⁹

C) Dr. Devi Shetty

Though Dr. Shetty, one of the three eminent doctors nominated by the government to revamp the Medical Council of India has avowed in televised interviews that most successful doctors incorporate spirituality in their practice of medicine, it is a sad commentary on the state of things that even in 2017 the Graduate Medical Education Regulations of the Medical Council of India does not have the term ‘spiritual’ anywhere in it. However the goals they have written down, i.e., “practice of holistic medicine”, “personal integrity”, “ability to relate to or show concern for other individuals”, “appreciate the socio-psychological factors affecting health”, “develop humane attitude towards the patients” can be achieved only if an understanding of spirituality, new ideas in quantum physics, altruism and religion are made part of the medical curriculum and training. Hoping to achieve the lofty goals mentioned, without given any place to education or training in spirituality in medical education is impossible.

It is disheartening that India, the motherland of *Yoga* and meditation, is yet to incorporate these priceless no-cost, no-side-effect, yet most effective complementary therapies in her medical colleges. Here, the private sector has been more responsive. Corporate hospitals with Joint Commission International accreditation, offer their patients *Yoga*, *pranic* healing, meditation and even music therapy.

D) Prof Agarwal

Agarwal, in a 2018 paper after a review of evidence-based research on the benefits of *Yoga* in cancer treatment has recommended that, “*Greater efforts must be made to integrate Yoga as a mainstream therapeutic program. This includes scientific*

*mindset and acceptability of Yoga as an important therapeutic tool. It is therefore necessary to introduce courses on Yoga therapy in medical schools, seek accreditation by authentic agencies, provide insurance coverage for Yoga therapies, and educate the public about the benefits of Yoga.”*¹⁹⁰ Now that the political leadership with a better understanding of the merits of *Yoga* is in power in India, one can hope that *Yoga* will gain its rightful place in the practice of modern medicine in India too.

E) Prof Thangavel:

A 2015 paper has recommended that India take the lead and incorporate *Pranayama* into the first year Physiology curriculum. Writes Thangavel from Sri Ramachandra Medical College, “*Basic Faculty Development workshop, Research Methodology workshop, PRANAYAMA as a health promotion in Medical Students and Mentorship can be totally done at undergraduate and PG level by Community Medicine department as an Indian Innovation in Medical Education and this will make the Community Medicine Department, the centre of attraction for Medical Students. Teaching Professionalism is challenging, because medical teachers are Medical Education Technologists. The objective is to include the theory and practice of PRANAYAMA along with the Physiology of Breathing in the 1st year MBBS course and reinforcing it in the Community Medicine Department.*”¹⁹¹

There is no mention of *Pranayama* in the Indian Medical Curriculum as of today. In the West, Dean Ornish has popularised the stress relieving, pro-relaxation benefits of *Pranayama*. Alternate nostril breathing, abdominal breathing, ‘square pattern breathing’ etc. are increasingly gaining acceptance as excellent complementary

therapies in the management of anxiety linked symptoms and disorders. They have the benefit of being no/ low cost and totally free of side effects.

Though neglected in their homeland, India, *Dhyana* (meditation), *Yoga* and *Pranayama* (Breathing techniques) are being increasingly studied and used to benefit the public at large in the past two decades in the USA.

A 2018 Harvard Mental Health Letter Update on Benefits of *Yoga*:

As early as 2009, the Harvard Mental Health Letter had reported health benefits of *Yoga*; and after a decade of reviewing the pro-health health benefits of these Eastern practices, the 2018 Harvard Mental Health Letter stated, “By reducing perceived stress and anxiety, *Yoga* appears to modulate stress response systems. This, in turn, decreases physiological arousal - for example, reducing the heart rate, lowering blood pressure, and easing respiration. There is also evidence that *Yoga* practices help increase heart rate variability, an indicator of the body's ability to respond to stress more flexibly.”

It also quoted a significant Utah study which showed that people who have a poorly regulated response to stress are also more sensitive to pain. Experienced *Yoga* practitioners, people with fibromyalgia (a condition characterized by hypersensitivity to pain, and healthy volunteers were subjected to painful thumbnail pressure. The participants with fibromyalgia - as expected - perceived pain at lower pressure levels compared with the other subjects. Functional MRIs showed they also had the greatest activity in areas of the brain associated with the pain response. In contrast, the *Yoga* practitioners had the highest pain tolerance and lowest pain-related brain activity during the MRI. The study underscores the value

of techniques, such as *Yoga*, that can help a person regulate their stress and, therefore, pain responses. The 2018 Mental Health Letter concluded, “The evidence is growing that *Yoga* practice is a relatively low-risk, high-yield approach to improving overall health.”¹⁹²

2019 Study Results - *Yoga* Effective to Prevent & Treat Stress and Burnout Among Health Workers:

The prestigious Journal of Clinical Medicine published results of a study on the use of *Yoga* to manage stress and burnout in healthcare workers. The researchers conclude, “*Yoga* is effective in the prevention and management of musculoskeletal and psychological issues. In addition to an improvement in physical problems and quality of sleep, both stress levels and burnout are consistently reduced in subjects who practice *Yoga* techniques and mind-body meditation.”¹⁹³

A 2019 Report - Introduction of Meditation in Surgical Training:

It is most heartening to note that mandated by the Accreditation Council for Graduate Medical Education (which sets standards for US graduate medical education programmes), mindfulness based cognitive training in surgery is an ongoing project; and initial results have been promising. The Mindful Surgeon Pilot Randomized Clinical Trial studied the effect of modified MBSR (modMBSR) on primarily on perceived stress and executive function and secondarily on burnout, depression, motor skill performance, and changes in blood oxygen level–dependent functional neuroimaging during an emotion regulation task were studied. This trial conducted in PGY-1 surgery residents showed potential benefits

to well-being and executive function, suggesting a powerful role for mindfulness-based cognitive training to support resident well-being and performance.¹⁹⁴

One can only hope, that taking a leaf out of all this the Medical Council of India will make training in *Yoga*, *Dhyana* (Meditation techniques) and *Pranayama* (pro health breathing techniques), part of graduate and post graduate medical education. 2020 has been a year that has highlighted the value of the Indian practices of *Yoga*, *Dhyana* and *Pranayama*, as they have been found to be effective in reducing stress, anxiety and allied disorders among frontline workers during the COVID-19 pandemic; leading medical establishments in the USA have recommended that people turn to these practices to de-stress.

Harvard: Meditation, *Yoga*, *Pranayama* help De-stress during Pandemic:

John Sharp, MD, a board-certified psychiatrist on the faculty at Harvard Medical School and the David Geffen School of Medicine at University of California, Los Angeles, writing in the Harvard Health Blog, suggests that when faced with worries, anxiety, depression during COVID-19 times, *Yoga*, meditation and controlled breathing could help. To practically help readers, he writes, “One simple technique is called square breathing. Visualize your breath traveling along a square. As you follow the instructions to inhale, hold your breath, or exhale, count slowly to three on each side. Try it now. Inhale up the first side of the square. Slowly count one, two, three. Hold your breath across the top. One, two, three. Exhale down the other side of the square. One, two, three. Then hold your breath across the bottom. One, two, three. After a few minutes of this you should be feeling calmer and more centered.”¹⁹⁵ It is plain, simple, basic *Pranayama*!

UCSF- Online Meditation & *Yoga* Classes to Help Frontline Health Workers Battling CCOVID-19 Pandemic:

Re-labelled as ‘Breathing Techniques’, *Pranayama* is proving so useful in relieving anxiety in these pandemic times. Medical academics like Clinical Professor Daphne Miller of University of California, San Francisco, are using these techniques to help herself and patients in the hospital or even through Zoom video interfacing. The basic thing to know is that taking a longer exhale than inhale can help calm your body. Easy techniques include slow diaphragmatic belly breathing (vs. chest breathing), a 2:1 ratio for the exhale (i.e., inhale to the count of 4, exhale to the count of 8); 4-7-8 count breathing, and alternate nostril breathing.¹⁹⁶ All of these are part of basic *Pranayama*.

Stanford: *Pranayama* and *Yoga* help De-stress during COVID-19 Pandemic:

An article by Leasca in the *Yoga* Journal reveals that Stanford doctors are turning to these Eastern practices to de-stress during the COVID-19 pandemic.¹⁹⁷ Why the stress? In the words of Markman, Professor of Psychology at Austin, Texas, “Few people in healthcare have had real-life experience with triage in which a significant number of life-and-death decisions had to be made because of equipment shortages. That increases the chances that they may experience moral injury as a result of their jobs.”¹⁹⁸

What is ‘moral injury’? It is a mental health concern; and often manifests as Post Traumatic Stress Disorder (PTSD). A new research paper co-authored by moral injury experts Rita Brock and HC Palmer states, "the fight against the coronavirus is strikingly similar to battlefield medicine: desperate and unrelenting encounters with patients, an environment of high personal risk, an unseen lethal enemy,

extreme physical and mental fatigue, inadequate resources and unending accumulations of the dead.”¹⁹⁸

According to Leasca, Dr. Arghavan Salles, a Bariatric Surgeon and Scholar in Residence at Stanford University, who was only too aware “of the stress facing first responders, nurses, doctors, and all those working to save lives on a good day”, began sharing the benefits of the practice of these Eastern techniques, with her medical community and beyond by hosting free streaming classes each Saturday on social media. Dr. Lindsey McAlarnen, a fourth-year OBGYN resident in Chicago, states, “I’ve done virtual *Yoga* with Dr. Salles. I’ve been deployed to the COVID-19 renal service and had many unknowns amidst the pandemic and her *Yoga* is a calming way to focus me and bring peace amidst the chaos.” Dr. Amina Farooq, a radiology resident in New York who also started doing *Yoga* with Arghavan in COVID times, echoes the same; says she. “It’s been amazing. It’s been a godsend to keep me sane through all the changes in the hospital and as a resident.”¹⁹⁷

The deep Crisis faced by the Indian Modern Medical Establishment:

The Indian medical scene needs sweeping reform. The unfortunate jettisoning of anything Indian as retrograde and ‘superstition’, with blind adoption of so-called ‘scientific’ materialistic western culture by the Indian intelligentsia has resulted in the Indian medical establishment’s moral downfall. Ridiculing of the priceless Indian pro-health practices is only one symptom of this malaise. Alarming, the very moral fabric of medical education and healthcare is threatened. The moral

crisis in India, manifesting as corruption in its myriad forms in society has percolated down to the medical colleges.

A paper in the Journal of Post Graduate Medicine by Gitanjali, of the faculty of Pharmacology in JIPMER Pondicherry, highlights this moral crisis in medical colleges in India with rampant dishonesty such as copying in examinations, and fudging data in dissertations and research. States the author, tracing the roots of the malady, *“A steady decline in morals and ethics seen among politicians, religious leaders, industrialists and society as a whole seems to be contributing to the academic dishonesty that is eroding into the very depths of our medical educational system. Politicians who give themselves (and their wives!) doctorates, who remove the anti-copying law of a state within one hour of assuming office, who not only make sure that their children get medical seats in colleges but also make sure they pass at the top of the class are just part of the picture.”*¹⁹⁹

Gitanjali minces no words as she continues, *“Which administrator or faculty member will dare stand against this type of “institutionalised corruption”? Even the chairman of the MCI, the prestigious body which is supposed to implement the code of professional ethics for doctors has been accused of malpractice and was asked to step down. Given the high stakes of medical education and the lengths to which parents will go to procure seats for their wards, it is a moot point to expect students or faculty of high moral fibre to enter medicine, after all, the pool of students and staff is drawn from this corrupt society. The “unchallengeable honesty” and commitment seen in most of the faculty of yesteryears may still be seen in a handful of individuals in every institution. It is up to these individuals to curtail the current rot that pervades the medical establishment in India.”*¹⁹⁹

The Dangerous Mantra - Success at any cost!

Youngsters always want to know, “What is in it for me?” The current God less society only teaches eat-live-and-be-merry-for-tomorrow-you-may-die. ‘Success’ is seen to be the only thing that matters; and the ends justify the means to most youngsters, medicos included. This ignorance leading to immoral behavior can be corrected only by presenting the empirical evidence and facts thrown up by quantum physics and para-psychology experiments in the past few decades which sadly, medical curriculum has ignored. Medical students need a course in the advances in quantum physics which reiterates the *Vedic* perspective of all-is-one. The latest studies and psychiatric therapeutic practices like past life regression therapy support the theory of *karma* and rebirth. That one will have to pay for one’s misdeeds is bound to drive sense down the young minds. In the West too, the trend is the same; the boundaries of right and wrong are all too hazy. ‘Succeed at any cost’ is the mantra in vogue; with success equated to fortune and fame in that order.

Global Maladies Afflicting the Senior Medical Fraternity:

(i) Grappling with Finances:

The malady of medicos continues as they become seniors in the practice of medicine. Though most doctors do want to be good doctors, in this day and age grappling with finances has become an ugly but inevitable part of the practice of medicine, with a negative impact on the mental well-being of doctors. One suggestion to help reverse the situation was provided in a 2009 Lancet article by Cole and Carlin. They pointed to the need for structural and cultural change in large institutions where doctors work - for example, in hospitals, health science

centres, or health maintenance organisations. The disillusionment of many physicians in many countries derives from the imbalance between the energy and focus devoted to strategic planning and generating a financial surplus and the attention given to the primary goals of professionalism and patients' care. The change needed, therefore, is providing activities that encourage self-care, reflection, and development.¹³⁹

(ii) Absence of Self Care:

Cole emphasises, “Academic and other health-care institutions and professional organisations need to provide opportunities that support and guide physicians in their search for meaning, wellbeing, and self-care. Physicians need compassionate and non-judgmental listeners. This is especially true, for example, among physicians who take care of seriously ill and dying patients. Our work in this area has shown that first-person narratives by such physicians can reveal some important themes that deserve increased attention: unmourned losses; unrealistic expectations; uncertainty in relating; unasked questions; and unexplained suffering and death.”¹³⁹

(iii) Lack of Spiritual Education Compounds Problems:

“Many of these issues are within the realm of spirituality. Consider the situation of terminal care / emergency care / intensive care physicians. Unmourned losses can mount up when taking care of critically ill and dying patients.”¹³⁹ Therefore not only is it necessary to include spirituality in the medical curriculum, but ‘Continuing Spiritual Education’ on the lines of continuing medical education seems warranted!

To continue with the thought provoking Lancet article, “It is no secret that physicians tend to suppress their feelings to maintain their composure and ability

*to take care of the next patient. But the consequences of neither talking to anyone nor allowing oneself to feel the impact of these experiences often results in an accumulation of pent up emotion and unmourned grief. Similarly, the unrealistic expectations that physicians encounter can also be challenging. In 'Just Here Trying to Save a Few Lives' emergency medicine physician Pamela Grim writes about informing a family of the death of their loved one: "This is the time when people hate you as a doctor. You have failed, flunked, dropped the ball. You should be sued - you will be sued. You are a quack... And a part of you believes all this because no matter how sure thing the death was, some part of you believes you really can perform miracles."*¹³⁹

(iv) The Uncertainty Principle:

As my Professor of Medicine, Dr. KV Thiruvengadam used to say, "*In medicine two plus two is not always four; it could be three or even five.*" Uncertainty is the name of the game. This could land doctors in trouble too. Renowned JAMA columnist Grouse in his column, 'A Piece of My Mind', relates the story of a patient named Annie who came into the emergency room having been kicked in the stomach by her horse. As Annie bled into her abdomen and went into shock, she asked Grouse "Will I live?" Grouse thought she was dying but assured her that she would live. Grouse later told Annie that he had thought that she was, in fact, going to die. On hearing that, Annie felt betrayed and angry. Grouse had no answer; and felt out of his depths. Physicians need training on addressing and coping with the fallout of such issues of uncertainty.²⁰⁰

Cole writes in the Lancet article, "*The difficulty in having open conversations with critically ill patients is illustrated in the posthumous memoir of the physician Steven Hsi, Closing the Chart: A Dying Physician Examines Family, Faith, and Medicine. Despite the compassionate care he received, Hsi was most troubled by*

*his physicians' failure to ask the crucial questions: "What has this disease done to your life? What has it done to your family? What has it done to your work? What has it done to your spirit?" As suggested by Hsi, physicians faced with questions of unexplained suffering and death are loathe to ask existential questions that have no biomedical answer. Some physicians, as David Smith points out in Partnership with the Dying, may hold an unspoken practical theodicy, a way of relieving the shame and guilt of failure by leaving matters ultimately to God or a higher power. But they tend to keep these thoughts to themselves."*¹³⁹

(v) Advances in Medicine Compound a Doctor's Spiritual Dilemma:

Advances in medicine add to the spiritual dilemmas of physicians. Surrogate parenting, organ donation, declaration of brain death, the issues of people just living too long with no 'real life' due to Alzheimer's and other disorders in nursing homes, virtually abandoned by families, the travails of chemotherapy which makes one wonder which is worse - the disease or the treatment, the prohibitive high costs of biological and other modes of treatment that divide the world into can-affords and cant-affords - all add to the physicians dilemma burden. Science alone just cannot provide the answers.

One population subgroup that poses the biggest challenge in developed countries right now, and poised to strike developing countries a few years later due to their sheer numbers, is the elderly. Old age brings into sharp focus the frailty of human existence, the morbidity of ageing and the stark reality of impending mortality. As mentioned in the previous chapter not-for-profit elder care homes seem to give better quality of care. Attrition rate of staff is also lesser in not-for-profit elder care homes. So, the aims of the people setting up and running these homes seems to matter - whether altruistic or commercial or neutral as in government run set ups.

(vi) A Crying Need - Continued Training in the ART of Medicine, not merely in medical advances:

‘CME’ in the ART of medicine and not merely on the scientific advances, is the need of the hour. Passion, compassion, love and the like are as of now beyond the purview of science. And yet they have a vital impact on the quality of healthcare. Therefore, in the interest of better quality healthcare for human beings it seems vital that the custodians of healthcare - the doctors, nurses and others receive not merely a scientific education but education and training in humaneness and in fact, the very meaning and purpose of human life.

The training of doctors and nurses must include meaningful discussions on human birth, life, suffering and death in the context of quantum physics and the huge empirical evidence on the existence of consciousness, the plasticity of time space and non-locality of mind. The ancients knew it intuitively; modern man is rediscovering it; health professionals who have to deal with these challenges day in and day out, cannot afford to be ignorant of these advances. This knowledge then, must become part of medical education so that the patients and their families who seek succour from doctors go back with a greater peace of mind.

A Simple Practical Prescription:

One way to counter the maladies listed above seems to be judicious doses of spiritual education on a regular continuous basis for doctors. It will enable them to re-learn the art of medicine in our rapidly changing times. Simply stated, the best prescription for the health of health professionals is open-minded workshops on spirituality, human values and the latest developments in quantum physics during

undergraduate and post-graduate training. Indeed, it should be part of continuing medical education as well.

Food for thought

A) Recommendations from the East:

Practically, it would involve incorporating at least *Yoga* and meditation into the medical curriculum - which should be music to Indian ears, as we as a nation, are the world's authorities in these fields. As part of the study of *Yoga*, the principles of *yama* (social restraints) and *niyama* (self-disciplines) should be elaborated upon.²⁰¹ The five *yamas* ask practitioners to avoid violence, lying, stealing, wasting energy, and possessiveness, while the five *niyamas* ask us to embrace cleanliness and contentment, to purify ourselves through forbearance, to continually study and observe our habits, and to surrender to something greater than ourselves.²⁰¹ The commercial West has given short shrift to these two vital areas and focused only on *asanas* that benefit the body. But a balanced mind leading to a healthy Emotional Quotient is very important as we know today. A happy spin off would be that not just healthcare professionals but patients also will begin to have more peace of mind and better physical and mental health as they will 'catch' their doctors' positive attitude.

B) Recommendations from the West:

The only way the human race and our planet can survive, according to professor of psychiatry, Dan Siegel, is a radical shift in the way we view things. He heads a project as important as, or probably more important than the human genome project - the human 'connectome' project, which studies how our minds are all

interconnected. From separateness we move to an expansive self-view; echoes of the ancient Indian *Rishis*!²⁰² Says he, “*As I see it, “the science of consciousness” is the key to getting the mind to rise above the brain’s vulnerabilities, which - if not altered or modified - will probably destroy the planet. After all, the perspective of the mind as a product of the brain alone, or the self as only emerging from the skin-encased body, leads us to an isolating sense of inhabiting a “separate self,” which desensitizes us to our impact on each other and on the planet. It’s that narrow understanding of the self that fuels us-versus-them conflicts all around the world and propels us to treat the Earth like a trashcan. So it may well be that our very survival depends on the evolution of the human mind - and contributing to that shift in consciousness really needs to be a primary focus for our field from now on.*”²⁰²

East Meets West:

Evidently, the prescription for health is to move on to an expanded sense of self. No more ‘me’ and ‘me alone’. “*Man has to move from me to we; man has to think ‘mwe’*” - to quote Dan Siegel! It is only fitting that healthcare professionals - doctors and nurses in charge of the well-being of their fellowmen take to this path first. Mindful meditation is what helps one get there; and there are many side benefits. As the brain becomes more integrated, people experience better physical health, less burnout, more intentional strength, and greater relational empathy. Meditation and the state of mental presence are found to be associated with optimum levels of the enzyme telomerase, which repairs the ends of chromosomes as well as the epigenetic alterations that decrease inflammation. In Siegel’s words,

one develops ‘FACES’ - i.e., a *flexible, adaptive, coherent, energetic, and stable* mind, which leads to state of harmony in one’s inner and interpersonal lives.²⁰³

Getting Beyond the Optical Delusion of Consciousness:

Dan Siegel sounds like a *Vedic Rishi* as he states, “*The world is waiting for us to get to the next stage of the evolution of the mind. That means moving beyond the old idea that the totality of the self is entirely contained by, and is synonymous with, the physical body; beyond the old idea that each individual self - your self, my self - is completely separate from other selves, not to mention the rest of the physical world. That’s what Albert Einstein called an “optical delusion” of consciousness. And it’s in getting beyond that delusion that we can begin to embody the more integrated sense of MWe that will make possible a kinder, more compassionate, more connected world, where we belong to each other now and we belong to the future.*”²⁰²

Not just individually, but as societies we need to move on to looking at all things from a ‘MWe’ perspective rather than from just a ‘Me’ perspective! For all the problems facing mankind including discontent with healthcare systems, need to be addressed by civil society as a whole and not just by doctors or nurses. A lot of the discontent with the modern medical system stems from financial inequities and unaffordability issues.

The *Dharma* of Healthcare:

The practice of *Dharma* is doing the right thing, the right way, at all times. Healthcare and the practice of medicine, the world over, are at crossroads; and the

COVID-19 pandemic has only served to underscore that issue. It has exposed the fragility of privatized for-profit healthcare. It has shown the resilience of good public health systems. It has stimulated debate on immune health; that proper nutrition and lifestyle measures to boost natural immunity should get precedence over knee jerk reactions like finding one more vaccine. It has also brought into focus the dangers of vaccines which hitherto tended to be swept under the carpet by a profit-driven pharma and their allies.

Whether healthcare should be free for all, whether it should be covered by universal health insurance, whether for-profit healthcare industry should be allowed unbridled growth thanks to market demands whilst there is no investment in healthcare for the poor - all these are issues the answers to which can only come from discussions based on spirituality and human values. These decisions in today's world, cannot be taken by the medical community alone; decisions have to be taken after healthy debate and discussion between all stakeholders - the doctor and nurse community and allied healthcare professionals, healthcare management gurus, investors, administrators, political masters, the executive arm of government, law makers and civil society in general.

Lessons in *Dharma* for Healthcare Professionals - Need of the Hour!

If *dharmic* decisions are to be taken, it is imperative that all these stake holders involved in healthcare get an education in spirituality and human values. Such a large canvas is beyond the scope of this book. As the first in the line of fire in the healthcare arena, however, it is only fitting that healthcare professionals be educated first. All of spirituality and all the human values are grounded in love.

They say the greatest is love; that love can even heal incurable diseases! As a doctor, I used to always wonder - is that statement really true?

The First Lesson - Love Heals; Faith Heals; More than we Imagine!

Therefore, as we journey to spirituality and human values let me first share a few authentic accounts of such healings and facets of human existence that I can absolutely vouch for. Love, Faith and the like that are fundamental to our human existence are beyond ‘evidence-based medicine’, and yet, like prayer, they make more things possible than one can dream of, even in the realm of healing. With modern advances in communication, no more can these well documented healings be dismissed as ‘impossible’. No more can we doctors adopt the ostrich policy. We may not understand how these healings happen. But they do. That is the truth; and we have to humbly accept it.

That these healings are beyond our current understanding; and in fact, seem ‘impossible’, means only one thing - that the next generation of doctors, has a most challenging area to research, in the true spirit of honest human enquiry.

Over to the ‘impossible’!

* * *

Chapter 5

HEALINGS AND EXPERIENCES BEYOND OUR CURRENT SCIENTIFIC UNDERSTANDING

Outline:

Healings beyond current scientific understanding in the Christian, Islamic, Jain, Buddhist, Sikh, Jewish and Indian traditions; spiritual side of the comatose state; glimpses of the next dimension; living without food; yogis demonstrating control over the autonomic nervous system; sun-gazing; modern medical establishment and academia as closed minded as the medieval church; a silver lining; the impasse between medical science and spirituality; from Newtonian physics to a quantum view of existence, disease and health

The reason why it is important to document and study the one in a hundred thousand cases of ‘miraculous healing’, is not for the glory of the one, but rather for the wondrous possibilities it opens up for the other ninety-nine thousand nine hundred and ninety-nine. Likewise the extra-ordinary but nevertheless true experiences of ordinary men and women, both from the healer’s end and patient’s end warrant study and debate in these days of high-tech medicine, for they will help us frame humane protocols of care, humane counseling of patients and their families, humane end of life protocols, humane organ donation ethics and so on.

In India, ‘miracle cures’ consequent to prayer are fairly commonplace; especially in rural India where people are more heart led and have abiding faith in the omniscience, omnipresence and omnipotence of the divine. Temples are

considered portals to the divine; and pilgrimages to temples, often coupled with vows are carried out in total faith with prayers for healing. Many prayers are answered; when it involves the rich and famous, thanks to the press others come to know of it. Most go unnoticed but as a doctor who practiced in rural India for a few years, I have myself directly witnessed quite a few of such inexplicable ‘faith cures’.

Traditional Indian medical systems, such as *Siddha* and *Ayurveda*, are grounded in this faith in the divine; the basic dictum followed by physicians is, “I treat but it is God who cures / heals”. In fact, in traditional Indian medicine, all treatments are begun with prayer; and ALL cures are considered divine in origin. Since the divine was omnipotent, omniscient and omnipresent, it was considered a prerogative of the divine, to intervene and turn the tables. Impossible cures could happen. Such serendipities were never questioned by the wise ones. Spontaneous / Faith healings were considered rare and exceptions; but could happen- was conventional accepted medical belief.

The traditional medical systems further believed that a human being was much more than a physical body. Anatomy as taught in the traditional systems of medicine, described the existence of non-physical bodies that made the material body functional; namely, the energy body, mind body, supreme intelligence body and bliss body, all of which were permeated by and powered by Consciousness, referred to as the Atman. In mathematical terms, while Consciousness was considered the ‘Universal Set’, the others were subsets of it; the order being, the physical body was a subset of the energy body, which was a subset of the mind body, which was a subset of the supreme intelligence body, which was a subset of the bliss body; and all of these existed in and were permeated by Consciousness.

Further, the higher subsets, i.e., the mind body, supreme intelligence body and bliss body were considered non-local. Cures could therefore result by intervention at any of these subset levels. Distance healing was therefore a concept understood and employed by traditional systems of medicine. Such a concept is alien to modern medical science as of now.

However, it is heartening to note that in this 21st century, many quantum physicists are coming around to the idea that Consciousness is the basis of all existence. Besides, the infinite complexity of cellular processes unquestioningly indicates that a supreme intelligence is indeed, at work within our bodies. Energies of various kinds are believed to operate within the body. New types of energy such as the ‘power of thought’, ‘distance healing’ and the like are finding scientific corroboration; more of all this in the next chapter.

For now, let us take a look at documented healings and cures, which are beyond the understanding of medical science as we know it. *A disclaimer before I begin - all phenomena that defy explanation start as anecdotes observed by someone; then someone else writes about these anecdotes and similar observations that they have heard of, or known of, from other sources, and puts forth a suggestion that these phenomena merit study; then a third person who reads the book gets inspired and takes it up as an area of research. This book has only a role at Step-2; i.e., in collecting from various reliable sources, these anecdotal events and presenting them in a commonsense manner. No matter how many details we collect, a doubter can pick holes in it and dismiss it as ‘unscientific’. But for an open-minded person it presents a research opportunity.

Spontaneous healings are seldom properly documented. Searching through available material, I have cited below cases which have had witness testimony and, in some cases, received testimony from modern medical doctors as well.

Healings associated with Christian Saints

Case 1

Healings associated with Euphrasiamma (Saint Euphrasia)

Saint Euphrasia Eluvathingal baptised as Rosa Eluvathingal (17 October 1877 – 29 August 1952) was an Indian Carmelite nun of the Syro-Malabar Church which is an Eastern Catholic Church and a part of the Saint Thomas Christian community in Kerala. She was canonised as a Saint by Pope Francis on 23 November 2014 in Vatican City.²⁰⁴

To be canonized as a saint, two miracles that have occurred as a result of intercession by the candidate have to be verified and approved. For that, a team of more than 500 medical consultants in Vatican have to attest that they are medically impossible. After that, a team of theologians have to study and give a report on divine intervention in the miraculous cure. Following that, a special congregation of cardinals has to approve it. It is only at the end, that the Pope grants his approval. Confirmation of the first miracle is the penultimate step in the process of canonisation. Only if a second miracle is confirmed, sainthood is declared.

Curing the bone cancer of Thomas Tharakan, a furniture polishing worker from Anchery in Ollur, is the first confirmed miracle attributed to Sister Euphrasia. Thomas had gone to the Jubilee Mission Hospital in Thrissur in 1997 with hip pain. After many scans and tests, the tumour in the hip bone was

diagnosed as cancerous by Dr.Rajeev Rao, an orthopaedic surgeon. The diagnosis was reconfirmed by Dr. Krishnan Nair of the Regional Cancer Centre in Thiruvananthapuram. Thomas was admitted in Jubilee Hospital a day before his surgery. That day, Dr. Rao took another scan, and he found that there was no tumour. The doctor was surprised. Since it was impossible in medicine, he admitted that there must be something divine in it. The tumour on the bone was very clear in the old scan.

Thomas's sister Rosy said the miraculous cure was the result of her prayer to Sister Euphrasia, seeking her intercession. She was an employee of the St Mary's Convent in Ollur.^{205,206}

Case 2

Another Euphrasiamma healing miracle

A second miracle which was subsequently confirmed by the Vatican panel happened on December 20, 2006. Seven-year-old Jewel from Aloor in Kerala had a tumour in his neck because of which it was excruciatingly painful to swallow. The doctors at Dhanya Hospital in Potta said the disease could not be cured without an operation. This expense was beyond the reach of the poor family and they were also worried about the potential complications of surgery which included the loss of ability to speak. After Jewel's maternal grandmother began praying to Sister Euphrasia the family began noticed that the tumour on Jewel's neck was shrinking. Dr. Sasikumar of Dhanya Hospital again examined him and found the tumour to have disappeared. Many doctors examined the boy and stated that it was a complete miracle.^{205,207}

Case 3

Healings associated with Alphonsamma (Saint Alphonsa)

Alphonsamma, as we call her, was the first Saint to be beatified from India. People of all faiths pray to her for help. In our family too prayers to her have been compassionately answered by her. I felt her Presence when she helped me zero in on authentic ‘miraculous’ healings from all faiths, to include in this book. The two miracles listed below were thoroughly scrutinized by the Vatican before Alphonsamma was venerated as St Alphonsa at Rome.

I quote an official write up, *“Athiyalil Thomas Abraham also called Athiyalil Kunjettan was born in Kattoor family of Punkunnam. He was born with a defect of his lower limbs. Both his legs were twisted. His parents took him for treatment to places in Kerala and outside but were of no avail. Once where their relatives were going to St Alphonsa’s Tomb at Bharananganam, their aunt Aleykutty advised them to take the 11 year old boy too. They did so. On reaching the cemetery, they prayed fervently on their knees to St Alphonsa, for the whole day. It was his father’s sister Aleykutty who found the miraculous healing of the boy’s legs on the second day. Vicar Rev. Fr. George Mulangattil (Sr.) of Ponkunnam Church conducted Thanksgiving prayers. The famous doctor Dr. Eppachen Kadamapuzha of Kanjirappally on examination of the boy agreed that both legs have been healed. This miracle was chosen to declare Venerable Alphonsa as Blessed. Athiyalil Thomas Abraham, who ceaselessly prayed Novenas to Sr. Alphonsa and led others to her for most of his life, is 72 years old in 2010.”*²⁰⁸

Case 4 - Another Alphonsamma healing

An official write up informs, *“On 5th may 1998, Jinil was born at a private hospital in Ettumanoor. He is the second son of the Sales tax Inspector of*

Kottayam, named Ozhuthottiyil Shaji Joseph and of Kappumthala Service Co-operative Bank employee, named Lissy. The child was born with his legs bent inwards. He was taken to the ESI Hospital and to the Medical College. His legs were put into plaster casts and these were to be changed after six days. But the legs became septic and the casts had to be removed. Surgery was advised after six months by orthopaedic specialist Dr. P. S. John, but Mr. Shaji Joseph, who had found that not many were benefited by this, refused it. It was pathetic to see little Jinil dragging himself on the floor. At one and a half year of age the limbs became lifeless below the knees.

The Vicar of Kapumthala Fathimapuram Church, Rev. Fr. Jose Vallompurayidom told them of the power of intercession by Bl. Alphonsa to heal such disabilities. So on the 13th of November, 1999, Mr. Shaji and his family came to the tomb of Bl. Alphonsa. For two and a half hours they wept and prayed at the tomb. That evening Jinil got up, holding his parents' hands, on to his feet. The surprised parents then held his hand and helped him to walk a few steps. The lifeless legs have become normal and strong, miraculously. This miracle was chosen for the elevation of Blessed Alphonsa to Sainthood."²⁰⁸

Case 5 - Alphonsamma healing miracle transcending religious boundaries

The following miraculous healing touched my heart as it shows how compassion is beyond all boundaries. Bishop Sebastian reported and I quote:

"About ten years ago, when I was in a small village in Wayanad outside Manatavady, I saw a boy walking with some difficulty, using a stick. As he approached me I noted that both of his feet were turned upside down. I had a stack of holy cards in my pocket with Alphonsa's picture on them, so I pulled one of them

out and gave it to the boy. When I told the boy that he should pray to this woman for the cure of his feet, the boy - he was quite smart for a ten-year-old boy - replied: "But I'm a Muslim, and, besides, I was born this way." I replied that God is very powerful, so let's pray. A few months later, a boy and a gentleman appeared at the house here. I didn't recognize them at first but soon learned that it was the Muslim boy with his father, here to tell me that his feet had been cured through their prayers to Sister Alphonsa. They showed me the calluses on the tops of his feet, and you could see the marks which had been made from the years of his walking with his feet turned under. Before they left, the three of us had our pictures taken.

The boy had reportedly taken Alphonsa's picture card and asked Alphonsa to help fix his feet. Several days afterwards one of his feet supposedly turned around. He and the other members of his family then prayed for the cure of the second foot, which also supposedly turned around later."²⁰⁹

Healings at Islamic shrines

Case 6

Miraculous Healing at Imam Hussein's shrine, Pakistan

Published by Shiite News, Pakistan, Monday, 22 December 2014.

Sameere Wali Muhammad crippled and wheelchair bound, from Khairpur of Sindh province in Pakistan, travelled to Karbala, during the Arbaeen to Imam Hussein's holy shrine. Upon reaching the shrine, she suddenly got up from her wheelchair and walked towards the shrine.

This was reported widely in all media.²¹⁰

Case 7

Astounding Miracle for Pakistani Visitor at Imamain Kadhimain's Shrine

Published by: www.aljawadain.org, 3 October 2017

To quote from the above post, *“Finishing the Ashoura visit to Holy Kerbala, a Pakistani group came to visit Imamain Kadhimain. A handicapped young man, named Shahrazad Ridha Abidi, aged 32, from Pakistan who long suffered from paralysis, approached the Holy Shrine of Imamain in his wheelchair, prayed God and asked Him by the statures of Imamain Kadhimain to heal him from his incurable ailment. To the surprise of other visitors, the handicapped young man suddenly stood on his feet, leaving his wheelchair and started walking along the cage of the tomb.”*

“Thanks to God!” said Shahrazad to our Website journalist, “I have been disabled since I was 13 years old when I was accidentally injected with a wrong vaccine. Since then, I could not walk on my feet. However, I always had a feeling that one day, I would be able to walk again. I have a strong belief in Ahlul-Bayt, and when I had the opportunity this year to visit the Holy Shrine of Imam Hussein during Ashoura, I was advised by a friend to visit Imamain Kadhimain and pray to God there to have a cure for my ailment. By my visit here, I knocked at one of the Gates of God’s Mercy. I approached the shrine and sought God’s help. I felt at once a weird energy penetrate and spread all over my body. I shivered and surprisingly, I felt I was strong enough to stand on my feet. So, I made my first steps and walked.”

*“At this Holy place,” he added, “I made an oath to continue visiting the Holy Shrines of Ahlul-Bayt and commemorate the anniversaries of Ashoura, and especially visit the Holy Shrine of Imamain Kadhimain”.*²¹¹

Case 8

Cancer healing at Islamic shrine

Source: www.imamreza.net

Imam Reza (A.D 765 – 818) was a descendant of the Prophet Muhammad and the eighth Shi'ite Imam. His name has been associated with many miraculous healings. Here is an account from the post mentioned above:

“Mr. Sheikh Ali Vaeli is a famous orator, great historian eminent Shi'ite scholar from Iraq who had lived in exile since last twenty years due to the oppression of Saddam.

In the year 1997, he was inflicted with the cancer in his neck, so he went to London for treatment. The time of his treatment coincided with the month just before Muharram-al-Haram, just before the time when he was always lecturing and preaching in the Masjids and Hussainiyahs in Kuwait.

In this condition composed an ode in the praise of Imam Reza, beseeching His Holiness to pray to God to heal him. He wanted to send it to Mashhad, Iran by a pilgrim to be sung in the holy shrine of Imam Reza. But before sending it; he sang it on the phone to one of his relatives in Mashhad, Iran. Next day he referred to his physician for treatment in London. The doctor gave him glad tidings that the disease has vanished completely and he had recovered perfectly, and that he could make a journey to wherever he wished.

Then he returned to Kuwait happily where he was able to continue his lectures and preaching during the months of Muharram and Safar. He owes his health recovery to the favor and magnanimity of Holy Imam Reza.”²¹²

Case 9

Sufi Saint healing miracle transcending religious boundaries

In Pakistan people of all faiths flock to pure hearted Sufi Saints for succor. A Hindu doctor colleague's family used to consider as their family Guru, the Sufi Saints in the lineage of Revered Sufi Shah Inayat Shaheed. Continuing family tradition, the doctor's family used to go regularly and pay their respects and seek the blessings of the present Saint, Revered Attaullah Sattari of Jhoke Sharif Dargah in Sindh. When the doctor's newborn son developed continuous watering of one eye leading to redness of the eye, he suspected that the lacrimal duct was blocked. The symptoms got worse over the months. The Ophthalmologist suggested naso-lacrimal duct surgery after one year of age. When the child was 14 months old surgery was fixed. They wanted to take the blessing of their Guru, Revered Sufi Attaullah Sattari, reverentially addressed as Sahib Karimji before the surgery so that all would go well.

They took the child to the Dargah in the morning. It was crowded. Finally, their turn came. The child's mother carried the little boy to the Saint and prayed for his blessing for the boy's eye surgery. "*Already done!*", declared the Saint. The mother thought he had not heard her right and began to explain, "*Sahib Karimji! His eye operation is NOT yet done. It is fixed for next week. Please bless!*". The Saint waved her off saying, "*Done! Already done...*", as he signalled for the next person to come. The disappointed mother returned to her doctor husband seated in the crowd and ruefully related what happened; that she was not given a chance to explain things properly; that the child had not got the blessing.

A few minutes later they looked at the child and were surprised to find the affected eye, which was red and angry even that morning, now looked clear and the sclera

was white; besides the constant overflow of tears had stopped! The symptoms of constant watering of eyes, the lids getting sticky overnight and the redness of the eye - all vanished and the eye became absolutely normal. Later fellow devotees explained - Sahib Karim's Word - "Already done" - was the 'surgery'! Sahib operated on the child with his Word and healed him!" The child did not need any surgery. To date the child has had no eye problem and he is the Prefect of his class in Singapore and an all-rounder.²¹³

Healings through Jain sacred chants

Case 10

Healing through *Bhaktamar*:

Pradeep Jain of the *Bhaktamar* Centre at Rohini, New Delhi, shares his story with Dr. Manju Jain; on YouTube (Dr. Manju Jain is a managing Trustee of the Indian Federation of Spiritual Scientists (IFSS), based in Bangalore. She is the Vice President of Integrated Healing Forum)

The Jain tradition teaches that sincere prayer and chanting of *Bhaktamar*, a sacred scripture, when done with faith makes the divine respond favourably. One can watch on YouTube the verifiable story of a Jain lady who was on a ventilator in a Delhi hospital for 3 months. The doctors had given up hope and asked the family to take her home. Hearing about the miraculous cures that chanting *Bhaktamar* could bring as a last resort they contacted the office of Dr. Manju Jain. Possibly the office referred her case to Pradeep Jain of Delhi. He went there with an associate and humbly did the *Bhaktamar* chant. Seeing the poor condition of the patient he advised the family to pray for her release from the body and *sadgati* i.e., liberation.

Half an hour later to their amazement a phone call came stating that the doctor had come on rounds and declared her well enough to come off the ventilator. To cut a long story short she was transferred to a room and thereafter made a steady recovery and is a regular visitor to the temple now and the whole family recites the *Bhaktamar*.²¹⁴

Healings in the Buddhist Tradition

Case 11

The Medicine Buddha heals

I quote from the accounts posted by Faith Stone on the internet -

“The Medicine Buddha is a healing Buddha from the Tibetan Buddhist tradition. Many cultures have healing deities or rituals, and the Medicine Buddha is a profound practice for healing physical, mental, and emotional ailments. It is even more powerful when a group practises together, focusing on the loved one or person who needs healing. I have seen so many what could only be called miracles related to this practice.

Giving a simplified description of the practice, we can say that it begins with preliminary mantras and prayers and then - and this is the wonderful part - one visualizes the Medicine Buddha, blue in color like the Vaiduriya jewel. One then goes on to visualize the Medicine Buddha’s healing energy radiating in all directions, especially to the person named, practicing the healing mantra Tadyatha Om Bhekhaze Bhekhaze Maha Bhekhaze Bhekhaze Radza Samungate Swaha for at least one mala or 108 repetitions, and then one dissolves into the “great seal of emptiness,” or rests the mind in the natural state, and dedicates the merit to all

sentient beings. It is a beautiful, transformational sadhana which heals both the person who is the focus of attention as well as the practitioner. The practice is most effective when the person suffering is engaged in the process - they also practice the healing mantras and invite the healing in...

...I was raised Catholic, and we would do the rosary for people. In later years, my mom would phone me to say that a particular friend or relative was sick. She said, "Faith, you do the Medicine Buddha and I'll do the rosary. We'll tackle the illness from all sides." I had a super-cool mom. We witnessed the results together...

... A young man was thrown from a horse and his femur broke. He had successful surgery for the break but then, post-operative, while he was waiting to be moved to a room, his girlfriend saw his heart stop beating. She called for help, and while the doctors were able to restart his heart, they were afraid that the blood clot and his heart stopping were going to leave him in a state of permanent brain injury and warned the family that he may never be normal or even be able to walk again. Collectively, we began doing round-the-clock Medicine Buddha practice, with Sangha members overseas pitching in during daylight hours that were nighttime here. Ben was in a coma for a month before regaining consciousness and immediately recognizing his girlfriend. Now, he is 98 per cent healed. We have no doubt that it was due to the practice. I had also painted a small Medicine Buddha to place at his bedside, to keep watch over him."²¹⁵

Cases 12 & 13

More Medicine Buddha healings

To continue to quote from Faith Stone, "In August, a Sangha mom who lives in the mountains went into early labor, and the baby girl was born breech and did not

take a first breath. The mom did not cut the umbilical cord, which was not done until the paramedics arrived. The baby needed to be airlifted to the hospital, and the team of doctors feared she had been deprived of oxygen for too long and that her brain function would be severely compromised. Again, a call went out to Sangha near and far to focus on the baby girl and her mom. Now, Virika is almost six months old and meeting all of her growth milestones.”

Faith Stone has personally experienced a healing as well. To quote her, *“I have also been the beneficiary of group Medicine Buddha practice. I had surgery on my gallbladder and there were complications: the doctor accidentally cut an artery, and while he thought it had been successfully repaired, it hadn’t, and I had internal bleeding. Having had the surgery as an outpatient, I was sent home. I was slowly bleeding to death. I didn’t know what was wrong, just that I felt very strange. I thought that if I could only fall asleep, I would be okay when I woke up. Had I done so, I would have died. My husband could see that something wasn’t right and took me to hospital, where I underwent emergency surgery.*

For the next few days, I felt as if I was in a bardo (according to Tibetan Buddhism, a transitional state, often referring to the bardos between the end of life and rebirth). It was very much like what I’ve read about in the Tibetan Book of the Dead - I would see beautiful deities and protectors who I recognized from my thangka painting practice and then I would see demons and the most frightening things. It felt like a dream from which I could not wake up, and I felt as if the fabric of my life was unraveling. The practice that helped me most was simply surrendering to the energy, like dissolving into emptiness at the end of Medicine Buddha practice. After three days in this state, floating between life and death, I suddenly felt as if the fabric was growing back together. I was coming back. I had the idea that this must be the result of my Sangha doing Medicine

Buddha mantras. It was as though each mantra were another thread weaving my fabric together. I'm quite sure that this is what happened. Having had this experience, my faith in the Medicine Buddha and the power of Sangha has grown even stronger."²¹⁵

Healings in the Sikh tradition

Case 14

A Healing at the Golden Temple, Amritsar

Mr. Vasu Bhardwaj was a Special Correspondent of Gujarati "Mitr", a daily published from Surat, India. This science researcher with American educational background was working in India when in 2001, he was diagnosed suffering from bone cancer and doctors soon pronounced defeat at finding a cure for him. The story below is written by Mr. Bhardwaj and I quote,

"...Being a science researcher with American educational background, I did not even believe in the existence of god... I had never been to any place of worship and also never prayed. But not anymore..."

"...Dr. Kiran Shah, the senior most reputed oncologist haematologist in Surat who himself performed bone marrow analysis gave me the shocking news that I am not only suffering from bone cancer called multiple myeloma but the cancer has already destroyed much my vital bones. As per his advice, electrophoresis of the blood and MRI - [magnetic resonance imaging] - of brain and skull as well as CT-Scan were also done at Mahavir General Hospital which confirmed beyond doubt that I was slowly but surely dying of bone cancer. I had been losing appetite and had developed dislike for food in between, I had also suffered from tumour on the

right side of my head which gave me excruciating headache and giddiness. I lost orientation and would fall after walking for 30 seconds. As soon as cancer was diagnosed, I was immediately admitted to government civil hospital. There they administered six chemotherapy sessions – one every 28th day. This further destroyed my appetite and all the hair on my head and body were gone. I suffered these agonies for more than three and half years when on April 27th 2002, three teams of doctors and oncologists advised me that I should prepare my will as I had only a few days left.”

“Beginning of the Miracle

Now, this was the phase when the divine miracle began to take shape. It was Sardar Kesar Singh, the owner of reputed "Kwality Group of Hotels and Restaurants" in Surat and his son Sardar Manjeet Singh, who suggested to me that I should undertake a pilgrimage to the holy Golden Temple at Amritsar and offer Akhand Path and Ardas with complete faith and total devotion and pray before Sri Guru Granth Sahib to cure me of my cancer and bless me with good vibrant health and long life to remain in his service. I initially, took this suggestion very lightly and argued back that I do not understand Punjabi or Gurmukhi and would therefore, not follow any word of Sri Guru Granth Sahib and whatever brief knowledge of Sikhism and Sri Guru Granth Sahib I acquired was in April of 1999, when I wrote six researched articles on the 300 years of Khalsa celebrations published in the Indian press. But, Sardar Kesar Singh, who is also the president of Gurdwara at Udhana-Surat, convinced me that Sri Guru Granth Sahib's blessings were not restricted to those who spoke or understood Punjabi or Gurmukhi. It was the faith and sincere devotion to the Guru which made you worthy of his blessings.”

“The Miracle

So we left by Golden Temple Mail express train which departed from Surat at around 1-15 a.m. on April 29th 2002. We were received by the staff of Golden Temple and particularly Sardar Diljeet Singh Bedi who is in charge of liaisons with press and the public... Since I had only a few days to live according to my doctors, they quickly made preparations for Akhand Path and Ardas after I paid Rs. 2100 as fees. My wife Kanta, my daughter Halley and my brother-in-law's daughter Puja also sat with me. I was permitted to photograph and tape-record entire Akhand Path as well as Shabad Kirtans which I wanted to keep listening till I was to breathe my last on my death - bed.

Blessings

But I was never to be lying on my death-bed because the moment the Granthi started reciting the Akhand Path, I began to feel streams of energy entering and flowing thru my body. It rose majestically from the pages of Sri Guru Granth Sahib like a serene cool flame of light entering my body through my fingers. The excruciating pain which I had suffered while struggling to reach the Golden Temple also disappeared. After 48 hours, I got up on my own two feet and began to feel and enjoy such vibrant health that I almost ran with joy towards Sri Arjan Dev Niwas and quickly climbed the stairs to my room no. 16. My appetite returned. I first took bath and then visited Jaliyanwala Bagh and then went to the 'Hotel City heart' and for the first time in three and half years I enjoyed a variety of Punjabi and Chinese foods which I had missed like deserts miss the rains.

Return to Surat

We returned to Surat on 18th May 2002 and on 25th May again bone marrow analysis and electrophoresis tests were done on my body. No cancer was detected.

Hence, to obtain second medical opinion, the samples were sent to Mumbai and Ahmedabad and medical doctors there also confirmed that the bone cancer is gone. My oncologist at Ahmedabad Dr. Pankaj Shah was preparing for stem cells transplant on me which was to have cost me Rs. 9 lakhs. The entire medical world was taken by surprise. All doctors agreed that this is, indeed, a miracle because there is no medicine in Allopathy that can cure deadly cancer within 48 hours and effect a 180 degree change. The latest electrophoresis: serum protein test done is dated April 7th 2003 at Abha Clinical Laboratory. The doctors have signed this medical test report with comments: "no myeloma band."

Post-Miracle Analysis

I have preserved all the medical reports and x-rays done before and after the Akhand Path and Ardas at Golden Temple and they all tell the true story of my miraculous cure. Ever since this miracle, I not only experience Guru's vibrations within me but also feel God's spiritual energy within me which inspires me and guides me in thought and deed, and I vibrate in unison with him. I am joyfully back to "cheers and gears of life." soulfully sharing my God-Given spiritual energy with those who love... "

*"...My life has taken a spiritual turn. I get sound sleep without any sleeping pills. Since 25th April 2002, I am no longer on any medicine. I read Nitnem and get sound sleep and get up early to read Paath and enjoy Shabad Kirtan on Punjabi TV channel. Guru's teachings have gone a long way in dispelling the darkness of ignorance. Guru has not only changed my destiny but made me a devotee with the faith that is not blind but enlightened."*²¹⁶

(After leading an active life for many years after being diagnosed with Multiple Myeloma, Sri Vasu passed away.) All people who are miraculously healed,

eventually, of course, die; like all human beings. The miracle healing gives them a window of “Extra Time”, which otherwise they may never have had.

Healings Reported in the Jewish Tradition:

Cases 15-20

Healings Wrought through Prayer by Proxy for 40 days, in the Jewish Tradition, at the Western Wall, Jerusalem.

“There is a powerful Jewish spiritual technique (segula) that one who seeks an answer to his/her prayers should journey to the Western Wall in Jerusalem to pray the same prayer request every day for 40 consecutive days. The segula can also be done by donating to have a pious prayer representative pray 40 days in your place.

It is exceptionally POWERFUL TO PRAY 40 days in a row at the Western Wall (Kotel), because Moses prayed 40 days consecutively on Mt. Sinai and his very difficult prayers were granted.

Western Wall Prayers' caring team will partner you with a righteous personal prayer agent who will journey to the Western Wall (Kotel) and pray for you every day despite the searing sun, pouring rain, bitter cold or uncomfortable conditions. Your prayer agent's self-sacrifice (mesiras nefesh), intense spiritual teachings (Torah-learning), lofty intentions (kavana) and charitable donations (tzedakka) on your behalf will add incredible merit (zechus) to you, and we pray will bring about a clear answer to your prayer requests.”²¹⁷

“The idea for Western Wall Prayers originally came from Gershon Burd. Gershon left his family's insurance business in Chicago in 1999 to pursue full-time Torah studies in Jerusalem. Gershon founded Western Wall Prayers together with his

wife Batya Burd, a former lawyer who moved from Toronto to Israel in 2001. Batya and Gershon lived in the Jewish quarter, had five children and fast became active members of the local community. Tragically, Gershon passed away in late 2013. After his death, stories began emerging of the many hidden kind deeds and secret acts of charity he had performed. The incredible amount that he accomplished in so short a time has inspired thousands, and numerous charitable projects have been established in his memory. Batya proved herself to be a bastion of faith and is continuing the mission to help people get closer to their Creator and develop their power of prayer through Western Wall Prayers.”²¹⁷

Case 15

Healing through Western Wall prayers

“Just wanted to let you know of the success of the prayers of my shaliach regarding my proposed neck surgery. HaShem repeatedly put roadblocks in the way of my being able to have the surgery even including an infected submandibular gland located at the exact point in my neck that the incision would be. However, with the passage of time from one delay to another, my body apparently laid down scar tissue to stabilize my neck. My symptoms are gone and I no longer need surgery. HaShem had a better way. He spared me the ordeal of a major operation and blessed me with a complete healing. All of the delays were messages from God to not have the surgery. He even physically prevented me from proceeding. Baruch HaShem. I thank and praise God for opening my eyes to the answer He had already provided for me. I thank God for His great mercy and protection. Please extend my appreciation and thanks to my shaliach.”

Talia, New Jersey²¹⁷

Case 16

Healing through Western Wall prayers

“I signed up yesterday for 40 days at the Wall for my aunt. This is my second time I’ve used Western Wall Prayers for her with success. The first time was a miracle in itself: she has survived inoperable pancreatic cancer even though the doctors predicted she would live only a few weeks. Yesterday she was diagnosed with stomach cancer. Today I get email from you: “Just to let you know, Rav Tzvi Pesach Dan Siegel is praying for her. He is starting this morning.” I just got a phone call that made my day: they do not believe it is cancer anymore.”

Barbara, Chicago²¹⁷

Case 17

Healing through Western Wall prayers

“I want to thank you, and my prayer agent Daryl Michels who interceded with strong prayer for my health. For the 40 days that Daryl prayed for me, I discontinued all my medications except for a multi-nutrient. I studied the seven Noahide laws, Psalm 20, and prayed the prayer every day, as you suggested. The terrible pain in my left arm and shoulder is almost gone (I feel it a little sometimes to remind me that I am healed), my high blood pressure and diabetes numbers have dropped dramatically, my eyesight is much improved (I can see much better out of left eye now and it is still improving) and my hair is growing (smile). I am sure that this is God's miracle working power produced through my mighty prayer agent Daryl. What a blessing for me that God lead me to you and the Wall.”

Dorothy, Utah²¹⁷

Case 18

Healing through Western Wall prayers

“After my mother was diagnosed with cancer, we were in a bit of a panic. I signed her up for 40 days of prayer and miraculously the next test turned out negative - she no longer has cancer. Thank you for your part in this miracle... we will forever be grateful!”

Alex Langer, Los Angeles²¹⁷

Case 19

Healing through Western Wall prayers

“My sister was diagnosed with cancer. It was a shock to us. During the 40 days that an agent prayed for her, a miracle literally happened. The cancer was gone. Doctors see no trace of it anymore. I can't understand it, but I'm not complaining. You do wonderful work.”

Lisa, Toronto²¹⁷

Case 20

Healing through Western Wall prayers

“I am very grateful to my shlichim, who have davened on behalf of myself and others. Every day I daven that they should both see tremendous zchar in this world and in the World to Come. Howard is an elderly gentlemen who had a second stroke and had a dozen doctors tell his family that it was over. The day after the

davening started his daughter called me to tell me that her father opened his eyes from a semi coma, ripped out his feeding tube, said "I'm hungry," and started eating. A true miracle!"

Nancy, California²¹⁷

Case 21

Healing of a Jewish lady by prayer to Jesus

Tel Aviv radio and TV stations broadcasted the incredible healing of Therese Daoud, a Messianic Jew.

“Doctors at Tel Aviv’s Ichilov Hospital did not have good news for Therese when she showed up complaining of pain in her ankle and leg. MRI scan revealed an orange-sized tumour in her leg.

A biopsy indicated it was sarcoma cancer which according to specialists is one of the worst forms of cancer tumors because of its aggressiveness. Concerned, the Israeli doctors sent the tests to specialists in the U.S., who confirmed the diagnosis.

To save her life, the doctors told Therese the only course of action was amputation.

She had her first appointment for amputation scheduled a few days later, but when Therese showed up, the hospital called it off due to “technical difficulties.”

The amputation was rescheduled.

When Therese showed up for her second appointment, the hospital postponed again saying a number of emergencies had come in and staff had to be pulled away. The hospital rescheduled Therese’s appointment a third time.

But now things were happening in Therese's life. She postponed the third appointment because she needed to care for her mother who was gravely ill. When she told her doctor — Professor Yaakov Bickels head of the hospital's Orthopedic-Oncology Department — about her decision, he was very concerned.

In an interview with Israel's Channel 2 TV, Dr. Bickels said, "It was clear to me she was going to die within a short time. She is an educated, intelligent and sane woman, and when a person makes such a decision and is cognizant of its significance, we respect it."

But three months later, Therese shocked Bickels when she showed up at his office alive and seemingly better. He immediately sent her for an MRI which showed a shrinking tumor. Stunned, Bickels ordered a second biopsy a short time later which he personally supervised. The test showed the cancer was gone.

When Bickels asked Therese what happened, she replied after returning to Ussfiya — an Arab village located outside Haifa — to look after her mother, she fervently prayed to Yeshua (Jesus) for healing and Jesus answered.

Therese said she was just as shocked the cancer was gone. She called it "a gift from God."

Dr. Bickels said in Israel Today: "This just does not happen. A growth of this kind cannot recede like this. If someone told me the story of what happened to Therese, I would have said they are crazy and sent them to a mental hospital. But I was there I saw it with my own eyes..."

The medical staff was so stunned they rechecked all the tests — old and new. Medical personnel and newspaper reporters even visited Therese's home to test the water and food to find an explanation for the miracle...^{218,219}

Faith Healings in the Indian Spiritual Tradition:

Prayers at temples, prayers to saints and holy men, the performance of specific *yagnas* - all have been associated with not just spontaneous healings of diseases but the ‘healing’ of all sorts of problems, including drought, in the Indian context!²²⁰ Indeed, innumerable are the cases of healings that occurred through prayer, the intercession of Saints and Sadhus, through pilgrimages and so on. As the Indian spiritual tradition accepts the concept of faith healing, this was never considered a big deal by the average Indian. Families were never overwhelmed by such ‘cures’; invariably, such healings only served to strengthen the family’s faith in the unseen divine. Faith in the divine, in rebirth and in *Karma* is embedded in the Indian psyche. It was never felt that such spontaneous healings needed documenting! Nevertheless because of the rise of agnostics and rationalists, of late temples and shrines have taken to online documenting of cases.^{221–223} But investigations into the cases so documented, may not meet the stringent criteria needed to pass scientific scrutiny. For the faithful, anyway, such ‘proof’ is not necessary.

Many doctors in India, this author included, practise what Larry Dossey calls, ‘the use of Prayer and Penicillin’.

Case 22

Cancer cancelled

One case which I have personally followed up for twenty-eight years, since 1992, is that of Madhavi, the sister of our live-in housekeeper, from my own village. As I was one of the few doctors from the village, Madhavi landed up at our home, when she was diagnosed to have a cancer of the uterus by the doctors at the district hospital after tests. I sent her to the renowned Cancer Hospital in Chennai, where

the diagnosis of stage 4 endometrial carcinoma and prolapse uterus was made after repeating all investigations including biopsy.

As a purely palliative step, surgical removal of the mass and uterus was planned. Prayers had begun in earnest; and I also sent her to a saintly lady who routinely interceded with the divine for the ill and maimed. Madhavi came back and her son reported that the saint had conveyed that her prayers had been answered. The divine whom the saintly lady had channeled, had said that the ‘cancer was cancelled’. This gave Madhavi renewed hope and she went in for surgery. The mass, on removal astonishingly, showed no signs of any malignancy! The doctors were stunned; nevertheless, they advised further treatment as there was radiographic evidence of spread; but the patient was not willing. 27 plus years on, she is still alive and well as I pen this.²¹³ I have no explanations to offer. To paraphrase Dossey, it seemed then to me, that perhaps ‘prayer’ works even where ‘penicillin’ does not! Adding prayer to the therapeutic armamentarium therefore makes for commonsense.

In India, even today, the common man judiciously combines the spiritual with modern medical management to the benefit of the patient! In Chennai, the metropolitan city where I practiced as a Physician for over two decades, people seek spiritual guidance even as they seek medical treatment. It appears that the invisible divine oversees the visible medical management! Here is a case in point!

Case 23

Healings by Seshadri Swamigal

The patient Kalyanaraman narrates how in the year 2000, he was involved in a major road traffic accident when the two-wheeler he was riding collided with a

state transport bus coming at great speed.; he missed a major head injury by a whisker, but his upper limb was badly injured. He was rushed to a hospital and after x-rays the doctors opined that the bones were so badly shattered due to multiple fractures, that it was unlikely that he would regain function of the limb. His Guru was duly informed. Guru Sri KVLN Sharma who could channel Sadguru Seshadri Swamigal, a great 20th century Saint, reverted that there was nothing to fear as Sadguru was taking care.

Later a message came from the Sadguru that he had to be shifted to another hospital and where a particular Orthopedic Surgeon would operate on him. The Sadguru's instructions were followed. A team of two senior Orthopedic Surgeons operated as it was a very difficult case. The doctors were astonished that he did so well after surgery. At discharge they requested that he leave the pre- and post-operative x-rays with them so that they could use it for teaching purposes as his case had been the most complicated that they had attempted to date. Exactly as *Sadguru* had said, he made an uneventful recovery and regained full use of the affected limb to the great joy of his doctors as well.²²⁴

In this age of audio-visual references, the reader has the opportunity to hear the account straight from the patient in the Tamil language. He narrates a second case where his boss was told that he would require cardiac bypass surgery for multiple blocks in the coronary vessels. Prayers were made to the *Sadguru* that he be please healed without surgery. Sadguru Seshadri Swamigal, through the intercession of Guru KVLN Sharma, replied that he would be healed with just medicines and advised that the patient be told that he was being taken care of; there would be no surgery; and he was sent sacred ash before going in for angiography (presumably). The Sadguru's words came true; as the doctors, after tests, decided on simple medical management. In 2020, he is alive and well.²²⁴

These cases illustrate how in India, the common man who has total faith in the divine, successfully combines spirituality and medicine! I have had similar experiences. Once while practicing in rural Kerala, I happened to treat a patient with bad rheumatoid arthritis. Their utter exuberance and joy, even as I was going through the very first consultation, made me feel that there was something strange going on. At the end of the consultation the truth came out. They had been told by a *Guru* that a doctor with the syllables that made my name, who lived in such-and-such area would heal him. They had then combed the town to locate the doctor who fitted that bill; and then had zeroed in on me! The *Guru* had okayed the ‘find’; and they had come for the consultation!

The important point is that even before treatment had begun, for that matter, even before seeing the doctor, the patient and family were so sure that he would be healed!! I was stunned. Needless to add he did very well and the chronic rheumatoid arthritis, which is usually so difficult to manage, simply responded excellently to treatment. Often, I would wonder WHAT EXACTLY had healed him; perhaps it was a combination of the universe conspiring to heal him as well as the power of positive expectation. Anyway, I was grateful to providence for the experience. Middle class south Indians thus employ a winning strategy of combining total faith in the spiritual with modern medical treatment; a common sense ‘Prayer and Penicillin ‘combo’ in action!

The devotees of the Paramacharya of Kanchipuram also attest to innumerable miraculous healings that they attribute to his intercession. Since I had the privilege of being the ‘Family Doctor’ to some of his close devotees I too had a ring side experience of his benediction that helped in very difficult cases. As they were not

documented ‘scientifically’ I cannot quote them; but I can vouch for the fact that even in this 21st century, faith in Masters like the Paramacharya, helps overcome the worst of medical challenges. At the treating doctor’s end, I have always found this help most invaluable; it helps tilt the balance favourably when the chips are down, so to speak. So as a matter of policy, I do my utmost to promote faith in their own Masters /God; and pray to my own Master to help the patients who seek my help. It has always paid off.

The fact is that healing goes far beyond ‘evidence-based medicine’. It is never one size fits all. Treatment always has to be personalized for every patient; the mindset of the patient is so vital. In my humble experience, welcoming the spiritual dimension that the patient has faith in, adds to the odds of success like nothing else can. The case described below underscores that fact. It was the sheer faith of the patient that enabled me to ‘treat’ her scary problem without stress, for a whole year.

Case 24:

Faith Heals

It was in 1992 that Gayathri came with her husband to consult me. She calmly told me that she had kidney failure and had been advised a kidney transplant but that she simply could not afford it. They had come because they had heard that I did free work at the Sunday Sai Clinics. They had also heard that Baba was going to start a kidney transplant program in the tertiary care hospital that he had set up in Puttaparthi; could I help them get a transplant done there, they wondered.

Sure enough her blood pressure was extremely high as patients with kidney failure are wont to have. I knew Prof. HS Bhat, of my alma mater, the Christian Medical

College, Vellore, who had joined Baba's hospital as Head of Urology. His wife, Dr. Prema Bhat had been a senior of my mother, in school; at the Sacred Hearts Convent, Tellicherry. So, they had been like foster parents to me when I first joined hostel at CMC. Dr. Bhat had retired soon after. But there was that little personal connection. I told Gayathri and husband that I would write to Prof. Bhat enquiring when the transplant program was beginning; but that first I needed to do some baseline tests.

Prof. Bhat very kindly sent me a prompt reply; but he said that the transplant program would only start a year later, in 1993. Presently Gayathri returned to consult me with her reports; and then I had a shock. Her Serum Creatinine was 13 mg/dL!! Normally if the creatinine was over 5 mg/dL, it was considered an indication for dialysis; and here she was, walking around with a creatinine level of 13! I told them that she would need urgent dialysis; that I would refer them to a nephrologist. Then I got a bigger shock. Gayathri vetoed the idea outright and declared that she was not willing to go for any dialysis. Baba would take care, she said; and added that she was taking *Vibhuti* (holy ash) received at a local spiritual centre and that she would be fine till transplant could be done at Baba's hospital; and so, could I please continue to treat her till then?!

Her faith shook me. I knew that she was adamant; there was no way she was going for dialysis as regular dialysis was clearly beyond their affordability. Surrendering to Baba, I took on her case. Once in a month or two, she would come for a check-up. I managed the hypertension with tablets. She was hardly passing any urine; but she had a near constant diarrhea, which I reckoned was the Divine's way of keeping her going! Miraculously her electrolytes held on within the normal range. The usual life-threatening high potassium levels were conspicuous by their absence. Perhaps the diarrhea kept the potassium in check. A whole year passed

with Gayathri posting Serum Creatinine levels of 13 or more with treatment being only anti-hypertensive tablets and *Vibhuti*!

Finally, the hospital in Puttaparthi announced that they were starting the renal transplantation program. Gayathri's sister was ready to donate a kidney. So with a reference letter to Prof. Bhat, I sent them to Puttaparthi. They returned with a letter to me requesting that I arrange for HLA typing in Chennai to check if the donor had a compatible blood profile. You see, the lab at Puttaparthi had not started HLA typing yet. So, I arranged for them to have the HLA typing done at the premier corporate Apollo hospital of Chennai to which I was attached. The lab was in for a shock when they read my entry against the column - "Date of last dialysis". I had truthfully written, "Never had dialysis". The lab could not believe it and called back to recheck the facts about this curious case of someone walking around with a Serum Creatinine of over 13 mg/dL for a year with virtually no treatment! The HLA typing showed 100% compatibility - again rather unusual.

Armed with the report and my reference letter they returned to Puttaparthi. Hers was one of the first cases taken up for transplant. The surgery went like clockwork; and she recovered in record time. While in the post-operative ward, Baba visited them; and blessed them, remarking, "Gopis"! (the milkmaid friends of Lord Krishna). The duo had been Gopis in Krishna's time apparently; a statement beyond the purview of medicine! She did very well and I did not see her for many years. Over a decade later, while shopping in the famous T-Nagar shops of Chennai, I ran into her. Gayathri was delighted to see me; and so was I. She was doing fine; keeping good health.

The main point I seek to highlight is the fact that it was the patient's absolute faith that gave me the courage to continue to treat her. I am sure it was the steadfast

faith that healed her as well. In later years I was to experience many more such miraculous divine intercessions. Suffice to say, that in all humility we need to accept that there is much more to healing than what modern medicine understands.

Case 25

Miracle Healing By a Spiritual Aspirant:

I recommend dear Reader that you study ‘Healing through LOVE - The Quantum Gazing Story by Connie Shaw, whom I have known for over two decades. I can vouch for the fact that it is an absolutely truthful account. Besides documented miraculous healings world over, from cancer, paralysis and the like after the patient’s photograph had been gazed at, over Skype, the book gives you a ring side view of the spiritual transformation of a contemporary, fellow human being.²²⁵

I quote here, the experience beyond our current scientific understanding, about how she underwent a spiritual awakening and thereafter could heal people through a complementary therapy called Therapeutic Touch. This account by Connie refers to how she helped her father get better in a near miraculous manner. It also enables us to get a glimpse of the dimensions of human existence.

“One day, in 1988, when I returned from a trip to India, Jim and I crossed travel paths at home briefly as he was headed for a three week business trip. No sooner had I said my farewells to him, as he left through the front door, when a bolt of energy hit me and knocked me to the carpet. As I looked above me, I gasped at the image of the ‘I AM Presence’ standing about twelve feet above me, with its feet anchored in my heart. It was blue white and emitted a blue etheric rain that showered down on me for twenty days. The Samadhi Activation was sublime and

for the next twenty days I seldom ate or drank anything and lay on the floor in bliss...

Over the ensuing days and weeks, eighty four spiritual gifts and unsought Siddhis, appeared, some only temporarily, and others remained permanently. They integrated and life resumed in familiar patterns and routines, but from a higher state of consciousness.

Dad asks me to fly home

Shortly after the unexpected Samadhi activation, my father called and announced that he had been diagnosed with a brain tumour. No one could believe it. He had never been sick a day in his entire life. After recovering from the shock of the news, I told him that I'd pack immediately and be there as soon as I could book a flight.

Dad, an engineer who had many hobbies, had distinguished himself as a trophy winning amateur golfer, as well as for his leadership and community service. Though he was 69 at the time, his wavy hair was still coal black, he was fit and trim, he still laughed many times a day and lit up any room when he entered it.

When I arrived at the hospital, I walked up and down the hallway twice, looking for his room, perplexed that I couldn't find a room with a handsome, black haired patient. Finally my Aunt Mary, Dad's sister saw me walk past his room the second time and said, "Connie, we're in here." When I stepped into the room, I could hardly believe my eyes. The last time I had seen Dad, six months before, he had had his customary wavy blue-black hair. Within just six months his hair had turned to pale gray, his complexion was gray and he looked like an entirely different person.

After hugging him and Aunt Mary, I agreed to their request that I do Therapeutic Touch with him, that took about twenty minutes. No one spoke as I concentrated about moving my hands about three inches above his body, without touching him. Finally, as I stepped back, at the end of the bed and surveyed him, noticing that his gray face had become rosy, Aunt Mary exclaimed loudly, “Connie! John’s hair has turned back to black! How did you do that! Why, I have never seen or heard of anything like that in my entire life! John, here, look in the mirror! Your beautiful hair looks normal again: black and wavy! Tell us, Connie, how did you do it? Does Therapeutic Touch turn hair to normal colour again?”

Noticing his hair I was stunned. Aunt Mary was absolutely right; Dad’s hair had turned from light gray to black again! “No, Aunt Mary”, I exclaimed, “I’ve never seen anything like that either. God must have done that because I would never know where to begin to make that happen! How do you feel, Dad?”

Dad smiled a wide smile, looked very pretty and pink, in contrast to twenty minutes before, and said, “I feel better than I have in months, Honey. In fact, I’m going to call the nurse’s station and tell them to please prepare my release forms because I’m going home today, no matter what they say. I’m fine now....”

He proceeded to pack his bag, signed the form and drove home. He then removed all of the storm windows and mowed an acre of lawn on his riding lawn mower and drove to the golf course to play nine holes... after having been inactive, bedridden, in a hospice wing for months.²²⁵

The Grey Area of Afterlife:

Connie continues the most intriguing experience, “Six months later, however, as I was driving along 6th Avenue in Denver, on the way to a weekly ‘Course in Miracles’ class, Dad suddenly entered the passenger side of my car in his etheric

body (the shock of which caused me to swerve into the oncoming traffic lane), explaining that he had gone back to Hospice, and that he would be leaving that very night and wanted to say goodbye before he went, He promised that he'd visit me after he 'got to the other side', as we had agreed to months before, and would tell me what it was like over there and how he was doing...

Later that night my sister Beverly called to say that she had shocking news. I said that I knew....

Three days later, at 3am, I was awakened to see my father standing at the foot of the bed, smiling his beautiful smile, dressed in a yellow golf shirt and white golf pants. There was a green lawn behind him and he was carrying some books. "Hi, Honey!," he said chuckling. "I told you that I'd contact you after I got here so here I am. It's really beautiful here as you can see. It's like a University campus, which I love, of course, and I wanted to be sure I tell you a few things before I have to go to the next class.

You know, it was very surprising to your mother and me when you started to go to India to see Sai Baba. We just couldn't understand how on earth our daughter could have gotten involved with a guru, of all things, after having been brought up as a Catholic. (Connie's note: Feeling unfulfilled in the church, I left it at 19 and started my true search). In fact, I want to apologise to you, Honey, for having been so aloof whenever you mentioned Him. I have to confess that we ridiculed you behind your back and I am very sorry about that.

In the short time that I've been here, I've learnt that you were actually right about Him, and we were wrong. We just had no knowledge or experience with Eastern traditions. I would always laugh when you brought up subjects like reincarnation, Cosmic Law, the importance of connecting with God inside, and all of that..... But

now am catching up and taking lot of interesting classes about the things you mentioned, which we rejected... I did my life review and understand where I fell short in my life. I'm so happy here that I can't tell you...

I have to go now and I'll always love you... „²²⁵

Connie Shaw, subsequently was inwardly inspired to heal people by just gazing at them, or their photographs, becoming an egoless love filled instrument through which Consciousness in the forms of Great Masters, in other dimensions, healed people. These sessions are totally free for everyone. No fee is collected. Connie considers herself blessed to be able to serve selflessly with love.

Physiology in other planes of existence

Comatose patients:

In these days of advanced critical care when patients are literally brought back from the jaws of death and when due to therapeutic intervention the comatose and even the ‘brain-dead’ can go on to live for years, a question that rankles doctors, patients, their families and the public at large are what exactly is ‘a living person’? Is a brain dead person or comatose patient ‘alive’? Are they capable of any useful activity? It is imperative that we leave no stone unturned in our effort to learn more about this dimension of existence; for it will affect the way we frame humane protocols of care, humane counselling of patients and their families, humane end of life protocols, humane organ donation ethics and so on.

The term ‘consciousness’ or terms ‘level of consciousness’ in modern medicine refers to that state of functioning of the ‘higher mental functions’ of a subject. In spirituality as well as in explaining the universe / existence in quantum terms the

word' consciousness' refers to the ultimate substratum / source of all existence; sometimes called the Unified Field. To differentiate the common garden medical term from the other, the term used to denote the ultimate substratum of all creation is referred to in this book as 'Consciousness' with a capital C. Medically when someone is brought in, unconscious, we take a history, examine him and grade the level of consciousness according to the Glasgow scale; but what if he / she is active in a dimension we have not yet learnt to perceive? These are frontiers we have very little knowledge of, or experience. This fact makes all the more important, the following account.

Jay Mead, a semi-comatose patient was brought by his mother Berniece Mead, during one a 'Gazing Session' done by Connie Shaw. Connie writes, *"Later, Jay appeared to me in a dream and explained that most comatose patients are playing vital roles in their etheric bodies, while their physical form is being cared for, by hospital / hospice / nursing home staff. The so-called comatose person is actually helping medical science to have compassion and patience while tending the comatose, and to learn that comatose people can actually see and hear what people in their room are saying, even though they can't respond. In the 'Jay Mead dream', Jay announced that he was grateful for the work I was doing on Earth (gazing, healing, counseling, writing, speaking and teaching) and that he, himself, was playing some new educational and healing roles on the 'Other Side' of the Veil. Though Jay had been rendered comatose from a roof-top fall, as a Knott's Berry Farm stunt man, during his comatose state he was extremely busy welcoming the newly comatose, giving tours, educating medical people, and teaching classes, all the while in a coma!"*

In fact, he had worked through a psychic who dictated messages to his parents which have been compiled into a book, entitled, 'Letters from Jay', by Berniece

Mead, his mother.... Jay, in his letters to his mother, remarked that he could read the thoughts of the nurses and the attendants who cared for him and that very often they were distracted, depressed, hasty or even disrespectful of his body, since they mistakenly thought that he was unaware of their neglect, resentments or sloppy work. If they had known that he was watching them yank the covers over him with a bad attitude, or that they were taking shortcuts at times, they might have approached the job with the same sort of awareness that they did when attending to conscious patients. Jay said that his work was very important, since the medical profession has very little understanding of how to deal with the comatose and of their 'other life' in working with a host of professionals beyond the Veil of the third dimension. ”^{225,226}

A 2017 article published as a news feature in the prestigious journal *Nature* supports what Jay Mead has communicated from beyond the Veil. David Cyranoski, who reported the work of Adrian Owen of the University of Cambridge, writes, “*Adrian Owen still gets animated when he talks about patient 23. The patient was only 24 years old when his life was devastated by a car accident. Alive but unresponsive, he had been languishing in what neurologists refer to as a vegetative state for five years, when Owen, a neuro-scientist then at the University of Cambridge, UK, and his colleagues at the University of Liège in Belgium, put him into a functional magnetic resonance imaging (fMRI) machine and started asking him questions.*

Incredibly, he provided answers. A change in blood flow to certain parts of the man's injured brain convinced Owen that patient 23 was conscious and able to

communicate. It was the first time that anyone had exchanged information with someone in a vegetative state.”²²⁷

From the reports furnished here, it is obvious that the ‘personality’ and Consciousness endure beyond the damaged brain; in fact, evidence is fast accumulating, that they endure even beyond death! Our challenge is how to communicate at least with patients who are alive, but in these unenviable states. Research in this area must be carried out; for it has far reaching implications on the way we perceive the comatose patient, brain-death, the current tendency to harvest organs ‘at the earliest’ etc.

At this point, perhaps a personal experience is relevant. Possibly meditation and regularly going inward, makes one more sensitive to other dimensions. I can share here how, just as Connie felt the presence of her father in the car, I felt the presence of two of my medical colleagues; one, immediately after death and another, while unconscious and ‘brain dead’..

We had all been worried as our colleague was in the ICU after a massive heart attack. At home I suddenly felt he was there in the room, wearing his usual cheerful smile, and he wanted me to visit his wife and reassure her that he was fine. Something told me all was not ok and when I called the ICU they told me that he had just been declared dead. I did carry out his wish by calling and introducing myself to his wife; and the relating of my experience gave her a lot of courage and peace of mind. Years later, when she had to finalise their daughter’s marriage, she was wishing he had been there to help. Then she distinctly felt his presence reassuring her that he was around and to go ahead with the marriage proposal.

The other was when I heard that another colleague was on life support. I was praying frantically for his survival when he appeared in my mind’s eye, very

cheerful and relaxed and conveyed to me that his family had already decided on organ donation and he was fine with the idea. I had no inkling of all that; but it all came to pass exactly as he had said. I have also felt the reassuring presence of my dear late mother; and on more than one occasion she has guided me on problems; and her advice saved the situations. I am sure many of you readers have had similar experiences. It is time medical professionals accepted such real experiences. We may not be able to explain them; but they are true and do happen. But these experiences point to one common thing- that in all likelihood, we survive physical death; our non-physical selves continue to live; albeit in some other plane.

Medical research in this area is very much warranted for it will bring a sea change in our perspective of death, related fears, and the ethics of medicine as it is practised. Perhaps doctors will come to understand that just as there is a good birth, there is a good death; especially when one is dealing with the very elderly. Perhaps letting the elderly move on to the next dimension with dignity and love must replace the needless heroic tendency to scale up high tech care even as mounting bills for prolonged intensive tertiary care spell financial hara-kiri for the patient's family; and finally, the patient dies in the impersonal cold setting of tubes and beeps.

Near Death Experiences

We will now look at a thrilling account from a doctor, who became a patient, went over to 'the other side' during the course of surgery, mercifully returned, recovered and thanks to his unique experience, thereafter, became a spiritual healer. This 'grey area' is another topic that junior doctors, I hope, will take up for research.

I quote from an article in the Daily Mail by Dr.Rajiv Parti -

“By all indications, the patient on the operating table was dead. His heart had been stopped, his body drained of blood and he was no longer capable of breathing on his own. He was, in fact, in suspended animation - through a surgical procedure that replaces the blood with a cool fluid and stops all bodily functions. Meanwhile, surgeons had just one hour to repair a tear in the main artery leading to his heart. This is a difficult operation, not to mention dangerous. And, as the hospital's chief anaesthetist, it was my job to make sure that the patient remained deeply unconscious throughout. He did, and thankfully he survived.

In the recovery room later, I was there by his side as he woke up - with a smile on his face. "I was watching you guys in the operating room," he told me. "I was out of my body, floating around by the ceiling. I saw you just standing at the head of the table, I saw the surgeon sewing the patch on my artery, I saw that nurse . . ." Everything he said was uncannily accurate. But could he really have witnessed it all? No, of course not - how could he see anything when his heart wasn't beating, his head was packed in ice and his brain had stopped functioning?

He wasn't the first patient of mine to have reported strange events. Over the course of my 25-year career, I'd heard people claim to have seen deceased friends during a cardiac arrest, or lights at the end of tunnels or people made of light. I'd always thought such stories were nonsense, so I said I'd return to talk to him later. But I never did. By the next day, he'd been moved to another department, so he was no longer technically in my charge. And time, after all, is money. That's how materialistic I was. Within a few days, that patient had become just another anecdote.

In many ways, my wife, Arpana, and I had a charmed life. She ran her own dental practice and I was making a very good living not only as an anaesthetist, but also

as the co-founder of a private pain clinic. Soon we'd traded our small house for a larger one and then a mansion. Our cars went from average Fords and Toyotas to 'supercars', including a Porsche and a Hummer. I was even planning on buying a Ferrari: my goal was bigger everything - house, cars, art collection, bank accounts. Naturally, I'd made sure my three children had the finest possible education. And I had my eldest son Raghav's life all mapped out: he was going to follow in my footsteps and become a doctor. The only problem was that he wasn't that interested in medicine, and his grades reflected that. I had no sympathy: I shouted at him a lot, punishing him with my anger. Like my father and grandfather before me, my theory of child-raising was: "A bent nail must be straightened with a hammer." Otherwise, I felt my life was near-perfect.

Then, in 2008, at the age of 51, I found out I had prostate cancer. I was furious with God: what had I done to deserve this? Still, I booked an operation with one of the best prostate surgeons in the country and assumed that all would be well. "I can almost guarantee no complications," the surgeon told me - but something went drastically wrong, and I was left with incredibly painful scar tissue and other debilitating side-effects. There were five more operations over the next two years to try to repair the damage, but none of them really worked. Then one evening, just two weeks after my fifth operation, I suddenly felt faint. My temperature was 105F. I knew instantly what was happening: despite two courses of strong antibiotics, an infection was spreading rapidly in my abdomen. And if I didn't get help fast, I'd soon be dead from septic shock.

My wife, tears streaming down her face, managed to bundle me into her BMW and drive me to hospital, where I was quickly loaded on to a trolley. I remember emerging from a fog to see a surgeon looming above me. He held his hands like a praying mantis, a sign that they were scrubbed for surgery and ready to be gloved.

Next time I surfaced, I was in the operating theatre. I managed to tell the anaesthetist what I did for a living and ask him what he was about to give me. Propofol and fentanyl, he said. In other words, the usual - exactly what I would have selected. "Are you ready?" asked the surgeon. He waved his gloved hand at the anaesthetist, and I was asleep before I could answer.

Was it over? Was the surgery already over? I felt myself zooming straight up, as if in a lift. It was the same feeling you get in the pit of the stomach when you're rocketing to the 20th floor of a skyscraper. Slowly, my consciousness began to return: I could see the ceiling approaching, its glossy surface slowly getting closer. Then I looked down and saw my own abdomen, now with several incisions. I heard the anaesthetist make an off-colour joke. I won't repeat it, but everyone in the operating theatre laughed, including me. But where was I? For a few moments, I froze with fright, worried that whatever was holding me up on the ceiling would suddenly let me drop.

Eventually, though, I relaxed, watching in rapt amazement as the surgeons and nurses worked on my body. "Is that really me, or is this really me?" I wondered. "How can I be in both places at once?" Suddenly, I became aware of a shift in my perspective as my field of vision expanded. I was still in the operating theatre, but at the same time I could see my mother and sister sitting on a sofa in our family home, thousands of miles away in New Delhi - where I'd grown up. The scene was vivid and detailed. My sister was wearing blue jeans and a red sweater and my mother a green sari and a green sweater. "What should we make for dinner?", my sister asked. "It's cold outside," said my mother. "We should make hot soup. Lentil sounds good."

I was so focused on them that the sudden sound of instruments clanking in the operating theatre gave me a start. Turning my head to the left, I found I could still see and hear the scene below me. "This guy's a mess. He's lucky to be here. Give me more swabs," said the surgeon to a nurse. I was now seriously frightened. What was going on? Would my untethered consciousness ever get back into my body - or was I destined to roam through eternity as a spirit? Was I dead? I felt like an astronaut who'd left his spacesuit, only to find that a suit was unnecessary to begin with. With rising panic, I looked back and forth at the two scenes - until both started to fade like a fast-setting sun. Everything went dark. I was relieved: I'm returning to my body, I thought.

Then came a jolt of pure fear. To my right, I heard screams of pain and anguish. I was drawn in, as if on a moving pavement, to the edge of a flaming canyon. Smoke filled my nostrils, and with it the sickening odour of burning flesh. I knew then that I was on the lip of hell. I tried to turn away, but each time I took a step back, an unseen force moved me forward. A voice spoke to me telepathically. "You have led a materialistic and selfish life," it said. I knew that was true and felt ashamed. Over the years, I'd lost empathy for my patients. Standing on the rim of hell, I remembered a woman who'd come to my clinic for treatment of chronic arthritis. She was in considerable pain, but that wasn't the reason why she was weeping. "I need to talk to you, doctor, she said to me, "My husband's dying of lung cancer, and I don't know what to do." "I'd love to talk to you," I said, writing out a prescription for pain-killers and sleeping pills. "But I have several patients waiting."

I was like a robot. I'd trained myself to blunt my emotions. Worse, I had trained myself to think only of myself. As the smoke billowed and the burning souls screamed around me, I thought of my possessions and how meaningless they were.

Why did I have all these things? Why did I need a home so big that, when we were in different parts of the house, we had to communicate through our iPhones? I felt steeped in shame. But I knew my chance to change was gone: at any moment now, I'd be pulled into the pit of fire to burn for eternity. There seemed no way out, but I prayed for one anyway. "My God, give me another chance. Please give me another chance." Almost at that instant, I did get my second chance - in the form of the last person I ever expected to see. It was my father. I recognised him immediately, though he looked at least 30 years younger than when he'd died.

He took my hand in his and led me away from the edge of hell, as if I were still a little boy. Then, putting his arm around me, my father tried to comfort me - and it was the first time I could remember him touching me affectionately. To be honest, I almost shrank back - even at the age of 53, I was still afraid that my father was going to beat me, just as he had so many times in my childhood. But, just then, I had a vivid flashback of the day he found out I'd bunked off school and gave me a savage beating with a cricket bat. Suddenly, I was seeing it all from his perspective. His own dreams of bettering himself had come to nothing, so he'd beat me because he couldn't bear to see me wasting my life. What I'd discovered in my father's mind wasn't hatred, but fear. He'd been frightened that I wouldn't take advantage of my chances and go on to university. His tyranny, I finally understood, had been born of love. And now this.

My father, my cruel and despotic father, was spiritually rescuing me from hell! I looked into his eyes, and my hard heart melted with love. No words came from his mouth, but for the first time I learned from him that his own father had abused him, just as he'd abused me. "Anger," my father told me, "isn't usually about an event. It's passed on from father to son. If you know that, you can stop it; you can choose not to be angry. Simple love is the most important thing in the universe." I asked

myself, would I ever return to the land of the living? If I did, I would have to focus on love; I would have to break the cycle of anger in my family.

The scenery was changing: I noticed now that we'd walked straight into a tunnel. Incredibly, it was soon teeming with people I knew were my ancestors, reaching out hands of welcome. I recognised my grandfather, who gave me a look of sheer joy. "Love is the most important thing there is," he told me. Then both he and my father simply faded away. I was now halfway through the tunnel. And that's when I had a life review - in which I re-experienced in detail all the good things that had ever happened in my childhood - from being given sweets by my sisters to the warm feeling of being swathed in my mother's love.

Again, a telepathic message came from nowhere: "The simple moments are the most important. All moments are memory and lessons. They all build the person you are." I was nearing the end of the tunnel now, where a light shone more brightly than a thousand suns. I could feel it pulling me weightlessly towards it, but I felt no fear.

Before I could reach the light, however, two angelic forms emerged into the tunnel. Exuding powerful energy as they hovered above me, they introduced themselves as my guardians - the archangels Michael and Raphael. Now, I'm a Hindu. So it was only later that I learned that St Raphael is the angel of healers, and St Michael is the protector of people and the angel who opens doors. Both archangels had a human shape, yet they shimmered with light and had a thick translucence. Michael had a blue hue and long hair; Raphael was greenish and wore a cap. In a moment, I was lifted by them and guided towards the blazing light before us. As we approached, I found myself high above a green meadow, peppered with rose bushes. Just the sweet smell of the grass and roses made me almost delirious with

pleasure. We travelled on to a higher plane and then a higher one still, until I was surrounded by a landscape of clear light.

Raphael explained that at the highest level, you are surrounded by a powerful energy that consists of pure love and intelligence - the underlying fabric of everything in the universe. Enlightenment comes, added Michael, when a person realises that love is everywhere and is the only thing that matters. Yet most people don't realise this until they leave the earth. With that, they took me by the arms and we moved rapidly upwards towards a being of light, a silver-blue form that showed no sign of being male or female. When it engulfed me with its blue light, I felt as if I were being wrapped in a blanket of pure love. "I am one with the universe," I thought. The being started communicating telepathically. "You need to look at your life one more time," it said. "It's important to reflect on changes that you need to make."

It went on to tell me that I was destined to become a healer of souls - helping people with problems such as addiction, depression and chronic pain. I would no longer be an anaesthetist; instead I'd become a practitioner of spiritual medicine, of "consciousness-based healing". I don't know how long I stayed with the being. But my exit, when it happened, was sudden and rapid as I fell into a white fog. For the first time, my eyes began to hurt, so I closed them.

And when I opened them . . . I was in the recovery room. My heart was beating hard and my lungs pumping double time. "How do you feel?" It was the anaesthetist, still in his scrubs. "That was a rough one," he said, referring to my surgery. I must have looked stunned, because when I didn't respond, the anaesthetist leaned closer. "Are you all right?" he asked. "I saw you during my surgery," I said. "I left my body and watched you from the ceiling." "Interesting,"

he said, his voice a study in disinterest. "No, really. I watched as you administered the anaesthetic and even heard you tell a joke." I repeated his risque joke, word for word, and he blushed. "I must not have given you enough anaesthesia," he said, looking hard at my file in order to avoid meeting my gaze.

I wasn't about to be fobbed off. As one professional to another, I was determined to tell him exactly what I'd seen. So I described going to India, where I'd seen my mother and sister, and travelling to the edge of hell. I'd just started on the next part when he glanced at his watch and flipped the file shut. "Very interesting," he said. "I'll come back later to hear about it." I never saw him again.

When the surgeon came in to check on me, I started recounting my out-of-body experience all over again, and this time got all the way to the tunnel entrance. At that point, he reached for his phone - which wasn't ringing. Then he excused himself by saying he had an "important call".

POSTSCRIPT: After recovering, Dr. Parti resigned from his job as chief anaesthetist at Bakersfield Heart Hospital in California - much to the bewilderment of his colleagues - got rid of all his expensive cars and sold his mansion, moving into a house half the size. His wife supported all his decisions, keeping the family afloat while he established a new practice to heal people through meditation and other alternative methods. Realising he'd placed his ego above his eldest boy's happiness, Dr. Parti encouraged his son - then in his third year at medical school - to find a career he preferred. His son is now happily training to be a computer programmer and enjoys a close relationship with the father he once feared.^{228,229}

Dr. Parti's experience has a valuable message for all of us doctors, nurses, and other healthcare professionals. Many of us, like many of Dr. Parti's colleagues, may gloss over the phenomenon superficially and may be apt to dismiss it as confusion

under anaesthesia. But if we look at it with an open mind, the all-important paradigm shift that it implies, in the modern medical perspective of life cannot but hit us; and we will definitely agree that this phenomenon not only deserves to be acknowledged, but in-depth study and research is warranted and the truth of the matter must be established. In my nearly four decades as a doctor, I have witnessed many, many more such healings and phenomena, that are simply baffling, to put it mildly. I have written about just a few here. This chapter is intended to be food for thought; to make one pause and reflect instead of just brushing them aside; to inspire the next generation of doctors to study these phenomena with humility and respect in a genuine attempt to understand.

It is appropriate to mention at this juncture, that the University of Virginia Medical School has a Department of Perceptual Studies, set up by the late Dr. Ian Stevenson, who meticulously recorded information on previous lives given by little children, in various parts of the world, and corroborated that information by going all out to check it.²³⁰ The department is devoted to researching and studying the post-mortem survival of the human personality and individual Consciousness; and the department is in the 50th year of its existence this year.

This chapter also aims to get generation-next thinking about the kind of doctors, nurses and other health professionals they want to become. If nothing else, reading all these true experiences is most humbling; there is so much that we do not understand; that we do not know.

But one thing is crystal clear. However demanding our day might be, as doctors and nurses, we must make time to be kind. Even if we cannot cure all who come to us, we need to give of our time, speak kind words and exude the balm of love. That itself may set the chemistry in motion for healing, as I have often experienced!

The physiology of the inedia state (living without food)

I shall present one more brilliant case study done by Indian researchers which the journals of the medical community have ignored because they just could not understand it! It is also an example of how authoritarian and narrow minded the high priests of science have become. This concerns another phenomenon that begs understanding; how human beings, by dint of spiritual practices, are able to live and function without food or drink. The phenomenon has been described to occur in the west in Christian saints; the most well-known, most scientifically documented and most rigorously recorded case being that of Blessed Alexandrina da Costa who spent 13 years without food or drink but for the Eucharist. She died in 1955.^{231,232} In India many Sadhus follow such practices. They are largely unknown. Some cases have been studied medically. I present a thoroughly researched case below.

Prahlad Jani – a case study

I quote Dr. Sudhir V Shah, (Consultant Neurophysician, Sterling Hospital / Associate Professor of Neurology at K. M. School of PGMR, Ahmedabad)

“A 76 years old male, Prahladbhai Jani (Chunriwala Mataji), gives a detailed description about his life. He left home at the age of 7 years and wandered in the jungles of Mt. Abu, Girnar, Narmada, etc. At the age of 11 years he had some supernatural experience and this changed his life. According to him he has no desire to eat, drink liquids or pass urine or stool since then. He had been physically fit. Almost daily he goes in a state of extreme bliss (Samadhi) where he experiences enormous light and strength. He attributes his strength to an elixir

coming out through his palate. He has studied up to 3 standards & knows to read and write with limited abilities.

According to him he did not speak for about 45 years (Maunbrat). In 1942 he was admitted at J.J. Hospital and was under care of doctors & police for 45 days.

One and half years back he was investigated by Dr. Sudhir V. Shah for initial analysis of his state of health.

He has no past history of any major illnesses, hospitalization [save 1942 for observations], major or minor surgeries or drug intake. Mr. Jani accepted to undergo all non-invasive procedures and blood investigations but refused for any invasive procedure from the beginning.

He never wanted anything to be introduced through anyway to his body.

It was decided to study him by a panel of doctors, which included Dr. Sudhir V. Shah (neurologist), and a variety of other specialists including physicians, general surgeons, endocrinologists, nephrologists, a urologist, radiologists, a G.I. surgeon, a cardiologist, a psychiatrist, a genetician, an ophthalmologist, a dietician, a pulmonologist and pathologists.

He was kept in Sterling Hospital (Gurukul Road, Ahmedabad) from 13/11/03 (10:00 AM) to 22/11/03 (10:00 AM) for observation. Directors of Sterling Hospital specially Dr. V. N. Shah and the management committee of Sterling Hospital kindly consented to look after the ethical aspects and the funds for the project including various tests.

The strict monitoring to ascertain the genuinity of his claim (Not eating anything, not drinking anything, not passing urine and not passing stool) was done by the unbiased august body i.e., Association of Physicians of Ahmedabad, under precise

protocol set by the Secretary of the Association, Dr. Urman Dhruv, along with executive committee of the association.

The research panel of doctors was headed by Dr. Sudhir V. Shah (Consultant Neurophysician, Sterling Hospital/Associate professor of neurology at K. M. School of PGMR, Ahmedabad).

During the project, Dr. Sudhir Shah was in touch with Professor Dr. Selvamurthy frequently who is the over-all controller of Defence laboratories including DIPAS (Defence Institute of Physiology and Allied Sciences), New Delhi.

He was kind enough to guide the protocol of monitoring as well as further tests for the project. During the study period Mr. Jani was completely monitored by doctors, staff members and security people all throughout the day. He was asked to make an affidavit to undergo the study with clear understanding that if his health or medical parameters deteriorate then panel of doctors will withdraw from the study.

He was kept in ICU for 24 hours i.e., 13/11/03 (10:00 AM to 14/11/03 (10:00 AM) and then was kept in a room with glass door. The toilet door was sealed. CCTV camera was set in the room for the rest of the period of study i.e., from 14/11/03 to 22/11/03 (10:00 AM).

Medical officers on duty were assigned the job to monitor him.

Staff persons were deputed on round the clock duty for 9 days and nights continuously to stay with Mr. Jani in the same room to closely watch him and make sure that he does not eat, drink, and pass urine or stool. The video tapes were reviewed for all 24 hours of all these days by committee.

Mr. Jani was not allowed to go out of the room except for sonography of bladder and MRI testings, but even during that period, he was all the way accompanied by doctors.

He agreed not to take bath or have body sponging for first seven days as decided by the panel.

Clinical opinions of system examination of all experts were obtained including cardiac, renal, neurological, urological, gastrointestinal, general medical, pulmonological, ophthalmic, ENT, psychiatry and others.

A series of investigations were done as per protocol defined earlier as well as additional tests were carried out as per suggestions of the team. Clinically all his systems were generally normal.

All his special senses were also ok except moderate hearing loss. However, his pulse remained at 42-46/min, BP about 114/80 mmHg and respiration around 12-14/min.

His cognition and behavior was all right.

His weight was taken daily. His clinical examination including vital data and general examination and systemic examination was done daily.

Urinary volume in the bladder was checked by ultrasound twice daily at 10:00 AM & 6:00PM. This showed that there was urine accumulation, which ultimately decreased on its own without passing.

Blood samples were checked regularly with frequent monitoring of CBC, RFT, electrolytes, sugar and acetone. There was mild alteration in renal parameters and there was slight fall in weight, which subsequently stabilized.

Otherwise all reports were in normal range.

Genetic study report is awaited. The above study was done for the period of 10 days.

Pertinent Clinical Investigations

Hematology Blood Group: "A" +ve

Date: 12/11/03 14/11/03 16/11/03 18/11/03

Hb: 10.8 G% 11.3 G% 11.5 G% 12.3 G% T.RBC:4.17 4.37 4.49 4.87

T: 4880 /c.mm. 5780 /c.mm. 5640 /c.mm. 8180 /c.mm.

DC: 40/47/10/03/00 47/41/09/03/00 52/36/09/03/00 66/27/04/03/00

PC: 3,52,000 /c.mm. 4,25,000 /c.mm. 4,53,000 /c.mm. 5,03,000 /c.mm.

ESR: After 1 hr: 10 mm

Blood Indices: HCT: 35.8 37.9 38.5 42.0

MCV: 85.9 86.7 85.7 86.2

MCH: 25.9 25.9 25.6 25.3

MCHC:30.2 29.8 29.9 29.3

Date: 20/11/03

Hb: 12.9 G% T.RBC:5.17 m/c.mm. TC: 7690 /c.mm. DC: 62/25/04/05/01

PC: 4,86,000 /c.mm.

MPV: 9.0 fl

ESR: After 1 hr: 25 mm After 2 hr: 52 mm

Blood Indices: HCT: 42.2 MCV: 81.6 MCH: 25.0 MCHC: 30.6

Biochemistry Dated 12/11/03

Prolactin: 3.80 S. Cortisol: 12.2 microgm/dL

S. Total Proteins: 7.27 Albumin: 4.05 Globulin: 3.22 A/G Ratio: 1.26

Gamma GT: 31.0 U/L

Thyroid Function Test: T-3: 0.86 ng/ml T-4: 5.90 TSH: 3.15 microIU/ml

Lipid Profile: S. Cholesterol: 216.0 mg/dl S. Triglycerides: 127.6 mg/dl HDL: 57.2 mg/dl Direct LDL: 118.9 mg/dl Cal. LDL: 133.28 mg/dl Very low density lipoprotein: 26 mg/dl LDL/HDL: 2.079 Cholesterol/HDL: 3.776

S. Electrolytes: S. Na+: 139.8 mmol/L S. K+: 4.61 mmol/L S. Cl-: 103.2 mmol/L

S. Acid Phosphatase: Total Acid Phosphatase: 4.58 IU/L Non Prostatic ACP: 2.58 IU/L Prostatic Phosphatase: 135.19 IU/L

S. Bilirubin: Total Bilirubin: 0.48 mg/dl Conj: 0.10 mg/dl Unconj: 0.38 mg/dl Delta: 0 mg/dl SGPT: 21.0 U/L SGOT: 22.0 U/L

S. Alk. Phosphatase: 95.0 U/L

FBS: 85.7 mg/dl Blood Urea: 33.0 mg/dl S. Creatinine: 1.36 mg/dl S.

Uric acid: 5.26 mg/dl S.Acetone: 10 mg/dl

Human Growth Hormone: 0.14 ng/ml

Date: 14/11/03 Blood Urea: 46.9 mg/dl S. Creatinine: 1.53 mg/dl S. Na+: 145.1 mmol/L S. K+: 4.60 mmol/L S. Cl-: 107.0 mmol/L S.Acetone : 10 mg/dl

Date: 15/11/03 S. Na+: 143.7 mmol/L S. Acetone: 30.0 mg/dl

Date: 16/11/03 Blood Urea: 59.6 mg/dl S. Creatinine: 1.52 mg/dl S. Na+: 148.3 mmol/L S. K+: 4.97 mmol/L S. Cl-: 106.8 mmol/L RBS: 84.9 mg/dl S. Acetone: 30.0 mg/dl

Date: 18/11/03 S. Uric acid: 11.44 mg/dl SGPT: 10.0 U/L S. Acetone: 30.0 mg/dl Blood Urea: 63.7 mg/dl S. Creatinine: 1.75 mg/dl S. Na+: 154.3 mmol/L S. K+: 4.37 mmol/L S. Cl-: 107.5 mmol/L ABG: (Venous Blood) PH: 7.31 PCO2: 48 PO2: 23 TCO2: 25 HCO3: 23 BE: -3.0 O2 sat: 35% Venous RBS: 162.0 mg/dl

Date: 20/11/03

T-3: 0.97 ng/ml T-4: 9.0 ug/dl TSH: 2.1 mIU/dl Plasma Cortisol: AM: 11.0 ug/dl FBS: 76 mg% Blood Urea: 77 mg% S. Creatinine: 1.7 mg% S. Na+: 155.9 M.Eq/L S. K+: 4.67 M.Eq/L S. Cl-: 115.9 M.Eq/L SGPT: 24 Units/ml S.Acetone: 30 mg/dl

Date: 21/11/03

Blood Urea: 87.5 mg/dl S. Creatinine: 1.46 mg/dl S. Na+: 143.5 mmol/L S. K+: 4.16 mmol/L S. Cl-: 101.5 mmol/L S. Acetone: 30.0 mg/dl (Present)

Date: 25/11/03

*S. K+: 3.40 mmol/L SGPT: 23.0 S. Creatinine: 1.40 mg/dl S. Na+: 137.5 mmol/L
Blood Urea: 48.2 mg/dl RBS: 99.8 mg/dl*

Audiological Evaluation: (17/11/03) Bilateral severe to profound degree of sensori-neural hearing loss. ECG and cardiac evaluation were normal.

Radiological Investigations X-Ray Chest PA (12/11/03): No significant abnormality detected.

USG Abdomen (12/11/03): No significant abnormality detected.

Doppler examination of carotid, vertebral, abdominal aorta and peripheral arterial system of lower limbs were quite normal.

MR Angiography of Brain, Neck & abdomen was unremarkable.

MR Oesophagus: Normal study

MR cholanigopancreatography: Normal study

MR Abdomen – pelvis: Presence of bowel gas and solid faecal material. Gall bladder collapsed. Urinary bladder partially filled with urine around 70ml

MR Myelography: Normal study Cartography (26/11/03): Normal study.

After day 10, the committee is satisfied with following matter:

- 1. The protocol was strictly adhered to.*
- 2. Mr. Jani has not passed or dribbled urine during these 10 days.*
- 3. He has not taken anything by mouth or by any other routes not even water for 10 days.*
- 4. All his parameters remained within the range determined by the committee.*
- 5. He has shown evidence of formation of urine, which seems to be reabsorbed from his bladder wall.*

However at present the committee does not have any scientific explanation for the same but the help of senior scientists and medical personnel of the country is being taken for the same.

We are surprised as to how he has survived despite above particularly without passing urine for 10 days and remaining generally physically fit.

However it should be made very clear that we have confirmed the claim over 10 days only and we as scientists and responsible doctors cannot say anything regarding validity of the claim of his sustaining without food, drinks, urination and excretion of stools over several years.

Our attempt is to understand this wonderful phenomenon having confirmed from our side over these 10 days and we are not sure whether this is reproducible in

other human beings by the way of YOGA as he practices or by other methods like Genetic Engineering.

If so, also we are not sure whether and how it can contribute to human welfare.

At the moment, we are trying to analyse the results and trying to learn for the betterment of science.

Probably, some invasive investigations may help understand this process but from the beginning Mr. Jani has refused any invasive procedure or any sort of injections be it a dye only.

Dr. Urman Dhruv (Physician & Secretary of APA)

Dr. S. V. Shah (Consultant Neurology & Head of Research Committee)

Dr. V. N. Shah (Diabetologist & Director - Sterling Hospital) ”²³³

In October 2010, the Italian television station Rai 2 broadcast a program named "Voyager" which presented an extensive report on Prahlad Jani and the tests. In 2010 Prahlad Jani was also featured in an Austrian documentary "In the Beginning There Was Light”.²³⁴

Just why did Dr. Sudhir Shah’s study not make it to the prestigious journals of medicine / science?

Everything was supervised by the Indian Defence Institute of Physiology and Allied Sciences (DIPAS) and all possible clinical tests including daily blood counts and CT-scans of the body were done - with incredible results. Then why did the Prahlad Jani study not cause an "earthquake" in the science community?

“The study never has been published in a renowned peer-reviewed journal” - is the answer of most scientists, meaning, that if there would be truth in it – it would have been published.

To get back to an important issue, why do doctors and the scientific establishment choose to ignore and NOT publish such meticulous reports that challenge as it were, modern medical concepts of nutrition, physiology and well-being?

The establishment considers only that which fits their views, as the truth! Anything that goes against that grain is vehemently opposed and ridiculed. Why do scientists who are supposed to be wedded to truth do this?

“The Big Peer Reviewed Scientific Journals ‘make the truth’!”

P.A Straubinger, the Austrian director of a documentary which included Prahlad Jani’s amazing story offers valuable insights on his website, *“Nobel Prize Laureate Prof. Brian Josephson explained to me that the big peer-reviewed scientific journals are like the "holy scriptures" of science. They "make the truth".*

What’s not in there does not exist and is not true. And Josephson compared the mainstream science with the Catholic Church a few hundred years ago. An elite of "clerics" decides what is published in the "Holy Scriptures" and what’s not. And what’s not in there is not true and anybody who makes different claims will be "excommunicated from the Church of Science".

But the history of science shows that it happened very often that scientists were not published in renowned journals and even ridiculed just to be proven right years later. For example, the Japanese Physicist Hideki Yukawa tried to publish his work in the 1930s about the "Meson" particle in renowned western science-journals. He was declined by all western journals as his research would be "obvious nonsense". But Yukawa continued working and published in an unimportant Japanese journal.

Two decades later he received the Nobel Prize for his work on the Meson as the first Japanese Physicist. Before we get too negative on the system of peer-review - of course it works very well in established parts of science. You have experts in a field checking the work of a colleague and judging it as right or wrong. This guarantees a good quality in scientific work but it makes it very difficult to bring up really new things.

So - not being published in one of the renowned journals can mean that the work is really mistaken - but it also can mean that it is so far out of the mainstream that the peer-reviewers find no consensus to publish it.

*Prof. Harald Walach writes in his "Generalised Quantum Theory" about this chronic problem of mainstream science: "We tend to ignore phenomena which we encounter and which we cannot classify within the narrow bounds of the official theory. We tend to interpret them differently within the standards of the theory or to declare them as irrelevant."*²³⁵

As an aside, though the main landmark study described above never got published, an IIT Madras team conducted an imaging study in 2017 on Jani's brain. They found that the size of Jani's Pineal and Pituitary glands were of the same order of a 5-10 year-old boy. The study results were published in the Annals of Neurosciences and the authors proposed that although his body is aging over the course of time his neuroendocrine morphology and functions still continue to remain as that of a normal young child.²³⁶

An Unfortunate Pattern - Western Researchers study Superhuman Powers of Eastern Masters but findings NEVER published in Peer Reviewed Journals:

Over the past 60 years a common pattern can be seen repeating itself. Individual Western researchers impressed by the superhuman powers shown by Indian Yogis,

invite them over in all sincerity and meticulously document these powers under controlled conditions. But thereafter, these landmark findings that are beyond established medical ‘norms’ are never published in peer reviewed journals. Sometimes, due to pressure from ‘the establishment’ the researchers, even distance themselves from the entire episode!

The Physiology of Yogic states

Swami Rama was studied at length by researchers at the Menninger Foundation in the sixties. Nearly half a century later, in a 2019 volume of Progress in Brain Research, a highly acclaimed book series in neuroscience, Stephen Parker eloquently explains in anguish this reluctance of the scientific establishment to face the truth.

He writes, “1969 Swāmī Rāma of the Himalayas arrived in the United States and was introduced to Elmer and Alyce Green of the Menninger Foundation in Topeka, Kansas. They had a well-equipped laboratory designed to investigate voluntary control of psychophysiological processes. In their initial discussions, as they described their work, Swāmī Rāma decided that this was a place to realize his master's ambition that the abilities manifested by a masterful practice of yoga be documented scientifically.

He demonstrated an array of abilities including simultaneously raising and lowering the temperature in adjacent muscles by 10°F, placing his heart in such rapid atrial fibrillation that his heart stopped pumping blood for several minutes, manifesting telekinesis in an environment carefully controlled for the motion of air and for electromagnetic forces, spontaneously creating cysts under his skin and also voluntary entry into alpha, theta, and delta brain wave states. One of these

involved a demonstration of a yogic practice called yoga-nidrā, conscious entry into deep, non-REM, delta wave sleep.

He was connected to an electroencephalogram and Swāmī Rāma then entered into a delta wave state where he was creating delta waves almost exclusively. During the period of the experiment, two technicians were quietly talking in the next room. When he resumed ordinary waking awareness after the experiment, Swāmī Rāma recounted that conversation verbatim. This illustrated the criterion he articulated that in addition to being focused on his inward state, he also remained aware of his external environment. There is no current explanation in neuroscience for his ability to do this.”

“There are several reasons why these experiments were not published in the formal scientific literature. The most important reason is that to the true masters of yoga, science needs yoga; yoga doesn't need science. The masters of yoga know what they can do and they are never interested in demonstrating these things as a matter of self-promotion. Swāmī Rāma was ordered by his own master, Bengali Bāba, to do these demonstrations as a way to help the West understand the degree to which a state of health and wellness can be within the control of an individual practitioner. Another reason for the failure to publish in peer reviewed circles was the fact that these were individual cases which lacked statistical generalizability and usually also lacked matched control subjects. As such they were not favored by editors.

Finally, there was the skepticism of many scientists, and their fear of their colleagues' skepticism, which often extended to not believing what they had seen with their own eyes, much less found acceptable in a peer review. Their unwillingness to believe the very senses on which they relied for their evidence

eventually persuaded Swāmī Rāma that many, perhaps most, scientists were not ready to see and he stopped demonstrating.”²³⁷

In another 2017 review article Parker writes, “Swāmī Rāma's close disciple Swāmī Veda Bhāratī set out to replicate his master's experiments at the Institute for Noetic Sciences in California in 2006 under the experimental leadership of Dean Radin Ph.D. During these trials, in addition to duplicating Swami Rama's experiment, Radin accidentally discovered that Swāmī Veda remained almost perpetually in a state of yoga-nidrā, his brain producing theta and delta waves even with his eyes open, talking and moving around. Again, there is no neurological explanation for the possibility of this. Swāmī Veda subsequently published a small book about his personal experiences and experiments with yoga-nidrā, which actually began from the age of three, even though he did not recognize it as such at the time. Mainstream peer reviewed journals still do not accept these papers.”²³⁸

The physiology of Sun Gazing

In the nineties, similar treatment was meted out to Hira Ratan Manek, the ‘Sun Gazer’, who could derive nutrition by tapping into the energy of the sun, in an as yet not understood manner. The first fast by Manek lasted 211 days in 1995-96, in Calicut, India, and was directed by Dr. C.K. Ramachandran, a medical expert on allopathic and *ayurvedic* medicine. This was followed by a second fast lasting 411 days in Ahmedabad, India, directed by an international team of 21 doctors and scientists, led by Dr. Sudhir Shah.^{239,240}

Dr. Mitchell Gibson is the author of *The Enlightened Perspective*. One who has extensively researched the effect of light on the human body, he is the author of ‘The Human Body of Light’. Gibson received his medical degree from the

University of North Carolina at Chapel Hill and completed his residency training at the Albert Einstein Medical Center in Philadelphia. He has himself experienced meditation and had mystic experiences during his inward journey. He is not only a brilliant medical psychiatrist but a spiritual Master in his own right. He has written in detail about the studies done by US researchers on Hira Ratan Manek; and I see no reason to disbelieve him

I quote Dr. Gibson here; he writes, *“Sun-gazing is a practice also called the HRM phenomenon, coined as such after Hira Ratan Manek, the man who submitted himself to NASA for scientific testing to confirm that he does indeed, possess the almost ‘super-human’ ability of not eating, gained through his dedication to this interesting marvel.”*

“Funded by NASA, a team of medical doctors at the University of Pennsylvania observed Hira 24 hours a day, 7 days a week for 100 days. NASA confirmed that he was indeed, able to survive largely on light with occasionally a small amount of buttermilk or water during this time.”

“What happens to the body during Sun Gazing?”

During your first 3 months of practice, the suns energy is moving through the eyes and charging the hypothalamus tract, says those who have studied this technique and used it. This Science/Medical Team wanted to observe and examine his retina, pineal gland and brain, therefore this observation team was led by Dr. Andrew B. Newberg, a leading authority on the brain and also featured in the recent movie “What the Bleep Do We Know”, and by Dr. George C. Brainard, the leading authority on the pineal gland. Initial results found that the gray cells in HRM’s brain are regenerating. 700 photographs have been taken where the neurons were reported to be active and not dying. Furthermore, the pineal gland was expanding

and not shrinking which is typically what happens after mid-fifties and its maximum average size is about 6 x 6 mm, however for HRM, it has been measured to be at 8 x 11 mm. The hypothalamus tract is the pathway to the rear of the retina which leads to the brain.

The brain then, over time, becomes activated by the energy supply being received by the sun. You will first experience a relief of mental tension and worry, since most worry is fueled by the energy received by the foods we eat. Since food gets its energy from the sun, it is said to be readily available to sun-eaters without the trouble of digestion. Though hunger is said to eventually cease, it is fine to continue eating regularly during initial stages, until appetite disappears naturally.”²⁴¹

However, whether NASA actually observed Manek is controversial and the internet abounds with contradictory reports.²⁴²

More yogis capable of ‘Sun Gazing’ and getting their ‘nutrition requirements’ from the sun have been reported by 2020. Umasankar teaches Sun Yoga to all who are interested. He promotes Sun Yoga for well-being. He is able to get his nutrition from the sun. On occasion he eats normal food offered by devotees. He promotes Sun Gazing for its pro-health benefits and not as a means to live without food.²⁴³ Medical Researchers at Lonavla found that though he could not voluntarily ‘stop his heart’, Umasankar had considerable voluntary control over his cardiac function.²⁴⁴

With both Hira Ratan Manek, Umasankar and more ‘Sun Gazers’ being available and contactable, today, we have a great subject for research to be taken up by an

enterprising team of gen-Y doctors. The study should be on camera and preferably uploaded on the internet even as it happens.

The Indian sub-continent undoubtedly has many such spiritual folk who defy the laws of medical science as we know it. My fervent hope is that the next generation of Indian doctors will research these phenomena in the true spirit of scientific enquiry.

Mainstream Indian Academia generally apes the west

The mainstream Indian medical journals kowtow to the west and ‘dare not’ publish anything that contravenes ‘established principles’. Smaller journals show more open-mindedness and a readiness to publish the truth even if it questions status quo. The landmark study on Hira Ratan Manek by Sudhir Shah and others was published in the Gujarat Medical Journal in 2001.²⁴⁵

The Indian Journal of Medical Research, in 1973, published a paper by Kothari et al titled, “Study on a yogi during eight day confinement in a sealed underground pit”. Since those were pre-internet archive days, a copy of the original paper could not be accessed. A team of researchers studied a *yogi* named Satyamurti. He was monitored by a 12-lead ECG. At 29 hours of observation in an isolation chamber, there was ‘severe sinus tachycardia’, which then progressed at 30 hours to an ECG record showing a straight line in all leads lasting for five days. One half-hour prior to the end of the experiment, on the eighth day, an active ECG record reappeared.”²⁴⁶ In the 2000 volume of Progress in Brain Research, this experiment is quoted in detail.²⁴⁷ Surely it should have made it to the top journals in the world; but it did not.

Sadhguru of Isha fame has himself in the course of YouTube interviews disclosed how at the request of researchers in the west, he agreed to EEG studies and other concomitant tests while in a state of deep meditation. To their astonishment the EEG recording was akin to that of ‘the ‘brain dead’ while he was in deep meditation! Using pure common sense, Sadhguru explains that medical men are too grounded in physicality. That has to change for the most of the cosmos is made of no-thing; Indian tradition that emerged through a process of enquiry postulates that Consciousness or Brahman, pervades all that ever was, is and will be; and therefore it pervades ‘things’ as well as the no-thing!²⁴⁸

As in the macro, so in the micro. It is no rocket science that our bodies are in reality made up of atoms which are 99.99% empty space; which means we are actually 99.99% non- physical beings. We are much more than the physical body. The mind and levels of existence beyond it exist in the no-thing dimension. Today we know that the mind can affect our physical body both positively and negatively. *Yoga* when mastered demonstrates the supreme control that can be effected by the non-physical on the physical. Medical science needs to be open-minded and study this phenomenon in the true spirit of scientific enquiry. This area is an excellent area for open-minded Indian researchers to study as such *yogis* abound in India.

A Silver Lining! A New Book in Sync with This Chapter:

As this second edition goes into circulation, I am delighted to find that 2020 has seen the release of a book titled, “ CURED - The Life Changing Science of Spontaneous Healing”.²⁴⁹ This book explores the stories of terminally ill patients who made seemingly impossible recoveries, sometimes with the help of alternative medicine or spiritual practices. Absolutely in sync with this chapter, it lists

extensively well documented cures which defy conventional medical logic. Penned after due diligence - fifteen years of dogged follow up of the cases in question, by the author, a Harvard Psychiatrist, Dr. Jeffrey Rediger, it also emphasizes the oft forgotten fact that the primary aim of doctors should be the promotion of holistic health; and not just the treatment of diseased organs. Modern Medicine seems to have gone off at a tangent, to the detriment of patients!

Longtime editor at the Washington Post, Mary Hadar, who interviewed him posted a headline that says it all - “After spending 17 years studying ‘miracle’ cures, a Harvard psychiatrist says Western medicine has it all wrong.”²⁵⁰

That Medical Journals and academic conferences will invariably reject such reports, and physicians have no choice but to go direct to the public with books on the subject, is a tragedy of our times. And yet, perhaps it is a blessing; for only a movement by inspired public opinion can shake an establishment so mired in its own views and closed to any notions of change.

The Impasse between Medical Science & Spirituality:

A review article in the Indian Journal of Psychiatry seeks to explain just why this impasse between the spiritual and medical science; why the reluctance on the part of the scientific medical establishment to accept faith healings, miracle cures and the like. In this paper titled, “Prayer and healing: A medical and scientific perspective on randomized controlled trials”, the authors, Andrade and Radhakrishnan conclude thus, “*God may indeed, exist and prayer may indeed, heal; however, it appears that, for important theological and scientific reasons, randomized controlled studies cannot be applied to the study of the efficacy of prayer in healing. In fact, no form of scientific enquiry presently available can*

suitably address the subject.”²⁵¹ For now, to paraphrase Galileo, “The aim of medical science is not to open a door to infinite wisdom but merely to set a limit to infinite error”

The human being is an amazing example of not just outer engineering represented by the body; but an amazing piece of ‘inner engineering’ too, as *Sadhguru* of *Isha* fame states.²⁵² Life is a combination of energy and time, he oft states; and the quality of life depends on how you manage your energies. Health is the basic requirement that makes for a good quality to life. As custodians of the health of our fellowmen, it is imperative that we know as much as possible about these energies and their play through time, as they are determinants of health. Nevertheless, the dilemma of the modern-day physician practicing modern medicine, when faced with requests by patients or their families that they be ‘allowed’ to resort to ‘faith healing’ measures was brought out eloquently in a 2015 paper.²⁵³

Doctors practising modern medicine look up to academia for guidelines on the issues discussed in this chapter which seem beyond our current scientific understanding. Academia cannot afford to continue with its ostrich-like attitude; no longer can we ignore what stares us in the face. It’s time medical science confronted the uncomfortable and unconventional.

From Newtonian Physics to a Quantum View of Human Existence, Disease & Health:

In the next chapter we shall attempt to make some sense of the bewildering phenomena, like those described in this chapter, that confront modern medicine. Just as physics and chemistry have gone to the next level thanks to quantum

mechanics, to understand biology and medicine beyond the three-dimensional, we need to adopt a quantum view of things. Employing a quantum view, let us see what the latest scientific research has revealed about matter and energy, about space and time, about the mind and intellect, about the individual and the-universe, about the human cell and its wondrous activities; about creation itself, about the unified field/Consciousness, about life, death and other dimensions.

To me it looks like physics and metaphysics are meeting; and its implications for sickness, healing and the practice of medicine, in the decade to come, are bound to be profound. It's time we liberated ourselves from the box of three-dimensional physics; time for doctors to think out of the box; time to take a quantum leap.

* * *

Chapter 6

WHAT THEY DON'T TEACH YOU IN MEDICAL COLLEGE

Outline

The human existential crisis; stress related diseases; quantum view of origin of the universe and man; update on the micro; scalar energy; bio-fields and healing; water and cellular memory; concepts of emergence & phase changes; the cell wide web & DNA; the observer effect; EM fields of the body; newer roles for DNA; the heart of healing; heart-brain coherence, DNA, the earth and nature and man as a holistic healing system; love- the highest form of intelligence; the mind extends beyond the brain; mind & chemistry; power of belief & intention; prayer & meditation in healing; on intuition; physics & metaphysics meeting; beyond the brain to awareness; eastern view of Consciousness & the human organism; Consciousness research; NDEs; veridical perceptions; post-NDE healings; neural correlates of Consciousness; language, experience & Consciousness; the twin journeys to Consciousness

Introduction:

This chapter contains information highly relevant to the understanding and practice of medicine; but strangely there is no mention of these concepts in medical college. So much scientific evidence has come up on these topics that they do not teach in medical college, that this chapter is going to be extra-long. If reading it inspires generation-next of medicos to work in these areas, as much as it inspired me to research, educate myself and share through this book, this chapter would be well

worth the effort. The lack of this knowledge is what keeps modern medicine at least fifty years behind the healing techniques being unravelled by researchers in the pure sciences.

Practitioners of alternative systems of medicine have shown greater pragmatism and a willingness to learn; for this research helps understand how millennia old healing techniques possibly work. A lot of the development lies in the quantum realm, which the medical establishment has been refusing to acknowledge as relevant in medicine. But that argument appears no longer tenable. Despite all the high-tech advances, modern medicine faces the biggest burden ever, of non-communicable diseases. So clearly, we are going wrong somewhere. This chapter is an attempt to course correct. It is an attempt to introduce that new knowledge so that at least the next generation of modern medical healthcare professionals who read this book will be familiar with both the practice of quantum medicine and medical ethics from a Consciousness perspective,

The Human Existential Crisis:

Mankind faces the disturbing fact that in the past 100 years, spectacular advances in science and technology have fostered the growth of an affluent, intelligent but selfish section of society globally. This crust of society rules in all nations. All economies seem driven by the roughly 150-year-old Darwinian concept of survival of the strongest (those were his original words). Selfish behavior holds sway. The net result is that FEAR is the overriding emotion worldwide; COVID-19 is a pandemic of fear too! Among the deprived, fear of how to get by today and tomorrow, fill their lives. Among the affluent, the fear of loss, the fear of inability to keep up with the Jones's or fear of not being able to fulfill unbridled ambition

fill their lives. Naturally the fight and flight responses have taken over humanity resulting in a never-before-seen plethora of stress related diseases. The ultimate disease - suicide, has also peaked. Frustration and depression have led to highest levels of suicides among all classes of society globally. In previous chapters we have seen a sample of all this as it affects healthcare professionals.

Stress and Disease:

Separatist thinking and Stress:

Modern man's body-centric separatist thinking is the basic cause of all unrest. Indeed, body-centric separatist thinking is the basis of all 'stress' that precipitates and aggravates all health problems. There is no one single definition of stress. At the simplest Stress can be defined as the way you feel when you're under abnormal pressure. The Wikipedia defines chronic stress as the response to emotional pressure suffered for a prolonged period of time in which an individual perceives he or she has little or no control. It involves an endocrine system response in which corticosteroids are released.

While the immediate effects of stress hormones are beneficial in a particular short-term situation, long-term exposure to stress creates a high level of these hormones. This may lead to high blood pressure (and subsequently heart disease), damage to muscle tissue, inhibition of growth, suppression of the immune system, and damage to mental health. Stress strikes from all sides. It could be fears of all sorts - fear of sickness, fear of financial insecurity, fear of losing one's job, fear of exams, fear of the future, fear of old age, fear of the loss of one's looks, fear of death... the list is endless. Apart from fear, loneliness is a big stress in the West.

Our consumerist material society fans one-upmanship, greed, keeping up with the Jones', arrogance, pride, envy, jealousy, the stress of resorting to underhand means, the stress of telling lies to cover up lies, the stress of being found out, the stress of shame and loss of face. Geo-political factors add wartime stresses, stress of refugee camps, stress of poverty, stress of religious genocides, stress of terrorism, stress of natural disasters. The stress of too fast paced a life and having to run all the time to stay ahead; the stress of peer pressure; pressure to perform; the publish-or-perish stress in academia - the sources of stress are innumerable. In the health arena we have stress of sickness, stress of unaffordability and poor access to treatment, stress of financial ruin due to cost of treatment, stress of advanced medical treatments like chemotherapy and as we have experienced globally in 2020 – the stress of pandemics and stress ensuing from measures to tackle them. Women and children have additional stress due to fall of moral standards, abuse at the hands of fellowmen, single motherhood. Manmade stresses include alcoholism, drug abuse and so on where again women and children are the ultimate victims in a family.

Stress and rise in Non-communicable diseases:

There has been an alarming marked rise in non-communicable diseases (NCDs) across the world. To quote India's statistics – the proportion of all deaths due to all NCD causes increased between 1990 and 2016 from 37.9% to 61.8%.²⁵⁴ The NCDs that featured among the top 10 causes of death and disability combined in 2017 included ischaemic heart disease, stroke, chronic obstructive pulmonary disease and diabetes. The top 10 risk factors associated with death and disability included high blood pressure, tobacco use, high fasting plasma glucose, alcohol

and drug use, high BMI and high LDL.²⁵⁵ We shall look at the role of stress in NCDs in more detail in the ensuing paragraphs.

Stress and coronary artery disease:

Doctors have long suspected that increasing stress was at the root cause of the rise in NCDs but could not quite put their finger on how it did so. Today we have scientific studies to back that fact.²⁵⁶ Steptoe and Kivimaki stated in the Annual Review of Public Health in 2013, *“Considerable progress has been made during the past decade in research on cardiovascular effects of stress. Early-life stressors, such as childhood abuse and early socioeconomic adversity, are linked to increased cardiovascular morbidity in adulthood. Our updated meta-analyses of prospective studies published until 2011 show a 1.5-fold (95% confidence interval 1.2–1.9) increased risk of coronary heart disease among adults experiencing social isolation and a 1.3-fold (1.2–1.5) excess risk for workplace stress; adverse metabolic changes are one of the underlying plausible mechanisms. Stress, anger, and depressed mood can act as acute triggers of major cardiac events; the pooled relative risk of acute coronary syndrome onset being preceded by stress is 2.5 (1.8–3.5) in case-crossover studies. Stress is also implicated in the prognosis of cardiovascular disease and in the development of stress (takotsubo) cardiomyopathy.”*²⁵⁷

Stress and Cancer:

The National Institute of Cancer website describes studies that suggest psychological stress can affect a tumor’s ability to grow and spread. *“In studies of mice carrying human tumors, researchers found that in mice isolated from other mice – a condition that increases stress – the tumors were more likely to grow and metastasize. In one set of experiments, tumors transplanted into the mammary fat*

pads of mice had much higher rates of spread to the lungs and lymph nodes if the mice were chronically stressed than if the mice were not stressed. Studies in mice and in human cancer cells grown in the laboratory have found that the stress hormone norepinephrine, part of the body's fight-or-flight response system, may promote angiogenesis [growth of tumor-supporting blood vessels] and metastasis.”²⁵⁸

The Dana-Farber Cancer Institute blog tries to discuss the available evidence regarding the effect of stress on cancer and I quote, “...Another animal study focused on prostate cancer. Mice were implanted with human prostate cancer cells and treated with a drug being tested against the disease. When the mice were kept in a calm condition, the drug destroyed the cancer cells and inhibited tumor growth. When they were put under stress, however, the cancer cells did not die and tumor growth surged ahead. In a similar study involving mice genetically prone to developing prostate cancer, the results were much the same. The researchers traced the result to adrenaline, a stress hormone that shuts down the natural death process in cancer cells

A few studies have looked at the question of stress and cancer growth in human patients. In one, researchers analyzed 80 ovarian cancer tissue samples grouped by the stress levels of the patients from whom the samples were taken. Stress, along with elevated stress hormones, were associated with higher levels of a protein called FAK (focal adhesion kinase), which is linked to faster progression of the disease.

*Overall, stress has not been clearly shown to worsen the course of disease in patients with cancer, but there's no question that reducing stress can help people cope more effectively with a cancer diagnosis.”*²⁵⁹

Prof Tsonwin Hai and team after a decade of study, published in 2017, have shown that stress fuels cancer by triggering a 'master switch' gene which allows the disease to spread.^{260,261} To quote from a daily mail article featuring this research, *“Stress has long been linked to many forms of the disease including breast and prostate cancer, but the reason has remained a mystery. The team at Ohio State University says our own bodies help turn cancer against us by turning on a 'master switch' gene known as ATF3 which is expressed in response to stressful conditions in all types of cells.*

Usually, it causes normal and benign cells to commit suicide if they decide they have been irrevocably damaged. But cancer cells somehow coax immune-system cells recruited to the site of a tumour to express ATF3. It is unclear exactly how, but the gene promotes the immune cells to act erratically and give cancer an escape route to other areas of the body.

Professor Tsonwin Hai, one of the study authors said: 'If your body does not help cancer cells, they cannot spread as far. So really, the rest of the cells in the body help cancer cells to move, to set up shop at distant sites. And one of the unifying themes here is stress.'

They studied cancer cells in different animal hosts. The primary tumors were similar in size, but only in the host that could express ATF3 - the stress gene - did the cancer cells metastasize efficiently. This suggests that the host stress response helps cancer to metastasize.

*'If the body is in perfect balance, there isn't much of a problem. When the body gets stressed, that changes the immune system. And the immune system is a double-edged sword,' she said.*²⁶²

That the converse is true; that de-stressing helps in cancer was shown by Ainslie Meares of Australia. Meares was a pioneering physician who took on advanced cases of cancer who were beyond treatment and had been sent home to die; through meditation, prayer and related remedies; and to the amazement of oncologists, they survived far beyond medical expectation demonstrating the power of de-stressing and developing a positive mind set.²⁶³⁻²⁷¹

Stress and auto-immune diseases:

A 2018 paper studying the relationship between stress and autoimmune diseases states, “*Physical and psychological stress has been implicated in the development of autoimmune disease, since numerous animal and human studies demonstrated the effect of sundry stressors on immune function. Moreover, many retrospective studies found that a high proportion (up to 80%) of patients reported uncommon emotional stress before disease onset.*”²⁷² Unfortunately, not only does stress cause disease, but the disease itself also causes significant stress in the patients, creating a vicious cycle.

Recent reviews discuss the possible role of psychological stress, and of the major stress-related hormones, in the pathogenesis of autoimmune disease. It is presumed that the stress-triggered neuroendocrine hormones lead to immune dysregulation, which ultimately results in autoimmune disease, by altering or amplifying cytokine production. The treatment of autoimmune disease should thus include stress management and behavioral intervention to prevent stress-related immune imbalance. Different stress reactions should be discussed with autoimmune patients, and obligatory questionnaires about trigger factors should include psychological stress in addition to infection, trauma, and other common triggers.^{272,273}

Stress and diabetes mellitus:

A 2017 Lancet article reveals that stress is known to negatively affect health and is a potentially serious barrier to diabetes-related health outcomes. Another paper synthesizes what is known about stress and glycemic control among people with type 1 and type-2 diabetes across the lifespan. Chronic stress - especially in relation to living with diabetes - was most strongly associated with HbA1c, particularly among subgroups that face disproportionate stress, such as minority groups or adolescents/young adults. Mechanisms of the stress-A1c association include physiological, psychological, behavioral, and environmental links. Understanding the dimensions of stress as they relate to health in diabetes can be of significant clinical importance, and interventions targeting mechanisms that either exacerbate or buffer stress have reported modest improvements in A1c.²⁷⁴⁻²⁷⁶

Stress and Hypertension:

An analysis of papers on hypertension from 2010 to 2014 studying the effect of ‘psychosocial factors’ (read as stress) on hypertension says, “*A growing body of research demonstrates that psychosocial factors play an important role in the development of hypertension. Previous reviews have identified several key factors (i.e., occupational stress) that contribute to the onset of hypertension; however, they are now outdated. In this review, we provide an updated synthesis of the literature from 2010 to April 2014. We identified 21 articles for inclusion in the review, of which there were six categories of psychosocial stressors: occupational stress, personality, mental health, housing instability, social support/isolation, and sleep quality. Sixteen of the studies reported an association between the psychosocial stressor and blood pressure. While several findings were consistent with previous literature, new findings regarding mediating and moderating factors*

underlying the psychosocial-hypertension association help to untangle inconsistencies reported in the literature. Moreover, sleep quality is a novel additional factor that should undergo further exploration.” ²⁷⁷

The Only Real Solution:

The ONLY solution to this dismal scenario seems to be rolling back this stress generating selfish behavior pattern of 21st century man and replacing it with a caring compassionate society. But then the question that any smart young educated person, including doctors and nurses would ask is, “*Why? Why should I do that? What’s in it for me?*”. Science rules the way we think. And science, including medical science, in the past hundred years, has been governed by the Darwinian idea of reality - that the universe itself is just an accident of physics; that we are just insignificant, powerless specks who exist briefly in time and fade away at death; with no real purpose in life. Naturally this has spawned an eat-drink-and-be-merry-for-tomorrow-you-may-die generation with nary a concern for others or anything else. The natural consequence, a conspicuous consumption driven economy, and an ad driven media sponsored culture only fuels it further. Money is God, even in healthcare.

Mercifully, advances in science today challenge these ‘unshakeable’ Darwinian concepts. Creation seems no more an accident of physics. Biology and advances in medical research have put forth a new view, that is gaining ground, that creation is no accident; that human beings may well be powerful co-creators of the universe; more important - that we are all linked far more closely that we can imagine. This new knowledge is what can heal us; heal our diseases; and heal the world at large. This knowledge obviously cannot yet percolate down to textbooks of medicine; but

the sad truth is that even peer reviewed medical journals and conferences seems blind to these crucial developments which have the potential to change our very perspective of this world for the better; because of the fossilized egos of top medical academicians who resist all change! However, they are widely discussed and published in top peer-reviewed pure science journals. Quantum physics and quantum chemistry have led the way to quantum biology; and it is only fitting that modern medicine and modern healthcare acquaints itself with the concepts of quantum medicine; and takes the lead.

The new evidence shows that we may not be as separated as we think; that we are interconnected with each other and the earth that we live on, in more ways than we can imagine. It suggests that possibly, rupturing that connect is one main cause of the diseases that plague us modern humans; restoring that connect may well heal us. Secondly, for millennia all traditional systems of medicine have employed energy healing methods. Till the eighties modern medicine would simply ridicule such claims and rule the world of healing with an iron fist. But thanks to digital media, information and knowledge are free today. It is known globally that many traditional energy healing systems do work. They seem to be safer, more holistic and much less expensive and their success rates are impressive.

The modern medical establishment has generally ignored this fact though researchers from the pure sciences have come out with landmark discoveries on just HOW these healings are possible. With awareness spreading thanks to the alternate media, the discerning public is opting to seek alternative therapies. Because of our reluctance to study and embrace best practices of traditional systems, modern medicine is increasingly being considered only to be useful in an emergency situation. For chronic illnesses many people prefer alternative therapies. As they say, if you can't beat 'em, join 'em! If we are to be relevant,

modern medicine needs to come out and humbly learn and improve on the knowledge behind traditional systems and incorporate their best practices. There everything to be gained; we have nothing to lose except our egos!

In this chapter we shall take a look at these revolutionary new concepts for as custodians of the health of our fellow beings, it is of paramount importance that we as health professionals acquaint ourselves with these developments which may well totally change healthcare and healing to the benefit of mankind. With humility of attitude and in the spirit of honest sincere enquiry, let us see the profound developments in the basic sciences. It is absolutely crucial for us as medical professionals to be acquainted with these advances in knowledge; for it promises to have far reaching implications in patient management, medical ethics and our own wellbeing as health professionals.

Is it a Disconnected Universe or a Connected Universe?

Are the solid bodies in space connected or are they disconnected? Physicists had grappled with the question for long. Many believed that an ‘ether’ connected everything, while others dismissed the very idea as preposterous. Extending the question beyond our planet astrophysicists wondered whether the space between heavenly bodies in space was ‘empty’ as most of them believed or whether there existed a ‘field’ in which all things existed.

The landmark Michelson Morley experiment of 1887 was considered to be the acid test that would answer this question. The way it was interpreted is questioned by scientists today; but at the turn of the 20th century, the inference was that such an ‘ether’ did not exist.²⁷⁸ The scientists of the day concluded that the space between objects was empty; and this notion held sway for the next hundred years. The idea

of the separateness of all existence held sway in all disciplines including biology. At best there was some interdependence; physicality of things and living creatures and separateness of life into sentient beings was the accepted theory.

Three decades ago, in 1986 to be precise, the experiment was repeated with advanced equipment, sponsored in part by the US airforce, and it seemed to suggest that there WAS indeed, a field connecting all things in space.^{279,280} This earth shattering discovery that pointed that non pharmacological medicine was indeed, a real possibility, should have been reported and reviewed by medical academics in top medical journals and conferences, considering that even the discerning editor of the prestigious Forbes Magazine picked it as a must-read.²⁸¹ But it was roundly ignored by the medical establishment.

A 21st century Update on the ‘Empty Space’ Between Things:

Let us study the Macro-world first.

Today we know that the space between heavenly bodies in outer space is not empty. Science today says that 70% of the macro Universe is made of dark energy which is the space between galaxies. Why ‘dark’? Because it is not atomic and does not react with light. It is made of an as yet unknown substance and has the power to rip things apart; i.e., it acts in a way opposite to gravity which is a force that attracts objects. The force of dark energy keeps the Universe expanding constantly; in fact, it is expanding at a speed faster than the speed of light. This energy is also referred to as zero-point energy; and exists in what we call a vacuum. A vacuum in fact, has wave forms of energy that can turn into particles. One such particle that can exist in particle or wave form is the photon or unit of light energy.

Of the remaining 30%, science reports that 26% is made of dark matter. ‘Dark’ again, because it is not made of atoms and so it does not respond to light and so cannot be seen. Why call it matter? Because like matter, it has the property of gravity. It is the gravity of dark matter that keeps galaxies together. It is the dark matter of the Milky-Way that keeps you in your chair and this book in your hand; keeps Mother Earth and the planets and sun in place. So, 96% of the universe is unknown or unknowable and yet without it you and I could not be here!

The remaining 4% of the universe is atomic but virtually 99.9% of it is made up of just hydrogen and helium which has not yet formed into stars. So, we are left with 0.1% as the visible universe. But 99% of this is invisible inter stellar dust. So, it is only 0.01% which is the manifest Universe that we know with its two trillion galaxies, trillions of stars and uncountable number of planets. Even in this manifest universe, say on planet earth, the empty space between molecules and atoms and within atoms is NOT empty as physics earlier taught us. It is full of zero-point energy; or the field; it has been given numerous names. It is postulated to connect all that is, in the universe.

These scalar waves are said to exist in the vacuum of empty space, or the time domain. Even in our world of matter, this vacuum of space exists all through everything, though seemingly hidden. Even our bodies are mostly empty space between atoms and molecules. This vacuum is the gateway to this scalar energy which is literally a "seething ocean of energy". As mentioned earlier, it is apparently present everywhere, even within our bodies. Medical textbooks make no mention of even such a possibility as yet. But is so important that doctors in training and junior doctors are aware of these developments. To quote the captivating words of Bearden, a pioneer in the field, "*Emptiness is Full! Of the most powerful energy!*" This amazing discovery announces that the "emptiness" of

empty space is in fact, not empty, but a great ocean of seething energy! The power of the ‘*shoonya*’ in metaphysical terms of ancient India!

Bearden, a pioneer in zero-point energy research, refers to this ocean of energy as being of the ‘time domain’. *“Energy out of time? It seems like something from Star Trek, but this is the point which the new science of scalar electromagnetics has reached. And where it is going may be beyond anything Star Trek could have dreamed of. We live in a 3-dimensional world, which physics calls “3-space.” But there is also space-time, or 4-space, or the “4th dimension.” Then suddenly comes this amazing new knowledge that time itself is actually compressed energy. And it is energy which is compressed by exactly the same factor by which matter is considered compressed energy: the speed-of-light-squared!*

*So we have a new companion to the famous $E=mc^2$. It is now paired with $E=tc^2$ (where t is actually “delta- t ,” or change in time). Or (amaze your family and friends and) say, “ E equals em-*cee*-squared” and “ E equals delta-*tee*-*cee*-squared”²⁸² This energy that is believed to be present everywhere including the human body, is certainly a subject that deserves study by medical men.*

Is the Universe a mere accident of Physics or is there an underlying Intelligent Intentionality?

Was creation just an accident after a crunch and big bang? Science now says it that creation is beginning-less and endless; that the Universe eternally oscillates through big crunch/big bang cycles. A ‘Crunch’ is really a very small - infinitesimally tiny event to start with; then inflation begins; during inflation life begins and flourishes; at the end of inflation the reverse happens, and it is back to

the ‘crunch. These endless cycles go on and on.’²⁸³ The universe hitherto was considered to have four dimensions of space-time. Science now postulates a fifth dimension; our Universe is a four-dimensional sheet in this five-dimensional space. Other universes could also exist along this extra dimension, cut-off from our universe by the space that particles cannot penetrate.

Universes can collide causing more Big Bangs! In this chaotic rapidly expanding scenario by pure luck, bubbles of stability may come into being within the maelstrom of inflation — and one of them could be our Universe. Given enough time, a mind-bogglingly large number — perhaps even infinite number — of such bubbles will occur, with all kinds of different cosmological and physical properties existing in different bubble universes. The vast majority of bubble universes might have physical laws that do not allow for the development of stars, planets, or people. But there would still be an extraordinary number of particularly comfortable universes, such as ours, that can support life.²⁸³

Was Creation Accidental or Intentional?

Be that as it may be, the point is that in a universe such as ours, the organization of chaos into order unequivocally seems to have been an infinitely intelligent event; certainly, a supreme intelligence seems to have been at work. Intelligence cannot be seen; but when intelligent activity is perceived, it means intelligence is at work. What evidence is there to posit the existence of infinitely intelligent Consciousness underlying the development of life? Research on the origins of our universe show that the earlier theory that life developed by sheer random chance on this planet alone, after the ‘Big Bang’ seems very unlikely. The world appears to be designed

for life, at the level of the universe itself. Scientists have discovered that the universe itself seems to have been fine tuned for our existence!

The seemingly random activity that resulted in our universe, on close study, seems to have the seed of intentionality within! To quote Dr. Robert Lanza, *“It is as if everything (the universe) contains — from atoms to stars — was tailor-made just for us. If the Big Bang had been one part in a million more powerful, it would have rushed out too fast for the galaxies and life to develop. Result: no us. If the strong nuclear force were decreased two percent, atomic nuclei wouldn’t hold together, and plain-vanilla hydrogen would be the only kind of atom in the universe. If the gravitational force were decreased by a hair, stars — including the sun — would not ignite. In fact, all of the universe’s forces and constants are just perfectly set up for atomic interactions, the existence of atoms and elements, planets, liquid water and life. Tweak any of them and you never existed.”*

In fact, this finding has been referred to as the *“Goldilocks Principle”*. Hundreds of parameters of the cosmos, near miraculously, combined to make conditions, which like in the final Goldilocks’ choice, was not *“too this”* or *“too that,”* but rather *“just right”* - for life! Only a highest intelligence could have worked it out; ordinary folk call it God; scientists are forced to admit that there must be Consciousness with supreme intelligence behind it. The old theory of the universe - that such perfect conditions occurred randomly - seems not quite plausible. Robert Lanza says that in order for science to move forward, it needs to venture into new territory. *“Science hasn’t confronted the one thing that’s most familiar and most mysterious, and that is, of course, Consciousness.”*²⁸⁴ Unlike Lanza, Einstein thought the universe began by chance; that it exists independent of us; that we could be born, live life and die; but the universe probably would never know you existed.

Experimental Evidence for the Presence of Awareness / Intelligence Across Space:

Support for Lanza's theory, strangely, comes from an experiment done over a hundred years ago, in 1909. The experiment, now famous as the double slit experiment,²⁸⁵ showed that some intelligence / awareness / Consciousness seemed to operate in the 'emptiness' of space. A single photon particle, when shot, initially crossed a single slit barrier and could be followed through up to the target as a single photon particle. But when two slits were made in the barrier, and obviously, the single photon could only go through one of the slits, something very strange happened. The photon seemed to 'know' that an extra slit had been introduced into the barrier that it had to cross; and so the photon just disappeared! Later it was detected to have crossed the barrier as a wave form, passing through BOTH slits and creating an interference wave pattern at the target!!

How did the photon 'know'? The knowledge in the scientist's mind seems to have affected the photon's behavior! Einstein was not comfortable with this result and called it 'spooky science'! It was termed the observer effect on particle behavior. John Wheeler, a colleague of Einstein, thought differently; he postulated a theory that was a paradigm shift. He said that it proved that it was not even possible to imagine a universe that does not contain us; because it is the act of us observing the universe that makes the universe happen. Shades of the *Vedic* dictum - *Mano Moolam Idam Jagat* (this world comes into existence because of the observer's mind). Wheeler felt that we were more than just 'observers'. The experiment laid the foundation for the theory of the 'participatory universe', as Wheeler called it.^{286,287} We are co-creators of the universe.

Gregg Braden, contemporary scientist and spiritualist, who analyses the world of spirituality scientifically, quoting Wheeler, says the act of us looking thinking that something is there, is an act of creation unto itself. Looking with that expectation that something is there is what makes it happen. Consciousness is creating our physical universe.²⁸⁸

Are we Human Beings here by Random Chance or by Design?

The idea that creation is unlikely to be an accident; that there seems to be intentionality to creation, is gaining acceptance. What is more, a hypothesis gaining ground is that such a supremely intelligent intentionality seems to be responsible for not just the creation of the universe, but for the creation of us modern day human beings. This is something young doctors in training need to ponder. The greatest project of the millennium was the Human Genome project. To the surprise of scientists who expected supremely endowed man to have very many more genes than the worm or a chimp, we turned out to have only about the same number. Not just that, we shared 98% of our genome with chimpanzees!

We have just one pair of chromosomes lesser than chimpanzees. Curiously, human chromosome 2, seems to have been created by the fusion of two chromosomes. It was seen that more or less in the centre of our chromosome 2 there were telomeric and subtelomeric DNA sequences (normally present at only one end of chromosomes, but not in internal areas). This made it clear that the fusion of the two chromosomes had been complete, that is, from one end to the other. Nowadays, the availability of human genome and the genome of large apes has revealed how the genetic content of our chromosome 2 corresponds to the sum of the two chromosomes of our ape ancestors.²⁸⁹

Genes on chromosome 7 are related to the human ability for complex speech and related abilities. To many discerning scientists, the specific and extremely intelligent changes in chromosome 2 and 7 that set human DNA apart from the DNA of apes seems much more than random chance and selection by slow evolution. A supreme intelligence seems to have been at work to achieve this perfect genetic change. Just as Lanza opines that only a supreme intelligence could have resulted in creation of our planet with its perfect conditions for life, such a perfect and precise piece of genetic engineering seems to point to intelligent intentionality rather than random chance and natural selection.

To quote Gregg Braden who has spent a lifetime investigating the scientific basis for spiritual healing, *“New discoveries have led to more unanswered questions, created deeper mysteries, and brought us to the brink of forbidden territory when it comes to explaining our origin and existence. These discoveries reveal the following facts:*

Fact 1. Our origin - Modern humans appeared suddenly on earth approximately 200,000 years ago, with the advanced brain, nervous system, and capabilities that set them apart from all other known forms of life already developed, rather than having developed slowly and gradually over long periods of time.

Fact 2. Missing physical evidence - The relationships shown on the conventional tree of human evolution are speculative connections only. While they are believed to exist, a 150-year search has failed to produce the physical evidence that confirms the relationships shown on the evolutionary family tree.

Fact 3. New DNA evidence - The comparison of DNA between ancient Neanderthals, previously thought to be our ancestors, and early humans tells us that we did not descend from the Neanderthals.

Fact 4. A rare DNA fusion - Advanced genome analysis reveals that the DNA that sets us apart from other primates, including in our advanced brain and nervous system, is the result of an ancient and precise fusion of genes occurring in a way that suggests something beyond evolution made our humanness possible.

Fact 5. Our extraordinary abilities - We are born with the capacity to self-heal, to self-regulate longevity, to activate an enhanced immune response, and to experience deep intuition, sympathy, empathy, and, ultimately, compassion - and to do each of these on demand.²⁹⁰

As Braden explains, anatomically Modern Humans appeared on the planet 200,000 years ago. We are the same; our brain capacity and bone structure have remained the same over 200,000 years. What DNA research shows is 2 specific precise DNA changes occurred simultaneously; quite unlike what happens in slow evolution. Chromosome 2 is our biggest DNA pool. This gives us amazing neocortical function; the ability to think. Chromosome 7 gave us the ability for complex speech. Chimpanzees have 98% of our DNA. The precision of the genetic modification, Braden says, seems INTENTIONAL. For 75 million years chimpanzees existed but no such mutations happened!!

What makes one suspect ‘intention’? The major genetic shift makes scientists suspect an underlying Intention - a PURPOSE. The way the genes were tweaked; the precision; the way the genes were modified, after some were fused together; how overlapping parts were deleted or modified to streamline the change and to give it stability. That a supreme intelligence was behind the creation of human

beings seems plausible; definitely an area for the next generation of human biologists and medical men to research.

If indeed, there IS an intelligence and an intentionality behind our existence, what evidence do we have for the presence of this invisible intelligence?

A Micro-level Update; An undisputable Supreme Intelligence in Operation:

If you and I thought hitherto that all intelligence is a function of the brain, it is time for a paradigm shift. The intelligence that organizes the human body beats the brain hands down. For a start let us update our knowledge a little beyond what is taught in medical school.

The Micro Universe - the cell:

As for the micro world, let us see today's understanding of the basic building blocks that make you and me - the cell. By the time we are adults our bodies contain between 50 trillion and 100 trillion cells, which can be grouped into about two hundred different types. However, only about 10% of these cells make up the 'solid body', i.e., bones and tissues. Approximately 40% make up the non-solid parts, such as blood and lymphatic fluids. Around 30 trillion red blood cells and 500 million white blood cells circulate through our bodies. The lymph system is crowded as well, as it contains roughly one trillion lymphocytes and other immune cells.

An amazing true fact that we are faced with today is that the majority of cells that go to make a human being are NOT human cells! Massively outnumbering our "human" cells, are micro-organisms, without whom we could not really be alive and well! These creatures aren't just passive riders or pathogens. Our skin and

digestive tract contain a hundred times more than human cells, these cells which are not “ours” at all! They are microbial cells, referred to as the microbiome – our second genome, so to speak. These include both bacteria and other single- celled creatures known as archaea. The truth is that these 400 trillion microorganisms are the largest biological part of “man”; human cells are a minority in a human being’s cell count! You and me are, in essence, composed of colonies of human cells and even more colonies of non-human cells living in harmonious balance.

These trillions of bacteria keep us healthy. For example, if we have a boy who has to be raised in a bubble because he has a rare disorder, Severe Combined Immunodeficiency syndrome, and cannot control infections, the digestive tract can’t function properly. The microscopic, finger-like projections, or microvilli, that line the intestinal wall don’t form. Without them, there is not enough gut surface area to accomplish the digestion and absorption of nutrition. By adding back in the helpful bacteria that normally line the intestines, the microvilli arise. So, our genome – the sum total of our genetic inheritance – is simply not sufficient to code for all of our digestive tract!

Even our skin is not exclusively human. Even the most important function of skin - being a protective barrier - cannot work without the aid of bacteria! Let us go back to Chopra. Says he, *“Pause and move your hand, observing how the wrist and finger joints move under the skin. Why doesn’t the skin break down with all this motion, the push and pull of your fingers closing and extending, your arm bending and stretching? Because the bacteria lining the creases in your skin digest the cell membranes of dying skin cells and produce lanolin, which lubricates the skin. How long would “you” and your genome last if your skin were cracking, open to infection just from typing on a laptop or waving goodbye to someone?”*²⁹¹

We are alive because of our connection to other living creatures and the outside world; indeed, there is no boundary between you and me and the living organisms outside. Even our genes code not only for our cells, tissues, organs and interactions within our cells, but our genes code also for the interactions between our cells and our live-in neighbours, bacteria! Our genes code for the exchange of biomolecules between human cells and bacteria! Likewise, the biochemistry of digestion is a shared project between our bodies and bacteria, a basic fact acknowledged for decades. What it implies is that, without bacteria there can be no ‘us’! They are virtually part of us!

Lifeless still Cadavers & Frozen Tissues under a microscope Fool Us:

It is my humble opinion that the powerful subliminal message that gets into the subconscious of medicos about human life is all wrong. Medical academia assumes that the study of cadavers and sections of lifeless tissues, give one a foundation to healing! Nothing could be further from the truth. The living body AND mind of man hold the secrets to wellness or illness. This crucial dictum is ignored in medical school. Doctors in training are literally brainwashed into developing a cold matter-is-all-there-is attitude; their whole lives are grounded in this lifeless belief!

To ‘unlearn’, let us look at a living functioning cell. As a medical student peering through microscopes in histology class looking at stained preparations of slices of tissues, I tended to have a mental picture of a cell being just a stained motionless tiny object seen in high power; like something frozen in time, or in suspended animation. I was woken up from this reverie by science writer Bill Bryson; so, if you are like me, reading the following will help you too; he writes:

“If you could visit a cell you wouldn’t like it. Blown up to the scale at which atoms were about the size of peas, a cell itself would be a sphere roughly half a mile

*across, and supported by a complex framework of girders called the cytoskeleton. Within it, millions upon millions of objects—some the size of basketballs, others the size of cars—would whiz around like bullets. There wouldn't be a place you could stand without being pummeled and ripped thousands of times every second from every direction.*²⁹²

To continue the animated perspective, let me quote cell biologist Franklin M. Harold who calls each cell an “intricate and sophisticated chemical factory.” He says, *“Even in the simplest cells, this calls for collaborative interactions of many thousands of molecules, large and small, and requires hundreds of concurrent chemical reactions. These break down foodstuffs, extract energy, manufacture precursors, assemble constituents, note and execute genetic instructions and keep all this frantic activity coordinated. The term ‘metabolism’ designates the sum total of all these chemical processes, derived from the Greek word for ‘change.’”*²⁹³

According to Fraser and Massey, our cells are change managers par excellence. And the rates of change that a single cell must coordinate are unbelievable, which brings us to the subject of the speed of life. To quote the duo, *“Activities in our body occur at speeds that have no counterpart in our normal, macroscopic world. Every second millions of cells die. They have to be identified and then dismantled and swept from the body, even as new cells are being born to replace them. Take the red blood cells in your body. Every second almost three million red blood cells die, and every second new blood cells are made to replace them.”*

“That's only one type of cell and one set of related activities taking place in one second. There are millions of other activities taking place in your body during time frames that make seconds feel like forever. In your kidneys, specialized cells are

monitoring your salt and water levels, secreting hormones, and removing wastes. Amino acids are arranging themselves into strings that are making up the particular proteins that the body needs at specific times and in exact quantities. The proteins then fold themselves into the intricate three-dimensional structures that determine their function. Each configuration gives a protein a different identity, but somehow proteins know which shape to assume. Ribonucleic acid (RNA) is zipping apart the double helix of DNA, copying the millions of “letters” of the genetic code, proofreading the replication and correcting any mistakes before zipping the new strand of DNA back together again. Messenger RNA is receiving messages from DNA and shuttling those messages around to direct the production of enzymes and other molecules.”

“Your heart is pumping more than a liter of blood a minute. T-cells and other immune cells are tagging, attacking, and destroying foreign organisms such as bacteria and viruses, while leaving harmless microorganisms alone. Adenosine triphosphate (ATP), arguably the busiest molecule in the body, is being broken down to provide energy to power your cells. In fact, every minute millions of cells in your body will each deplete about 500 million ATP molecules, and an equal number of new ATP molecules will be created to rush into those cells to replace them. Neurons are firing, releasing cascades of neurotransmitters, which are fitting like keys into the receptor locks on the surface of cells. Many of the different types of receptors that pepper the surface of cells are themselves active, changing their shape over time and according to different states of the body’s internal environment to accept only particular molecular keys, while rejecting others. Thousands upon thousands of other activities and millions upon millions of chemical reactions that are absolutely crucial to your health—and to your life—are going on below the level of your awareness every minute of every day.”²⁹⁴

For sure, a supreme intelligence - infinitely more intelligent than our brains - is at work in every cell of ours! More about that later.

The micro-micro world in a cell:

If your head is not spinning already, let us now enter the micro world of the cell. Continuing with Fraser and Massey, *“This frenzy of cellular activity that is occurring at staggering speeds in spaces too small to imagine, is nothing compared with what is going on at the sub-molecular level of your body. And at the quantum level, activity is taking place at speeds that make chemical reactions seem lethargic and in spaces that make cells feel cavernous. Here is where chemistry gives way to physics.*

Physics is the study of the very small (as in smaller than atoms and therefore “subatomic”) and the very fast (as in almost the speed of light, which is slightly more than 186,000 miles per second).²⁹⁴ As molecular biologist Atkins wrote of chemistry, “On the one hand it deals with biology and provides explanations for the processes of life. On the other hand it mingles with physics and finds explanations for chemical phenomena in the fundamental processes and particles of the universe.”²⁹⁵ He marveled at the precise nature of the interactions that must take place for chemistry to work at all: “One or two atoms can convert a fuel to a poison, change a color, render an inedible substance edible, or replace a pungent odor with a fragrant one. That changing a single atom can have such consequences is the wonder of the chemical world.”²⁹⁵

What causes that transformation; what decides the selection of one atom rather than another? What is directing the choice or the need? For answers you have to look to physics. Yet not many biologists, or even biochemists, concern themselves much with physics. Though in the life sciences, including medicine, today

chemistry rules; though even genetics is based on the chemistry of DNA, if one does not study it down to the level of physics, one might miss the most fundamental part of what really goes on in the body, as we shall see below.

The young disciplines of quantum biology and biophysics involve the study of quantum processes - the energies and information - that underlie chemistry. Sadly, the medical curriculum skirts this entirely. Proponents of complementary and alternative systems of medicine (CAM) have dived in to study these areas as these systems have a rich and ancient history of viewing the body in terms of energy, which is fundamentally what physics is about.

Going beyond Matter to Energy:

Traditional Chinese medicine and Indian Ayurvedic medicine have long explored the energies of the body. Acupuncture and homeopathy are practiced widely in Asia, Europe and the UK. They are slowly gaining acceptance in the United States also. Today, there is growing interest in these unconventional techniques and theories because science is beginning to discover that although chemistry has been wildly successful at explaining many of the mechanisms of the body, it is not adequate by itself to the task of explaining the integrative workings of the body.

As Deepak Chopra, argues, the body is simply too complex to be ruled by chemistry alone; there is some deeper process involved that keeps everything running at the level of precision the body demands: *“The healing mechanism resides somewhere in this overall complexity, but it is elusive. There is no one organ of healing. How does the body know what to do when it is damaged, then? Medicine has no simple answer. Any one of the processes involved in healing a superficial cut—the clotting of the blood for example—is incredibly complex, so*

*much so that if the mechanism fails, as it does with hemophiliacs, advanced scientific medicine is at a loss to duplicate the impaired function. A doctor can prescribe drugs to replace the missing clotting factor in the blood, but these are temporary, artificial and have numerous side effects. The body's perfect timing will be absent, as well as the superb coordination of a dozen related processes. By comparison, a man-made drug is a stranger in a land where everyone else is blood kin. It can never share the knowledge that everyone else was born with.'*²⁹⁶

One cannot but accept Dr. Chopra's assessment of the limits of chemistry. Just as the eye sees only what the mind is looking for, to paraphrase Albert Einstein, we can only find answers to the questions we choose to ask. Our questions are limited by our worldview, our paradigm. If scientists (read as doctors) believe that chemistry and genetics are all there is to the body, then that is all they will examine. As they shift their perspective from the stuff of life (matter) to the processes of life (energies and information), they are finding a whole new world within the body.

We just had a glimpse of the incredibly complex activities going on inside our cells 24/7. What controls it? At the chemical end we have DNA and RNA. Time was when genes made up of the various combinations of the four 'alphabet' DNA were considered king; the genes nature endowed you with were believed to exercise supreme control over how you turned out. But studies on identical twins - who had identical genes - showed that nurture seemed to be more important. Perhaps at this point we need to check out the frontiers of DNA research. When the human genome was mapped, genetics experts reckoned that only about 3% of the DNA coded for the human body and the rest was 'junk DNA'.

The 'I.T' or Information System of the cell:

Research shows that the 'junk DNA' in fact, may be most valuable as they can create vortices and receive and pass energy signals from nucleus to RNA to cell organelles to cell membrane and influence cell to cell as well as intracellular communication. So called 'junk DNA' could be the master communicator conveying environmental information, intercellular information and intracellular information and even be the regulator of genes! Through our non-core genes, the environment can alter our core gene expressivity and thus our bodies. Nurture thus could affect nature. We have always had a hunch that it was indeed, so despite genetics experts declaring the contrary and swearing by the inherited gene. Today we are also closer to understanding HOW it happens. A classic example of how nurture can overwhelm nature, in the opinion of this scribe, is the epidemic of Type 2 diabetes mellitus that we face in India today.

For thousands of years our genes remained the same. But the environment and life experience of the common man has met with devastating changes over the past half century; nurture / lifestyle has changed. The environment, food habits, sleep patterns, exercise patterns, stress levels and so on have changed so much that these qualia of experience have caused of quanta of energy / mass change through non-core DNA. Epigenetic factors have come into play and the net result is the type 2 diabetes epidemic. The good news is that the converse too must be possible. Positive lifestyle changes can make a genetically vulnerable constitution resistant to disease as well. The benefits attributable to *Yoga* and meditation could possibly be due to energy mediated changes at the DNA level. These ideas and advances are areas that doctors in training need to be aware of; and in fact, they could explore them further through study and research.

Postulated New Energy Sources:

An activity such as communicating and regulating change virtually all over the cell, all of the time, must involve an energy source that is present virtually all over the cell. ATP alone cannot quite match such a need. Where does the energy for this pan-cellular activity come from 24/7? Enter scalar energy. To explain scalar energy, let us read what Bill Morgan, a crusader to spread the knowledge about scalar energy has to say. He says, *“The greatest scientific discovery in the history of the world has happened over the last few decades and it has gone largely unnoticed because of the great secrecy with which it has been held by all who know of it. It is the discovery of a completely new kind of electromagnetic waves which exist only in the vacuum of empty space, the empty space between the atoms of our bodies as well as the empty space we see in sky at night. All of empty space.”*

“These waves constitute a kind of ocean of infinite energy, and it has now been discovered that this abundant energy, which is much faster than light, can be coaxed to pour into our 3-dimensional world from their 4-dimensional realm, to be used to do work, provide electricity, power all transport, and even heal the body of almost all disease. This is the new world of scalar electromagnetics, the zero-point energy, the energy of the absolute nothingness which existed before the world began.”²⁹⁷

An aside – a brief intro to Scalar / Zero-point Energy:

The book ‘Energy from the Vacuum’, by Tom Bearden is a must read for health professionals thirsting to know more about the amazing inner workings of cells and cutting-edge future therapeutic technologies. Tom Bearden, now 88 years old, is a

pioneer who not only understood but had the courage to write about the various possible applications of scalar energy including in medicine despite vested interests such as the military-mega business-big oil nexus, doing all in their power to suppress knowledge about scalar energy.

Bill Morgan, who was mentioned earlier, gives a glimpse of this amazing energy; says he, for the benefit of fellow non-physicist laymen - and I would include most doctors in the list for alas, only Newtonian physics is taught at medical school; not quantum physics! Says he, *“The layman will need to understand that there is a new kind of electromagnetic energy that is altogether different from what he knows, e.g. radio, TV, cell phones, etc. The ordinary EM waves that we have known about are called transverse EM waves, to distinguish them from the new longitudinal EM waves.”*²⁹⁷

Just as the atomic bomb released the compressed energy in matter, nature seems to know how to unleash the tremendous energy that is compressed into time itself; and what is more, nature’s design releases that energy on an as-is-necessary basis most constructively as opposed to the destructive way that man used atomic energy.

According to Bearden, the French, even in the 1960s and 1970s had developed safe scalar energy medicine solutions for cancer and other diseases but thanks to vested interests that line of research was pooh-poohed and abandoned.²⁸² Young doctors and other health professionals with the necessary drive and determination should certainly study how nature makes use of scalar energy in other species. Taking a leaf out of nature and integrating it into therapeutics, could benefit all mankind.

In nature scalar energy is made use of by many creatures. 10^{17} joules of solar energy bathe Earth each second. Plants make use of it and harvest almost 95

percent of it from the light they absorb. The transformation of sunlight into carbohydrates takes place stupendously fast; in a millionth of a billionth of a second, preventing much of that energy from dissipating as heat. Now biophysicists at the University of California, Berkeley, have demonstrated that plants use the basic principle of quantum computing - the exploration of a multiplicity of different answers, in parallel, at the same time - to achieve near-perfect efficiency.^{298,299}

Some hypotheses being studied show that scalar energy is part of nature's design. The subject is currently controversial, but we should have more definitive answers in times to come. One hypothesis is that migrating birds travel thousands of miles by tapping into the scalar energy around. A bumble bee according to aerodynamics should not be able to fly; but it is able to tap into the free scalar energy around and fly. Fish can stand still in a current - again by tapping into scalar energy; and the same helps fish jump up waterfalls - a feat biologists could never explain. Tendrils of plants create vortices that help tap into scalar energy and reach out further than straight shoots could have. Dragon flies are able to hover - again by using scalar energy fields. Indeed, quantum biology seems to underlie the sense of smell, quantum coherence in microtubules, regeneration, and quantum processes in brain dynamics. DNA too apparently creates vortices and taps into scalar energy.³⁰⁰⁻³⁰² More of that later. So, it definitely seems that ATP is not the only energy source in a cell.

The Concept of Energy Medicine:

Biofield (biologically generated field) therapies presumably work through scalar energies. Scalar energy research has so much military potential that it is a

zealously guarded ‘secret’. In fact, Dr. Steven Greer, founder of the over quarter century old Centre for Study of Extra-Terrestrial Intelligence and of the Disclosure Project, who seeks to bring out the use of free energy to solve the problems of the planet, also points out the disturbing fact, that he has conclusive evidence, that vested interests scuttle any research into scalar energy for peaceful purposes, including medical and therapeutic purposes. The many complementary therapies that come under the genre of ‘Energy Medicine’ that presumably make use of the biofield to therapeutic advantage, are an area that merit the attention of mainstream medicine.

Whether mainstream medicine accepts these complementary therapies or not, patients are voting with their feet; and abandoning ‘allopathy’ or modern medicine and flocking to ‘safer’ biofield therapies such as *Reiki*, Therapeutic Touch, Healing Touch, *qigong*, *Johrei* and so on. Randomised controlled trials, of nonphysical contact biofield therapies according to Ferraresi, have the potential to contribute to an evidence base for health-promoting effects mediated through mechanisms outside the present understanding of biomedicine. The pilot study nature of essentially all the identified nonphysical contact biofield therapy RCTs, as reflected by low sample sizes alone, precludes drawing robust conclusions. Given this perspective, the finding that two thirds of the higher-scoring trials demonstrated at least partial effectiveness favors a continued research effort, especially in light of the translational value of biofield clinical trials for studies exploring the nature and physiologic basis of biofield healing.

An article by Ferraresi et al analysing the benefits of *Reiki* and related therapies stated this on the benefits of *Reiki* on Dialysis Patients. “*Reiki allows a statistically significant but very low-grade pain reduction without specific side effects. Gentle-touch therapy and Reiki are thus good examples of approaches in which*

controversial efficacy has to be balanced against no known side effect, frequent free availability (volunteer non-profit associations) and easy integration with any other pharmacological or non-pharmacological therapy. While classical evidence-based approach, showing low-grade efficacy, is likely to lead to a negative attitude towards the use of Reiki in the dialysis ward, the ethical discussion, analyzing beneficium (efficacy) together with non maleficium (side effects), justice (cost, availability and integration with mainstream therapies) and autonomy (patients' choice) is likely to lead to a permissive-positive attitude. In patients undergoing dialysis Reiki has been found to help in pain relief.”³⁰³

Complementary and Alternative Medicine therapies claim to work through invisible bio-fields that connect everything in the universe. More recent research into bio-fields will be discussed later. Even the vacuum which contains nothing is believed to have the role of organizing the formation of matter in space-time. According to this view, in physics jargon, *“the vacuum organizes the structure of space-time through macroscopic electromagnetic fields, and the phase-controlling property of the electromagnetic potentials plays a central role. The importance of phase-relations for complex biosystems, consisting of many oscillating fields coupled nonlinearly by their phase-relations, points to the importance of the vacuum for the biofield itself.”*³⁰¹ Vortices of scalar energy fields is what perhaps the ancients called *chakras* of the body. Scalar energy may well be the stuff of which *prana* (the ancient Indian term for biofield) is made.

There is “potential information” in the organism that is virtual and non-measurable! The coherent biophoton emission that has been observed in all living organisms - from the unicellular to man - has been suggested to arise from such a “*superfluid vacuum model*”. It has been proposed for biophoton emission of seeds and its connection to their vitality. This model characterizes the vacuum as a

“superfluid Bose-condensate of photons in which virtual fields in the vacuum state are involved”. It seems *“that there is significantly more to the quantum vacuum than just the electromagnetic vacuum (the zero-point fluctuations)”*. „^{301,304,305}

Vacuum Bio-physics:

Zeiger and Bischoff postulate, a PRE-PHYSICAL dimension of POTENTIALITY for the understanding of organisms. They suggest the creation of the new discipline of vacuum biophysics as a basis of biophysical understanding. The fundamental quantum mechanical nature of biological phenomena will only be fully understood if the vacuum is taken into full and explicit consideration as the essence and ground of these phenomena. *“The quantum vacuum may serve as a framework for a unification program in biology aimed at incorporating all relevant aspects of life into a physical picture of the organism.”*, they state.³⁰⁴ Fraser and Massey, who have written a brilliant treatise on the human body field on the basis of which they have worked out bio-energy therapy models which, most importantly, seem to be working, have also concluded from their studies that the interaction of quantum waves imparts energy and information that is encoded in the human body-field, which serves as a holographic template for the physical body.²⁹⁴ Shades of the ancient Indian perspective that everything exists first in the ‘*sookshma*’ or subtle before it manifests in the physical?!

So, to summarise, one of the latest scientific theories is that indeed, it is ‘nothing’ - the vacuum - that holds the supreme intelligence, the blueprint for all that is to form physically! The therapeutic implications of such a view are so enormous that it merits serious study by health professionals.

If reading all this makes you feel like ‘file not found’, it is because quantum physics has been ignored in the medical curriculum. It is imperative that medical students be acquainted with quantum physics and quantum biology which need to be part of the medical curriculum. ‘Move over, pharma and surgeries’, is the vision of the times to come. Unless mainstream medicine steps out of its ivory tower, studies with an open mind the benefits of biofield, and energy-therapies and integrates them with modern medicine to the advantage of patients, it runs the risk of being rendered obsolete except in acute emergencies.

A Teaser on New Roles for DNA:

Getting back to DNA, the hypothesis is that at the cellular level, DNA vortices seem to make use of scalar energy for life processes; and through collapsing wave forms, matter needed for life processes is also created.³⁰² But what is it that provides for things to happen in the correct order, in time? One may say it is the arrangement of base pairs in the DNA. But what is the information technology within the cell that codes for the arrangement? Where does that information come from? And how does it organize itself over time so that all the chemical reactions and cellular activities flow so perfectly? In the modern world the flow of information through the world-wide-web / internet ensures that things run properly. What flows inside a cell and does a similar job?

How does information flow in a cell? Postulate of a ‘cell-wide-web’?

Evidence is steadily accumulating that it is water that does this job! Our bodies are more than 70% water. Water is, of course, crucial to life. As an example of how

information drives energy and matter, we have only to think of water. One of the most intriguing questions in biology right now is how water works in the body - how an aggregate of water molecules in the body can serve as an information-carrying network that affects almost every physiological function. However, the water in your body is not like ordinary water. To quote Fraser and Massery, *“Biological water displays unique characteristics that put life in living things. For instance, the latest research shows that DNA and genes can carry out their functions only with the help of water.”*²⁹⁴

Felix Franks, of the University of Cambridge and Rustom Roy, Professor Emeritus and former Chair of Department of Materials Science, Stanford University, have done extensive work on water. Biological water could well have a role in cellular ‘memory’ thanks to the property of ‘epitaxy’ which is well known to material scientists as it is an established phenomenon in semiconductors. Fraser and Massey share what has been published by researchers, *“Biological water is governed by a quantum energy called zero-point energy (ZPE), which is the lowest possible energy state of a quantum system. This ZPE energy often is equated with the emptiness of space, with the vacuum. However, what we call empty space is in reality a froth of vibrations at the quantum level.*

*Research into biological water suggests that as a result of the influence of these ZPE vibrations, water molecules in the body take on amazing properties, especially in regard to how hydrogen molecules bond to oxygen and other molecules. The studies also suggest that biological water somehow relays information to proteins so that they connect only to precise sequences of genes and not to others and that water molecules even warn proteins about nearby damaged DNA. To say that scientists are surprised by the strange qualities of biological water as an information-carrying network is an understatement.”*²⁹⁴ For supporters

of Homeopathy, the unique properties of water as a carrier of memory has been a Eureka moment; for it seems probable that water borne memory is what makes homeopathic ‘medicines’ diluted with water more effective. The fact that Homeopathy can be effective has to be admitted. Personally, I know from experience that the only ‘medicine’ that could prevent my North America born cousins from breaking out in heat boils, whenever they came to India, was the tiny sugar-sweet, spherical Homeopathy ‘medicine’. Big pharma and other vested commercial interests are not excited about this discovery about water and hence every attempt to discredit the findings has been made. Be that as it may be, but the physiology of water within the human body certainly warrants study by medical researchers.^{306–312}

Information Networks of the Body:

Modern research shows that the information network in the body is not just the nervous system. The connective tissue system is another information network. Further, there is the factor of ‘Heart Intelligence’. The heart contains its own independent nervous system, comprised of more than 40,000 neurons. Neuropeptides found in the heart and in body fluids could be transmitters of communication. The heart’s electromagnetic field is the most powerful field generated by your body. It is projected throughout the body and radiates several feet outside of you. Thoughts and emotions can cause energy changes and vice versa. More of that when we discuss heart brain coherence and the localization or not of the mind within the body.³¹³

Concept of COHERENCE:

Coherence is the state of being highly ordered, organized, and efficient. In a coherent system, all the individual parts are operating in harmony and virtually no energy is lost. It is a state of least effort and maximum benefit because all the individual components are working together rather than against each other. Just as coherent magnetic fields exist around a magnet which we see in the organized way in which iron filings arrange themselves, the biofield of the body exerts a coherence on the material body. The EMF of the heart also reinforces this coherence which is pro-health. The hypothesis is that coherent energies working on the biofield as through say, CAM and amplification of the body's own heart-coherence which can be effected through positive thoughts- in particular, appreciation and gratitude, forgiveness and a non-judgemental attitude, can be very pro-health; more about these concepts later.³¹⁴

Concepts of EMERGENCE and PHASE CHANGES:

Two other concepts that health professionals need to understand, when confronted by realities that defy understanding such as spontaneous healing, are Emergence and Phase changes. ***Emergence*** refers to patterns in nature that arise, increasing coherence as it were, as you move up the scale of reference. To put it in its simplest terms, it means that the whole is greater than the sum of the parts. Emergent properties often border on the miraculous, as seemingly chaotic processes produce order and symmetry at larger scales. For example, the individual ice crystals in a raging snowstorm come together to form a snowflake, or the electrical and chemical impulses of millions of neurons coalesce into a thought.²⁹⁴

Mathematician Ian Stewart marveled that nature's patterns "*emerge from an ocean of complexity like Botticelli's Venus from her half shell—unheralded, transcending their origins.*"³¹⁵ Of this phenomenon that is seen in nature and so fundamental to life, another author, Laughlin said, "*Emergence means complex organizational structures growing out of simple rules. Emergence means stable inevitability in the way certain things are. Emergence means unpredictability, in the sense of small events causing great and qualitative changes in larger ones. Chemical bonding accounts for how atoms group together to form molecules. Then molecules bind to make cells, cells cluster into tissues, which form into organs, and before you know it you have a living organism. Nowhere, at any of those levels, can you find the one organ or activity or process that is 'life'. Yet, put all those component parts together - and add in an external environment that supplies nutrients and light and other factors necessary to support life - and you get an E. coli bacterium, a mosquito, a salmon, a peacock, a rhinoceros, or a human being. Life is the grandest emergent property of all.*"³¹⁶

The other property seen in nature is **phase change**, also called phase transition. Phase changes in the macroscopic world are well known. At room temperature, water is a fluid. At a lower temperature it becomes ice. At a higher temperature it becomes gaseous and escapes into the air as vapor. Phase changes occur in the subatomic world as well. Beyond certain parameters, atoms lose their individuality and act collectively. Life itself may have emerged from the primordial soup as a phase change of aggregating molecules that catalyzed into a self-organizing, self-replicating organism.

One can think of the loss of health or the regaining of it, if one has been ill, as a phase change in the body. Spontaneous regressions from cancer could fall into the class of phase change, as for no reason apparent to conventional science a tumor

disappears overnight or within days. One of the difficulties in pinpointing the cause of disease is that a small input, such as exposure to a toxin from the environment over a long period of time, can build up to a point that pushes the body over a threshold, after which very suddenly the system goes awry.^{294,317}

Classical systems, which are governed by the physics of the everyday world, usually follow this pattern of change building up slowly over time and then reaching a breaking point. These are called linear systems, because they tend to follow a steady, sequential course. Non-classical systems are nonlinear, which means that change often happens suddenly, with a dramatic shift occurring from a tiny, seemingly insignificant cause; like the popular metaphor for non-linearity - a butterfly flapping its wings in Tokyo can affect the weather in Dallas. The body is a non-linear, and some would say quantum, system, that can experience a rapid shift from a small input. As biophysicist James Oschman reminds us, “*In cooperative systems [such as the human body], large transitions can take place sharply and rapidly in response to minute inputs of energy.*” The concepts of emergence and phase change imply that the flow of events over time can result in amazing results; the final result far outweighing the sum of the individual events! Perhaps this is one way by which ‘miracle cures’ occur.^{294,318}

Most of the information given in this chapter eludes the medical college syllabus; and yet it is so vital that doctors, nurses and other healthcare professionals are acquainted with this knowledge! We have seen how remarkably intelligently the body operates. Is there likewise an intelligence that organizes all life forms on earth?

Do We Affect the Space Around Us? Do Living Systems Affect Other Living Systems Around Them?

Conventional medical teaching has been that we are each of us, separate individuals. The intelligence we have is contained within us. We may communicate through language. But the intelligence of human beings is separate. Separateness is our hall mark. Even our fingerprints and pupils are unique. Medical science has generally focused only on the sense of separateness; on the ‘self’-‘nonself’ divide; to explain even the basic concepts of immunity. Medical men grounded in Newtonian physics were happy with the results of the Michelson-Morley experiment alluded to earlier. Space was just space; and empty. However, the historic 1987 experiment by the US Air Force had proved the reverse; that there indeed, existed a ‘Field’ connecting us all. The establishment is always refractory to change; and as we can see even in 2020, the medical establishment chooses to ignore this and many more findings that suggest that there is much more to our existence than matter; that there is much more in the space around us than emptiness.

As seen earlier, the double slit experiment and Wheeler’s version of it called the delayed-choice experiment, have shown that in some manner, human intelligence / awareness / Consciousness seemed to operate in the ‘emptiness’ of space beyond the physical body and affect the behavior of matter, in this case, photons. The photons, which started off as a particle seemed to ‘know’ that an extra slit had been introduced into the barrier they had to cross; and so just disappeared and were later detected to have crossed the barrier as wave forms at the target!! Either the ‘knowledge’ of the observer scientist had affected the photon; or there was an ‘unseen’ intelligence in the space making the photon behave the way it did - both

of which are unacceptable explanations to most men of science, doctors included!^{285,286}

Be that as it may, let us see where the study of physicality has reached. One sobering fact is that we seem to have reached the physical limits of the micro-micro world. The limits of physicality have been reached. This is an area on which there is scientific consensus, thanks to quantum theory: There is a smallest level of scale beneath which one can go no further, at least in this “real” universe of four-dimensional space-time, known as the Planck scale: 10^{-35} meters (decimal point followed by 35 zeros and then 1). Besides defining where physicality ends, the Planck scale also marks the end point of the environment that encloses material things, such as time, space, and the laws of nature, from a human perspective.

An epochal discovery has been that at the quantum level, at the Planck dimension, the tiniest units of matter exist in a dual state. They exist as particles only when they are being observed or interacting with other subatomic particles. These particles though infinitesimally small, have mass and energy. But when not observed they just disappear into a wave form. What is it a wave of? Like waves of the sea are made of water; what are these waves made of?

The only answer science has today is that these waves are POSSIBILITIES! A ‘possibility’ is not a thing! And this wave of ‘possibility’ occupies a space that exists only in mathematical calculation or mathematical imagination called Hilbert’s Space! So, science says that the basic building blocks of the whole universe actually exist only as ‘possibility waves’ in a mathematically calculated space until you look at them. In practical terms, this book in your hand is only made of ‘possibility waves’ till you pick it up to read! So, matter as we know it, as something, is made of blocks of no-thing till we observe it! The famous double slit

experiment and its variants proved this to be so (that is homework for you to read on google and watch on YouTube).

The Observer Effect:

Quantum theory, as we have seen earlier, says that no small object actually assumes a particular place or motion until its “wave function” collapses. As more experiments were done it became clear that any possible way the experimenter could “take a look” at the object would collapse the wave function. As more sophisticated experiments were devised it became obvious that mere knowledge in the experimenter’s mind is sufficient to cause the wave function to collapse! There was therefore SOME connection between the observer’s mind and that wave! An important finding was that the more the particles were ‘watched’, the more their behavior changed! To quote from a book on fundamental physics, *“The basic reasons why psychology has traditionally been considered to be of little significance to physics are discussed briefly. It is then shown that in quantum mechanics, the course of the physical world can be linked to a person’s observational activities and that these activities are tied to the observer’s knowledge of the physical world. The argument is presented in a discussion, and extension, of Schroedinger’s gedanken experiment popularly known as “the cat paradox.” The precise and reproducible empirical evidence supporting quantum mechanics is shown to constitute evidence for the influence of human observers on the structure and course of the physical world.”*³¹⁹ The double slit experiment has been repeated the world over and the ‘observer effect’ has been confirmed; it was also found that the more the observers watched the particles, the MORE the EFFECT became!!!

Particles Communicate!

Going a step further, in 1964, Irish physicist John Bell proposed an experiment to check whether separate particles could influence each other instantaneously over great distances.³²⁰ First two bits of matter or light that share the same “wave function” were created using a special crystal (thereafter called “entangled particles”). When these born-together pairs of photons are created in a special kind of crystal, observing one member instantly influences the behavior the other — even if they are separated by enormous distances. They are intimately linked in a manner suggesting there’s no space between them, and no time influencing their behavior. The astounding implication was that all of creation, which was in the pea sized universe at the beginning of creation, was therefore still connected though billions of light years apart. In human terms, it suggested that all of us were indeed, interconnected; and it called for a fundamental change in our perception of our individual selves, humanity and nature at large. But the scientific establishment, significantly the medical establishment, chose to look the other way.

Knowing the implications of these results, well-meaning scientists conducted a widely publicized study at the University of Geneva in 1997 where the phenomenon of ‘entanglement’ was demonstrated. Nicolas Gisin sent pairs of photons in opposite directions to villages north and south of Geneva 10 kilometres apart along optical fibers of the kind used to transmit telephone calls. Reaching the ends of these fibers, the two photons were forced to make random choices between alternative, equally possible pathways. Since there was no way for the photons to communicate with each other, “classical” physics would predict that their independent choices would bear no relationship to each other. But when the paths of the two photons were properly adjusted and the results compared, the independent decisions by the paired photons always matched, even though there

was no physical way for them to communicate with each other. To explain the results to the layman, Dr. Gisin said *it's as if he had flipped a coin at Bellevue, Gisin says, while his colleague had flipped one at Bernex, and each time he grabbed his coin out of the air and saw it was heads up, his colleague's coin had simultaneously stopped spinning and landed heads up as well. And this happened thousands of times in a row!*^{321,322}

Many more experiments done subsequently on the same lines; most recently involving light emitted from ancient quasars at least 7.8 billion light years away³²³ have demonstrated consistent results thus proving that separate particles can influence each other instantaneously over great distances — as if they're endowed with a kind of ESP.

To quote another great Physician of our times, Dr. Robert Lanza of stem cell research and cloning fame, *“This means that if one particle is observed to have an “up spin” the act of observation causes the other to instantly go from being a mere probability wave to an actual particle with the opposite spin. They are intimately linked, and in a way that acts as if there's no space between them, and no time influencing their behavior. Experiments from 1997 to 2007 have shown that this is indeed, the case, as if tiny objects created together are endowed with a kind of ESP. They truly seem to prove that Einstein's insistence on “locality” - meaning that nothing can influence anything else at superluminal speeds - is wrong. Rather, the entities we observe are floating in a field - a field of mind, biocentrism maintains - that is not limited by the external space-time Einstein theorized a century ago.”* In fact, researchers recently showed that pairs of ions could be “coaxed to entangle so their physical properties remained bound together even when separated by large distances, as if there was no space or time between them.

Why? *“Because space and time aren’t hard, cold objects. They’re merely tools of our understanding”*, in Dr. Robert Lanza’s words.³²⁴

The implications of all these experiments, as explained by scientist, Gregg Braden to an Italian audience, should have shaken all of mankind. It implies that once PARTICLES that have been together are physically separated, even if they are physically apart, they continue to be ENERGETICALLY connected. As we were all connected at the beginning of creation, according to the principle of entanglement we all MUST be energetically connected. In fact, the particles communicate at a speed faster than that of light. Many scientists currently believe that it occurs as a holographic response; that in fact, the universe we live in, is a holographic universe.²⁸⁸

Medical men used to take cover under the pretext that quantum physics applied only to the microworld of the atom or the macro world of the cosmos but not to human beings who lived on terra firma; that only classical physics applied to human beings and the science of medicine. Not anymore, that view is challenged now. Dr. Robert Lanza, who has studied these quantum physics experiments in great detail, says, *“New experiments carried out with huge molecules called ‘buckyballs’ show that quantum reality extends into the macroscopic world we live in. In 2005, KHC03 crystals exhibited quantum entanglement ridges a half-inch high — visible signs of behavior nudging into everyday levels of discernment. An exciting new experiment has just been proposed (so-called ‘scaled-up superposition’) that would take this even further.”*³²⁴

What are the implications of such a perspective - THAT WE ARE ALL CONNECTED AS ONE - for humanity? for medical science and healthcare? Certainly, doctors in training and junior doctors need to debate this.

Experimental Evidence - to Show that Human Beings Affect the ‘Empty’ space around them:

In 1992, Russian researcher, Vladimir Poponin created a vacuum in a glass tube. But even a vacuum is not empty; it still has particles of light - photons. On measuring their presence, the photons were found to be randomly distributed as expected. Next, human DNA was then put into that space to study what effect human DNA has on the photons; to study what effect the stuff our body is made of, has on the stuff this world is made of. The view of established conventional science was that it should have no effect. But the photons moved and aligned themselves with the human DNA. THE PHOTONS PHYSICALLY MOVED IN THE PRESENCE OF THE DNA mirroring the arrangement of the segment of DNA. The stuff the world is made of was changed by the stuff the human body was made of. For the first time it was shown in the lab that the human body can change the world of matter.³²⁵

Then they took the DNA out. The photons behaved as if the DNA was still present there! As if they were still connected! The photons continued to arrange themselves as if aligning to DNA, though the DNA was not present in the space anymore! This was termed the DNA Phantom Effect. Phantom pain is one of the most unusual symptoms encountered in rehabilitation medicine. First described in the 16th century by Ambrose Pare, a military surgeon in France, these painful burning or cramping sensations that seem to come from the missing limb itself affect upwards of 80% of the estimated 1 million people who annually suffer loss of limb through injury or surgery. Similar pain has also been reported in phantom breasts, teeth, penis, eyes and tongue post-operatively.³²⁶

This phantom pain differs from almost universal proprioceptive phantom sensations, in which patients perceive the existence in space of their missing body parts in a normal and not unpleasant manner. Phantom pain is often so intense that secondary depression and suicide are not unusual. Extreme suffering often accompanies phantom pain. Because of its neuropathic nature, it is not modulated by opiate receptor mechanisms. So typically, standard narcotic medications do not work. Treatment strategies have been empiric; ranging from pharmacologic (anticonvulsant) and surgical (destruction of anterior horn cells), to electrical (implanted spinal cord stimulators) and psychological (hypnosis).³²⁶

Hypothesis - Phantom DNA changes created by one human being can effect Healing in another.

Strikingly, it has been observed that patients with phantom pain are able to perceive noncontact energy interventions on their phantom limb, despite the absence of relevant portions of their nervous system. The theory of a non-neurologically based memory matrix, in accordance with holographic and non-local principles of consciousness, seems very plausible. Kafatos et al ask tantalizing questions - can the use of CAM (complementary and alternative systems of medicine) take advantage of the nonlocal nature of the biofield (e.g. along with hands-on healing, distant healing, as in *Reiki*) to be equally effective? Can the biofield be understood as ultimately emanating from the quantum vacuum? Would this open up new vistas for energetic healing transmission? For example, could the persistence of biofield be utilized for health benefits across space-time? Plenty of scope here for young medical professionals to research!^{327,328}

More on Bio-fields:

The idea of ‘bio-fields’ is here to stay, medical doctors notwithstanding. We cannot ignore the existence of bio-energy fields anymore. Biologically generated fields (biofields) are a spatially distributed set of forces and physical properties that have the capacity to encode information and exert instructive influences on cells and tissues capable of perceiving and being modified by them.³²⁹ In a 2015 paper Kafatos wrote, *“Coherent electromagnetic fields (EMFs) may indeed, be the organizing agent of cellular processes, which would indicate that the biophoton source is non-biochemical. It is of course possible that these ultra-weak photon fields are somehow related to biochemical processes, although consensus is that they may be guiding the entire cellular physiology.”*³⁰¹

Yet another leading researcher defined bio-field as, *“an organizing principle for the dynamic information flow that regulates biological function and homeostasis. Biofield interactions can organize spatiotemporal biological processes across hierarchical levels: from the subatomic, atomic, molecular, cellular, organismic, to the interpersonal and cosmic levels. As such, biofield interactions can influence a variety of biological pathways, including biochemical, neurological and cellular processes related to electromagnetism, correlated quantum information flow, and perhaps other means for modulating activity and information flow across hierarchical levels of biology.”*³³⁰

Kafatos, in his 2015 paper neatly summed up the crucial role of bio-fields like this, *“What makes biofield research so fascinating is its immediate impact on human beings. We are living entities imbedded in the fields described by classical and quantum physics. Nature's forces invisibly affect us every day, and science has long searched for a bridge between the quantum and classical world. If these*

*worlds turn out to be united in a very practical way through the phenomenon of life itself, the biofield will be far more than theoretical. It will redefine what human life constitutes, where we belong in the panoply of life on the planet, and ultimately how we should live in a wider, even cosmic, context.”*³⁰¹

The world looks to medical men as ethics are formulated in our digital world. When pandemics, climate change and the like threaten the very existence of the human race, doctors in the making, who are to be the custodians of human well-being, cannot afford to be ignorant about bio-field research with its implications for healing, its impact on human behavior, on the health of communities and on the planet itself.

Do Energy Fields carry blueprints for matter?

To quote authorities on bio-physics, *“Biofield interactions could also be responsible for the organization of cellular microtubular networks and biological regulation processes that have been shown to occur via endogenous EMFs within microtubular cytoskeleton such as the following: the regulation of the dynamics of mitosis and meiosis; chromosome packing during the mitotic phase of the cell-cycle; and interactions between ion channel activity and the phosphorylation status of binding molecules such as MAP2 and CaMKII, which modulate cytoskeletal structure and connectivity. These experimental data are supported by theoretical prediction of classical and quantum information processing in microtubules. The coherent photon field, on the other hand, could be the dominant factor in cellular physiology, a conclusion supported by experimental observations of cell-to-cell signaling via coherent bio-photon activity.”*³⁰¹

What Visible Proof is there for Bio-Fields?

Can the biofield or energy body be seen or photographed? When viewed through modern technology such as an Electrophotonic Imaging (EPI) GDV (Gas Discharge Visualization) Bioelectrography camera, the true nature of the human organism is revealed of being composed of light and sound frequencies. Along with Ekaterina Jakovleva, M.D., Ph.D., Dr. Konstantin Korotkov, Ph.D. wrote “Electrophotonic Analysis in Medicine” in which they present cited works from peer reviewed journals proving that it is clear that Electrophotonic technique has a high potential in analyzing the human energy field for health and wellbeing, as well as monitoring the reaction of people to different influences and treatments.

Electro photonic imaging (EPI) has also been described as a novel technique growing in its application in the field of scientific instrumentation to assess health status on the basis of bio-energy; reports on its successful use cannot be ignored. Surely modern medical doctors need to be aware of these developments and study these techniques.^{331–333}

A Possible Mechanism for HOW Bio-Fields can affect the Human Body:

The human body is made of MATTER. Matter is made of atoms. The quantum view is that an ATOM is made of waves of energy rather than of particles or matter. The human body may be interpreted as a phase change from wave to particle; or even as an ‘observer effect’; something that *Vedantins* may understand but not modern medical doctors! But let me not digress. To change an atom, we need to change the ENERGY that the atom is positioned in

According to Einstein - the Field determines how the atom behaves; it's the sole governing agency of the atom. The Field that holds everything together is made of two energies; they are ELECTRICAL ENERGY and MAGNETIC ENERGY. If you change the electrical field it changes the way the atom behaves through what is called the STARK EFFECT. If you change the magnetic field, again the atom changes; and it is called the ZEEMAN EFFECT. The past three decades have shown that the human body has a powerful electromagnetic field around it. It is hypothesized that this field could extend for miles. For lack of equipment to measure it, we do not know its real extent. However, machines can definitely measure its presence for a diameter of 2 to 3 metres around the body.

WHAT creates this Electromagnetic field around human beings?

In the body the one organ that creates the biggest electrical and magnetic field is the heart. Though published in peer reviewed journals, this information is nowhere in medical academia. Doctors and nurses in training need to know this. Coming to more information- a magnetocardiogram (MCG) detects fields generated by the human heart. The ECG and MCG signals are shown to closely parallel one another.³³⁴ The magnetic fields produced by the heart are involved in energetic communication, termed as *cardioelectromagnetic communication*. The heart is the most powerful source of electromagnetic energy in the human body. The heart's electrical field is about 60 times greater in amplitude than the electrical activity generated by the brain. This field, measured in the form of an electrocardiogram (ECG), can be detected anywhere on the surface of the body. Furthermore, the magnetic field produced by the heart is more than 100 times greater in strength

than the field generated by the brain and can be detected up to 3 feet away from the body, in all directions, with magnetometers.

Studies have shown that by training to centre and feel positive emotions in their heart space, trainees are able to change their heart electromagnetic fields in measureable ways; and what is more, DNA can be changed when placed in this field. DNA changed when kept in tight enclosed container within field of HeartMath trained volunteers. The DNA unwound in a life affirmative manner, as if to replicate with positive feelings such as love, appreciation and gratitude; while it contracted and knotted when the volunteers intentionally focused negative feelings such as anger, hatred etc. in their heart space.^{335,336}

In fact, trainees trained in heart coherence at the Institute of HeartMath as well as traditional experienced healers were both able to create changes in the DNA by focused intention to change the DNA in a particular manner.

If this is what happens OUTSIDE the body, what could be happening INSIDE?

Experiments Indicating Coherent Bio-fields from the Heart Effect DNA these experiments measured the winding and unwinding of the two strands which make up the DNA helix; also referred to as conformational changes in the secondary structure (helix) of DNA. Although these experiments were conducted on isolated DNA, winding and unwinding are properties of DNA which occur in the body. Unwinding of DNA precedes cell division and winding of DNA is associated with DNA repair. However conventional modern medicine, as it is taught, and even

psychoneuroimmunologists, do not consider mind body effects to be mediated by endogenous (internal) EM fields.

Nevertheless, it is important to note that the existence of such fields is well acknowledged by the scientific community since EEG and ECG measurements indicate the existence of endogenous bio-fields generated by “electrically excitable cells” in the brain and the heart. There is even experimental data indicating the coherent nature of these bio-fields.³⁰¹ Although these bio-fields are not usually considered to regulate the natural healing process, thanks to research by biofields Guru, Popp, such a function has been considered. Popp believes coherent bio-fields are generating from light emitted from DNA, since his experimental data indicates DNA is capable of emitting weak coherent photons.^{337–339}

The DNA molecule itself oscillates coherently and would therefore generate a coherent EM field.³⁴⁰ Interestingly, the observation that DNA oscillates coherently is also consistent with the hypothesis that DNA is sensitive to externally applied coherent EM fields. DNA is known to respond to ordinary EM fields and that quantum fields enhance DNA synthesis. Collating all available research findings, Rein has hypothesized in a peer reviewed article that extends previous scientific definitions of the biofield (endogenous energy fields of the body) to include non-classical and quantum energy fields, as follows:

“The biofield is defined in terms of its functional property to act as a resonance target for external forms of energy used as treatment modalities in energy medicine. The functional role of the biofield in the body's innate self-healing mechanisms is hypothesized, based on the concept of bioinformation which, mediated by consciousness, functions globally at the quantum level to supply coherence, phase, spin, and pattern information to regulate and heal all

*physiologic processes. This model is used to explain a wide variety of anomalies reported in the scientific literature, which cannot be explained by traditional biophysics and bioelectromagnetics.”*³⁴¹

The Flip Side of Artificial Electromagnetic Fields:

An absolutely down to earth practical application is worth mentioning. Due to the concern that the various EM fields generated by military equipment could affect the health of the armed forces, devices to scramble these fields into ineffective random fields rather than coherent fields have been developed by the US military.³⁴² Surely in this age of hi-tech equipment with possible radiation hazards, doctors need to be well informed of these developments in the interest of patient safety and their own safety.

The safety of 5G technology is a natural question that arises in all our minds; medical research in the area is clearly warranted.

Subtle Energies:

The way DNA folds on itself, apparently gives it the ability to be the cell's antenna to receive 'subtle energies'. Among medical men, the term 'subtle energies' evokes a 'file not found' response. But researchers in the biological sciences have been aware of the subtle energies for over four decades.

As the conventional four forces i.e., strong nuclear force, weak nuclear force, electromagnetism and gravity are unable to explain many phenomena present in biological systems and in areas such as distant healing these energies were postulated as existing in the vacuum and have been detected experimentally as well

as by mathematical models.³⁴³ Today they are widely recognized and modern medicine can no longer ignore them; particularly since they seem to work; healing does occur with these non-pharmacological methods in ways modern medicine does not care to understand.

As mentioned earlier, the public however, understands; and they are voting with their feet! Alternative healing clinics are full. In acute medical emergencies they may rush to the ER; but for many chronic conditions, alternative healing methods like energetic healing, *Qi gong*, acupuncture, homeopathy, *Ayurveda*, *Yoga* and so on seem to be safe and effective. We need to familiarize ourselves with research on the subtle energies of the vacuum such as zero-point field energy, biofields etc.; the twenty first century promises to see the rise of quantum medicine.^{336,344}

New Roles for DNA:

DNA apparently does more than transmit genetic information and code for proteins. It has a vital role in transmission of information from outside the body to the body; within the body between systems; and within the cell itself.

The toroidal shape of DNA when it folds on itself twice, functions as an antennae to allow DNA to sense subtle energies in the environment. Toroidal DNA acts as a transducer converting subtle energy into conventional EM energy which is then radiated from the DNA to produce a variety of intracellular events at the biochemical level. As mentioned above, experimental evidence already exists indicating DNA emits EM fields in the form of coherent photons.³³⁹ Meditation and coherent intention are proven to produce DNA changes.³³⁶

Modern theories in quantum physics therefore support the Toroid Antennae Model of DNA by suggesting the toroid acts as a transducer for some new form of energy (i.e. subtle energy) which exists in higher dimensional spaces.³³⁶ The nature of this type of energy or information has been considered by other scientists and has received a variety of names including non-Hertzian, scalar, tachyon and zero-point energy. As alternative healing systems make use of these subtle energies, modern medical doctors need to be at least acquainted with these forms of energy, which are written about in quantum science peer reviewed journals. Plenty of scope for research here for medicos and post graduate trainees in medicine.

It appears that coherence is critical in the connection between conscious intention and DNA. In summary, specific thoughts and intentions are generated by the brain/mind and are used to frequency modulate the coherent bio-fields from the heart. When one is in a state of love the coherence is enhanced and the biofields become stronger. This allows for a resonance between the coherent fields of the heart and the coherent fields around the DNA molecule. This process is further enhanced by the presence of subtle or spiritual energies which resonate with the body due to the toroidal nature of the coherent bio-fields. Such an interaction allows the frequency information associated with the original intention to manifest as a physical change in the DNA, whether it be a conformational change in the structure of the helix, a change in DNA replication or a shift in the electrical properties. In this way our thoughts and intentions can manifest in the body at the biochemical level bringing about actual physiological changes associated with the healing process.

How Energy Healings Work - New Evidence:

Whenever posed with a case of successful distance healing, or spontaneous healing following non-medical interventions, the tendency of modern doctors has been to question the diagnosis in the first place or dismiss the cure as did not meet research criteria or peer review. Much of the pioneering research into psi effects in the DNA took place in the 1980s and 1990s at the HeartMath Institute (HMI) in Boulder Creek, California. But academia and mainstream medical journals always chose to shy away from these; and big pharma was definitely against such methods of therapy as it would affect their profits.

Thanks to the alternate news media information about such therapies has percolated down to the discerning public; and large numbers are opting to go to practitioners of alternative systems of medicine. These systems of healing have the distinct advantage of being safer, less invasive, more holistic and less expensive. Modern medicine therefore is now forced to wake up.

We Need to Follow the Lead of a Nobel Laureate in Medicine:

For medical professionals who tend to dismiss energetic healing and the like as mumbo jumbo, the work of a contemporary physician and Nobel Laureate of 2008, should have a sobering effect. A good beginning would be to peruse the work of the 2008 Nobel Laureate for Medicine, Dr. Luc Montagnier on the tantalizing possibilities of DNA related electromagnetic fields in the brain; of how they connect with the earth and how the harmony affects human homeostasis.³⁴⁵

DNA can Project its structure as an ElectroMagnetic Field into Water!

In brief what this intriguing statement means is as follows. The electromagnetic field in the DNA is capable of being projected into water. The electromagnetic

field seems to have all the information of its sequence of bases in its memory for it is capable of reconstructing itself into the identical chemical molecule; provided the ambient electromagnetic environment in the water is maintained at a frequency of not less than 7Hz. The first cardinal finding is the fact that the information about the original sequence of the DNA was emitted by the DNA as an electromagnetic field.³⁴⁴

Water - the Carrier of Memories in Biological Systems:

The second cardinal discovery is how the nanostructures in the water can retain the information from the DNA in the form of memory. The water in some manner ‘remembers’ the arrangement of the bases in the DNA and the purines and pyrimidines present in the solution are structured in the correct manner to replicate the DNA strand. The fact that it is precisely pure water that has this capacity to transmit the signal from the DNA and to retain the integrity of the signal in memory will not come as a surprise when it is remembered that about 65% of the composition of our bodies is water. In other words, it is reasonable to assume that water acts as carrier of memory provided the ambient electromagnetic environment in the water is maintained at a frequency not less than 7 Hz - which is the Schumann frequency associated with the earth. So, it seems to be a normal metabolic process that is occurring naturally in all creatures containing DNA, from plants to human beings!³³⁵

Human Brain Waves, Water and The Earth’s Electromagnetic Field:

Incidentally, 7Hz is in the same frequency window as Alpha rhythm brainwaves and the natural Schumann resonance of the Earth. Incidentally, the Schumann resonance (SR) is defined as a set of resonant modes or spectrum peaks, between

7.83 and 45 Hz, in the extremely low frequency (ELF) portion of the Earth's electromagnetic field spectrum. The fundamental Schumann Resonance is a standing wave in the atmosphere around 8 Hz. Human brainwaves are entrained to this pulse emitting theta and alpha frequencies in the same electromagnetic field region. The reciprocal system functions as a phase-locked loop. Basically, a phase-locked loop is a control system that generates an output signal whose phase is related to the phase of an input "reference" signal.³⁴⁴

The Earth's Field is Crucial for Homeostasis in Human Beings too:

The Schumann resonance is necessary for mammalian growth and repair; such signals in guide waves are the meta-drivers of biological processes, homeostasis and adaptation. We cannot thrive without them. Cells respond between 3 - 25 Hz. Frequencies outside this range have little or no effect. In the early days of the space race it was found that cosmonauts that were outside the earth's magnetic field for extended periods lost 80% of their bone density. Consequently, Schumann wave generators (7.83 Hz) were developed for space flights which overcame this side effect.³⁴⁶

We are bathed in a sea of natural low-frequency electromagnetic (EM) fields from conception to death. The brain is an electromagnetic system synchronized by the Schumann Resonance signal that continuously stabilizes the brain wave activity. Research has shown that the Schumann resonances can modulate human health indicators such as blood pressure, cardiac and neurological disease, reaction time, neuroendocrine sensitivities.³⁴⁴

It is high time the Schumann resonance found at least a mention in textbooks of physiology and neurology.

Optogenetics - Mental states can Change Genes:

Exciting new research in optogenetics shows us how human beings have been able to modify gene expression through their thoughts! They are able to do so through their Alpha rhythm and Mu rhythm brainwaves, both of which are in the same frequency window as the Schumann resonance. These waves can be produced just by simply by adopting different mental states.

I HAVE TO share with you, dear Reader, the sheer elegance, simplicity and brilliance of the experiment designed to prove that mental states can alter gene expression. I quote Bartholomew:

“A recent paper in Nature Communications is entitled “Mind-controlled transgene expression by a wireless-powered optogenetic designer cell implant”. The Leader of this research team was a Dr. Martin Fussenegger, a bioengineer at ETH Zurich in Basel, Switzerland... They made use of the comparatively new field called optogenetics. Neuroscientists have now discovered that they can literally, with the flick of a switch, turn the neurons on and off in our brain using light. As well as this they are finding more and more genes that are responsive to light, that is to say EMR.

The Fussenegger team implanted some human kidney cells under the skin of a mouse. In these human cells they had also inserted a gene that was responsive to infrared light. When this gene is activated it causes a cascade of chemical reactions that will lead to the activation of another gene which we will call their target gene. This is the actual gene they wanted to switch on. Also in the mouse alongside the implanted cells they put an infrared LED that could be controlled wirelessly.

They then went about getting some characteristic brainwaves from some human volunteers. The volunteers were taught to produce a “relaxed” pattern of brainwaves from meditation techniques, and they played computer games to produce “deep concentration” brainwaves, and they were taught a technique known as “biofeedback” where they learnt to control their thoughts in such a way as to be able to switch on a set of lights on a computer.

These human volunteers were wearing EEG devices that were linked wirelessly to the LED implanted in the mouse, and when that was switched on by any one of these three mental states, it activated the light-responsive gene which in turn started the gene cascade and led to the activation of their target gene; hence their claim that human brainwaves can control genes. The implant in the mouse was encased in a semi-permeable membrane that allowed nutrients from the animal’s blood supply to reach the cells inside and also allowed proteins produced in the implant to pass into the bloodstream. When the target gene was activated, it produced a human protein that passed into the rodent’s bloodstream.³⁴⁷

Dr. Fussenegger says: “We picked a protein that made an enzyme that was easy to identify in the mouse as proof of concept, but essentially we think we could switch on any target gene we liked.”³⁴⁸

Bartholomew then holistically links all the findings - thought could induce DNA changes through the brain’s EM field or the earth’s - which are at the same frequency of around 7Hz. He states and I quote,

“We have seen that the DNA is stimulated by $\cong 7$ Hz naturally occurring waves on earth, the so-called Schumann resonance. Waves produced by the human brain are also in the range of 7 Hz and we know from optogenetics that EMR can trigger action potentials in neurons and EMR can turn on light sensitive genes. What all

this seems to indicate is that there is some sort of three way communications or biofeedback going on between the DNA, the neurons of the brain, and the Earth's Schumann resonance.

If this is in fact, the case you have not only a complete explanation for psi or psychic phenomena in humans, but you also have an explanation for other sorts of unexplained phenomena in nature such as the way termites which are actually blind can act in concert to build their nests, how various bird species can literally navigate to the other end of the earth in order to breed and then return to their normal habitat, how schools of fish and flocks of birds can change direction in apparent unison, and indeed, how plants can communicate with each other.”³⁴⁴

How Healers Heal - a Possible Method:

Another researcher, Robert C Beck, found by measuring the brainwave activity in “healers” from many different traditions (including psychics, shamans, faith healers, practitioners of Wicca and an Hawaiian kahuna) that when they are actually performing a healing their EEG recordings were on average around 7.8-8.0 cycles/second, that is to say the Schumann frequency.³⁴⁹ This would appear to be direct evidence that the psi activity (psi refers to paranormal and psychic phenomena) reported by Rein on conscious intention on the DNA can be explained by the healers brainwaves being phase and frequency synchronized with the Schumann resonance.³⁴⁴

Raw EEG frequency bands include gamma (25-60 Hz); beta (12-25 Hz); alpha (7-12 Hz); theta (4-7 Hz); and delta (less than 4 Hz). Their ranges overlap one another along the frequency spectrum by 0.5 Hz or more. In other words, the brainwaves are being generated at multiple frequencies. If it is true that brainwaves are actually

modulating the synthesis and activity of various neurotransmitters, proteins and hormones within the body then different bodily functions and organs as well as the DNA itself must respond to a single frequency only and can then tune into the brainwaves similar to the way we tune in to our favorite radio station.³⁴⁴

Pioneer researcher of Consciousness, Iona Miller tells us that alpha waves are present during dreaming and light meditation when the eyes are closed. Alpha-wave biofeedback is considered a consciousness self-regulation technique. This induces a state of deep relaxation, but not quite meditation. In alpha, we begin to access the wealth of creativity that lies just below our conscious awareness. When the goal is alpha, either in meditation or in biofeedback, it means entraining with the primary Schumann Resonance. As a matter of commonsense it is plain that this is the zone of consciousness that the healers are likely to be accessing in order to perform the psi acts on the DNA previously described. They are not likely to be able to do those acts in deep sleep or deep meditation for instance, nor in the state of alert consciousness when the brainwave frequencies increase considerably.^{350,351} Edison used to himself induce this state, called the ‘hypnagogic state’, for he got all the brilliant ideas for his discoveries, when he was in this state.³⁵²

At this juncture it would be appropriate to briefly discuss the Mu wave. The mu rhythm extends across the motor cortex at the back of the head from ear to ear and operates at the same frequency as the alpha waves, as well as the Schumann resonance. A person suppresses mu wave patterns when he or she performs a motor action. Since 2005, it is also known that the mu wave is suppressed when one observes another person performing a motor action or an abstract motion with biological characteristics. This phenomenon has been given a special name, the Mirror Neuron System.³⁵³ This is a crucial finding for Psi researchers, for it means that the mirror neurons in our own brain fire when we observe someone else

performing an act, just as if we were performing the act ourselves. And the brainwaves being generated are in the same frequency range as the Schumann resonance as well as the background resonance for the DNA EMR. This phenomenon can therefore explain any amount of psychic happenings that have been reported over the centuries.

One really wonders why such cutting-edge research has eluded the doctor community.

Pure Science & Math Research Ignored by an Ignorant Medical Establishment:

In the early days most of the Psi research on DNA and the heart and brain were done at the Institute of HeartMath. Probably since it was not a medical institution and since the scientists there had largely a pure science or mathematics background, the medical establishment until recently had a tendency to debunk HeartMath research; and findings relating to EM fields and energetic modes of therapy used to be dubbed as ‘pseudo-science’. But not anymore, they were just ahead of their time. The quality of their research has been upheld as among the best based on research metrics and citations of their publications in peer reviewed journals.³⁵⁴

Energy Medicine is here to stay:

The fact that emerges is that Energy Medicine has a scientific basis to it and it is here to stay. EM fields and their action on DNA is possibly the way energy heals at short distances. The fact that distance healing works even if the healer when

separated by thousands of miles, makes it necessary to postulate that subtler energies such as a zero-point energy may be involved, coupled with the properties of phase changes and emergence that have been described earlier. This is a fertile area for research by junior doctors.

Role of Energy Fields based Strategies in the Management of Stress Induced NCDs:

Research by the Institute of HeartMath has consistently shown that energy fields-based, non-pharmacological treatment strategies show significant benefit in the management of many of the NCDs which are the bane of our times. It is time medical science accepted it. Let us explore the physiology behind it.

The Heart of the Matter

New research shows the human heart is much more than an efficient pump that sustains life. The heart has been considered the source of emotion, courage and wisdom for centuries. For over three decades, the HeartMath Institute Research Center has explored how the heart and brain communicate and how the activity of the heart influences our perceptions, emotions, intuition and health; just why do people experience the feeling or sensation of love and other regenerative emotions as well as heartache in the physical area of the heart? Research looked at how stressful emotions affect the activity in the autonomic nervous system (ANS) and the hormonal and immune systems, but also at the effects of emotions such as appreciation, compassion and care.

Of the physiological measures studied, such as EEG, SCL (skin conductance), ECG (heart), BP (blood pressure) hormone levels, etc., consistently heart rate variability, or heart rhythms stood out as the most dynamic and reflective indicator

of one's emotional states and, therefore, current stress and cognitive processes. It became clear that stressful or depleting emotions such as frustration and overwhelm lead to increased disorder in the higher-level brain centers and autonomic nervous system and which are reflected in the heart rhythms and adversely affects the functioning of virtually all bodily systems.

Neural and other communication pathways between the heart and brain were studied and it was found that the heart communicates with the brain in four ways:

Neurological communication (nervous system)

Biochemical communication (hormones)

Biophysical communication (pulse wave)

Energetic communication (electromagnetic fields)

The first is self-explanatory. Coming to the second, although not typically thought of as an endocrine gland, the heart actually manufactures and secretes a number of hormones and neurotransmitters that have a wide-ranging impact on the body as a whole. The heart was reclassified as part of the hormonal system in 1983, with the discovery of atrial natriuretic factor (ANF) / atrial natriuretic peptide (ANP) / atrial peptide produced and secreted by cardiac atria.. Nicknamed the balance hormone, it plays an important role in fluid and electrolyte balance, regulates the blood vessels, kidneys, adrenal glands and many regulatory centers in the brain.³⁵⁵

Increased atrial peptide inhibits the release of stress hormones, reduces sympathetic outflow and appears to interact with the immune system. Experiments suggest atrial peptide can influence motivation and behavior. The heart has cells that synthesize and release norepinephrine, epinephrine and dopamine, once thought to be produced only by neurons in the brain and ganglia.^{356–360}

Oxytocin is a neurotransmitter and commonly is referred to as the love or social bonding hormone. Besides its functions in childbirth and lactation, oxytocin is involved in cognition, tolerance, trust and friendship and the establishment of enduring pair-bonds. The heart also manufactures and secretes oxytocin, in the same range as those produced in the brain.³⁶¹

Prompted by the findings that the timing between pulses of the heart's magnetic field is modulated by different emotional states, the Institute of HeartMath has performed several studies that show the magnetic signals generated by the heart have the capacity to affect others around an individual. Every cell in our bodies is bathed in an external and internal environment of fluctuating invisible magnetic forces.³⁶²

It is increasingly apparent that fluctuations in magnetic fields can affect virtually every circuit in biological systems to a greater or lesser degree. A primary way that signals and messages are encoded and transmitted in physiological systems is in the language of patterns. In the nervous system it is well established that information is encoded in the time intervals between action potentials, or patterns of electrical activity.³⁶³ In the endocrine system, biologically relevant information is encoded in the time interval between hormonal pulses.^{364,365}

Heart-Brain Coherence

The heart secretes a number of different hormones with each contraction. So there is a hormonal pulse pattern that correlates with heart rhythms. In addition to the encoding of information in the space between nerve impulses and in the intervals between hormonal pulses, it is postulated that information also is encoded in the interbeat intervals of the pressure and electromagnetic waves produced by the heart. Leading researchers like Pribram propose that low-frequency oscillations

generated by the heart and body in the form of afferent neural, hormonal and electrical patterns are the carriers of emotional information and the higher frequency oscillations found in the EEG reflect the conscious perception and labeling of feelings and emotions.³⁶⁶ What is amazing is that studies at the Institute of HeartMath suggest that these same rhythmic patterns also can transmit emotional information via the electromagnetic field into the environment, which can be detected by others and processed in the same manner as internally generated signals!

Activity in the EEG that is time-locked to the ECG, is called the heartbeat-evoked potential. Amazingly, the contractions of the heart set up pressure waves down the arteries, capillaries right down to the tissues and in the brain these can be detected as heart beat evoked potentials, 50 to 550 milliseconds after each systole.^{367,368} There is a replicable and complex distribution of heartbeat-evoked potentials across the scalp. Gary Schwartz and his team at the University of Arizona believe that this complex distribution cannot be explained by simple physiological mechanisms alone and suggest that an energetic interaction between the heart and brain also occurs.³⁶⁹ Research at the Institute of HeartMath has found the same; that heart-focused attention is associated with increased heart-brain synchrony, providing further support for energetic heart-brain communications. This is a landmark finding.³⁷⁰

HeartMath researchers have found that the nervous system acts as an antenna, which is tuned to and responds to the magnetic fields produced by the hearts of other individuals. This energetic information exchange called energetic communication is an innate ability that heightens awareness and mediates important aspects of true empathy and sensitivity to others. This energetic communication ability can be enhanced, resulting in a much deeper level of non-

verbal communication, understanding and connection between people. They propose that this type of energetic communication between individuals may play a role in therapeutic interactions between clinicians and patients that has the potential to promote the healing process.

ECGs of two people while holding hands as well as when not in contact, showed that though a significant degree of signal transfer occurs through skin conduction, it is also radiated between individuals. Training to improve heart coherence improved this communication.^{371,372}

HeartMath studies also show that the heart of one person can cause measureable changes in the brain of another- data show it is possible for the magnetic signals radiated by the heart of one individual to influence the brain rhythms of another; in addition, this phenomenon can occur at conversational distances. The degree of coherence in the receiver's heart rhythms appears to determine whether his/her brain waves synchronize to the other person's heart.

Heart Rhythm Coherence

A coherent heart rhythm is defined as a relatively harmonic (sine wave-like) signal with a very narrow, high-amplitude peak in the low frequency region (typically around 0.1 Hz) of the power spectrum with no major peaks in the other bands. Researchers have found that specific emotional states are reflected in the patterns of the Heart-rate variability (HRV) rhythm; emotions such as appreciation or compassion are associated with a more coherent rhythm, as opposed to emotions such as anxiety, frustration or impatience.^{373,374} HRV coherence feedback has been shown to significantly improve outcomes in a number of clinical populations in various centres, such as patients with post-traumatic stress

disorder, depression, congestive heart failure, hypertension, anxiety, fibromyalgia and insomnia.³⁷⁵⁻³⁷⁹

HeartMath research has shown that those trained in coherence, such as healers, can create electromagnetic fields capable of changing DNA kept within the field as well as DNA thousands of miles away.³⁸⁰ Two learnings derived are firstly, that our emotions can cause healing through changes in the DNA; and secondly, that DNA seems to have a role not just transferring the genetic code from generation to generation, but in being part of the information pathway for energetic healing.

Heart Intelligence:

Everyone is familiar with such expressions as "put your heart into it", "learn it by heart" and "speak from your heart." All of these suggest an implicit knowledge that the heart is more than a physical pump that sustains life. Such expressions reflect what often is called the intuitive, or spiritual heart. Throughout history, people have turned to the intuitive heart – also referred to as their inner voice, soul or higher power – as a source of wisdom and guidance.

The Institute of HeartMath refers to the terms intuitive heart and spiritual heart as the *energetic heart*, which is coupled with a deeper part of ourselves. Many refer to this as their higher self or higher capacities.

The physical heart has extensive afferent connections to the brain and can modulate perception and emotional experience. HeartMath research suggests that the physical heart also has communication channels connecting it with the energetic heart. Surely these are areas of research that medicos should know about.^{370,381,382} It is unfortunate that cardiologists in training have no inkling of these postulates and research findings.

Love is one of the Highest forms of Intelligence

Cardiologist, Dean Ornish, researchers at HeartMath Institute and many others around the world now believe, based on scientific studies, that a great deal of human intelligence is heart intelligence.³⁸³

To quote the HeartMath research update, *“As numerous as the studies demonstrating this are, for most people, it only takes one simple observation in their daily lives for a clear example of their hearts’ intelligence: How many times has the brain in your head told you to do one thing while your heart advised another? No doubt, experiencing an actual physical feeling in the heart when torn between one direction or another has left many a skeptic of listening to your heart at least somewhat skeptical of their skepticism.”*

“How strong is the power or intelligence of love? Here is a scientific experiment HMI researchers who wondered about this conducted several years ago. A boy, Josh, and his dog, Mabel, were placed in a room together. Then Josh moved to a separate room, the result of which was that the dog’s monitored heart rhythms were chaotic and incoherent, unlike with Josh in the room. Josh was instructed to use a coherence technique to consciously feel feelings of love and care for Mabel, which he did upon re-entering the room with her and while having no physical contact with her. Mabel’s heart rhythms quickly became smooth and stable, or coherent.”^{384,385}

The Mind exists beyond the brain:

Let us move on to the conscious mind before updating ourselves regarding what is known today about the subconscious. By its very nature of being beyond the three-

dimensional world, all studies on the mind are beyond conventional research methodology and measurement. The information in this chapter until now must have given the clue that the mind exists not just in the brain but in other cells of the body too as Institute of HeartMath has shown. The elegant experiments of Clive Backster who showed that scrapings of buccal mucosal cells kept alive in vitro, reacted when the subject whose cells they were, reacted to stimuli miles away proved the same. That a small percentage of organ recipients, particularly heart transplant recipients develop the mental tastes, likes and dislikes of the donors suggests that they received the donor's mind as well along with the organ!³⁵²

Mind Chemistry:

To quote Deepak Chopra, *"To think is to practice brain chemistry. Thoughts, feelings, and emotions create molecules of neuropeptides that travel throughout the body and hook onto receptor sites of cells and neurons. Your brain takes in the information, converts it into chemicals, and lets your whole body know if there's trouble in the world or cause for celebration"*.³⁸⁶ The energetic effect of whatever your brain is thinking and feeling directly influences the body through these molecules course that through the bloodstream.

When your heart feels sad, the emotion is reflected chemically too; for a chemical analysis of heart tissue would show excessive amounts of adrenaline and cortisol - molecules that cause stress and damage. When one feels boundless joy or exhilaration, a skin analysis is apt to show up natural neuropeptides with possible antidepressant effects and could even modulate the immune system; while your blood may show high levels of interleukin and interferon, which have powerful anticancer effects and are in fact, used as anticancer 'drugs'! Thoughts can change

your chemistry. Chopra says, *“The trend has been entirely against the physicalist position, i.e., that the human body is a machine that needs fixing when it gets broken.”*³⁸⁷ Research has consistently validated the ancient Indian view: mind and body are too intimately related to be seen as separate entities.

One’s mind affects one’s body:

The following can well be called Principles of Physiology; but sadly they are yet to impact a doctor’s daily practice. In Chopra’s words, these principles are

- *“Every cell of the body is in some form of communication with the brain, either directly or indirectly, is receiving messages triggered by all of our thoughts, feelings, moods, expectations, and beliefs.*
- *Experience gets transformed and metabolized, exactly as food, toxins, pollutants, air, and water get metabolized. In a word, if you want to see what your experiences were like yesterday, look at your body today. If you want to see what your body will be like tomorrow, look at your experiences today.*
- *The body is a verb, not a noun. In other words, it’s a continuous unbroken process.*
- *Cells are born and die; atoms and molecules fly in and out of each cell constantly. Yet despite this constant flux, the blueprint of the cell remains intact. This blueprint is invisible, intelligent, dynamic, and self-organizing.*
- *Lifestyle choices make the dominant difference between wellness and chronic illness. Years, sometimes decades before symptoms appear, cells can be gaining negative input that lead to the onset of disease.*

- *Our genes are dynamic and respond to everyday experiences and lifestyle choices. Habits lead to longer term changes in the programming of our gene expression via “epigenetics”.*
- *If we knew the pivot point that creates positive cellular activity out of positive experiences, a state of radical well-being is possible.*
- *Purely mental practices, especially meditation, have been shown over and over to improve various physical functions, and these improvements are now known to extend all the way down to gene activity.*

The rising field of integrative medicine takes advantage of these principles, unlike mainstream medicine, which remains wedded to two fix-its: drugs and surgery. „296,388,387

Our thoughts, emotions, intentions, affirmations, which come under the broad umbrella of ‘experience’, can be called units of awareness; these units of awareness express themselves as quanta, i.e., units of energy and / or mass. In the quantum perspective, one could postulate that wave energy works through the DNA vortices - potential research project for sharper brained younger physicians! The wave form can become matter; the energy for all the changes also comes from the wave which taps into infinite scalar energy present in the empty space around! The no-longer-considered-junk DNA thus conveys the information for change to the RNA, nucleus, genes, cell membrane and so on. Our cells thus change - depending on the input, for better or worse! Nurture can overcome nature! This brings us to just how very important our attitude and mental and physical daily activities are in determining our wellbeing.

The Placebo Effect:

That one's own mind can influence the well-being of one's own body makes sense and is absolutely well known; placebo effects are the best examples. As shared by Dr. BM Hegde, placebo effects are as amazing as significant revascularization, absence of angina and significant improvement of cardiac function after sham coronary artery bypass surgery.³⁸⁹ The placebo effect itself is a classic example of the power of thought.

Harris Dienstfrey, contributor to *Consciousness and Healing*, writes, "*The mind as a source of medicine is waiting to be explored.*"³⁹⁰ As researcher Marliyn Schlitz writes, "*It is very interesting to me as a researcher that the placebo effect is something that we tend to put aside. It's the control condition. And yet if we really wanted to understand the innate capacities of the body to heal, wouldn't we want to focus in there and look at the ways in which our body can take an inert substance and produce a physiological change? More so, this inert substance knows the whole cascade of responses that are necessary to lead to a particular kind of outcome. How does that happen? It is a profound mystery and one that needs to be explored more fully.*"³⁹¹ To quote Deepak Chopra, "*The placebo effect is one of the solidest scientific proofs of the mind-body connection.*"³⁸⁷

Can minds of others affect one's mind and body?

Can the minds of others influence one's health? According to Professor of Psychiatry, Dan Siegel, "*Mind is the emergent self-organizing process, both embodied and relational, that regulates energy and information flow within and among us.*"³⁹²

No doubt, the brain plays an incredibly important role. But our mind cannot be confined to what's inside our skull, or even our body, according to this definition. The most immediately shocking element of this definition is that our mind extends beyond our physical selves. In other words, our mind is not simply our perception of experiences, but those experiences themselves. Siegel argues that it's impossible to completely disentangle our subjective view of the world from our interactions.

*“I realized if someone asked me to define the shoreline but insisted, is it the water or the sand, I would have to say the shore is both sand and sea,” says Siegel. “You can’t limit our understanding of the coastline to insist it’s one or the other. I started thinking, maybe the mind is like the coastline—some inner and inter process. Mental life for an anthropologist or sociologist is profoundly social. Your thoughts, feelings, memories, attention, what you experience in this subjective world is part of mind.”*³⁹²

In Eastern societies this mutual interconnectedness, this influence of the mind on societal well-being, was so well recognized that healers learnt to tune their minds to heal the minds and bodies of fellow beings who were unwell. Going into details is beyond the scope of this book but over the past three decades, Chinese, Japanese and American science journals are replete with controlled in vitro and in vivo studies on Distant Mental Interactions with Living Systems (DMILS) or, in Traditional Chinese terminology, External Qi therapy. Unequivocally these studies prove that trained practitioners of Qigong can through meditative Intention produce significant anti-cancer effects and benefit patients; distance does not seem to matter.^{393–395}

That we do not have instruments to measure intent and the fact that inter-personal variations must be infinite, make conventional studies on these therapeutic

modalities very difficult if not impossible. But that does not mean they do not work. I have personally witnessed many cures of chronic diseases including cancer thanks to healing intentions. All the healings I have witnessed were done free. No fee was collected. It was perhaps a combination of desperation / faith on the part of the patient and compassionate intention and total faith on the part of the Healer. Modern medicine needs to have an open mind and welcome such therapies as they can well complement modern medical treatment. That they work points us to the principle of non-locality of energy fields and the mind.

A snack break - some Food for Thought:

Let's take a 'snack break' from evidence-based medicine; and have some 'food for thought'. Let us look at faith that goes beyond it and produces the 'miracle' healings wrought by shamans in the Far East and South America as well as Christian healers like Pastor Tom Loud, Pete Cabrera Jr and others posted widely on YouTube. I would not dismiss them out of hand. In fact, they merit proper documentation in the spirit of humble, honest enquiry. Those who have directly witnessed these healings testify to their genuineness. Just because something has not been studied scientifically does not mean it does not exist.

Why go so far? India is replete with phenomena that beg scientific study and documentation by young energetic medical professionals. For example, in my village at the *kaavu* (temple) next to my house, fire walking is conducted every year. I do not understand how - but skin that should undergo third degree burns remains intact and normal. At Chennai I have witnessed at very close quarters 'vels' (rods a metre or more long and as thick as a finger with sharp ends) being pierced sans any asepsis or anaesthesia through one cheek and out through the

other. There is not any bleeding worth the name. The faithful walk in procession with the temple deity. After the function the metal rod is simply pulled out and holy ash is smeared on the cheek. The wound heals and leaves hardly any scar! I may not understand how it happens. But that does not mean I can deny that it happens. All I can say in all humility is that science does not have all the answers.

Attitudes to Prayer:

What is the attitude of the educated general public towards therapeutic intention or simply put, prayer? That the educated well informed public at large even in the ‘scientific’ West believe in the efficacy of prayer has been brought out by studies and polls. From the survey studies, it is clear that people are hungry for a deeper sense of meaning and for a connection to their spirituality. Seventy-three percent of adults believe praying for someone else can help cure their illness; this is based on a CNN poll. Fifty percent of patients wanted physicians to pray with them. This says something about what people are calling for; how people will feel happier, more contented; how they feel satisfied in terms of the therapeutic encounter. A recent survey published by the National Institutes of Health looked at the ten most common complementary and alternative practices or modalities that are used by Americans today, and they found that of the top ten, three involved prayer: prayer for self, 43%; prayer for others, 24%; and prayer groups, a very common modality for people to engage in.³⁹¹

Medical professionals too need to tune themselves to the concept of ‘customer delight’ (read as patient satisfaction); which means going by this evidence medical professionals can no longer shun matters spiritual! And in India where the common man is totally grounded in faith and spirituality, there is no way the medical

profession can divorce itself from spirituality. Over four decades, the successful therapeutic outcomes and supreme patient satisfaction that we have been able to post in our medical practice, by the grace of providence, I believe, is because the spiritual has been the cornerstone of our medical practice. In today's evidence based world of medicine we have plenty of direct experiential evidence that such an approach works.

The Power of Intention and Belief:

I have also had the rare privilege of witnessing spiritually mediated cures. I have personally met and received 'holy ash' that simply materialised de novo from at least half a dozen spiritually advanced fellow human beings. None of them had any 'conflict of interest' to declare! None of them collected any fee. All were absolutely genuine. How they did it, I know not. But as Einstein said matter and energy are interconvertible. As a doctor I also had the opportunity to follow up a few cases where patients took the holy ash in faith for illnesses and a healing resulted. World authority on the science of spirituality, Gregg Braden would say it was the belief coupled with the emotion of love that emanated as feelings from the heart which acted through altered EM field of the heart and transmission through subtler energies into the patient's DNA, effecting a cure. Selfless love and faith in some manner ignite and enable finite Consciousness to tap into infinite Consciousness; the finite is then able to tap into the qualities of the infinite - into omniscience, omnipresence and omnipotence; and that results in healing.

Sometimes the intention of the healer alone is sufficient, as many Christian Healers like Pete Cabrera state. When Lazarus was raised from the dead, obviously Lazarus could not have had any faith; for he was dead. Only the intention of Jesus mattered.

The healers who successfully heal by laying hands on people in pain, in malls and in the streets always aver that they are just an instrument of the divine. The recipient of healing seldom has faith; they are just willing to ‘try’ someone who says he / she can help them; and that too at no cost and no fear of side effects.

Distant Mental Interactions with Living Systems:

How does the mind interact with other living systems, either nearby or at a distance? Western medicine has just about come to terms with the idea that meditative practices trigger a non-specific “relaxation response” that produces general beneficial effects through the biochemical and neurohormonal activation of the parasympathetic system - but the experiments with Qigong are not only directional (that is, correlate with a positive or negative intent), they also produce statistically significant effects on remote targets while leaving control samples unaffected. Clearly, something other than the relaxation response must account for such mechanisms of action in what has been called Distant Mental Interactions with Living Systems (DMILS) or, in Traditional Chinese terminology, External Qi (E.Qi) therapy. External Qi therapy as defined by the Chinese Society of Qigong Science states that

1. E.Qi exists only when a well-trained Qigong practitioner enters into the Qigong state of mind (A specific state of mind or a state of tranquility during Qigong practice or Qi emission); it does not exist among ordinary people nor in a practitioner in an ordinary state of mind.
2. E.Qi can travel a distance from the practitioner and affect the distant objects to produce measurable signals.

3. E.Qi is directional and can be applied to a specific target far away while not affecting the objects nearby or those very close to the practitioner where his intention is not focused.³⁹⁵

Experiments have proved all three facets. Is meditation able to modulate the local electromagnetic environment of the body? Can it deliver effective therapeutic frequency signals to the targeted organ or tissue? Research as of today suggests possible modes of action. One attractive hypothesis is that the mechanism of information transmission between mental intent and target tissues in mind-body therapies must involve specific EEG frequencies that propagate along a continuous brain-body semi-crystalline matrix of microtubules, chromatin and other macromolecules; and that in turn modulate body-wide biophoton fields and microtubule arrays, such that large-scale coherence and interference phenomena become instrumental in creating loci of above-threshold, effective biophoton intensity, capable of regulating genetic expression and metabolic pathways in accordance to low level laser therapy (LLLT) mechanisms of action.³⁹⁶

Given the evidence that biophotons can travel along nerve fibers and microtubules similar to laser wave guide conduction, the specific targeting of given body areas may be a simple matter of utilizing the normal motor pathways associating conscious intent with that body part in order to transmit the biophoton frequencies to the specified area. Once there, these photons may act simply through biochemical signaling mechanisms, or by field-modulated changes in chromatin unfolding or condensation - exposing or suppressing specific genes based on the operator's intent. It is hypothesized that long-term meditation creates reinforced and persistent epigenetic changes which in effect remodel the brain/body structural continuum in a way that increases overall coherence and conductance, facilitates

large-scale synchronization, minimizes dissipative processes and increases sensitivity to minimal stimuli.³⁹⁶

Can we combine mind-body research with cellular biology technology to train patients in the ideal meditation form for their specific condition? How are these results to be interpreted, or indeed, incorporated into modern medical practice? An exciting area for junior doctors to research indeed! The ‘miracle cures’ that happen during ‘Quantum Gazing’ sessions with Connie Shaw, who I happen to know for over two decades also merit study. Connie Shaw’s sessions are all held totally free for all and with the only intention of serving all and thus loving all. With absolutely no conflict of interest to report, she totally egolessly surrenders to Consciousness / God, so that divine healing love flows through her gaze to all and heals them. Perhaps it is not unlike a Qigong Master’s meditative state.

Therapeutic Role for Meditation:

It is heartening to note that though medical doctors are not studying meditation and its effects on life systems, physicists and biologists are. Recent experiments show that meditation can trigger rapid genome-wide transcriptional changes spanning a wide array of functional ontologies.³⁹⁷ It is proposed that meditation could exert different therapeutic effects by the propagation of specific electromagnetic waves which modulate the local environment of proteins and chromatin, initiating conformational changes in critical regulatory signaling regions, which trigger the expression of specific genes. The challenge at this point is to determine if and how we could progress from an ancient, intuitive healing art to a more predictable, effective and quantitative science, in a true synthesis of mental, biophysical and molecular biology technologies.

Traditional ancient Indian thought has always been that observation and the next stage, intention, can change events. Science is slowly veering to “*Yad Bhaavam tad bhavati*” (as the thought, so it becomes).

Modern Attempts to Understand the Phenomenon:

When it comes to human beings the greatest challenge seems to be devising a methodology to measure and quantify intent; for intention is not in the measurable three-dimensional world. Many studies have suggested that the power of intention works; but on methodology grounds they have not been accepted. We do not have the tools yet to study intention; but that does not mean that it does not work. The hypothesis is that intent causes possibly scalar energy mediated changes in the biofields of the recipient and this is translated into physical change through effects on the epigenetic DNA and other systems of the cell.

Why go to the miraculous? As Dan Siegel writes, *the key is to realize that the human mind is, in a very real sense, much bigger and more expansive than the skull that we imagine (in our wrongly limiting way) to house it. Specifically, relationships are the sharing between people of energy and information flow. The brain and its whole body are the embodied mechanism of that flow, and the mind is the self-organizing process that regulates that flow - and what you do with your mind can change the structure of your brain. The mind can change the molecules of the body. When we move that structure toward integration, we're cultivating well-being. One of the most powerful, science-supported methods for bringing about such neural integration is the practice of mindfulness.*²⁰²

Love and Compassion Matter; including that of the Treating Doctor:

World famous cardiologist Dean Ornish states being loved and cared for, itself is the most therapeutic energy... and the contrary is true too. *“People who feel lonely and isolated”*, reveals Dr. Dean Ornish, *“have a 300 to 500 percent greater risk of premature death from physical illness”*. So, the minds of others definitely affect our wellbeing. A natural corollary would be that the treating physician’s attitude is definitely bound to affect the wellbeing and recovery of the patient; with a joyful positive loving and caring attitude accelerating healing and a negative cold aloof attitude proving detrimental to the patient’s health.^{383,398}

There seems to be more than ‘evidence-based medicine’ at work. In four decades of practice time and again Dr. Seshadri and I have experienced this to be a fact. Time and again I have found that the treating physician’s intention, faith and prayer have made a difference to treatment outcomes. It is heartening to note that research on biofields will perhaps unravel the cause behind what we have experienced in our practice. Kafatos, in a 2015 paper wrote, *“That the observer’s participation plays an essential role in the outcome of events, has fundamental implications for biofield science and mind/body therapies. It has the potential for understanding how many such therapies operate. In the same breath, the issue of efficacy arises. There is a wide range of response to all medical interventions, whether in complementary or conventional scientific medicine. No two patients respond alike.”*³⁰¹

As Professor KV Thiruvengadam, under whom I trained in medicine constantly reminded us trainees, uncertainty is a constant in the practice of medicine. It is a most humbling fact. Mind and body are fundamentally connected but the degree can vary infinitely and hence the outcomes too. Thus, the primary connection of

the observer and the observed system, as understood in quantum mechanics, has profound implications for the nature of the biofield. We cannot take the living body as an entity existing independent of the biofield to which it belongs and independent of the practitioner in CAM treatments. The message for young doctors and care team members is clear - love your patients; and they will get well faster; why, you may well experience miracle cures!

Intuition - some asides:

A meditative mind can sharpen your intuition too. Meditation helps one connect to ‘universal awareness’; and it comes to one’s aid when one does not even know that one needs help! Dr. Steven Greer, who used to be an Emergency Room doctor states how he once, over-ruling the rest of the ER staff, he followed his intuition and ordered brain scans rightaway, saying he was sure there was a brain tumour though according to evidence-based medicine his decision could have been challenged; as the patients symptoms did not suggest any likelihood of tumour. To the incredulousness of the staff, the scans showed a brain tumour!³⁹⁹

I have had two similar experiences. Once I admitted an elderly mildly disoriented male with symptoms of urinary tract infection and I myself was flabbergasted for I found myself saying that we would do our best but that the prognosis was very grave! Later I remember wondering why I had said so; there had been nothing so grave in the preliminary history, examination or investigation findings to warrant saying so; but some force had put those words into my mouth! At dawn I got a call that he had succumbed to a sudden cardiac arrest. When I rushed to the ward, the relatives in awed, hushed tones told me, “You were so right, Doctor...”

Another time it was a referral from a neurosurgeon to certify medical fitness for surgery and advice for some gastrointestinal problems in a patient suspected to have brain tuberculomas causing seizures. I found that she had severe intestinal amoebiasis and the words, ‘AMOEBIASIS IN THE BRAIN’, flashed across my mind. Now that was a very rare diagnosis; in fact, the few cases reported worldwide had been post-mortem diagnosis. Fellow Consultants laughed at the possibility. Nevertheless, I followed my intuition, and wonder of wonders, as I treated the amoebiasis, all her neurological symptoms like ataxia and others resolved! In fact, she became so well that surgery was deferred.

She was discharged and asked to continue anti-amoebic medication and anti-seizure drugs and return for repeat brain scans and CSF studies after a few months. She kept well but as is common in rural India, once well, the family stopped everything. She had fits again and was rushed back. This time the neurosurgeon did a brain biopsy and it confirmed amoebiasis in the brain - one of the very few cases of amoebiasis in the brain, where antemortem diagnosis was made; and she did well. In fact, this case made it to a historic Clinico-Pathological Conference at the Apollo Hospital where I worked then.

So, my advice to junior doctors would be - meditate regularly; it sharpens intuition; and could well save your patients. I am sure many doctors have found this hand of providence that nudges one to see the patient again, or order a test, or prescribe a particular drug and so on...; which in some mysterious way, favourably tips the balance between life and death / sickness and health.

Examples of Settings that use Prayer / Meditation as aids in therapy:

Praying for one's patients, praying with one's patients - as *ayurvedic* physicians do, promising to do one's best and reaffirming that by God's Grace nothing but the

very best would happen, and offering gratitude in that acceptance, to God, is a sound proposition in India, where the vast majority have total faith in the divine. It leads to better acceptance of the results of treatment by the patient and patient's family. Even in Western countries, such a trend is catching on. In the Christian Medical College where I trained, every day began at the department of medicine with prayer. Prayer is a most positive thought. Thought acts on biofields and group prayers possibly create coherence and heal. Many studies show that when group meditation has been done for peace, crime rates in the areas have fallen following the meditation indicating that prayer/ meditation with intention, works.

Time and Consciousness:

The concept of time is also changing. Past is past we have often been told. But the past can be changed by the present! More recently, scientists in France shot photons into an apparatus, and showed that what they did could retroactively change something that had already happened. As the photons passed a fork in the apparatus, they had to decide whether to behave like particles or waves when they hit a beam splitter. Later on – well after the photons passed the fork – the experimenter could randomly switch a second beam splitter on and off. It turns out that what the observer decided at that point, determined what the particle actually did at the fork in the past. At that moment, the experimenter chose his history.^{324,400}

Are Physics and Metaphysics meeting?

All absolute notions of linear time are gone. Time can slow down; even disappear at the black holes. Besides, energies that travel faster than light have been

described. According to the biocentric theory of Dr. Lanza space and time are tools created by the brain; the universe indeed, exists only when it is being observed; and it stands to reason that the universe must look different to different species. Our world is different to a bat's world is different to a bumble bee's world is different to a whale's world... No more is the universe 'out there' and we 'in here'. It is a participatory universe according to the Biocentric theory. Veering towards *Adwaita*, philosopher physician Deepak Chopra states the *Vedantic* view - "*You are the universe.*"

We all know that we exist. We are 'aware'; awareness is a facet of human beings. Both Chopra and Lanza propound the commonsense theory - that it is 'awareness' that makes the universe manifest! To the Indian mindset, where *sat-chit-ananda* or being-awareness-bliss permeates all that is, was, or will be, the entire universe is sentient; and it is an I-told-you-so fact. Now science too is veering to that fact. Scientific experiments repeatedly suggest that these basic building blocks or 'possibility waves' also seem to have 'awareness'! The famous double slit experiment and its many variations should actually be part of Physiology, as taught in the medical curriculum.

The Vacuum / The '*Shoonya*'; the NoThing where Everything Resides?

To add an interesting historical aside, the world's leading physicists met at Neils Bohr's home in Copenhagen and their collective interpretation of the phenomenon, made famous as the Copenhagen Interpretation, was this - in the absence of observation the universe is only possibilities. The absolute concept of objectivity does not hold good anymore. Observation by the subject alters the behavior of the object! That everything comes from nothing is gaining ground among scientists

who now endow the quantum vacuum as containing the potential of all that manifests as physical reality when observed.

And even beyond the vacuum is the beyond expression, beyond understanding Consciousness which nevertheless can be reached and experienced through meditation.

Did DNA Create Life or Life Create DNA?

Over to Deepak Chopra and Tanzi, both of whom have the gift of putting across difficult-to-comprehend scientific jargon into common sense layman's lingo.²⁹¹

The philosopher-scientists say, *“Ever since its structure was unraveled in the early fifties, DNA has been considered the mastermind of the cell. Sitting in splendid isolation in the cell's nucleus, DNA encodes all of life. It sends duplicates of itself (RNA) to direct the manufacture of proteins; and proteins, as high-school biology teaches, are the building blocks of the cell. But something doesn't look quite right here. If every cell is a biological robot, and the entire body is made up of cells, then we must be biological robots too. This view, which a surprising number of geneticists believe in, cannot be true. The whole approach is totally logical, but nobody can seriously claim that the works of Shakespeare and Mozart are explainable by protein manufacture.”* Their words make sense; every day, human beings think thoughts and feel emotions, which neither proteins nor cells do! Epigenetics is a field that helps us understand, how everyday experience, including our lifestyle and memory, actually gets chemically imprinted on our genes through what was earlier thought to be ‘junk DNA’.

DNA seems to be able to do a lot more. Chopra minces no words as he takes on molecular biologists; says he, *“Looking at the body’s hundreds of biological clocks, you’d have to suppose that DNA can tell time. But that’s absurd. Chemicals live in the now. They meet and interact instantly. They have zero capacity to hesitate, plan ahead, remember, and keep to a schedule. It doesn’t matter how complex an atom or molecule is in its structure. Nothing in chemistry indicates that DNA can tell time. Instead, DNA orchestrates signaling pathways in which the temporal and spatial series of signaling events lead to the precise biological functions needed by our body at any given time to survive. In this way, our bodies keep time and we as humans know how to experience time. In fact, the word “experience” encapsulates the hollowness at the core of current genetics. DNA has no experiences, but we do. Claiming that a non-experiencing mastermind sits in the middle of our cells for the purpose of originating the richness of human experience is nonsense.”*

“We are asked to believe in models for their own sake in order to protect the sanctity of scientific investigation. We are great advocates of science ourselves, but it must be founded on reality. At bottom, reality is just experience and the knowing of experience. Reality occurs in consciousness and nowhere else. Attributing life to DNA is the opposite of what is actually going on. Life created DNA, in the sense that without consciousness at the source, nothing our genes do can possibly be explained. It’s time for a paradigm shift if we really intend to understand who we are and why we are here.” So, in the no-thingness that Kafatos et al³⁰¹ postulate must be that omniscient, omnipotent, omnipresent supreme intelligence and awareness that is Consciousness...

The limitations of matter-based science are put very succinctly by Chopra and Tanzi who state, *“There is no other way forward except to overturn some basic assumptions completely. These assumptions include the following:*

** Matter can explain mind.*

** Bits of matter known as genes created Homo sapiens.*

** If bits of matter become complex enough, they explain how experience works.*

** Reducing complicated processes down to simple processes always leads to the right answer.*

** If you want to know what a person is all about, map his genome.”⁴⁰¹*

A supreme intelligence must exist!

Another reason why it becomes necessary to postulate that Consciousness exists, is because of the amazing nature of the experiences we feel. Touch, pressure, temperature, pain, pleasure, hearing, vision, taste, smell - these sensations are perceived when stimuli send up electricity down nerves and electro chemical reactions occur in the brain. But what causes the mysterious sublime personal experiences? The sublime realms that music take us to, the wonder of a sunset, the joy of seeing a newborn, the thrill and shyness of falling in love, the ecstasy of experiencing the Divine, the smell of the earth as rain falls on the ground... ? These wondrous experiences cannot come merely from electricity going up nerves and some electrochemical reactions in the brain. There is something missing in that equation. This is what scientists call ‘the hard problem of Consciousness’. One is forced to admit that Consciousness exists.

Going beyond the brain to awareness:

Scientists are ready to study functional scans of the brain during common garden experiences such as depression, meditation, anxiety, sleep...etc. etc.; the ‘easy problems of Consciousness’. But they tend to scoff when students of Consciousness in the Eastern traditions, speak of ‘moving the mind to a *chakra*’ or talk of ‘Out Of Body Experiences’ (OOBE). One has to be open-minded enough to accept that we need to respect those who have studied the inner world of the mind and beyond, just as much as we respect material scientists.

Also, if one scoffs at ‘Outside the body experience’, one has to then scoff at the ‘Inside the Body Experience’ too. All of us, hardboiled physicists included feel a sense of ‘I’. There is no denying that! But where is that ‘I’? We have not been able to localize it. But we are all aware of it. Our degree of awareness needs to be cultivated and increased say the wise ones. In fact, spirituality has been defined as a progressive increase in awareness.

Material scientists are comfortable when we think of our body and its processes including the mind as ‘self’. That we are bounded by our skin and that all the cells contained within are our ‘self’. But as we have just seen, the vast majority of the cells contained in our body are not ours and we live only because with every breath we are taking in part of the universe and giving out a part of us to the universe! Am reminded of Sadguru, Juggi Vasudev who shot a repartee at an upstart-ish interviewer who wanted proof for the idea that all was one; that man has no separate existence. “*Just shut your nose and mouth for one minute and you will know*”, said Sadguru wryly.

A Philosopher Scientist on Consciousness:

An Oxford philosopher-artist Rupert Spira echoes modern scientists and gives the most elegant explanation about Consciousness, Time and Space that I have ever read. Says he, *“If we wanted to speak the truth about the nature of Consciousness, experience or reality, we would have to remain silent. That is why it’s said that the highest teaching is silence.”* (Echoes of Ramana Maharishi??!)

Spira continues, *“However, very few of us are sufficiently mature to intuit the reality of Consciousness from silence. Therefore, the spiritual traditions have elaborated various paths, various skillful means, tailored to various levels of our understanding. So it is in that spirit that I speak of the nature of Consciousness...*

...Once it becomes clear to us that attention or the finite mind rises from infinite Consciousness, we may notice that attention or mind rises in the form of thought and perception. Thought and perception are the two forms in which the finite mind appears. And if we explore the substance or reality out which thought and perception are made, we find only infinite Consciousness. That is, Consciousness finds only itself.

Thought cannot know Consciousness, although it is made of it, any more than a character in a movie can see the screen out of which it is made. Likewise, perception cannot see Consciousness, although it is made of it. When thought tries to find the substance in which it appears, it projects its own single dimension onto Consciousness and, as a result, instead of seeing Consciousness it sees time. Time is what Consciousness looks like from the point of view of thought. Time is Consciousness objectified by thought.

Something similar takes place when we try to find the stuff in which our perceptions appear. If we notice the perception of, say, this screen (pointing to the

screen on the right), and then we notice the perception of that screen (pointing to the screen on the left), we can ask ourselves, 'What is the stuff between these two perceptions?' We look at the two screens, and then we look at the stuff in between, and we label it 'space'. In fact, perception takes place in Consciousness, not in space. In this case, perception has simply superimposed its own limitations on Consciousness. Space is what Consciousness looks like from the point of view of perception. Space is Consciousness objectified by perception.”⁴⁰²

An important conclusion therefore is - Time is Consciousness objectified by thought and Space is Consciousness objectified by perception. This is exactly what Robert Lanza and other physicians, and scientists mean when they say, “*Space and time are but tools of the mind...*” If science has all but accepted Consciousness, what is a practical scientific approach to Consciousness? Why science is an imperfect tool to study Consciousness needs to be first understood.

It is a serendipity of sorts that what one intuitively felt about the Consciousness based on traditional Indian thought, is what has been expounded in YouTube lectures by the greats of science such as Masaru Imoto, BM Hegde, Deepak Chopra, Kafatos, Laza, Tanzi, Vommel, and others. The most sensible scientific analysis which is in keeping with commonsense is as follows.

Understanding the limitations of science:

Science is the experience of perceptual reality; it is not exactly fundamental reality. Science is a species-specific description of a mode of observation. Science is based on a subject object split - so it is a fragmented truth. Science for example, tends to rubbish phenomena like out-of-body experience. How do you explain ‘I.B.E’ (in-body-experience)? There’s no solid entity there... but you feel there’s someone! Is

it a hallucination or outside of space-time? Consciousness cannot be measured; it cannot be directly observed or measured.

Conversely, according to quantum physics, if you can touch taste see hear smell something, it does not exist! In other words, what is 'measurable' has no real solid existence! What exists is that without which you cannot experience / touch / taste.... Everything else is a quantification of that. Consciousness is the one that measures. Consciousness is never the object. Consciousness is always the observer. All scientific validation of Consciousness is inferential and so indirect. The only way to experience Consciousness is through self-awareness. Spirituality is a progressive journey in self-awareness. Spiritual discipline is the only valid way of understanding and experiencing Consciousness directly.

Science has limitations as it is based on observation of facts and measurements. There's an assumption on the part of many scientists that this is the most reliable way of knowing the truth. That is questionable. Descriptions of 'empirical facts' are actually description of modes of human perception using a human nervous system.

There is no observer independent reality. All observations are made in Consciousness. All theories are conceived in Consciousness. Science cannot explain Consciousness. But Consciousness can conceive and construct the scientific method. Science is the offspring of Consciousness.

The Eastern view of Consciousness and the human organism:

By definition Consciousness or God is beyond definition, beyond expression. In fact, the ancients of India referred to it as just '*Tat*' or that. In the Indian tradition,

the experiential form of Consciousness was called *sat-chit-ananda* which is best translated as being-awareness-bliss. Being everywhere is the fundamental property of Consciousness and refers to its omnipresence aspect; chit or awareness is the omniscience aspect which includes our 'I' consciousness, intelligence, memory, language, music, mathematics and other facets of the intellect as well as mind that is thoughts, feelings, images and perceptions; all are derivatives of this omniscience aspect. *Ananda* or love-bliss is the omnipotence aspect.

Many Indian Masters as well as Hopi Indians use a spider analogy to explain creation. They explain that Consciousness wanted to love and experience Itself; and so through love, from Consciousness came forth all of creation and through love will all of creation merge back in Consciousness. So all of creation is part of Consciousness; like a spider's web is created by the spider from the spider and so the web too is part of the spider. Love is the most powerful force - greater than the four primary forces of the universe that physics recognizes. From the primordial energy of love, came forth sound and all other energies; from energy did all matter come forth. Bliss is the other side of the Love coin.

The Eastern View of the Human Organism:

How do these facets express themselves in a human being? The body made up of matter comes from food consumed. The energy to run it is from the energy body which is also linked to the food body through the breath and to the rest of the universal biofields and the solar field. The 'I' awareness and world awareness through the mind creates a sense of separateness and ego; the intellect when focused outwardly, creates its various byproducts and along with the mind - which is sense perceptions, images, feelings and thoughts - enchants us and distracts us.

But if we go inwards in meditation we can experience and tap the omniscience and omnipresence aspect through pure awareness. When we look outwardly only sense of separateness is sharpened; selfishness, fear, ego related negative emotions imprison us. But if we choose to use our intellect and we go inward, we can experience the universal ‘I consciousness’. If a discriminating intellect helps us see the same ‘I’ outside and so love all and serve all selflessly like all the great masters could, then, we can even experience the omnipotence aspect of Consciousness, say Indian Masters.

To borrow a manner of expression from set theory, the *annamaya kosha* (physical or food body) is a subset of the *pranamaya kosha*. The ‘*pranamaya kosha*’ is akin to the biofield. The *pranamaya kosha* is a subset of the *manomaya kosha* (mind sheath). The *manomaya kosha* is a subset of the *vijnanamaya kosha* (intellect sheath) and the *vijnanamaya kosha* is a subset of the *anandamaya kosha* or bliss sheath. The ego which gives one the illusion of separation is present up to the mind sheath. The discerning intellect could get beyond the ego and hence the *vijnanamaya kosha* and *anandamaya kosha* are not fettered by the ego and represent freedom.

Beyond the sheaths is the *Atma* or individual Consciousness which could only be described as not-this or not-that (*neti neti* in Sanskrit). The *Atma* was a subset of the *Paramatma* or supreme Consciousness which was considered beyond expression or understanding. It could only be experienced and its nature, as revealed by the realised ones was love-bliss. All these sheaths / bodies depend for existence on the Individual Consciousness or *Atma* which dwells in them and sustains them: the entire organism, Individual Consciousness included, exists in a matrix of Universal Consciousness, which arose as an extension of the Source during creation.

Someone once asked, "Since Consciousness was identical, whether Individual, Universal or in the Source how do you tell them apart?" During any cycle of creation one can "separate" them only by their location. Besides, while Universal Consciousness can be thought to be akin to potential energy in that it silently and passively provides that vast screen on which the movie of creation is projected, the Source and Individual Consciousness are in contrast in a mode akin to kinetic mode; for the energy flow from the Individual Consciousness holds together all the bodies of the organism and keeps it ticking and going and the energy flow from the Source keeps all of creation ticking and going.

View of ancient Indian seers:

The ancient seers of India were scientists of Consciousness of the highest integrity for they had experienced the omniscient universal mind. According to them, once born, the human being, while in the physical, existed in space-time, as determined by the solar system and earth. At death, only the food body and energy body were dropped. The mind body along with the ego, continued to exist in other space-times; the subtle worlds - declared these ancient scientists of Consciousness from direct experience. As long as the ego persisted, one would come back to the earthly realm by being born again and again, till one finally learnt the lesson of all-is-one and made that quantum leap back to merger with the One. Super scientists of Consciousness, whom the common man referred to, as great masters, *avatars*, *yogis* and so on, i.e., those who had conquered ego, could dwell at will, in the subtler Intellect and Bliss bodies in different space-time dimensions. Once freed of all the sheaths, the 'I' awareness merged back in Consciousness, they said.

Science has not reached love and bliss yet. It has just about gotten to the energy body and the non-local mind. Just how did the ancient seers know this? By experience! For, even when alive in the physical body, they went inwards and discovered means of crossing between the various space-time dimensions. This they did through meditation and *Yoga*. In fact, they became such adepts at going between dimensions, that many of them could decide to drop their physical bodies at will! Even today we have adepts who are able to do that; and we have documented cases of *yogis* and *Siddhas* who have announced when exactly they would be departing and dropped their bodies.

Obviously, this is an experiential realm; not quite an area for double blind measureable studies. Such a perspective of life totally alters our world view and view of life, birth and death. The good news, however, is that both in the East and West, now, many more people are opting to go inward and are experiencing these dimensions. Though it occurs in a small minority, serious research has shown that even while alive people can experience other space-time dimensions of existence; in other words, there IS something beyond our three-dimensional world. The fundamental field in which all dimensions exist is postulated as Consciousness in science; or God, in lay man's language.

The frontiers of scientific Consciousness research:

Let us see where science has reached, in Consciousness research. Research shows that in certain situations, human beings seem to be able to acquire verifiable information which they could not have obtained by any known natural means - called veridical perceptions. Evidence is accumulating that veridical perceptions are indeed, true. Perception seems to be possible without a brain and physical

body! Out-of-body experiences (OBE) unrelated to near death experiences (NDEs), and robust findings from rigorously conducted investigations of remote viewing confirm that veridical perception is a widely shared human perceptual ability that occurs both spontaneously - including in some NDEs and OBEs -and during other altered states of consciousness, and in gifted individuals under controlled laboratory conditions.^{403,404}

While confirmed cases of veridical perceptions in minimally conscious states or at moments near death are admittedly rare, a complete explanatory model of consciousness must address extra-sensory or non-local aspects of consciousness reported to take place in NDEs, OBEs and other so called transpersonal experiences. No more is the statement - ‘the brain produces consciousness’, tenable.

On the brighter side, modern medicine that used to pooh-pooh, laugh at and ridicule NDE, OBE and the like, is in all humility ready to study these phenomena now. To quote a 2017 paper by James Lake, two mutually exclusive perspectives inform current thinking about the NDE. One perspective - the view of current science - assumes that NDEs are artifacts of physiological changes in the brain that take place at moments near death, constitute epiphenomena of a dying brain, and have no intrinsic significance. The other perspective - one held by the majority of near-death survivors and increasing numbers of NDE researchers - contends that NDEs are unique and transformative events that cannot be adequately explained by reductionist models of consciousness.⁴⁰⁵

NDE posits a different “order” of reality all together in which human consciousness may take place and function independently of the brain or - at least in some cases - outside of so-called ordinary space-time. Veridical perception and

other so-called anomalous experiences that take place in the context of NDEs are consistent with postulated non-local aspects of consciousness. It is clear that contemporary science grounded in physicalism cannot provide an adequate model of complex relationships between brain function and consciousness.

Perhaps the future will see quantum mechanics and emerging concepts in physics leading to research methodologies capable of testing relationships between established neurophysiological mechanisms and postulated non-classical mechanisms at multiple hierarchic levels of organization in body-brain-environment. Future studies will help elucidate the role of quantum-like processes in both “ordinary” conscious functioning and so-called “anomalous” experiences such as documented claims of veridical perception associated with NDEs.

Efforts to develop a more complete theory of consciousness will ideally invite dialogue from disparate epistemological perspectives including those of anthropology, psychology, neuroscience, psychiatry, transpersonal psychology, and physics as the spiritualizing effects of NDE are profound.⁴⁰⁶ *“By embracing a multi-disciplinary framework, future theory-building in consciousness research will help reconcile the formalisms of current science with profound insights of the world’s great spiritual teachings”*, states Lake.⁴⁰⁵ One can only hope that these researchers will meet with and learn from the Yogis, the great *Siddhas* of South India, Buddhist masters and Tibetan Lamas - who are masters of these other subtle space-time dimensions and have direct experience of these dimensions. Then they may be spared re-inventing the wheel.

NDE studies are vital for they show us an existence beyond the body; a purpose to life; it affords a glimpse into Consciousness or ‘the mind of God’ as laymen would say; and two extremely important positive changes relating to one’s well-being

seem to occur. Firstly, many who experience NDE become more spiritual, loving, caring and do more for society and fellow-beings and very importantly, lose all fear of death. Secondly, a small percentage, happily find that the terminal diseases they had, which pushed them into an NDE in the first place seem to have spontaneously ‘miraculously’ been cured after the NDE! Both of these are priceless serendipities and definitely make research in this area highly warranted.

NDE Research:

Doctors and nurses are the privileged few who are invariably present when fellowmen go through near death. As of now, doctors and nurses are invariably at a loss as to how to respond when confronted with an NDE experience by the patient in their care; this confusion and lack of understanding needs to be replaced by compassion and understanding. So, it is only appropriate that this book studies this area in some depth. First to update the reader about general NDE research, let me quote from the proceedings of the 2017 Seattle conference of the International Association for Near Death Studies (IANDS).⁴⁰⁷

“Dr. Bob Brumblay, an emergency room physician from Hawaii, told the IANDS conference audience how his attempts to understand his wife's near-death experience led him to a new theory of human perception...

... He compared the conventional worldview that rejects NDEs and other mystical experiences to the time before humans understood that the earth was round. Of course, our perception at the time that the earth was flat didn't prevent the true reality that the earth was, indeed, round. Similarly, mainstream science's reluctance to accept NDEs as real doesn't negate their continued occurrence. Dr. Brumblay used the book Flatlands to build his analogies about perception. In a

two-dimensional world, we would not be able to see the front and back of things that we can see in our three-dimensional world. Likewise, during an NDE people can perceive more than our customary three dimensions, so their perceptions seem to us to penetrate solids and to transcend time. Our everyday life is three-dimensional, but that doesn't mean there cannot be more dimensions, a principle in fact, supported by present-day physicists...

...Seattle pediatrician Dr. Melvin Morse confessed to having been skeptical initially when children resuscitated by him described their NDEs. Later he authored the book, "Closer to the Light: Learning from the Near-Death Experiences of Children".

Dr. Morse speaks of a paradigm shift emerging. This shift includes the view that humans are meant to have mystical experiences because we have a part of our brain specifically devoted to that task, the deep right temporal lobe which takes up 11-15% of our brain. This is the same area that shows increased activity in experienced meditators, and produces feelings of expanded consciousness, shown decades ago by Wilder Penfield's neurological experiments. It may also be the part of the brain that allows us to interact with one another at a distance, and is possibly the area that is stimulated during the out-of-body portion of an NDE, before all brain activity ceases.

Dr. Morse suggested that the right temporal lobe constantly interacts with patterns in nature that lead to the seemingly miraculous instantaneous healings sometimes accompanied by out-of-body experiences. For that reason, it should become an important area of study for mind-body medicine. Dr. Morse's conclusion is that deep mystical experiences occur in the right temporal lobe and that we may be biologically "wired for a God connection." Morse has published his latest theories

in the book, Where God Lives: The Science of the Paranormal and How Our Brains Are Linked to the Universe...

...Colorado family physician Dr. Pam Kircher related how realizing in adulthood that her own childhood NDE had profoundly shaped her life's values led her to finally talk about NDEs with her medical colleagues. That in turn moved her to work in hospices, where she found NDEs and ADCs (after-death communications) to be extremely common among patients and their families...

...Dr. Kircher moderated a discussion among forty health-care professionals about reactions they encountered when acknowledging NDEs on the job. Many were encouraged by current research on NDEs. One suggested that physicians would become more receptive to NDEs if their patients insisted on telling them of their NDEs so that the profession would become "flooded with NDEs." The attendees were reminded that the IANDS office has wallet-sized cards which NDErs can carry to show their medical providers what an NDE is and to alert them to its common after-effects, including increased sensitivity to medications. The discussants agreed that nurses often are much more receptive to patients' NDE stories than are doctors...

...At a separate session, Chicago nurse Linda Morris reported on her Ph.D. thesis research, which examined the response of nurses in eight Chicago-area hospitals to patients who'd had NDEs. Morris discovered that not only do patients tell nurses about NDEs, but nurses often perceive a "glow" around patients as they die. Morris identified several ways that health-care providers can be of assistance to NDErs. These include (1) understanding that patients may be confused about the experience, (2) understanding that patients often are aware of what's going on around them even when considered unconscious, (3) not dismissing the NDEs as

merely side-effects of medications or as hallucinations, (4) validating their experience, and (5) listening to their experiences in a non-judgmental way...

...Debbie James, a critical care nurse from Texas whose master's thesis was on NDE, narrated how understanding NDEs enabled her help organ transplant patients. Transplant recipients sometimes deeply sense the personality characteristics of their anonymous donors. Understanding the reality of NDEs has helped Ms. James be more receptive to such experiences. By sensitive listening, she has found that transplant recipients often are made more comfortable by being given details about their donor, especially if they are already sensing things about them.

According to James, people often want to talk about their NDE as soon as it occurs. If their first telling is met with skepticism or negativity, they often won't risk telling others. As a nurse working in a cardiac care unit, James feels that her current mission is to help other health-care providers learn about NDEs so they can be helpful to the many patients who undergo NDEs during cardiac arrests. To that end, she speaks about NDEs at many healthcare conferences throughout the country...

*...Dr. Jeff Long, a Radiation Oncologist, Tacoma, created a research website (www.nderf.org) on which experiencers were invited to record their NDEs. The NDE narratives have greatly influenced his approach to patients and how he views the world. According to him, relationships are the reason most NDErs choose to return to earth, and that our immersion in the interconnectedness of life is a prime concern...*⁴⁰⁷

The 2017 Seattle conference clarifies that NDEs are not only of clinical interest to the medical profession, but they are changing the lives of nurses and doctors who

have been opened to their significance. Furthermore, clinicians are now looking at how theories about NDEs might inform our understanding of brain functioning, and how the NDE phenomenon accords with new developments in physics and philosophy. Indeed, we are on the verge of a paradigm shift in medicine that can lead to a broader acceptance of NDEs in the clinical setting.

Basically, in NDEs the patients find themselves outside their bodies and are able to watch ‘from above’ the code blue teams trying to resuscitate them. Their ECGs and EEGs are flat. In 2001 Lancet published a prospective Dutch study of 344 patients who nearly died of whom 62 has NDEs.⁴⁰⁸ NDErs have veridical perception. It would appear from the accounts of NDErs that we can hear better without our physical ears, see better without our physical eyes and we can even thought-read and see through solids when out of the body!

A Personally Documented NDE:

Has this author met at least one person who had an NDE? While writing the book, “The Sai-ence of Medicine” at the turn of the century I was looking for a verifiable NDE by an Indian and then got to interview Dr. Gopalakrishnan, a Cardiac Anaesthetist at the Trivandrum Medical College Hospital who had himself experienced an NDE. Another NDE was that of George Rodonaia, a Russian Neuropathologist, who ‘woke up’ as they were going to perform his autopsy! Both Gopalakrishnan and Rodonaia were atheists before their NDEs and both became gentle believers in God post-NDE. Rodonaia in fact, became a pastor.³⁵² A more recent well known NDE, details of which you can also watch on YouTube, is that of Neurologist Dr. Eben Alexander.^{409,410}

Research on NDE associated unexplained healings: We move on now to an aspect of NDEs that excite and intrigue medical professionals even more - the phenomenon of patients being ‘miraculously’ healed of their diseases after undergoing an NDE. Are there really such examples of post-NDE recovery from the diseases that in the first place pushed them into an NDE? The late Dr. Barbara Rommer, in a book entitled, “Blessing in Disguise: Another Side of the Near-Death Experience” meticulously studied the medical records of many such patients and documented them.⁴¹¹

To quote Dr. Rommer, *“I have interviewed many near-death experiencers who reentered this lifetime cured of the physical illnesses that caused their deaths. I have painstakingly reviewed their complete hospital medical records. My cases include people who have come back totally healed of kidney failure, end-stage liver failure, aplastic anemia (bone marrow shutdown), legal blindness, pneumonia, and cancer...”*

“...I have also interviewed several people who, after being pronounced dead by trained medical personnel, were in that state for a very long time. Three people awoke in the hospital morgue. Another person re-entered his life in a funeral parlor.”

She was also the one to study and document Less Than Positive experiences that occur in a minority of patients undergoing NDE. The final conclusion after interacting with the subjects who underwent NDE with LTP content was also that it helped them in their altruistic spiritual growth.⁴¹¹

To get back to the ‘miraculous’ cures post NDE, one well known case is that of NDEr Anita Moorjani. At the Chairman and Senior Consultants Meet of the number one corporate hospital in India, the flagship Chennai Apollo Hospital, the

Anita Moorjani case was presented as ‘food for thought’ for the orthodox community of modern medical doctors. The unbelievable spontaneous remission of grade 4B lymphoma in just five days, while in hospital left all the doctors dumbfounded. I have no doubt that doctors in training need to be aware of these rare but thought-provoking cases that could, if studied sincerely with an open mind, lead to breakthroughs in medical science. For a start one could read Moorjani’s first person account.⁴¹²

Another is the case of Anne who had life threatening Lupus in 2005 resulting in doctors declaring her brain-dead after tests, when she had an NDE. The NDE literally ‘cured’ her of the lupus.⁴¹³ NDE Researcher Dr. Atwater has a well-researched list of post-NDE ‘impossible cures’.⁴¹⁴

In 2015 the Daily Mail reported the case of 12-year-old Annabel Beam who underwent an NDE following a 30-foot fall headfirst; not only did she emerge unscathed, but more importantly, after the NDE, a most unexpected serendipity was, that tests revealed that Annabel had remarkably stopped displaying symptoms of pseudo-obstruction motility disorder, a rare incurable condition that had seen her in and out of hospital since 2008.

Doctors advised she could begin to come off the antibiotics she had been taking for years. Instead of taking ten different types of medication throughout the day, she only needed three, and the painkillers that were prescribed ‘as and when she needed them’ were not required at all. Previously, Annabel’s medication meant she had to have a liquid diet or stick to soft, bland food – but now, she can happily tuck into pizzas and McDonald’s happy meals. The family have gone more than a year without a single visit to the doctor.⁴¹⁵

“The Wisdom of Near-Death Experiences” by Dr. Penny Sartori, a senior nurse, describes the case of a patient who had a claw like deformity of his right hand, since birth, recovering function of that hand. Only phase change and emergence concepts can explain this recovery, impossible according to current concepts of physiology.⁴¹⁶ Dr. Sartori’s book on NDE was serialized in the Daily Mail and there was an avalanche of letters from readers testifying to the NDEs undergone by them or close family members. As NDE is not in the 3-dimensional measurable world, medical journals editors hesitate to publish NDE papers. But YouTube and scientific blogs show that well documented accounts and studies on NDE are increasing worldwide. Like death, which is real, NDE too is real and is here to stay.

The NDE undergone by Dr. Jere Rivera Dugenio is a most objective scientific account; a highly recommended read. To his pleasant surprise, discovered that the NDE had cured him of the pathological body problems that had led to the NDE in the first place! (189). Strangely, he was interested in life after death even as a child, and he writes, *“In 1975 at age 10, I entered a public speaking contest at school in which I chose the topic “Life After Life” based upon the book and near-death experience (NDE) research of Dr. Raymond Moody. Ironically, twenty-five years later in 2000, after a twenty-year drug, alcohol and sex addiction, I underwent my own NDE when I suffered a cardiac arrest, momentarily dying for several minutes as a result of a massive drug overdose. Within that lucid, non-local event of my NDE,*

1) I experienced multidimensional (or trans-harmonic) reality outside the confines of my 3-dimensional physical body,

2) I experienced myself as conscious, living personal morphogenetic field pattern with 360° conscious awareness interwoven and connected within the greater cosmic morphogenetic unified field, and

3) I consciously experienced what I refer to as “trans-harmonic identity accretion” wherein portions of my faster oscillating, higher dimensional consciousness began harmonically downloading and replacing my slower oscillating, lower-dimensional conscious identity. Some identify this type of experience as being called a “walk-in” 3 experience in which a new consciousness replaces the old consciousness Think of it as being similar to downloading a new software update to replace older software on a computer. “

Then he makes a wondrous revelation - *“As a direct result of this trans-harmonic, quantum leap during my NDE:*

1)- my previous addictions ceased to exist ,

2)- my perceptual filters shifted whereby my primary focus of perception became multidimensional rather than 3-dimensional,

3)- discontinuous activation of my higher, sensory perceptions such as direct cognition awareness, telepathy, bio-location of consciousness occurred

4)- a deeper understanding and connection with the basic order and systems function of the greater unified field occurred.

Albert Einstein proposed his famous $E=mc^2$ equation in 1905 but the impetus behind his “Theory of Relativity” began in 1892, when as a young teenager he experienced a dream in which he went as fast as the speed of light.

“I knew I had to understand that dream and you could say that my entire scientific career has been a meditation on that dream.” – Albert Einstein

Similarly, I knew that through the cellular memory of my NDE, I would come to know that the potential for organic, bio-energetic regeneration and self-healing within the physical, mental, emotional, and energetic systems of all biological organisms is directly related to and affected by better understanding the morphogenetic field template surrounding the DNA, as well as systems function of the greater unified field.

In the late 1890's, C.W. Leadbeater and Annie Besant, prominent leaders of The Theosophical Society, were both pre-New Age channellers who entered altered states to describe molecules, atoms and sub-atomic atoms called ANU years before science had confirmed their theories.

After I was resuscitated, I went to the nearest hospital emergency room just to make sure all of my vital systems were functioning normal. To everyone's surprise, including my own and the attending emergency room physician, not one drug was found in my blood or urine after testing. What had happened to the multiple drugs that I had previously consumed over a twelve-hour period straight? No one could explain this phenomenon.

Dr. Dugenio continues, “This experience was the impetus behind my proposed theory for organic bio-energetic regeneration and self-healing called “Morphogenetic Cellular Reprogramming” in which I have proved through this dissertation and my case studies that higher oscillating scalar frequency is capable of reprogramming and repatterning the morphogenetic fields of a cell, organ, functional system, and the bio-energetic body via the physio-regulatory matrix of the human body.

Research suggests that epigenetic changes, such as modifications to DNA and histones, alter gene expression patterns and regulate cell identity. Since that transformational day where I experienced the transfer of consciousness via the NDE, I have not relapsed, nor have I had any serious health issues. A sound understanding of morphogenetic field mechanics, the transfer of non-local consciousness and the death process will help us learn HOW TO successfully heal the human bio-energetic organism’’⁴¹⁷

How NDE heals may hold the key to understanding spontaneous healings as well as distance energy healings. The shift in Consciousness acting through the biofields must be the factor that heals at the cellular level on the body of the person who is back in the three-dimensional world. Perhaps something similar happens at a slower speed during Qigong, faith Healings, laying of hands, etc.; when the power of intention works through bio-energetic fields effecting changes through scalar energy and manifesting healing through emergence and phase changes. Plenty of scope for research here for budding doctors willing to take the road less travelled.

Challenges to the brain-produces-Consciousness theory:

Medical men who still cannot accept NDEs, nevertheless have to concede that four broad challenges exist to the brain-produces-Consciousness theory of yesteryears. Firstly, the nature of subjective experience; how do thoughts somehow arise from chemical processes in the brain cells? Secondly, how do activities that are taking place all over the brain blend into a unitary experience such as consciousness or vision? For example, when we observe something more than 30 areas of the brain spread far and wide get activated. How do these different processes bind into a

single conscious state of vision? Just how does one transition from pre-conscious processes to Consciousness itself? How do chemical processes that are not conscious events lead to a conscious state?

What about 'free will'? We have free will and we use it in our everyday lives to make decisions. If Consciousness is controlled by just brain cell activity, how do we explain free choice? Everything should be predetermined! An essential part of our lives involves the notion of free will. We are judged in society based upon our intentions and actions, and the brain-based perspectives expressed above cannot account for this. If accurate, it would mean our lives would be completely determined by our genes and environment, hence there would be no place for personal accountability. Imagine the situation that would arise if everyone claimed that everything they did was due to the action of their genes in combination with their environment? There could be no concept of accountability! Common sense demands that we seek alternative explanations for Consciousness.

Even single-celled organisms such as amoeba, that lack brain cells or brain cell connections (synapses) are able to swim, find food, learn and multiply. So, there must be a different mechanism other than the activity of brain cells and their connections with each other that leads to a sense of self. Hameroff and Penrose proposed that conceivably very small protein structures called microtubules that are found in all cells whether simple single celled organisms such as amoeba (who thus do not have a separate brain) or the most complex organisms such as humans may be what leads to conscious awareness and thoughts - or in other words, 'the self'.

Furthermore, they reason that Consciousness is not a product of direct brain cell-to-cell activity, but rather the action of processes occurring in the smallest possible

level within the microtubules of brain cells - the subatomic level - where things are even smaller than atoms. But this theory proposed by Hameroff and Penrose still fails to answer the fundamental question of how subjective experiences and thought processes arise. Also, microtubules exist in all cells throughout the body and not just in the brain. Also, there are drugs that can damage the structure of microtubules but appear to have no effect on consciousness.⁴¹⁸

Current consensus and concepts about Consciousness:

The consensus now is that Consciousness is independent of the brain. Consciousness or the self, is at present not reducible in terms of currently understood mechanisms of brain cell activity and its true nature may only be discovered when our science progresses further. Consciousness (or the self) may be an irreducible scientific entity in its own right, similar to many of the concepts in physics, such as mass and gravity, which have also been irreducible entities. The investigation into consciousness and the self has consequently been suggested to be analogous to the discovery of electromagnetism in the nineteenth century or quantum mechanics in the twentieth century, both of which were enigmatic in terms of previously known principles.

Nobel Laureate Eccles of squid axon action potential fame wrote a book, “The Self and its Brain” and argued that it was a grave error to think that the brain did everything for conscious experience. The unity of conscious experience was a faculty of the mind. Eccles argued in favor of such a separation between mind, consciousness and the brain. He claimed that the unity of conscious experience was provided by the mind and not by the machinery of the brain. His view was that the mind itself played an active role in selecting and integrating brain cell activity and

molded it into a unified whole. He considered it an error to believe that the brain did everything and that conscious experiences were simply a reflection of brain activities.

The brain was an instrument that furnished the conscious self with the lines of communication from and to the external world. It did so through the immense sensory system of the millions of nerve fibers that fire impulses to the brain, where it is processed into coded patterns of information that experienced as perceptions, thoughts ideas and memories. He acknowledged that he was still unable to explain how the mind carried out these activities and how it interacted with a separate brain. Both mind and Consciousness being in realms beyond the three-dimensional, they have eluded objective scientific study; research methodology of the 3-dimensional world reaches a dead-end when it comes to studying Consciousness.⁴¹⁸

Van Lommel describes a concept in which our continual consciousness with declarative memories finds its origin in a non-local dimension as wave-fields of information, while the brain only serves as a relay station for parts of these wave-fields of consciousness to be received into or as our waking consciousness. The latter relates to our physical body. These informational fields of our non-local consciousness become available as our waking consciousness only through our functioning brain in the shape of measurable and changing electromagnetic fields.⁴¹⁹

Could our brain be likened to the TV, which receives electromagnetic waves and transforms them into image and sound? Could it be related to the TV camera, which transforms image and sound into electromagnetic waves? These waves hold the essence of all information, but are only perceivable by our senses through

suitable instruments like the camera and TV. The function of the brain should be compared with a transceiver, a transmitter/receiver, or interface. Van Lommel says, *“Therefore, there are two complementary aspects of consciousness, which cannot be reduced one to the other, and the function of neuronal networks should be regarded as receivers and conveyors, not as retainers of consciousness and memories...*

...With this concept, consciousness is not embedded in the measurable domain of 3-dimensional reality. This suggests that the wave aspect of our eternal consciousness in the unified morphogenetic field is inherently not measurable by physical means. Nonetheless, the physical aspect of consciousness, which seemingly originates from the wave aspect of our consciousness through collapse of the wave function, can be measured by means of neuroimaging techniques like EEG, fMRI, and PET scan. The unfeasibility to empirically calculate this non-local aspect of consciousness that also has been called ‘higher’ awareness could be likened to fields of gravity, of which only the physical effects throughout the universe can be determined although the fields themselves are not directly provable.”⁴¹⁹

Scientifically speaking, it was postulated that perpetual, non-local awareness, has always existed separately from the physical body since matter originates from energy or consciousness. The physical body functions as a resonance interface during one’s lifespan; body linked Consciousness has a seeming organic foundation. However, there is no physical, biological foundation of our perpetual consciousness since it originates in non-local space. Non-local consciousness is not limited to nor does it exist within our brain. Therefore, it appears that the brain may have a simplifying and non-producing function to experience consciousness.

The idea that our brain acts as a transceiver and not as a manufacturer of consciousness, actually, was stated as early as in 1898 by William James who conveyed that the brain's role in the occurrence of consciousness is not a productive but rather a transmissive role as it transmits information. In James' view, Consciousness does not begin in the 3D, physical world for it already exists multi-dimensionally. Accessing facets of Consciousness depends on one's own 'threshold of consciousness', where for some people is lower than others. This allows people to experience various aspects of heightened awareness. James uses abnormal experiences of Consciousness to support his theory: *'The whole drift of my education goes to persuade me that the world of our present consciousness is only one out of many worlds of consciousness that exist, and that those other worlds must contain experiences which have a meaning for our life also'*.^{420,421}

Dr. Jere Dugenio echoes Vedic Rishis when he postulates that death is likely a transfer of consciousness procedure similar to what happens when we sleep; when our awareness leaves the physical body to traverse higher dimensional planes. During the NDE he experienced his continuing Self Identity as separate from the physical body. Experientially he realised that outside of the physical body one can have conscious memories and experiences. According to him when his new higher consciousness returned to the physical body, the re-integration of the higher dimensional, non-local consciousness possibly shifted and changed the morphogenetic fields such that any residual drugs in his body were eradicated.

Dugenio postulates that during life, the physical body is a resonance interface with non-local Consciousness. This interaction could explain end-of-life experiences, after-death communication, non-local connectedness to deceased relatives, remote viewing, non-local information exchange and perhaps could be the basis for neuroplasticity where Consciousness affects brain matter. This is an area that must

receive priority in research as it has practical implications on the ethics of medical issues such as abortion, euthanasia, care of the comatose, harvesting of organs from the dying who have a warm body and a beating heart but have been declared brain-dead. Research in this area importantly, has wide ranging implications on how we physicians comfort and reassure dying patients in our care and help them face death.

To quote Dr. Dugenio, *“Fear of death and of the dying process often notifies decisions on ethical and medical issues on the part of doctors, patients, and families. A fresh perspective on death that considers a perpetual stream of consciousness after death of the physical body, will have disadvantages for the way healthcare providers deal with patients in coma, as well with resuscitated or dying patients. Ongoing improvement of the quality of healthcare is not just contingent on technical and medical advances, but also on compassion for individual patients and their families.*

*I permanently shifted after my NDE for it provided me a sentient experience of non-locality in which 1) time and space is irrelevant, 2) the past, present and future is simultaneous, 3) where I felt complete freedom and 4) where I experienced my true cosmic nature of energy. Subsequent the NDE, I realized that everything is interconnected, that every thought is like an energetic seed which has an effect on the entire planetary morphogenetic field. However, the most important realization was that consciousness precedes matter and continues past physical death. There is much to learn from people who are willing to share their NDE with others. Dag Hammerskjöld stated: “Our ideas about death define how we live our life”.*⁴¹⁷

Neural Correlates of Consciousness:

All experiences lead to electrochemical reactions in the brain. For example, when one is seeing, scans can pick up neural activity in the occipital lobes; called neural correlates of Consciousness. But, even thinking of the word ‘brain’ or ‘neural correlates of Consciousness’ are experiences in Consciousness. We do not know the origin of Consciousness. Just as we saw that the universe, in the ultimate analysis, is made of no-thing, Consciousness too is made of no-thing! But no-thing interacting with no-thing seems to produce everything! Nothing becomes all things! We are not the first people to think so. As Deepak Chopra says, we human beings have thought about this mystery ever since they started thinking. In times gone by it was philosopher’s realm; today it is the scientist’s realm. Indeed, human beings have thought of reality for a long time.

The link between language, experience and Consciousness:

Here is a gist of Deepak Chopra lectures I heard on YouTube.⁴²² Around 30,000 years ago we were not just Homo Sapiens on this planet. There were 8 types of Human Species in the Human Family. What set apart our species was language. From sounds came calls and then language. From calls that were for basic preservation, for example, food calls, danger calls and mating calls, language developed into story telling. We are the only species that tell or write stories.

Strangely, it is stories that gave Homo Sapiens power to vanquish all the other species as all animals including humans would move in packs and a ‘leader’ had at best a hundred followers. But come story-telling and unlimited numbers followed one! The story-telling pack, i.e., us - Homo Sapiens, simply outnumbered other packs and vanquished them. From storytelling came art, the written word,

literature, technology, money, nations, monarchs, Gods...stories of the origin of the universe came. We had the classical universe, the relativistic universe, the quantum universe, the human universe, and finally, Chopra echoes the *Vedas* as he states, 'You are the universe'. The universe is a made-up construct; there is no universe! You experience and interpret the experience as the universe.

Going back in history, indeed, this universe was the story of storytellers till Isaac Newton came along. He said God created laws of nature that could be known through human logic and reason. But where did thought come from?????

Descartes spoke of two worlds - that of the mind and spirit, and that of the physical. Chopra wryly comments that the priests and scientists divided the universe into territories or turfs! Dualism was in. But the fact is that the two are interrelated. Thought leads to physical action. Everything starts with a thought; thought has no mass. The law of conservation of energy has to be followed. Where does energy for thought come from? Then came the doctrine of monism. There were two camps. One camp believed that all is physical. The other camp believed that all is non-physical. Till recently this ideology of monism persisted.

As science advanced, first we realized that the classical laws of physics worked. Till Einstein came along and changed everything! His special theory of relativity of 1905, that the speed of light is fixed; that matter and energy are interconvertible led finally to the creation of the atom bomb. His general theory of relativity was about gravity. That led to the thought that gravity is a distortion in space-time. This led to the theory of black holes. Scientists spoke of gravitational time delay. One circle around a black hole was 100 million years plus! Time not only slows, they said; it even stops near a black hole! Then came the concept of wormholes that helps one Time Travel!

Finally, the idea arose that space, time, matter all are related. They are the same thing. But what is that? Chopra has an interesting aside to share - the conversation between Einstein and Tagore. Einstein was a realist. He said the world was real. Tagore on the other hand was an idea-list who believed that the world is a projection of ideas.

To get back to history, then came advances in quantum physics and quantum mechanics – all mathematical, which only mathematicians understood! The math obviously was correct as it works; all of today's technology is based on the math of quantum mechanics. Presently it was discovered that Non-Locality was a fact. That everything correlated with everything led to the notion of quantum entanglement. Einstein could not accept it; and referred to it as spooky action at a distance. Then came the famous observer effect; that without observation the world remains just possibilities! We also realized that particles and waves are the same and everything is related. But why and how does it work?

What does it mean? Interpretations in quantum mechanics are sets of statements that attempt to explain quantum mechanics beyond the recipes that it gives for performing calculations. Bohr, Schroedinger etc. were philosopher physicists and they tried to interpret why things were happening the way they were happening. The Copenhagen interpretation which is the interpretation that these scientists made when they met at Bohr's Copenhagen home, was until recently the most popular interpretation. The gist of it is that a conscious being looking at the universe creates it. A natural corollary is that it had to be different for different species. Over twenty interpretations exist! That there are so many interpretations means nobody really knows what is going on! The same math works for all the interpretations and they all agree on the math. And the math works. Most of today's technology is based on quantum mechanics math!

It is a public secret that most physicists are atheists; in fact, militant atheists, says Chopra. They detest the word Consciousness and never want to postulate anything even remotely connected to Consciousness! A popular atheist's interpretation of the universe is eternal inflation. The math is right and so it is as of today a widely accepted interpretation. To illustrate it they talk of a cosmic casino with infinity slot machines that throw up coins randomly. If they fall heads up, they double in size. If they fall tails up they halve in size. Imagine that infinite coins land tails up. When the coin becomes Planck size, i.e., size of a quantum fluctuation, it falls through a hole and it spins out and makes a universe. Infinite such particles escape, and the universe expands. Such a thought process is unfortunately only a way of calculating how trillions of universes could be around; and more being born - but eternal inflation does NOT explain why we are where we are! It's a dead end! And remember, this visible universe is only 0.01% of creation.

The Grand Theory of Consciousness in the Eastern Tradition:

Let us explore the grand theory of Consciousness in the Eastern tradition. The universe is an expression of Consciousness. How come the universe is so fine tuned for life and mind!? Only the existence of a supremely intelligent Consciousness can explain it. The movement of atoms seems so unpredictable; it is like watching the crowd in a railway station. But in reality, each person is making a purposeful walk to his or her destination. There IS a method in the madness; an underlying order in the apparent chaos....

Our own consciousness is like that. Physics, math and biology alone cannot explain this experience we are having. We name objects. We have given everything names. They are human constructs for modes of knowing an experience

in human Consciousness. No other species does that, not even human babies or toddlers. Therefore, all that we talk about, including quarks, atoms, bosons etc. etc., are just human constructs for an experience. A toddler looks at the same things with curiosity, wonder, joy, awe, mystery. The toddler experiences shapes, colours, smells... A baby stays that way till he / she is taught - you are this. This is your name. We give constructs using our consciousness and give these experiences names and they become constructs. In a relaxed moment Chopra exclaims, "Education bamboozles you!" Space, time, galaxies - are these real or mere names for experiences?

The experience is a quality of consciousness called qualia. These are qualities of consciousness modulating/ modifying itself as experience called qualia. Qualia are both perceptual and mental. We give words to these experiences and create the human universe. In reality there is no body or mind. All human knowledge is rooted in Consciousness. So, it is consciousness trying to experience itself through our individual consciousness. Our brains limit our knowledge; our senses limit our knowledge. Reality is infinite. It localizes in us as these experiences. We are the conscious agents who create reality in our own image. God, universe, body, mind- are just labels we give to modes of knowing and modes of our experiences which are modifications of our own self. Indeed, we are the universe!

As doctors whose main role is to alleviate the suffering of fellow beings, the cause of human suffering cannot but intrigue us. Chopra dives into *Vedanta*. Human suffering is caused across time. We do not know the reality of time. We do not know the true nature of existence; we do not know our true identity. The problems essentially are five-fold; in India we call them the five '*kleshas*'. They are:

- 1) We do not know reality

- 2) We cling to the transient'
- 3) We are afraid of impermanence
- 4) We cling to ego
- 5) We are afraid of death

These will disappear if we understand what is real, who we really are.

That which knows is Consciousness. Consciousness is not in time; It is eternal. Consciousness has no death; death happens to the ego which is an experience; you are not the ego. You are Consciousness; death happens to your experience; not to you. So, death does not apply. Wisdom traditions say we will not suffer if we know what is actually real.⁴¹⁷

Now let us do a common-sense down to earth experiment. What is our body? Let us experience our body. Let us touch our body. This body is real state the sensations of touch and sight. Now let us close our eyes and experience our bodies. Let us feel our bodies with eyes closed. We feel sensations; diffuse amorphous sensations. The crux of the matter is, if we were not familiar with the word 'body', say like a baby, then with eyes closed, we just feel some sensations. Sensations come from Consciousness. Modified Consciousness is sensation, whenever we experience a shape or a colour, we experience qualia, i.e., qualities of Consciousness. So, in the final analysis, it is Consciousness experiencing modified Consciousness.

Our body is an intermittent stream of sensations and sense perceptions. Is the body a thing? The body is not a thing. It is an experience. Ten years ago it was a different experience. The body is an activity of Consciousness modulating itself as this experience. Now let us replace the words 'world' and 'body' with the word

experience. The body is an experience of sensations, sense perceptions, thoughts and feelings. The physical world is an intermittent stream of sensations, sense perceptions, thoughts and feelings. Our thoughts often recycle. So our experiences often recycle.⁴²²

Another fact is that nothing stands still. Everything called a thing is actually an activity. This activity is a quality of awareness. The experience you have is in time. But what is modulating as experience is not in time. It is you! It is Consciousness! You are the universe literally. Without you, there is no perception, thought or emotion; no experience of a body or a mind or a world.

You are a particular species of infinite Consciousness. A bee is another species of infinite Consciousness. Eternal and infinite, we are all branches of the SAME Consciousness. As Rumi said, “We come spinning out of nothingness and scatter stars...” What is the purpose of life?? Why did we come here at all? To find out- - WHO AM I? You are an infinite being having a local experience. You are a spiritual being having a human experience.

Universe = Consciousness, the universe we know is a human construct. Education as we know it today, leads to human constructs. Education fosters ignorance!! Because education as it is today, does not tell you how we know what we know. It is sadly, just information. What really is existence?? Consciousness helps us know an experience. Core Consciousness can also be called pure awareness. Awareness is a field of infinite possibilities. Humans create constructs around raw experience and assign names to them. This led to Arts, Science etc.

Is it useful? Yes. It helps life go along? YES, as long as it helps life go along. For example, I may say, “Why don’t you join me at the canteen for lunch?” These are just names given to an experience. Reality is that which gives rise to the constructs.

The only reality is Consciousness. Constructs are conceived, governed and come into existence in Consciousness. Sensations, sense perceptions, images, feelings and thoughts are the mind. Interpretation of sense perception is thought.

Body, mind, brain, world and cosmos, are words; they are constructs that flummox us. Body, mind, brain, world, cosmos are actually only sense perceptions experienced; and we give these experiences these names. Names and descriptions are only language constructs that nail down raw experience. The five senses plus pain / pleasure is a baby's raw experience. Attraction or aversion towards experiences is rudimentary emotion.

Without these constructs, reality is Consciousness, in various modes of itself, not as yet labelled as sense perceptions, thoughts and emotions. The Real Reality is being-awareness, timeless, formless, dimensionless. Chopra adds that if you believe in God, then you can substitute the word, God, for Consciousness. If you are a non-believer, then just think Consciousness.⁴²²

Space is but unmanifest Consciousness. And matter is manifest Consciousness. The distance between them is space-time. Forms and phenomena rise and fall in eternal time. Now is the window to eternity. Your freedom lies in getting beyond constructs. So, this is where scientific understanding of life and Consciousness stands at the moment. We have seen the limitations faced by science in studying Consciousness. The truth is that Consciousness is something beyond study; but it can be experienced.

The Experiential Scientists of Consciousness; concepts of Love and Bliss: We could call those who have experienced Consciousness, the scientists of Consciousness. Since the world of science has not moved into the experiential

realm and still stays fixated in the three-dimensional physically measurable world view, the experiences of these scientists of Consciousness are not published in scientific journals. The good news is that thanks to advances in information technology, today these scientists of Consciousness are able to directly reach out to the common man. Blogs, websites and the YouTube link us all at the click of a button.

As most senior doctors in medical academia stubbornly cling to the three-dimensional world and are blind to anything that is not double blind, they miss out on the advances shared by the experiential scientists of Consciousness; and because of their negative influence, junior doctors too seem to wear blinders! The common man, mercifully, is not blind; he has his eyes and ears open and is guided by common sense. Indeed, taking the cue from the experiences of these scientists of Consciousness in simple trust and faith and by starting their own inward journeys, many ordinary men and women are getting a glimpse of Consciousness and moving on to that blissful personal experience of Consciousness.

More on these scientists of Consciousness in the next chapter. Since this is a book on excellence in healthcare, it is with great joy that I introduce to you two modern medical doctors who are also scientists of Consciousness. You can watch them on YouTube. One is Dr. Srikanth Sola and the other is Dr. Steven Greer; and both are experts on the inward path to Consciousness. Dr. Sola was a Cardiologist at the prestigious Cleveland Clinic who gave all that up and joined as Cardiologist at Sai Baba's tertiary care hospital at Whitefield, which like all Sathya Sai hospitals does NOT have a billing section! Dr. Greer has headed for the past twenty five years the Centre for Study of Extra-Terrestrial Intelligence and his autobiographical account, which personally I found most fascinating, is a must read and can be downloaded for free.³⁹⁹

While searching the internet for scientific studies of Consciousness / Life / Creation / Origins of the Universe and so on, nowhere did I find terms like ‘love’ or ‘bliss’ mentioned. And yet without exception, all the experiential scientists of Consciousness - without exception - talk of ‘love’ as the royal road to Consciousness; and ‘bliss’ as the experience of Consciousness.

Theory, however, is of no use here. All of these experiments in Consciousness are however experiential in nature. As Indian Masters say, “How can you know God?” Only by becoming God...”! They would encourage us on the path saying, “You ARE God already; just remove the illusion that is hiding it!”.

A Philosopher - on Love, Bliss, Consciousness:

Nevertheless, let us see what Rupert Spira, the Oxford Philosopher, a well-known participant in scientific discussions about Consciousness has to say about ‘love’ and ‘bliss’.

He asked the men of science a most relevant and important question; if all that ever is, was or will be is but Consciousness, he asked, “*What does this mean in terms of everyday practical life? Does it only mean something when we are sitting at a conference talking about reality? No, it means that all experience is only infinite Consciousness. It means that the taste of tea, the pavement that we’re walking on, the cutlery we hold in our hands, the relationships we have, everything is only God’s infinite Being.*

*Do we live like that? Or do we just agree with each other at conferences like this? That is not enough, although it is a beginning.”*⁴⁰²

THIS is the crux of our entire existence; and the very reason this book is getting written. We doctors and our brethren health professionals need to understand that in this 21st century scientific research has led to physics and metaphysics meeting; we are all part of the One; the patients who come to us are as much part of us as our own selves. Our interaction with them must be governed by this basic principle. Treat thy patients as thyself, to paraphrase the carpenter of Galilee.

To recap, *sat* and *chit* - being and awareness that we are part of the One Being, is thus not just timeless *Vedanta* but modern 21st century scientific enquiry. What about *ananda* or bliss? Rupert Spira deftly places it thus, “‘*Am I aware?*’ is a thought. The answer ‘Yes’ is a thought. What takes place between those two thoughts? The experience of being aware that I am aware. In between those two thoughts, Consciousness is divested of the objective limitations it assumes in order to rise in the form of the finite mind and ask the question, ‘Am I aware?’ There is a plunge of the finite mind into its source in between these two thoughts. In that plunge of the finite mind, or attention, into its source, Consciousness recognizes its own Being — re-cognizes, or knows again, its own Being — which it seemed to overlook or forget when it rose in the form of the finite mind. This knowing of its own Being shines in the mind as the knowledge ‘I’ or ‘I am’ or ‘I am aware’, and is felt in the heart as peace or happiness. That is *ananda*!”

Where does love or *prema* fit in? Rupert Spira puts it very simply; he says, “When the Sufis say, ‘*La ilaha illallah*’ they mean, ‘There is no god but God.’ In other words, nothing has an existence of its own, nothing is a thing unto itself. All things borrow their thingness, their ‘isness’, their reality, from God’s infinite Being.”

“God’s infinite Being shines in each of our minds as the knowledge ‘I am’. That is why the ultimate spiritual practice is to give the ‘I’ that ‘I am’, our attention, to

allow the mind to sink back into its subjective source. As it does so it is temporarily, in most cases, occasionally suddenly, divested of its finite limitations and stands revealed as infinite Consciousness, God's infinite Being, the only Being there is, the heart that we all share, the heart we all are. I would suggest that the experience of love is simply the knowledge of our shared Being. When we love, we feel one with the other. Love is the experience of our shared Being. Is there any experience the separate self-desires more than the experience of love? What the separate self longs for above all else is simply to be divested of its separateness. Love draws us from separateness to oneness.”⁴⁰²

In India it is said, “*This is the road map to the Supreme One; first move from I to we... and then from ‘we’ to He!*” Science has not gotten to ‘love’ yet; but in this scribe’s humble opinion it is only a matter of time. The greatest ‘force of attraction’ - stronger than gravity and all the others will be discovered to be ‘love’. All the Masters of mankind whom we love, worship and adore are examples of this love that knows no reason; love that loves for love’s sake. All the love that we feel during our human existence is a pale shadow of this love. Yet they are important; for they are the ‘appetiser tastes’ of love that makes us want more of it! We doctors and health professionals have a great opportunity here. Selflessly loving our patients is a great, daily chance of for us to get closer to Oneness with Consciousness; or the form of God we worship; or whichever Master we believe, personifies Consciousness!

If Consciousness is eternal, does life continue after death? Or put another way, was there life before birth? Today Psychiatrists treat patients successfully with past life regression therapy. We have enough research done on children who could accurately remember their previous lives and so on. As we saw earlier, thanks to effective cardiac resuscitation, we also have studies on patients who were nearly

dead but came back. Studies on people who underwent Near Death Experience point to the fact that life continues after leaving the physical body. The fact that NDErs meet with relatives and friends who had passed on, in the subtle, is tantalising evidence that there is a subtle body dimension to life.

Life is purposeful and not an accident:

So, Life after all seems to have a purpose. Both science and the experiential scientists of Consciousness have helped us reach such a conclusion. We are not here just by random chance; says science clearly. All that seems solid is really made of no-thing, says science. And in that no-thing hides Consciousness exclaim the experiential scientists of Consciousness who found what they were seeking by direct experience! Science agrees that a Supreme Intelligence / Consciousness must exist; for though Intelligence cannot be seen, the presence of intelligent activity posits that intelligence is at work. Only a supreme intelligence can carry out the six trillion chemical reactions that occur in each of your cells every second; or plan out the blueprint for a zygote to develop into a baby! The experiential scientists of Consciousness have gone one step further and found the way to this Supreme Intelligence / Consciousness!

The twin journeys to Consciousness - the OUTWARD JOURNEY and the INWARD JOURNEY:

The way to Consciousness involves an outer journey AND an inner journey, they say. The outer journey to Consciousness, focuses on love-based conduct seeing Consciousness / God in all 'others'; and the inner journey to Consciousness,

focuses on love-based conduct towards one's own self, which is again, Consciousness / God!

When we journey through life thus with constant integrated awareness, it not only helps us experience glimpses of Consciousness, but loving, caring, and serving all selflessly, also keep us, fellow beings and planet earth happy and peaceful. Happiness and peace of mind are bound to result in better health.

It makes sense to live a life grounded in Consciousness. As mentioned earlier, there is an outer journey and an inner journey. In chapter three we saw how one mode of inner journey - mindful meditation, can help de-stress. What exactly does the outer journey to Consciousness entail? What are the steps? The best way to learn would be from the experts. Fortunately, the great scientists of Consciousness, have left a clearly sign-posted outward pathway to experiencing Consciousness and a great side benefit of following this path, is that it stress-proofs us.

In the next chapter we shall take a look at this outward journey to Consciousness and how it leads to a stress-free life as well as make our acquaintance with some of the master scientists of Consciousness. As we are focused on the practice of modern medicine, let us also see how walking the path to Consciousness can enable doctors to do more than just prescribe medicines for patients; and how when collectively as healthcare teams, we decide to walk the path to Consciousness, it helps us move on to excellence in healthcare.

On to the next chapter!

* * *

Chapter 7

HUMAN VALUES, SCIENTISTS OF CONSCIOUSNESS & HOW TO GROW EXCELLENT CARE TEAMS

Outline:

Human values in the setting of modern medicine; spiritual growth demystified; master scientists of Consciousness; contemporary master healers; best practices of healing; integrating human values into care teams; the science of human values; practical guide to grow excellent care teams and volunteer teams.

Human Values are based on the scientific principle that a single unitary Consciousness alone exists; and we are all a part of it.

Human Value - Truth:

That we are all one, is the first human value of TRUTH. The common garden definition of Truth generally means relating something exactly as you perceived it. But that could be flawed. For example, one may ‘truthfully’ say that he saw a ghost; you put on the light and discover it was a shirt flapping on a hanger. Or there is the story of the motor bike rider who ‘truthfully’ thought that the two oncoming headlights were those of two bikes and he could safely pass in between. Later at hospital he realized those had been headlights of a car!

Truth, as referred to, in the context of human values refers to is something that never changes with time or space. Our bodies and minds, for that matter all of

nature, is constantly changing; so, they cannot be the Truth. The unchanging Consciousness that underlies everything alone qualifies to be Truth. The first step in the practice of human values is recognizing and realising therefore that our True Identity that does not change over time or space, is Consciousness. And so is everybody else, every other creature and every other thing. In fact, there are no ‘others’. All are part of the One Truth, i.e., Consciousness.

How should this impact us medical professionals and the care team? When it comes to patients, how should this Truth impact us? More importantly would be our prescription practice; we ought to prescribe only what we would prescribe for ourselves or our own family members. Trying out new drugs, prescribing powerful pain killers, steroids, powerful antibiotics, benzodiazepines, advice to go for surgery - even if one can justify one’s prescriptions on the basis of evidence-based medicine, the real touchstone would be to only prescribe what one would prescribe for one’s own self or one’s own family.

During a question-answer session when he was addressing teachers in Singapore, on September 2015, Sri Sadguru Madhusudan Sai, a former Sathya Sai student, who leads a global mission of selfless service with selfless love in his teacher’s name not only declared this cardinal rule, but also in his teacher’s inimitable way expounded a fundamental lesson that had to be taught to medical students by example by their professors, at medical college.⁴²³ Reproduced here with the kind permission of SAIPRAKASHANA.ONLINE, is the exchange between a spiritual aspirant and Sri Sadguru Madhusudan Sai. The question posed was as follows:

“Swami, (meaning Sadguru) may I ask a question about medical teaching? A lot of doctors, not just here, but all around the world, are becoming very technical. They are more interested in treating the disease than actually looking at the well-being

of the patients. I think this is something that we are not doing right in medical schools. I am not sure what the solution is. Could you advise please?"

Sadguru Madhusudan Sai's reply was as follows:

"It is always said, 'Do not do to others what you do not like done to yourself.' If you are on the operating table, would you do the same thing to yourself? If you will not, then don't do it to others as well. That is the way professors should teach.

When you are curing, you are not curing just a particular part of a body, but the entire body. When you cure the entire body, you cure the entire person, the entire family, the entire society to which he belongs. Therefore the patient is not merely a piece of flesh or bone. It is a human behind all that. Would they (the doctors) do this to their own fathers, mothers, brothers and sisters, or even to themselves? If not, they should not do it to others as well.

Life is reflection, reaction and resound. The one who is a doctor today can become a patient another day. You can imagine what another doctor can do to him. It can come back to them. If doctors all around the world develop this understanding that they are primarily not curing a disease, but curing a person, who is a father, a mother, or a brother, or a sister, a member of the family, and this family is part of society, and society is part of the nation, then they will really be helping the nation.

This broad understanding must be taught as part of the training of doctors. Merely encouraging them for their intellectual prowess leads to all these kinds of problems. That is why I said, it is only information knowledge. They only want to be great; they do not want to become good. As teachers you must keep emphasizing, encouraging, acknowledging and rewarding them (students) for the good work they do, and not just the great work they are doing.

If you go to Raipur hospital and listen to the stories, you will know how much of goodness is there, and not merely greatness. They do all kinds of complicated children's operations. The heart is only as big as a two rupee coin; it is so small and there are holes that they need to close. Definitely it is a complicated job. However they do it with so much love, because they do not want patients to pay them but they want patients to love them. That is why as part of your medical curriculum, these values must be taught; and not for the sake of a few extra rupees should doctors treat their patients.

A doctor is really helping the whole nation, when he treats a patient with a disease. Then the patient can take care of himself and he is no more a burden to society. He can work, he can earn, he can look after his family, and the whole economy benefits as a result. This economy pays the doctors too. Therefore he should understand that he is part of the bigger picture. That understanding must be given. If the seniors follow the right approach, reward the junior doctors for the right kind of work, and reward good doctors and not merely the great ones, then obviously they will be encouraged.’⁴²³

Relevance of the Practice of Truth in Medical Education & Practice:

Let us get back to the value-based practice of medicine. The practice of living life from one's true identity of Consciousness, will help form truly caring care teams. Though there is a hierarchy in the care team, compassion for one's juniors becomes a natural corollary. Shockingly, all across the globe, including in Indian medical colleges, unfortunately, reality is far from this ideal.⁴²⁴⁻⁴³⁸ In the hierarchical system of departments in medical schools, seniors in the department can make or mar the careers of juniors; and they use this power sometimes rather

threateningly, with the result that post-graduate trainees often live in fear. In fact, this tremendous stress during post-graduate training, is often cited as one of the reasons for the high depression rate among post-graduate medical trainees sometimes even leading to suicide.⁴³⁹⁻⁴⁴² To quote Leisy and Ahmad, medical residents live in fear as retaliation is perceived as pointless. Sadly, this fear only enables the negative culture to continue. They write and I quote,

“Resident fear of retaliation and a lack of confidence in our healthcare systems to adequately and appropriately handle reports of mistreatment can also contribute to flourishing mistreatment. Fear of retaliation has been widely shown to be a reason for the persistence of resident mistreatment. In many cases, the resident does not report an incident of abuse due to the fear that it would negatively influence his or her career, the fear of labelling, or the fear that greater mistreatment would occur if reported. Residents may fail to report witnessed mistreatment as a way of “protecting their own learning experience,” or to avoid “sticking out.” A survey-based study showed that 79 % of doctors who experienced bullying were too afraid to complain.

Additionally, many sources state that residents often do not believe that the policies and process of reporting will exhibit a just application and outcome. In one study, only 44 % of residents felt that the process of reporting abuses would be fair and adequate, setting the stage for a culture in which mistreatment can go unchecked.”⁴⁴³ The seniors learning and practicing human values is the only real solution to eradicating this scourge.

Such detrimental practices would automatically stop if one was aware that one's true identity was Consciousness; and that all the hats one wore of 'Prof', 'Chief', 'Principal', 'Dean' etc. were only temporary hats for this ephemeral drama. There

would be no place for such fear and stress if the human value of being aware of one's true identity, was practiced by the Chiefs and all the way down the line to the postgraduate trainees and housemen in the various departments.

Within the department, there would in turn be no place for ego driven authoritarianism, envy, selfishness, one-upmanship, professional rivalry and so forth which are now common in medical institutions. Instead trust and faith in each other and camaraderie would develop. Co-operation and harmony would replace competition and rivalry; and humility would replace the arrogance that doctors tend to fall prey to; particularly as patients tend to treat them like Gods.

The realization that the doctor, nurse, therapists, patients, administrators, ward boys, cleaners - all are but parts of Consciousness wearing different hats is a very sobering thought. In a country such as India where nationality, religion, creed, caste, language, skin colour, economic background are so very diverse, a constant awareness that these differences are but superficial and ephemeral; and being aware of the fact that an eternal unity binds us all is indeed, a sobering realisation. Practically this awareness helps one take that quantum leap from the sense of separateness and selfishness to that of oneness and selflessness. One learns to function from the heart with humility instead of being driven by the pompous ego. Care teams would experience a joy that seems to elude care teams as of now. One would see certainly more smiles and it cannot but have a positive therapeutic effect on the patients.

I had the rare opportunity of doing my post graduate studies in two medical colleges and hence worked in many departments. The happiest and most memorable days were what I spent with Prof. K.V. Thiruvengadam who truly lived from his humane identity and was the epitome of humility. He never ever got angry

or raised his voice; he respected all; he had a razor-sharp intellect and was world renowned; but all academic honours sat lightly on his shoulders. He revered all staff and all patients as one would revere God! He truly practiced living from the identity of Consciousness and was loved by all his juniors, students, staff and patients; he was worshipped literally.

Human Value - Non-violence:

The second lesson that the truth that we are all part of Consciousness fosters is the practice of nonviolence. You may say, “Well, I never knowingly hurt anyone.” But then what if someone hurts you? Do you retaliate? Great if you do not retaliate. But most of us are apt to feel anger or resentment within. Even that has to be eschewed, my teacher, Baba would say; as practicing non-violence means no violent thoughts, words or deeds. He drove home this point very simply and subtly.

Baba- “Sometimes you bite your tongue, right?”

Me- “Yes...”

Baba- “Then do you take a stone and knock out the tooth that bit the tongue?”

Me- “No!”

Baba- “Why not?”

Me- “Because it is part of me.”

Baba- “Exactly! The person who hurts you is also just a part of you! So, no feeling angry, retorting angrily or resorting to violent actions...” NON-VIOLENCE was non-negotiable in the context of human values!

Human Value - Love:

The third fundamental value is LOVE. A corollary that stems from the Truth that we all are just parts of the same Consciousness, is that we need to love all others as we love ourselves. Scientifically study-able or not, measurable or not, it is a universally accepted fact that it is love that keeps the world going. Love keeps mother and child together; husband and wife together; siblings together; generations together. Human values posit that as we are all parts of the same Consciousness, we need to consciously expand this circle of love. We have to learn to love all. The instinct driven love that we feel for our kith and kin has to become a conscious learning experience that makes us extend that love to all. As doctors we need to learn to love our patients. Baba would go a step further and say, “Practise selfless Love.”

In practical terms it translated as thinking only loving thoughts about others, speaking softly and lovingly; and loving and serving others through our actions. To us doctors he would say we were placed in a perfect location by providence as our very vocation was ministering to others! We were so lucky for our very vocations were tailor made for the practice of human values!

Human Value - Right Conduct:

Right Conduct is nothing but thoughts, words and actions suffused with love. Over the past three decades there have been so many books by modern medical doctors extolling LOVE as the paramount therapeutic energy. To give you some examples here is a short list – Dr. Bernie Seigel, author of ‘Love, Medicine and Miracles’⁴⁴⁴,

Dr. Larry Dossey, author of ‘Healing Words - The Power of Prayer and the Practice of Medicine’⁴⁴⁵, Dean Ornish the world-famous Cardiologist who proved that lifestyle changes could reverse heart disease and wrote the book ‘Love and Survival’³⁸³, Deepak Chopra, author of ‘The Path to Love’⁴⁴⁶; and there are many more.

Human Value - Peace:

‘PEACE’ is the last universal human value. In the outer world nothing is under our control. But at least in our own inner world, we ought to be in control, right? I would ask my patients this question and without exception they would agree. Depending on their faith and religion I would ask them to use commuting time, waiting-in-queues-time, waiting-to-pick-up-the-kid time, to do a simple guided meditation. With every inhalation mentally say God within and with every exhalation say God without and say ‘God is all there is and God is Love’; Then visualize breathing in God’s Love with every inhalation and breathing out God’s Love to all fellow creatures with every exhalation. This simple exercise gives a sense of Peace beyond expectation.

The USP (unique selling point) of LOVE is that it is available in infinite quantity. Besides, love is one thing that makes the giver even richer; for as the popular song goes, “Love is something when you give it away, you end up having more!” Another fact is that the physiological benefits of receiving love are equally available to the one giving love; which means each time you feel love for the patient in your thoughts, each time you suffuse the words spoken to the patient with love, and each time you carry out all acts - say physical examination, interaction during ward rounds, while performing procedures and so on - when

your actions are filled with the undercurrent of love, it is not only the patient's immune system and heart that benefits; you benefit too!

A Sad Fact that needs Urgent Addressing:

The sad fact is that one visit to a ward in any hospital shows that invariably the contrary is practised. Patients are reduced to just being 'bed numbers'. Harried doctors, short-changed for time, run through impersonal 'rounds'. While if one overheard nurses at handing over time between shift duties, it would be something like this, "...bed number 1 ok; bed number 2 had a spike of fever; bed number 3 on n.b.m after midnight as posted for scopy; bed number 4 vomited twice..." and so on; and both doctors and nurses spend more time at the computer screen keying in information than talking to the patient, driven by data hungry managements. So out through the window go 'loving' and 'serving'!

An Example of an Ideal Setting:

In my private practice, as a doctor who was passionate about being a doctor and particularly as I was trained to be a caring doctor at the Christian Medical College where I studied, I used to give of myself totally to my patients. But I had to charge a fee; that was our only income. I was happy however, as all the patients felt that what they got was worth much more than the fee they paid. That the practice grew and grew just by word of mouth was testimony to that. But when I started work at Sai Baba's hospital it felt blissful for even that little transaction was not there; there was no billing section at all at Baba's hospital. The joy that loving and

serving without any expectation of reward could bring HAS to be experienced; it is out of this world. How true it is - in the giving you also receive.

Practical ‘Hospital Life’ Difficulties

In the Government Hospitals in India, the overwhelming numbers prevent doctors from spending time with the patients. If only the government allowed private doctors who were willing to serve, to work honorarily in the government hospitals at least for a few hours every week, this problem could easily be solved. But vested interests are more interested in guarding their turf so to speak and the system of having honorary doctors has been abandoned to the disadvantage of patients. Indeed, to the disadvantage of junior doctors too who are faced with the humanly impossible task of seeing more than 100 patients in the OP at one sitting! Corporate hospitals are more interested in the bottom line; and even if the doctor is willing to spend more time with a patient who needs his time, the clinic manager will discreetly message, “Please hurry up, Doctor!”

The Original Sin:

Perhaps the original sin - if one may call it so - lies in what is learnt through the ‘informal curriculum’⁴⁴⁷ at Medical College. As stated by Shapiro in a 2012 paper in the European Journal for Person Centered Healthcare, “*Medical education does not typically pay explicit attention to the attitudes and emotions of its trainees. Hafferty’s seminal work drew the attention of medical educators to 3 types of curricular experience in medical training: the formal curriculum (sanctioned official, authorized coursework and training experiences); the informal curriculum*

(the values, attitudes and behaviours highlighted through interpersonal interactions between learners and teachers) and the hidden curriculum (the influences exerted on learners by the larger organizational structure and culture).

The formal curriculum rarely considers trainee emotions directly, although it periodically enumerates officially desirable attitudes and values of respect, altruism and caring. The informal curriculum often conveys the message that the appropriate professional relational position vis-à-vis the patient is one of emotional distance and detachment. At times, the informal curriculum presents examples of outright physician disrespect, annoyance, hostility or intolerance toward patients and thus promotes attitudes of cynicism among trainees, although of course it also offers students counter-examples of caring, compassion and empathy. The hidden curriculum frequently appears to prioritize efficiency of function and productivity over benevolence and kindness.

In one telling ethnographic study, surgeons and intensivists intentionally tried to be unaware of their patients' stories and to reduce their work to technical, biomedical tasks. All these pedagogical encounters, whether of the formal or the informal variety, teach something to their learners about appropriate professional attitudes and emotions. Although the specific content is mixed, there seem to be 2 dominant, albeit somewhat contradictory, messages. The more accepted position is that, on the whole, physician emotions are untrustworthy and problematic and have little or no place in the practice of medicine. They are implicitly viewed as self-indulgent, co-dependent, even at times histrionic. An assumption exists that, if not overruled by cognition, experiencing emotion can lead to burnout and compassion fatigue.

The view persists that inadequate emotional control can result in professional failures. Such suspicions apply to both positive and negative emotion. Positive feelings - such as liking and/or feeling affection for a patient - are seen as potentially inhibiting the physician's ability to face either problematic diagnoses or otherwise difficult situations that affect the patient although no actual research supports the idea that caring about patients and establishing an emotional connection with them results in problematic outcomes. Nevertheless, the fear of "caring too much" about patients and hypothesized consequent emotional exhaustion, is widespread among learners.

Problematic emotions such as frustration, helplessness, anger or resentment are rightly also regarded as risky, as they can negatively influence patient care, for example, causing the physician to avoid regular follow-up care of disliked patients or resulting in more automatic, stereotyped physician responses to patient concerns. In consequence of this discomfort with emotion, many physicians believe they should be objective, rational, precise and intellectual in their interactions with patients. Scholars have noted that the dominant cultural norms of medical education likewise promote emotional detachment, affective distance and clinical neutrality. The overriding principle governing the doctor-patient relationship is one of emotional control with many physicians inferring that they must exert control over their emotions in the work setting, (which, as I will discuss later, is different from emotional regulation).

Medical students are particularly susceptible to this message, because they are still learning how to successfully imitate a professional demeanour, including the expression or suppression of emotion and pay careful attention to the role modelling around them. Somewhat contradictory to this official view supporting the value of an objective, emotion-free attitude toward patients, is a competing and

more self-justifying attitude toward negative emotions. In this perspective, rarely stated but not infrequently enacted, it is acceptable to express annoyance, anger or even ridicule about certain patients, for example, in the hospital corridors during rounds. Sometimes, especially non-verbally through tone of voice or gestures, such emotional reactions are communicated even in the presence of patients who, in the judgment of the physician, “deserve” such treatment because of their stigmatized status as “causing” their own illness, being demanding, “not caring” about their own health or being difficult or non-compliant. Because feelings are rarely addressed in the curriculum, this competing emotional reality receives little attention or acknowledgment, resulting in trainee disillusionment and cynicism.”⁴⁴⁸

Shapiro’s views are all too true. It is time that being humble, loving, peaceful, soft-spoken and caring is taught as basic attitudes that a care team needs to cultivate. What Shapiro says about Medical Teachers being models imitated by students who idolize them is so true. We used to have a Physiology Professor, Dr. Marcus Devanandam who encouraged thinking out of the box and truly gave of himself to students. His home was an open house and so many of us have eaten at his table. One of my classmates who hero-worshipped him, even began to walk like him, with a stoop! Later he became a famous researcher like Marcus. Similarly Dr. K.V.Thiruvengadam, mentioned earlier in this chapter, impacted so many of us so; his gentleness, compassion, humility, total calmness (nobody ever saw him get angry!), his meticulous physical examination technique, most caring bedside etiquette is what turned many of us, his students, into his near-clones, to the great benefit of patients.

On the other side I remember my passion for surgery and Ob-Gyn quickly dissipated when I heard the crude jokes cracked in the operation theatre; cynicism

coupled with vulgarity seemed to be the norm. Of course, there are many great surgeons; I myself did my surgery internship under Dr. Balsalam of the Trivandrum Medical College who ministered to those under his care with such kindness. He never uttered a bad word; never swore; and he prayed for his patients. He was a wizard of a surgeon, but a bit of a misfit among the He-man brand of surgeons.

The macho hero surgeon image is that of someone who can hold his drink and hold his scalpel, which brings me to the negative role played by big pharma companies in Indian Medical Colleges. Teetotaller final year medical students, interns and post-graduate trainees are lured by pharma companies to their various drug launches. Some even arrange to pick them up in fancy cars and at the post-launch dinners cocktails are the rule. Most seniors in the profession these days, imbibe. When their heroes and role models behave thus, what can one expect of hapless, impressionable young medicos. Most succumb to the temptation. The subliminal message sent out by seniors to the upcoming generation of doctors, at these ‘medical meetings’ where alcohol flows, is – you do not have to practice what you preach. If we are to have a generation of doctors of high moral calibre, it is imperative that the senior doctors change.

Some practical ways of incorporating human values in a clinical setting:

Let me share what I do. I first say a quick silent prayer and visualize my Lord’s WORD - that all is divine and hence interconnected to seemingly separate; me, the patient, and the interaction are all one. It brings mindfulness to the moment immediately. Nothing can stop the flow of love thereafter. One’s words and one’s body language have to convey the love felt. A kind, reassuring word, a smile and a

gentle pat - help connect heart to heart with the patient. It helps the patient relax and be receptive to the intent of healing. It is also the best insurance for things to go smooth. Does it take effort? For sure, it takes conscious effort in the beginning. It takes practice; every activity is perfected only through repetition. But as time goes by, it becomes second nature to you.

Empowered Love - Power of the WORD:

Love also translates as empowerment. Thanks to a training session in business ownership that I got to attend, I learnt about the Power of the Word - the spoken and written Word. Anything the human mind can conceive of and believe in, it can achieve; and one way to do so was by using the Power of the Word, regularly repetitively. All the spiritual traditions of the world attest to the Power of the Word and the value of repetition. All the chants and rosaries are examples of the power of repetition of the word. The '*japas*' performed at *yajnas* are examples of the same too.

One look at the corporate world and one quickly realizes that the power of the word must indeed be real; it must be working. Otherwise, these smart corporate companies would not be wasting millions creating plaques with their vision and mission and target statements stuck everywhere right down to the toilets in their branches all over the globe. It was all about programming the mind for success. My husband and I started applying it diligently in our franchise business and presently we discovered soon that it WORKED! In fact, we found by direct experience that it worked in personal life, in relationships, in clearing examinations... why, even the weather could be programmed! If it worked in

corporates, business and all these other settings, it had to work in therapeutics too, I reckoned; and I started teaching my patients the Power of the Word.

The ground rules were that the goal had to be in keeping with the natural laws of *Dharma*. One could not entertain a goal of say, hurting another person. As long as what one wished for, was in accordance with *Dharma*, i.e., righteousness, it would work. I cannot help sharing one wondrous experience with the Power of the Word.

The Power of the WORD - Real Life Experiences:

In Tamilnadu, in the Arcot region virtually every family sends the sons to the armed forces. I once had a lady in her late thirties, a diabetic, who came to me from Arcot, for treatment. Her husband was in the army and she was staying with her mother-in-law who seemed to be a real shrew from what I could understand; and the ‘mother-in-law problem’ was perhaps the reason for her uncontrolled diabetes.

I spent a lot of time listening to her; finally, I suggested that prayerfully we try Power of the Word. I told her to write once every day - “Thank you God! I don’t know how but by your grace mother-in-law is now so kind and loving and everything is happy and peaceful at home. Thank you!” In the Indian context faith in God is near universal. I asked her to put the Name of the form of God she worshipped instead of the word, ‘God’. She had to write this once and read it once every day. It had to be written in red ink on yellow paper (that was what the business classes taught! It was a ‘success principle’ and one does not argue with success principles!). I gave her a few sheets of yellow paper as well. She left looking happy and hopeful.

She came for review after about two months. I had forgotten all about the mother-in-law issue. Anyway, her blood sugars seemed much better controlled and she

looked much better and happier too. I finished the review and told her that I was very happy with her reports. I was waiting for her to leave the room, but she stood up and wouldn't go. Finally in a faltering voice she asked me if she could please have some more sheets of the 'yellow paper'!! Then it clicked! As I got the sheets of yellow paper, she profusely thanked me and said that her mother-in-law had really become SO nice to her - it was a miracle!

I have tried the Power of the Word in hypertensives and diabetics time and again. A simple statement like – “Thank you God - I don't know how - but by your grace my BP is now 120/70. Thank you!”, when coupled with common sense measures like diet, supplements, exercise, relaxation techniques, and medicines seems to work. I have no double-blind studies to showcase but it works! Try it out in your practice!

A confidence building exercise like Power of the Word has many benefits; once they find that it works in the realm of health, patients themselves want to try it out in other areas. One girl who used to accompany her mother wanted to know if she could try the Power of the Word as her exams were approaching. I said sure; do your bit; study and prepare and just write with gratitude to God every day for helping you score the marks you want. She had written 95% and finally scored 96%; when she came with her mother later, she confessed that she was kicking herself for not having written 100%! The brain and nervous system are the hardware which can be programmed by thought which is like the software.

Success Principles:

Three aspects of Love that my Master taught were taught in the business classes as 'Success Principles'. One principle was - 'Attitude determines your altitude and

gratitude is the most important attitude”. Counting one’s blessings was an exercise I recommended to patients to be done once a week - literally count and write!

The second powerful ‘Success Principle’ was forgiveness. Apparently, it was an extraordinarily powerful force that propelled one to success. It made sense; for not-forgiving would result in pent up anger and other negative emotions which would negatively impact one’s physical, mental and spiritual health and definitely hinder focus and slow down success. A winner’s mind had to be like a clean slate; for only on a clean slate can you script successfully.

The third teaching was to be positive always, no matter what. It was just common sense. If you thought about the future negatively it was called ‘FEAR’, if you thought of the future positively it was called ‘FAITH’. Fear and Faith were just two sides of the same coin. Nobody knows anyway, what is going to happen in the future. So then why not be positive?! Why not opt to have faith? Besides there was power in positive expectation. The ancients summarized it as “*Yad Bhavam Tad Bhavati*”. In recent times studies proved it. In a school the weakest students were put in one section and a new teacher was assigned the class and told that these were the cream of the students: the very best. The students were also told that they were the best. The performance in the exams proved the strategy worked. The students outdid themselves and came out in flying colours. The Power of Expectation works. The Bible too says, “The doubters shall perish”; in the ancient texts of India, they said the same - ‘*Samshayaatma vinashyati*’.

If patients had faith in God, I would reinforce the faith that God would do only what was in our highest good. So there was no place for fear; one had to just hold on in faith.

I spent a lot of time teaching my patients to be winners. In chronic lifestyle disorders and in my own area of interest, i.e., arthritis, the mind was a very important player in the healing and recovery process. And these strategies paid rich dividends in terms of improved wellbeing and better recovery.

To recap,

- Power of the word
- Cultivating an attitude of gratitude
- Forgiving all who the patient perceived as ‘against’ him/ her was part of therapy.
- Cultivating Peace whenever possible by practicing the God-Love-Breath method was also taught.
- Positive expectation

It is well worth spending time with patients and teaching them to be winners. Treatment outcomes are definitely better. The fantastic by-product of such an approach was that invariably patients continued these simple mind practices even after the disease got better. They felt that their days went better this way.

All this was not really taught in Medical College. I must thank the business ownership classes for putting me on to ‘Success Principles’. In my experience they work very well in the realm of therapeutics too.

Spiritual Growth in a nutshell:

At this point perhaps it is in context to clarify what exactly SPIRITUAL GROWTH means. In simple terms, we human beings are born, and after a while, we die. In between what happens? We grow. Basically, we talk of three kinds of

growth; physical growth, mental growth and spiritual growth. 3 KINDS OF GROWTH happen between our arrival and departure

- Physical growth - we grow in height, weight, size; learn to walk, run, jump, and swim.
- Mental growth - we learn Language, Math, Science; we become teachers, technicians, nurses, docs, scientists, philosophers and so on.
- Spiritual Growth - what's that??

We come with a mixture of 3 types of qualities

- 1) Animal qualities of Hunger, Sleep, Procreation and Fear.
- 2) Demonic qualities of Lust, Anger, Greed, Deluded idea that the world is permanent, Arrogance /Pride, Jealousy/ Envy
- 3) Humane / Divine qualities of Loving and Serving, Giving and Forgiving, Sharing and Caring, Selflessness and Sacrificing.

Spiritual growth / Humaneness is nothing but growing from the animal and demonic to the humane / divine.

Let us look at some examples of those who achieved the highest, in all three types of growth.

- Examples of achievers of the highest in Physical growth - Hercules, WWF wrestlers, Olympians
- Examples of achievers of the highest in Mental growth - Edison, Einstein, Marie Curie, CV Raman

- Examples of achievers of the highest in Humaneness/Spiritual Growth - Buddha, Jesus, Prophet Mohammed, Mahavira, Lao Tse, Sai Baba, Mother Teresa

Which truly is the highest growth? Who do you feel really achieved the highest?

This author has asked this question to various groups

- to educated and uneducated
- to literate and illiterate
- to rural and urban folks
- to young and old
- to students and retired people
- men and women
- believers in God and atheists

THE ANSWER HAS BEEN THE SAME!!

ALL without exception felt that those who attained EXCELLENCE HUMANENESS / SPIRITUAL GROWTH had attained the HIGHEST. Not those who were champions in physical or mental growth. ALL agreed that GROWING IN HUMANENESS / HIGHEST SPIRITUAL GROWTH was REAL HUMAN EXCELLENCE. What do you feel, dear Reader?

Now, let us see how human values are related to spiritual growth? HUMAN VALUES that we studied at the beginning of this chapter, are nothing but signposts that help us reach the pinnacle of humaneness/spiritual growth. To recap, they are TRUTH, LOVE, NON-VIOLENCE, RIGHT CONDUCT & PEACE.

Human Values Lessons learnt from a Nurse:

On a personal note, I can share what I learnt from Mrs Deirdre West, a British nurse, nearly three decades my senior, who was the one-woman-wound-dressing department, when I first joined Baba's hospital; one who walked the talk. She had spent many years in China before coming to India. Treading the path of service outwardly and treading the meditation path inwardly was her forte and she took me, the new kid on the block, under her wing like a mother hen. Her mission was dressing with great love all the wounds of the villagers who gravitated to her 'dressing room'; and writing ditties on human values and health education which were then translated into the local lingo to help the villagers learn good habits such as using toilets, cutting their nails, brush their teeth, dealing with lice and scabies with human values like non-violence and peace thrown in for good measure... Between my clinics and her dressings, she gave me lessons on human values.

First, she taught me about Truth. The Truth was that which NEVER changes over space or time. I learnt that I had two identities: a transient mortal ever changing human form with name, and an eternal unchanging nameless formless identity which I could feel as 'I' inside of me, which WAS Truth. I was in reality not 'Hiramalini', she told me; I was the Truth; the eternal formless 'I'- immortal, deathless, blemishless with every auspiciousness of divinity. Next, I learnt the Truth that all my fellow beings were also in reality, the very same Truth! So, we were all part of each other; there were only brothers; no others. Another name for Truth was Consciousness.

Then she taught me the next human value of Love, which is universal, even the lowest worm at least loves itself. We too love ourselves; but we are under the mistaken notion that we are our bodies. Now that I knew my real identity, I had to

love that true self in me and in others all as my own self. And therefore, always practise nonviolence - the third human value. I had to help ever, hurt never; and love all, serve all

In the transient drama of life I had to conduct myself right. Right conduct was the fourth human value and the main rule of the life game, transient though it was! Conduct meant thoughts, speech and action. My Nurse Guru said right conduct meant suffusing thoughts with love; suffusing speech with love and suffusing actions with love.

Such a life, she said would give me the fifth human value - peace. I could also taste peace by going inward.

She said I had to be wary and not fall into the trap of the ego; one had to be wary of the crafty ego-self which made one think that one was the body with a name; and develop body related attachments and selfishness. Body relationships would be there, for example, family. The secret was to do one's duty with love; but to have no attachment; to see them as the property of Consciousness / God who had temporarily loaned them to you. Supreme Consciousness / God was the only true eternal relative, friend and inner buddy.

She said that the 'I' in me, i.e., the Truth of me, had existed before this birth; in fact, it had undergone many body experiences; that this time, again if I identified with the transient human form with name, after death, I would have to come back for another round of the body game. But if I identified with the 'I' within, i.e., the Truth within, and lived life right, I would live on eternally in love and bliss in Truth like she was sure she would!

She said that anyone who saw the same self in all beings like she tried to, and so conducted himself / herself would experience Omniscience and Omnipresence just

as Jesus and Sai Baba did! And if I could love as selflessly as they did, I would experience Omnipotence as they did. Love was the most powerful energy, she said.

One day she asked me, “So what do you want? It’s your choice!” Immortality and Divinity any day seemed a better deal than identifying with the body and all its attendant anxieties and mortality. She then gave a simple prescription - follow the path of selfless love and selfless service. There is a whole bunch of us trying to follow that path. Obviously, it is not easy! And being but ordinary folk, we often lose out to the ego and keep falling flat on our faces; but then we get up and run again. In the end we should all make it; at least by Grace marks!

Human Values Research: The Scientists of Consciousness

Who were the original Fathers of Success Principles and human Values? I prefer to call them scientists of consciousness, the Great Masters of mankind. Just as no textbook of medicine is complete without a mention of Hippocrates, Apollo, Charaka, Sushruta, Harvey, Leeuwenhoek and so on. No book on human values is complete without mentioning these great scientists of Consciousness who left a priceless, timeless legacy for all mankind.

When one looks at the history of mankind and the histories of the great religions of mankind, particularly in the East, history goes back to many thousands of years. The Eastern part of the world saw most of the research in this area. In particular, the Indian subcontinent was a great centre of spiritual research. A full exposition of all these scientists of Consciousness and their work is beyond the scope of this book. Yet for academic interest, let me furnish a list of the great scientists of Consciousness of the past.

This is by no means an exhaustive list; for many scientists of Consciousness never left their names or images of their forms, for their research had proved to them that name and form were only as important as clothes! To be worn for a while and then discarded for new clothes! They had learnt to exist in their real identity which was beyond time, name and form. So, in contrast to present day scientists who are dying to get their names on to every paper published, these ancient scientists of Consciousness were just not bothered about putting down their names to their discoveries. They had gotten beyond name and form!

In chronological order let us look at the list of these master scientists of Consciousness who have walked the earth. Their USP was their mastery of spiritual growth. The various scientists of Consciousness researched all these five areas of human values and specialized in some of them. Let us, for present day purposes look at this by-no-means-complete list:

Scientists of Consciousness over the ages:

The table that follows, I have outlined a rough TIME period when these great scientists of Consciousness walked the earth (there may be inaccuracies; they are subject to correction); and to the right of their names, is listed the Human Value(s) that they mainly researched and are identified with most, though all of them truly practiced all five Human Values.

Experiential Scientists of Consciousness of the past

30 - 40,000 yrs ago	Avatars and seers of the Bhagavatam	All 5 human values
Over 20,000 yrs ago	Jain Thirthankaras	Non-violence
10 – 20,000+ yrs ago	The Great <i>Siddhas</i> of S. India	Right Conduct
7132 years ago	Rama	Right conduct
5000 years ago	Krishna	Love
3800 years ago	Abraham	Right conduct
2800 years ago	Zoroaster	Truth
2700 years ago-	Buddha	Right conduct Non-violence
8 yrs after Buddha	Padmasambhava	Truth
????	Amitabha Buddha	Truth
???? -????	Avalokiteswara	Truth
2700 years ago	Lao Tse	Right conduct
2650 years ago	Confucius	Right conduct
2200 yrs ago	Socrates	Right conduct
2200 yrs ago	Thiruvalluvar	Right conduct
2100 yrs ago	Jesus	Love
72AD	Apostle Thomas	Love
203 AD	Maha Avatar Babaji	Truth
200 AD	Annai Nagalakshmi Deviyar Mataji	Truth
1400 years ago	Prophet Mohammed	Right conduct
1200-1000 yrs ago	Nayanmar saints	Truth

1000 yrs ago	Aztec Masters	Truth
Around 1185 AD	Avvaiyar	Truth
800 years ago	St Francis of Assisi	Love
1330-1405	Arunagirinathar	Love
600 years ago	Guru Nanak	Right conduct
1478-1573	Sur Das	Love
1486-1534	Chaitanya Mahaprabhu	Love
1491-1556	Ignatius Loyola	Love
1498-1557	Meera Bai	Love
1511-1623	Tulsidas	Love
15??-????	The Great Peace Maker Deganawida of Iroquois	Truth
1525-1595	Hiawatha, follower of Deganawida	Truth
1595-1671	Sri Raghavendra Swami	Truth
1608-1681	Samartha Ramdas	Truth
350 years ago-	Swami Narayan	Truth, Right conduct
?-1755	Sadashiva Brahmendra	Truth
270 years ago-	The B'ab of Bahaism	Truth, Right conduct
1800- ????	Manilaq the Eskimo Prophet	Truth
1823-1874	Vallalar (Ramalingaswami)	Love
1828-1895	Lahiri Mahasaya	Truth, love
1835-1918	Shirdi Sai Baba	Love
1844-1879	Bernadette of Lourdes	Love

1848-1929	Pamban Swamigal	Love
1853-1924	Chattambi Swamigal	Love
1855-1936	Sri Yukteswar Giri	Truth, Love
1858-1932	Native American Prophet Wovoka	Peace, Love
1863-1902	Swami Vivekananda	Truth, Love
1863-1950	Black Elk	Truth, Peace
1865-1927	Pagal Haranath	Love
1870-1929	Seshadri Swamigal	Truth, Love
1872-1950-	Sri Aurobindo	Truth
1873-1897	St Therese of Lisieux	Love
1879- 1950-	Ramana Maharishi	Truth
1878-1973	Pondicherry Mother	Truth, Right conduct
1884-1936	Swarupanandji Maharaj	Love
1884-1963	Baba Ramdas	Love
1887- 1968	Padre Pio	Truth
1896- 1982	Anandamayi Ma	Love
1896-1977	Bhaktivedanta Swami Prabhupad	Truth
1905-1938	St Maria Faustina of Poland	Love
1908-1982	Swami Mukthananda	Truth
1910-1951	St Alphonsa of Kerala	Love
1910-1997	Mother Teresa	Love, Peace
1916-2008	Swami Chidananda	Love
1917-1993	Swami Chinmayananda	Truth
1918-1987	Gajanan Maharaj	Right conduct
1918-2001	Yogi Ramsurat Kumar (Love)	Love

1926-2011	Sri Sathya Sai Baba	Love; all 5 human values

Contemporary Experiential Scientists of Consciousness:

Below is a list of contemporary experiential scientists of Consciousness and spiritual healers. (Disclaimer - this is not an exhaustive list; and it is not in any particular order}

Sri Sadguru Madhusudan Sai	Love, all 5 Human values
Mata Amritananda Mayi	Love
Pope Francis	Love, Peace
H.H. the 14th Dalai Lama	Love, Non-violence
17th Karmapa, H.H. Ogyen Trinley Dorje	Truth, Love, Non-violence
Sufi Attaullah Sattari of Jhoke Sharif, Pakistan	Love, Truth
Chief Arvol Looking Horse (Native American)	Right conduct, Love
Mother Meera	Truth, Love
Amma Karunamayi	Love
Vasantha Sai of Mukthi Nilayam	Love
Sri Sri Ravishankar	Truth, Love, Right conduct
Sri M	Right conduct
Acharya Vidyasagarji Maharaj of Jains	Truth, Right conduct
Narayani Amma of Vellore	Love, Right conduct
Mooji (Anthony Paul Moo-Young)	Truth
The Great Gurus of the Jains	Non-violence, Right conduct

The Rimpoches of Dharamshala	Non-violence, Right conduct
Swami Sathyam of Kerala	Love
Shaharewale Sai alias Lal Sai of Sindhis	Truth, Love
The Sankaracharyas (Kanchi and Shringeri)	Truth, Right conduct
Brahmarshi Mohanji and Guru Avadhuta Nadanand	Love
Sri Ganapathi Sachidananda Swami	Right conduct
Sadguru of Isha.org Tamilnadu	Right conduct
Swami Chidanand Saraswati, Parmarth Niketan, Rishikesh	Truth
Mahant Swami Maharaj; BAPS, SwamiNarayan	Right conduct
Vishwayogi Vishwamjee	Love, Right conduct
Swami Sarvapriyananda , Ramakrishna Mission	Right conduct
Radhanath Swami, ISKCON, Mumbai	Love, Right conduct
Swamini Vimalananda, Chinmaya Mission, Coimbatore	Right conduct
Rimpoches of Byla Kuppa	Truth, Non-violence
Avdhoot Shivanand	Truth
Ishan Shivanand	Right conduct
Nithya Shanthi	Non-violence, Right conduct, Truth
Sudhanshuji, Saharanpur	Truth, Right conduct
Swami Niranjanananda Saraswati, Bihar	Truth, Right conduct

Swami Sukhabodhananda, Prasanna Trust	Love, Right conduct
Anandmurti Gurumaa, Punjab	Love, Right conduct
Jagadguru Ramanandacharya Swami Rambhadracharya, Chitrakoot	Love, Truth, Right conduct
RameshBhai Oja, Mumbai	Right conduct
Avdheshanand Giri Maharaj, Juna Akhara	Truth, Right conduct
Morari Bapu, Gujarat	Love, Truth
Guruji Sri CB Satpathy IPS (Retd), Orissa & Delhi	Love, Truth
Gurumayi Chidvilasananda of SiddhaYoga, Mumbai	Truth, Right conduct
Brother Chidananda, Self Realisation Fellowship	Love, Truth
Yogiraj Sadgurunath Siddhanath, KriyaYogi	Truth, Right conduct
Jude the Healer (African Shaman)	Love
Prema Pandurang	Love
Connie Shaw	Love
Valerie Barrow	Truth
Irene Watson	Truth
Catherine Kapahi	Love, Truth
Braco the Healer	Love
Sri Kaleswar, Penukonda	Love
Eskimo shaman Angaangaq	Love, Peace
Mohan Joshi, Healer, Belgaum	Love

John of God, Abadiania, Central Brazil	Love
Dr Steven Greer, doctor, extra terrestrial researcher & yogi	Peace
Dr Srikanth Sola (Cardiologist; deals with spiritual heart also)	Love
Dr Barry Kerzin, Dharamshala	Love, Peace
Master Tang Wei Zhong (Energy Medicine healer);UCLA	Love
Master Ming Tong Gu (Energy Medicine healer) New Mexico	Love
Ngangkari (Aboriginal Healers), Australia	Love
Psychic Surgeons of Phillipines	Love
Acharya Badrinarayanan Srinivasan, Melbourne	Truth, Right conduct
Dandapani, Hindu Monk, USA	Right conduct
Dibia Oje Na Muo of Africa (Healer priests who travel through spirit-realms)	Love

I must repeat - this list is by no means complete. It is also not in any particular order. In fact, according to Indian experiential scientists of Consciousness, these great Masters, even after leaving the physical, are still available to us devotees from the subtle realm. In all likelihood, physician and world-famous stem cell researcher, Dr. Robert Lanza is right - he states, at death we just exit the physical-leave this ‘earth suit’, and move on to another dimension and re-boot. If the internet spirituality websites are any indication, many great scientists of

Consciousness, who have re-booted thus, though invisible, are in the earth realms, as the whole planet itself transitions to a higher energy, higher frequency, and higher vibration dimension.

Doubtless, this statement from a medical doctor must raise your eyebrows. But having myself interviewed and written about NDEs and having experienced albeit in a small way, a few phenomena like bilocation and intuitive ability to connect across dimensions, and coming from a background of Indian spirituality, to me it makes perfect sense. This is in the experiential realm; not quite in the experimental realm. I urge you to read the Proceeds of the Conferences of International Association of Near Death Studies⁴⁰⁷ and half a century's meticulous research carried out by the Division of Perceptual Studies (DOPS)²³⁰ at the University of Virginia's School of Medicine. I urge discerning open-minded medical men and women to also visit Yogi, Sri M, of Satsang Foundation and Yoga Sadhguru of Isha fame.^{449,450}

The latter's workshops on Inner Engineering²⁵² will give you an idea of the inner dimensions of human beings, which we do not learn about, in Medical College.

A never before witnessed number of scientists of Consciousness are here on earth now; to the open-minded researcher of healing and Consciousness, it represents a never before available opportunity to study first-hand the methods to Consciousness and healing practiced by these advanced scientists of Consciousness. The diversity of this list itself is amazing. From John, man of God of Brazil who is illiterate but has been recorded to cure even glioblastoma multiforme, to octogenarian Valerie Barrow who communicates with fellow beings from other galaxies, to young Kaleswar of Penukonda who is guided by Shirdi Baba to Marian visionary and healer Connie Shaw to Braco the Croatian whose

gaze heals, to Revered Acharya Vidyasagarji Maharaj of the Jains to Sufi Attaullah Sattari Sahib of Jhoke Sharif in Pakistan to Avdhoot Sivanand to Master Ming Tong Gu of China now based in the USA to the most intriguing ‘ngangkari’ aboriginal healers of Australia to teenager Shaharewale Sai, the girl who manifests the spirit of Guru Jhulelal of Sindh - the epitome of Hindu-Muslim unity, to the psychic surgeons of the Phillippines whose barehanded skills floor modern surgeons...^{451,452} to ‘Dibia Oje Na Muo’ spirit healers of Africa(28) - this list includes experiential scientists of Consciousness as well as spiritual healers, from varied races, religions and nations.

Modern medicine does a great dis-service by rubbishing traditional healing methods simply because they cannot understand it. One example that comes to mind is the derogatory statement made out of ignorance⁴⁵³, officially by the Indian Medical Association about the *Siddha* System of Medicine which has a ten-thousand-year history and is a system of medicine still popular in Tamil speaking lands around the world.

In our COVID-19 times, this bias also led to the *Siddha* formulations not being used right away to combat the pandemic. However, people voted for *Siddha*; and once the effectiveness of the formulations became apparent, the government in Tamilnadu has officially promoted *Siddha* medicine for Covid-19. Significantly, research published in peer reviewed indexed journals has recently vindicated the efficacy of *Siddha* formulations.⁴⁵⁴

Likewise, the Psychic Surgeons of Philippines were in the news in the sixties and seventies. There were many from USA and Australia who went to them for treatment and benefited. But today, the modern medical association in the country has all but banned psychic surgery. People, however go to these simple ‘surgeons’

who ‘operate’ with bare hands and attribute their techniques to trans-dimensional assistance from beings in another dimension. A full-page newspaper article in *The Living Daylights*, on January 15th, 1974, shows how effective these surgeries were. Even practitioners of modern medicine used to refer hopeless cases which somehow turned around after psychic surgical or “injection” intervention.⁴⁵⁵ A highly respected South African researcher, Dr. Lyall Watson had extensively studied the psychic surgeries performed by the Filipino surgeons. He could not explain how they worked, but it was true. The psychic surgeries were real; and they did heal patients.⁴⁵⁶

In contemporary times Jaime T. Licauco, popularly known as Jimmy Licauco, a highly respected academician and Visiting Professor around the world, a renowned parapsychologist, author and management practitioner in the Philippines has written honest accounts of psychic surgery. As in all systems of medicine, frauds may exist, but it would be foolish to declare an entire time tested system as ‘quackery’, for it does work. He relates his own experience with a competent psychic surgeon for his own illness related to an enlarged prostate, which was healed by the psychic surgeon.⁴⁵⁷

As a doctor currently based in Singapore which is just next door to Malaysia, I have had the privilege of talking to Dr Amir Farid Isahak. A reputed gynaecologist, he created headlines when he left the lucrative practice of modern gynaecology to pursue the study and practice of ‘Energy Medicine’. Well known as a man of total integrity, Dr Amir Farid Isahak is an accomplished Qi Gong Healer and an expert on traditional plant-based nutrition. It is time medicos and junior doctors in training spent time with seniors like him who walk the road less travelled. Their experiences will surely stimulate interest to study and research aspects of healing that modern medicine scarce understands. I am sure Dr Amir Farid’s article on

‘psychic surgery’ in a leading publication, ‘The Star’, from which which I quote below, itself should spur junior doctors to take up its study in the spirit of honest enquiry.

“Psychic surgery - by Dr Amir Farid Isahak

...In my previous article, I explained that psychic healing is very much an energy phenomenon, and that the healing often involves spirits assisting the healer. I also mentioned about John of God (Joao de Deus, or his real name, Joao Teixeira da Faria)...

...Psychic surgeons in the Philippines

The Philippines has hundreds of faith healers and psychic surgeons. I am fortunate to have witnessed, at close hand, several such healers doing psychic surgeries, including the famous Rev Alex L. Orbito.

I was not very impressed with some. However, there are some who actually operate just as how we doctors do surgeries (as a gynaecological surgeon, I have carried out many major surgeries and know what to look for). The difference is of course they do not use anaesthesia, there is little or no blood, and they do not have to stitch to stop bleeding or close the wound. Some do use simple knives, or even surgical knives. Most of the surgery is done directly by their hands. Some of the tissues that were taken out have been proven to be actual diseased tissues. But there are also quacks who use animal tissues as part of their trickery. So we really have to be wary.

...The hidden realms of energy healing

It is easy to be skeptical of Joao, Dr Fritz and other genuine faith or psychic healers. It is also easy to be captivated by their psychic healing powers. But it is not easy to explain or understand this phenomenon. To see such an operation done

in a plain room with a pair of scissors and no anaesthesia, no pain, little or no blood, and the patient appears cured, goes beyond reason. Yet, because the cures have been proven to be real, it is important for us to come to terms with it.

Many sceptics, scientists and doctors have gone to Brazil in the hopes of debunking Joao and Dr Fritz but most became completely convinced that they are genuine: over one million people have been treated by them, including cancer and other terminally ill patients.

Yet, there are still those who remain sceptical. As those in the spiritual paths will testify – for the disbeliever, no amount of proof is adequate; but for those who experience it, no other proof is necessary.

Their work attests to the reality of the hidden realms of energy that constitute and interact with our physical, mental and spiritual bodies. This life-energy can be creatively and constructively utilised to cause healing in unexpected, unexplained and miraculous fashion.

I am sharing their stories to impress upon readers the wide spectrum of healing – from simple physical therapies and medicines to miraculous Divine intervention. John of God, for example, always says that, “It is not me, but God who does the healing”.

At the most fundamental level – either in the perspective of molecular biology or spirituality, the understanding of these phenomena is convergent. They all involve energy.

I have said earlier that if you understand both quantum physics and spirituality, then you can easily grasp psychic healing and psychic surgery...

...With love everything is possible

One very important thing to note is that a passion to heal and an overbearing compassion for others are prerequisites for anyone who hopes to become a psychic healer. The healer must first love his Creator, his patients, and his work... ”⁴⁵⁸

These scientists of Consciousness make us look at life with a new perspective; find a meaning and purpose in life. Some of them, in ways that we do not understand yet, are even able to heal incurable illnesses. What is more, as established by Dr. Steven Greer and others, the tantalizing possibility of higher evolved beings from other dimensions and galaxies being here to assist us, seems real too. Junior doctors with a burning curiosity to know more about the planes of human existence, and curious to experience the truth for themselves, could google details of these present-day scientists of Consciousness and also watch them on YouTube. I urge with all my heart, young doctors in the making, to spend a semester or an elective, with these scientists of Consciousness, and in the humble spirit of scientific enquiry study their work and the human values they espouse, meticulously documenting findings for the benefit of all mankind.

Masters of Consciousness & Healing:

Many of these Master scientists of Consciousness were Healers as well. How did the healings happen? Thanks to the advances in the pure sciences that we saw in the earlier chapters we can at least postulate possible mechanisms for some types of healings. Some techniques like psychic surgery are beyond our understanding; they deserve to be studied, in most cases the healers demonstrated overwhelming selfless love and sacrifice. Most worked stupendously long hours, charged no fee, accepted humbly whatever was donated and did the healing at considerable

personal sacrifice; they had no time for personal life! Such strong feelings of love, faith and sacrifice possibly endowed them with such powerful electromagnetic bio fields that they could affect healing changes through the DNA of the ailing; and the healings were possibly examples of phenomena mediated by coherence, emergence and phase changes. Often, they received help from other dimensions. In the case of Great Masters, it could be just compassionate intention and subtle energies from the Masters that healed the ailing.

A common denominator we see is that outwardly all the true Masters of mankind served fellow beings selflessly; and inwardly they were all One with Supreme Consciousness. Some were ordinary folk; not Great Masters but were gifted Healers. But even they, during healing, invariably were in a plane of ‘oneness’ with a ‘higher power’, and the vast majority lived simple lives, for they knew from direct experience that there was much more to life than the physical world.

As we saw on the earlier chapter, the Great Masters who invariably were Master Healers as well, trod both the outer path of love and service to others and the inner path of love to the Supreme Self. This made them epitomes of all the human values. In modern management jargon, one could term the practices that they followed, ‘Best Practices of Healing’. These ‘Best Practices’ in the medical context world translate as outwardly treading the path of selfless service with love while dealing with patients, and inwardly treading the path of love to the true self within eschewing the ego.

Therefore, it makes sense that we health professionals, who are committed to the ‘healing profession’, take a leaf out of their ways; and incorporate these practices into our continued training towards excellence in delivering healthcare. Common sense decrees that we do so within the tenets of scientific reasoning. Eschewing

religious sentiments, a frame work of training for a ‘Continuing Human Excellence’ program, can be worked out which, like ‘Continuing Medical Education’, helps us hone our skills in compassionate and loving delivery of care, while functioning as members of a “Care Team”.

I share below one such experiment that is under way.

Practical methods of incorporating human values into the functioning of healthcare organisations:

How does one incorporate Human Values into the running of a healthcare organisation? Where does one begin?

This is rather uncharted territory but let me share with you a proposed action plan to foster human values in all the stake holders and staff at the Sunshine Welfare Action Mission, a Voluntary Welfare Organisation in Singapore, dedicated to serve and care for the elderly with selfless love.

SWAMI Home touches over a thousand elderly positively daily. 150 elderly are residents while over 800 elderly are served through Meals on Wheels, help to go to hospital, help with chores, Day Care etc. Another opportunity for selfless love that SWAMI Home provides is in caring for and looking after the health and welfare of young staff members from various countries around who live at SWAMI Home 24x7 to do the hard work of caring.

SWAMI Home staff verily represent the world; they belong to many faiths and many races. As the Management Committee of SWAMI Home have recently declared that SWAMI Home is to be a Centre for Human Excellence, by default all those who work at SWAMI Home, right from the Management Committee

members to the guard at the gate become students of this Centre for Human excellence.

The proposed ‘Continuing Human Excellence’ Program:

The proposed plan is that on joining SWAMI Home, the staff are to do a SELF ASSESSMENT on Human Values practiced by them. Every six months they are to repeat this self-assessment. This way they will themselves become aware of human values and over time change will happen. As the Founder of SWAMI Home, Sri Sathya Sai Baba, who was one of the greatest scientists of Consciousness, used to say, *“Human Values are not things that have to be brought from outside. They are present in every human heart. They just have to be uncovered. This uncovering again cannot and should not be done by force. It has to come from the source. Those who wish that others should follow human values, need to first follow these values themselves. They will then be examples and just as one candle lights another, others will automatically be inspired to be like them. First you be the change that you want to see in the world...”*

Baba indeed, was one who walked the talk. Millions of us have been inspired by him to live a life based on human values. One is bound to falter and fall; but the idea is to each time get up, dust oneself and get running again!

I give below the Self-Assessment Questionnaire & Rating Scale, followed by a short write-up on the concept of nurturing excellence in Healthcare Teams.

No intellectual copyright is claimed; in fact, it is licensed to be shared. It may be freely copied, modified as needed and used, by any organisation that wishes to try

it out. This is a free gift to any individual / team looking for a step by step, practical way to implementing human values in day-to-day functioning.⁴⁵⁹

TOWARDS EXCELLENCE IN HUMAN VALUES - A SELF ASSESSMENT QUESTIONNAIRE AND RATING SCALE

It is suggested that every 6 months all who work at Human Values Based Healthcare Centres will do a SELF ASSESSMENT on their personal growth.

SELF ASSESSMENT QUESTIONNAIRE ON 5 HUMAN VALUES

(Free Thinkers may use the term Consciousness as accepted by quantum scientists; believers in divinity may use the term Divinity/ Divine spark irrespective of religion)

TRUTH

- Am I closer to understanding that there is the spark of Consciousness / Divinity within me and all creatures that is the SAME and hence we are all brothers and there are no others?

0- No understanding 10- excellent understanding

1- Mark yourself on a scale 1 to 10

LOVE

- Am I improving in my ability to LOVE my true self i.e., Consciousness / Divinity?

- Am I able to see the same in others and love them too?

0- No improvement 10- Excellent improvement

1- Mark yourself on a scale of 1 to 10

- Do I have a better understanding that violent or angry THOUGHTS and WORDS are also to be avoided?

- Am I better at practicing NON-VIOLENCE in THOUGHT WORD and DEED?

0- Not better 10- Excellent improvement

1- Mark yourself on a scale 1 to 10

RIGHT CONDUCT

THOUGHTS

- Do I spend at least 10 minutes with my Inner self i.e., Consciousness that dwells within / Divinity that dwells within, daily?

- Do I consciously try to fill my thoughts with unconditional Love?

0- No improvement 10- Excellent improvement

1- Mark yourself on a scale 1 to 10

WORDS

- Do I consciously practice speaking SOFTLY AND LOVINGLY AND RESPECTFULLY TO ALL OTHERS?

- Do I consciously AVOID raising my voice?

- Do I consciously avoid shouting?

- Do I consciously avoid gossiping?

- *Do I consciously avoid negative speech?*
- *Do I consciously avoid bad language and 4 letter words?*
- *Do I consciously watch my body language and therefore SMILE more?*
- *Do I consciously avoid arrogant and angry body language?*

0- No improvement 10- Excellent improvement

1- Mark yourself on a scale of 1 to 10

ACTIONS

- *Do I consciously go out of my way to be KIND to others?*
- *Do I consciously try to GIVE more than TAKE?*
- *Do I consciously practice GIVING and FORGIVING rather than GETTING and FORGETTING?*
- *Do I consciously EXPRESS appreciation and gratitude to others?*

0- No improvement 10- Excellent improvement

1- Mark yourself on a scale of 1 to 10

HABITS

- *Have I consciously stopped / reduced SMOKING?*
- *Have I consciously stopped / reduced ALCOHOL INTAKE?*
- *Have I consciously stopped / reduced being a couch potato (i.e., now do regular exercise)?*
- *Am I consciously trying to be PUNCTUAL at work?*

- Am I consciously trying to practice a CEILING ON DESIRES?

- Am I consciously trying to AVOID WASTING Time, Money, Food, and Energy both at the workplace and at home?

1-No improvement 10- Excellent improvement

Mark yourself on a scale of 1 to 10”

Follow Up at 6 Months:

It is suggested that this simple self-assessment is to be done by all healthcare staff once in 6 months with HR taking the responsibility of getting it done.

It can be done in such a manner that no one day is too crowded. For example, if one joined on March 2nd, then one will do Self-Assessment on every Sept 2nd and March 2nd. A computerised list generated a week in advance can be used to notify the concerned persons.

This process can be adopted by any healthcare organization that seeks to infuse human values into its functioning in a non-intrusive gentle manner. As the entire process is a self-assessment with confidentiality being maintained, compliance should be better.⁴⁵⁹

Cheer-Level ‘Uppers’!

Two other simple steps that improve cheer levels in a healthcare organization and therefore make it more humane are

1) Reminder bill-boards that read ‘smile’!

Reminder billboards with “SMILE! The world looks nicer that way!” put around corners with a mirror that staff cannot help seeing themselves in will certainly help.

2) Using a respectful title while addressing people

In multi-ethnic, multi-racial multi-faith healthcare organisations, it may help if the prefix Brother / Sister is used while calling / addressing a fellow worker.

As different cultures follow different practices this becomes important. For example, in India, seniors are addressed as ‘Sir’ or ‘Madame’; in the USA and Singapore even someone much older and senior may be called by first name; in the UK it is a bit more formal; one is ‘Dr so-and-so’. In multi-cultural settings it may be best to call everyone ‘Brother so-and-so’ or ‘Sister-so-and-so’.⁴⁵⁹

In my experience such a respectful way of greeting and addressing people has paid rich dividends in the form of improved relationships, mutual trust and respect. Staff, particularly cleaning staff, janitors, guards at the gate, gardeners, ward-boys, theatre boys, tea-ladies, visitors, relatives of residents / patients... all feel much better when addressed with respect. The cheer quotient in the entire organisation goes up. Human values have to be integrated into the very breath and words of daily life – as it was done in Africa before the onslaught of ‘civilisation’ and westernization; where even the proverbs that little children were taught, in the oral tradition, were laden with human values.⁴⁶⁰

The Science behind Human Values:

Over forty years of research at the Institute of HeartMath as consistently shown that one can be trained to create coherent heart activity; and that such coherent

cardiac activity has a beneficial effect on the organ systems of that person as well as in those near him. This coherent activity of the heart, which has strong pro-health benefits, can be achieved by:

- 1)- Slow relaxed breathing techniques
- 2)- Feeling in the heart, positive emotions such as appreciation, gratitude, forgiveness, love, kindness, compassion.

They have also found that in contrast, heart incoherence is triggered by

- 1)- Feeling negative emotions
- 2)- Psychophysiological incoherence which in layman's lingo translates as lack of harmony between thought word and deed; or a confused mind.³⁷⁴

The Heart Truly is the Heart of all Body-Mind Activities!

The heart connects not only with the brain but with all other organs and systems of the body as we have seen in chapter 5; to recap, the heart connects

- 1)- neurologically (through the transmission of neural impulses),
- 2)- biochemically (through hormones and neurotransmitters),
- 3)- biophysically (through pressure and sound waves), and
- 4)- energetically (through electromagnetic field interactions)

The implications are that we have the power to ensure that all our bodily organs and systems keep good health, by training ourselves; through simple breathing practices and by learning to feel positivity from the heart.

The way to Team Excellence is through Individual Excellence

Social scientists at Harvard have found that helping others is contagious; seeing acts of kindness and compassion inspires others to be their best selves. How does this work? Besides the direct conscious cognitive impact that inspires others, it also possibly works through a subconscious 'Mirror Neuron' effect that was discussed in chapter five.

At a greater level it can impact the wellbeing of others. Research done at the HeartMath Institute suggests, that one of the ways the Great Masters cause healing effects on others, is possibly through their powerful coherent heart fields; as they are literally embodiments of love. We now have a clue as to how miraculous healings possibly work.

As members of a Care Team, you can see just how this can be a vital input, for it can to improve the treatment outcomes of the patients in our care.

As members of the healing profession you can see just how very important it is, to incorporate this into the medical curriculum!

Personal Health & Well-being benefit of practising Human Values:

Besides positively impacting others, we stand to gain a lot. Neurological signals originating in the heart have an important and widespread influence in regulating the function of organs and systems throughout the body. For example, it is known that in addition to modulating the activity of the nervous and endocrine systems, input from the heart influences the activity of the digestive tract, urinary bladder, spleen, respiratory and lymph systems, and skeletal muscles. Research has shown that in both animals and in man, cardiac coherence promotes physical wellbeing.

For instance, cardiovascular afferent signals regulate efferent ANS outflow, immune responses like IgA levels in saliva rise; pain perception is reduced; natural feel-good chemicals like endorphins rise; stress hormones like cortisol and adrenaline decrease; tremors due to reduced excitability of spinal tract neurons and skeletal muscles, and so on.^{370,461–464}

Such information should be shared with Care Teams going through a Value Addition program towards the goal of Human Excellence; in my limited experience, I have found that it spurs team members to inculcate human values into their work; for they realise how it positively impacts their own wellbeing.

Growing a Well-Informed Volunteer Base:

In most institutions delivering healthcare, be it hospitals, aged care homes, orphanages, day care centres, rehab units and so on, an active volunteer base definitely helps keep the wheels turning merrily. Volunteers break the monotony and bring joy to the patients / clients; and give a breather and a break to the members of the regular Care Team. Most people volunteer because a friend asked them to come along, or they were urged to join at the school / college they were attending; or they just wanted to do something good, or in some cases it is only because “you need to do good to get to heaven”. It would be a good idea to share with volunteer groups, what science has to say of the benefits of volunteerism.

Benefits of Altruism:

Dr. Andrew Armour, a leading neuro-cardiologist has found the heart contains cells that make not just hormones such as epinephrine (adrenaline) and dopamine,

but also oxytocin, commonly referred to as the “love” or “bonding” hormone.⁴⁶⁵ Remarkably, concentrations of oxytocin produced in the heart are as high as those found in the brain. When you are altruistic – lending a helping hand – your oxytocin level goes up, which helps relieve your stress. Altruistic behaviour also may trigger the brain’s reward circuitry – the feel-good chemicals such as dopamine and endorphins. What is more, the more you serve from the heart out of love rather than from the head, out of a sense of duty, the more your oxytocin levels are. The cascade continues; the more joyful you feel, the more pro-health, your own blood pressure, sugar levels and so on become!

50 scientific studies funded through The Institute for Research on Unlimited Love, headed by Stephen G. Post, PhD, a professor of bioethics at Case Western Reserve University School of Medicine involved a comprehensive investigation of altruism, aka benevolence, compassion, generosity, and kindness. *Post told WebMD: “This is the care-and-connection part of the brain. States of joy and delight come from giving to others. It doesn’t come from any dry action – where the act is out of duty in the narrowest sense.”*^{466–468}

What Post is describing is exactly what the researchers at the Institute of HeartMath have found. Heartfelt giving powered by altruism changes our neurochemistry. Interestingly, studies have found that oxytocin encourages generosity and charitabiltiy.^{469,470}

Proven Benefits of Volunteering:

The benefits of volunteering on a regular basis are huge. To quote the HeartMath Institute website, “*In one study that followed over 400 women for 30 years,*

researchers found that 52% of those who did not engage in volunteer work experienced a major illness – compared with only 36% of those who did volunteer. In a British poll of volunteers, half of those surveyed said their health had improved over the course of volunteering. One in five even said that volunteering had helped them lose weight. Another large research study found a 44% reduction in early death among those who volunteered – a greater effect than exercising four times a week. And a recent investigation conducted by the University of Michigan’s Institute for Social Research found that older people who are helpful to others reduce their risk of dying by nearly 60% compared to peers who provide neither practical help nor emotional support to relatives, neighbours or friends.”^{471,472}

Surely this is information that needs to be shared with volunteer groups at all institutions! It will not only strengthen their own volunteering habit but draw more others into volunteering. In fact, this is information that should be given to school children and college kids. Facts sometimes drive home the point far better than sermons on morality.

Small is not just Beautiful; but Great!

Aldous Huxley, one of the most knowledgeable persons who walked this earth, was asked at life’s end, what he considered most important in life; what he wished he had done more of. He replied that to be kind was the greatest; he just wished he had been kinder through life. The greatest things in this world are grounded in humility and simplicity. So too is it with human excellence. So, it is imperative that we be ready to cultivate these two qualities, which in the context of hi-tech competitive modern medicine, have all but dried up. To cultivate individual

excellence in human values, these two qualities are non-negotiable requirements; they are:

Humility:

Humility makes one open to change; and simplicity helps one make the change. In childhood, these qualities are natural; and that is why children learn so fast. So to move on to excellence, one needs to become child-like, again - food for thought indeed, for doctors, nurses, and fellow members of care-teams who generally tend to be too very know-it-all and set in their ways.

Simplicity:

The second change one needs to make is to be heart driven rather than head driven; for only the practice of human values can lead us to excellence in modern healthcare; it is the heart that intuitively knows human values. So it is time to make an evidence based shift; from the complex to the simple; from the head to the heart; for therein lies the secret to excellence.

You will agree with me, that most successful doctors tend to be a little short on these two qualities; short on humility and simplicity! But it is time for change; time to become humble, simple and open to change; otherwise we run the risk of becoming irrelevant!

Towards Team Excellence & Individual Excellence:

A Care Team's continued growth towards excellence is sure to benefit patient care, regular day care of elders and the challenged, elder care nursing homes, dementia care settings and centres of terminal care. Individual doctors moving towards

excellence in functioning can be a boon for all the outpatients seeking one-on-one care. The improved doctor-patient interaction itself will be greatly enhanced with powerful therapeutic value consequently.

In the next chapters we shall see how psycho-spiritual strategies can help us maximize therapeutic efficiency in the individual doctor-patient relationship.

We shall see how to become better doctors just by the judicious use of thought, word and deed. We shall see how this no-cost therapeutic add-on, when exercised by the treating physician, can verily accelerate the healing process.

* * *

Chapter 8

PSYCHO-SPIRITUAL STRATEGIES; MORE WAYS TO INDIVIDUAL EXCELLENCE & HONING YOUR HEALING POWER

Outline

Psycho-spiritual strategies practiced in India by Drs Seshadri; parables, mental housekeeping, energizing, so-humming; monkey and snake technique; counselling elder care givers in the east; sound & music therapy; laughter therapy; how the ancient Siddha way of observation, contemplation and meditation led to human values; compassion heals the healer too; Siddhars or 'perfected men'; Siddha ethics as the forerunner of the Hippocratic Oath; trans-dimensional everyday occurrences in south India and trans-dimensional Siddha healing techniques; brief on Ayurveda; heart-intelligence and HeartMath concepts to hone the healer in you; technology for biofeedback to reinforce breath and positive-emotions based physiological changes that heal; mindful meditation and Yoga in the west; understanding other forms of Yoga - Bhakti, Karma and Jnana Yogas; concepts of Karma, Purusharthas, Ashramas in life, Varnas, Shruti and Smriti; how these concepts relate to modern medicine and doctors; understanding Siddha and Ayurveda - medical systems founded on Consciousness; Raja Yoga

The use of psycho-spiritual strategies for therapeutic advantage is a very dynamic and ever-growing area in medicine. In my practice, the following simple strategies seamlessly combined well with modern medical treatment and gave considerable

therapeutic benefit. Patients were happier and more at peace and seemed to respond to medicines better. The strategies used were broadly:

- 1) Cognitive therapy in the course of conversation & relating of parables
- 2) Mental Housekeeping
- 3) Energising
- 4) So-Humming
- 5) Prayer and using Power of the word (see chapter 6)
- 6) Sound and Music as therapy
- 7) Laughter therapy

Cognitive Therapy through conversation and parables:

As faith in God is ingrained in the Indian psyche cognitive therapy through conversations and parables worked very well for me. It may come in handy for any healthcare professionals with such faith, reading this book. Others without such beliefs will have to tailor these concepts as applicable in the cultures they live and work in.³⁵²

It was my routine practice to tell all my patients to pray to God and then take their medicines. The villagers, the poor, the illiterate, had no difficulty in comprehending this bit of advice but the educated, the elite, the “foreign returned”, and so on sometimes reacted with a quizzical raised eyebrow as if to say, “*Pray?! Come on Doc! Not in this age of Science!*” Some frankly said, “*But I do not believe in God*”. Usually at this point the following conversation would ensue.

Dr. H.S: *So, you don't believe in God. That's fine! But I'd like you to answer a question. Now, I have prescribed all these tablets; and you are going to swallow the lot; just how exactly do they work? What makes them go down from the mouth to the stomach? What force helps to digest them? What makes them get absorbed and get circulated to the right places and act? What force actually heals you?*

Patient: *(silence); Hmm...*

Dr. H.S: *Now just imagine that a sick patient is being brought in. He has the build of a Hercules. But if it is-a dead body is there anything I or the medicines can do to help?*

Patient: *No!*

Dr. HS: *That is precisely the point! There is some power in us that makes digestion, circulation, healing.... everything going; some power that keeps the whole body ticking and going. The ancients of this land called it the Atma; you can call it whatever you want. Do you agree?*

Patient: *Yes!*

Dr. HS: *Likewise, there is some power that keeps the whole universe ticking and going; we call that the Paramatma or God; and we believe the Atma and Paramatma are identical in nature; like the wave and the ocean. Anyway, the fact remains that it is that power which makes use of the food, the medicines and so on and gets you well; indeed, THAT is your real self. So, think about it. Believe that you CAN and WILL heal yourself. Think positive!*

At this point many of the educated would agree, for though God is not 'the in thing' in these modern times, positive thinking is! Then I would explain that prayer is in reality The Most Positive Thought.

Well, dear reader, you too will agree that there is something - call it God or energy or an unknown force 'x', there is SOMETHING that keeps all of creation going. Indeed, the very existence of creation posits that there must be a creator, for, as Julie Andrews sang with sound common sense in *The Sound of Music*, "*Nothing comes from nothing! Nothing ever could!*" In this 21st century we may not subscribe to a God in the form of a kindly old man sitting on a throne in some exalted locale in the universe; the modern mind would tend to agree more with the *Rishis* of yore, that God is THAT which runs all of creation and yet is beyond everything, Many renowned modern doctors like Bernie Siegel, and others perceive God as a Supreme, Intelligent, Loving Energy. The *Rishis* of yore meant much the same thing when they referred to God or Consciousness as *Sat - Chit - Ananda*.

A good doctor has to be a good communicator and a good storyteller. When confronted with chronic disease, either general medical or rheumatological, my experience was that the patients and care givers, would often be lost in self-pity, frustration, the why-me syndrome and the life-is-so-unfair attitude. It is much easier to treat the patient if the patient accepts the disease, with a positive outlook and then seeks a way out. Acceptance of a problem with a calm mind is the first step to solving it. As long as we jump around agitated crying, "Why? Why? Why?" no solution is possible. In the traditional Indian context, with the traditional Indian patient who believes in God and *karma*, this is a strategy that has worked well for me.

Invariably when I saw these patients with chronic rheumatoid arthritis, they would have varying degrees of disability and pain, and were frustrated and depressed because of the chronic arthritis. After I was done with the routine consultation, i.e., detailed history taking and physical examination, the following conversation

usually took place. Invariably, since I would have questioned them in detail about their mental state, many of them would be tearful or close to tears, having ventilated their anxieties, despair and fears.

Dr. HS: *The good news is this - you can certainly get better. But how much better and how fast, God will decide.*

Patient: *That's ok doctor; but really nobody should suffer like this. I have not knowingly harmed anyone; life is very unfair...*

Dr. HS: *Let me tell you one thing. See there are three of us in this room, right? (Pointing to the patient, the person accompanying the patient and myself)*

Patient: *Yes.*

Dr. HS: *Well, if last time around, i.e., in our last birth, we three had attained Vishnu Charana (merger with the Lord), we wouldn't have come back to this circus, right? So, it means the last time around the three of us failed; and to pass those karmic exams we have been sent up again, just like students who fail in March have to take the September exam. At least this time around we must pass; this arthritis is also part of that karmic exam. You have already finished off with a lot of it. Why not we feel happy that so much negative karma has been worked out?*

Patient: *(Looks surprised usually) Ok... (says so not very surely)*

Dr. HS: *You see, we have to look at things that way, because only then can we get out of it. For instance, suppose you fall into a ditch. Getting angry and shouting, "O Why? Why? Why?!" will never help us get out of the ditch. But if we ACCEPT things and say, "OK, I have fallen into a ditch; too bad but doesn't matter. But now how do I get out of this? And then if one calmly tries to find a way out, then*

there is every chance of being able to climb out of the ditch. Likewise let us look at the disease positively. Let us first accept it.

Patient: *(Usually listens keenly by then) Yes, please go on, Doctor.*

Dr. HS: *So, step one - let us accept the disease and try to be happy saying it has helped us cancel a lot of our bad karma. Let us learn to celebrate it.*

Now another question - do you sincerely believe that God loves you more than you love yourself?

Patient: *Yes!*

Dr. HS: *Do you also believe that God will allow only what is really good for you? I mean good for you in a spiritual sense. That he will want only our highest good?*

Patient: *Yes!*

Dr. HS: *Then we have to believe, however difficult it may seem, that in some manner this disease too is good for us; that this suffering is also good for us in some way. Let us accept it as His Will.*

Now by His Grace, let us see how we can get out of it

Patient: *OK!*

I used to go to the extent of trying to get the patient to see the disease was also perhaps a blessing (in disguise of course), a learning experience and so on. It is not easy. As one patient wryly put it, *“What I am looking for, doctor, is for a blessing that is not in disguise”!* But I have found one parable related by my spiritual Master very useful to get across this fundamental truth that we HAVE to bring ourselves to believe that everything happens for the best. The story goes as follows:

A king once cut his finger while slicing an apple. The minister who was watching said, *“It is for your good, Sire!”* whereupon the king got so furious that he put his minister in jail. Later that day the king went hunting. The king got separated from the huntsmen and was captured by a tribe that used to perform human sacrifices. The king was being prepared to be sacrificed when the priest noticed a bandaged finger and declared him as imperfect and not worthy of being a human sacrifice. So, the tribal members set him free. The king then remembered his minister’s words and was full of remorse for having jailed him. Indeed, cutting his finger had been a very good thing; it had saved his life. So, the king hastened to the jail and apologized to the minister for having incarcerated him in jail. *“Oh no! That was very good too”*, said the minister. The king was thoroughly perplexed. The minister explained, *“Had you not jailed me, I would have come hunting with you and got captured; and I would have made a perfect sacrifice!”*.

Relating this story has helped many a patient view his situation more positively.

Sometimes, accepting treatment is the problem. As faith in God is virtually ingrained in the Indian psyche, the patient is able to accept the illness. But he/she finds it very difficult to accept the idea of taking tablets long term. Sometimes the question if-we-have-faith-in-God-why-take-medicines comes up. To this I reply that just as taking our breakfast or lunch in no way demeans or diminishes our faith or trust in God, taking medicines when needed also in no way decreases our faith and trust in God. For it is God who provides the doctor and medicines too. Take them with faith praying to him to make them work well and you will get better; and then slowly we can try to reduce medicines, I used to tell my patients.

Learning to live in the present is a great lesson that my Master taught me. Modern day scientists of Consciousness like Eckhart Tolle say much the same. When I

detected high worry and anxiety levels, the following conversation would often ensue.

“Dr. HS: *How old are you?*

Patient: *Thirty-five years old.*

Dr. HS: *Can you show me where those 35 years are?*

Patient: *(looks rather puzzled and perplexed)*

Dr. HS: *Ok; show me the next 35 years to come in the future; please show me the next 35 years...*

Patient: *(thoroughly perplexed)*

Dr. HS: *So you see; the past; your past 35 years - they are just a memory; they exist only in your mind. And the next 35 years; they too exist only in the mind. Both past and present really have no existence.*

Patient: *(agrees but unable to fully understand)*

Dr. HS: *In life for practical day to day living we need to keep time; at 8am I have to catch the bus. At 10am have to go to the bank, etc. We need ‘clock time’.*

But brooding over the past or worrying about the future make no sense. As both have no real existence. They exist only in your mind and cause worry and attendant chemical changes that make your diseases worse. But the mind is like that. Either by worrying about yesterday that is gone or tomorrow that never comes, you end up losing a perfectly good today!

Be aware! Whenever the monkey mind dwells in the past or future and worries you, pull it to the present! Live in the now. Enjoy your present moment. In fact, if we can learn to enjoy each present moment, our whole life would be so much better!”

My teacher had given us two visualizing techniques using symbols; one, to help quieten a monkey mind and another, to help one get off the emotional rollercoaster.

The Monkey and Snake Methods:

This is a leaf I took out from the teachings of centenarian, late Phyllis Krystal, who could help people all over the world overcome anxiety and worry, through some very simple mental techniques. To quieten the mind, one had to imagine a monkey; one could even dress it up and mentally had to make it wear a harness. As it tended to run riot one had to visualize steadily pulling the belt attached to the harness and deftly tying it up so that it sat quietly to one’s side.

If emotions were getting the better of one, a snake had to be visualized. One had to hold it and wrap it round a branch and finally let the snake’s head bite its own tail. Amazingly one instantly felt that emotions that were running riot had been check-mated. This exercise used to bring an instant calm on many; and was popular and gelled well with patients who were educated and westernized in upbringing.

Cognitive ways Help Patients Understand How medication works:

It is common knowledge that up to 30% of patients attending the medicine outpatient department, actually suffer from depression. Many of these hapless patients go from doctor to doctor and undergo batteries of tests only to be told,

“The reports are all normal; there is nothing wrong with you.” But the pain and lack of energy and depression persist; and they feel unwell, but nobody understands. Fellow family members accuse them of being lazy and fudging symptoms. We see many such patients; tests done come as ‘normal’.

We often refer them to psychiatrists. One of the biggest challenges psychiatrists face is the lack of compliance with prescribed medication. Patients and their family most often scarce understand ‘depression’ or the need to take some simple medicines to come out of it. Thanks to our teacher, we evolved the following conversational approach that helps enlighten the patient and relatives about the pathogenesis of disease as well as the relevance of medicines and psycho-spiritual strategies. Let me quote Dr. Seshadri Harihar:³⁵²

“Dr.SH: You see this tube light here?

Patient: Yes.

Dr.SH: Now supposing it doesn’t work what do you think could have happened?

Patient: Maybe the tube is fused; or the choke did not work...

Dr.SH: Right! Or maybe proper current is not coming from the mains.

Patient: Yes.

Dr.SH: Well, that is what is happening in your case. The organs of your body are like the tube light. They seem to be fine according to your reports. But their function is affected as current coming down the nerves is not ok. Your heart is itself fine. But the current coming down the nerves to the heart is not ok. That causes palpitation.

Patient: Why is the current not ok?

Dr.SH: *Well, you are going through something similar to a 'battery down' situation.*

Patient: *I don't understand.*

Dr.SH: *Let me explain. Tell me, on what power does a car run?"*

Patient: *Car battery*

Dr.SH: *Now in a battery there are cells. Cells have chemicals. If the chemicals are in the right proportion smooth current comes and the car runs, right?*

Patient: *Yes.*

Dr.SH: *Well, our body is like a car. And the brain, medulla and spinal cord are like its battery. They also have cells, and these cells have neuro-chemicals. If the chemicals are in right proportion proper current comes down the nerves and all the organs work normally. If there is an imbalance in chemicals the current is not proper. And the organs, though they are ok, they do not work properly. Your heart is fine; still, you have palpitation. Your head is fine; still, you have headache etc.*

Patient: *Now I understand*

Dr.SH: *Excellent! The good news is we have medicines to set the chemical imbalance right. Just take them and over a few days and weeks with God's grace you will be fine."*

Explaining Psychospiritual Strategies:

Stress precipitates and aggravates both physical and mental illnesses. Helping the patient understand the link between stress and illness helps greatly. They then

understand how psycho-spiritual strategies can help. The following conversational strategy helps get this message across.

“Dr.SH: Just imagine that you are listening to bhajans sung by MS Subbulakshmi or Lata Mangeshkar. How would you feel?”

Patient: I'd feel good!

Dr.SH: Your muscles are relaxed; your pulse and BP are steady... you feel good.

Now, for argument's sake imagine that you are looking out of the window. You see a car come and crash. People are screaming. There is blood all around. What happens?

Patient: Oh my!

Dr.SH: Even imagining it makes you feel so anxious, right? You may feel your heart pounding; you may feel giddy; even faint..

Patient: Yes.

Dr.SH: Let us analyse both situations. Music and screaming. Both are sounds. We hear both with the same ears. Electrical impulses go through nerves to the same brain. Music produces certain chemical changes while screaming produces some other chemical changes and the final effects are different on the body.

Patient: Ok...

Dr.SH: Tension also works like that. With longstanding or chronic tension bad chemicals accumulate and lead to malfunctioning of the body.

Patient: Now I understand

Dr. SH: Music causes favourable chemical changes and you feel good.

Dr.SH: *That is how regularly singing in the choir can help you. Meditation can help you. If you want, we can teach you some of these strategies. What is more, they also help the medicines work better.”*

A patient who understands how meditation can help him is more likely to do so than one just told to meditate.

Elder Care - Facing Progressive Morbidity & Inevitable Mortality; Cognitive Counselling to Care Giver Staff:

Since 2016, I have been involved in elder care as well. One of the first things I noticed was the sadness and depression that hands-on-work staff seemed to ‘catch’ as it were, from the patients who suffered varying degrees of the morbidities of old age. To help the staff in an all-round manner, a one-on-one ‘Life Improvement Program’ was started wherein the staff could come and talk about all matters and they themselves would work out a path to improve their physical, mental and spiritual wellbeing, with my role largely being a supportive facilitator creating an environment of unconditional love. This experiment, which was earlier very successful in India, has found great success in Singapore too.

One of the problems to which I had no answer, in the beginning was this -

Elder care Nurse: *“Doctor, sometimes I feel so hopeless...no matter what we do, no matter how much care we give, these grandpas and grannies steadily just get worse and die... sometimes I feel we are only prolonging their agony. Sometimes I feel so wretched... I used to work in an orphanage earlier. There I used to feel so happy! It was so nice to see the babies growing up to be lovely sturdy children... it*

was so heartening to see the positive effects of the hard work and love we gave... on the other hand, here it is so bleak... ”

This statement left me stuck for an answer. When I sought my teacher’s counsel in meditation, this is what was inwardly prompted. The message went thus, *“Worry not; they will understand. Singapore is a nation where the concept of re-birth is not alien; thanks to centuries of Buddhist thought. Tell them that the work they are doing is as important as in an orphanage. In fact, it is like giving ante-natal care! If the old person dies feeling uncared for, unloved, bitter, resentful and frustrated, then he or she attracts those same negative conditions; after death he/she is reborn then in a negative environment. But if they feel loved, cared for, and have people to talk to and have been at least able to talk their hearts out and resolve any issues that have been rankling in their minds, if they feel relieved and are at peace, then when they die, they attract such peaceful environs to themselves. They get a good rebirth. So giving the elderly a loving environment as they depart is very very important work indeed!”*

I could reassure the nurse successfully at the next session by quoting my teacher’s words; and I added, *“So you see, caring for the very elderly and dying, is like ‘ante-antenatal care’!*

You are preparing them for a better birth; a more glorious future; now can you see how very important this work of caring for the elderly is?”

It was a paradigm shift of perspective. I shared these meditative insights, and it made a lot of sense and many of the staff felt a lot better. In Singapore where Buddhism is followed by many, and culturally, the concept of rebirth is fairly well understood, this explanation seemed to make sense. This explanation enthused many of the staff and they discovered a new meaning and purpose to elder care.

Facing the Why Resuscitate Dilemma:

Another point that would be gingerly brought up was this, *“Doctor, just because relatives insist, why resuscitate elderly with dementia and all kinds of problems? Are we not actually being cruel? It is such a wretched quality of life that we are prolonging...”*

My teacher’s compassionate answer received in meditation, was that resuscitation of such elderly folk was actually training for all of us; to learn to view ourselves and all others from our REAL identity. We had to look at the granny with all these physical and mental challenges as an embodiment of the divine *Atma*. All else was temporary and was just something that had to be attended to with love, with care, with mindfulness. But we had to see only the divinity in that elderly dying granny; love, revere and respect that divinity which was her real identity and attend to the body and mind she was ‘wearing’ with love and respect doing our best to keep her alive and as well as possible, till the *Atma* / divinity decided it was time to discard the ‘old clothes’ of body and mind. One had to learn to see the divine in the human suffering. Echoes of Mother Teresa! Again, a paradigm shift in perspective that transmuted the mundane into the divine and brought peace of mind.

The Challenge of Chronic Illness:

Chronic illness can be a great challenge. In my rheumatological practice, while in India, I was often faced with the following situation. Patients would want an explanation - *“Why did I get this terrible disease doctor? I have never harmed anyone.”* The law of *karma* comes to my assistance often in the Indian context.

Dr. HS: *“This disease is perhaps karmic in origin. But karma is only High Court. God is Supreme Court! Just as the Supreme Court can quash, commute, reverse – any High Court order, God can over-rule any karma. But the Supreme Court does not come on its own, right? Likewise, we have to surrender to God; take sharanagati as they say. And you WILL find that medicines work better; you begin to get better; so pray to your ishta devata (chosen or favourite form of God you worship). I guarantee you that it will help. I will also pray for you. Forms may be different, but God is one. Remember, we are THREE partners in this treatment. You, me, i.e., your doctor, and God; and God is the managing partner. We have to actively involve him.”*

Patient: *“Yes!”* (By that time there is usually hope and a smile on the face)

So dear reader, as you can see, we authors have used to therapeutic advantage, the concept of *karma*, *Atma*, rebirth and so on. Sometimes a smart patient may ask, *“Why is it Doctor that God wants only our spiritual well-being and not our physical well-being? Why is spiritual well-being considered to be the highest?”*

At that point, what we saw in the previous chapter regarding what exactly constitutes, physical growth, mental growth and spiritual growth comes in handy. Explaining it in simple language and asking the patient to name examples of those who achieved the highest in all three types of growth and then putting the question back to them, as to who they felt had attained the highest growth, usually wins the day.

Once when I explained how the *Atma* was all-powerful as it was a part of and identical with the *Paramatma*, one smart patient asked, *“If I have such an all-powerful Atma within, then why do I fall ill??”*

I was inwardly inspired to answer thus - *“Well, it is like this. The sun is all powerful, right? Yet a small cloud can block it. Like that there are a few clouds blocking the Atma. If we can remove them healing will take place.*

One such cloud is karma; and we have just seen how to tackle that.

A second cloud, which is even more important, is our mind. Negative thoughts such as doubts, uncertainty, worry and negative emotions such as anger, fear, sadness, despair and so on, block the Atmic healing light. If we can remove this cloud, then definitely healing can proceed unhindered.”

Patient: *“Just how can that be done?”*

Which brings us to ‘Mental Housekeeping’; it was usually the perfect time to teach them ‘Mental Housekeeping’ as they were in a receptive mood. Let me quote verbatim from an article on Mental Housekeeping that I had penned for the popular magazine, Eve’s Touch, which was reprinted and used in many stress-control workshops etc.⁴⁷³

‘Mental Housekeeping:

“Mental Housekeeping? What’s that?”, was the surprised question my patient shot at me when I mentioned MH which has become part of my routine prescription these days. In these stress beleaguered times of ours, rarely are people afflicted by plague, smallpox and the like. What do most people suffer from? ‘Sugar’, ‘BP’, ulcers, cancer, asthma, allergy, arthritis, heart attacks, stroke, etc. and the biggest cause of these illnesses is ‘tension’, scream the headlines in the health pages of newspapers and magazines.

How exactly does ‘tension’ translate into disease? One important way is by causing various emotions to sprout; emotions such as anger, hostility, fear,

mistrust, frustration, envy, greed and pride. Emotions, though primarily triggered by the brain, are felt all over the body. Feelings evoke various responses in our organ systems, both good and bad. For example, anger causes you to leap up, blood rushes to the face, eyes bulge, offensive speech and body language pour forth, you are unable to think clearly, blood sugar goes up...etc.

Another negative emotion is fear. The person sweats, has palpitations, tremors, rise in heart rate and blood pressure, may even urinate and defecate. In contrast, when a person is happy, his face muscles are wreathed in smiles, there is laughter, BP and heart rate and stress hormone levels are normal. You can imagine how a person plagued by negative emotions is going to fare health wise.

Case in point:

The alarm doesn't ring; so, you get up late. Oh my goodness! Shave in such a hurry that you nick yourself; spill coffee when you read in the paper that your stocks and shares are faring abysmally; snap at the wife and set out; you are racing to make it in time to the office but blast! You have been stuck in that traffic jam for ten minutes now. You reach the office; the meeting has already begun - now where ARE those papers?! You've forgotten them on the breakfast table! Somehow you manage well enough without the papers. Phew! Finally its lunchtime; the grapevine is abuzz with news of the promotion list; your name is not on it... but your colleague's is; a short while later there is a call from the wife - your eight year old has come back from school with a fever; so can you come home a bit early so that she can be taken to the Doctor?

The emotional stress of such a day is enough to open the doors to ulcers, diabetes, and hypertension. Day in and day out the modern middle-class person is a victim of this kind of stress with its consequent emotional turmoil and price in terms of

disease. You cannot prevent the stresses, but you can surely buffer yourself against the destructive emotional responses. *Yoga, TM, dhyana, japa, tapas...* all help but none of them is easy. However one very simple but effective method does exist - Mental Housekeeping, MH for short.

When and Where of MH:

Now, when can Mental Housekeeping be done? It is something that can be done when you get about ten minutes to yourself at the end of the day, and, in fact, it can be done at any time of day. All you need is a place where you can sit undisturbed for a while. It is not necessary to sit in a puja room; many patients have confided that they find the bath/ toilet, an ideal place to practice MH, because it is only there that they are not disturbed.

What does MH involve?

Just as we have to sweep and mop our houses daily to keep them clean and nice, so do we have to dust, sweep and scrub our minds, to keep our mental houses free of emotional dirt. The ancients referred to this emotional ‘rubbish’ as *kama* (lust/desire), *krodha* (anger), *lobha* (greed), *moha* (deluded thinking), *mada* (arrogance), *matsarya* (jealousy), *bhaya* (fear). In modern times researchers have identified anger, hostility, aggressive tendencies, competitiveness, jealousy, frustration, fear, unappeasable greed, sadness as deadly emotions. MH is an effective way of ‘treating’ and ‘immunising’ yourself against these.

Day Analysis:

The first step is the ‘Day Analysis’. Ask yourself whether you were angry, irritated or upset about anything over the previous twenty-four hours. Suppose a colleague had ignored you or slighted you in some way. Unless you clean out the anger from

your system, the minute you see him the next day, your BP is going to shoot up. Tell yourself, maybe he had a fight with his wife or some other problem, and that's why he snapped at you. I must not take it to heart, you say to yourself.

Or try this line. We often meet very irritating co-passengers when we travel by train. But do we pick a quarrel with them? No. Why? Because we tell ourselves, *"Anyway we are going to get off the train tomorrow morning. So why pick a quarrel today?"* Well life too is like that. We arrived yesterday; we are here today; tomorrow we may be gone. Life is such a brief journey. Why fight and spoil it? This also brings into focus the transient nature of all problems; and that itself is therapeutic.

Ask yourself, did anything make you frustrated or envious? If so, sweep it out. Tell yourself, so-and-so probably had better *karma* in his account and that is why he got the promotion - it is some negative *karma* that has made it elude me. God is always just. We have to wait. And anyway we are all ACTUALLY one. There are no 'others', only brothers! Cultivate this feeling of oneness; that you are part of the whole rather than separate. You will be surprised at the sea change in your vulnerability to emotional turmoil. Don't expect dramatic changes overnight. But with regular MH over a period of time, you will find that you slowly but steadily grow from 'I' to 'We'.

Worry and fear are other common contagions. Studies have shown that, funnily, most of our fears are about the future. Worrying about tomorrow people fall ill today. The other problem is crying over spilt milk and getting trapped in the blame-game. It is like stepping on a nail but not lifting your foot off it. Stuck in yesterday's sadness you miss a perfectly good day today. Here again some cognitive therapy is in order. Whatever is to be will be; what is mine will surely

come my way; and what is not mine will not come my way even if I stand on my head. If the mind doesn't buy that statement use logic.

Use Logic to Convince Your Mind:

Ask yourself, “*Could I choose my date of birth? Could I choose my parents? Could I choose my brain, or my skin colour or the length of my nose? Could I choose my educational milieu or my position or status or spouse or children or health status?*”

The logical answer is NO! All these are decided by circumstances which are not under your control.

Even our date of departure is something we have no control over. Things happen in life not as per our will but largely as per some cosmic blueprint. What then is our freedom or choice in life? Our freedom or choice is how we react or respond to our various circumstances. We can respond with fortitude or anger; with fear or confidence; with good will or envy; with laughter or sadness; with arrogance or humility; with contentment or greed. THAT is our freedom; that is our choice. Indeed, making the right responses, to the various situations one is faced with is what life is all about.

The marvellous thing is that anyone given average intelligence, can pick out the right response instinctively; we don't need any education for that. But because of our egos and the desire for body-sense-gratification, in life we end up very often making the wrong responses and they lead to the wrong emotions, paving the way for disease. MH teaches you to gradually make the right responses.

Does MH after a Problem has Occurred, Help?

That is an interesting question.

You may wonder, “*What’s the point in analysing AFTER I’ve made the wrong response and been a victim of destructive emotions?*”

Research has shown that chronic or longstanding emotional negativity is what harms. MH helps nip these negative emotions in the bud. You will find that over a period of time - usually six months to a year - you do get ‘immunised’ to a large extent, against wrong responses, so to speak. When a similar situation recurs in future, you are much more likely to make a right response.

A Natural Corollary to MH:

Faith in God or the self, is a natural corollary to MH; for even the most rationalist minded must agree that there is a difference between a dead body and a living person. That which makes the difference, that which animates the body and makes it the many-splendoured live person, is the ‘Self’ or *Atma*; and that which animates this whole universe is the big Self or *Paramatma*, of which the small Self is an integral part. Logically then, we are, in reality, the Self or *Atma* and not the perishable body that we identify with in the mirror.

This logical thought helps banish another great fear that plagues us all - the fear of death. This powerful thought tells us that we in fact, do not die; we leave the body and that is all. Then comes the next fear - after death what? It is here that faith in a personal God or Guru helps ever so much. We simply know then, that, we will be taken care of, during that onward journey too, for once you have surrendered to the Self, It will guide you, bearing the name and form of your choice, say the scriptures; and all the saints and messiahs down the ages vouch for that. This kind of cognitive therapy helps banish fear; and in its place come peace and calm with their pro-active health-giving properties, and so, we develop true wellbeing. But

just as Rome was not built in a day, this strong mental foundation for health needs to be built brick by brick, day by day.

Mental housekeeping is thus, a most simple but effective way of building positive health. Once I discovered its benefits myself, I felt I should pass on the benefits to my patients. As a rheumatologist, I used MH very often to therapeutic advantage. Often chronic arthritis makes one short tempered, frustrated, depressed; and these negative emotions translate into stress and aggravate the disease. MH helped a lot and has become a part of my routine prescription; and going by the feedback received, it was to the considerable advantage of patients. It definitely helped them feel better.’

Introduction to Energising:

Energising is another technique that has helped many of my patients. But before I share it, a crash course on *prana* / energy field, *chakras* / energy vortices, *kundalini* and the subtle bodies is in order. As seen in the previous chapters, quantum theory has proved that in the ultimate analysis our bodies are waves of energy collapsed into particles by awareness. We also know thanks to advances in physics that there is a biofield around the body and it can be captured by special image capturing techniques.

For those of you who have doubts about the existence of the biofield, here is a simple exercise to feel it. Keep your palms in front of you, facing each other and slowly bring them close to each other. At one point you will start feeling a warmth in the palms, and that is because the biofields of both palms are meeting up. Separate the palms slowly and at one point you will feel a sensation of tingling or pin pricks as the biofields disentangle. It is unmistakable!

Prana:

According to the scientists of Consciousness, just as quantum physics has discovered, we are in reality energy vibrating at a certain frequency in Consciousness; within and without we are surrounded by energy. The awareness faculty of Consciousness, in quantum terms collapses the wave energy form into matter, i.e., the physical body. Its functioning is sustained by energy (*prana*) it draws from the universal energy around it through vortices of the energy body which in space extends through and outside the physical body. Clairvoyants and trained practitioners of alternative medicine are able to feel and perceive this energy body. The body also draws in energy through the breath in some manner that science scarce understands today.

Chakras & Kundalini:

According to the experiential scientists of Consciousness, the energy body has seven *chakras* or vortices. They are not in the physical plane but in the energy realm with physical points only to help locate them. The central vertical axis along which the vortices are situated is called the *sushumna* which clairvoyants describe as a silvery cord. It is believed to anchor all the subtler bodies to the physical body; and at death this connection is lost. Energy flows from the energy streams without and from the breath through these vortices; experiential scientists able to perceive this energy say that it flows in a serpentine manner from the lowest vortex to the highest. This energy or *prana* is perhaps what is called *chi* in Chinese medicine; and the flow of energy on the left and right side are called *ida* and *pingala* in India and *yin* and *yang* in China.³⁵²

The lower three vortices / *chakras* for which the reference points are, just below the perineum, the navel and the solar plexus area, provide the life energy and drive

for all our inbuilt instinctive survival urges. They are partially open through life. *Yoga* helps them open fully. They enable satisfy our hunger, sleep, procreation and self-preservation functions. A powerful potential energy called the *kundalini* is believed to exist akin to a coiled-up spring, at the first or root *chakra*.

The fourth or heart *chakra* is the core of our being which is located a little to the right of the physical heart. The sense of identity occupies this *chakra* and the identity we resonate with, determines the blossoming or not of the three higher *chakras* above it. If one is ego-driven and trapped by the mind to feel separatist, then ego usurps the heart *chakra* as it were, and our entire lives are driven mainly by the lower *chakras* and their faculties. If, however, one has an expansive self-view and feels oneness with all and therefore selfless love for all, then the three higher energy vortices open linking one to higher awareness. The fifth *chakra* called *vishuddhi chakra* (at the throat region) means refinement and our expression of thoughts, words, music, art reflect that refinement of Consciousness that one is able to tap into.

The sixth *chakra* is the *Ajna* – meaning ‘Will’ and is located at mid-brow point. Intellect, discrimination, dispassion, will power and intuition are governed by this *chakra*. The Eureka of men of science arise here. The seventh or Crown *chakra* is the seat of perfect harmony of thought word and deed with selfless love and is the seat of perfection. To recap, the three vortices above the heart vortex connect us to the higher impulses of unitary feelings, unitary thoughts and unitary experience which are beyond words. Essentially life is all about moving from the separatist to unitary existence and experience; all about a journey in awareness, the zenith of which is the sense of omnipresence. The zenith of the of intellectual unitary experience results in omniscience and the zenith of experiencing unitary feelings is

love - the MOST POWERFUL FORCE, that results in the experience of omnipotence.

The Key Chakra:

The key *chakra* that determines which way we head in life, therefore, is the fourth, the Heart *chakra*. Even without knowing anything about the Heart *chakra* all of us intuitively feel that the heart region is where the core of our being is located. Our hands instinctively go there when we say, "*I swear*". That is where we FEEL things from the core of our being when we say things like "*I love you*" or "*Dear God, please bless us all!*" or "*I wish I could do something to reduce his suffering*" and so on, with all Sincerity. The heart region of our bodies is where we seem to FEEL such words. Our truest feelings are FELT in the heart region; our conscience too. It is in the heart that we feel pricked when we go against our conscience.

The mind on the other hand is a different cup of tea. All our machinations and schemes generally hatch in the head and that is where we feel them too; thoughts like "*I'm going to fix him*" or "*How can I make sure that I don't get found out?*" and so on which are narrow ego centred thoughts invariably arise in the mind and are felt in the head; and if you do this little experiment on yourself, you will also find that we usually 'feel' all such 'wicked' thoughts in our heads!

To recapitulate, we need to open our Heart *chakra* if the higher *chakras* are to open out. One method is to try seating Consciousness or one's Master in one's heart and following his teachings. The other way is by simply learning to give love and to receive love. Love is how we experience Consciousness; if we can spontaneously give or receive love like children, trusting all and shutting out nothing, the heart *chakra* will open out.

Role of Chakras & Kundalini in Death, Life & NDE:

Another important function for the *chakras* that we know of is that they are the points of resonance where the subtle bodies link up to each other. Yet another role that the *chakras* have is that they are the route by which the high-powered potential energy of *kundalini*, when awakened rises up. This normally, occurs at physical death and provides the energy needed for the mind - wisdom - bliss bodies and *Atma* to disengage from the physical, snapping the *sushumna* (which I have referred to earlier in this chapter).

However, the scientists of Consciousness from direct experience teach us that it is not necessary to die to release *kundalini* energy. Yogis can awaken and cause the controlled release of *kundalini* energy up the *chakras* even when alive. Having subdued the mind and body, the will of the self, in the case of these adepts, causes the controlled release of *kundalini* energy during life itself and with the help of this energy, they are able to disconnect from the grosser bodies at the *chakras* which act as switch points and thus can experience life in the subtler bodies and realms. They get to directly experience the fact that there is an existence beyond the physical. What is more they also experience "supra human" powers which are but intrinsic to existence in the subtler realms. The super scientists of Consciousness could at will move between the various realms of existence.

According to the scientists of Consciousness, in NDE also the *kundalini* gets activated and results in very profound spiritual experiences. For one thing most NDErs lose their fear of death. *Kundalini* activation can also occur accidentally. Such an uncontrolled release of this powerful energy in an unsuspecting person can lead to the person experiencing all kinds of paranormal perceptions and feelings. According to Bentov, a modern *kundalini* researcher, many such unfortunate

people are misdiagnosed as having mental illness and end up being taken to psychiatrists!⁴⁷⁴

The Mind, Wisdom & Bliss Bodies:

The mind body and mind per se have a very great impact on the physical. The mind is not confined just to the brain but permeates every cell of our physical body. The mind integrates all the messages received by the sense organs and with the help of intelligence, which is a projection of Consciousness, builds up memory stores in the brain and by processing incoming information with past information constructs a world view and unfortunately, a 'new' self-view - the ego.

Hitherto we used to think that the function of retaining the memories of our likes, dislikes, feelings and so on were restricted to the brain; and that memories with regard to antigens and so on were related to the immune system cells. But modern research shows that the yogis were right; that even all our general memories, through the mind, permeate every cell of the body. For example, recipients of organ transplants seem to 'feel' the likes and dislikes of the donors!"

Existence in the mind body - wisdom body - bliss body complex called the astral body is what happens at death. Only the physical body and energy sheath are gone; the personality continues to exist and has to move into a subtler space-time dimension; another world so to speak, say the scientists of Consciousness.

The wisdom and bliss bodies are causal bodies; they are beyond the mind body and hence beyond the binds of ego. One then feels the true expansive self and experiences that all is one. The great scientists of Consciousness like Zoroaster, Buddha, Mahavira, Jesus, Sathya Sai Baba and so on were established in that state even while in the physical. They exhort us that we too, if we succeed in fully opening out our heart *chakra* through selfless love, can experience even while in

the physical, many of the qualities normally experienced in these causal bodies; this refers to wisdom, intuition, creativity, discrimination, dispassion omniscience, omnipresence, omnipotence and so on!.

Liberation - which only Humans are endowed with - getting beyond the physical:

Indeed, possibly this is why, a human birth is considered so precious; for if one can just open out one's heart *chakra* then, as the higher *chakras* automatically open, one can experience all these subtle causal world existences also compressed into just this lifetime, and finally through the crown *chakra* achieve merger with Consciousness. It is quite the quickest way to merger or liberation. To recap, according to the experiential scientists of Consciousness, the quickest route to liberation, is to be born physically as a human being and then to take the *chakra* route up to merger during the human physical lifespan, which apparently, is much shorter than the time one has to live out in other realms. No wonder the rishis always said, "*Getting a human birth is the luckiest of all.*"

This penchant for 'Liberation', the positioning of 'Liberation' as the highest goal of life, so that one redeems oneself from the cycle of endless *karmic* births and deaths, is what sets apart the eastern, particularly Indian, mindset, from the western one. Dr. Robert Lanza and other medical men, with a quantum view of existence, are coming around to the same viewpoint.

The body is the 'earth suit' we wear for this sojourn on earth; and we discard it when worn out, only to re-boot in another dimension as our real self is the nonphysical part of us. The body is important as it is our vehicle for human existence on earth; the vehicle which enables to us love and serve - the primary duties of a human being.

Relevance of the Higher Subtle Bodies to Health:

From the point of view of health why are the wisdom and bliss bodies important? Obviously, the flowering of the intellect, wisdom, intuition, creativity, discrimination and dispassion spell the highest spiritual health. Joy or happiness is a natural end result and this in turn has a most salutary effect on one's physical and mental health as well. What is more, such individuals will end up changing whole societies and communities for the better. Indeed, if a critical number of human beings can achieve this spiritual growth, most of the problems of contemporary society will be solved; and we will automatically achieve all the WHO objectives of physical health, mental health, spiritual health AND social health.

Love is the Key:

Do not worry dear reader if reading about all these *chakras* only confuses and confounds. The only thing to remember is that the heart *chakra* is the key to positive spiritual evolution during life. We have to learn to open the heart *chakra* by learning to give and receive love. That will automatically lead to opening of the higher *chakras* and lead us to Consciousness. Love is therefore the key. From the medical point of view, the wonderful spin off is that positive health will automatically result; for as Ornish, one of the greatest physicians of our times states about the links between love and health, "*I am not aware of any other factor in medicine - not diet, not smoking, not exercise, not stress, not genetics, not drugs, not surgery, that has a greater impact on our quality of life, incidence of illness and premature death from all causes.*"³⁸³

All the information given in the previous paragraphs about the various subtle bodies and their role in life and health is basically just that - information; and information alone has never really helped anyone. The way to transformation and

the flowering of all the positive qualities associated with these subtle bodies during physical life itself, is what counts, and that can be done by one single thing - love; and we have seen from Dr. Ornish's statement, just how important love is, for good health. What is the practical way to achieve that?

As we have seen earlier it can be done by consciously making an inner and outer journey in life on the path of love. The outer journey is serving others selflessly with love. The inner journey is to Consciousness within, with love.

Back to Energising

Energising is a technique that we have found practically, very useful for patients. Energising is one way of making the inner journey and the spinoff is - better health! It is a journey made by using the mind. We create the road with positive words and images. And in the process, the subconscious mind gets programmed most positively through the conscious mind. Positive thoughts and feelings are verily the most powerful pro-healing software so to speak; and this inner journey to Consciousness helps download and install this software, in computer lingo with great attendant health benefits.

So how does one do it?

Step 1:

Sit comfortably in a chair. As one is to receive healing energy sit in an attitude of receiving humbly, and joyfully, with hands on the lap, palms facing up; to avoid distraction close eyes lightly. To be in a relaxed state, slowly breathe in and breathe out. One can count to nine relaxed breaths. Why nine? They say nine is the number of divinity.

Step 2:

Since Consciousness is beyond description and form, practically, it is simpler to visualise one's favourite name and form of Godhead. If one believes in the formless God, then one can just visualise light. It is important to feel the power of omnipotent love as one visualises the omnipresent omniscient One. Visualise name-form and vitalise it by feeling omnipotent love.

Step 3

Relax and mentally say 'I' and notice where in the body, you feel the 'I' sensation. You are bound to feel it in the region of the heart. It is not a specific crystalline feeling; but a sort of amorphous feeling; but it is undeniably felt. Every other part elicits more of a 'my' sensation; like 'my leg', 'my hand', 'my head'... and so on.

Visualise this all powerful, all knowing Godhead of your choice or light coming to your heart vortex through the three higher vortices, at the crown over the head, at the mid-eyebrow point and at the throat. *'Why not as in an IV drip?'*, one smart patient had asked.

I replied doubtless inspired by Consciousness as follows, *"We all know and believe that the Grand Trunk road takes us to Delhi, right? Now, none of us has walked it but others before us have travelled by it and they reached Delhi; and so, we just believe them. Right? Well, just like that, Bhagawan Ramana and Ramakrishna Paramahansa and Yogananda and Sri Aurobindo... and countless others who have experienced oneness with Consciousness have stated that this is the route. So, we just believe it."*

In any case great scientists of Consciousness like them, so full of unconditional love, I guarantee would not lie to us.

Step 4:

Now visualize your chosen form of Godhead lighting up your heart vortex where you felt the 'I' identity. In fact, your real 'I' identity is part of Consciousness or part of your chosen Godhead. Vitalise it by feeling total unconditional love and bliss at the heart vortex / *chakra*. Visualise the loving kindly light spread out all over your body from the heart. Visualise the light moving across your body from head to toe, and side to side and all around, enclosing you in a globe of healing. Fill your heart with an attitude of gratitude as if the healing has already occurred.

Step 5:

General Affirmations are to be made with full conviction. Whatever the human mind can conceive of and believe in, it can achieve, as taught in business schools. State with gratitude that you are already healed. State and visualize the mind being cleared of all anger, greed, jealousy, pride, lust and ill feelings or sour relationships; instead fill the mind with love, forgiveness, humility and gratitude.

Step 6:

Specific affirmations help too. Depending on the disease you are fighting compose your affirmation and state it to yourself with conviction. If you can scarce believe it you can prefix the statement thus, "*Thank you God! I don't know how; but by your grace...*" Visualise the result you want. If it is blood glucose levels, see '80mg fasting blood glucose' and '120mg post prandial blood glucose' reports; if you have been told you have blocks in the coronaries, visualize the blocks dissolving and blood flowing through nice healthy arteries. Visual imagery is very powerful.

Hands as Tools of Healing:

Our hands are special tools given to us by Consciousness to perform actions with. Visualise the loving healing light from Consciousness / Godhead around you filling your hands. Lay your hands wherever you have discomfort or pain with an attitude of gratitude as if already healed. Feel energized and refreshed. Rub your palms together; place on your eyes and slowly open them.

Relax for a few minutes savouring the peace of the moment; then lightly step back into the day. Energising when done daily definitely helps one grow spiritually. From the medical point of view, it accelerates healing; medicines seem to work better; patients report more peace of mind, less fatigue and depression. As explained in previous chapters we have just leveraged to therapeutic advantage, positive neurochemistry created by images, words, thoughts and feelings evoked through the process of energizing. Again at nil cost, with nil side effects!

So-Humming:

In these days of endless queues - at the doctor's clinic, at the ticket counters, while waiting for the bus, during commuting, when stuck in a traffic jam... - any time when time seems to hang on your hands, a simple technique transforms the otherwise frustrating moments to therapeutic advantage. Just sit back, breathe deep slowly and visualize your Self as a glowing light in your heart vortex / *chakra*. As you breathe in slowly mentally say, "So...." And then as you breathe out slowly, mentally saying 'Hummmm...'. "So-Hum" means "That I am". As you breathe in and out, identify yourself with the light within and see it shine brighter. Feel love, healing and all auspiciousness radiating out to you from the Self within. Instead of fidgeting and getting irritated and frustrated as you wait your turn in endless

queues that are a part of modern life, with their attendant negative effects, convert the inevitable ‘waits’ into pauses of positivity which make you feel better.

Prayer:

Regular prayer according to the faith the patients belonged to, always helped. Patients invariably appreciated my suggesting regular prayer. If the patients were atheists, (very few were atheists), then, positive thinking strategies were used. I would also pray for my patients. In my experience the effects of prayer were powerfully pro-healing. For a recap go to chapter 5.

The Power of the Spoken and Written Word was regularly used with great success as explained in chapter 7. I urge young doctors to take up studies in this area.

Sound and Music Therapy:

Depending on the faith they practiced, I routinely advised my patients to join the choir, or go for *bhajans*, or recite the *Gurbani*, or the *surahs* of the Koran and so on. My own personal experience with devotional music had convinced me that it had powerful relaxing, mind calming and possibly subconscious healing power.

In the long term rehabilitation and management of patients with aphasia and patients with gait problems after stroke or due to Parkinsonism, music has been found to be helpful.^{475–477} Soft instrumental classical music or meditation music have been found useful in intensive care settings, even reducing the need for

anxiolytics and hypnotics.⁴⁷⁸ Much music helps patients recovering in ICUs after cardiac surgery.⁴⁷⁹ Children recovering after cardiac surgery benefit a lot with such music therapy as per a 2006 study.⁴⁸⁰

Of course, all music and all sounds are not therapeutic. There are plenty of studies about the deleterious effects of noise pollution, loud rock music and so on.

All the experiential scientists of Consciousness have given sound great importance. Sound is a bridge between physicality and the non-physical, as it is the subtlest form of physicality. Sound depends on the movement of air; and hence, the breath was closely linked to sound. The breath in some way, that we do not yet understand, is also linked to the energy body. The scientists of Consciousness discovered that the conscious individual, therefore, could use the breath to create a suitable sound that helped the individual consciously link up with the energy vortices or *chakras*. The experiential scientists of Consciousness, in various parts of the globe intuitively found that sounds in the frequency of 432 hertz enabled them to reach the higher dimensions through the *chakra* route. The chants of *vedic* mantras, Buddhist chants, Gregorian chants, the sound of *Aum*, *Amen*, *Ameen*... all at 432 hertz and 528 hertz are found to enhance feelings of peace and calm.⁴⁸¹

Music at this frequency has been found to be an effective non-pharmacological way of reducing anxiety and thus reducing pain perception.⁴⁸² Classical music and chants have helped many individuals get beyond the mundane chatter of the mind to the subtler planes of bliss and harmony. While alternative systems of medicine widely use sound as therapy, sound therapy is in its infancy in the practice of modern medicine. Practically speaking, in my experience, patients benefit from simple techniques involving breath or sound or both. Examples are the so-

humming technique, simply listening to devotional or classical music, chanting *Aum / Amen / Ameen* and participating in group devotional singing.

Laughter Therapy

As a fan of ‘Anatomy of an Illness’ author, Norman Cousins who literally laughed his way out of arthritis, when faced with cases of chronic arthritis I often suggested watching videos / movies that made one laugh heartily. I cannot say whether the arthritis improved but their mood certainly did; and family members found it a practical way of getting the patient’s mind off the pain. Just to stimulate out-of-the-box thinking among young doctors who may be reading this, let me relate the story of Norman Cousins.^{483,484}

Norman Cousins, a journalist, was given a few months to live in 1964. He had Ankylosing Spondylitis, a rare disease of the connective tissues. He was told by a doctor who was his friend that he had a 1 in 500 chance of survival. He was told to 'get his affairs in order'. As a journalist, he did some research and hit upon his own solution. He read and discovered that both his disease and the medicines were depleting his body of vitamin 'C', among other things. He began to get injections of massive doses of vitamin 'C'. Armed with a movie projector and a pile of funny movies including the Marx Brothers and 'Candid Camera' shows he checked into a hotel. He spent most of his time watching these films and laughing. In spite of being in a lot of constant pain, he made sure he laughed till his very stomach hurt from laughing. His doctor had written him off in 1964; but Cousins lived on, until 1990.

Convinced by the experience of Cousins and common sense, I used to recommend laughter therapy to patients even two decades ago. It is heartening that newer

reviews and studies vindicate that stand. A 2015 study concludes, *“We concluded that laughter therapy can improve general health and its subscales in elderly people.”*⁴⁸⁵ On a lighter note, an extensive 2009 review in the Journal of Family Medicine recommends, *“As Robert Provine, the noted laughter researcher, commented in the documentary Laugh Out Loud, “Until the scientists work out all the details, get in all the laughter that you can!”.*”⁴⁸⁶ Medical practitioners could begin to help patients get more laughter in their lives. Following the announcement of a study of the benefits of laughter on endothelial function⁴⁸⁷, Dr. Michael Miller, one of the study’s authors, said he envisioned a time when physicians might recommend that everyone get 15 to 20 minutes of laughter in a day in the same way they recommend at least 30 minutes of exercise.⁴⁸⁶

The 2009 review article added, *“Although physicians’ advice about health-promoting behaviour might have a limited effect in some cases, it can certainly be a catalyst for change. Specifically, medical practitioners might acquaint themselves with opportunities such as laughter clubs, which are available for their patients and provide information and endorsements. Let us begin to consider that, along with eating your vegetables and getting enough sleep, laughter is a sound prescription as a wonderful way to enhance health.”*⁴⁸⁶

These simple psycho-spiritual strategies were very useful in improving patients’ compliance with treatment and in increasing trust and faith in the treating doctor. In some manner it seemed to switch on as if it were, a ‘healing button’ in the patient’s psyche and clearly the same medicines worked better and overall response to treatment was beyond one’s expectations, which single fact alone makes it well worth the extra time and effort spent on psycho-spiritual strategies. Particularly in this age of non-communicable diseases which are all linked to

stress, these psycho-spiritual strategies, suitably adapted to for different cultural settings, may turn out to be a priceless value addition to conventional treatment.

On cost-benefit analysis, they win hands down as they cost next to nothing and do no harm whatsoever. If modern healthcare which is staggering under the stress and strain of cost, both financial and mental, is to move on to excellence, then these low-cost psycho-spiritual strategies, which may not interest big pharma, nevertheless merit serious study by mainstream medicine.

Is there any contraindication to joining a ‘Laughter Club’ that encourages vigorous belly laughter? People with hernias should avoid it; and in some asthmatics, laughter can set off a wheezing spell.

To Individual Excellence & Honing the Healer in You:

The Great *Siddha* physicians of South India who walked the earth allegedly, around 10,000 years ago gave paramount importance to individual spiritual excellence for they believed that individual spiritual growth and excellence, in itself endowed one with healing abilities.⁴⁸⁸ Their perspective of healing becomes all the more worthy of study as modern science is slowly but steadily veering to their point of view, regarding human existence.

The ancient *Siddha* tradition laid great importance on physicians being trained to be selfless, loving, caring and compassionate, by developing an expansive sense of self through meditation and *yoga*. Western scientists have also propounded of late, the importance of compassion in medicine. While western science draws deductions by objective measureable evidence, the eastern system relied on going inward.

Findings from the Ancients - through Observation, Contemplation & Meditation:

The ancient Masters of India drew deductions by observation, and thereafter by concentrating on, contemplating on, and then by meditating on nature and on their own selves. Meditation, simply put, is going inwards to the various levels of existence of our own selves, in Consciousness. According to these ancients, behind the physical existence, there is a mental existence and even deeper to it exist subtler levels of existence, till the centre point of existence which is pure Consciousness. Deductions were made by accessing and functioning from these different levels of existence. The *Upanishads* contain many examples of such rational deductions.

By observation the ancient Indian Masters deduced that though food, water and air were equally important for existence, the more subtle the element the more crucial its need was; one could live for weeks without food; but only days without water; and only minutes without air. Energy, that was subtler, was even more vital; for example, a cardiac arrest could kill one in seconds.

Thoughts and feelings which constituted the mind, were even subtler; so powerful was the mind that a mind gone awry could cause one to self-destruct; even commit suicide. They studied the mind through observing, contemplating and meditating on it. While going inward to the self, through meditation they discovered that the mind was the first thing that one encountered. By contemplating on it, they deduced that it was just a bundle of thoughts and emotions. By witnessing the mind, i.e., watching thoughts and feelings pass by, they realised that one's identity had to be beyond thoughts and emotions. As one could observe one's body and mind as a witness, one obviously had to have an identity that was in reality beyond

the body and mind. Name and form were thought / ego-based identities; just as a ball of wool is only thread rolled on itself over and over, ego is only thoughts and emotions rolled over; ego had no real existence. They thus concluded that the body and, mind and energy were only vestitures worn by the real self within.

Processes of the Mind:

According to them, the mind basically had four kinds of mental processes.

First comes the intellect or survival intelligence; second comes one's sense of identity which governs the entire direction of one's thinking process. Generally, this is based on one's ego identity; this fosters separatist thinking and tends to dissect all information; which modern culture emphasises too much to its peril.

Third is the emotional mind which is linked to memory, and keeps one in turmoil. Of memory, besides immediate, short- and long-term memory, they spoke of past life memory, genetic memory, species memory, *karmic* memory... In fact, they spoke of a 'mind body' linked to memory, which again, they deduced, was a vestiture of the self.

Fourthly they conceived of a heart-centric aspect of the mind - '*Chitta*' - which was the seat of feeling. Negative feelings due to ego based perception and reactions imprinting on the *Chitta* led to an impure *Chitta*. Purifying the *Chitta* by borrowing the intelligence of the wisdom body and learning to perceive and react from the identity of Self rather than ego, was the way to *Chitta Shuddhi* (pure heartedness). Obviously, a pure-hearted one is spared the stress and consequent ill health that can come on with negativity.

Chitta unsullied by negative memories could lead you to your Inner Self. The entire usual sense of identity then changes, with consequent effects on your

thinking, your emotions and memory. The mind was not the end; or the deepest part of you. Getting to the *Chitta* and thence through pure unsullied intelligence to the even subtler dimension of love-bliss and a sense of identity based on Oneness experience was to lead you beyond the 'mind'. Importantly, for the ancients in the subcontinent, this was NOT just an intellectual exercise but an experiential reality!

The Supreme Intelligence / Wisdom Body:

The ancients discovered that through deep meditation, they could go past the mind, and tap into a supreme intelligence that permeates the body; this vestiture of pure highest intelligence, which was beyond the mind-body, they discovered, was in fact, part of the omniscience facet of Consciousness. This was an intelligence far superior to the ego-related survival intelligence; and was present in every cell of the body. In simple terms, it is the intelligence that turns cheese and toast into a human body; the intelligence that creates the wonders of nature; the intelligence which leaves scientists awestruck at the perfection of creation.

In fact, this finding has been referred to as the “*Goldilocks Principle*”. Hundreds of parameters of the cosmos, near miraculously, combined to make conditions, which like in the final Goldilocks’ choice, was not “*too this*” or “*too that*,” but rather “*just right*” - for life! Only a highest intelligence could have worked it out; ordinary folk call it God; scientists are forced to admit that there must be Consciousness with supreme intelligence behind it. The old theory of the universe - that such perfect conditions occurred randomly - seems not quite plausible. Lanza says that in order for science to move forward, it needs to venture into new territory. “*Science hasn’t confronted the one thing that’s most familiar and most mysterious, and that is, of course, Consciousness.*”²⁸⁴

This meditative ability to tap into supreme intelligence or wisdom, enabled the ancient Masters to make, what in retrospect, seem to be fairly flawless conclusions

The Wisdom of Oneness Experience:

A very important meditative insight and experience of the ancient Indian Masters was that that this wisdom body or supreme intelligence body / vestiture was a singularity. All of creation shared this higher humane vestiture of supreme intelligence, which they called '*Vijnana maya kosha*' (supreme intelligence / wisdom body) Therefore, on reaching this wisdom body plane, meditatively, the ancient Indian Masters experienced a oneness with all of creation. They learnt from this unitary experience that the evanescent vestiture of the body was also a conglomeration of elements of nature so transformed by the supreme intelligence and held together by energy which was in the final analysis sun dependent. The mind, which was a thought and feeling of this higher intelligence tended to project outward through outward bound senses and perceive separateness rather than oneness. Only if it was trained to go back to its source would it realize essential oneness of all existence, which would then cause a paradigm shift in the way one perceived oneself, others and the world.

Wisely, these Masters chose to identify themselves with the subtler, more permanent parts of themselves rather than the evanescent body which was subject to decay and death. They recognized that the value of the body was that it provided a physical vehicle for existence in the physical plane. Not any more, not any less. Naturally these Masters, thereafter, felt total compassion for all; as they knew from meditative experience, that all were part of one.

The Love-Bliss Body:

Going beyond the wisdom body, meditatively, they experienced an envelope of love-bliss which was again a singularity - the '*Ananda maya kosha*' (the bliss body). One felt overwhelming love for all, as all was part of one. Compassion was second nature to these Masters. Sacrificing one's body-mind for others needed no second thought. All the great Masters of mankind are examples of this living in love.

Even beyond the love-bliss vestiture, said the meditative Masters of India, was the Self, or Consciousness which they just called 'that' (*Tat* in Sanskrit). Its qualities they listed as attributeless, ever delightful, ancient Lord of all, in whom reside all, eternal, pure, supremely intelligent, free, blemishless, formless and yet embodying all this..! (in musical Sanskrit, is *Nirgunam, Niranjanam, Sanaatanam, Niketanam, Nithya, Shuddha, Buddha, Mukta, Nirmala Swaroopinam*) Since it was pure and changeless over time and space '*Tat*' qualified to be called the 'Truth'; as by definition, truth is what remains changeless over time and space. The concept that Consciousness was 'Truth' arose thus.

Our Real Identity:

The ancients therefore declared that *Atma* / Consciousness which qualified to be called the truth, and was present everywhere, was man's real identity. Teachers of *Advaita*, in India, emphasise, "I am God; and so are you; so is all that ever was, is and will be." Interestingly, Neville Goddard, a great Christian spiritual teacher of the twentieth century said much the same thing!⁴⁸⁹

All these Great Masters, both ancient and modern, found the answer to the question human beings had searched for over eons - who am I? You and I are in reality part of that one truth or Consciousness, they declared; separate existence as a body was

an illusion, they said. ‘*The truth will set you free*’, is an echo of this momentous finding!

Quantum physicists say much the same thing; all matter is energy and energy exists as possibility waves until an observer effect collapses then into particulate matter. All things - including this solid world or solid bodies - are really no-thing declare the quantum scientists, echoing the ancient Masters.

Since it was constant over time and space the faculty of truth bestowed the quality of omnipresence to Consciousness. Consciousness was therefore present everywhere all the time. Consciousness was the ‘Source’ of all else; the source of creation clothed in multiple vestitures. The vestitures of love-bliss, supreme intelligence and the mind, were also potentially everywhere, deduced the ancients. By going inward with focused intention, a mind could be trained to make use of the vestitures of intelligence and love-bliss.

Contemplation led the Ancients to Human Values:

Through contemplation of existence, the ancients thus deduced the paramount importance of the two cardinal human values in life, i.e., truth, (*Sathya*) and love (*Prema*). Building on these two values they derived three more, i.e., non-violence, right conduct and peace. Taken together the five values gave a road map to a life of compassion and completeness. Hence it makes sense to look at it before delving into the mayhem of present-day healthcare.

The first derivative of the two cardinal values of truth and love, was non-violence, which is best represented by the Buddha. It is easy not to be hurtful to people who do not hurt one. But according to the ancient Indian Masters, a natural corollary to the truth is that there are no others; all are one, is that therefore one should not hurt anyone; in fact, one should feel for others; one should feel pain when one sees

another suffering. The seeds of compassion are sown thus. At the cost of repetition from earlier in the book, I quote a Zen Master like conversation that my teacher repeatedly dinned into us.

Student- *“Well, I never knowingly hurt anyone.”*

Master- *“But then what if someone hurts you? Do you retaliate?”*

Student- *“I don’t retaliate; but I do feel anger and resentment within.”*

Master- *“Even that has to be eschewed. Sometimes you bite your tongue right?”*

Disciple- *“Yes...”*

Master- *“Then do you take a stone and knock out the tooth that bit the tongue?”*

Disciple- *“No!”*

Master- *“Why not?”*

Disciple- *“Because it is part of me.”*

Master- *“Exactly! The person who hurts you is also just a part of you! So no feeling angry, retorting angrily or resorting to violent actions...”*

NON-VIOLENCE means no violent thoughts, words or deeds. Non-violence is the foundation for compassion.

Another derived value was *DHARMA*; again, most well known by its association with Buddhism where it is called ‘*Dhamma*’. Simply put it means right conduct. Conduct is but thought, word and deed. Right conduct is just thoughts suffused with selfless love, words suffused with selfless love and actions suffused with selfless love; this would obviously mean living a most compassionate life.

The third derivative was PEACE which could be achieved in two ways; a life based on the other for values would automatically lead to peace. The other way was to just practice regularly go inward through meditation; peace and calm are the signatures of a regular meditator. In this day and age, Jain and Buddhist monks are an ideal example of this state.

Siddhas & Siddha System of Medicine:

The ancient physicians of India, called *Siddhas* made use of meditation to tap into these vestitures of the self, to the benefit of their patients. By using the mind right, i.e., by shining one's awareness in a totally focused manner, on the omniscient intelligence aspect, one could make discoveries, sharpen intuition and achieve perception beyond the ordinary. This ability to achieve perception and other abilities beyond the ordinary, in fact, gave the name '*Siddhas*' to these physicians; a '*Siddha*' was one who attained 'powers or *Siddhis*' through meditation.

The *Siddha* system of medicine, the most ancient system of medicine that present day mankind has known, continues to this day in south India. "*The Siddha System of Medicine (Traditional Tamil System of medicine), which has been prevalent in the ancient Tamil land, is the foremost of all other medical systems in the world. Its origin goes back to B.C 10,000 to B.C 4,000.*", states the National Institute of *Siddha* Medicine.⁴⁸⁸ Meditation, *yoga* and awakening the '*kundalini shakti*' – all of which helped the *Siddha* physicians tap into and be guided by supreme intelligence, was part of the training of ancient *Siddha* physicians.

This was the way the ancient eastern physicians tapped and received knowledge about the healing properties of herbs, and various other therapies. To quote the National Institute of *Siddha* Medicine, "*The system is said to have emerged in*

*antiquity, from the highly evolved consciousness of the Siddhars. The clarified intellect and heightened intuition of the Siddhars, resulting from their yogic powers, enabled them to explore the world around them and exploit its natural resources for the sake of humanity.”*⁴⁸⁸ Practically, in the course of treating patients, ancient *Siddha* physicians used to advantage the omniscience facet of Consciousness. Through deep meditation, they sought intuitive guidance from supreme intelligence within, to choose lines of therapy. The love-bliss envelope of Consciousness represented omnipotence.

Love is all powerful as world famous cardiologist Dean Ornish writes, *"Being loved and cared for, itself is the most therapeutic energy..... and the contrary is true too; people who feel lonely and isolated, have a 300 to 500 percent greater risk of premature death from physical illness".*³⁸³ The ancient physicians who could tap into the love-bliss envelope found that they could become healers just through the power of love. This explains how the great Masters like Buddha, Jesus, and others who were literally embodiments of this absolute pure, selfless love, could heal people with just a touch or glance.

To the *Siddha* physicians, the ability to heal spontaneously, was another ‘*Siddhi*’; that could be attained through deep meditation. Since the love-bliss aspect of Consciousness is omnipotent, as a rule, humble, sincere prayers were offered lovingly by the treating physician to universal Consciousness to heal the patient and only then was any kind of treatment, begun. The patient was also urged to pray and then consume the medicines. It was very clear to both the healers and patients- it was Consciousness that healed; the physician or surgeon only treated.

The double benefits of Meditation and Compassion:

The ancient *Siddha* physicians were quick to perceive the double benefit of the practice of meditation and human values on health; it helped not only helped the patients heal, but the doctors also improved in health. To summarise - the ancient physicians of India used to advantage the fact that meditation was not only a way to get answers to problems of patients, from the universe, but the very process of meditation made one happy, long-lived and healthy. So, meditation became a part of life for all physicians in training. Further, eastern traditions believe in reincarnation and the law of *karma*; a life of kindness begets a good future life.

The ancient *Siddha* physicians were the best example of such medical men whose training included meditation and *yoga*. To quote the National Institute of *Siddha*, “*Siddhars, of Tamil land, were mystics, yogis, poets, devotees, seers and medical men of various combinations and various statures. They were superhuman beings who possessed supernatural powers (like Eight types of Siddhis). They were the greatest scientists of +ancient times and were the guardians of the world and they existed, and still exist, for the benefit of the public at large... A line of 18 Siddhars, existed with Agastya being the foremost; and a large portion of Siddha lore is credited to him. With time, this oral tradition was transcribed on palm leaf manuscripts that now serve as the major repository of the knowledge.*”⁴⁸⁸

All-time great *Siddha* physician, Agastya who is remembered for his contributions to *Siddha* medicine, the four *Vedas*, to both Tamil and Sanskrit language and literature, is an ideal example. Palm leaf manuscripts, apparently, put his date of birth 7673 BC; and like persons described in the Old Testament, he allegedly lived for millennia. Many *Siddhars* allegedly had lifespans like the Old Testament Masters; unimaginable today. To quote late Dr. Mandayam Kumar of the

Bangalore *Siddha* Research Institute, whose lifetime work was translating ancient palm leaf texts, “*With the help of these scholars, Sage Agastya conducted a conference at Courtalam and founded a hospital and research institute at Thoranamalai, for the propagation of medical science. In commemoration of this conference of eminent Siddhas, the year has been named as Sidhaarthi Samvatsara, the 53rd year of Kali Yuga. (3049 BC)*”¹⁰⁴

In fact, the palm leaf manuscript reveals that Agastya along with other *Siddha* physicians, when formulating the curriculum for the Thoranamalai medical school and research institute gave meditation and *yoga* pride of place. Dr. Mandayam Kumar states and I quote, “*At Thorana Malai Research Institute, provision was made for teaching students from different parts of the world in five distinctive subjects in a systematic manner. Firstly, they were taught philosophy to understand the relationship of soul and matter, the process of evolution and attainment of reality. Secondly, they were trained in different branches of Yoga to attain perfection or Siddhi through the process of meditation. Thirdly, they were thoroughly taught Astronomy and Astrology, which are inter-related. Fourthly, they were trained in alchemy. The last subject to be taught was the Science of Medicine. With these they would be thorough in their diagnostic capacities through the Nadi system, i.e., pulse reading. The science of pulse reading is very subtle which would be understood only with the practice of Yoga and cannot be explained through texts.*”^{104,490}

The *Siddha* code of medical ethics reads like a more ancient version of the original Hippocratic Oath.⁴⁹¹ Evidence is accumulating thanks to inundation map studies, oceanographic exploration by the National Institute of Oceanographic Studies and individual researchers like Graham Hancock and seabed structure studies that a highly developed civilization existed beyond present day southern shore of India,

where *Siddha* Medicine flourished. Two extinction level events due to meteoric impacts led to sea-level rises and inundation of these lands, around 13000 and 11600 years ago.

The knowledge of the ancient *Siddha* physicians possibly reached the Greeks through translation of the *Siddha Vedam* into Greek, and through maritime routes from ancient Sri Lanka and influenced Greek thinking around 3000 BC and thereafter. Going into depth on that is beyond the purview of this book; but Agastya's '*Sillarkovai*', lists the virtues desirable in a *Siddha* physician. It has been quoted in many Tamil books and a recent research document published as a book states, "The *Siddha* physician must care for his patient as the eyelid cares for the eye. The *Siddha* physician must look after his patient as a mother looks after her sick child." Such was the compassion expected of ancient physicians.

This practice was continued by Agastya's students. In a recent paper Narayanan and Rajasekaran state, that Thirumoolar, student of Agastya, established a medical hospital and medical school in Thiruvaaduthurai. What is noteworthy is Thirumoolar's advice to physicians in training; he wrote, '*of the need for Man to control and discipline himself through Yoga to realize the God in him and thus attain the highest spiritual state. For Siddhars, who are always healing others and doing good to others seeking self-realization is vital; such wise ones must undergo Rejuvenation and Longevity through Yoga for the good of the general public and for their own salvation in life.*'"⁴⁹² Thus the *Siddha* physicians were urged to practice self-care; to learn *yoga* (which includes meditation), which enabled one to live long, serving others and attaining salvation themselves. As these practices result in an expansive self-view, for such physicians, kindness and compassion would be second nature.

In summary the ancient *Siddha* system of medicine prevalent in south India clearly underscored the importance of individual spiritual growth and excellence in physicians. One's ability to heal was considered directly proportional to one's spiritual growth. In fact, even today traditionally trained *Siddha* practitioners practice a 'Continuing Spiritual Education'. They go regularly to the '*Jeeva Samadhis*' (Living *Samadhis*) of the Great *Siddhars*, which are usually near temples and spend time meditating to recharge their spiritual and healing batteries. The modern scientific reader who is reading this may well fall out of his chair when I state that the fully accomplished *Siddhars*, after a long innings in the physical, would voluntarily want to get walled off in subterranean enclosures while in deep meditation. From these 'Living *Samadhis*', millennia later they guide and instruct present day *Siddhars* and the faithful who seek their counsel in meditation, by telepathic means! I can relate to it; for when I am in a receptive state of meditation, I am inwardly prompted by my teacher. Meditation has also helped me become more intuitive. Certainly, this has helped hone my healing skills. Call it a physician related 'placebo effect'; but this is possibly the reason why, though two doctors prescribe the same medication to the same patient, one doctor's prescription works, while the other's does not. In south India this is called '*Kai Punyam*' (read as Healing Hands). Doctors, who by word of mouth get to be known as doctors blessed with '*Kai Punyam*', have endless queues of patients!

An Aside - Valuable Food for Thought and Research:

Even today accomplished *Siddha* physicians and saints go into '*Jeeva Samadhi*'. But because of modern laws against suicide, they do so silently. As an interesting aside I must mention the case of Swami Nirmalananda which made news in 1997. He had declared to his friends around the world, that he would be taking *Samadhi*, on such and such day. The 'Rationalists Association' got wind of this and filed a

case against him on charges of ‘intention to commit suicide! They got a court order to post two policemen at his humble *Ashram* to ensure that he did not do anything rash and kill himself. On the appointed day, Swami Nirmalananda sat in the lotus posture, went into deep meditation and exited the physical, just as he had declared he would!⁴⁹³

Jeeva Samadhi is common in the Buddhist tradition too. The exhumed body of a Buddhist lama in Russia, was found to be remarkably well preserved; almost alive! “*Ivolginsky Datsan in Eastern Siberia is one of the major Buddhist temples in Russia. It is also home to Dashi-Dorzho Itigellov Lama, the chief figure of Russian Buddhism before the October Revolution in 1917. After being buried for decades, his body was exhumed, only to find that there were no signs of decay on it. Now he is worshipped as a saint.*” states a 2020 media report. No medical studies are permitted on the body for religious sentimental reasons.⁴⁹⁴

Getting back to the *Siddhas*, even today, in Tamilnadu, *Siddhas* go into *Jeeva Samadhi*. Surely this phenomenon is valuable food for thought and research; that modern medical doctors need to study with humility, reverence and an open mind.

What of *Ayurveda*?

I can almost hear you say, dear Reader,” Where does *Ayurveda* fit in?” *Ayurveda* is the younger brother of *Siddha*. Timelines as well as system components separate the two. According to traditional belief, Siva is considered the first *Siddha*. He apparently taught the system to Parvati, his wife, Nandi, his servant and to the *Sapta Rishis* (seven great Rishis). They antedate the *Avatars* of Vishnu according to the scriptures.

Ayurveda was founded by Dhanvantri, a form of Vishnu, who emerged with the elixir of life and healing following the churning of the oceans, during the second *Avatar* of Vishnu, the *Koorma Avatar* (tortoise form of Vishnu).⁴⁹⁵

As for system components, both *Siddha* and *Ayurveda* systems share herbal remedies. But the use of minerals and metals is more in the *Siddha* system. Energy medicine originated and is practised in the *Siddha* system. Trans-dimensional communication and accessing the guidance of Great Masters who continue to be available in the subtle, is a hallmark of the *Siddha* system of medicine. In fact, the highest aspiration of *Siddha* physicians is to ultimately conquer the physical and move into the subtle as an immortal *Siddha*. I personally know of one young *Siddha* physician who routinely receives trans-dimensional guidance from the premier Great *Siddha*, Agastya. To me, this statement seems ‘normal’; for my teacher graciously answers my doubts in meditation. Perception can be enhanced through meditative practices.⁴⁹⁵

Science today accepts that extra sensory perceptions like pre-cognition exist. In fact, ‘remote viewing’ was made use of by the US military for two decades. For security reasons we cannot access information about its present status. Studies documenting near death experiences have also found a scientific forum in the International Association for Near Death Studies for presentation and their peer reviewed index journal is a valuable source of authentic information on the subject. Other journals are also open to the concept of paranormal phenomena.^{410,496–502}

The extensive experiential knowledge that has come down the generations from the ancients in the east, about the various dimensions of existence, is not yet known in the west. However, having lived in rural India, and having experienced trans-dimensional events in everyday life, this knowledge, which westerners would be

apt to consider preposterous and impossible, has become part of ‘normal’ life for me; just as it is for many Indians. Let me list a few such events.

1) At the annual temple function next to our ancestral house the priest goes into a trance and connects trans-dimensionally to the deity and predicts future events and counsels families. The oracle’s words have invariably proved accurate.

2) During the annual function of ancestor remembrance, the behaviour of crows in whose forms ancestors are believed to come, is remarkably different to their behaviour normally; especially when the offerings are made with great sincerity.

3) Telepathic communication with those who have passed on. From personal experience I can vouch for the fact that it happens. My late mother has helped on occasions when I sought her counsel; and on occasions, she has acted on her own, to pre-empt problems. Perhaps I should elaborate this point. This was in 1991 after she had passed away. One night, I felt her repeatedly urging me to keep the keys of the steel almirahs away. Since I felt her repeatedly urging me to keep the keys away, though I was dead tired, I went down and brought the keys up.

Normally, they used to be kept on top of a cupboard in the bedroom on the ground floor of the house where my father slept; and anyone looking in through the bedroom window from outside could have seen the keys. In fact, half the window had no bars as an air conditioner was to be fitted. So, one could enter the room from the outside through the window!

The next morning there were policemen swarming all over. A thief had broken onto the ground floor bedroom in the house next to ours and had scissored off the golden anklets of our neighbour. Mercifully she had slept through it. Father’s bedroom was just on the other side of the low wall between our house and the bedroom of our neighbour’s house which had been broken into.

Reconstructing the event, very likely the thief would have checked out our ground floor bedroom. Had the keys been on the cupboard, he would have clambered in through the window with its inviting gaping opening! Probably seeing nothing interesting and just an old man sleeping, he chose to break into the bedroom next door! Mother's timely intervention prevented what could have been an ugly event. Those who have passed on, possibly have pre-cognition of events.

I have documented the uncanny telepathic messages relating to two medical colleagues, one who was on life-support, and another just after death was declared, in chapter five.

4) The annual festivities related to Muruga and the Divine Mother, are big events in Chennai, wherein deities are invoked and the faithful pierce their cheeks, tongues and torso with sharp metal rods. There is no antiseptic or anaesthesia given. Amazingly there is minimal bleeding and the wounds on removal of the rods / spikes close with no sepsis, no scarring. The only thing that is applied when the metallic sharp objects are removed is holy ash (*Vibhuti*). I have watched this from close quarters when we participated in the festivities on one occasion; and I was awestricken by what I saw with my own eyes.

5) Fire walking. This happens every year in the temple next to my house. There is no burn on the skin or soles of the fire walkers.

6) Materialisation of holy ash, lockets, chains, idols for worship by spiritually awakened fellowmen - I have myself witnessed this phenomenon associated with at least seven people. This list includes one Muslim gentleman as well. All of them attributed the phenomenon to the divine manifesting the materialization through them. None of them had any conflict of interest of any kind. The materialisations were all given away for free.

7) I may add that in our own home, to our utter amazement, we have had materialisations happening. We were astounded as it stood all the laws of science as we knew them, on their head. It had a most humbling, sobering effect on us; and made us view these phenomena with a new-found respect.

I scarce understand all these phenomena described above; but I can vouch for the fact that that they do occur. Facts must be stated; and it will be a matter of great satisfaction for me, if young doctors trained in modern medicine, research these phenomena that point to the existence of a trans-dimensional aspect to human existence.

Getting back to the power of human beings to heal, I find it most heart-warming that science is also veering to the same conclusions as the ancient *Siddhas*; that human beings can positively impact the health of others by non-physical means through intention. Of course, the modern medical establishment is about fifty years behind these findings; but pure science researchers and researchers from alternative systems of medicine have made remarkable advances in studies related to the mind and ‘heart’. The most important *chakra* in the Indian tradition is the heart *chakra*; and the west too is rediscovering this vital door to Consciousness through research on the heart.

Indeed, the heart is much more than just a pump. It seems to be the seat of an intelligence that is independent of the brain with connections to the brain and all the organ systems of the body and as seen in chapter five, seems to verily be the conductor of the symphony that the human body is. What is more it seems to be the real seat of feeling; and feeling generates energy fields related to the heart which have the ability to affect both one’s own body and mind and that of others. A lot of the scientific evidence that supports the techniques towards individual excellence

that will in turn hone your healing skills come from the Virginia University, Institute of Heart Math and so on. Let us quickly recap what we learnt in chapter five. Here goes -

There is energetic communication between the heart and brain. The nervous system acts as an antenna, which is tuned to and responds to the magnetic fields produced by the hearts of other individuals. This energetic information exchange called energetic communication is an innate ability that heightens awareness and mediates important aspects of true empathy and sensitivity to others. This energetic communication ability can be enhanced, resulting in a much deeper level of nonverbal communication, understanding and connection between people. The crux of the matter is that this type of energetic communication between individuals may play a role in therapeutic interactions between clinicians and patients that has the potential to promote the healing process.

This is exactly what the ancient *Siddhas* deduced by going inwards; and they used it to the highest benefit of patients and their own selves. Based on the scientific evidence we have, it makes sense for us healthcare professionals to make use of this property of the heart to become more effective healers. We saw in chapter five that ECGs of two people shows that signal transfer is radiated between individuals. Training to improve heart coherence improves this communication. We also saw that the heart of one person can cause measureable changes in the brain of another - data show it is possible for the magnetic signals radiated by the heart of one individual to influence the brain rhythms of another; in addition, this phenomenon can occur at conversational distances. The degree of coherence in the receiver's heart rhythms appears to determine whether his/her brain waves synchronize to the other person's heart.

To quote Heart Math, *“This suggests that when a person is in a physiologically coherent state, he or she exhibits greater sensitivity in registering the electromagnetic signals and information patterns encoded in the fields radiated by others’ hearts. When people are able to maintain the physiological coherence mode, they are more internally stable and thus less vulnerable to being negatively affected by the fields emanating from others. It appears that increased internal stability and coherence is what allows the increased sensitivity to emerge.*

*This fits quite well with our experience in training thousands of individuals how to self-generate and maintain coherence while they are communicating with others. Once individuals learn this skill, it is a common experience that they become much more attuned to other people and are able to detect and understand the deeper meaning behind spoken words. They often are able to sense what someone else truly wishes to communicate even when the other person may not be clear in what he or she is attempting to say. The Coherent Communication Technique helps people to feel fully heard, speak authentically and with discernment and promote greater rapport and empathy between people.”*³⁸⁵ This technique therefore promises to be a good way of increasing compassion in healthcare.

Individual Techniques Combining Breathing and Heart-Feeling:

This technique can be used to help yourself as well as to help others.

Technique to Impact others:

This technique was worked out thanks to my teacher; and significantly, it has helped many people. Vitiating inter-personal relationships have improved; negative thinking mind-sets have turned positive. These inferences were made since the

improvements occurred in time coinciding with the initiation of this practice. The practice is as follows:

Step 1:

Sit comfortably in a place where you will not be disturbed. Take a few deep slow breaths in and out. Visualise your subject. Take care NOT to have any judgmental thoughts or feelings. Then focusing on the heart region feel love and compassion for the person whom you seek to help. Put out the positive intention.

Step 2:

While feeling intense love and compassion breathe in slowly and deep imagining that the breath is drawing in God / Consciousness Love energy into your heart. The positive intention is then then articulated with all your heart.

Step 3:

Breathe out slowly imagining that the out breath is carrying the God / Consciousness love and intention to the subject.

Step 4:

Visualise the positive change happening to the subject.

Technique to Help Yourself:

This can be done anywhere, any time. It is an instant fix when you feel low, listless, drained of energy, anxious, worried..

Step 1:

Close your eyes. Take a few slow breaths. Visualise your favourite form of God / Guru; or Light; or formless Consciousness.

Step 2:

With every in-breath visualize the love of God / Consciousness going in with the air you breathe, from the God / Consciousness without to your God / Consciousness self within, in the region of your heart.

Step 3:

With every out-breath visualize and feel the love of God / Consciousness from your God / Consciousness self within, going out with the air you breath out, to God / Consciousness without.

Result:

Soon you feel yourself cocooned in love as with every breath love passes through your being. You feel relaxed and at peace.

Meditation practices

All of them have the ability to make one feel relaxed and at peace. We have seen from chapter 3 that mindful meditation was found to improve performance in surgical trainees. We have also seen similar results with the daily practice of 40 minutes of *yoga*; and how it has benefited medical students in experimental trials. Surely the medical curriculum should incorporate lectures and practical training in these techniques.

One does not need to know rocket science to understand that a physician who is trained in these techniques and practices them regularly, will have more patience while dealing with patients. Any person who has himself / herself experienced feelings of selfless love will be in a better position to impart such love to patients; and as Dean Ornish points out, this itself can have a most salutary effect on the patient's recovery.

Technology Incorporating Visual Biofeedback Cues to help one Create the necessary Heart Coherence:

The Institute of HeartMath has come out with simple relatively inexpensive devices that help people train themselves to develop heart coherence and thus generate favourable pro health responses in their own bodies. To recap, the logic is that you create heart coherence by focusing and feeling positive emotion such as gratitude, forgiveness, love and compassion in the heart area while sitting comfortably and breathing slowly. This sets heart activity into coherence. One of the best variables that detects and is a measure of cardiac coherence is heart rate variability (HRV). In a manner similar to how a pulse-oxymeter detects oxygen saturation, the device can measure HRV. This shows up as a visual signal of the device which is about the size of a mobile phone. The ideal HRV that is the target shows up as a green light. So users learn to breathe slowly and generate feelings that lead to the green light glowing. This indicates that their cardiac activity is in coherence.

Such coherent cardiac activity generated twice a day or ten to fifteen minutes has been found to positively impact many diseases, as mentioned in chapter five. In the USA, hypertension, has emerged as a ‘national disease’ – over 55% of African American men and over 46% of the rest of the American men suffer from hypertension. Interestingly, a recent study has found that the regular use of a device made by the Institute of HeartMath, to help reduce blood pressure but such a feedback method, results in significant reduction of blood pressure. This device thus promises to be a non-pharmacological way of reducing blood pressure.⁵⁰³

Kill Stress Before it Kills You:

There are simpler HeartMath feedback devices that help people relax and feel calm. Dave Asprey, a trained HeartMath Instructor, advises people to invest in their own health through ‘EmWave2’, a simple device marketed by not-for-profit Institute of HeartMath for less than hundred and fifty dollars; well worth it since it is not a recurrent purchase and the whole family can use it to de-stress. To quote him, *“The beauty of HeartMath is its simplicity. You can do many of the HeartMath techniques without any tools or training, but for measurable results, try an emWave. The emWave is a small device about the size of an iPod that displays your heart’s level of coherence. Once you connect the sensor to your ear, you focus your mind on making the small light on the emWave turn from red, to blue, to green. Once it turns green, you’re in a state of high coherence – the Bulletproof state of high performance.*

*HeartMath is easy to learn and starts working for most people immediately. You may need a few days to get the hang of it, but once you do, you’ll be on your way to better thinking and a longer life in no time, like this commenter.”*⁵⁰⁴

HeartMath lists the following benefits with the emWave:

“Typical Benefits that People Notice With 2 Weeks of Genuine Practice:

- *More calm*
- *Better sleep*
- *Less reactivity*
- *Less worry*
- *More alertness*
- *Better focus and decision making*
- *More positive attitudes*

- *More ease and inner peace*”⁵⁰⁵

For sure it seems good value for money. It comes with a sixty day trial period and money back guarantee. If you are a busy doctor reading this, I am sure you are tempted to try it out. Definitely this is an area that any enterprising medical student / junior doctor can take up for study; to do trials of this device on stress management among medicos and junior doctors.

Moving from Survive to Thrive - Mindful Meditation:

We need to move from survive to thrive; from just about alive to vibrantly alive; from somehow being just not-unhealthy and not-unhappy, to positively healthy and truly happy; from being just average to excellence! In this context, let us read what the Harvard Business Review recently wrote:

“You probably know the feeling all too well: You arrive at the office with a clear plan for the day and then, in what feels like just a moment, you find yourself on your way back home. Nine or 10 hours have passed but you’ve accomplished only a few of your priorities. And, most likely, you can’t even remember exactly what you did all day. If this sounds familiar, don’t worry. You’re not alone. Research shows that people spend almost 47% of their waking hours thinking about something other than what they’re doing. In other words, many of us operate on autopilot.

Add to this that we have entered what many people are calling the “attention economy.” In the attention economy, the ability to maintain focus and concentration is every bit as important as technical or management skills. And because leaders need to absorb and synthesize a growing flood of information in order to make good decisions, they’re hit particularly hard by this emerging

trend.” Mindful meditation, a modern derivative of the ancient *Vipassana* school of meditation, as an effective method of solving the above problem is something large corporations, business houses and others have incorporated into their daily functioning schedules.

Mindfulness can be extrapolated to healthcare organisations too. All of us who work in healthcare too can perform better and be happier if we take care to be more mindful. Mindful meditation has to be woven into one’s whole day; the idea is that it has to become as natural as breathing. In fact, it IS linked to the breath. It is all about directing one’s awareness to breath. One is alive only as long as one breathes. Mindfulness is about living a life with awareness instead of stuff happening through the day like a blur and one wondering what happened at day’s end.

On waking up in the morning, spend a few minutes in bed simply observing your breath. As thoughts about the day pop into your mind, let them go and return to your breath. When you are on the bus to hospital, put your mobile phone in silent. Take 10 minutes for a mindfulness practice. Close your eyes, relax, and sit as upright as possible. Focus on your breath. Simply maintain an on-going flow of attention on the experience of your breathing: inhale, exhale; inhale; exhale. To help with focus on breathing, count silently at each exhalation. Any time you find your mind distracted, simply release the distraction by returning your focus to your breath. Very importantly, enjoy these minutes. Throughout the rest of the day, other people and situations will fight for your attention. But these 10 minutes, are your personal time with yourself.

When you get to the ward or OPD or operating theatre, ready to start working, mindfulness can help increase your effectiveness. Two skills define a mindful

mind: *focus* and *awareness*. Focus is the ability to concentrate on what you're doing in the moment. Awareness is the ability to recognize and release unnecessary distractions as they arise. Understand that mindfulness is not just a passive practice. Mindfulness is about taking charge; about developing a sharp, clear mind. In yesteryears we heard a lot about multi-tasking. But in a work situation doing one thing at a time spells better efficiency. So apply focus and awareness to everything you do from the moment you enter the hospital. Focus on the task at hand and recognize and release internal and external distractions as they arise. In this way, mindfulness helps increase effectiveness, decrease mistakes, and even enhance creativity.

A huge distraction is checking our WhatsApp messages. It is almost an addiction. Before you open your email or WhatsApp spend a minute and watch your breath and tell yourself you will check only work-related messages and mails. *Focus* on what is important and maintain *awareness* of what is merely like background noise. To get a better start to your day, avoid checking your email first thing in the morning. This simple step helps avoid distractions that can destroy your day.

As the day moves on and the inevitable back-to-back consultations, ward rounds, surgeries start, mindfulness in the team, step up the entire organization's efficiency. And the whole is greater than the sum of the individual parts. Individual mindfulness can result in an inspired matchless performance by the whole team.

Avoid starting work with a wandering mind, by taking two minutes to practice mindfulness. It can be done even while you're walking to the next ward or between cases. In the operating theatre, let the first two minutes before each case is taken up, be silent, with EVERYBODY practicing mindfulness; thus, ensuring everybody is there both physically and mentally.

Just before lunch, if possible silence your mobile phone. Spend a minute on mindful breathing and saying Grace. Eat mindfully enjoying every dish. After lunch take a five-minute rest break of doing nothing! Set an alarm to wake you up after 5 minutes. After lunch, most people's minds tend to wander, or doze off. Some mindfulness teachers recommend setting an alarm on your phone to ring every hour. When the alarm rings, cease your current activity and do one minute of mindfulness practice. These mindful performance breaks will prevent lapsing into distractions.

Finally, at day's end, on the bus going back home, for at least 10 minutes, put your phone into silent mode and if you can, close your eyes and simply do nothing but breathe. If you close your eyes others are less likely to talk to you. Let go of any thoughts that arise. Attend to your breath. Doing so will allow you to let go of the stresses of the day. This helps you return home and be with the family both physically and mentally when you are home.

If you are on call, definitely find five minutes between calls to just put your mobile on silent and sit back, with eyes closed, simply observing your breath. It energises as well as relaxes; and one can continue with the day in a better frame of mind and body.

*“Mindfulness is not about living life in slow motion. It's about enhancing focus and awareness both in work and in life. It's about stripping away distractions and staying on track with individual, as well as organizational, goals.”*⁵⁰⁶ This is what the Gurus of mindfulness teach. Anything done for 21 days becomes a habit. I heartily recommend that every hospital or health centre that aspires for excellence puts its workforce through mindfulness training. The added bonus is that home and family life get better too.

Physical fitness and mental acuity improve with *Yoga*. When TIME seems so short, how do we fit in *Yoga* into the already busy hospital / clinic schedule? There is a way.

Thirty-five minutes a day before starting work, spent in the following way is the best investment into the human resources of the organization. A *Yoga* teacher could lead the team in the exercises. The following format suggested for medical students, by Saoji in 2016 is given below:¹⁷⁸

- *Shithilikarana vyayama* (loosening exercises) - 5 min
- *Suryanamaskara* (sun salutation) - 5 min
- *Asana* (physical postures) - 15 min.
 - *Ardhakatichakrasana* (lateral bend pose)
 - *Ardhachakrasana* (backward bend pose)
 - *Padahastasana* (standing forward bend pose)
 - *Sarvangasana* (shoulder stand pose)
 - *Matsyasana* (fish pose)
 - *Bhujangasana* (serpent pose)
 - *Padmasana* (lotus pose)
 - *Savasana* (corpse pose).
- *Pranayama* (breathing practices) – 10 min
 - *Kapalabhati* (illuminating forehead breath)

- *Nadisuddhi* (alternate nostril breath)
- *Ujjayi* (the psychic breath)
- *Bhramari* (humming bee breath)

Saoji recommends in addition, Meditation/relaxation for 10 minutes and mindfulness-based relaxation/*Yoga nidra* (psychic sleep).¹⁷⁸ But if mindfulness is integrated into the day, these may be omitted as time is of the essence. MSRT (mind sound resonance technique) or cyclic meditation – once a week is another recommendation worth incorporating.

Many corporate and commercial set ups have woken up to the fact that employee well-being is crucial to increasing productivity. The well-being of the doctors, nurses, other para-medical personnel - is something that virtually hardly figures during discussions by managements of hospitals. It is often presumed that doctors and nurses know how to take care of their own health. Nothing could be further from the truth! It is time we invested in the health and well-being of the custodians of our health.

Work can be a stressful place, and with companies trying to keep an eye on the bottom line while simultaneously improving productivity, many workers may find themselves with more responsibilities than ever before. While there is no way to totally eliminate stress from the workplace, some companies are doing what they can to help employees relax, and many, like those that we feature here, are doing that through on-site meditation.

Meditation has been shown to produce a wide range of mental benefits when practised on a daily basis. Studies have shown that it can actually change how the brain processes information and manages the effects of stress, depression, and

anxiety. Those who practice meditation, research has demonstrated, are happier and calmer than their counterparts who don't, so it's no surprise that many high-stress businesses are catching on and making meditation a part of their corporate mission. Read on to learn about some of the world's top companies that are leading the way in promoting on-the-job meditation.⁵⁰⁷

Meditation at the workplace

Apple: Thanks to Steve Jobs, meditation has long been promoted at Apple. Jobs himself often took part in meditation retreats, was married in a Zen ceremony, and maintained lifelong friendships with many monks. Perhaps the mental control he gained from meditation helped him create the new, innovative products for Apple. Jobs wanted to pass on his love of meditation to others in the workplace. Employees of Apple were encouraged to take 30 minutes each day to meditate at work. Classes on meditation and *Yoga* were provided on-site, and a meditation room was provided.

Prentice Hall Publishing: This publishing company gives workers a chance to de-stress and refocus while at work through meditation. Prentice Hall has created a meditation space in their corporate headquarters, which they call the "Quiet Room." Employees take a break and slip into the space for meditation, prayer, or just a moment of quiet reflection when they're feeling particularly stressed out.

Google: One of Google's original software engineers and now head of personal growth Chade-Meng Tan, brought meditation into the workplace called "Search Inside Yourself" which helped more than 500 employees learn how to breathe mindfully, listen to their co-workers, and even improve their emotional intelligence. On a regular basis, the company also offers meditation space and

meditation courses, believing that meditation can help improve not only employee mental health and well-being but the company's bottom line as well

Nike: Nike's motto "Just do it" applies to meditation as well. Employees of the athletic apparel giant have access to relaxation rooms, for a nap, or to pray, or of course meditate. In addition to these quiet rooms, employees can also take part in meditation and *Yoga* classes without ever having to leave the office.

AOL Time Warner: In 2000, AOL Time Warner, after down-sizing, to help employees deal with the stress of their new longer and busier days, added meditation classes into the work day. Workers could slip into a class or a quiet room to help refocus, relax, and refresh themselves before getting back to their long days.

McKinsey & Co.: Management and consulting firm McKinsey & Co. founded in Illinois is embracing meditation as part of a new HR strategy aimed at keeping employees happy and healthy. McKinsey partner and meditation aficionado Michael Rennie says, "What's good for the spirit is good for the bottom line," and the company is taking that to heart, developing meditation and self-analysis programs not only for their own employees but for other multi-million-dollar corporations as well. In one case, a meditation program developed by McKinsey for an Australian client saved the business more than \$20 million.

Yahoo! Employees of Yahoo! can take advantage of meditation rooms or engage with others who share their interests in a more mindful workday by taking free classes offered on-site.

Deutsche Bank: Deutsche Bank is yet another multinational business which has for several years, promotes meditation-in-the-workplace. They've been offering

meditation classes and quiet spaces on site for several years, hoping that it will help to reduce worker stress and lead to more level-headed thinking.

Procter & Gamble: P&G's CEO A.G. Lafley is dedicated to his own meditation practice and thinks it has a lot to offer employees as well. He has said, "You cannot out-work a problem, you have to out-meditate it." The company offers a wealth of health and fitness programs that include meditation classes and spaces in their major corporate buildings.

Yoga at the workplace is proving very popular in the West. Surely in India, the home of *Yoga*, we need to reap the benefits of *Yoga* in our hospitals and clinics.

The *Yoga* schedule that Saoji suggested can therefore be carried out thrice a week if doing it daily cuts into work too much at our too-busy hospitals and clinics. It IS a fact that Indian hospitals and clinics handle the highest patient loads in the world. A natural corollary is that our staff are therefore likely to be the most stressed out and need *Yoga* more than ever! Without healthy, happy staff no healthcare organization can thrive in the long term.

Lest I give the impression that *Yoga* is just about physical stretches and postures to the rhythm of the breath, let me give you a bird's eye view of this timeless science. *Yoga*, the recently recognized *Siddha* system of medicine which antedates *Ayurveda*, and *Ayurveda* (which means the science of longevity) are India's gifts to the world in the realm of medicine. In fact, they are not only a royal road to physical, mental and spiritual health but effective catalysts for spiritual transformation itself, which is what life is really all about. But the irony of our times is that in India all three - *Siddha* system of medicine, *Yoga* and *Ayurveda* have been relegated to the back seat; not even our medical curriculum includes them! And it is through the experience of western researchers that we have to learn

their value! Till I personally decided to educate myself, I too was a typical modern medical doctor, oblivious to the value of *Yoga*, *Siddha* and *Ayurveda*.

Having learnt something of their value I strongly feel that *Yoga*, in its entirety, and *Siddha* / *Ayurveda*, at least in their preventive medical aspects and sound life style recommendations be incorporated into in our medical curriculum. It is hoped that the powers that be, both governmental and non-governmental, will be inspired by the vast literature accumulating on these ancient pristine arts of healing - this book included - to do something, to restore *Yoga*, *Siddha* and *Ayurveda* to their rightful place in our national life.

While the word ‘*Yoga*’ actually refers to the path of *Raja Yoga*, let me introduce the other paths of *Yoga* as well. The word *Yoga* means 'union' and refers to man's union with God - the merger of individual Consciousness with the Source. This was also known as ‘Enlightenment’, ‘Self Realisation’ etc. and is the real goal of life that we in the east, particularly India, shoot for in life. In fact, it is verily ingrained in the Indian psyche. Getting out of the endless strife ridden *karmic* cycle of mortality, i.e., birth and death, and instead realizing one’s true ‘God’/ Consciousness nature and moving on to eternal, ever new blissful immortality was the real purpose of human birth; nothing else! Oneness is the name of the game; ‘all is one’, is the Indian slogan since antiquity; propounded as ‘*Advaita*’ (non-dualism); and for those who wish to read a delightful, absolutely logical scientific piece on *Advaita*, tailored to modern science, I whole heartedly recommend the essays of Jayant Kapatker, a US based researcher with an absolutely admirable clarity of vision.⁵⁰⁸

Yoga refers to this ultimate union with our divine ‘Self’; and the seers of *Yoga* said that there are essentially four routes to attain this *Yoga*.'

The first or ***Jnana Yoga*** is the path of inquiry to the question, "who am I?". The person reaches the conclusion, like you and me, that he/ she is not the body, the mind or the intellect but something else - the Consciousness that activates all this. But unlike you and me, he / she then has to live it out, consciously directing every thought, word and deed from that true identity of the Self and without giving in to the ego-mind. A very tall order indeed! Obviously, it is not the path for the weak-minded. The conscious experience of the Self leads the *Jnani* to truly live as a part of the whole, feeling for others what he/she feels for himself/herself. It results in absolute unconditional love towards fellow beings and in fact, towards all creation! Wisdom thus results in love; and examples of scientists of Consciousness who made it through this path are Bhagawan Ramana, Maharishi Aurobindo, Sadguru Gnanananda and so on.

Bhakti Yoga or the path of devotion is open to all. Love suffuses this path; love for Consciousness / God is what gets you going, what sustains the journey and overwhelming LOVE, oneness and Bliss is what one feels at journey's end. The ancients described a set of 'symptoms' and 'signs' that help identify one set on this path. The 'symptoms' are a yearning for the company of the saintly (*satsang*) and for spiritual and mystical books (*swaddhyaya*), frank admiration (*stuti*) of supreme Consciousness, devotion in mind (*Bhakti*), devotion to the Consciousness in action (*nishtha*), a fondness (*ruchi*) for hearing the glory of the forms taken by Consciousness, faith (*shraddha*), increased attachment to such forms (*rati*), a steadfastness of these qualities (*sthayibhava*) and finally supreme love for - Consciousness whom the person sees everywhere and in everyone (*prema maya*). Chaitanya Maha Prabhu is one experiential master of Consciousness who comes to mind immediately.

The 'signs' that one on the *Bhakti* path exhibits are constant remembrance and hearing the name (*shravanam*), singing (*kirtanam*), constant remembrance of Consciousness with or without form (*smaranam*), constant service at the feet of Consciousness (*paadasevanam*), indulging in worship (*archanam*), reverence and adoration (*vandanam*), taking up the role of a servant of Consciousness (*daasyam*); treating Consciousness as one's best friend or buddy (*saakhyam*); and finally feeling a total oneness with Consciousness by total surrender (*Aatmanivedanam*).

A third path to *Yoga* with Consciousness is the ***Karma Yoga*** or action path. According to the natural laws of creation governing *karma*, our present situation was created by the past and through our actions, every moment we are creating our future. The ancient scientists of Consciousness of India refer to the accumulated result of past actions as *sanchita karma* and this is there in the 'cosmic records' of each of us. *Prarabdha karma* refers to the result of past *karma* that each of us is working out right now. *Agami karma* refers to *karma* that is to unfold in births to come. All these *karmas* can be considered to be like seeds. Now, if seeds are roasted, they don't germinate, right? The equivalent of the "roasting" of *karmic* seeds can be achieved by doing actions without any attachment to the fruits of action.

In other words, if you can go through life doing whatever is expected of you without worrying about the results and dedicating the results to Consciousness, believing that you are only an instrument of Consciousness who is the real experiencer, then you can be freed of the binds of *karma*; then your *karmas* will not germinate. One then does not have to bear the imprisonment of flesh again. One can continue life in the subtler higher dimensions.

Super social scientist, my teacher, Sri Sathya Sai Baba put us, his students, on to this *karma* or action path to Consciousness through service. To help us learn the ropes, He first put us into the *seva dal* or service wing where one learnt to do *seva* or service in precisely this spirit; there were plenty of tests for the ego as one went. Once you sort of passed it (most of us did so only with grace marks!) he then expected us to apply the same yardstick to all other activities in life too. There was no more separation between ‘personal work’ and ‘schoolwork’; everything became one work!

The ancients did a lot of research on *karma*. By analysis, they found out that in general, we human beings have mainly four aims. Firstly, we all have duties to do, like looking after our families i.e., we need to do *dharma*; for that one needed resources, i.e., one needed to earn money; we needed *artha* (wealth); thirdly, we all had our little desires which we sought to fulfil; i.e., we needed to fulfil *kaama*; and finally we all wanted to make it to Consciousness; we want *moksha*. The ancients then said, "*Fine; go ahead with all four aims; but remember not to get attached! Dedicate even your desires to Consciousness; and your action to get them; and the fruits when you finally attain them. Dedicate even your failures to Consciousness! Pursue all your aims but do so dedicating yourself also in fact, to Consciousness.*" This they called *nish-kaama karma* and it has the effect of "roasting" the seeds of *karma*. It is like say being able to walk through rain without getting wet!

Taking into consideration, our lifespans, the growth of the human body and the ageing process the ancients divided life into five stages - childhood (*baalyam*), student life (*brahmacharya*), married life as a householder (*grihastha*), a slow withdrawal from worldly activities and handing over responsibilities to the next generation (*vaanaprastha*) and finally renunciation and preparing for the exit from the physical (*sanyasa*). The ancients also prepared guidelines which enable one to

attain *nish-kaama karma* (*karma* devoid of desire and therefore non-binding in nature) at each stage.

Since each of these roles have to be played out on the stage of society, to enable smooth functioning of society that could at the same time accommodate this highest growth of the individual, and ensure the successful achievement of *dharma*, *artha*, *kama* and *moksha*, by every individual, the ancients attempted to regulate the "social movement" of man into *varnas* or social classes based on vocation. This is what degenerated into the caste system.

However, the seers who could see far beyond their times also put on a safety clause to rescue society from laws gone obscure. They divided their manual of natural laws and truths into two; into *shruti* and *smriti*. The first set of natural laws, *shruti* refers to timeless truths and dicta that hold good for eternity; these are the concepts of Consciousness / God, *karma*, rebirth, that the highest is love and so on.

The second set of natural laws, *smritis*, are time-specific or age-specific laws that govern society; and therefore, change with the times. For example, in *treta yuga* or Rama's time, a water-tight caste system was advocated; in Manu's time a near Taliban-like code of laws for women existed. Both of these cannot however apply in *kaliyuga* (the present age). Social scientist Sri Sathya Sai Baba propounded the gender *Smriti* for our times as follows - "*There is only one caste - the caste of humanity*". As for women, He not only gave them a position equal to that of men but gave them a higher place as nurturers of the next generation and as the powers-that-be at home. He advocated that women balance the two roles giving priority to one's special higher duties.

"What has all this got to do with medicine?" did you ask? If we are doctors seeking success in the practice of medicine as well as in spiritual life, *Karma Yoga* is our

main plank. We have to do our best for our patients leaving the result to Consciousness. I found it very difficult to 'leave the result', in the beginning. I would pray and pray to my teacher, who in my view, represented Consciousness, to make this temperature come down, that bleeding stop, that other cardiac stress analysis turn negative ... and so on; the end result was terribly important to me.

When my teacher initially burst into our lives, and I realized that he was answering ALL my prayers, I just wouldn't give him any respite. I would keep badgering him and he would ever so sweetly oblige; even the worst cases would turn around, to the great astonishment of my Registrar and Residents! For my teacher always said, *"First I give you whatever you want, so that you will then begin to want what I have really come to give you-liberation itself!"* After a while, one day I suddenly heard him gently, rebuke me inwardly, *"What?! Do you think I have no other work that to make all your patients well? You do your duty sincerely with love and learn to leave the result to Consciousness that is enough!"* Slowly I learnt to pray and ask to feel the presence and guidance of Consciousness and leave the result to Consciousness; for the cosmic computer knows better than me what the highest good of the patient is. *Karma Yoga* and *Bhakti Yoga*, I realised, were like two feet, on which, as a doctor, I needed to learn to walk.

"What of *jnana*?" did you say? , The time spent on psycho-spiritual strategies that I teach patients, doubles as my personal *jnana Yoga*. Real *jnana Yoga* needs time; time to hear-think-meditate, inquire-introspect-reason out, access-know-feel, seek-understand-realize to quote my late colleague, Dr. Ghooi.⁵⁰⁹ Time is one commodity we doctors simply don't seem to have; we do not seem to have even time to grab a meal, leave alone indulge in self-inquiry, And that brings us to that great gulf between what we preach and what we practise. As Dr. Dean Ornish

realized each of us will slowly realize that fact (if we are lucky, before we get a heart attack!) that we need to spend some time with ourselves.⁵¹⁰

As it is such an important point, to drive home the lesson, let me quote Ornish. Wrote he, *“I had many accomplishments... but the loneliness could not be fed for long by external accomplishments and activities, no matter how interesting or exciting. I worked for at least eighty hours a week; sometimes more; which was a good distraction from these feelings. I remember rushing to catch a plane and just making it inside, as the door was being closed.*

“You look harried,” the flight attendant told me.

“I feel harried,” I replied.

“Well,” she said, not recognizing me, “I just read this book by Dr Dean Ornish. I highly recommend it. It has some wonderful stress management techniques there, which might be helpful for you.”

“Yes, I am familiar with the book...”

God’s little reminder.

The irony was not lost on me. Although I was quite healthy, I was getting increasingly stressed. I began to imagine the headlines - “AUTHOR OF STRESS, DIET AND YOUR HEART GETS HEART ATTACK FROM STRESS DESPITE EXCELLENT DIET!”. ”⁵¹⁰

Ornish later went on to try and practice what he preached and acquired for himself the balance in life that he routinely advocated to others. A valuable lesson here for all members of a care team.

If you analyse the three *Yogas* - *bhakti*, *karma* and *jnana Yogas* - described above, you will agree that they are also routes to a relatively stress-free life; they also give a sense of direction to life. In the twentieth and twenty first centuries, 'anomie' is a great cause of physical and mental illness particularly in urban settings. For human beings who are groping in the dark to find a meaning to life and a right path to follow, these paths of *Yoga* can be a boon. My Master advocated a judicious mix of *karma Yoga*, *bhakti Yoga* and *jnana Yoga* to make life meaningful.

If you do not have a guide or teacher yet, but would like to have one then, just seek with all your heart and Consciousness within, will arrange for the appropriate guide to come into your life. All of us six billion human beings may not relate to just one name and form. But not to worry for formless Consciousness takes on as many names and forms as we call out for! So, we may relate to guides bearing different names and forms; but the secret is, that actually they are all one.

Raja Yoga (Ashtanga Yoga)

Finally, we reach one of the main topics of this chapter - *Raja Yoga* or *Ashtanga Yoga*, popularly known as *Yoga*. Patanjali was the sage who codified and compiled *Raja Yoga* somewhere between 5000 to 300 BC.⁵¹¹ He has divided *Raja Yoga* into eight steps. *Asanas* or poses/ stretches are only the third step in this eight-fold path but sadly only that step is highlighted as *Yoga* today; and what is worse, the mandatory first two-steps are bypassed. Hence let me highlight the first two steps, which if followed, are not only excellent recipes for health but even conducive for world peace.

The first step of *Yoga* is called *yama*. It includes *ahimsa* which translates as non-violence. Vegetarianism is implicitly implied in it. One has to be truthful which

translates as love-filled speech that is factual but does not hurt others. If unmarried, celibacy is expected; if married, responsible exercise of control to avoid excesses is recommended. *Asteya* comes next which means not depriving others of their rights and this brings under its ambit, thou-shalt-not-steal, thou shalt-not-covet-thine-neighbour's-property and so on. One is also expected to reduce greed (*aparigraha*).

Niyama, the second step starts with *shaucha* or cleanliness which has to be both external and internal. Contentment is to be cultivated in the belief that one's lot is decreed by God and hence the best for one. A willingness to suffer for others is to be encouraged (*tapas*). Study of the scriptures (*swadhyaya*) is to be done; and one has to surrender to Consciousness (*ishwara paridhana*). As you can see, just learning and practising these steps would be a great exercise in stress management and pro-health, not to mention the salutary effect it will have on society.

Only after these two steps come the *asanas*. Many people mistakenly equate *asanas* with aerobics. *Asanas* primarily aim at stretching various tissues of the body and each stretch / pose has its own associated breathing exercise. Modern research also shows that stretching is a positive pro-life activity for cells as opposed to contraction which spells death.' Further, the *asanas* stretch not only voluntary muscles, but also stretch and massage internal organs like the heart as well as affect blood supply due to postural changes. For example, cerebral blood flow significantly increases on the headstand.

This book cannot be a complete handbook of *Yoga*; but for a good practical guide on the *asana* aspect, we recommend 'A matter of health" by Dr. Krishna Raman, a modern medical doctor who has specialized in *Yoga*. The *asanas*/exercise most frequently recommended are *surya namaskar*, as a general complete exercise for

all muscles of the body; *shavasana* as a relaxation technique and *viparita karini* for hypertension.⁵¹²

Pranayama or step four of *Yoga* literally means control of *prana* or life energy. This is achieved through various breathing techniques. A basic technique is abdominal breathing. Breathing techniques are also used as relaxation therapy. An ancient *Yoga* technique is alternate nostril breathing. To quote Dean Ornish, "Whether or not it works for the reason that *Yoga* teachers believe, alternate nostril breathing is an exceptionally powerful technique for calming and relaxing your mind and body." According to the different *Pranayama* techniques used, *RajaYoga* has branches such as *HathaYoga*, *KriyaYoga*, *SiddhaYoga* and so on.⁵¹⁰

Western researchers have by now understood the importance of right breathing. They have adopted the eastern system of *pranayama* and developed breathing techniques that help the body and mind relax. We have seen this in fair detail in earlier chapters.

The fifth (*pratyahara*), sixth (*dharana*), seventh (*dhyana*) and final (*samadhi*) steps of *Raja Yoga* enable one effect the ultimate merger with Consciousness. They are worship and meditation upon the formless God or God with form; either way one aims to develop *Atmanubhava* or feeling that one is the *Atma* (*pratyahara*). Constant *pratyahara* is *dharana*; and this goes hand in hand with single pointed meditation on Consciousness (*dhyana*). This leads one to *samadhi* where the mind is unshakably fixed on Consciousness. The *Siddha* system of medicine - the most ancient one, had perfected this aspect.

As seen earlier in this chapter, indeed, the Great *Siddhas* were 'Perfect Men'. The ability to trans-dimensionally connect to the omniscience aspect of Consciousness made them physicians par excellence in knowledge - they not only were perfect in

diagnosis and treatment methods, but thanks to omniscience knew the karmic roots of the patient's problem too. Hence their treatment was truly holistic. Their ability to tap into the omnipotent love-bliss aspect of Consciousness conferred the ability to heal by mere intention. Due to their ability to tap into the omnipresence aspect of Consciousness, they are beyond space-time and even now respond to calls from the faithful and contemporary *Siddha* physicians for help with addressing problems, both health related and life related.

Getting back to *yoga*, as Dean Ornish puts it, while each *Yoga* method is powerful in itself (and medical researchers have mainly done work only on some *asanas* and *Pranayama* techniques), combining all these techniques in their original context yields a power even greater than the sum of the individual methods. *Yoga* is a very powerful system; yogic techniques were designed for something much greater physical health; they were designed as tools for transformation itself.

India is the home of *Yoga*; and the greatest tragedy of our times is that we Indians are neglecting *Yoga*. It is heartening to note that the government and the powers that be have woken up to the importance of *Yoga* of late. I strongly feel that *Yoga* should be part of school curriculum from kindergarten to the plus two level. This single act will do more for the nation's health than all the hospitals put together; not be mention the salutary effect it will have on the peace and happiness level in society. Besides *Yoga* should certainly be made an integral part of the MBBS training.

The west is able to relate better to *Ayurveda* rather than *Siddha* system of medicine for it is largely an herbal system combined with lifestyle medicine. The *Siddha* system has not just these components but also uses metals and minerals in their pharmacopeia besides having a wealth of energy medicine techniques and the

unique system of ‘referring’ to the Great *Siddhas* trans-dimensionally during the course of treatment. Having said that it must be pointed out that sadly, the government run ‘*Siddha* medicine’ courses, patterned on the MBBS course have given short shrift to the trans-dimensional aspects and energy medicine aspects and reduced the grand ancient system to being a ‘poor relation’ of modern medicine.

Ayurveda has managed to survive netter. It has also gained a lot of acceptance in the west. *Ayurveda*, the science of longevity, which is one of the traditional Indian systems of medicine. *Yoga* is an integral part of *Ayurveda*, which means that practise-what-you-preach is integral to *Ayurveda* too. Besides *yama* and *niyama* which you read about under *Yoga*, 'dinacharya' or daily routine is another corner stone of *Ayurveda*.⁵¹³

One had to live by the biological clock which is tuned to the sun and not to the electric light. So early to bed and early to rise was the rule. My Master often declared that the root cause of modern man's maladies to be "hurry, worry curry", Hurry is anathema in *Ayurveda*; there are no instant remedies; patients had to learn patience for even preparation of medicines would involve their "ripening" for so many days and sometimes administration: only on certain days of the lunar calendar and so on.

Worry was addressed up front; the *ayurvedic* physician would state right at the beginning that he would only treat; God alone was the healer; and before starting therapy it was usual to perform a *puja* and pray to the Lord. The patient entered therapy thus secure in the assurance that God was guiding the doctor. *Ayurveda* had an uncanny way of addressing the 'curry' issue. Avoidance of certain foods was routine; fasting was invariably advocated. Eating out was proscribed; there was no

question of indiscriminate snacking, TV dinners, junk foods; and alcohol and cigarettes were taboo.

A basic difference between *ayurvedic* remedies and modern medical drugs is their manner of discovery. The original *ayurvedic* Physicians were all *rishis* of the highest degree of intuition; hence many of the *ayurvedic* remedies, mostly herbal were derived by tuning into Consciousness; a fool proof method. In modern medicine, on the contrary, a thousand molecules are tested before one is found useful. While remedies of both systems are products of intelligence, one has to agree that the intelligence that guides the six trillion chemical reactions within our cells so accurately must be inherently equipped to do a better job than a conscious ego-directed limited intelligence; hence the superior usefulness of *ayurvedic* remedies; particularly their tendency not to have too many side effects and the fact that they have stood the test of time so well. The fact that they have proved useful for over three millennia itself testifies to that.³⁵²

This is not to decry modern research but to drive home the point that if we research traditional *ayurvedic* formulations we may be able to spare ourselves the job of re-inventing the wheel. Smart Western researchers have caught on to this aspect and are now engaged in an analysis" of popular *ayurvedic* remedies. But then medicines so 'discovered' should be made available to all of humanity at no cost or minimum cost; for the patent would in truth belong to Consciousness or God and not to any individual or company.

Modern researchers are also coming around to the view that 'going inwards' is what has resulted in some of man's greatest discoveries. A classic example is Edison. He realized that brilliant creative ideas and solutions germinated best when the mind was in a hypnagogic state, when he could go within. So, he always tried to be in

that state. The hypnagogic state is one between wakefulness and sleep. According to psychiatrist Dr. Brian Weiss, when we pass through the hypnagogic state, "*the mind is completely turned inwards and can access the inspiration of the subconscious.*"⁵¹⁴ Perhaps this is what the 'genius state' is! And discoveries made while in such a state are in a totally different class altogether. Edison's light bulb which has revolutionised life for all mankind is but one example. Scientists and inventors could achieve so much more if only they learn HOW to go inward. As 'God' quipped in 'Conversations' with God', by Neale Donald Walsch, "*If you don't go within, you go without*"!⁵¹⁵

To get back to *Ayurveda*, as mentioned earlier, the real tragedy of our times is that our governments, instead of realizing the intrinsic worth of *Ayurveda* have modernized it and reduced it to being a "poor relation" of allopathy. To quote from an article I wrote many years ago for a national newspaper, "*Throwing tradition to the winds they have created an ayurvedic degree patterned on the MBBS course. Gone is the faith in God, yama and niyama, total veneration to one's guru and the integral Yoga, which was part of traditional Ayurveda. The "inward training", development of intuition and so on which were part of the making of the ayurvedic physician have been jettisoned and Ayurveda graduates are churned out every four and a half years. I saw for myself the pathetic plight of Ayurveda some years ago in Kerala, one of the erstwhile homes of pristine Ayurveda. The prescription from the Malayalam speaking ayurvedic physician to his Malayalam speaking patient, for a lehyam (semi-solid oral medicine), arishtam (liquid medicine) and kuzhambu (medicinal oil) was written in English!*"⁵¹³

If *Siddha* and *Ayurveda* have to be redeemed, they have to be released from the clutches of secular bureaucrats, politicians and lawmakers and handed back to the *Siddha* and *Ayurvedic* physicians. Let both systems flourish as it did for millennia

and let new *Siddha* and *Ayurvedic* physicians train as understudies with *Gurus* in the traditional manner, with faith in God, and concentrating on inward growth through *Yoga* that will make them true intuitive healers.

"Have you any experience of *Siddha* and *Ayurveda*?" did you ask?

The *Siddha* system of medicine became a passionate interest as I am a history buff. I intuitively always felt that there was something radically wrong, whenever I read about the principles of the Hippocratic Oath originating in Greece; for I knew that the great *Siddha* physicians had founded those principles. But their timelines were so much into the deep past that until recently, many were apt to dismiss the Great *Siddhas* as mythological characters! But thanks to advances in glacial studies, sea level rises, under sea explorations, study of extinction level events of the past, archaeology, better dating techniques and so on, today we know that the Great *Siddhas* were real human beings who became 'Perfect Humans' through *yoga* and developed an amazing medical system. In fact, it seems most likely, that their ethics which were put down in the four major languages of the world, five millennia ago, influenced Greek thought. It looks like the Hippocratic Oath therefore has its roots in ancient India! In fact, if you google it, you will find that there is a lot of evidence today that ancient Indian thought shaped the thinking of great Greek philosophers in all spheres. Not just concepts in medicine such as '*Food is the best medicine*' and medical ethics, but foundations of mathematics, astronomy, ideas of space-time and creation, physics, chemistry, concepts of the mind and its influence on health, etc., etc. Looks like western thought had its roots in the east!

As for *Ayurveda*, as child I had been treated most successfully for many ailments by traditional *ayurvedic* physicians in Kerala. What I remember most now, is not

what illnesses I had, but how those *ayurvedic* physicians used to glow with health and an inner peace. Humility was part of their natures; faith and trust were in their bones. "*Not to worry; Guruvayurappan (Krishna) will heal you*", they would say, close their eyes for a moment of prayer and then dispense the medicines. And Guruvayurappan did heal me; always. The modern doctor who tells the patients with that I-know-best attitude, "Well, according to latest studies you have a 60% chance of making it", just cannot hold a candle to the wise *ayurvedic* physicians.

All of us doctors know, statisticians included, that there is no way we can accurately predict outcome in anyone given case. But as the ancient seers intuitively knew, and as quantum physics is fast proving, and studies on non-local influence of the mind indicate, our faith, prayers and thoughts can affect outcome. So then why not be one hundred percent positive? Why not encourage the patient also to be one hundred percent positive? And why not doctor and patient learn to surrender one hundred percent to Consciousness - the doctor of doctors? We modern doctors need to take a leaf out of the *ayurvedic* physicians' approach; we need to stop playing God and instead learn to pray to God.

Perhaps the twenty-first century will see that change come into modern medicine; perhaps we will learn to blend the *science* of medicine with the art of healing of which *Yoga* , *Siddha* and *Ayurveda* represent the highest; and then we shall have a system of medicine that is truly par excellence.

* * *

Chapter 9

WHAT THE FUTURE HOLDS

Outline

A post-COVID perspective; integrating the best of traditional medical systems; the greying globe; plant-based diets can solve many problems; need to promote priceless low cost therapeutic techniques; putting compassion on centre-stage through Consciousness research; delinking medical education from big pharma; adding value to life through human values; role model doctors and healthcare initiatives; changing the informal curriculum; the concept of a good death; integration of psycho-spiritual strategies invaluable; harnessing the power of Consciousness / Love to heal.

What does the future hold for modern healthcare?

2020 has been a watershed year for mankind due to the COVID-19 pandemic. It has literally stopped mankind in its tracks, so to speak, and changed man's way of life on the planet, as never before seen.

COVID-19 has, in particular, exposed all the weaknesses and strengths of healthcare systems around the globe. It has revealed the vulnerability of the most expensive healthcare system based on unbridled capitalism. It has also revealed that even a totalitarian regime with sweeping powers can be humbled by a little virus; that brutal suppression of human rights and values only serves to amplify the sorrow of disease and death. As for the wealthy nations of the world, COVID-19

has shown the high price that one has to pay for complacency. But let us look at the silver lining to this global cloud. The COVID-19 pandemic has also revealed the resilience of a relatively not-so-rich nation like India that respects human lives and human values above all, and therefore promptly put in place measures to combat the virus.

It has shown how a pragmatic leadership that values human life above all else, can overcome even such a deadly pandemic. In India, timely measures to slow the spread of virus, created a window of time to put testing and treatment facilities in place as per the principles of universal healthcare; despite the challenges of catering to 1.3 billion plus people over a huge subcontinent, including remote villages. That India has managed to keep the death rate well below that of developed countries and has posted testing and recovery rates indicating that herd immunity is a possibility, only proves that doing things correctly works. Wedded to the ideal of '*Vasudhaiva kutumbakam*' (the world is one family), India also showed sensitivity to the needs of other nations when it overcame the instinctive tendency to hoard and profit thereby; and instead, sent out adequate hydroxychloroquine supplies, to countries all around the globe, when they requested for it at the onset of the pandemic.

COVID-19 has shown that the basic values of a society matter most. Thanks to the national habit of '*Anna Dana*' (the free offering of food to the needy seeing God in them), India could also prevent starvation deaths as huge numbers of daily wage-earning socio-economically weaker citizens were impacted by the lockdowns necessitated by the pandemic. The food requirements of the needy were readily met by the common man, communities, NGOs and so on. The government too rolled out a free rations program for the needy. Between the people and the government, there were no starvation deaths. For decades India has had the

dubious distinction of being the nation with the maximum number of people below the poverty line. But concerted efforts by the government and people of India changed that by 2018. I quote a Washington Post article of July 2018.⁵¹⁶

The article talks of the Brookings report which is based on estimates generated by the World Poverty Clock, a model created to track progress against poverty in real time. Apparently by July 2018, it showed that India had 70.6 million people living in extreme poverty, while Nigeria had 87 million. The Washington Post added, *“What’s more, the gap is widening: The number of people living in extreme poverty in India is falling while the opposite is true in Nigeria, where the population is growing faster than its economy. Extreme poverty rises in Nigeria by six people each minute, according to calculations by the World Poverty Clock. Meanwhile, the number of extreme poor in India drops by 44 people a minute.”*⁵¹⁶

In 2019, the government of India rolled out the biggest universal healthcare system in the world in the form of the *Ayushman Bharat Yojana* where every Indian was assured of free tertiary care if needed, for up to Rs 500,000/-.

Integrating the best of Traditional Medical systems

COVID-19 has also put the spotlight on the benefits of ancient traditional systems of medicine. I quote an article from one of India’s national newspapers on evidence based potential benefits of *Siddha* formulations as anti-COVID-19 shield.¹¹⁰

“Anti-viral shields from Siddha system

By Dr. Hiramalini Seshadri

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Dr. Shiva Ayyadurai of MIT, more famous as the popular contender for the US Senate from Massachussets, is the founder of Cytosolve, a bench mark technology which uses computer software to assess the potential and effectiveness of pharmaceuticals, nutraceuticals and vaccines accurately, sans time delays associated with the usual drawn out clinical trials method.

Using somewhat similar software, Indian researchers have elegantly shown, in the May 2020 online issue of The Journal of Ayurveda and Integrated Medicine that many of the constituents of the ancient Siddha formulation, Kabasura Kudineer and another herbal preparation of the Siddha genre, dubbed 'JACOM', are effective against the spike protein of the SARS-COV-2 virus, which is one of the surface proteins that helps the virus enter body cells.

The researchers further state, "Phytoconstituents have good oral bioavailability and are free from toxicity." They are now racing to integrate the best of Kabasura Kudineer and JACOM to create a potent COVID-19 shield, christened 'SNACK-V'.

Even as COVID-19 hit India, the Siddha practitioners in Tamil Nadu had in one voice requested the powers that be, to begin large scale distribution of Kabasura Kudineer; but the 'modern' lobby, ignorant of the value of traditional medicines, had shot it down.

Valuable time was lost. As India crosses the 2000 deaths a day mark, perhaps it is time we wake up and begin distribution of Kabasura Kudineer on a war footing.

Another Siddha remedy, Nilavembu Kashayam, actively distributed to frontline anti-COVID workers and the public in Coimbatore district, by NGO's such as the Isha Foundation, also has potent antiviral activity, according to a publication in a peer reviewed indexed journal.

Just how much the ancient formulation has helped, is debatable; but Coimbatore has not been overwhelmed by COVID-19. Evidence based recommendations to beat COVID-19, by the quarter century old Institute of Functional Medicine which gives out the annual Linus Pauling Awards, emphasises enhancing one's immunity with nutrition.

In common garden Indian terms, it would translate as greens, sweet potatoes, tomatoes, pumpkins and carrots for Vitamin A, iron and antioxidants; gooseberries and limes for Vitamin C; neem and tulsi leaves for the immunity mineral, zinc; turmeric for master immune booster, Curcumin; ginger, pepper, mint, for flavonoids and immune modulators; dal and peanuts for protein; and early morning sun and fish for Vitamin D.

There is enough empirical evidence to believe that Asha workers educating housewives about enhancing immunity through nutrition and nationwide distribution of the Siddha system's time tested, anti-viral shields may be the right way forward; both cost effective and safe.

Certainly it will be better than doing nothing and just reaching for paracetamol when COVID-19 threatens; especially with the lockdown easing. Needless to add, social distancing and hygiene measures must continue; and when ill, standard treatment protocols must be followed.

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Siddha formulations, as we have seen earlier, have been effective against dengue, chikungunya and so on. Ayurveda has also come up with an anti-COVID-19 formulation that proved effective against cases that tested positive for COVID-19; initial trials showed success in mild and moderately severe COVID-19 cases. As a

matter of abundant caution, the formulation is sold as useful in ‘COVID-19 management’, rather than as a ‘COVID-19 cure’; for its effectiveness in critically ill patients has not been evaluated yet.⁵¹⁷

Incidentally, it is the product of a company that truly is a role model for big pharma, the world over. The company known as ‘Patanjali’ posted revenue of Rs 83290 million i.e., much over US dollars one billion, in the financial year ending March 2019.⁵¹⁸ What is absolutely amazing, is that this company uses 100% of its profits for societal benefit! 100% profits go to fulfill CSR!^{519,520} Its owner is a renunciant *Sanyasi*, Baba Ramdev and its CEO is a spiritual teacher, Acharya Balkrishna. They live the simplest of lives; and practise the highest thinking. The public knows that it is an honest company, so they have near zero advertising budget. Their ads just feature a simple Baba Ramdev explaining their product. Period! They have a grocery range as well. Patanjali have become a byword for honest products; an example of true commerce with morals in this profit-at-any-cost world.

Both the *Siddha* system of medicine and *Ayurveda* are very clear on one point - doctors only treat, it is God who heals. This takes away stress on the doctor, as nothing else can; one learns to do one’s best without that sense of doership. This is stated in no uncertain terms, upfront, to the patient. We modern medical doctors could take a leaf out of the traditional *ayurvedic* physician’s ways. The traditional physician sees herself / himself, only as an instrument of the divine. So, the entire interaction with the patient is as if the divine is present in the room; reverence, respect, humility, faith and mindfulness fill the air. Doubtless such an atmosphere makes for healing much more than the brusque, often impersonal, ego-laden and sometimes mindless words that patients receive in a typical busy modern medical OPD.

Impact of COVID-19 on healthcare systems

Now to turn to the world of global commerce and economics, let us see what McKinsey, the global think-tank that usually provides information and ideas that help the rich become richer, has said of the impact of COVID-19 on global healthcare systems.

They eloquently described the COVID challenge to stakeholders in private healthcare systems, thus: “*Healthcare has found itself tested by the pandemic. The frontlines are delivering heroically, but the next normal for healthcare will look nothing like the normal we leave behind.*”⁵²¹ McKinsey says the war like crisis calls for unprecedented ‘Resolve’ on the part of governments, healthcare providers, payers, manufacturers and other stake holders. It will test ‘Resiliency’ to the core; businesses will face liquidity and solvency challenges and not reduced profitability.

The next challenge will be the “Return”; to a modicum of operational health after being stretched or shut down. Healthcare will have to ‘Reimagine’ and reinvent itself; so that it is more flexible and productive. It is no rocket science to see that certain technologies which grew thanks to COVID-19 will boom in the post-COVID era; such as cell phone based healthcare apps, telemedicine, and in countries like India, healthcare on wheels. Finally, there will be a call for major ‘Reform’ in the healthcare sector, globally.⁵²¹

I sincerely hope, that post-COVID, the world over, the main reform will be, that healthcare will revert to being the service that it was always meant to be; that healthcare will stop being a money-making industry.

A reasonable fee for service is fine; but there seems to be something fundamentally flawed in the very premise that corporate healthcare providers can ‘market’

healthcare using all commercial methods including advertising and insurance, to maximise ‘profits’ for shareholders. Civil society needs to debate the justice of the very idea; should healthcare providers be an industry that ‘incentivises’ healthcare professionals like doctors and rakes in revenue by catering to desperate families seeking medical treatment for a loved one ? Or should healthcare providers be not-for-profit service providers?

One of the grim facts that the COVID-19 pandemic has highlighted, is the chilling possibility of the state of medical ethics; or rather the lack of it, in the corridors of power of the modern medical establishment. I sincerely hope that the disturbing stories put out by mainstream and alternative media regarding research on gain of function on chimeric viruses by medical men despite government bans, turn out to be false. Likewise, I hope that the story about viruses being used as bio-weapons against unsuspecting humanity turns out to be untrue.

Like you, dear Reader, I too hope the independence of the WHO was not compromised. Let us hope that contrary to popular belief, the fact of human-to-human transmission of the virus was promptly notified to all of mankind. I can almost hear you say, no-smoke-without-fire, dear Reader. The international independent enquiry into the history of the pandemic should clarify what exactly happened and help humanity ensure that it never happens again. Be that as it may be, the undisputable conclusion that emerges, is the urgent need for human values-based education for at least the next generation of human beings. Only a generation that is committed to human values can ensure that humanity is spared man-made disasters spawned by irresponsible, immoral, selfish ways of living.

Plant-based diets - the need of the hour

COVID-19 has also drawn attention to the increasing problem of zoonotic infections. A popular paper of the UK, The Sun, reviewed a New York Times best seller by a highly respected medical doctor who actively advocates that people switch to a vegan diet through a most updated scientific not-for-profit website, nutritionfacts.org. The Sun states, *“Not if, but when. Virus from chicken farms could dwarf coronavirus and kill HALF world’s population, says scientist in extreme warning. During the H5NI bird flu in Hong Kong in 1997, the government sought to kill 1.3million chickens to eliminate the virus. The virus has never been fully eliminated as outbreaks have happened again between 2003 and 2009 outside of China.” According to Greger, COVID-19 is just the trailer of the bigger chicken related viral pandemic that is sure to come unless current chicken rearing practices are halted.*⁵²²

The highly respected Scientific American adds, *“But what’s more difficult is to be honest with ourselves about what kinds of pandemics we may be brewing through own risky animal-use practices. And while the new coronavirus, crippling as it is, might have a somewhat merciful case fatality rate (proportion of those infected who die) of less than 1 percent, we know that this catastrophe may be just a dress rehearsal for an even more serious pandemic that could take a more gruesome toll — akin to the 1918 global flu pandemic, which originated in Kansas and killed at least 50 million people...*

...the H5NI bird flu outbreak in 1997 evidently originated in Chinese chicken farms (case fatality rate 60 percent), a similar bird flu in the U.S. just five years ago led American poultry farmers to kill tens of millions of their birds to contain the outbreak, which thankfully never made the jump into the human population.”

A pandemic with an over 50% fatality rate is just waiting to happen, is the take home message.⁵²³

Climate change and its cascade effect resulting in poorer nutritive value of agricultural produce is a big challenge for developing nations. Today we also know that more than the automobile industry, it is meat farming that leads to climate change.⁵²⁴⁻⁵²⁷ Across the globe, discerning citizens have been calling for vegetarianism and veganism to both save the earth, and to battle two health scourges. The healthcare benefits alone make such a change worthwhile. This single changeover will help the developed west overcome the alarming rising morbidity and mortality secondary to fat consumption linked NCDs; and the grain saved by abolishing factory farming will be enough to prevent starvation / undernutrition / malnutrition related morbidity and mortality in the developing world.

Sometimes human beings need a shock to wake them up from their reverie. Perhaps it will take another zoonosis related viral pandemic to make us human beings change over to healthier, more compassionate eating habits; provided we survive such a pandemic with its projected devastating fatality rate, as Greger grimly points out.

The Greying Globe

Another fact that we need to wake up to, is that the world is greying. By 2030, 1 in 6 people in the world will be over 65 years of age.⁵²⁸ In the developed Western countries and Oceania, a quarter of the population will be above 65 years of age. In countries like India too life expectancy is increasing and around 15% of the population will be aged over 65. In Singapore the number of elderly is set to

double today's numbers by 2030. With old age come the attendant problems of degenerative diseases affecting body and mind. Thus, healthy life expectancy and disability free life expectancy become more important than just life expectancy.

Modern lifestyle brings with it new illnesses; in Britain, loneliness and isolation have become such a big problem that the Prime minister has appointed a Minister of Loneliness! A newspaper states, *"...of the 66 million people crammed onto an island smaller than the state of Michigan, about 9 million people report often or always feeling lonely. One study showed about 200,000 elderly people in the U.K. had not had a conversation with a friend or a relative in over a month."*^{4,5} From the previous chapters we know how isolation and loneliness can precipitate and aggravate all non-communicable diseases, the bane of our times.

With the developing world catching up with 'development' such problems of the developed world are also bound to be close on the heels of the developing world. Wisdom dictates that some preventive action be taken; or else, it is only a matter of time before the same problems swamp countries like India as well. More technological development and higher standards of living obviously are NOT the answer to these new problems. Humaneness and people making TIME for each other alone can mend this rent in the social fabric. Life after all is time. Human beings have to be willing to give a slice of their life to others!

Nowhere is it more relevant than in the field of medicine. If we are serious about moving on to excellence in the practice of medicine, doctors simply HAVE to make time for their patients, data hungry employers notwithstanding. One of the biggest causes leading to patient mistrust, as we have seen is that doctors seem to spend more time on their computer screens than on looking the patient in the eye and talking to him/ her.

Time to embrace Energy Medicine and Consciousness research

Another area that demands our attention, research and practical utilization, is energy medicine. In view of the overwhelming costs and mental stress caused by our high-tech treatments and in view of the fact that energy and intention therapies like *qi gong* show great promise, it is high time mainstream medicine opens its doors to such modalities so that all of humanity can benefit from such therapies.

I myself remember watching, many years ago, a film clip of a Caesarian Section being performed under acupuncture-anaesthesia, instead of general anaesthesia. Some months thereafter one of my illustrious seniors lost her life after anaesthesia related liver damage following Caesarian Section. Surely acupuncture for anaesthesia deserves to be studied and researched at length - for its safety is so much better not to mention the savings in cost. But nobody has shown interest in such an endeavor; commercial interests often dictate research goals. Finally, the costlier the medicine, the more it is written about and promoted no matter what the side effects are; and the profits go to line the pockets of those who are already ultra-rich.

On the other hand, when no-cost therapies are found to have truly phenomenal benefits they are not highlighted anywhere! For example, in oncology, Dr. Bernie Siegel⁴⁴⁴ and his one-time critic, Dr. Spiegel²⁷¹ both found separately, that group supportive therapy - which costs much less than radiation, chemotherapy and so on - helped to more than double cancer survival rates! If one does a comparative cost-benefit analysis, psycho-spiritual strategies for sure emerge as winners. Yet they make no headlines in medical conferences. The truth is that big pharma, profit driven corporates venturing into healthcare in the diagnostic and therapeutic

sectors and insurance companies dominate the healthcare industry. Ironically doctors do not have much of a say in matters medical these days!

The adage, “If you can’t beat ’em join ’em” is only too true and many doctors also begin to see the practice of medicine as primarily a business. In India, which has become a global healthcare destination thanks to the ability to render world class treatment at low cost, even the government supports the idea of medical tourism and industry status for healthcare. Laudable though such an achievement is, it is important that the common man in developing countries also is able to benefit from the expertise of his countrymen. Medicine has to be a service affordable and accessible by all. That is where healthcare models, described in earlier chapters, such as the Sathya Sai model, the Sankara Netralaya model and the Aragonda Model of healthcare are like breaths of fresh air.

The strides made in physics, chemistry and biology in the quantum domain and the scientific understanding we have today, of Consciousness have to be given centre-stage in medical conferences instead of getting only fringe session attention. In fact, the situation is so anomalous that physicians who have also taken up Consciousness research seriously, are constrained to have separate conferences outside of mainstream medicine. They have to report their findings only in books (which fellow doctors scarce read but the public devours, making them best sellers), and discuss their concepts on YouTube videos. The fact that there is but one universal mind of which we are all a part and the infinite therapeutic potential that the human mind has, needs to be at least accepted as a hypothesis and seriously researched by mainstream medicine.

Delink medical education from Big Pharma

The first step to that would be delinking medical education from big pharma. It is heartening to note that generation-next has taken the first step in this direction. A medical student's brutally frank e-mail to the British Medical Journal as a rapid response to a 2008 paper on 'Doctors' education; the invisible influence of drug company sponsorship', said it all; and I quote,

"I appreciate the recent article on the industry-favorable influence of industry sponsored "education." But, as a medical student who has listened closely to the professed ethics of my profession - evidence-based, patient-centered, cost-effective, Hippocratic - I would hardly call the influence invisible. In fact, I take it as an offense to our collective intelligence, and as a symptom of the degree to which the pharmaceutical industry has influenced our language around what counts as "education."

A few questions to consider: Why would pharmaceutical companies pour \$7 billion dollars into advertising to... excuse me - "educating" - physicians in the U.S. alone if it were not an incredibly profitable endeavor?

Why would any pharmaceutical company spend money on "education" that did not increase the company's return to shareholders? Given that they are for-profit companies, wouldn't that be a poor business decision?

Why are physicians so vehemently offended by the notion that industry "education" is biased and an interference into the duty of the physician to do what is best for her/his patients despite the studies that clearly link company "education" (which almost always comes with some gifts to help clinicians remember the "educator") to changes in prescribing behavior?

Would we have this same conversation around "education" from car dealers, clothes companies and other for-profit entities?

I am proud to say that a large and growing cadre of physicians-in-training in the U.S. have joined the PharmFree campaign (www.pharmfree.org), which aims to rid medicine of the VERY visible influence that industry "education" has on clinicians, the patients of these clinicians, and the larger healthcare system. The campaign was the American Medical Student Association's cure for the addiction to industry influence that so infiltrates medicine today, following the organization's move to become the first national medical organization in the U.S. to divest from pharmaceutical funding. PharmFree physicians-in-training pledge to take no gifts (lunches, pens, etc.) from industry, and to seek unbiased sources for their education. In doing this our mission is simple:

RECLAIM the ethics of medicine by, REMOVING conflicts of interest, and RECLAIMING the sanctity of the patient-physician relationship

I would close by simply saying that we must not kid ourselves by using terms that suggest that industry influence in its "education" and other attempts to influence physician behavior is anything but obvious, visible, and blatantly violating of the trust relationship between patients and physicians.”⁵²⁹

The only really effective way to bring about change in modern healthcare, is to enable the human elite to understand that there is much more to life than just acquisitiveness. As mentioned earlier, in today's world, healthcare is not a subject dealt with only by doctors; there are so many players - governments, corporate diagnostic service providers, corporate healthcare providers, big pharma companies, the retail pharmacies, healthcare management organisations, insurance companies, the media, and finally the end user - the common man.

Consciousness Education is the need of the hour

All need to have this education in advances in Consciousness research, advances in energy medicine and the non-locality of our minds; mankind and its leaders need to be updated on our current knowledge of birth, death, near death experiences, the revelations made by the experiential scientists of Consciousness about space-time and reality, zero-point energy, the existence of fellow galactic civilisations and their visits to this planet and so forth. The Right to Information act has to become global! Only awareness can lead to understanding and positive change.

All of mankind needs to have a chance to know that there are riches far more valuable than money-riches which one has to acquire in life for one's own real future security; and by that, I mean security for life beyond the body. All of mankind has a right to add value to life by living a life based on human values. Perhaps it is only fitting that doctors first understand these concepts.

Non-local Consciousness and One Mind

Larry Dossey, the author of 'Reinventing Medicine' and Gandhi Peace Prize winner put it most eloquently in an essay in the Moonshine Magazine 2018 from which I quote⁵³⁰

"I have had several experiences suggesting that my mind, my consciousness, my awareness are not limited to my individual brain and body or the present. I'm not unique; millions of individuals routinely have similar experiences, but are reluctant to talk about them.

Early in my practice of internal medicine I had a series of precognitive dreams: dreams of future events that proved true in great detail. My patients related similar

experiences to me. So did nurses. After I began to write about these events, my medical colleagues eventually began to open up and share their own experiences. An example is an internist who reported that she dreams the specific values of her patients' lab tests — before she even orders the tests.

During my early years as a physician, I stumbled across actual experiments affirming the idea of linked, unified minds. This was rather shocking, as this evidence never came up during my entire educational experience, from university days through post-graduate medical training. I began to consider this one of the best-kept secrets in modern medicine.

I was delighted to discover that some of our greatest scientists and philosophers have come to the same conclusion I reached: that there is a collective domain of consciousness that is a kind of umbrella for all individual minds. In fact, an increasing number of leading scientists and psychologists support this idea. For instance, one survey found that a majority of academic scientists believe that extrasensory perception or ESP has already been proved or is likely to be proved. ESP is an expression of minds without boundaries in space and time. It is a natural, short step from ESP to the unbounded, unitary One Mind. ESP is one way the One Mind manifests in our lives.

A number of experiments have shown that we can interact mentally with animals at a distance, beyond the reach of the physical senses. British biologist Rupert Sheldrake, for example, has conducted many experiments with dogs that demonstrate they know when their owners are returning home—even from a different location or at a different time than usual.

It is vital to realize — and this is almost always ignored by skeptics — that scores of these experiments deal with effects not just in humans but in animals, plants,

microbes, and even chemical reactions. Why is this important? Skeptics generally say that if a person responds to, say, the healing intentions of a distant individual, this is due to chance or is merely a placebo effect — the result of positive thinking, suggestion, or expectation. But if an animal, plant, microbes, or biochemical reactions are affected, the distant effect cannot be easily dismissed as a placebo effect because, as far as we know, animals, plants, microbes, and chemicals don't think positively — or if they do, as some evidence in higher animals suggests, these effects are not as widespread as in humans. So, these non-human studies strongly suggest that the remote, distant, consciousness-mediated healing effects and similar nonlocal phenomena are real, and that we are not fooling ourselves.

These various experiments point toward One Mind. They show that some aspect of our consciousness operates outside the human brain and body, and cannot be confined or limited, but is nonlocal or limitless. And if limitless, the mind has no boundaries and must, in some sense, come together with all other minds.

Other studies called “presentiment” experiments, or experiments in “anticipatory awareness,” show that we can acquire information from the future before an event happens. Presentiment experiments, pioneered by researcher Dean Radin, have been replicated in scores of experiments by researchers around the world. The odds against a chance explanation of these findings are millions against one, as noted.

Putting this evidence together, a nonlocal picture of consciousness emerges, which means that our minds are not localized or confined to particular points in space or time. And if our minds are unbounded, they must in some dimension come together to form a single mind, a single entity: the One Mind.

I begin my book, One Mind, by relating the story of Wesley Autrey, 50, a black construction worker and Navy veteran, who saw a young man fall onto the subway tracks in Manhattan while having a seizure in January 2007. He instantly jumped onto the tracks and tried to lift him onto the platform but could not do so in time. As a train approached, Autrey shoved the man into the depression between the rails and covered him with his own body. The train could not stop in time and several cars passed over the two men before it could be brought to a halt. Autrey was nearly beheaded; he had grease stains from the train's undercarriage on his cap.

The reason for including this incident in my book goes back to my experience as a field battalion surgeon in Vietnam in 1968-1969, where I was involved in an experience similar to Autrey's. Briefly, I rescued a pilot from his crashed helicopter with the help of one of my medics, when everyone believed it would explode. Fortunately, it did not. I experienced other similar events in Vietnam.

I was disturbed and confused by these happenings. Before going to Vietnam, I had sworn that I would never take unnecessary chances. When I found myself violating this resolution repeatedly, I began to doubt my sanity.

Why would I, or anyone else, risk his or her life to save a perfect stranger? It goes against the premise of evolutionary biology, which maintains that our most basic drive is to preserve our genes or those of our close kin, but not risk our life for total strangers.

On returning to the U.S., I eventually came across an explanation by the German philosopher Arthur Schopenhauer, described by mythologist Joseph Campbell. Schopenhauer believed that at the decisive moment the rescuer identifies so completely with the rescued person that their minds have literally

fused; they have become a single mind. Their mental union is so complete that the rescuer is not rescuing someone else, he is essentially rescuing himself. I felt deeply that this description explained my own experiences in Vietnam.

In researching my book, I collected a number of life-saving stories. They are not just human-to-human events, but they also involve humans rescuing animals, animals rescuing humans, and animals rescuing animals — every possible combination.

So what is going on? What's the pattern? I think Schopenhauer nailed it: there is a fusion of apparently separate, individual minds into a single, collective consciousness. In these instances something larger than individuality takes hold; the One Mind is bridging and uniting individual minds, pushing separation aside in favor of unity and oneness. "Courage" or "valor" is what we call it later — concepts based in individuality and separateness.

One Mind and survival

Our problems are enormous: global climate change, environmental pollution, overpopulation, water scarcity, hunger and food insecurity, endless wars, religious strife, degradation and acidification of our oceans, on and on. Nearly all these problems are caused by individuals who represent a particular culture, race, tribe, country, or religion, who are competing with other individuals who hold different views: "the other." We cannot see beyond our individual self, our tribe, our religion, our political party, our culture. All of these problems are compounded by greed and selfishness. Put another way: we are fragmented, and we are destroying our planet's life-support systems.

The fundamental cause of these problems is that we have an identity crisis. We have forgotten who we are. The "cult of the individual" — I, me, mine — overrides

our awareness of wholeness, unity, and membership in the shared community of life, not just human life but the entire biome. Our illusion of the separate ego and self-blinds us to the interdependence of all things.

The message from modern science that we are merely mortal, local creatures who are completely annihilated with physical death is part of the problem. Having no long-term vision, and blind to our nonlocal, immortal nature, we are driven to a pathological acquisitiveness in this life: “get it while you can” because “you can’t take it with you.” If this insane level of consumerism continues to spread, it may be the death knell of our civilization. As Emerson put it, “The end of the human race will be that it will eventually die of civilization.”

It is going to be difficult to confront these problems intelligently without dealing with our fragmentation and sense of separateness. We need a profound shift in our sense of how we are related to one another. I believe this is possible by re-imagining how we connect with others through consciousness. The “us-against-them” competitive model is not going to see us through. A shift to a One-Mind perspective may be our best alternative — a sense of unity that is experienced at our deepest psychological levels, and which makes a difference in our behaviors.

A dramatic example of this shift is the “Overview Effect” experienced by astronauts and cosmonauts returning to Earth. Many of them sense profoundly that our planet is an integral whole. They feel deeply that the Earth’s customary borders are not fundamental. Our disagreements and divisions are seen as petty, arbitrary, and utterly misleading. This shift in perception can be life-changing. An example is Edgar Mitchell, the lunar module pilot of Apollo 14 and the sixth man to walk on the moon. On returning he established IONS, the Institute of Noetic Sciences, to explore this integral way of knowing.

If we genuinely believe we are of One Mind with all others, our existential premises shift. Our resentment and loathing of “the other” diminish. Not only is our attitude toward other humans transformed, but our regard for the Earth and all its creatures as well.

The good news is, you already know the One Mind, but you might not know that you know! Our membership in the One Mind already exists; we’re already a part of it. It is not something we have to engineer, acquire, or generate. We just have to become aware of it. This process always means turning off the rational mind, so that our unconscious wisdom can bubble up into our awareness.

Most people who come to this realization don’t have a dazzling, spectacular experience. They simply grow gradually into the realization of connectedness. This is a natural process, a part of our psychological and spiritual maturation. It is the result of staying alive, growing older, and paying attention. Without realizing that it is happening, a One-Mind awareness becomes part of who we are.

Some people are born with this awareness — advanced souls who come into life knowing their larger connections.

We can invite this awareness through meditation or some other contemplative type of spiritual practice, in which we learn to set our ego and sense of self aside and permit a larger, more expansive awareness to emerge from our unconscious mind.

Peak experiences, such as being “in the zone” in athletics — where you can’t miss on the basketball court, or you have the perfect downhill run while skiing, etc. — are ways of experiencing oneness and being in sync with all there is.

Other people enter this awareness through detailed dreams of far-off or future events, which jolts them into realizing that their consciousness is not stuck in their

brain or the present. “Telesomatic events,” in which people share similar physical symptoms and feelings with a distant person, are also a doorway to One-Mind awareness. Children who remember previous lives is another, as are remote viewing, shared death experiences, communication with the deceased, presentiment effects, and so on.

One of the most effective ways of intentionally accessing the One Mind is doing something for others. For many, the simple retreat into silence works best: turn off your smartphone, sit down, be quiet, and pay attention to whatever comes through. Whether we call this process meditation, contemplation, or simply getting quiet, the point is to turn down the chatter that crowds out everything else in our waking life. You may be surprised to discover what you already know.

Exposure to the beauty of nature and wild places has been important for me — a kind of short-cut to what matters in life. For decades, my wife and I have spent weeks camping in wilderness each year, removed from civilization. This has become a pilgrimage of sorts, a retreat from the distractions and noise of daily life.

All these processes have this in common: the dominant sense of self and ego is transcended in favor of an expanded notion of who we are. Awareness of the One Mind has contributed enormously to my own tranquility, joy and creativity.

I’m an introvert by nature, inclined toward aloneness. Awareness of my place in the One Mind has helped me overcome my innate tendency for isolation. It’s a sense of belonging, of finding your natural fit in the great scheme of things.

The great human dread of death is diminished. As a physician, this is important to me, because I believe the fear of death and annihilation has caused more suffering throughout human history than all the physical diseases combined. The One Mind reduces this fear and the suffering that goes with it. Why? The One

Mind mandates immortality by way of our infinitude in space and time. (A colleague of mind says, “We should stop calling ourselves ‘internists’ and start calling ourselves ‘eternists.’”)

One-Mind awareness has affected the way I relate to other people. I’ve become much less competitive, more giving, more supportive, more understanding of other people’s difficulties and problems, and more interactive with others. (I still have a long way to go!)

One-Mind awareness helps me see how I can make a difference. In today’s world we can feel overwhelmed by the challenges we face. What difference can my efforts as a single individual possibly make? The One Mind increases our sense of adequacy and what is possible, because through it we have access to all wisdom and knowledge, and we can act in concert with others. We realize we don’t need to know and do everything individually, because we are a part of the Great Connect. We are never alone. We are an infinite team, not a lone wolf. The pressure eases. A lightness of mind and spirit arises, and perhaps a sense of humor. Now that is different!

Let me leave you with a few lines of poetry that captures the One Mind from Hafiz, the fourteenth-century Persian poet,

Let’s go deeper,

Go deeper.

For, if we do,

Our spirits will embrace

And interweave.

Our union will be so glorious

That even God

Will not be able to tell us apart....”⁵³⁰

Inspiring Examples and Role models in the pursuit of Excellence in Healthcare

The pursuit of excellence in healthcare, as individual doctors and the care team members, as well as healthcare organisations, depends on our understanding and acceptance of this truth of the oneness of all there is, and our realizing that this life is but a cross sectional view of our life; that we existed before life in this body and will continue to exist beyond life in this body. So, our vision of self has to include all; and our vision for the future has to go beyond this lifetime. Automatically then, selflessness will become our creed and goodness our bank account.

Competitiveness, publish-or-perish and the like will be replaced by open research and patent rights will be replaced by licensed to share. The desire for a bigger house, flashier car and branded wear will be replaced by a ceiling on desires program. I know of a non-Indian orthopedic surgeon who has mortgaged his house to take a loan to help build a school in a remote Indian village he never knew existed! I know of a young pediatric cardiac surgeon who not only comes from the USA to operate for free but mentally declares he is NOT the doer before surgery and offers it all to his Guru as he does not want to incur any more *karma*- good or bad. He wants out from the cycle of birth and death! For such a one, the practice of human values becomes automatic!

A perfect example of a balanced life I found in Dr. Srikanth Sola, former Cardiologist at Cleveland Clinic, who left all that to work at Sri Sathya Sai Baba's tertiary care hospital at Bangalore. He has integrated work and spirituality into life perfectly. Dr. Sola has no holier-than-thou pretensions; he eats out and goes to the movies once in a while with children in tow; but always in conversation makes it clear that he is NOT this body! If you are a young healthcare professional, I urge you to watch all of Dr. Srikanth Sola's videos on YouTube, Vimeo and Ted Talks.

As in all fields, in medicine too, we need role models. At the Christian Medical College where I did my under-grad studies, we had two all-time great, brilliant and compassionate role models, who nevertheless, had trained in non-Christian medical colleges themselves. They were Dr. MS Seshadri and Dr. Kuruvilla Varkey. In fact, technically MS Seshadri was Hindu. But the two were the best of friends and true Christians in the real sense of the term; and a great inspiration for all students. I was very lucky during post graduate training too; for I trained under Prof KV Thiruvengadam, who again, combined the highest qualities of heart and head. Today's youngsters need role models too.

Unfortunately, physicians who follow the spiritual path are disowned as if it were, by mainstream medicine. Senior doctors of yesteryears, Deepak Chopra, Bernie Siegel, Larry Dossey, BM Hegde and others are loved by humanity, but their papers and talks are seldom part of mainstream medical conferences. But mercifully that trend is changing. While on the topic of role models who are at home with quantum medicine concepts, the next generation of physicians like Robert Lanza in the USA and Srikanth Sola of Whitefield come to mind. Young health professionals looking for altruism in the practice of medicine, need to meet idealists and role models like them. A stint with 'Doctors without Borders' will

give junior doctors from developed nations a taste of the practice of medicine sans frills with the most basic of equipment's and facilities.

Global teams of doctors and other healthcare professionals coming together to serve in needy areas in the spirit of selfless service with love promises to be the way forward in the future. A classic example would be the work of the little-known Sai Prema Foundation in the little island nation of Fiji. Wealthy Fijian nationals can afford to go to Australia and New Zealand for treatment. But poor families especially those who have children afflicted with congenital heart defects hit a dead end as the costs of surgery are prohibitively high. In 2017 a pediatric cardiac surgery team from the Sri Sathya Sai Sanjeevani Hospital at Raipur flew down and operated on 25 such children; and everything was done totally free of cost.

Inspired by this, in 2018, a team of doctors from Australia, New Zealand, the USA and Raipur in India came together and carried out 27 pediatric cardiac surgeries, again totally free of cost. On April 24th, 2018, Sadguru Sri Madhusudan Sai, who walks Sai Baba's path of selfless loving service, declared that the first pediatric cardiac care hospital of the South Pacific would be established in Suva. Reporting on the inauguration of the Sri Sathya Sai Sanjeevani Medical Centre, The Fiji Sun quoted the Prime Minister of Fiji who did the honours - *"The, Sai Prema Foundation is not only limited to this new medical centre; your charitable work throughout the country has already touched the lives of thousands of people."* Sri C Sreenivas, who heads a global initiative by Sai students and devotees to provide healthcare to fellowmen all across the globe, echoed Baba's words when he said the Fiji hospital would provide "genuine care, quality care, most needed care and totally free of cost care." Despite an interruption of work due to COVID-19, the Fiji hospital construction is on track and 2021 promises to see the first ever

dedicated child heart care hospital of the south Pacific sans billing section open its doors to patients.

Just how is it getting done? The building and infrastructure is handled by the local foundation; the equipment needed - which is very expensive - is being arranged for by the aid agency teams from developed countries and the Raipur Hospital team from India stands rock solid behind the venture, to provide and train the manpower needed. Initially Sanjeevani and international teams will come and carry out the surgeries, and side by side they would train the local Fijian team of doctors, nurses and other health professionals in pediatric cardiac surgery. It would be all done totally for free. The goal would be to set up a centre of excellence in pediatric cardiac surgery in the South Pacific region. The future, hopefully, will see such events of selfless cooperation between peoples and nations happening all across the globe. Clearly this is the example to follow in the future.

Incorporating Human Values into medical education and training

Side by side, changes have to come about in the area of basic medical training. Human values need to be incorporated into the non-academic parts of the making of a doctor too. The horrendous practice of ‘ragging’ which still unfortunately exists, albeit invisibly, in many Indian medical colleges has to totally go.^{531–533} Crude jokes and vulgarity which are considered ‘okay’ in the operating theatres has to definitely go, now that we are beginning to understand that what we say can impact the ‘unconscious’ patients and their post-op progress; what is referred to as ‘unconscious awareness’. For example, after lower back surgery, many patients need catheterization because of spasm in the pubic muscles. One group of researchers suggested to patients on the operating table, while anaesthetised, that

they would be able to relax the crucial muscles afterwards. None of these patients needed catheters.⁴⁴⁴

It is especially important to avoid negative messages in the operation theatre, says Dr. Bernie Seigel.⁴⁴⁴ He is not the only one to have noticed this ‘unconscious awareness’ while under anaesthesia. A medical student once reported to Seigel the terrible language and disgust expressed by a surgeon during surgery and the sadness the patient felt post operatively. Henry Bennet of the University of California Medical School asked unconscious patients to make one hand warmer than the other; and they complied! With another group of patients, non-hypnotic pre-op suggestions, that blood would leave the hip area reduced blood loss by half during hip surgery.^{352,444} Sometimes, talking to the patients during surgery can make the difference between life and death. Seigel gives examples of cardiac irregularities and rapid dangerous pulses settling. Once, a patient had a cardiac arrest on the table. In fact, even the anaesthetist gave up and walked out. “Come on back Harry! It’s not your time, yet!” shouted Seigel firmly and at that point the electrocardiogram spontaneously picked up to everyone’s relief.^{352,444}

Medical Education needs to address Death and the Fear of death

Another important area that modern medicine has to stop shying away from, is discussing the topic of death with medical students and patients. Mortality rates even in the USA, as expected, rise sharply after age 74. The cost of hospitalization can be prohibitive towards end of life. About one fourth of all healthcare costs occur in the last year of life when expensive efforts to stave off life threatening illness are common. Invariably, the last illness - the one the doctors cannot cure - is the most expensive. With more of the population being the elderly, hospitals are

bound to be occupied even more by the elderly and very elderly. More than 20% of people die in the impersonal setting of ICUs now. That figure is set to increase. Is there any solution to this?

It is time the medical fraternity accepted that just as there is a good birth, human beings are entitled to have a good death, with dignity and peace in their own homes. The way things are now, doctors and patients, in the West are even hesitant to use the word, 'death'. Open discussions are hardly held in medical schools about death, pre-death experiences, near-death experiences and the like. This needs to change; so that at least the next generation of doctors is more competent and comfortable with end-of-life matters. A young ICU medical resident, Ashley Alker wrote in The San Diego Union Tribune, about this struggle with conscience, on witnessing the impersonal love-less last moments of many patients.⁵³⁴ I quote,

"Death is a difficult subject. And given the discordance between the dying wishes of Americans and the reality of dying in America, death is a subject we are not talking about.

It pains me to watch the terminal cancer patient be sent to another futile surgery. It is difficult to watch the 90-year-old man have his ribs broken by the chest compressions of CPR. All this because the patient's wishes were not made clear and the family feels a responsibility to exhaust every resource.

During my last year of medical school, my father called me to talk about my hospitalized 56-year-old mother and her status of do not intubate or resuscitate. When she died, she died in the ICU, but she was surrounded by her family.

My mother was my best friend and the single most important person in my life. When we made the decision to allow her struggle to end, the choice was clear

because she had made her wishes for no resuscitation in these circumstances known. It was our turn to carry the burden of suffering, allowing her peace.

My message is simple. Think about the circumstances in which you would like to die and communicate your wishes with someone you trust.

In 2013, I was attending the TEDMED conference in Washington, D.C. One of the speakers was chef, Michael Hebb. When he took the stage, I expected to hear about how food is key to life. Instead he spoke about quite the opposite: the death dinner - a dinner in which we come together with friends and family to broach the difficult subject of death. Tell people under what circumstances you would like to be on a breathing machine, receive CPR and revival measures. Communicate under what circumstance you would like to be left to nature's devices.

Only one month into my residency, I have seen patients die. Each time is difficult. It has been most difficult for those terminal patients who come to the hospital hoping for a miracle. But medicine does not deal in miracles, only science. And because we know that we can never defeat an ultimate end, our oldest oath has always been first do no harm.

As medicine advances, the role of the physician remains the same. I believe the physician to be a component of a team. The job of that team is not to prevent death, but to alleviate suffering.

I know that as I continue in my career, death will be a pervasive adversary and the inevitable victor. But my hope is that patients will die in peace surrounded by those they love.”⁵³⁴

Contrast this with the traditional Indian villager's approach to death. Some of our countrymen go to Varanasi when death seems imminent, as leaving the physical in

Varanasi is believed to release you from the bondage of rebirth; free homes of liberation existed at Varanasi where the dying were brought and family stayed with them in that sacred milieu of prayers and scriptural readings till they died, gracefully and gratefully, at Varanasi. With ‘development’ and modernization the number of such homes has come down, but they are still there. The point to note is that the concept of a good death exists; death is not only accepted but even celebrated. Contrast the state of the ninety-year-old who suffers rib fractures at CPR, only to die in the impersonal ICU surroundings, with the ninety-year-old, who breathes his last listening to sacred sounds, while receiving holy water and hearing confidence building words urging to make the journey ahead to Godhead after dying.⁵³⁵

Even in places remote from Varanasi, for example, in Vellore, where I was a medico at the Christian Medical College, I remember watching countless funeral processions with drums and dancing and flowers; with relatives turning grief into a fond farewell as the person set out on the journey to the higher dimensions. In fact, our American Physiology Professor, Dr. Bullard, once on returning from vacation in the USA, told us how disturbed his eight-year-old son had been on seeing a somber bleak, black funeral procession in America. Apparently, the boy turned to his father and declared - “Daddy, I want to die ONLY in India!”⁵³²

Again, in Tibet, all of life is considered a practice so that one makes a conscious crossing at death, to a life in a higher dimension with awareness and peace instead of getting caught in otherwise inevitable rebirth.⁵³⁶ It is believed that as an act of sacrifice, the high lamas and Rinpoche’s volunteer to be reborn to lead other fellow beings to the higher dimensions at life’s end. Modern medical doctors need to ponder these concepts; and study them. Indeed, death deserves study and research by modern medical doctors. One heartening development is the ‘End Of Life

University'; an online initiative by Karen Wyatt to bring the topic of death into normal conversation; to educate people about the one event that is certain to happen in life - death.¹⁴⁷

The goal is to take the fear of death out of people's minds. Therein may lie the key to a more peaceful fear-free life; and the key to solutions to many ethical dilemmas in the practice of medicine; nay, in fact, in modern society itself!

Ethical challenges in the age of Hi-tech medicine

High-tech modern medicine continuously throws up newer ethical challenges. Let me give one example - I once saw a 73-year-old Sri-Lankan Muslim lady in the OPD. She came with her 80-year-old husband and 55-year-old daughter. They were terribly anxious; and this was their story. She was a hypertensive. A few days ago, she had chest pain. She was rushed to a top hospital at Colombo. ECG, echocardiogram, blood tests and an angiogram were done and as critical blocks in the coronary arteries were found an immediate bypass surgery was advised. Now, she did not want surgery; she was terrified by the very prospect.

So, they took the next flight out to Chennai and here at another hospital underwent all the tests again. The verdict was the same. The family by now felt compelled to follow the advice of the doctors for after all, doctors "know best". So, they went to a cardiac surgeon. Now, this lady had had breast cancer while in her fifties and had been treated with surgery and radiation. The radiation had damaged her lungs. The cardiac surgeon now opined that, yes, she needed bypass surgery alright; but it would be a *very* high-risk surgery. When the husband asked him to clearly spell out the risk, he very candidly said, well the patient may die on the table! The surgeon had assumed that the patient, a burqa clad old lady, did not speak English. But

appearances are very deceptive; and this lady could follow every word of the conversation that the men were having! So, you can imagine her mental plight.

As one of their nieces knew of my holistic approach to problems they had decided to come; and wanted me to help them make that difficult decision- to operate or not to operate. I sent up a quick prayer and felt inspired to say, *"God saved you from breast cancer. Most women in our part of the world don't manage to survive cancer; but you did! You have truly enjoyed God's Grace. Your children and even grandchildren are married and settled and you and your husband are happy. Heart problems are as old as humanity. These surgeries have come in only in the past fifteen years or so. Before that how did we treat patients? With medicines! So do start medicines and pray to God. Let God decide how long you should live. Let not surgeons do anything to lengthen your lifespan or, to shorten it. What do you say?"*

She was so relieved! It was as if I had spoken what was in her heart. She did well with medication for IHD and had no more chest pain. She did a lot of shopping at the Spencer Plaza and went home happily. Some years down the lane, her cardiologist said she was doing fine. So, I think I did right in advising her as I did.

But many patients are driven by fear; and it is only a very courageous person who can say 'NO' to bypass surgery, after the angiogram shows up blocks. However, in our country many patients opt out of surgery not due to courage of conviction but financial constraints. Many people simply cannot afford bypass surgery. Like most physicians I too have had to treat many such patients. With these patients, my strategy has been, to go all out the Ornish way, packing in all our psycho-spiritual strategies for good measure and making Consciousness the 'managing partner' in the treatment. The wonderful news is that all of them are alive and better; and what

is more, some of them have even turned treadmill test negative! The healing powers of Consciousness are far more than we imagine.

Integrating Psycho-spiritual strategies into Chronic disease management

This takes us back to the points raised at the beginning of this chapter; as to what modern medicine can do for the various ailments that afflict man after around age 40; the ailments that we seem to be stuck with, the great hi-tech advances of medicine, notwithstanding. What can medicine do for diabetes, hypertension, ischaemic heart disease, asthma, allergy, arthritis and so on? As far as India is concerned, diabetes and coronary artery disease are of particular relevance for their prevalence seems to be rising by leaps and bounds.

Let us pause for a minute. As we saw earlier, in the pathogenesis of these illnesses, you will find stress with a capital 'S' is a common denominator in all of them. Stress relates primarily to the mind and is specifically 'felt' by the ego. The more one's sense of separateness and ego, the more the stress felt. Through psychoneuro-immunological pathways disease results or aggravates.

In the case of auto-immune disease, my own feeling is that one's self-view becomes so contracted and one has such a heightened sense of separateness, loneliness and insecurity that the immune system itself becomes paranoid; and ends up treating one's own tissues as foreign. Rheumatoid Arthritis is a typical auto-immune disease.

I have often wondered about the scientific basis for the improvement and reversal of disease that I find in my patients thanks to the psycho-spiritual strategies. Though I use all conventional disease modifying drugs I avoid steroids and

painkillers. At best, spaced out injections of methyl prednisolone are used. Only paracetamol is used for pain. And yet I find such an improvement in patients! I can only attribute it to the psycho-spiritual strategies packed into the therapy. Indeed, they are quite the cornerstone of treatment that I dispense, which results in a more expansive self-view, feelings of closeness to God, and a progressive decline in that feeling of loneliness and insecurity. The treatment of associated depression and a pronounced improvement in confidence and energy levels also aid recovery. These therapeutic changes possibly act positively down the psycho-neuro-immunological pathway and result in the better treatment outcomes such that even milder medicines at lesser dosage seem to work effectively.

Harnessing the Power of Consciousness

Thus psycho-spiritual strategies that result in an expansive self-view and enlarge our ego boundaries thus have therapeutic value. So-Humming, energizing and so on, result in expanding self-view. In essence one has to try to get the patient to contact with Consciousness; if he / she can identify herself / himself with Consciousness it would be the best - for it would help them develop the grand *advaitic* concept of '*shivoham*' (I am God). Most of us however do feel separate; but we can develop a '*dasoham*' approach i.e.; we can learn to feel that we are God's servants; and that His Will is what will be; we can learn to surrender our wills to Him. Just as a servant unquestioningly obeys the master, we can learn to accept His Will, and again like a servant, learn to feel that we are the Lord's servants and are here only to carry out His Will (*dasoham*).

Both these methods, i.e., the *shivoham* path and the *dasoham* path, are equally effective in tackling the ego. The ego is like a chain that binds us. One way to get

out of it is to develop so expansive a self-view that the binds of ego snap. Another way is to reduce one's little will to nothing and merge it in the greater will of God; to become so small that one can slip out of the chains of ego!

Most of our psycho-spiritual strategies have a *dasoham* undercurrent to them. This way the blocks of the mind are removed and the healing energy (*prana*) of Consciousness (*Atma*) can help heal the illness. Most likely that is how these techniques work; in addition to medicines that work at the bodily level, we so change the mental milieu, that the spiritual healing energy can work unobstructed. Even with regard to heart disease Ornish has found much the same thing. He says, *"If we limit our treatments to the physical heart, the diseases tend to come back again and again - or the treatment may be worse than the illness. If we also address the emotional and spiritual dimensions, then the physical heart often begins to heal as well."*⁵¹⁰ The field of psycho-spiritual strategies is open to research and documentation by the next generation of doctors.

The future will see the power of the mind and Consciousness being harnessed to improve our physical health. As a first step towards that, modern medicine has to move out of its matter-based mindset. The second aspect is what has been alluded to in detail in the foregoing chapters - the power of the mind. The mind is not simply restricted to just the brain; its sphere of influence is over the whole body and even on other bodies and minds as the effects of praying for people testify. Larry Dossey, states that we will soon see the unfolding of what he calls, "Era III" medicine.³⁵²

He divides modern medicine into three eras; Era I is orthodox modern matter-oriented medicine; drugs, surgery, radiation and so on. Era II medicine is involved when we talk of the influence that a person's mind has on his/her physical body and

therefore on his/her health. Era III medicine refers to the non-local influence of the mind in time and space. The experiments done at Princeton,⁵³⁷ where messages sent mentally were received mentally thousands of miles away, sometimes even before the message was sent, is a classic example of this property of the mind; what the ancient *rishis* called *yogic* perception, to which time and space were no barrier; one could 'see' into the future or the past; or one could be anywhere as well!

For decades, a little known organisation called Spindrift has been studying the non-local effects of prayer on human beings and other organisms. Both focused intention prayers and open-ended "Thy will be done" prayers were found to work. Interestingly the open-ended prayers seemed to be two to four times more powerful.^{538,539} This is exactly what we have experienced; what we have been doing ourselves and teaching our patients to do - to learn to pray in surrender to Consciousness / God; and we have seen that it works, in that physical health improves.

Another magic word I would like to add to Larry Dossey's Era III medicine is Love; for ALL the psycho-spiritual strategies described in this book attempt to enlarge and expand our self-view so that we can learn to extend the love that we feel for ourselves to all of creation. Indeed, it is our hunch that ultimately it is this increased ability to give and receive love that is the FINAL COMMON PATHWAY through which all psycho-spiritual strategies work. In short, GOD HEALS; and LOVE is the aspect of God that heals. My teacher, Baba, reiterated this very same concept when he addressed some of us doctors on December the 29th, 2002.

We had made a flying visit to my teacher's *Ashram* so that the editor of this book, Divya, then a first year medico, could have my teacher's benediction. The words he spoke to us that day, are even more relevant today. Said he, and I quote, "*The current of healing needs both a negative and a positive pole to flow effectively. Hospitals, medicines, diet, water, air.... all those constitute the negative pole. LOVE constitutes the positive pole. Doctors! You have to be sources of LOVE! There is inexhaustible LOVE in your hearts; open your hearts and allow LOVE to flow out... In our hospitals doctors give plenty of LOVE to the patients... that is why they get well so fast! Doctors, remember always - God is LOVE!*"³⁵²

His Holiness the Dalai Lama says much the same. Inspired by him, his personal physician and Buddhist monk, Dr. Barry Kerzin, a faculty member at the University of Washington, a Visiting Prof. at Central University of Tibetan Studies in Varanasi, a fellow at the Mind and Life Institute and consults for the Max Planck Institute in Leipzig on compassion training has started a US registered, not-for-profit organization, Altruism in Medicine Institute (AIMI)⁵⁴⁰ and is also the director of the human values institute based at Japan. One who walks the talk, Dr. Barry Kerzin travels to many countries and teaches medical practitioners and medical students the art of combining compassion into the practice of medicine. It is time such movements take root in and flourish in Indian medical colleges.

A recent welcome development in India that augurs well, is that along with regular antenatal care mothers are trained to the give of Love to the growing foetus. Mothers-to-be are encouraged to think loving thoughts, talk to the unborn child with Love and listen to sacred texts and so on. Babies born after such loving antenatal care seem to have less perinatal problems, better bonding with parents, speak earlier and show more agility.³⁵² To paraphrase one of my teacher's sayings, it pays to start life with love, fill life with love and end life with love!

We certainly need a vaccine for malaria, an effective drug for AIDS, Hepatitis B and C, dengue fever and so on. But equally important is the development and incorporation of psycho-spiritual strategies to complement conventional medical management, particularly in stress related illness such as diabetes mellitus, hypertension, IHD, auto immune diseases, cancers, mental illness and so on. The effectiveness of psycho-spiritual strategies in preventive medicine also needs to be explored and utilized. There are plenty of studies that show that people who pray regularly, attend church or support groups, and volunteer to do service generally lead healthier and longer lives.

Sai Baba used to say that excellence was achieved when head, heart and hand coordinated harmoniously. Modern medicine simply HAS to learn to open out its heart, and acknowledge the truth, that ultimately it is Consciousness that heals; for all our medicines, surgeries, radiations, what-not are of no use to a dead man. Through love doctors must access the healing power of Consciousness. That one simple step will save modern medicine, which otherwise runs the risk of becoming 'heartless'; and then it shall rise once more, to become that great art of healing, that it was always meant to be.

* * *

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TRIBUTE TO PROF. KVT

Most solemnly, stoically and prayerfully do I share a few words about Professor KVT, whom we lost on October 3rd, 2020. His passing quite marks the end of an era in Modern Medicine in India. It is the hand of Providence that made me contact him early enough for a Foreword for this second edition of the book. Something made me send him the first draft of the book without waiting for editing to happen; and in hindsight, I am so glad I acted on the inner prompting.

In India, the Teacher is more than just a teacher. He / She is Preceptor; a Guru. Prof. KVT was truly my Guru in the purest sense of the term; and even today, four decades on, as I see patients, not a day goes by without remembering him. So it is only in the fitness of things that I add here, a spontaneous, personal Tribute that I penned on him, as soon as I got the news of his passing.

With utmost reverence and love do I quote from it below:

“To Sir With Love...”

An attempt to put in words what I feel for Most Revered and Most Beloved 'Sir', under whom I was a postgraduate trainee in Medicine; Prof KV Thiruvengadam to the rest of the world of Medicine...

1981 to 1983 were the Best Years of my life as a Doctor... as a postgraduate trainee with Sir.

I had taken a transfer from Christian Medical College, Vellore to Madras Medical College - by Baba's Grace. Normally such a transfer from a private medical college to a government medical college was not possible; but by God's Grace I had won the Rajah of Panagal Gold Medal as the Best Outgoing Medical Student

of the Madras University and that made the powers that be grant the request for transfer for they reckoned that on sheer merit I would have made it to the post graduate selection anyway - God's invisible Hand!

Meeting Prof KVT was like "love at first sight". He was just SO kind and compassionate... and made me feel welcome and at home. He softly told me that in his time he had won the Rajah of Panagal Gold Medal; and that he knew one other person who had taken a transfer from CMC to Madras for MBBS – Dr Mrs KVT, Malathi Ma'am to us!!

Every moment spent with him I consider SO precious; such an enriching learning experience!

Those were truly salad days! Ward 7 was our home! Nalini, now a Director of The Hindu, and I were buddies. Thayu, Jayashri, Ravi and others were a year senior to us. MR Sivakumar was a slender junior, behind thick glasses, ever reading some journal or the other. Venkat, a leading Diabetologist now, was a Senior House Surgeon along with Krishnan. Devarajan Sir, Gurumurthy Sir and Dorarirajan Sir were the three Musketeer Assistant Professors... And budding internationally renowned scientist-to-be, mentored by Sir, Dr. V Kumaraswamy, was a young Friend-Philosopher-Guide then, to many of us.

Dr. Devarajan's sense of humour always provided comic relief. I remember him once telling Sir during Grand Rounds that "the ECG machine had just suffered a cardiac arrest..."

It was from Sir that I learnt all my medical skills. Even today with every patient that I examine, EVERY time I check the ankle jerk, I remember Sir. He taught us THE correct and best way of eliciting the ankle jerk. How to take a COMPLETE

history and come to a tentative differential diagnosis, do a proper full physical examination and pick up even all 'soft signs' and come to a Clinical Diagnosis was something I learnt from Sir, the Master of Masters in Clinical Medicine. In fact it is solely because of the excellent training by Sir that I won the Medicine Prize for MD.

He trained us SO well! In fact I remember how impressed Professor Guz of Westminster & Charing Cross was when he took clinics for us as a Visiting Professor. He declared that we were "better than his MRCPs"!!

None of us ever saw Sir get angry. He was forbearance personified; and so very soft spoken. His compassion was boundless. Time and again have I seen him slip a hundred rupee note to a poor general ward patient.

Even his attire reflected his purity and humility - a simple white cotton full sleeved shirt with pockets to put in the knee hammer and steth; and white pants; a refreshing change from the suited booted Professors who abounded. In a way he reminded me of the seva dals and doctors serving in Bhagawan Sathya Sai Baba's medical camps that I had participated in, as a medico in Vellore; all dressed in immaculate simple whites!

Always on time, Sir never wasted a moment. Even lunchtime was a chance to learn. Sivakumar, Kumaraswamy and I would finish lunch a.s.a.p. and hang around Sir. Often I too had the privilege of reading to him from textbooks / journals while he ate! Lunch was simple home food that Malathi Ma'am lovingly packed for him. Sir ALWAYS prepared before every lecture or class. He never took knowledge for granted. It was such a humbling experience!

Awards galore came his way but they sat lightly on his shoulders. To me honestly, giving any award to Prof KVT was like gilding a lily; he towered far above awards. Having seen Medicine in India, the West and Far East I can state with confidence that Prof KVT was the best ever clinician on the planet. And as a human being he was as near perfection as possible. He truly lived by Dharma (Right Conduct); and he had that rare mastery over the six internal enemies of kaama-krodha-lobha-moha-mada-maatsarya (unbridled desire, anger, greed, deluded thinking that the world was permanent, arrogance, envy). A truly rare example of human excellence! Blessed indeed were we, his students, who got to spend so much time with him... Even his sons were not so fortunate as they were not destined to train under him.

There was a personal, very human side to him too. When Kumaraswamy's little daughter was born, he was really so happy. And he always enquired after Seshadri; he knew I was taking the bus to Vellore every weekend, to be with Seshadri who was doing his MD in CMC. His affectionate attitude and encouragement built confidence into us greenhorn trainees.

I remember how shy, diffident but absolutely brilliant MR Sivakumar, my junior, blossomed under Sir. Often with great affection Sir would call him "Raja"; and encourage him. Clearly it was Sir's loving mentorship that helped him come into his own; and eventually end up as one of the top academic Neurologists in the country. Sir just patently loved all of us, his students.

It is my good fortune that I could re-connect with Sir when we moved to Chennai in 1991. He took a personal interest in Seshadri and me; on our progress as a Psychiatrist and Physician respectively, in Chennai. Sir was very happy when our daughter Divya joined AIIMS Delhi for medicine. He rejoiced with us when she

won gold medals galore including the Medicine Gold Medal. A high point in life was Sir writing a Foreword for the book 'THE SAI-ENCE OF MEDICINE - where Modern Medicine meets Spirituality', which Bhagawan Sathya Sai Baba Himself released. The book was received very well and even went into a few editions.

The crowning glory and blessing from Sir, was his writing the Foreword for the book, 'TOWARDS EXCELLENCE IN MODERN HEALTHCARE'. Revered Sadguru Sri Madhusudan Sai released it at the Sathya Sai Sanjeevani Hospital in Raipur. It is sheer Divine Grace that Sir also sent a Message for its second e-Edition shortly before he left us.

Sir and Malathi Ma'am shared an abiding faith in the Divine. They saw God in all fellow human beings and were so good to all fellowmen. It is Divine Grace indeed that Malathi Ma'am left just a few days before Sir did. Both of them lived long, full, exemplary lives.

Both Sir's sons, Ravichandran and Raghunandan – both brilliant medicos in their time; are highly respected specialists in Gastroenterology and Oncology respectively, in the USA. Three of his grandchildren have qualified as doctors too.

Sir's daughter Lakshmi and her husband Durai have become dear friends over the years. I first got to know Lakshmi because, when Sir used to go to the US to be with his sons, he would ring me up and say, "Doc, am going to the US for two months. In case Lakshmi has any medical problem she will contact you..." That call from him indicating his trust in my competence was like a BC Roy Award for me! Lakshmi would have made a great doctor too. Like parents, she too epitomises all that is great and good and noble.

Sir has been a most special Blessing in my life.

To Sir with Love... I send this letter out to the universe...

Dr Hiramalini Seshadri

October the 4th, 2020”

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Infinite gratitude and most reverential salutations to my Inner Teacher, Sai Baba, who I believe, is the One who orchestrated everything from behind the veil and got this book done.

To my late parents, Smt Meera Sankaranarayanan and Sri KC Sankaranarayanan, and late parents-in-law, Smt Lakshmi Harihar and Sri TA Harihar, I offer my obeisances. To my husband, Dr. Seshadri Harihar, without whose cheerful loving support, this work could not have been accomplished, most affectionate gratitude! As for in-house Editor, Dr. Divya, a real Godsend, I simply cannot thank her enough. To Dr. Siddharth Sarkar with whom I have co-authored papers, for his incisive inputs, grateful thanks. To son, Shriram and little grandson, Aditya, who add meaning and charm to life - a great big thank you. To gifted artist and dear sister, Vinodini Jayaraman, whose splendid painting continues to adorn the cover of this second edition, grateful appreciation.

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To my *Guru*, Professor K.V.Thiruvengadam, who moved on to the next dimension on October 3rd, just gone by, at the ripe age of 94, *sashtanga namaskaram*. I am sure he is blessing us from the beyond, even as I thank him for penning a Foreword for this second edition too. Gratitude beyond words to distinguished Paediatric Cardiac Surgeon, Dr. Shaun Setty, who was not only a sounding board and constant source of encouragement for this e-edition, but graciously contributed a second foreword as well. To Professor Yeoh of Singapore who shares my viewpoints on health care, and who has to his credit, a lifetime of selfless service to

humanity, my most humble *pranams* and heartfelt thank you for a second edition message. To late Professor T.S. Koshy, my Teacher at my alma mater, the Christian Medical College, Vellore, and to Professor Emeritus, K.V.Krishnadas of Thiruvananthapuram, our family Doctor, who inculcated in me, a love for Medicine, most grateful *pranams*. To my patients who were, and are, my *Gurus* in my continuing medical education, my most humble salutations!

To Revered Sadguru Sri Madhusudan Sai, Sri Narasimhamurthy Sir, Sri C Sreenivas and Isaac Tigrett, who have been role models in living out the human values enshrined in this book, *sashtanga namaskars*. To the Institute of Human Values founded by them along with members of civil society, this eBook is most humbly offered with deep reverence. That this eBook is to be used as a companion Reference eBook, for the priceless, totally free of cost, global course in Compassionate Healthcare launched by the institute, is itself a blessing beyond measure.

In all this, I see the hand of my dearest teacher, Sai Baba, to whom, with utmost humility and love, I offer my all.

Dr.Hiramalini Seshadri

December 15th, 2020.

ABOUT THE AUTHOR

Dr.Hiramalini Seshadri graduated from the Christian Medical College, Vellore, in 1979 and was adjudged the Best Outgoing Medical Student among all 9 Medical Colleges affiliated to the Madras University then. She won the Gold Medal for Medicine for MBS as well as the Medicine Prize for MD in Medicine, of the Madras Medical College where she trained under the legendary Prof. K.V. Thiruvengadam.

She later became the first Indian lady doctor elected to the British Society for Rheumatology and went on to pen articles on rheumatological problems in the APLAR and IRA bulletins and other journals as well as chapters on Rheumatology in a Clinical Textbook of Medicine. She combined charitable work at Udhavum Karangal, The Banyan, and Sai Kripa at Chennai and later at the Sri Sathya Sai General Hospitals at Whitefield and Prashanthi Nilayam, along with consultancies in corporate hospitals and private practice. She received the Distinguished Alumnus Award of the Kendriya Vidyalaya Sangathan, Govt. of India in 1988 and a Citizens' Group of Chennai honoured her charitable work with a Maruthuva Maamani Award in 1992.

Along with other doctors she too was honoured by Sri Sathya Sai Baba for rendering selfless service at two hospitals regularly; in 2001, during the Silver Jubilee of the Sri Sathya Sai General Hospital at Whitefield; and in 2005, during the Golden Jubilee of the Sri Sathya Sai General Hospital at Prashanthi Nilayam. She is also a popular freelance writer, author of books on medicine and spirituality as well as a composer-singer of devotional Carnatic Music.

She served as Senior Consultant in Health Care for an NGO in Singapore from 2016 until 2020. She is now back in India where she continues her medical work and writing.

The Editor

Dr.Divya Seshadri graduated from the prestigious All India Institute of Medical Sciences, New Delhi, in 2008, bagging the Prizes for Medicine, Ob-Gyn and Community Health in final MBBS. She was the All India Topper in the AIIMS PG entrance exam and completed her MD in Dermatology at AIMS winning the Best Post-graduate in Dermatology Award. She worked as a Consultant Dermatologist at the Apollo Hospital Group, Chennai and won for two years in succession the Chairman's Award for Research Publications. She also authored chapters in the Textbook of Dermatology brought out by the National Association of Dermatology, Venereology and Leprology in 2015. A gifted writer, she was editor of the AIIMS Annual Magazine during undergraduate days and has also served as Assistant Editor of the Indian Journal of Dermatology, Venereology and Leprology.

In 2016 she moved to Changi General Hospital, Singapore, to expand her horizons. She continues to do editing work and besides this book, has edited three others.

* * *