
THE DNA OF CARE
OPPI

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Organisation of Pharmaceutical Producers of India

CURATED BY

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"I think the biggest innovations of the 21st Century will be at the intersection of biology and technology. A new era is beginning." - Steve Jobs

The 'patient' is at the core of all that, we, at OPPI do. The book has three sections to it - the first section has some interesting facts on the evolution of the patient care. Legendary physicians, like Imhotep from the Egyptian civilisation and Hippocrates from the Greek and Susruta from our own country have made significant contribution to medicine and patient care.

Wellness, in-home patient care, alternate healing methods like meditation and finally, patient expectations are engaging conversations which form the second section of the book. Interviews with policy experts, research and patient alliance experts try to answer the need for patient-centric policies in a developing healthcare matrix for a country like India.

With more technology, comes greater responsibility - and along with it comes greater benefit to patients. This section has been contributed by Quintiles IMS and marks the future trends in healthcare and the need for 'increased' conversations.

For a communicator, putting this book together was an inspiring experience and is exciting to be able to get a peek in to the future of patient care. Special thanks for the encouragement and constant guidance from Kanchana TK, Director General, OPPI who has helped make this book a reality.

I am fortunate to be a part of the healthcare ecosystem, and the opportunity to touch lives. This book gives 'hope' to patients and encouragment to researchers to continue to innovate.

CONTENT

FROM THE PRESIDENT'S DESK

It comes as no surprise that Hippocrates known as the Father of Modern Medicine believed in the adage "healthy mind in a healthy body". This later became an integral part of the Hippocratic philosophy. Interesting enough, health promotion, interventions on trauma care, and mental care and art therapy interventions were part of the philosophy too. Health promotion emphasised the importance of nutrition and physical activity. Interventions on trauma care included surgical practices developed by Hippocrates. Mental care and art therapy interventions used music and drama as management tools in the treatment of illness and in the improvement of human behaviour.

Strangely, now, more than ever, the Hippocratic philosophy holds true. Focussed on the holistic healthcare model, the belief that 'medicine' as a scientific discipline should not only be used for diagnosis and prevention of diseases but as a treatment, highlighted the importance of the 'pill' in addressing medical needs of the population. Hippocrates further believed in the harmony between the individual and the society and universe as a whole. In other words, the renowned Greek doctor stressed on the overall health of the patient.

Moving into the 21st century, holistic healthcare still remains a core objective for any 'healthy' economy. While access to healthcare facilities, availability of appropriate technology, role of doctors in prevention, early diagnosis and quality of care, need for transparent and ethical engagement models between patients and healthcare practitioners remain the pillars of holistic healthcare; healthcare financing including innovative payment models and sources of funds is the new addition to this evolving patient-centric healthcare model.

The patient is the core of the entire healthcare ecosystem. Technology has empowered the patient of today. Health IT has brought the patient and the rest of the stakeholders together by storing, sharing and analysing health information to improve patient outcomes. Today, electronic health records, personal health records, and e-health tools help the patient understand his/her health conditions better and work towards improving their individual health goals. Multi-measure wellness tracking tools, fitness trackers, etc., make interactions with the healthcare system more convenient, more reliable, and less time consuming.

While technology has brought cheer to the patient, it has also redefined patient care. Encouraging patients to be more involved in their care is important for

many reasons including increased patient safety and satisfaction. Technology helps contribute to patient-centered care by fostering communication between providers and patients through online communities.

Through the OPPI publication, The DNA of Care, we have traced the evolution of patient care and shared insights on the future of patient care, thus keeping patient safety and responsible healthcare at the helm.

The book also touches upon the alternate ways of delivering healthcare including wellness and art therapy interventions, akin to the Hippocrates philosophy. While on one hand, technology has enabled man to transcend frontiers - genomics and new personalized treatments are helping patients have longer, healthier lives; wellness and alternate therapies in delivering health have also restructured the DNA of patient care.

I hope you enjoy reading this book as much as we enjoyed putting this together.

A. Vaidheesh

President - OPPI
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1. Source: Fabre J. Hip, hip, Hippocrates: extracts from the Hippocratic doctor. BMJ. 1997;315(7123):1669.

FOREWORD

Good health has always been accorded its rightful place of importance in India with references dating back to our ancient texts. According to the *Rigveda*, "the first form of happiness is sound health, one should partake nutritious, balanced food to keep the body healthy. So, it is essential to maintain the health of the mind and body simultaneously."

Down the ages, the concept of good health sat quietly in a corner, as focus shifted to cure illness, critical ailments, lifestyle related chronic diseases and treat epidemic-related diseases. Moving across to the 20th century, the West invested in research and development which led to a plethora of discoveries and advances, that changed the landscape of medicine. By the 21st century, the outlook of medicines once again got redefined- it changed from keeping people alive to keeping them fit: good health came back to the limelight. The rapid progress of medicine in this era has been reinforced by new discoveries in biochemistry and physiology. For patients, it meant more precise diagnostic tests and more effective therapies that led to better health outcomes.

In today's millennial era, the definition of good health has undergone further refinement, due to newer innovations in technology that has a wide influence on health outcomes of patients. Technology has positively impacted healthcare in a meaningful and unprecedented way. The best illustration is the wearable technology that promises to change the way healthcare services are rendered; leading to increased patient self-management and a deeper level of patient engagement with health. Deloitte TMT Predictions 2014 predicted that smart glasses, fitness bands and watches will sell about 10 million units in 2014, generating over $3 billion. According to an IDC report, consumers will buy nearly 112 million wearable computer devices by 2018, a 78.4% growth rate from 2014's predicted sales. Most of these gadgets will be health-related devices.

Technology has enabled the concept of 'personalisation' to be intertwined with health. Personalised medicine, which was once unimaginable is slowly becoming a reality. Using diagnostic tools, it arrives at the best suited medical treatment for each patient. Cancer is an area where personalised medicines are having a particularly big impact, driving tremendous advances for patients with highly aggressive cancers, like non-small cell lung cancer (NSCLC). Leapfrogging from personalised medicines, technology has ushered the notion of 'personalised care' to patients through regular and consistent online interfaces between patients, drug manufacturers and healthcare providers.

What does all this mean to patient care? It means improved patient care practices including advanced health informatics; stronger patient connects; personalised health financing plans; perhaps even smarter tools and devices that monitor the health quotient of individuals leading to a more 'preventive' or disease-controlled environment.

The DNA of Care showcases patient care with stories being narrated by stakeholders involved in delivering care namely, doctors, care providers, patient care groups, technology providers with the underlying need to understand the patient better and 'sensitise' the entire ecosystem to work towards better patient outcomes. Patient-centricity is the driving force for delivering responsible healthcare, and we at OPPI, place the patient at the centre of all that we do. OPPI supports patient access to medication as a public health priority. A section of the book captures the several access initiatives of our member companies, which are targetted at providing care and comfort to the patient, and will go a long way in patient education and patient engagement.

This book illustrates the role of technology and medicine in the life of patients and recounts the transformation of patient care for the better. Today, we are standing at the intersection of technology and science that will unleash a new beginning. I have hope that the new era will usher in sensitivity towards patient care and will harness technology for providing the much-needed hope and joy to patients and care-givers, alike.

Patients first is in the DNA of OPPI member companies, if we do mutate, it will only be to become more developed in delivering better outcomes for patients.

Dr. Shailesh Ayyangar

Immediate Past President - OPPI
Managing Director,
India & Head, South Asia, Sanofi

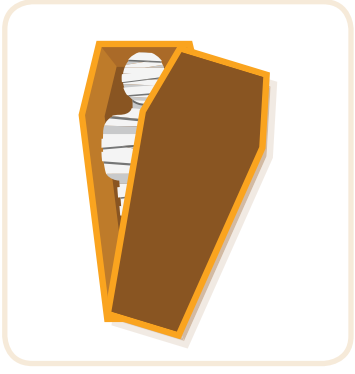
EVOLUTION OF PATIENT CARE

This entire section has been curated from material made publicly available on the internet.

Health is described as the physical, mental, emotional, spiritual and social wellbeing of an individual. Based on this description, it is but obvious that health and healthcare has been present since evolution of mankind. Authentic historical texts and scriptures are replete with citing and references of healthcare practices since time immemorial.

The Egyptian civilisation was one of the great civilisations. The Egyptian traders who travelled long distances, came back with herbs and spices from faraway lands. Their relatively high standard of living gave them free time, which was used for medical observations and research. Medical research involves a lot of patience and observation. Medicines of the ancient Egyptians are some of the oldest documented. Right from the beginnings of the civilisation in the late fourth millennium BC until the Persian invasion of 525 BC, Egyptian medical practices were highly advanced for its time, including simple non-invasive surgery, setting of bones, dentistry, few functions of the brain and liver and an extensive set of pharmacopoeia. The Egyptian medical knowledge influenced many other traditions, including the Greeks.

Egyptian medical practices were highly advanced for its time.



Egyptians had quite a good knowledge of human anatomy. During the classic mummification process, the mummifiers knew how to insert a long hooked implement through a nostril, breaking the thin bone of the brain case and remove the brain. They also had a general idea of the location in the body cavity of the inner organs, which they removed through a small incision in the left groin.

In ancient Egypt, the treatment of illnesses was no longer carried out only by magicians and medicinal men. There have been evidences found during archaeological digs of existence of people, who were referred to as physicians and doctors.

The physicians studied at schools that were called The House of Life. Individuals who studied to be physicians were dedicated either to one disease or to one part of the body; so in ancient Egypt, doctors were everywhere. Within the hierarchy of physicians, there were regular doctors, senior doctors, those who inspected and overseers, who acted as ministers of health.

The hieroglyphics on the door to the tomb of Irj, who lived around about 1500 BC described him as a physician at the court of the Pharaohs. The description reads as follows:
"Palace doctor, superintendent of the court physicians, palace eye physician, palace physician of the belly and one who understands the internal fluids and who is guardian of the anus."

Another physician, Imphotep was the physician to King Zozer and lived in about 2600 BC. Imhotep was considered by many to be the true father of medicine. He is believed to have diagnosed and treated well over 200 diseases that dealt with the abdomen, eyes, rectum, bladder and many more. Imphotep was considered so important that after his death, he was elevated to full god status and was worshipped as the 'God of Healing'.

Most of our knowledge about the ancient Egyptian medical practises comes from the discoveries of papyrus documents, where they documented medical knowledge. Numerous papyrus documents from the era 1900 BC to 1500 BC have been discovered. These documents also suggest that the ancient Egyptians believed that gods, demons and spirits played a key role in causing diseases. When no one could explain any obvious reason for an illness, many ancient Egyptian doctors and priests believed that the disease was caused by some spiritual beings, and spells and magical potions were used to drive out the spirits.

They even had a god who would frighten away evil spirits – Bes!

The Ebers Papyrus (Papyrus Ebers)

These are medicinal archives which are thought to have been written around 1500 BC and include transcribed materials dating back to 3400 BC. It is a 20-meter long scroll, approximately covering up to 100 pages. German novelist and Egyptologist, Georg Moritz Ebers (1837-1898) discovered this medicinal papyrus at Thebes (Luxor) in 1873-74. It is now in the Library of the University of Leipzig, Germany.

The Ebers Papyrus has over 700 remedies and magical formulae, as well as scores of incantations, aimed at repelling demons who cause diseases. The papyrus also has evidence of sound scientific procedures. The Ebers Papyrus, along with the Edwin Smith Papyrus, are considered the oldest preserved medical documents in existence.

The Book of Hearts, a section of the Ebers Papyrus, describes in great detail the characteristics, causes, and treatment for mental disorders such as dementia and depression. There is a section on family planning, contraception, how to tell if you are pregnant, and other gynaecological issues. It also contains a section on skin problems, dental problems, diseases related to the eyes, intestinal disease, parasites, and how to surgically treat an abscess or a tumour.

Egyptian physicians were well trained and good at first aid.

Egyptian physicians were well trained and good at practical first aid. They could successfully fix broken bones and dislocated joints.

Nutrition:

The Egyptians were partially aware of the importance of diet, both in balance and moderation. Owing to Egypt's great endowment of fertile land, food production was never a major issue, although in spite of the bountiful land, poverty and starvation did exist. Vegetables and fruits of different types were widely grown. Oil was produced from the linseed plant. Meat (sheep, goats, pigs) was regularly available to the upper classes. Fish was also widely consumed, although there is evidence of prohibitions during certain periods against certain types of animal products.

Pharmacology:

Like many other civilisations in the past, the ancient Egyptians also amply discovered the medicinal properties of the plant life around them. The Edwin Smith Papyrus describes many recipes to help heal different ailments. A section of the papyrus has five recipes- one dealing with problems women may have had, three on techniques for refining the complexion, and the fifth recipe for ailments that deal with the colon. The Ebers Papyrus has over 800 remedies, some topical like ointments, and wrappings, others taken orally like pills and mouth rinses, while a few others taken through inhalation. Amidst the many plant extracts and fruits, the Egyptians also used animal faeces and even some metals as treatments.

Surgery:

Surgery was a common practice among the physicians for the treatment of physical injuries. The oldest surgical tools made of metals, bronze or copper have been discovered in the tomb of Qar. Basic surgical procedures close to the surface of the skin (or on the skin) were common and well-learned skills. They knew how to stitch wounds effectively. However, they did not perform surgery deep inside the body, as they did not have effective anaesthetics,

only antiseptics. Alcohol was used as anaesthetic during surgical procedures.

They had excellent bandages, and would bind certain plant products, such as willow leaves, into the bandages for the treatment of inflammation. Circumcision of baby boys was a common practice. Several experts believe the text has not been translated properly, and hence it is hard to tell whether female circumcision existed; there is one mention however.

The Egyptian doctors classified three types of injuries:

- Treatable injuries - These were dealt with immediately.
- Contestable injuries - These were not considered to be life-threatening, i.e., the doctor believed the patient could survive without his intervention. Patients would be put under observation. If they survived, the doctor would then decide when and whether to intervene.
- Untreatable ailments – In these cases, the doctor would not intervene.
- The surgeons had an array of instruments such as pincers, scales, shears, forceps, spoons, saws, a graduated cubit (measuring rod), containers with burning incense, hooks, knives, etc.

Dentistry:

Dentistry as an independent profession dated from the early 3rd millennium BC. Although not very prominent, it was considered as an important field. The condition of teeth was poor among the Egyptians, as their diet was high in abrasives from sand left over from grinding grain and bits of rocks, in which the way bread was prepared. All Egyptian remains have sets of teeth in quite poor states. Dental cavities were rare, due to the rarity of sweeteners. Dental treatment was not very effective and the best sufferers could hope for was the quick loss of an infected tooth.

Some interesting details about the ancient Egyptian medicine:

- Although dental problems were a widely spread issue, no evidence exists of the existence of artificial teeth.
- Only alcohol was used as anaesthetic during surgical procedures.
- The Egyptians were very clean people. To prevent catching an illness or disease, they bathed and purified their bodies often, and even shaved their body hair.
- Malaria was a common disease in Egypt, for which the doctors had no cure.
- Ancient Egyptian doctors specialised in dentistry, pharmacology, gynaecology, autopsy, embalming and general healing.
- The world's first female physician, Peseshet belonged to the 4th dynasty of ancient

Egypt. Her title was, "Lady Overseer of the Lady Physicians".

- The ancient Egyptians believed that the human body consisted of passages that behaved like irrigation canals. When these canals got blocked, the person became sick.
- The largest contribution of the ancient Egyptians towards medical science was their documentation and research on how the body works.
- Egyptian physicians were aware of the existence of the pulse, and of a connection between pulse and heart.
- A parasite that lived in the Nile river was the likely cause of death for many ancient Egyptians. The disease was called Schistosomiasis.

Facts about Ancient Egyptian Medicine[1]

The Edwin Smith Papyrus:

- If you want to know the textbook which talks about anatomical observation and surgery in detail, then you have to look at The Edwin Smith Papyrus. The historians estimate that this textbook was probably written in 1600 BC. But later, the historians found out that it could be the copy of the earlier text. Some people believed that it was written as early as in 3000 BC.

The first surgery:

- The first surgical performance was estimated to be conducted in Egypt in 2750 BC.

The Ebers Papyrus:

- The Ebers Papyrus contains the explanation about the foul application and incantations. The main purpose of the text written in 1550 BC was to get rid of the diseases caused by the demons.

The short life span:

- The short life span in ancient Egypt made people concerned about their physical health. The diseases spread quite fast since the poor lived in small houses filled with people. The presence of bugs and the hot climate made their health even worse.

The ancient Egyptian practices:

- The ancient Egyptian practices may have involved magic spells, checkup procedures,

doctor's oath, medical texts and tools to cure the disease.

Respiratory problems:

- One of the most common diseases was respiratory problems. The sand in Egypt was the main cause. But tuberculosis was very common. The coughing could be reduced by drinking a mixture of herbs and honey.

Copper:

- Copper was used by the Egyptian people as disinfectant to clean the wounds. Copper needles were used to stitch the wounds.

Oils and massage:

- Oils and massages were used to reduce pain, aches and arthritis.

Reference:
1. Factfile.org

GREEK MEDICINE:

Around 700 BC, as the Egyptian civilisation faded, the Greek civilisation emerged and prevailed until the end of antiquity, around 600 BC. Ancient Greek medicine can be considered as the basis of modern scientific medicine. It is also considered the home of rational medicine. The most famous ancient Greek doctor was Hippocrates. He is known as the Father of Modern Medicine.

Many components of Greek medicine intertwined the spiritual with the physical. The Greeks considered illness as a divine punishment and healing as a gift from the gods. By the 5th century BC, however, attempts to identify material causes of illness as opposed to spiritual ones, led the Greeks to move away from superstition to scientific thinking.

Ancient Greece is famous for pioneering secular and scientific medicine

Greek medicine is a diverse collection of beliefs and methods which depended on factors such as geography, time period, local traditions, a patient's gender, social class, diet, trauma, etc. They realised that a better understanding of the symptoms and causes of an illness could help in the fight against the illness itself. Thus, observation of symptoms and their variations became a preoccupation of the Greek physicians. Lifestyle factors such as heat, cold and trauma were discovered to be important factors in people's health as they could alleviate or worsen the symptom (of an illness or the illness itself). They discovered that a person's physical constitution also affected the severity/susceptibility to an illness. Surgery was the last resort for the Greeks; surgical skills however, were developed on the battlefield and, by the great doctor Galen, in the gladiatorial arena.

Ancient Greece is famous for pioneering secular and scientific medicine; also equally noteworthy is the prominence of healing cults, like that of Asklepios. The cult of Asklepios began in Greece by the 8th century BC, and by the 3rd century BC it had spread to Rome and then throughout the Roman Empire, as the cult of Aesculapius. As the cult grew, the original shrines developed into great spa complexes with hostels, baths, gymnasia and theatres growing up around the healing waters of the thermal or mineralised springs. Healing took place by 'incubation', in which the patient slept and dreamt that gods gave advice on how to cure the disease. However, doctors were also on the staff at healing shrines.

The main divisions of ancient Greek medicine were medicine of the medical schools, temple medicine and medicine connected with physical training.

1. Medical Schools:

The two most important medical schools were those of Cos (Kos) and Cnidos (Knidos). Physicians from both these schools did not believe illness was connected with the supernatural. Treatment was holistic - involving diet and exercise. They practiced rational medicine rather than deducing from philosophical theory. Hippocrates and his school were the first to use the following medical terms for illnesses and patients' conditions:

Acute	Chronic	Endemic	Epidemic
Convalescence	Crisis	Exacerbation	Paroxysm
Peak	Relapse	Resolution	

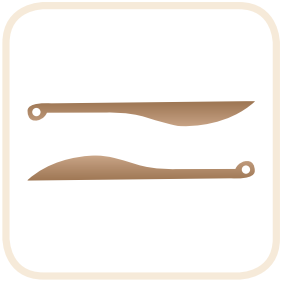
The teachings at his school revolutionised medicine - it established medicine as a profession. The Hippocratic Corpus, written by Hippocrates and his colleagues at his school, consists of about 60 early ancient Greek medical works. Hippocrates is also credited with creating the Hippocratic Oath, a vow taken by medical students when they become qualified doctors - they swear to practice medicine ethically and honestly.

It was Hippocrates who advanced the study of diseases by direct examination of the living patient. It is believed that Hippocrates and those practicing or having studied at his school were bound by the Hippocratic Oath and its strict ethical code. Students paid a fee to enter the school and were taken under their teacher's wing almost as if they belonged to the same family. Medical trainings included oral teaching and practical work as a teacher's assistant - the oath states that a student must interact with patients. Hippocrates is thought to be the first to make a detailed description of clubbing of the fingers, a hallmark sign of chronic suppurative lung disease, cyanotic heart disease and lung cancer.

The teachings at Hippocrates' school revolutionised medicine

Medical knowledge in ancient Greek during pre-Hippocratic era is relatively limited. Most information available comes from Homer and his epics. Homer used a myriad of medical and anatomical descriptions which were the main sources used to discern what was known about medicine before Hippocrates. There are no other medical texts written prior to those published by Hippocrates, so the descriptions of injury and disease treatment and human anatomy in Homer's Iliad act as the medical texts of the time.

Homer has been attributed with moving the society of his time towards humanism and it was at this point that the Greeks started to put the blame less on the gods and to look for more practical reasons and ways of solving problems.



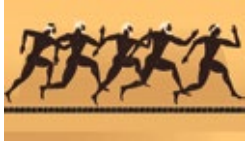
Although, during pre-Hippocratic times, human dissection was forbidden which made learning about the internal human anatomy extremely difficult, the Iliad discussed human anatomy with reasonable accuracy, suggesting there must have been some anatomical knowledge during the era. There are references to approximately 147 different body parts throughout the Iliad, including specific terms such as thorax, bronchi, lungs and diaphragm. According to Iliad, the Greeks did attempt to perform basic surgeries, although it is not clear whether they were performed only on the battlefield or in day-to-day life also. There are multiple mentions throughout the Iliad where someone is described using a knife to surgically remove an embedded arrow and then treating the wound, showing an understanding of the basic surgical practices.

2. Temple Medicine:

The two main healing sanctuaries were located in Cos and Epidauros, birthplace of Asclepius. Following a sacrifice, treatment included incubation by which was meant that the patient went to sleep. Upon awakening he would either be cured, or has received divine instruction in a dream that would be interpreted by experienced priests.

3. Gymnasium:

The gymnastic treatment, based on experience, relied mainly on athletic trainings and hygiene. Gymnasium trainers administered enemas, dressed wounds and ulcers, and treated fractures. The sophist Herodicus, who is believed to have taught Hippocrates, is called the Father of Gymnastic Medicine.



Over time, doctors acquired a basic knowledge of human anatomy, assisted by the observation of grievously wounded soldiers and, from the 4th century BC onwards, about animal dissection. Wounded soldiers were one of the best ways for a physician to learn his trade and widen his knowledge of the human body and its internal workings. Unlike private patients, there was also less risk of a soldier causing problems if things went wrong. However, few physicians claimed this useless as they believed the inner body changed on contact with air and light while few others, like today, protested that using animals for such purposes was cruel.

Interesting Facts about Greek Medicine[2]

The illness:

The ancient Greeks viewed the illnesses that they experienced as divine punishment. If they were fully cured, they believed that it was a gift from the gods.

Gender:

The medicine used to cure the disease experienced by men and women were different. They believed that gender determined the medicine.

Geographic location and social class:

The health of the people in ancient Greece was affected by the social class and geographic location. The poor people had to face different environmental problems which caused ailments. They did not have access to clean drinking water.

Humoral theory:

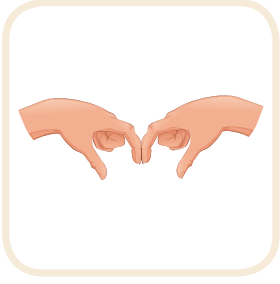
Humoral theory sets the foundation of ancient Greek medicine. They believed that the four humors, namely, blood, black bile, yellow bile and phlegm should be in perfect balance, if they wanted good health.

The Hippocratic Oath:

The Hippocratic Oath is still used until today in the medical world.

Clubbing of the fingers:

Hippocrates was credited as the first person who described the clubbing of fingers. Do you know that it is an important diagnostic sign for cyanotic heart disease, lung cancer and lung disease? People often called the clubbed fingers as "Hippocratic fingers".



Galen:

Another important figure who contributed to ancient Greek medicine was Galen. He was both, a scientist and a doctor.

Reference:
2. *Factfile.org*

INDIAN MEDICINE:

The history of medicine is a very interesting subject, as it is the story of man's struggle against sickness and diseases. As the civilisations evolved, the patterns of diseases changed and so did medical science.

Indian medicine and medical education has been shaped largely through the cross-cultural exchanges between the people of India and the colonial rulers. The mdical Science of ancient India was surprisingly advanced for its times, specifically in the areas of plastic surgery, extraction of cataracts, dental surgery, etc. There are documentary evidences proving the existence of these practices. There are a large numbers of manuscripts in private and public collections and libraries on Indian medicine, that still need to be documented and studied.

Medical Science of ancient India was surprisingly advanced for its times.

All ancient civilisations have had a collection of remedies for common illnesses, evolved either through trial and error methods, accidents or through inspirations. These remedies, however, were not based on any logical understanding of illnesses or of drugs.

The Ayurveda system of medicine evolved in India and has survived as a distinct entity from remote antiquity to the present day. Ayurveda is not considered as the science of health; but of healthful living, prevention of disease, personal and social hygiene all come under its ambit; and not merely the cure of diseases.

The Indian system of medicine, Ayurveda, evolved as a system with a rational and logical foundation

The Indian system of medicine, Ayurveda, evolved as a system with a rational and logical foundation. The fundamentals on which ayurvedic medicine is based is essentially true for all times and does not change through different ages. The development of surgery, classifications of diseases, the observations of signs and symptoms, prognosis and the descriptions of the nature, toxicity and therapeutic value of drugs described in the literature demonstrate a high level of knowledge, thus indicating a scientific approach.

References to medical knowledge have been found in the earliest texts including the *Vedas* and the *Puranas*. The *Rig Veda* has references to the first divine physician, Rudra and to Aswini Kumaras who cured Chyavana of senility. The *Atharva Veda* contains descriptions of diseases and their cures. In ancient times, a disease was characterised as not one organ but of several organs like heart, lungs, spleen, intestines, rectum, even of the bones and marrow. The *Atharva Veda* is believed to be written by doctors in northern

India about 1000 BC.

Evolution of Ayurveda:

The earliest available works are *Charaka Samhita, Sushruta Samhita, Ashtangahrdayam, Ashtangasamgraha, Bhela Samhita* and *Kashyapa Samhita*, with the latter two being incomplete versions.

Charaka Samhita text believed to have flourished around 6th century B.C., is the record of teachings by Atreya Punarvasu to his students. The scripture is a complete collection of medical information dealing with medical aspects, such as etiology, symptomatology, treatment and medical care in health diseases. No ayurvedic physician of any times would admit to not having studied the *Charaka Samhita.*

Susruta Samhita deals with surgical diseases, and diseases of the special organs such as the eye, ear, etc. *Susruta Samhita* is the written documentation of Dhanvantari Susruta, who lived sometime around 600 BC. Susruta is also considered as the Founding Father of Indian Medicine. He had identified 1120 diseases, listed 760 medicinal drugs, and also mentioned that the surgeon's equipment amounted to 20 sharp instruments (including knives, scissors, saws and needles) and 101 blunt ones (such as forceps, tubes, levers, hooks and probes).

Susruta's description of rebuilding a patient's nose gave him the status of the first plastic surgeon.

His description of rebuilding a patient's nose gave him the status of the first plastic surgeon. This was an important operation in ancient India. Amputation of the nose was awarded as a punishment for adultery.

However, it is believed that the famous rasarcharya, Nagarjuna, re-edited the book and that the last portion of the book - 'The Utterasthana,' was completely written by him.

Next in the chronological order is another classical work by Vagbhata's *Ashtanga Samgraha*. The Charaka and the Susruta were summarised in the *Ashtanga Samgraha* and brought both medical and surgical diseases as a single treatise. Vagbhata divided medicine into eight parts *(Astanga)* - General medicines, paediatrics, mental diseases, diseases of special sense organs, surgery, toxicology, gerontology and aphrodisiac.

Along with the evolution of systematic medicines in ancient India, there was also organised medical help in the form of hospitals and dispensaries, and a certain measure of health propaganda.

There have been other formal systems of medicines, such as Unani, Rasashastra, Siddha, and Sa-Rigpa that are practiced in India as well. During its development in India, Unani which is an Arab medical tradition, incorporated elements of indigenous materia medica from ayurvedic and folk sources. Unani medicine continues to be popular and practiced in India.

Indian system of healthcare started evolving on firm grounds, involving not just the physical ailment of the patient, but also the environment and other elements in its system. Matters of health and sickness were considered as anthropological or cosmological balances, imbalances and disturbances. Unlike modern medicine, ancient medicine dealt with plants, minerals, spirits, stars, voodoo, energy, appeasing to gods, and many others. There were priests, herbalists, magicians, sorcerers, etc. who were consulted by the patient(s) to diagnose, cure and heal. The Indian system of medicine considered concepts such as diet, climate, beliefs, supernatural, empirical and cultural while treating a person.

Indian medicine believed in the theory that the human body consists of three substances, and that health requires a balance between them. The three substances are spirit, phlegm and bile.

Indian medical knowledge and "native physicians" were important resources for the colonial establishment during the early days of the British East India Company. The skills of the Indian physicians to treat regional diseases and the knowledge of rich traditional medicine put them at an advantage over the newly arrived British doctors, struggling to deal with diseases unfamiliar to them. During the British colonial period, official status of Ayurveda and other traditional healing systems got lowered to secondary roles. Although western medicine became dominant, ayurvedic schools were opened and the study of classical texts in Sanskrit was initiated in many centers around India. These institutes integrated Ayurveda with biomedical education curriculum and the western concepts of disease and wellness.

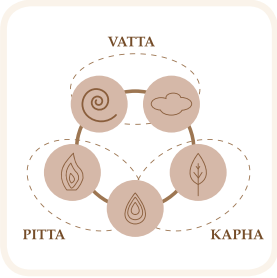
Susruta's description of rebuilding a patient's nose gave him the status of the first plastic surgeon.

After Independence, the Indian government made efforts to recognise Ayurveda, Siddha and Unani as being on par with allopathic biomedicine. With changing social structure and the norms imposed by the government regulations, Ashtavaidyas too are striving to adapt their practice to contemporary standards.

Interesting Facts on Ayurveda:

Three Doshas:

One of the most important facts about ayurvedic medicine is that patients are treated according to their constitution or dosha.



Rassas:

In ayurveda, there is a close association between food and medicine.

PATIENT CARE

"Understanding and respecting patients' values, preferences and expressed needs are the foundation of patient-centered care."

"Understanding and respecting patients' values, preferences and expressed needs are the foundation of patient-centered care."
- Harvey Picker

The concept of patient-centered care is increasing gaining prominence in recent years as a key aim of the health care system.

The eight Picker Principles of patient-centred care originated from the seven dimensions of patient-centred care. These seven dimensions were:

Respect for patients' values, preferences and expressed needs	Coordination and integration of care	Information, communication and education	Physical comfort
Emotional support and alleviation of fear and anxiety	Involvement of family and friends	Transition and continuity	

In 1987, with the addition of the eighth principle - Access to care, it was renamed to Picker Principles of Patient-Centered Care. The The eight principles of patient-centred care symbolise Picker Institute's belief that all patients deserve high-quality healthcare, and that patients' views and experiences are integral to improvement efforts. In fact, patient experience measures are now widely used in public performance reports in hospitals, medical practices and health plans, and are also being included in certification and value-based purchasing programs, most notably by the Centers for Medicare & Medicaid Services in calculating payments to hospitals treating medicare patients.

Eight Principles of Patient-Centered Care:

1 Respect for Patients' Values, Preferences, and Expressed Needs:

- Treating individuals with respect, maintaining their dignity and demonstrate sensitivity to their cultural values
- Keeping patients informed about their condition and involving them in the decision making
- Focussing on the individual's quality of life, which may be affected by their illness and treatment

2 Coordination and Integration of Care:

- Coordinating and integrating clinical and patient care and services to reduce feelings of fear, powerlessness and vulnerability

Three areas in which care coordination reduced feelings of vulnerability were identified as:

Coordination of clinical care	Coordination of ancillary and support services	Coordination of front-line patient care

3 Information and Education:

- During the interviews, patients expressed their concerns of not being completely informed about their condition or prognosis. The third principle focuses on:
  - Providing complete information to patients regarding their clinical status, progress and prognosis; process of care; and information to help ensure their autonomy and their ability to self-manage, and to promote their health

4 Physical Comfort:

- Enhancing patient's physical comfort during care, especially with regard to pain management, support with the activities of daily living, and maintaining a focus on the hospital environment (e.g., privacy, cleanliness, comforts, accessibility for visits)

5 Emotional Support and Alleviation of Fear and Anxiety:

- Helping to alleviate fear and anxiety the patient may be experiencing with respect to their health status (physical status, treatment, and prognosis), the impact of their illness on themselves and others (family, caregivers, etc.), and the financial impacts of their illness

6 Involvement of Family and Friends:

- Acknowledging and respecting the role of the patient's family and friends in their health-care experience by:

- Accommodating the individuals who provide the patient with support during care
- Respecting their role in decision making
- Recognizing their needs and supporting family members and friends as caregivers

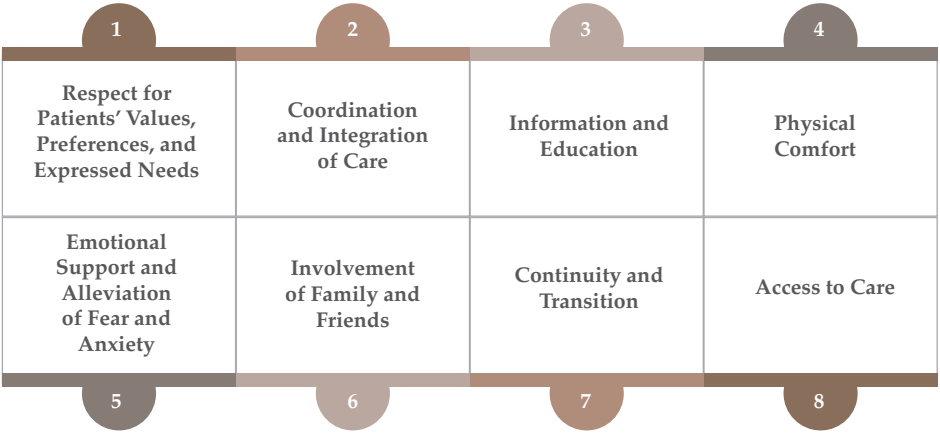
7 Continuity and Transition:

- Reducing anxiety about the patient's ability to self-manage after discharge by:
  - Providing adequate information regarding medication, physical restrictions, nutrition, etc.
  - Coordinating ongoing treatment and services and sharing this information with the patient and their family; and
  - Providing information regarding access to supports (e.g., social, physical and financial) on an ongoing basis.

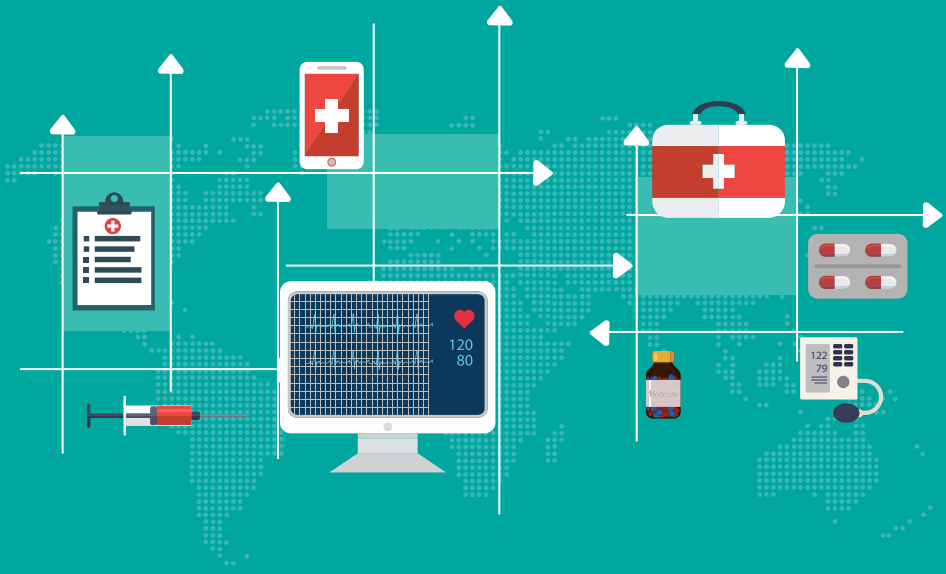
8 Access to Care:

- Ensuring, mainly with respect to ambulatory care:
  - Access to multiple healthcare settings and services
  - Availability of transportation
  - Ease of scheduling and availability of appointments
  - Access to specialists and specialty services when needed

Picker's Eight Principles of Patient-Centered Care:



DELIVERING PATIENT CARE



Conversations on alternate models of delivering care

Q&A with

ARIZ RIZVI

President,
APOLLO LIFE

In 2010, he helped Apollo Group to set up Corporate Wellness vertical, and in a short span of 5 years took the company to becoming the largest occupational health service provider in India. Under his dynamic leadership, the company has expanded its footprint across the country, while his business model has been replicated by other providers in the wellness market.

In addition to his present role as President of Apollo Life, he also has been a member of a number of committees set up by the Govt. of India and CII. Most recently, he has been working with NABL to set quality standards for SPAs and other wellness centres.

He has passed BA (Hon) from Huddersfield University (UK) and Advanced Management Program from IIM, Bangalore.

1. How has digitalisation revolutionised the patient care market in the country?

The intervention of technology in the healthcare sector has seen a gradual rise in life expectancy rates. Technology has given way to vast opportunities in the health sector for effective doctor-patient communication. Telehealth is a progressive concept. Mobility and cloud access is a method by which doctors can access the database of a patient including his/her medical condition, medical history and test results of a

patient. Robot-assisted surgeries have already taken over the health sector. They can provide accuracy in major and complicated surgeries.

The sharing of goals for optimising health by integrating technology into the daily lives of individuals is instrumental in bringing about a change in a patient's approach towards one's health.

Wellness apps are on the rise. There are now apps for losing weight, keeping the body fit and hydrated, diet or calorie counters, fertility related apps, etc. Some apps specialising in a particular disease or condition provide informative videos or content regarding the disease, which in turn spreads awareness among its users. Moreover, some apps as well as websites also offer live chats with doctors, whereby doctors respond as soon as a question is asked.

Coming to the Apollo Life Jiyo digital wellness platform - it predicts, prevents, personalises, processes and participates in driving health advocacy and contributes in promulgating wellness to improve the health index of its members. To keep members interested and engaged at all times, different methods of gamification are used.

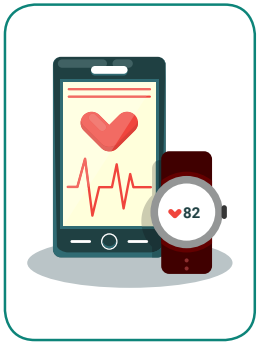
Apollo Life Jiyo also presents members with insights into health titbits, challenges, advanced online instructions and reward-based programs. Thus, it enables one to not only be able to gauge the effectiveness of their own wellness program, but also to get to understand how other members are improvising on their health by getting a sneak peek of their details.

2. With wellness apps like Jiyo, what is the market outlook in terms of increased patient demand and the ability to service these demands?

Smartphones are just amazing gadgets which help in transmitting important information, enabled by apps, to track the state of an individual's health, notify them, and also warn them in certain cases. Likewise, data from these apps allows doctors to refer to the medical history of their patients and to provide feedback on an urgent basis, when required.

But when it comes to apps, patients' demands are steadily increasing, but the more accurate the app is, the happier and satisfied the patient is. A recent report has

revealed that the benefits associated with the availability of advanced products, such as communication devices and the increased demand of the consumers for health monitoring devices, are some of the factors further amplifying market growth.



A successful app will clearly define the value proposition to patients and how they will benefit by downloading and using it. User interface and user experience needs to be addressed equally. The amount of time and effort devoted by a patient to learn to manoeuvre the app is directly correlated with the level of dissatisfaction they might encounter with the app, and inversely related with the level of contentment they might experience. Here are some vital features patients demand or look for, in apps:

a. Electronic medical records - If a paper or a file is misplaced, the medical history of the patient is lost. But with this system, it can be easily avoided. Even if the app stops working or the device has to be changed, the users can opt to save all the data on cloud (online storage of data), which can be recovered later.

b. E-visit - This is an easy replacement for in-office patient appointments, whereby interactions between patient and doctor through email, text, phone and video conferencing can take place with ease. Simple tasks like prescription renewal and medicine change can be done easily, by sitting at home. This convenient method can save a lot of time for doctors as well as patients.

c. Mobile health or m-health - As the term suggests, mobile health or m-health is a new trend which helps track the health of an individual.

The demand for wellness apps are increasing steadily and users tend to open these apps at least twice a day, to keep a track of their health. The app market too provides priority to health apps, as most of the users are youngsters and working people from the age group of around 18-40 years.

3. What has been the initial acceptance to such apps?

Wellness apps play the role of a motivator for individuals to make the right choices with regards to optimising their health and well-being. Besides, these apps are also about personalising the wellness experience for every individual, providing relevant information to the right audience at the right time, providing convenience of the marketplace for both products and services, and empowering members to take ownership of their own health.

Not only do these wellness apps help track one's progress, save time and yield better efficacy of results, but also boost motivation particularly in relation to one's fitness challenges.

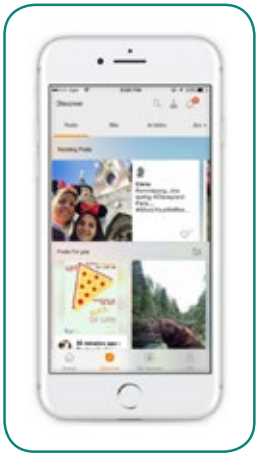
According to some studies, women users rely heavily on wellness apps as they trust these apps to accurately pinpoint issues. They also use these apps to manage certain ailments. Therefore, these apps help women in diagnosing, managing and preventing health issues.

However, as far as the regulatory questions hovering around the acceptance of wellness apps are considered, a little scepticism does exist regarding safeguarding the patients'/members' data - the way it is stored, used and shared.

4. How do you see the penetration and acceptance of wellness apps and what is their role in delivering better health outcomes?

Digital health, a term to be completely in awe of, incorporates a blend of information and technology to improve the health of a person, efficacy of healthcare services and wellness goals for individuals. But the successful conception, assimilation and implementation of new methods call for a radical shift from the traditional clinical approaches to conventional ones.

This is what Apollo Life Jiyo, the digital wellness platform aims to do. Through its various salient features, it encourages patients to adhere to a disciplined diet and exercise program depending upon their individual disease conditions, such as high blood pressure, cardiovascular ailments, diabetes, etc.



Members are likely to become well-versed with their own fitness regime, be it how much time they manage to take out for exercise, the diet they consume on a daily basis and also how much shut-eye they get. So, it's just not one of those apps that just help you manage your workouts or meditate more effectively. It does a lot more!

Features like inviting members to participate in challenges, organising of fitness classes and also carrying out health assessments to determine the risk factors in members, are some ways by which wellness apps can contribute towards the health of its members.

Apollo Life Jiyo also supports intervention and disease management programs which are carried out by Health Talks: Online streaming/live webinar/face-to-face talk of 45-60 minutes per session, based on the wellness calendar designed on the group report. One-to-One Consultation: Consult through Doc on Point, or call up for a consultation 24x7 and also get trained/guided by experts from all fields of wellness, that members follow on the community.

At times, some digital wellness platforms are designed in such a way that they work in conjunction with medications by helping patients manage their treatment regimens more effectively. If we carefully reflect, enabling the patient to seek control over their existing illnesses and preventing the progression of their disease also can result in huge cost savings.

5. Brief profile of the company

As a leading wellness company of the country and being a part of Apollo Hospitals and its inherent strength in health care, Apollo Life offers a unique perspective on holistic health to improve people's lives. At Apollo Life, we believe in results, and our processes guarantee superb results if followed correctly. We work with corporates at an individual, as well as on a group level. A complete health profile along with a plan for solutions by our experts is handed over to every individual.

Apollo Life manages over 100 medical centres across India, bringing the best that Apollo Group has to offer in preventive healthcare and bringing to life our chairman's vision of "Illness to Wellness." Apollo Life is also the only healthcare provider in the country that has a complete department of occupational medicine.

The Apollo Life Jiyo digital wellness platform enables employers to predict, prevent, personalise, process and participate to drive health advocacy, promulgate wellness and improve the health index of employees. It is a comprehensive wellness platform that helps increase member engagement quotients through a personalised approach, dwelling on individual needs that augment employer-driven wellness events and programs. Apollo Life Jiyo is a contextualised well-being digital platform that provides consumers with curated content, services, products, and insights that will help transform their personal health and well-being.

For more information, visit: www.apollolife.com

Q&A with

BEJON MISRA

Board Member on the
International Alliance of Patients' Organisations (IAPO), London

He has more than 45 years of professional career experience and has worked as a volunteer for more than 33 years in the consumer education and advocacy to strengthen consumer movement in India.

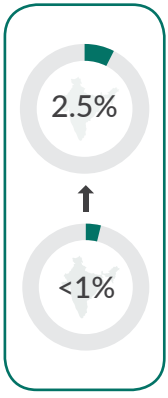
He has also worked for more than 18 years as an International Expert on User (Consumer) Focus, for developing strategies and capacity building programs in developing countries; on Quality Management Systems for public and private organisations. He is a visiting professor in the Institute of Management Studies, Banaras Hindu University (BHU). He is a governing Board Member on the International Alliance of Patients' Organisations (IAPO), London, which has official relationship with the World Health Organisation (WHO), Council Member of the Quality Council of India (QCI), Board Member of National Accreditation Board for Hospitals & Healthcare Providers (NABH) and National Accreditation Board for Education and Training (NABET).

1. You are a Board Member of the International Alliance of Patients' Organisations; can you share some of the essential principles of patient care?

International Alliance of Patients' Organisations (IAPO) is a unique global alliance; we are committed to improving the lives of patients from all around the world. We nurture relationships with members, partners and all those involved in healthcare,

and build dialogue with decision-makers around the world to promote patient-centred healthcare. Our key principles of patient care are: Adherence to global best quality and safety standards, accessibility to quality healthcare with freedom of choice, based on credible information, transparency in the processes to ensure non-discriminatory healthcare delivery system, and all the dimensions of services in the healthcare delivery system are made accountable to the patients.

2. Are there any gaps in the current models of patient care in India?



There are numerous gaps in the current models of patient care in India and the most important amongst them is minuscule investment in the public healthcare system by the government of India and the state governments. After building a great amount of pressure on the government, we have just managed to increase the government expenditure in India to 2.5% of the GDP from a shameful less than 1% all these years, which needs to be minimum 5-10% in the next 5 years. The public procurement system for medicines and devices should be based on quality and transparency, and the healthcare delivery system in the public and private sector has to be made accountable to the patients, with a robust regulatory over-sight to improve access.

3. Who are the key stakeholders and what roles do they play in delivering patient care?

The key stakeholders are the government, private industry, regulators, research institutions, healthcare providers and the patients. All of them play an important role in delivering patient care. Take the example of the government, they must first demonstrate their commitment towards patient care by ensuring all the government hospitals and the healthcare delivery systems are patient-centric and regularly accredited and certified by third party auditors to assure quality and safety. Private sector must not profiteer from patients because of ignorance or poor law enforcement mechanism, but instead make only reasonable profit on the investment without compromising on the quality and safety of the patients, and facilitate in the implementation of the Universal Health Coverage through innovation and research and development. The regulators and the law enforcers must catch the culprits who are enriching themselves from the healthcare sector; who adopt unethical and unfair practices in delivering healthcare to patients. Finally, the

government and the private sector must invest in encouraging innovations to treat rare diseases.

4. Could you share the patient care models in other countries?

Several models are functional in various countries around the world by different names and approaches. I recollect during my study in UK on modernising government, I have studied the model of Patient's Charter in public hospitals and even private entities. The model defined the various parameters of the services in the hospitals, and made the services patient-centric by making the delivery system accountable. Most of the hospitals in USA are measured and ranked based on the feedback received from the patients. The USA model provides information on the Quality of Service based on the users' perspective. In Europe, there is an accreditation process on quality healthcare delivery system called the ESQH.

5. How do you see patient care evolving in the future?

I can definitely forecast that in future the healthcare delivery system has to be patient-centered care. It is well established fact that one can improve the quality of healthcare and reduce the costs at the same time. We have to make healthcare competitive based on global best practices. Practicing physicians have to be focused on patients' clinical outcomes and satisfaction rates by improving the quality of the doctor-patient relationship, while at the same time decreasing the utilisation of diagnostic testing, prescriptions, hospitalisations and referrals. We will observe that in the coming years it will be patient-centered care, rather than current physician-centered system, which revolves around the patient.

6. A brief profile of the IAPO.

The International Alliance of Patients' Organizations (IAPO) is a unique global alliance representing patients of all nations, across all disease areas. The IAPO works to promote patient-centred healthcare around the world. The IAPO has 276 member organisations from 71 countries representing 50 disease areas. The vision is to see patients placed at the centre of healthcare. IAPO's mission is to help build patient-centred healthcare worldwide.

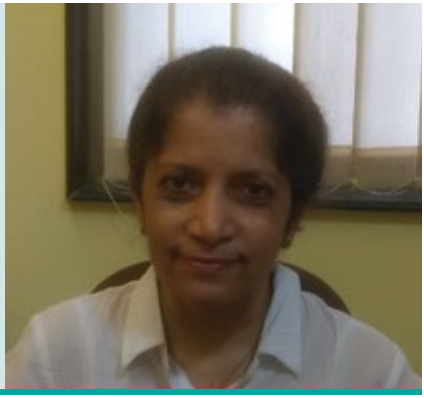
IAPO's strategy and direction is guided by the Governing Board, a group of elected individuals from IAPO member organisations. IAPO's day-to-day functioning is managed by a staff team based in London.

For more information, visit: www.iapo.org.uk

Q&A with

DR. BELINDA VAZ

Leading Dermatologist



Dr. Vaz is a leading practicing dermatologist in Mumbai. She has been practicing for over 27 years. In addition to her practice, she has been a consultant for Godrej Memorial Hospital and Procter & Gamble for several years. She has also been associated with the Bombay Leprosy Project

She is a recipient of many awards including the 'Dermatology Excellence Award' for the year 2003-2004 by Systopic Pharmaceuticals. She has presented several research papers and has been awarded the Dr. B. B. Gokhale Gold Medal for the best paper presented at the Seventeenth National Conference of I.A.D.V.L. and the Dr. Ambrish Parikh Award for the best clinical paper presentation at the annual meeting of the I.A.D.V.L. (Maharashtra Branch).

1. Can you elaborate on the role of alternate healing spirituality in healing and patient care? What are the various forms of alternate healing that are available?

The ancient philosophers, Galen and Hippocrates are known to have recognised the relationship between psyche and soma. Alternative medicine is a term that describes medical treatments that take into account the patient as a whole, and could be loosely classified as:

A. Traditional alternative health care systems - Ayurveda, Chinese or Oriental medicine, acupuncture, homeopathy and Tibetan medicine.

B. Mind body interventions - Alternative treatments like biofeedback therapy, psychotherapy, guided imagery, hypnotherapy, Qi Gong, music therapy, art therapy, dance therapy and humour therapy that recognise the relationship between body and mind.

C. Biologically-based therapies - Some alternative healing systems are based on nature such as herbalism, naturopathy, Bach Flower remedies, aromatherapy, macrobiotics and diet therapy.

D. Energy therapies - There are many alternative therapies that work on the energy system called prana or subtle life force system, such as reiki, pranic healing and aura healing. Marma and Meru Chikitsa are healing systems are a part of Ayurveda that also work on the energy system.

E. Manipulative and body-based therapies - There are others that rely on body work such as therapeutic massage, reflexology, chiropractic adjustments, and osteopathy and cranio sacral therapy. Chiropractors work on and balance the spine to bring about balance in the rest of the body. Craniosacral therapy is a gentle hands-on treatment that releases tension deep in the body to relieve pain and dysfunction and improve whole body functioning feel good and relieve stress.

F. Miscellaneous - For the technologically-driven and indoor-based cultures like in Japan, 'Forest bathing' or spending more time just being with nature is one of the newly emerging complementary treatments. 'Pet therapy' and cat cafes are also popular stress busters.

Some treatments e.g., yoga, meditation, biofeedback, Bach Flower remedies, etc. can be administered or practiced along with traditional western medicine. Hence, 'Complementary Medicine' is a more appropriate terminology to describe these systems of healing. Many of these treatments are being offered in various health set-ups, and hence, the term 'integrative therapies' is now commonly used.

2. Can you share a few examples of the benefits of such practices, from your rich experience? Please mention specific therapeutic areas.

Science has proven that there is a lot of truth in some of the age-old remedies. Recently, turmeric has been shown to be efficacious in patients with oral lichen planus[1].

Somatisation is an important concept, whereby an emotionally distressed patient is more likely to consult about physical symptoms, than to complain about psychological or social problems. Dermatology patients are known to have a higher prevalence of psychiatric disorders than the general population. Psychological factors play an important role in various skin diseases. Some of the emotions that patients go through are fear, anxiety, loss of hope, guilt, shame, lack of confidence, sadness, depression, anger, resentment and many more. These may be due to their skin condition, their inherent personality trait or related to significant life events. Several studies have shown a significant improvement in skin diseases following psychological intervention. Most patients are averse to seeing a psychiatrist, let alone taking psychiatric medications. I do encourage patients to learn some stress busting techniques, that can help them de-stress and take the responsibility of their own emotions and health. Meditation is one practice that is like cleansing the mind of the day-to-day stressors and restoring peace and calm. Meditation has helped a wide spectrum of patients, ranging from simple hair loss to psoriasis to pemphigus.

For those patients who find it difficult to meditate, breathing techniques are an easy and effective means of calming the mind, as there is a direct link between our breath and our emotions. Rhythmic breathing techniques like Sudarshan Kriya reduce stress and balance the immune system, and are a useful adjunct in treating patients with lichen planus, alopecia areata, atopic dermatitis, polymorphous light eruption and chronic eczemas.

Not all patients are willing to shoulder the responsibility of attending to their own emotions. In such patients, an alternative system that I have found useful in my practice is the Bach Flower remedies. These are obtained from flowers and different flowers are matched to different emotions and personality traits. There are different remedies for emotions like anger, fear, sadness, guilt, indecisiveness, etc. and for personality traits like impatience, wanting perfection from others or oneself, procrastination, shyness, etc. They are simple enough for the patient to self-administer or they can see a practitioner.

3. How do these practices impact the emotional balance of the care giver?

If stress were to be quantified, one of the highest levels of stress is experienced by the informal care giver, especially those looking after patients with dementia, psychiatric problems, cancer, advanced age and children with special needs. Some of the issues faced by the care giver are anxiety, depression, social isolation, financial stress and a lack of choice in being a care giver. Professional care givers like doctors and nurses are also some of the most stressed individuals in society. Approximately 1 of every 3 physicians is experiencing burnout at any particular time[2]. When a doctor experiences a drain in his or her physical, emotional and spiritual energy, it results in tiredness, cynicism, doubt, reduced personal efficiency, addictions and various health-related issues. Stress busting practices like meditation, yoga, therapeutic massage, Bach Flower remedies and others can help the informal care giver to cope better and can make the doctor more caring, empathetic, energetic, confident, efficient and connect better with his/her patients. Many health set ups are now increasingly providing for space in the hospital like a yoga room, recreation room, dance class, prayer room, etc. where the care givers can de-stress themselves. The adage, 'Physician, heal thyself' is even more relevant in this day and age.

4. Can you share the journey of this healing- its genesis; present state and a futuristic view?

Western medicine is excellent for the acute care model like heart attacks, trauma care, strokes, etc. However, for chronic diseases we need to know not just what disease the person has; but also why did they develop it, what started the person's medical condition and how did it develop into a disease? We need to focus on reversing chronic disease and not just managing it. By dwelling on the patient's lifestyle, diet, exercise, emotions and life experiences preceding the illness, one may be able to get to the root of the problem. As medical science has progressed and technology has replaced the human touch, the 'art' of healing has vanished and the distance between the doctor and the patient has widened. Often, patients are viewed as an amalgam of medical data, rather than as a fellow human being.

Complementary systems can be integrated into the management of chronic illnesses to improve patient outcome. But which therapy to choose remains a moot point. What is needed are controlled randomized studies that compare the outcomes of standard western medicine in managing a disease vis-à-vis standard treatment, plus an alternative system. Different alternative treatments need to be studied, so that the practitioner can choose the best possible complementary treatment that can be incorporated along with the regular treatment. It is possible that different treatments

may be useful for different diseases.

Fusion medicine is another term that is used to describe the evolving form of integrative healing that combines the best of western medicine with healing practices. Scientific studies will help the patient choose a safe and effective treatment; while a doctor can recommend the best possible treatment for the best possible clinical outcome; and a policy maker can determine which treatments can be part of the existing health care system and covered by insurance. A patient should be able to weigh the risks, potential benefits and the evidence in favour of the particular system of healing, for his or her particular ailment. It is also possible that scientific validation can result in a so called 'alternative' treatment becoming a part of the mainstream medical practice. For e.g., the benefits of yoga are now undisputed. Many mainstream medical practitioners do recommend yoga as a stress buster. It is heartening to note that over the past few years, the number of studies on alternative healing systems in published literature has increased and the quality of studies has also improved.

One of the reasons why many "alternative treatments" have fallen into disrepute or termed unreliable is because of the lack of standardisation in the training and lack of regularisation of the practitioners. Practitioners of alternative healing systems need to have a code of ethics as well.

In the future, people are not going to wait for a disease to occur before they see a doctor. They will want to stay healthy and ensure that they do not develop any disease. This is where alternative healing may score over conventional medicine.

5. A brief profile of The Clinic:

The Clinic caters to patients with dermatological conditions. The practice has been in existence since 1990. Patients with a wide array of skin, hair and nail problems are treated. The majority of the patients have conditions such as acne, psoriasis, eczemas, contact dermatitis, bacterial, fungal and viral infections, leprosy, alopecia, lichen planus, vitiligo, scars, pigmentation and other issues. Besides consultations, other treatments offered are electrocautery, radiofrequency, cryotherapy, Bach Flower therapy, narrow band UV therapy and laser treatments.

References:

1. *Chainani- Wu N, Madden E et al. High dose curcuminoids are efficacious in the reduction in symptoms and signs of oral lichen planus. J Am Acad Dermatol 2012; 66:752-760.*

2. *Shanafelt TD. Enhancing meaning in work: a prescription for preventing physician burnout and promoting patient centred care. JAMA 2009; 302(12): 1338 -1340.*

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Compendium of the non-commercial initiatives of OPPI members in delivering healthcare

This section has been extracted from the KPMG Report on Healthcare Access Initiatives, August 2016 and further updated in September 2017.

Abbott

AWARENESS

- Making India thyroid aware
- Tackling diabetes among pregnant women and infants
- Screening for liver related diseases
- iCARE road safety awareness drive

EDUCATION/ TRAINING

- Community led total sanitation project
- Nirmal Dhara dairy farmers livelihoods programme
- Knowledge Genie
- First to inform
- A train-the-trainer programme
- Indian Orthopaedic Association – Ortho Excellence Program (IOA – OEP)

WORK RELATED INITIATIVES

- Product safety
- Patient education
- Collaboration with government regulators and policymakers
- Responsible approach to sales and marketing
- Moving to zero CARE programme
- Safety training
- Health checks
- Waste reduction
- Water conservation

OTHER INITIATIVES

- The Wonder Grain

AWARENESS

Making India thyroid aware

Abbott launched the Thyroid Awareness Campaign in areas with high prevalence of thyroid disorders, but with limited access to diagnosis and low awareness. In order to address concerns regarding access and affordability of diagnosis, Abbott placed 100 point-of-care devices with the teams conducting thyroid camps. Here, free testing was carried out, based on medical advice. After on-site testing, patients received in-clinic diagnosis and consultation. Not only did this programme reduce the hassle for patients because consultation and treatment could be carried out in one visit, it also reduced costs and improved access to diagnosis in these areas. In 2015-16, thyroid awareness camps saw participation from over 130,000 patients.

Tackling diabetes among pregnant women and infants

The Abbott Fund has provided monetary assistance to the International Diabetes Federation for over four years to address the rising prevalence of Gestational Diabetes Mellitus (GDM) among women in India. The project aims to develop a model approach to care, that works towards: Screening and managing GDM in low-resource settings, improving the health outcomes of women with GDM and their newborns and strengthing the capacity of health facilities to address GDM. To date, the programme has trained more than 60 healthcare practitioners and helped 177 GDM mothers successfully deliver healthy babies.

Screening for liver related diseases

The Fibroscan initiative (conducted in partnership with Echosens, makers of Fibroscan technology) screened over 21,000 patients, leveraging a non-invasive method for liver disease diagnosis.

iCARE road safety awareness drive

India has one of the worst records of road safety in the world, with 1 death every

4 minutes due to road accidents. In 2013 alone, more than 130,000 people lost their lives in nearly 500,000 road accidents. Responding to the need for road safety, Abbott partnered with the American Association of Physicians of Indian Origin (AAPI) and the distinguished Indian actor, Amitabh Bachchan, to lead an awareness campaign in an effort to prevent road accidents and save lives. As a part of this programme, in April 2015, Abbott's sales staff visited medical clinics across the country to speak with and educate patients. Employees conducted training sessions to encourage people to be more responsible while driving and abide by road safety regulations. Through the awareness drive, Abbott's employees reached out to more than 500,000 people with 318,445 out of them signing pledge cards, promising to take ownership of their own personal road safety and to share road safety awareness ideas with friends and relatives. This initiative led to Abbott being recognised by the Guinness World Records for 'Receiving Most Pledges for a Safety Campaign'.

EDUCATION/TRAINING

Community led total sanitation project

Abbott has invested in an initiative to improve sanitation facilities in communities where the company's employees live and work. Abbott aims to make two villages in Bharuch district, Talodara and Dadheda – open-defecation free. The company is helping build more than 500 new toilets in homes, schools and community centers, raise community awareness of the connections between sanitation and health and empower the community to maintain the new facilities. Using mobile apps and IT-based geotagging tools, Abbott is mapping the locations of the toilets. This is helping monitor impact by tracking more than 15 criteria, such as improved access to toilets, improvement in school attendance, enrolment and drop-out rates of school girls, cases of diarrhoea or intestinal infections, reduction in healthcare expenditure and missed days of work due to illness, among others.

Nirmal Dhara dairy farmers livelihoods programme

While nearly half of rural households in India depend on dairy farming for at least part of their income, most dairy farmers face barriers that prevent them from joining the organised dairy industry – which limits their ability to grow their farms. Abbott is now working in Maharashtra to provide up to 1,500 smallholder dairy farmers with

the support and infrastructure they need to expand their production of high-quality milk. Working in partnership with local and global partners, the company provides the farmers – especially women, with training in financial and business skills, veterinary care, feeding and dairy development. The company is also building critical village-based infrastructure, including 10 new bulkmilk-chilling facilities.

Knowledge Genie

This is a multichannel, online platform providing medical practitioners with news about the latest developments and insights in medicine. Introduced by Abbott Healthcare Solutions in 2010, it provides access to an e-library of more than 3,000 medical journals, more than 2,000 e-books and daily updates on clinical and research developments. More than 55,000 of India's doctors across 15 specialties are enrolled in Knowledge Genie, with more than 160,000 doctors visiting the website annually.

A train-the-trainer programme

This was conducted with over 120 doctors, on thyroid disorder management, treatment and the therapy options available.

First to inform

This is a unique initiative to bring latest updates from international conferences to over 3000 Indian neurologists on the very next day.

Indian Orthopaedic Association – Ortho Excellence Program (IOA – OEP)

A collaborative programme where Abbott with its tie-up with the Indian Orthopaedic Association, disseminates education by IOA panel doctors to 500 orthopaedicians across the country.

WORK RELATED INITIATIVES

Product safety

Ensuring product quality and safety through maintenance of safety standards in production and distribution facilities. Abbott's product quality efforts are led by the Abbott Quality and Regulatory organisation. All the processes are regularly monitored, and products are assessed against approved specifications before distribution.

Patient education

Patients are educated on health conditions and available treatments to help them understand and effectively manage their conditions. They are also educated on working responsibly with health professionals so they can get better advice.

Collaboration with government regulators and policymakers

Abbott collaborates with various regulatory bodies and policy makers to share expertise and best practices. Abbott engages with expert bodies, such as the National Institute of Nutrition and the Central Food Technological Research Institute to exchange the latest thinking on nutrition science and to learn about national priorities on nutrition. Abbott works closely with various government bodies and industry associations, like Federation of Indian Chambers of Commerce and Industry, Confederation of Indian Industry, the Advertising Standards Council of India and the Protein Foods and Nutrition Development Association of India. Abbott works with the Ministry of Health and Family Welfare, Ministry of Consumer Affairs and the Ministry of Women and Child Development to advance the safety and quality standards pertaining to food laws.

Responsible approach to sales and marketing

It is Abbott's obligation to communicate responsibly with patients, consumers and healthcare professionals about diseases, its healthcare products and the alternatives that exist. The company's employees play an important role in providing doctors with

information about disease-specific data, new treatment approaches, patient initiatives and clinical trial results – all of which can significantly affect a patient's health.

Moving to zero CARE programme

A behaviour-based education programme designed to increase health and safety awareness - the letters CARE stand for Concentration, Attitude and Recognition for Everyone. The moving to zero CARE health and safety programme is a driving force at every Abbott manufacturing site in India and globally.

Safety training

Abbott conducts training programmes that deal with a broad spectrum of health and safety issues, such as work and road safety, first-aid and response to epidemics. All employees receive job-specific safety training, which includes working safely with machinery, working at high elevations and high temperatures, working in confined spaces and operating large vehicles.

Health checks

Abbott's commitment to promoting better health and well-being begins with its own employees. Employees are offered medical benefits and regular health checks. Abbott's flexi-time policies in India, help employees manage their work hours while attending to personal work/life challenges and emergencies. The company also ensures that each plant employee receives an annual medical examination.

Waste reduction

A key part of the company's global waste reduction effort is a comprehensive programme to certify Abbott sites as Zero Waste to Landfill. This means none of the waste goes to landfill, but is instead diverted to become a resource for other beneficial uses. Abbott's manufacturing plant in Goa is their first plant outside of Europe to achieve Zero Waste to Landfill status.

Water conservation

Abbott's Jhagadia plant is the first nutrition facility in Gujarat to harness new environment-friendly Karnal technology to reuse water from the plant to nourish a new 10-acre forest of 6,800 eucalyptus and casuarina trees planted on-site. This innovative approach minimises water waste, while creating a green area that adds to the local ecosystem.

OTHER INITIATIVES

The wonder grain

More than 200 million people living in India, many of them children, are hungry and malnourished. Rice, a staple for two-thirds of India's population, can play an important part in overcoming micronutrient malnutrition. Abbott and its foundation, the Abbott Fund, have partnered with international non-profit organisation PATH to reformulate its Ultra Rice® – an affordable manufactured grain that looks and tastes like rice, but contains important nutrients that rice lacks. With funding support from the Abbott Fund, Abbott and PATH scientists have reduced the cost of Ultra Rice by approximately 10 percent, while enhancing it with additional vitamins. Abbott is also helping PATH catalyse the market for fortified rice by strengthening local production, quality and distribution in India.

AstraZeneca

AWARENESS

- Young Health Program (YHP)
- Heart Beat 90 Camps

EDUCATION/ TRAINING

- Supporting primary education in the locality
- Early & right diagnosis for heart patients (NSTEMI)

WORK RELATED INITIATIVES

- Employee health
- Drive safe and safe rider defensive driving training
- Tree plantation Report

OTHER INITIATIVES

- Providing affordable and convenient options to access life-saving medicines

AWARENESS

Young Health Program (YHP)

Young Health Program began in India in 2010 and is an ongoing flagship initiative of AstraZeneca. It is founded in partnership with Plan International and John Hopkins Bloomberg School of Public Health. The programme focuses on adolescent health in marginalised communities, for primary prevention of the most common Non-Communicable Diseases (NCDs) – type 2 diabetes, cancer and heart and respiratory disease. Multiple expert organisations come together to collaborate for the programme, combining on-the-ground programmes, research and advocacy to target the four most prevalent risk factors for NCDs: Tobacco use, alcohol abuse, lack of exercise and unhealthy eating.YHP is rolled out in five project sites covering (Badarpur, Madanpur Khadar, Mangolpuri, Holambi Kalan and Dwarka) three districts of Delhi. The programme completes five years and recently saw the launch of phase III (2016-2020) in five more resettlement communities in New Delhi (Sultanpuri, Kirari Suleman Nagar, Jahangirpuri, Bawana and Holambi Khurd). With this launch, YHP India continues to enhance knowledge on adolescent health issues and coping mechanisms and aims to reach out to an additional 1.3 lakh young people as the year progresses. So far, YHP has benefited 199,387 adolescents and reached out to 7,510 members of the wider community that include parents, teachers, health workers and policy makers. 2,200 peer educators received training as part of the programme. Abbott launched the Thyroid Awareness Campaign in areas with high prevalence of thyroid disorders, but with limited access to diagnosis and low awareness. In order to address concerns regarding access and affordability of diagnosis, Abbott placed 100 point-of-care devices with the teams conducting thyroid camps. Here free testing was carried out, based on medical advice. After on-site testing, patients received in-clinic diagnosis and consultation. Not only did this programme reduce the hassle for patients because consultation and treatment could be carried out in one visit, it also reduced costs and improved access to diagnosis in these areas. In 2015-16, thyroid awareness camps saw participation from over 130,000 patients.

Heart Beat 90 Camps:

India has a high prevalence of hypertension, however, only 30% of the hypertensive patients are diagnosed and treated for it[1]. Further, 6 out of 10 primary hypertensives are found to have sympathetic overactivity (SO)[2]. Resting heart rate (beats per minute) is

one of the quantitative measures of SO and an early marker for cardio-vascular risk in such patients. Every increase of 10 beats per min above the resting heart rate may lead to increase in the risks of Coronary Artery Disease by 12%, stroke by 5% and sudden death by 12%[3].

Therefore, it is imperative to diagnose the primary hypertensive patients for SO at an early stage. To address this, Astrazeneca has scientifically partnered with Omron healthcare and launched the "Heart beat 90" campaign. Since its inception in September 2017, we have conducted Heart beat camps across the country and have screened ~1800 patients for free in the first 20 days. This initiative is helping nearly 75 HCPs across India to screen the primary hypertensive patients for increased heart rate and thereby, aiding their decisions for early management of hypertension to avoid future complications.

Sources:
1. Decision Resources group
2. Study No: NIS-CIN-DUM-2010/2. A non-interventional, cross sectional, study on the prevalence of Sympathetic Overactivity in primary Hypertensive patients (SORT Study).
3. Zhang D, Wang W LiF association between resting heart rate and coronary heart disease, stroke, sudden death and non-cardiovascular diseases; a metal analysis. Canadian Medical Association Journal .2016 Oct 18

EDUCATION/TRAINING

Supporting primary education in the locality

Kattigenalli Government School located near AstraZeneca's manufacturing facility houses 135 students from Class I to VII standards. As part of this initiative, AZPIL has sponsored the salaries of teachers; conducted medical examinations for students; offered scholarships; improved sanitation and drinking water facilities; set up labs; and provided computers, uniforms, shoes, cycles and books. AZPIL also conducted educational activities and provided transport for the educational tours undertaken by the school. In 2015, AstraZeneca provided basic furniture, i.e., desk with chair for school children, who until then were using the floor to attend their classes. In 2016, AstraZeneca plans to improve the illumination level in the school by repairing all electrical fixtures and improve sanitisation by undertaking painting of the school.

Early & right diagnosis for heart patients (NSTEMI)

Almost 30% of Acute Coronary Syndrome (heart attack) patients, today are not

diagnosed with the right markets to receive the right treatment on time, especially in tier 2 and 3 cities due to low access to diagnostic infrastructure. Identifying this an unmet need in the patient journey, AstraZeneca has partnered with third party agencies to bring diagnostic facilities at the door step of physicians and patients. Through this initiative, AstraZeneca is providing access of Quantitative Bio Marker tests for the Internal Medicines Doctors in Secondary Care Centers in Tier 2 & 3 cities on a pilot basis to facilitate the physicians to take informed decisions for their patients.

WORK RELATED INITIATIVES

Drive safe and safe rider defensive driving training

Safety is an important business value for AstraZeneca, with the foremost goal of, 'Zero fatalities and reduction of serious accidents in the field'. Driver safety is one of the main focus areas of AstraZeneca's SHE (Safety Health & Environment) strategy. Over the years, AstraZeneca has launched and sustained a robust driver safety campaign to create increasing awareness of road safety across the organisation. The sales force teams at AstraZeneca usually travel on two-wheelers or four-wheelers everyday, as part of their job. AstraZeneca initiated DRIVE SAFE and Safe Rider defensive driving training to develop road safety culture among employees. Defensive driving focuses on the need to develop a defensive attitude, given the unsafe behaviour of other road users, and unsafe conditions on the road. Both, two-wheeler riders and four-wheel drivers undergo a practical 'Behind the Wheel' training. This training equips drivers to follow safe/defensive practices while driving in adverse conditions – bad roads, night driving techniques, adverse weather conditions, and also on fast moving/slow moving traffic scenarios, accident avoidance techniques, traffic signs, etc. The training is aimed at reforming the driver and takes the onus of avoiding injury and accidents on the roads. During assessment, 'risky' drivers are identified and counselled to undergo refresher training. Post-training results demonstrated a major reduction in the injury/accident rates.

Employee health

Employee health is also a major focus area. Employee health check-ups are arranged once every two years. Online campaigns on health and nutrition, quitting smoking,

among others also raise employee awareness on health and nutrition.

Tree plantation report

In 2015, AstraZeneca planted 250 saplings in and around the premises of the manufacturing facility in Bengaluru. For 2016, the company plans to issue 500 saplings to all employees and other stakeholders.

OTHER INITIATIVES

Providing affordable & convenient options to access life-saving medicines

Adherence, Affordability and Accessibility are major challenges for better patient outcomes in any chronic disease such as heart diseases/attacks. To address these challenges, AstraZeneca recently launched a bottle pack of its Oral Anti-platelet drug with an option of EMI with no extra charges and door step delivery option for patients.

Bayer Zydus Pharma

AWARENESS

- Water, Agriculture, Sanitation and Hygiene (WASH) project
- Project SAHY
- Health development programme
- Health education and awareness
- Disease awareness talks

EDUCATION/ TRAINING

- Youth education and skill development programmes
- Flood relief programme
- Project Chiguru
- Project PRERENE
- Making Science Makes Sense
- Training courses in agricultural skills
- Fellowship programme
- Research and intervention center
- Breast cancer detection
- Integrated rural development programme
- Shiksha Abhiyaan
- Comprehensive educational interventions
- Mannschaft
- ECHO
- Comprehensive rural development programme
- Skilling center
- Vocational training for women
- Village training programme
- Education programmes for general practitioners
- Importance of drug safety reporting

WORK RELATED INITIATIVES

- Employee initiatives
- Tree of life
- LEED certified

OTHER INITIATIVES

- Community development programme
- Water and Sanitation (WATSAN enhancement programme)
- Flood relief programme
- Clean water access
- Improving agricultural productivity
- Women empowerment programme

AWARENESS

Water, Agriculture, Sanitation and Hygiene (WASH) project

Bayer has collaborated with EFFORT – Society for the Development of Agriculture & Youth on the WASH project. The project aims to improve public health through sanitation, conservation of natural resources and spreading awareness on health and sanitation among the village population in Andhra Pradesh.

Project SAHY

As part of this project, sanitation and hygiene-related programmes are undertaken in schools in Andhra Pradesh.

Health development program

This initiative aims to achieve overall improvement in public health parameters. The programme is undertaken across India in collaboration with School Health Annual Report Program (SHARP).

Health education and awareness

These initiatives are undertaken in collaboration with TB Alert India with focus on TB, sanitation and hygiene.

Bayer conducts disease awareness talks

These awareness talks concerning women's health were conducted by doctors across India. In the year 2014-15, Bayer conducted 100 programmes related to general women health and 100 programmes related to antenatal care. In 2015, Bayer conducted awareness programme for polycystic ovarian syndrome.

EDUCATION/TRAINING

Youth Education and skill development programmes

Bayer in collaboration with MAA Foundation undertakes Youth Education and skill development programmes in schools in Vapi.

Flood relief programme for Jammu & Kashmir region

The programme undertaken in collaboration with Save the Children focused on providing educational facilities, shelters and health interventions to those affected.

Project Chiguru

The project undertaken in Karnataka in collaboration with Association for Rehabilitation for Disabled (ARD) aims to rehabilitate and bridge school programme for children in the age group of 7-12 years affected by child labour.

Project PRERENE

The project in collaboration with Samark aims at improving reading and writing skills among primary school children in 10 government schools in Karnataka until 2017.

Making Science Makes Sense

The programme undertaken with Durga Devi Charitable Trust and scientific partner Grey Sim Ltd. aims to inculcate inquiry-based learning among students and provides school children an insight into natural science phenomenon. 60,000 students have benefited from this programme since 2007.
The company also runs the programme in rural areas in Andhra Pradesh under the theme 'Agriculture education to high school students'.

Bayer - Ramanaidu Vignana Jyothi School of Agriculture in Telangana

The school conducts two 6 month vocational training courses in agricultural skills for students from rural areas. Bayer provided the school with upgraded equipment and infrastructure.

Fellowship programme

BAYER fellowship programme provides support in Agro Science to 31 students for M.Sc. and 18 PhD students every year.

Research and intervention center

Bayer in collaboration with Public Health Foundation of India, KEM Hospital & Research Center, Pune along with Charitee Berlin and World Health Summit supports a research and intervention center for the prevention of sexual violence against women and children in Maharashtra.

Breast cancer detection

DISHA Foundation and Discovering Hands along with Bayer have collaborated to support a training center in New Delhi for blind women to become 'Medical Tactile Examinators' in early breast cancer detection.

Integrated rural development programme

The company along with BAIF Karnataka runs an integrated rural development programme in 10 villages of Koppal District, Karnataka.

Comprehensive educational interventions

Comprehensive educational interventions are undertaken with AAKRUTHI Foundation for all age groups in selected villages in Karnataka and Telangana.

Shiksha Abhiyaan

As part of this programme, scholarships are given for promoting education among the students from the aqua farming community across the country. Bayer has tied up with Sarvodaya Integrated Rural Development (SIRD) for this programme and provides eight scholarships worth INR 25,000 each to children who score the highest in 12th grade – science stream.

Mannschaft

Under this programme, the employees of Bayer volunteer to undertake village development initiatives like schools infrastructure repair, set up of information and communication technology lab, low-cost toilet construction and demonstration, anti-tobacco campaign, health and hygiene awareness campaigns in schools, etc. The programme is undertaken in Karnataka and in collaboration with SIRD.

Comprehensive rural development programme

The company has tied up with SIRDS for this programme and provides grant for education and livelihood initiatives.

ECHO

Bayer in collaboration with Karuna Trust provides specialist care and treatment at primary health centers using tele-health technology of ECHO (Extension for Community Healthcare Outcomes Model).

Skilling Center

Bayer has set up a skilling center in Karnal, Haryana in collaboration with National Skill Development Fund.

Vocational training for women

Bayer identifies adolescent women in the age-group of 15-19 years and trains them as per needs of the rural communities.

Village training programme

The company undertakes village training programme in Karnataka in collaboration with SIRDS for the village youth to augment their opportunities to earn agriculture and non-agriculture income.

Education programmes for general practitioners

Bayer in collaboration with a university undertakes education programmes for general practitioners across India related to women's health issues and diabetes including therapy, care, etc. The training modules for the programme are designed and undertaken

by specialists such as endocrinologists and diabetologists.

Importance of drug safety reporting

Bayer in collaboration with Indian Medical Association undertakes education programmes related to importance of drug safety reporting for healthcare practitioners. Through this programme, Bayer reached out to over 120 general practitioners in Gujarat.

WORK RELATED INITIATIVES

Employee related initiatives

Bayer undertakes various employee related initiatives. The initiatives include celebrating National and Bayer Safety Day, awareness talks on office safety and security, first aid training for employees, annual medical check-ups including pre-employment check-up, tie ups with tertiary care hospitals for catering to emergency medical situations, vaccinations when required, programme conducted by experts on office ergonomics and interactive health sessions by experts on various disorders like hypertension, diabetes and obesity among others.

Besides these, Bayer also ensures that the office canteens are inspected regularly, canteen staff are periodically counselled on personal hygiene and the kitchen, store room and dining hall are inspected regularly for cleanliness.

Bayer also organises interactive health talks by experts on diet and nutrition for its employees. Bayer also has an in-house body composition analyser machine for its employees to assess the effectiveness of individual's nutrition and exercise programme, both for health and physical fitness.

Tree of life

Bayer has collaborated with an NGO – PRAYAS for planting trees. The company distributed around 5000 saplings among its employees in 2014-15.

LEED certified

The new office of Bayer is LEED certified and makes use of natural resources for some of its energy needs.

OTHER INITIATIVES

Community development programme

Bayer along with BAIF – Development Research Foundation undertakes a community development programme in selected villages in the company's neighbourhoods in Vapi.

Water and Sanitation (WATSAN enhancement programme)

Bayer in collaboration with Mythri Sarva Seva Samithi (MSSS) undertakes the Water and Sanitation (WATSAN) enhancement programme in the neighborhoods of the company's vegetable seeds R&D site.

Flood relief programme

Bayer has provided relief support in Chennai and Nepal. The company through Concern India Foundation supported the flood relief programme in Chennai and Tamil Nadu with a focus on healthcare initiatives. In Nepal, the company contributed towards earthquake relief.

Clean water access

Bayer intends to increase access to clean water and has partnered with NGOs to set-up reverse osmosis plants for the rural population in Karnataka.

Improving agricultural productivity

Bayer in collaboration with S.M. Sehgal Foundation provides support for improving agricultural productivity and livelihood opportunities for small and marginal farmers through agriculture diversification in Bihar.

Women empowerment programme

The programme, through formation of self-help groups, aims to create income generating opportunities for women in North Karnataka. The programme was launched on International Women's Day 2016.

Boehringer Ingelheim

AWARENESS

- Making More Health (MMH)
- Stroke awareness week
- Health and hygiene awareness

OTHER INITIATIVES

- Human health and wellness
- Community involvement
- Cleanliness drive
- Drug safety programme

AWARENESS

Making More Health

Making More Health (MMH) is a global, long-term initiative to improve health around the world by Boehringer Ingelheim (BI) and Ashoka, the international association for leading social entrepreneurs. It works towards finding innovative ways to bring more health to individuals and to communities by supporting the concept of social entrepreneurship. Under this global initiative, BI has started its first MMH pilot project in India in Coimbatore, Tamil Nadu.

The project is undertaken in collaboration with Karl Kubel Foundation (Germany and India) and their large local network partners with an aim to improve healthcare facilities for rural population especially women and children, in the surroundings of Coimbatore, India. Currently in the target area of intervention, there is limited or no access to health facilities, lack of basic health insurance systems and people are often unable to pay for medicines due to their economic situations. Also, sanitation facilities and illness prevention measures are rare.

The project in India aims to improve access to healthcare by connecting MMH network of social entrepreneurs and scalable health ideas to meet the local health needs. MMH team works closely with the team of Karl Kubel Foundation for child and family welfare to identify the health needs. BI has supported the set-up of two kindergarten buildings, Children's Day and sponsored non-violence communication programmes for kindergarten teachers. A 'Tribal's cooking recipes' booklet has been developed together with tribal communities. Health education, health awareness programmes and setting up of mobile clinic services are made available for the public.
Since the beginning of the project in 2014, BI has undertaken several other initiatives such as organising twelve healthcare camps for tribal women; undertaking two workshops and one healthcare awareness programme for kindergarten teachers, a youth venture programme, tailoring training and livelihood income generation through MMH game changing business models, among tribal and urban women self-help groups. BI also organised visits to the project for its managers as part of learning week. Till date, the project has benefited 176 families, 17 villages and 138 kindergarten teachers and students.

Stroke awareness week

BI conducts disease awareness and patient awareness programme related to stroke for a week twice or thrice every year. 1000 people attend each stroke awareness week.

Health and hygiene awareness

BI conducts disease awareness initiatives for all employees thrice a year. The programme revolves around health and hygiene. External experts/in-house medical experts are invited to address the staff.

OTHER INITIATIVES

Human health and wellness

BI supports initiatives focussed on general health and well-being.

Community involvement

BI supports initiatives in the communities where the employees live and work through their involvement in local events, activities and programmes. Each year, 25 to 30 employees volunteer in BI's CSR initiatives and each employee contributes approximately 200 hours in a year for the activities.

Cleanliness drive

BI along with United Way of Mumbai and Municipal Corporation of Greater Mumbai undertakes a post-immersion cleanliness drive after Ganesh Chaturthi once a year. BI employees volunteer for the cleanliness drive.

Drug safety programme

BI conducts four outreach programmes related to drug safety each year covering academia and paramedical staff. The initiative has benefited close to 1000 people.

Bristol-Myers Squibb

AWARENESS

- Together with Diabetes project
- Delivering Hope project
- Patient forums
- Screening camps

EDUCATION/ TRAINING

- Joy of giving week
- Happiness tree
- Training related to pharmacovigilance

WORK RELATED INITIATIVES

- Employee related initiatives

OTHER INITIATIVES

- The Bristol-Myers Squibb India
- Free drugs
- Patient support programme

AWARENESS

Together with Diabetes project

The Bristol-Myers Squibb Foundation and in collaboration with, NGOs, hospitals and institutes (Humana People to People, Mamta Health Institute for Mother and Child, Sanjivani Health and Relief Committee, United Way Mumbai Helpline, All India Institute of Diabetes and Research (AIIDR) and Swasthya Diabetes Hospital), has initiated the Together with Diabetes project. The project tackles diabetes through a multi-pronged approach. It includes spreading awareness and providing treatment among the poor, rural and tribal population. This is done along with municipal and public school workers; training lay community health workers and local health workers, known as accredited social health activists and auxiliary nurse midwives.

The project is in operation in Andhra Pradesh, Rajasthan, Gujarat, Mumbai and New Delhi. In 2014, the project benefitted 243,529 people through the The Bristol-Myers Squibb Foundation funded programmes and trained 4,985 professional and lay healthcare workers. Overall, 90 per cent of the initiatives under this project have shown improvement in health equity including access to health.

Delivering Hope project

The project aims to spread awareness and provide treatment towards hepatitis B and C; and type 2 diabetes, together with training for rural health practitioners on liver and metabolic diseases. The project is undertaken by the The Bristol-Myers Squibb Foundation, in collaboration with AIIDR, Hope Initiative, Liver Foundation West Bengal, Mamta Health Institute for Mother and Child, Samarth and United Way of Mumbai and has its presence in Gujarat, West Bengal, Manipur, Nagaland and Mumbai. The project reaches out to patients with hepatitis B, schools, rural communities, underprivileged population, rural health practitioners and high risk groups such as sanitation workers, etc.

The Bristol-Myers Squibb Foundation funded initiatives, have benefitted 5,406,035 people and trained a total of 163,798 healthcare workers. All the initiatives under this

project have shown improvement in health equity including access to care.

Patient forums

The Bristol-Myers Squibb supports patient forums, where doctors spread awareness about diseases such as blood cancer and discuss the dos and don'ts. Disease advisors connect with blood cancer patients over a call, and provide healthcare assistance. In 2015, 500-600 patients were reached out through the forums.

Screening camps

The Bristol-Myers Squibb Foundation conducts 12-13 camps for hepatitis B across the country. Such camps have benefited approximately 20,000 people in a year.

EDUCATION/TRAINING

Joy of giving week

The Bristol-Myers Squibb celebrated the Joy of giving week in Mumbai. As part of this initiative, the employees of The Bristol-Myers Squibb contributed towards education for children by donating school bags, etc. which were then handed over to an NGO. Nearly 150-200 children benefited from this initiative.

Happiness tree

The Bristol-Myers Squibb collaborated with an NGO that works for children's education, Akanksha, for the initiative - Happiness tree. The company along with its employees fulfilled the requirements of the NGO by providing them with footballs, school bags, etc. Around 80 to 100 children benefitted from this initiative.

Training related to pharmacovigilance

The Bristol-Myers Squibb regularly arranges for training related to pharmacovigilance for nurses and paramedics. This year, training was provided to nurses and paramedics at Eastern Railway Hospital, related to dealing with adverse events and monitoring the side effects of drugs. Around 60 to 70 nurses benefit from such training every year.

WORK RELATED INITIATIVES

Employee related initiatives

As part of its work related initiatives, The Bristol-Myers Squibb provides its employees with annual health check-ups, two compulsory local benefits training per year, option to work from home, flexible timing for work and crèche allowance among others.

OTHER INITIATIVES

The Bristol-Myers Squibb India

The Bristol-Myers Squibb contributed towards the Disaster Relief Fund for the victims of disaster in Uttarakhand, Jammu and Kashmir and Chennai. The employees of the company made voluntary contribution to the fund and their contribution was matched by The Bristol-Myers Squibb.

Besides this, the The Bristol-Myers Squibb employees also participated in the Standard Chartered Marathon, Mumbai 2016.

Patient support programme

The Bristol-Myers Squibb's Foundation runs a patient support programme for patients who cannot afford treatment for diseases like cancer and diabetes. When doctors of

such patients request for medicines, The Bristol-Myers Squibb obliges by providing the medicines for a year. Similar support is provided to NGOs requesting for medicines. About 200 to 300 patients have been benefitted from this programme across the country.

Free medicines

The Bristol-Myers Squibb provides free medicines to support needy patients through requests by doctors and NGOs.

AWARENESS

- MDR TB partnership
- Lilly NCD partnership

EDUCATION/ TRAINING

- Step Up Project

WORK RELATED INITIATIVES

- Employee related initiatives
- Tree plantation
- Sustainability and recycling

AWARENESS

MDR TB partnership

With 1.9 million new tuberculosis (TB) cases every year, India has the highest incidence of TB in the world. In order to combat TB along with Multidrug-Resistant TB (MDR), Eli Lilly began with the Lilly MDR TB Partnership in 2004 with a pan India presence. For this partnership, the company collaborated with multiple partners such as International Union against TB and Lung Disease, TB Alert India, Reach, Indian Pharmaceutical Association, St. Stephens Hospital, Care India and the government – central TB division and district TB authorities.

Control Program (RNTCP) to assist in the implementation of the DOTS Plus Programme. It works with institutions like the Indian Pharmaceutical Association, NGOs and the industry associations along with the MoHFW and Delhi government's DOTS Programme for launching an interactive CD with learning modules, games and a quiz-based on TB. The company is working with different media houses to produce advocacy campaigns aimed at sensitising decision makers.

Through the partnership, over 2000 doctors, 4000 pharmacists/chemists and 635 rural healthcare providers (HCPs) have been trained; 1500 non-traditional healthcare providers have been trained to make appropriate referrals and 230 rural HCPs have helped in increasing the detection rate. Besides these, a chain of private hospitals have been engaged to improve treatment and care, referring previously 'missing' TB cases for appropriate care. The partnership has also benefitted 72,000 people at risk of TB by referring them to appropriate screening and care and 215,000 people are expected to benefit by 2016. Additionally, half a million people now have access to quality treatment through the partnership; 2,000 people were supported for treatment completion and an increased treatment completion rate of 5 per cent per year is observed for the target population in Burari (Delhi).

Lilly NCD partnership

Lilly NCD Partnership has a flagship project named UDAY since 2012 which aims to develop a cost-effective scalable 'Comprehensive Diabetes and Hypertension Prevention and Management Program' in India. The ongoing project will continue till 2018. As part of the project, seven blocks including rural and urban wards have been identified in Haryana (Sonepat), where healthcare workers go door-to-door to screen people. There is a separate team of counsellors for interpersonal communication to sensitise the awareness of diabetes and hypertension. This programme is implemented in Vishakhapatnam (Andhra Pradesh) and Sonepat (Haryana). The key components include screening, public awareness generation and capacity building of healthcare workers and pharmacists. Healthcare workers' capacity building curriculum developed under project UDAY has been under review of GoI for adopting as a training manual for NPCDCS (National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke) workers. Through this approach, the programme will focus on sharing results with key stakeholders, including the government and the global health community to encourage adoption of the best solutions and help to bridge the access gap through advocacy at government level. The project is being executed in partnership with PHFI, PSI and Project Hope. It has reached out to over 100,000 patients through screening and interpersonal communications, more than 12000 people through 462 street shows conducted at Vishakhapatnam on various aspects of diabetes and hypertension and 140 community health workers through capacity building initiative.

EDUCATION/TRAINING

Step Up Project

The Step Up Project, operational since 2013, provides basic education including language, mathematics and computer skills and prepares underprivileged children out of school, to join government schools at the right age. The project undertaken by the NGO - Humana People to People, is close to the company's office in Gurgaon and provides opportunity to employees to volunteer time, provide ideas and resources to improve education levels of the children. The company also works with the community through this project and conducts health camps and medical camps for children and families. Over 50 children of migrant and daily wage workers are reached out to each year, as part of the project. Besides this, all the families living in the area have been reached out to as part of this project.

WORK RELATED INITIATIVES

Employee related initiatives

Eli Lilly undertakes various employee related initiatives and provides facilities which include regular health check-ups organised in the office, annual health check-ups at partner hospitals, visiting doctor facility for the employees twice a week at the head office, fully equipped gym within office - Lilly India fitness center. Besides, yoga classes are conducted thrice a week. The company also provides its employees with mandatory practical four-wheeler training and two-wheeler training; safety guards like helmet, jacket, etc. Additionally, it shares communication on road safety and health, along with commitment from senior leadership. It has also launched an HSE app in order to report injury if any, for better tracking and to initiate proactive steps to reduce the collisions. Furthermore, it has an online HSE training for all three directions, i.e., Ergo, Mobile, Secure and Green directions.

Tree plantation

On each employee's birthday, a tree is planted by a partner organisation.

Sustainability and recycling

Rainwater harvesting, recycling of waste and mandatory double-sided printing for saving paper is practiced at the company's head office.

gsk do more feel better live longer

AWARENESS

- Neglected Tropical Diseases (NTDs) project
- Mother and child healthcare with focus on newborn survival
- Awareness on congenital hypothyroidism
- Value of vaccines
- Prevention of Antibiotic Resistance (AMR)

EDUCATION/ TRAINING

- Thyroid certification programme
- Pulmonary Rehabilitation (PR)
- Skills training

WORK RELATED INITIATIVES

- Employee related initiatives
- Road safety programme

OTHER INITIATIVES

- Holistic care for children with cancer
- Holistic care for vulnerables
- Preventive healthcare through water and sanitation

AWARENESS

Neglected Tropical Diseases (NTDs) project

As a key partner in the fight against Neglected Tropical Diseases (NTDs), GSK has begun this project to eliminate Lymphatic Filariasis (LF) in India in support of the London Declaration and WHO 2020 Roadmap on NTDs. In India, LF cases have been reported in 250 districts in 20 states. To combat LF, GSK produces the tablet Albendazole for donation purpose only. GSK reaches over a million people through this project.

Mother and child healthcare with focus on newborn survival

The project focusses on healthcare needs of newborns and improving their survival in high burden areas of Madhya Pradesh and Rajasthan. GlaxoSmithKline (GSK) has partnered with ARTH and Care India for the project to build capacity of ASHA workers, train skilled birth attendants, generate awareness and ensure improved facility-based and home-based care of newborns. 5800 new born lives have been saved through this project till date.

Awareness on congenital hypothyroidism

GSK has launched a campaign on Congenital Hypothyroidism which refers to the inability of a new born to make enough thyroid hormone and to develop and grow normally right from birth. It may also lead to mental retardation if not detected within the first few days after birth. To spread awareness about this condition, GSK has identified twelve major cities across the country. Here press meets are organised, through which a team comprising an endocrinologist, gynaecologist, pediatrician and representatives of GSK spread awareness about the importance of testing for congenital hypothyroidism, and the treatment for it among parents and doctors. The company also tracks the number of publications released and traces the awareness created for the condition. GSK also intends to target bloggers, apps and websites that mothers browse through, in order to spread awareness.

Value of vaccines

Vaccines are considered the biggest preventive measure to avoid disease. Thus, GSK organises press meets to spread awareness about vaccines in 20 cities across the country, where experts discuss importance of vaccinations, disease prevention and which vaccination prevents what. The objective of this exercise is to raise awareness among the general public.

Prevention of Antibiotic Resistance (AMR)

GSK has partnered with OPPI to create a media campaign on Prevention of Antibiotic Resistance (AMR). GSK's medical director was part of the panelists representing OPPI views in the industry session on AMR. GSK has also been working on health education programmes on AMR with doctors. The company has put up several posters on AMR at hospitals and clinics to educate patients on challenges of not completing the full course of antibiotics and the harmful impact of self-medication of antibiotics. GSK is now signing an MOU with the Maharashtra state government to carry through the awareness of AMR across the state.

EDUCATION/TRAINING

Thyroid certification programme

GSK has developed and/or supported scientific educational programmes for healthcare practitioners to update their knowledge about disease management, which will ultimately help their patients receive appropriate treatment. One such independent medical education programme, supported through an educational grant by GSK, is the Certificate Course in Management of Thyroid Disorders (CCMTD), which has been developed and implemented by Public Health Foundation of India (PHFI) in collaboration with Chellaram Diabetes Institute (CDI), Pune. This is a comprehensive training programme with the main objective of enhancing the knowledge and skills of primary care physicians in the management of thyroid disorders and till date, more than 700 physicians have completed this course. The programme has also been accredited/endorsed by some reputed international academic organisations and is certified by the Indian Medical Association.

Pulmonary Rehabilitation (PR)

GSK has also planned and conducted Pulmonary Rehabilitation (PR) workshops across India, in consultation with experts in the field, in order to educate chest physicians and physiotherapists regarding various aspects of PR and its benefits in patients with respiratory disease.

Skills training

GSK in collaboration with DB Tech and Save the Children provides training to 700 youth in industry related trades.

WORK RELATED INITIATIVES

Employee related initiatives

Every employee at GSK is allowed to avail of a health package across the country which includes child immunisations, preventive care examinations, cancer screenings, diabetes management, etc. through cashless facility. The idea is to promote preventive care. The company has partnered with Optum to provide counselling services for employees and their families through a 24-hour helpline for dealing with personal and professional stress. GSK organises regular talks on mental issues, women's health and relationship management. Besides this, the company provides crèche and day care facilities to its employees.

Road safety programme

The sales force at GSK travels on two-wheelers. To promote road safety among them, GSK has tied up with a global agency to conduct pan India online virtual training programme with pre-test and post-test related to driving built in.

OTHER INITIATIVES

Holistic care for children with cancer

GSK in collaboration with Sri Chaitanya Seva Trust, Indian Cancer Society, St. Jude Child Care Centers and Bangalore Hospice Trust Cancer Care provides holistic care for 1000 cancer affected children in Maharashtra, Uttar Pradesh and Karnataka.

Holistic care for vulnerables

GSK through partnership with Nai Dharti, Ashraya Seva Trust and Vanita Vikas Mandal aims to provide enhanced healthcare and education for 200 vulnerable girls and abandoned elderly in **Bihar, Karnataka and Maharashtra.**

Preventive healthcare through water and sanitation

GSK has collaborated with Habitat for Humanity and BITAN for provision of clean and safe drinking water and sanitation facilities benefitting 900 community members across Maharashtra and West Bengal.

Johnson & Johnson

AWARENESS

- Me without Migraine
- Niramaya Arogya Dham
- TB awareness campaign

EDUCATION/ TRAINING

- Neonatal Resuscitation program – First golden minute
- SOS nursing scholarship project
- Community Aid & Sponsorship Program (CASP)
- Training schools for auxiliary nurses and midwives
- Improving mother and young lives through community participation
- Helen Keller Institute vocational training unit for the Deaf-Blind
- Dissemination of updated scientific evidence
- Project Anando
- TOUCH project
- Paramedical training for underprivileged girls

OTHER INITIATIVES

- Programme for compassionate use of Bedaquiline
- Providing support to shelter home
- Khushi pediatric therapy centre
- Mobile health for Mothers
- Adhar
- Saving lives through baby wraps initiative
- Holistic development of Karahal Block project

AWARENESS

TB awareness campaign

Johnson & Johnson (J&J) partnered with Municipal Corporation of Greater Mumbai to drive TB awareness campaign for the commuters of suburban trains. J&J, in partnership with an NGO- Doctors For You, initiated a programme to raise awareness of Tuberculosis (TB) prevention and provided nutritional support, treatment support and counselling services to the underserved community (approx. 150 households). This project will benefit a population of 150,000 in an Eastern Suburb of Mumbai.

Me without Migraine

J&J has launched a digital campaign 'Me without Migraine' to raise awareness about migraine amongst the community. J&J has also initiated' Caring for minds', a programme for education of schizophrenia patients and their care givers.

Niramaya Arogya Dham

Niramaya Arogya Dham provides care to 300 children with HIV / AIDS.

EDUCATION/TRAINING

Neonatal Resuscitation program – First golden minute

Johnson & Johnson's 'Neonatal Resuscitation Program – First Golden Minute' programme in partnership with the Indian Academy of Pediatrics, aims at educating and training 200,000 healthcare workers and infant care providers on prompt and skilled resuscitation techniques to survive the neonatal period, in order to reduce Infant Mortality Rate in line with the Millennium Development Goals. Training is provided to private and government healthcare professionals and workers using low cost materials, thereby enhancing its implementability and scalability.

Training schools for auxiliary nurses and midwives

Johnson & Johnson also supports two training schools for auxiliary nurses and midwives for underprivileged girls from rural areas, in Maharashtra and Andhra Pradesh.

Dissemination of updated scientific evidence to the healthcare practitioners (HCPs)/training the healthcare workforce

J&J collaborated with Indian Medical Association – Maharashtra State to accredit the medical education events with Maharashtra Medical Council credit hours. In 2015, a total of more than 1700 CME credit hours points were awarded to more than 1200 HCPs across India.

SOS nursing scholarship project

It is a family-based care project for parentless and abandoned children through which the children acquire livelihood skills. The Johnson & Johnson nursing scholarship project supports girls under the care of SOS villages, as well as underprivileged girls from the SOS community projects. The girls undergo courses at the SOS nursing school in Anangpur in Faridabad that offers an optimum blend of technical and personality development skills to help nursing students excel in their individual performances and enhance their employability. 14 underprivileged girls have benefitted from this project.

To improve mother and young lives

Through community participation, J&J provides education, healthcare and sanitation facilities to women and children in Kolkata.

Community Aid & Sponsorship Program (CASP)

The programme focusses on provision of holistic education to students and has benefitted 1100 students in the remote villages in Mulshi Taluka in Maharashtra. Through

the programme, schools are provided sports equipment and guidance workshops are organised for students. Annual general health check-ups are also conducted for all the children.

Helen Keller Institute vocational training unit for the Deaf-Blind

The unit focusses on developing vocational skills among the deaf and deaf-blind. The unit also spreads awareness about deaf blindness. 35 deaf and deaf-blind individuals have been trained by J&J.

TOUCH Project

TOUCH Project supports education of 1000 children from Karnataka, Rajasthan, West Bengal and Maharashtra. Also, a model Book Bank that stocks textbooks for all professional and degree courses has been started at Vihigaon.

Paramedical training for underprivileged girls

The Arogyasahayak (Patient Assistant) course trains the girls as paramedical staff for hospitals and old age homes. The course covers all aspects of nursing, through theory and practical in the classroom as well as in hospitals. Over 100 girls benefitted through this programme.

Project Anando

Light of Life Trust started its Project Anando with the focus on overall development of out of school children in Maharashtra. J&J has provided support for the library and reading room at Project Anando's office for the benefit of the children. Overall 700 children, their families, school teachers and peer groups have benefitted from this project.

OTHER INITIATIVES

Programme for compassionate use of Bedaquiline

J&J initiated a programme for compassionate use of Bedaquiline, a drug for treatment of pulmonary MDR-TB and provided its access to the eligible patients in India. J&J also supported the launch of government's conditional access programme for the drug by providing free doses for 600 patients. Further, for patients from low socio-economic class who cannot access the company's drugs, J&J runs patient assistance programme for many of its Oncology, Immunology and Neuro-Psychiatry products, as part of which such patients may avail discount of up to 50 per cent on these drugs.

Mobile Health for Mothers

Johnson & Johnson provides healthcare services to 70,000 under-served patients. J&J's Mobile Health for Mothers provides free text messaging on prenatal care, appointment reminders, and calls from health coaches. Through J&J India's CINIASHA programme, the company reached out to 30,000 urban slum dwellers who are under-served by government health programmes.

Holistic development of Karahal Block project

Under the 'Holistic Development of Karahal Block' project, 3000 girl children's education is being supported under the Nanhi Kali scheme. Drinking water points are established, benefitting a population of 15,000, giving them access to safe drinking water. Primary healthcare and referral services are being provided to 102 villages by way of a mobile clinic. The programme has served 71,000 beneficiaries across these 102 villages. In the 'Bridge to Employment' programme, employees actively mentor students at risk of dropping out of school by providing them educational support and relevant exposure, thereby motivating them to pursue higher education.

Providing support to shelter home

J&J, through an NGO provides support for shelter home for victims of commercial sexual exploitation in Mumbai.

Adhar

Adhar is a residential center supported by J&J which provides complete physical, psychological and partial financial relief to the aged parents of 200 mentally challenged adults.

Khushi pediatric therapy centre

Khushi Pediatric Therapy Centre is supported by J&J for psychometric and therapeutic tests to assess the functional ability of autistic individuals. The center also plans to set-up a pre-vocational training center.

Saving lives through baby wraps initiative

J&J through donating baby wraps, supports the Saving lives through baby wraps initiative by the Impact India Foundation. The initiative aims to motivate rural women to deliver their babies under skilled medical care. The initiative has benefitted 2000 new borns.

AWARENESS

- River Ambulance project and river water testing project
- Stem cell donor registration drive

EDUCATION/ TRAINING

- Merck India Charitable Trust scholarship programme
- Active kids, Active India
- Education at Goa site
- SPARK - Sparking curiosity in science

WORK RELATED INITIATIVES

- Regular checks on the distribution network
- Complete health check-up camps

OTHER INITIATIVES

- Waste management project
- Support to Usgaon panchayat (Goa)
- Tamil Nadu flood relief
- Donation to drought affected areas in Latur

AWARENESS

River Ambulance project and river water testing project

Merck has collaborated with Narmada Samagra on a River Ambulance project. Through this project, Merck aims to improve access to basic healthcare facilities for people, mainly tribals living on the banks of the Narmada River in Madhya Pradesh. The programme, ongoing since 2014, covers 30 banks of the Narmada River, benefitting approximately 40 to 50 people on a daily basis. Till date, more than 12,000 people have benefitted from the project. Awareness about health and hygiene is also given through the ambulance by the on-board Health Care Practitioners (HCP).

Stem cell donor registration drive

The drive was organised by Merck on 16 and 17 May, 2016. The primary focus of the stem cell registration drive was to initiate the discussion about stem cell donation among employees, spread awareness about the advancement in the technology and procedure of stem cell donation and also to bust other common myths about being a stem cell donor. A total of 100 employees from Merck Mumbai and Bengaluru office willingly registered as stem cell donors at the end of registration drive. A second registration drive of the kind, is also proposed by the company.

EDUCATION/TRAINING

Merck India Charitable Trust scholarship programme

Merck India Charitable Trust encourages talented under-privileged students to pursue higher education by sponsoring their key educational expenses up to the completion of their graduation.

Merck has laid down specific criteria for selecting the beneficiaries and tracks the progress of these students. Every year, marksheets of the students are collected along with submission of invoices, to track the marks the student has obtained in the academic year. Meritorious students are encouraged to write letters/communicate through phone call to Merck about their achievements in terms of awards and other recognitions. These are then highlighted in the key events of the company such as company town halls and

selection of new batch of students for the MICT Scholarship. If the student is unable to pass all the exams in an academic year, the scholarship cheque is held back for the year, till the student clears the exam and shows progress in the next exam. If the student shows consistent drop in grades two consecutive times, the student is removed from the scholarship.

The programme provides opportunity to the beneficiaries to chase their academic dreams without worrying about the economic aspects. In this way, Merck, aims to encourage education and reduce dropouts on account of lack of resources. Over 200 students in Mumbai, Navi Mumbai and Thane have benefitted from the programme.

Active Kids, Active India

Merck, in collaboration with the Magic Bus Foundation supports education for underprivileged children in Thane. Around 600 children have benefitted from this programme.

Education at Goa site

Merck distributed school uniforms among 184 children from an underprivileged background in the villages of Usgaon, Goa.

SPARK - Sparking curiosity in science

SPARK, is an employee engagement programme that works around arousing the curiosity of students and getting them interested in the world of science. SPARK was created over two weeks from 29 February – 13 March, 2016. Under SPARK, which is built on the CR pillar of Science of Tomorrow, Life Science, employees in Bengaluru and Mumbai Merck offices carried out volunteering activities: Demonstrating scientific experiments to students at schools, working with NGOs to create study material for physically challenged children and cooking in kitchens that serve midday meals to thousands of under privileged children. Strong support from senior leaders encouraged employees to take time out from work and get together to give back in their own way. 541 SPARK volunteers from Bengaluru and Mumbai Merck offices reached out to a total of 5163 students in 24 schools clocking 3564 volunteer hours.

WORK RELATED INITIATIVES

Regular checks on the distribution network

At Merck, safety, quality, efficacy and security remains a key commitment. Across the globe, Merck performs thorough and regular checks on the distribution network of their products and supply chain partners to ensure compliance with their internal requirements.

Complete health check-up camps

Merck has an annual health check-up policy for all full time employees across India. This policy aims to serve as a preventive healthcare measure. It also aims to inform the employees about their health condition and possible health risks to avoid illness. Under this policy, an employee can undergo annual health check-up through pre-defined tests based on age bracket of the employee. The health check-up is company sponsored and all the expenses are reimbursed by the company. Additional tests required by the employee are available at a 10 per cent discount.

OTHER INITIATIVES

Waste management project

Merck, as part of the Swachh Bharat Abhiyan, has donated wheeled waste bins to Ponda Municipality in Goa. In support of the Goa government's initiative to make Goa garbage free, Merck, has donated a fork lift and bailing machine to the Department of Science and Technology, Solid Waste Management, Goa Pollution Control Board.

Support to Usgaon panchayat (Goa)

Merck has distributed street lights for the benefit of the villagers living in Usgaon.

Tamil Nadu flood relief

Chennai floods, which took place in November – December 2015, claimed lives of more than 500 people. In response to this calamity, Merck through AmeriCares, an international emergency response and global health organisation donated 2099 floor mats, 1060 bed sheets and 1050 mosquito nets to those affected by the flood. 1000 families in Thiruvallur, Thambaram (Chennai) districts of Tamil Nadu, which were considered some of the worst affected areas in Tamil Nadu, benefitted from this support.

Donation to drought affected areas in Latur

In 2016, as an emergency response to the severe drought which affected the Marathawada region in Maharashtra, the government of Maharashtra decided to supply water daily, through a train called Jaldoot from 12 April 2016. As the situation of water availability was very grim, the Union Railway Minister, Shri Suresh Prabhu and the Chief Minister of Maharashtra, Shri Devendra Fadnavis, through this initiative are still working towards meeting the immediate need of the citizens in drought-hit areas. Merck contributed INR 11.30 lakh towards the freight expenses of train with 50 rakes to transport water from Miraj to Latur. The whole initiative was initiated and coordinated by the Bombay Chamber of Commerce.

MSD Be well

AWARENESS

- MSD's SPARSH programme
- Support my school campaign
- Join my village
- Guard yourself

EDUCATION/ TRAINING

- MSD's CCEBDM

OTHER INITIATIVES

- MSD for Mothers
- Health camps
- Free medicines
- ASMAN
- Safe water network
- MSD Wellcome Trust Hilleman Laboratories
- Antibiotic stewardship programme

AWARENESS

MSD's SPARSH programme

MSD's SPARSH programme offers comprehensive diabetes management, including diet counseling, exercise counseling, education, and physician training. Around 25,000 patients have been referred for active counseling by physicians and enrolled patients receive support from a dedicated 'Care Counsellor'. Currently, a team of 70 care counsellors provide services to over 15,000 patients and over 35,000 patients have received support since the beginning of the programme.

Support my school campaign

It is a joint initiative by MSD, Coca-Cola, NDTV, UN-HABITAT, Charities Aid Foundation (CAF) India and Sulabh International to create awareness in students in rural and semi-urban areas on 'Water, Agriculture, Sanitation and Hygiene' (WASH).

Join my village

This initiative focusses on strengthening maternal and new born health and improving education, which is the foundation for helping women and girls in securing a brighter future for themselves and their families.

Guard yourself

MSD launched 'Guard yourself', an initiative which centers in partnership with private hospitals and clinics with an objective to spread awareness about cervical cancer and its prevention including education, screening and vaccination.

EDUCATION/TRAINING

MSD's CCEBDM

(Certificate Course in Evidence Based Diabetes Management): MSD India has partnered with Public Health Foundation of India (PHFI) and Dr. Mohan's Diabetes Education Academy (DMDEA) for launch and expansion of CCEBDM to develop core skills and competencies in primary care physicians for the practice of evidence-based diabetes management, focussed on the management of type 2 diabetes. The aim of the programme, CCEBDM, is to impart on-job training to the primary care physicians on the latest advances in the field of diabetes management. The course curriculum is divided into twelve modules spread over 12 months under which physicians are trained by regional faculty identified by the programme organisers. This programme is the first-of-its-kind to receive IDF accreditation. Till date, 7500 doctors have been trained by 165 faculty across the country and currently the fourth cycle is ongoing.

OTHER INITIATIVES

MSD for Mothers

The MSD for Mothers is a ten year commitment by the company to help address the issue of maternal mortality due to complications from pregnancy and child birth, globally. In India, MSD for Mothers (phase I – for a period from March 2013 to May 2016) aimed for innovative partnerships with leading non-governmental organisations. As part of this project, MSD has tied up with multiple partners such as Jhpiego Corporation, Hindustan Latex Family Planning Promotion Trust, Federation of Obstetric and Gynecological Societies of India, Pathfinder International, World Health Partners, Gram Vaani and The White Ribbon Alliance. These partnerships engage in and explore the potential of local private providers and health businesses to strengthen maternal healthcare in three states of Uttar Pradesh, Jharkhand and Rajasthan, states with high rates of maternal mortality. The activities that form a part of the programme include - generating demand for maternal healthcare through education and community outreach, expanding the 'Merrygold' network of maternal health clinics and hospitals, training private providers on safe birthing practices and use of technology, introducing low-cost, easy-to-use technologies to improve care and keep it affordable. Furthermore, the company does

its bit by developing and implementing quality standards to help private providers qualify for government programmes that subsidise the cost of maternal health services, designing free phone-based service for women to rate the care they receive and hold private providers accountable for delivering high quality services, improving access to care for women in hard-to-reach communities through telemedicine and telediagnostics (the remote treatment and diagnosis of patients through phones and internet), establishing links between public and private providers to offer a continuum of services and bringing high-quality, low-cost medicines to rural villages through a network of delivery agents.

Overall, the partnerships are set out to improve the affordability, accessibility and quality of private maternal health services and have reached nearly 500,000 pregnant women over three years (2013-2016). After Phase I, MSD will enter into Phase II interventions which are under process now.

Health camps

MSD employees played a significant role in the OPPI Jawhar project.

Free medicines

MSD provides free medicines during calamities and emergency situations.

ASMAN

Alliance for Saving Mothers and Newborn (ASMAN) – a health initiative of private sector foundations – Bill & Melinda Gates Foundation, MSD India, Tata Trusts, Reliance Foundation and USAID. This project was launched on 3 November, 2015 with an alliance for 3 years. The alliance would work with central and state governments in a Public Private Partnership (PPP) mode to help accelerate the efforts to reduce and eliminate avoidable maternal and infant mortality in some of the high priority areas in India.

Safe water network

MSD and safe water network launched a three-year partnership to increase access to safe water and reduce the impact of water-borne diseases in impoverished communities

in Andhra Pradesh, India.

MSD Wellcome Trust Hilleman Laboratories

MSD has joined the Wellcome Trust to form the MSD Wellcome Trust Hilleman Laboratories based at New Delhi, the first-of-its-kind, R&D joint venture with a not-for-profit operating model to focus on developing affordable vaccines to prevent diseases that commonly affect low-income countries.

Antibiotic stewardship programme

An initiative aimed to promote rational use of antibiotics and help formulate hospital specific antibiotic policy to improve healthcare outcomes and minimise antibiotic resistance. This programme has been advocated by the Indian Society of Critical Care Medicine (ISCCM) and under their banner antibiotic stewardship was expanded to antimicrobial stewardship by including management of fungal infections as well.

NEKTAR

OTHER INITIATIVES

Arogyasri healthcare

OTHER INITIATIVES

Arogyasri healthcare

Nektar contributes to a government-run healthcare programme – 'Arogyasri Healthcare' in Hyderabad which works for the benefit of families below the poverty line.

NOVARTIS

AWARENESS

- Arogya parivar program
- Leprosy awareness
- Prayaas
- Breast cancer awareness

EDUCATION/ TRAINING

- NGO excellence
- Education enhancement
- Subscription of NatGeo Explorer
- Vocational training
- Mid-day meal for children
- Mobile science laboratory

WORK RELATED INITIATIVES

- Employee related initiatives

OTHER INITIATIVES

- Donation programmes for cancer patients
- Child care centers
- Supporting medical and nutritional needs of promising athletes
- Novartis Oncology Access (NOA)
- Day care center
- Supporting maintenance of gardens
- Oncology
- Flood relief program
- Supporting environment sustainability
- Leprosy
- Child healthcare and nutrition
- Army Welfare Fund

AWARENESS

Arogya Parivar Program

Novartis is working to improve access to medicines and health education and awareness for rural poor people across eleven states of India through its Arogya Parivar Program that has been in place since 2007. From 2010 – 2016, more than 31 million villagers have attended 7,01,989 health awareness sessions and 18,43,134 patients have been diagnosed in health camps organised by Novartis. Arogya Parivar offers education on diseases, treatment options and prevention as well as increased access to affordable medicines. Through Arogya Parivar, Novartis has established strong links with more than 60,000 doctors and pharmacies and has also set up direct distribution channels in order to ensure availability of medicines, even in rural areas. Women's health is a focus area with awareness programs on iron and calcium being conducted across the states, where Novartis operates. The product portfolio of Novartis is expanded to offer affordable medicines to treat common diseases. Novartis has also sponsored education material done by an epidemiologist and health research specialist, reaching out to young people to encourage healthy behaviour.

Prayaas

'Prayaas' is a Novartis initiative that focusses on overall diabetes management. Patients prescribed Novartis medicines for diabetes are enrolled on to the program on the recommendation of the treating physician with the patient's consent. The program offers comprehensive diabetes care including inputs on lifestyle management, diagnostic support and disease management education. At present, there are more than 25,000 patients on the program.

Breast cancer awareness

Novartis collaborated with Indian Cancer Society for breast cancer awareness conducted for the benefit of general public in Mumbai.

Leprosy awareness

Along with NDTV Prime, Novartis sponsored screening of 'The Unwanted', a film on leprosy, to build awareness about the disease.

EDUCATION/TRAINING

NGO excellence

Novartis has partnered with SP Jain Institute of Management and Research (Mumbai) to strengthen competencies and skills of patient organisations and patient advocates in India. A customised organisational development programme 'NGO Excellence' aims at empowering patient organisations by strengthening skills in advocacy, governance, resource mobilisation, financial management, project management, counselling and social media. Since its launch in 2015, the programme has helped more than 35 patient organisations in building capacity.

Vocational training

Novartis provides vocational training to increase employability among school-drop outs and women around their facilities through Aarambh.

Education enhancement

Novartis helps in education enhancement by supporting NGOs working in municipal schools in Maharashtra e.g. Akanksha Foundation.

Mid-day meal for children

Novartis provides support the mid-day meal program for children in municipal schools through ISKCON Food Relief and Akshaya Patra in Mumbai and Karnataka, respectively.

Subscription of NatGeo Explorer

Novartis has collaborated with National Geographic through subscription of NatGeo Explorer to raise standards of english literacy, science and environment education in less privileged schools in Mumbai, Pune and Dharmashala e.g. Life Trust schools, Akanksha schools and schools run by the Dalai Lama.

Mobile science laboratory

Novartis through partnership with Agastya International supports a mobile science laboratory that helps in bringing science to the doorstep of municipal schools in Mumbai.

WORK RELATED INITIATIVES

Employee related initiatives

Health and well-being of its employees is high on the agenda of Novartis and there are several initiatives taken to support this. 'Be Healthy' is a global initiative to help employees around the Novartis world embrace healthy lifestyles. It covers the entire gamut ranging from information, activities and tips to promote employee health and prevent future health issues. Among the various initiatives available to employees are access to a gym on site, yoga classes, annual medical check-up, other disease specific checks through the year, flu vaccination for employees and their families, access to a healthy meal where meals are available on site and access to counselling services for employees and their family members through a partner organisation, where confidentiality is maintained among many others. The ultimate goal is for the employee to achieve optimal health.

HSE training is an on-going exercise with regular drills to ensure that employees are fully aware of what to do in case of an emergency.

OTHER INITIATIVES

Donation programmes for cancer patients

Through its full donation programs, Novartis provides one of its cancer medicines completely free of charge to close to 95 per cent of patients who are prescribed the drug in India, currently around 18,000 patients.

Novartis Oncology Access (NOA)

Novartis Oncology Access (NOA) is a sustainable access solution through which Novartis shares the cost of its medicines with the patients without healthcare coverage, who are unable to pay for the full cost of their medication. Patients who opt to apply for the NOA programme have to undergo financial evaluation by an independent financial institution, post which they are offered the appropriate slabs where the treatment cost is shared between Novartis and the patients. Novartis believes that through this partnership-based approach, it can extend affordable access to a broader base of patients in a sustainable manner.

Oncology

Novartis provides holistic support to children suffering from cancer in association with St Jude's India Childcare Centers. Novartis through the Tata Memorial Hospital provides funds for equipment to treat patients suffering from renal cancer and to manage hemodynamics in critically ill patients undergoing major lung and GI surgery. Novartis has also contributed towards refurbishment of part of a floor at Dr. E Borges Memorial Home of Tata Memorial Hospital that offers accommodation to outstation cancer patients.

Leprosy

Novartis has been funding a post-exposure prophylaxis project by Netherlands Leprosy

Relief through which patients suffering from leprosy are examined and given treatment if required. The aim is to achieve zero transmission of the disease. The programme supports training of medical and para medical workers including Auxiliary Nurse Midwives (ANMs) and Social Health Activists (ASHAs) in leprosy, as well as in the Leprosy Post Exposure Prophylaxis (LPEP) project. A prophylactic dose for prevention of transmission of leprosy was given to 12,540 eligible persons. For 25 years, Novartis through Novartis Comprehensive Leprosy Care Association provided for rehabilitation, reconstructive surgery and organised screening camps for leprosy for rural and semi-rural population suffering from or at the risk of leprosy in Maharashtra and Gujarat.

Child care centers

Novartis in association with St Jude India Childcare Centers helped to fund some of the centers used to house children suffering from cancer and their parents, free of cost.

Day care center

Novartis in association with Dignity Foundation provides support for the care of the less-privileged elderly suffering from dementia who are without access to home care, by sponsoring a day care center in Mumbai.

Supporting medical and nutritional needs of promising athletes

Novartis supports the medical and nutritional needs of promising athletes in preparation for the Olympic Games together with Olympic Gold Quest (Foundation for Promotion of Sports) across India.

Flood relief programme

The floods in Chennai, Bihar and Assam saw an unprecedented damage to healthcare facilities and disrupted the lives of thousands of people. Medicines, health and hygiene kits to ensure that the primary hygiene needs of families were met were provided by Novartis for those affected by the floods through AmeriCares India Foundation.

Supporting maintenance of gardens

Novartis supports maintenance of two gardens - Nehru Centre Garden and Rajni Patel Garden across Novartis India headquarters in Mumbai.

Supporting environment sustainability

Along with the Baddi Barotiwala Nalagarh Development Authority, Novartis is contributing towards developing a panchi vihar park at the site of a dumping ground in the industrial township of Baddi.

Child Healthcare and Nutrition

Novartis contributed to the Santhigiri Ashram to set up a center for child healthcare. Their focus of work is in the areas of preventive healthcare and nutrition for children along with skill development, training and research.

Army Welfare Fund

Novartis has helped provide speech therapy software and smart boards for classrooms at a school in Delhi. The school is an NGO working towards the training and rehabilitation of differently abled children of defence personnel.

AWARENESS


Novo Nordisk Education Foundation (NNEF)


Awareness of Diabetes


Prerana, a patient education newsletter


World Diabetes Day


CDiC educational scholarship

EDUCATION/ TRAINING


Changing Diabetes® in Children


NovoHealth


iWINN

Nordisk Education Foundation (NNEF)

The Changing Diabetes® Barometer (CDB) is an initiative from Novo Nordisk Education Foundation (NNEF) driving improvement in diabetes care and reducing the economic burden on healthcare systems and society by collecting and sharing data for diabetes care worldwide. In India, the CDB programme works closely with seven state governments, measuring the burden and outcomes of diabetes and facilitate knowledge sharing among doctors, people with diabetes and other stakeholders. Till date, over 7.3 lakh people have benefitted under the programme, more than 3000 government

healthcare professionals have been trained and around 100 community diabetes centers have been launched at government healthcare units.

Steno Diabetes Centre

As part of Novo Nordisk's commitment to create awareness and train healthcare professionals, the company collaborates with Steno Diabetes Centre to train public healthcare professionals, through the 'Practical Diabetology' programme. The Steno Diabetes Centre has many years of international experience in providing training and education to healthcare professionals and Novo Nordisk is now using this expertise to build capabilities in the public healthcare system. So far through this intervention, there are more than 2300 doctors and nurses from the government and private sector who have been trained across India. Part of the concept is 'Train the Trainer'. The NNEF supports the centre which trains some of the key healthcare professionals in each state and district hospitals and they in turn train other healthcare professionals within their organisations. In this way, they perpetuate capability building after their internal training is complete. Together with their partners, Novo Nordisk has trained and educated more than 400 healthcare professionals particularly from the public healthcare sector.

World Diabetes Day

As part of awareness creation, NNEF marks World Diabetes Day each year with various initiatives including talks, distribution of patient education literature, etc. In a geographically wide country like India, it is imperative that people living in the remotest corners are made aware of diabetes and associated complications to ensure they get themselves screened on time. By marking World Diabetes Day in collaboration with government organisations and NGOs, events are arranged under Novo Nordisk Education Foundation (NNEF). Novo Nordisk ensures that through the participants the awareness message is spread to a wide cross-section of society. Novo Nordisk has always stressed on creating a strong social support ecosystem for people with diabetes. The focus is on ensuring that people with diabetes live a healthy life, free from complications. Through these initiatives, approximately 20 crore people have been reached. The NNEF has entered the Guinness Book of World Records thrice consecutively in 2011, 2012 and 2013. In 2011, for testing the largest number of people for blood sugar levels (3,573 people in 8 hours); in 2012, for attracting the largest number of people for its 'health awareness' programme where 2621 people participated; and in 2013, for checking the maximum people (1,676) in 8 hours for foot-related complications arising out of diabetes.

Awareness of Diabetes

NNEF partnered with Bruhat Bengaluru Mahanagara Palike (BBMP) to make over 1200 sanitation workers aware about diabetes. In the past, the foundation has collaborated with Karnataka Postal Department for issuing a WDD special stamp and delivered 1 lakh patient education booklets through 9800 post office networks.

Prerana, a patient education newsletter

Prerana, a patient education newsletter featuring useful tips and informative articles, is distributed to people with diabetes.

CDiC educational scholarships

CDiC Educational Scholarships, is a programme for underprivileged children with type 1 diabetes. It is designed to make them self-reliant in the long run and help them take care of their life long disorder. Through this programme, the company provides educational scholarships for eligible children. These children are selected based on their academic performance and are those who manage diabetes as per doctor's instructions. So far, 362 deserving children across the country have been offered these scholarships.

EDUCATION/TRAINING

Changing Diabetes® in Children

India has a huge burden of ~69 million people with diabetes. Of all people with diabetes, ~95 per cent are estimated to have type 2 diabetes. This has led to an oversight of children with type 1 diabetes with terrible consequences. In an attempt to address the critical gap in the management of children with type 1 diabetes in India, Novo Nordisk AS, through the Novo Nordisk Education Foundation, in collaboration with leading government institutions, private hospitals, NGOs and key doctors has launched Changing Diabetes® in Children (CDiC) programme for improving access to care, with the main objective of giving children, with type 1 diabetes <18 years coming from below

the poverty line families, access to comprehensive diabetes care. The programme was by the former President, late Dr. A P J Abdul Kalam on 7 September, 2011 in Bengaluru. There are currently 21 CDiC main and 27 sub centres spread across the country with more than 4000 children under its care, thus creating a pan India footprint. Each child registered in this programme is provided: free insulin, syringes, glucometer, test strips and diagnostic tests. Apart from the primary objective of better outcomes through improving access to proper medication, monitoring, diagnostics and doctor consultation, the programme incorporates several other key elements of diabetes management. These include - training of healthcare professionals, periodic diabetes children camps and advocacy programmes. So far, the company has trained more than 4200 HCPs across India on management of children with type 1 diabetes. To make the children confident, more than 350 children camps have been conducted to educate them on better diabetes management. Two national level and 5 state level advocacy programmes have been conducted as part of the programme to bring the attention of the government and the policy makers on the specific needs of children with type 1 diabetes in India.

NovoHealth

As part of the employee health and wellness initiative, Novo Nordisk has launched Novohealth. Aimed to create a healthy workplace, Novo Nordisk has formed two clubs - running and cycling, wherein individual and team competitions are regularly organised. Employees are also encouraged to undertake a full-body health check-up as part of the Novohealth programme.

iWINN

iWINN (Women in Novo Nordisk India) is a women initiative launched by Novo Nordisk India. It is aimed to drive business performance, architect their career growth and empower themselves to resume larger roles in their department and organisation. It is a platform for women that focusses on developing strong, capable, competent women employees who can lead, manage, and deliver business results at all levels.

AWARENESS

- Pfizer India goes to school
- Maternal and newborn health programme
- Project Ummeed
- Pfizer India's response to emergency – Chennai (2015) and Assam (2017)
- Project Echo

OTHER INITIATIVES

- Pfizer IIT Delhi Innovation and IP Program launch
- Pfizer Foundation Projects in India:
  -Swasth Foundation
  -Sevamob

AWARENESS

Pfizer India goes to school

Aligning to the Swachh Vidyalaya Campaign - a part of government's National Swachh Bharat Abhiyan, Pfizer has partnered with the NGO – Habitat for Humanity to identify schools, construct or refurbish sanitation facilities in the schools as per the school's requirements. Pfizer also helps conduct sensitisation sessions through hygiene workshops using behavioural change communication to see the impact and change in the children, teachers and others who use these developed facilities at these schools.

Phase 1 of the Pfizer Sanitation project has benefitted over 10000 children, with around 120 units being built. The completion of the projects underway will see the total number of units going to over 200 units build/refurbished and over 18000 children being benefitted. More than 150 employees volunteered their time through the year to build these units and participate in the hygiene sensitisation sessions held.

Pfizer in India will extend this project to cover more states like Tamil Nadu, Andhra Pradesh and other districts within Maharashtra during Phase 2.

IMPACT: Phase 1:
200+ sanitation units built
18000 children benefitted

Response to emergency – Chennai and Assam floods

Pfizer India response to emergency: As a part of emergency relief efforts, Pfizer joined hands with AmeriCares India to help set up emergency health assistance camps in Chennai in 2015 and Assam in 2017. Pfizer's assistance was in the form of donation of a large number of essential and required medicines – over sixty thousand strips were provided for use by the doctors at the medical relief camps.

In Chennai, aound 65 Pfizer colleagues in and around Kanchipuram volunteered at the medical camps set up in the district. 14 medical camps were set up, reaching out to 2000 survivors of the floods.

Maternal and newborn health programme

Pfizer participated in the Standard Chartered Mumbai Marathon to support SNEHA, an NGO that works for the welfare of women and children. In partnership with SNEHA, the company directly works with communities and municipal health facilities to improve the state of maternal and neonatal health services. The outreach activities with local communities are aimed at creating and generating demand for quality healthcare services.

SNEHA works with two municipal corporations - Municipal Corporation of Greater Mumbai and Thane Municipal Corporation for this project to educate communities on various health-related issues.

Project Echo

Project Echo is Pfizer's patient-centered, data-driven access demonstrator project for

breast cancer being implemented in India. This project is an attempt to prove how interventions starting from building awareness towards higher detection, reducing barriers to medical treatment, increasing capacity at regional cancer centers and increasing visibility for available patient assistance programmes can enhance access to drugs across different socio-economic strata of the society.

The pilot project was launched in the week of 7 March 2016 in four Indian states with large rural and below poverty level populations to increase breast cancer awareness, prevention, and provide easier access solutions to diagnostics through mobile vans and capacity building.

The implementation phase of Project Echo will aim to conduct 30 awareness and screening camps in the following states: Madhya Pradesh, Andhra Pradesh, Assam and Chhattisgarh with implementation partners as a) The NGO 'ROKO Cancer' and b) Regional Cancer Centers (RCCs). This phase comprises four elements:
a. Training and capability building,
b. Awareness programme,
c. Screening and diagnostic camps, and
d. Follow up and data monitoring.

Project Ummeed

Pfizer India Cancer Helpdesk
Cancer, one of the most dreadful diseases of our time, has affected almost 2.5 million people in India. Around 1 million new cases of cancer are diagnosed every year in a population of 1·2 billion. In spite of the path breaking innovations in the field of cancer, the disease still remains the second leading cause of death in India; that is around 0.6 million deaths every year (one of the highest mortality to incidence ratio in the world).

The Cancer Helpdesk acts as one-stop information center that provides information to patients and their kin about different hospitals, diagnostic centers, and charitable organisations for subsidised treatment and financial assistance. It is a collaborative information aggregator supported by Pfizer that provides information on:
- Available government schemes, NGOs, trusts/charitable organisations and hospitals for financial assistance
- Different support groups for cancer patients/survivors and relatives
- List of budget hotels/accomodation for patients and relatives during treatment
- Crowdfunding/sourcing and other available funding options

IMPACT: The project has been able to assist over 2000 patients with information relevant

and useful to them. Pfizer intends to extend further support to Ummeed for expanding its reach.

OTHER INITIATIVES - Encouraging Healthcare Innovations

Pfizer IIT Delhi Innovation and IP Program launch

The Pfizer IIT Delhi Innovation and IP Program in partnership with Foundation for Innovation and Technology Transfer (FITT), a technology incubator at IIT Delhi, launched Pfizer IIT Delhi Innovation and IP program, an incubation accelerator initiative co-created to support, celebrate and reward healthcare innovations that are made in India.

The program comprises two components: For innovators seeking comprehensive support to translate their healthcare ideas into patents, the program provides resident incubation at IIT-Delhi for a period of up to two years; Funding of up to INR 50 lakhs for each innovator to take ideas through proof of concept to IP; Mentoring support from IIT Delhi's faculty and experts; Access to infrastructure, prototyping laboratories and space for setting up an office; IP search and filing services guidance from Pfizer's global experts; and access to venture capitalists and other industry linkages. For innovators who have a ready proof of concept and are seeking to obtain a patent, the program provides access to IP counseling services at IIT-Delhi and funding support to cover the patent fee.

Pfizer was invited by the Department of Industrial Policy (DIPP) to showcase the Pfizer IIT Delhi Innovation and IP Program at the 'Start-up India, Stand Up India' event held on 16 January, 2016

The phase 1 of this project selected and awarded two full- time innovators with an unencumbered funding of upto INR 50 lakh per incubatee and three innovators towards Intellectual Property (IP) Filing support services. These innovators are incubated at IIT Delhi where they are currently developing the prototype of their innovation. The program also awarded grants to three innovators towards IP Filing support services. The two noteworthy projects selected under the resident incubation are the novel wearable device for air purification and portable device for early diagnosis of typhoid and antibiotic susceptibility.

Further to the success of phase 1, Pfizer rolled out phase 2, of the program by calling in

entries at the national level. This phase has selected the next two innovators for resident incubation and three innovators for IP filing support services. The five second phase winners of the second phase program have been identified and will shortly be awarded the grants.

IMPACT:
Pfizer IIT Delhi Innovation and IP program – Year 1
- Four Indian healthcare innovators
- Six Indian innovators for IP filing services

Pfizer is proud to align with the honourable Prime Minister, Shri Narendra Modi's initiative of Startup India Stand up India.

Pfizer Foundation projects in India

Pfizer Corporate Responsibility combines traditional philanthropic methods with novel approaches to increase access to healthcare for people in need.

Partnership with Swasth Foundation:
Swasth is one of India's largest non-governmental health clinic chain for primary health and dental care and serves low income segments in India. With funding from the Pfizer Foundation in 2016, Swasth conducted a one-year diabetes program to increase awareness of the disease, conduct diagnosis and provide treatment for underserved patients. In 2017, Swasth is piloting a model to reduce the incidence of malnourishment in children under 5 living in Mumbai slums. They will implement and test malnutrition reduction work in three clinics, including screening and follow up care like the provision of Ready-to-Use Therapeutic Food and nutritional supplements.

Sevamob - Mobile clinics:
Sevamob is a chain of mobile clinics that provide access to primary care for low income consumers through a subscription model. Sevamob provides preventative and primary healthcare at 80% below the market rate to different organisations including NGOs, CSR groups, schools, hospitals and other sites.

Pfizer Foundation supported the creation of two mobile healthcare centers in Pune serving 175 patients and Gurgaon serving 202 patients in 2016. In 2017, as part of the grant support from Pfizer Foundation, Sevamob aims to expand its footprint to cover a total of 18 sites and increase the capacity of mobile staff to serve patients.

SANOFI

AWARENESS

- Healthy Children Happy Children (HCHC)
- Kids and Diabetes in School (KiDS)

EDUCATION/ TRAINING

- Saath 7
- Promoting training amongst HCPs on critical healthcare

WORK RELATED INITIATIVES

- Employee related initiatives
- Use of renewable energy
- Contractor safety

OTHER INITIATIVES

- Fighting Tuberculosis: Improving access to diagnosis and care in the slums of Mumbai
- Humanitarian emergencies
- Fun centers
- Reducing health inequalities around manufacturing sites
- Employee volunteering: Gyan Express
- Anti-counterfeiting Initiatives

AWARENESS

Healthy Children Happy Children (HCHC)

This largest student-led campaign for healthcare awareness is an integrated programme bringing together public and private schools, NGOs and Sanofi. Through creative workshops on eight identified health themes, the campaign has reached out to approximately 80,000 children covering 200 schools in 4 cities (New Delhi, Mumbai, Hyderabad and Chennai).

Kids and Diabetes in School (KiDS)

In partnership with IDF (International Diabetes Federation) and PHFI (Public Health Foundation of India), Sanofi aims to foster a school environment that creates a better understanding of diabetes and supports children with this condition. Training is currently underway with information packs available in Hindi and English.

EDUCATION/TRAINING

Saath 7

Sanofi's patient support programme in diabetes management, currently engages over 167,000 patients by connecting them with trained diabetes educators, who help patients understand their disease better.

Sanofi India, has broadened the parameters of its long running Diabetes Patient Counselling Program, 'Saath7'. Under this umbrella, the company is additionally conducting a PPP in the area of NCD. Launched in October 2014, the goal is to upgrade the knowledge of healthcare personnel (counsellors and nurses) about the management of patients with diabetes, hypertension, CVD and cancer.

Over the next 5 years, Sanofi India, will support the Maharashtra state government

in training counsellors and nurses from NCD cells across all 35 districts and impact the lives of 103 million people (excluding Mumbai) across Maharashtra. It will also install 6500 hoardings and posters on patient information in the area of diabetes and hypertension in government hospitals across all 35 districts. The impact of PPP till June 2016 is as follows: completed training in Module 1 of 311 counsellors and nurses in 11 districts and Module 2 in 5 districts and Module 3 in 6 districts. Besides this, Sanofi has installed 1011 hoardings and posters in 255 hospitals/community health centres in 17 districts and reached out to approx. 20 million people through awareness posters.

Promoting training amongst HCPs on critical healthcare

While patients are treated in hospitals, training of the Healthcare Practitioners (HCPs) is carried out in critical issues like deep vein thrombosis (DVT) management, communication with family members of terminally ill patients and pharmacovigilance. Sanofi, with its experience in training, holds awareness initiatives for HCPs in an attempt to improve the life of patients. Sanofi, promotes training for several purposes: to control infections in the ICU for reducing hospital induced infection and on good practices like managing drugs, organising drugs, regulations which improves HCP efficiency and dispensing of medicines. Sanofi also trains for monitoring of different errors in dispensing drugs.

Sanofi's personnel provide training to nurses for managing patients with diabetes; talking to terminally ill patients' relatives; identification of patients suffering from DVT and carry out the risk assessment. The nurses get the statistics of low, moderate and high risk. The nurses then discuss the line of management with the doctors. Besides this, a comprehensive evaluation and training is undertaken for the nurses and junior doctors for patient's medication regimen. Sanofi pharmacovigilance team trains the healthcare professionals in reporting adverse drug reactions.

Through its training programmes, Sanofi has reached out to 2290 HCPs in 2015, 2450 in 2014 and 1795 in 2013.

WORK RELATED INITIATIVES

Employee related initiatives

Sanofi undertakes multiple initiatives for its employees, such as annual medical check-

up for all industrial affairs sites and once in three years for others; process safety to minimise the probability of accidents/incidents; fire explosion preventive measures and exposure control by engineering controls.

Contractor safety

Sanofi ensures contractor safety and undertakes HSE audit once in two to three years.

Use of renewable energy

Sanofi makes use of renewable energy, wind energy for about 25 per cent electricity needs and also makes use of solar energy for street lights and boiler feed water. Besides this, Sanofi has energy and water conservation programmes; waste water treatment plant with zero liquid discharge facility and makes use of scrubbers and dust collectors for air emission control.

OTHER INITIATIVES

Fighting tuberculosis, improving access to diagnosis and care in the slums of Mumbai

Launched in 2008, Sanofi implemented awareness activities involving seven partner NGOs and five institutional actors (the public services in charge of tuberculosis -TB-control within each municipality: the 'TB control societies'), and covering a total slum population of about 3 million people. As a result, over 3 million people across five municipalities have been made aware of what TB is, and how to avoid or minimise infection risks, and how to diagnose and treat it. The programme has helped identify 4366 patients who are put on treatment.

Responding to humanitarian emergencies

Sanofi through AmeriCares donated medicines to those affected by natural disasters in Uttar Pradesh, Assam, Uttarakhand, Bihar, Odisha, and Jammu & Kashmir.

Fun centers

These centers are created in leading hospitals for the comfort and support of children coping with long-term treatment and hospitalisation.

Reducing health inequalities around manufacturing sites

Health camps are conducted in schools to check immunisation status, etc. of children around the company site in Goa. Also, SEWA rural conducts blood sugar level testing for the local community near the Ankleshwar plant of Sanofi. Besides this, Sanofi is committed to improve maternal and infant health of the tribal villages of Jhagadia. Fetal bilirubinometer and ultrasound probes supported by Sanofi have helped doctors in the hospital cater to more number of patients and save more lives.

Employee volunteering: Gyan Express

Some of the initiatives supported by Sanofi include opportunities for employee volunteering. One such initiative is Gyan Express, where Sanofi employees volunteer to mentor and educate underprivileged school children in health, science, etc. across Mumbai, Delhi, Chennai, Hyderabad, Kolkata, Bengaluru, Goa, Ankleshwar and Lucknow. In an another initiative, employees volunteer for reducing maternal and child mortality.

Anti-counterfeiting Initiatives

In India, a number of factors such as: low level of consumer awareness regarding counterfeit medicines, lack of coordination among law enforcement agencies and

low entry barriers to medicine counterfeiting contribute to the growth of medicine counterfeiters. With patient's access to safe medicine worldwide in mind and as part of its anti-counterfeiting strategy, Sanofi, created and conducted several anti-counterfeit awareness programmes across India, for both internal and external stakeholder groups. For the internal stakeholder, Sanofi executives, including field force have been made aware about identification and reporting of counterfeit drugs. In addition, Sanofi organises 'Sanofi Global Anti-Counterfeit day' across all locations to create anti-counterfeiting awareness among internal stakeholders. For external stakeholders, Sanofi anti-counterfeiting team conducted a training session on 'Investigating Trafficking in Spurious Medical Products' for senior officers of INTERPOL, Central Bureau of Investigation (CBI), Indian Customs and Indian Drug Authority.

Sanofi worked with OPPI, AIOCD and IMA to create Anti-Counterfeiting Joint Task Force with the aim of creating anti-counterfeiting awareness among retailers, distributors, medical colleges, pharmacy institutes and various other stakeholders. As part of this initiative, Sanofi conducted anti-counterfeiting awareness session for 120 chemists and distributors in Patna and more than 200 students of National Institute of Pharmaceutical Education and Research in Hyderabad.

Sanofi also worked with Messe Frankfurt in a knowledge partnership (provided idea, concept, industry connection, and subject matter knowledge) to organise India's first Pharma Anti-counterfeiting and Brand Protection conference namely 'Pharmasafe' in Mumbai on 24 and 25 November, 2015. This event brought the pharma industry, law enforcement agencies, drug regulators and anti-counterfeiting experts together, to discuss solutions to counterfeiting problems.

Conversations continued...

Q&A with

KANCHANA T.K

Director General,
OPPI

Kanchana T.K currently leads the Organisation of Pharmaceutical Producers of India (OPPI) as its Director General. In her current role, Kanchana is closely involved in healthcare policy discussions, and represents OPPI while dealing with healthcare sector stakeholders, including government, media, civil society groups, patient support groups and international healthcare forums.

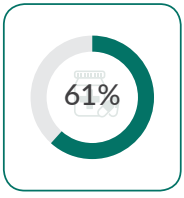
Kanchana has joined OPPI with nearly two decades of professional experience across a range of healthcare-related business, having worked in two highly regulated sectors – insurance and pharmaceuticals. Most recently, she was with Bristol Myers Squibb, where she was Lead Public Affairs for Middle East, Africa and India.

Kanchana has been awarded with 'Women Worth Watching - Diversity Journal 2017', 'Women Achiever Awards -IWC 2017', '50 Outstanding Women in Healthcare 2017'. She is also a recipient of the 'Bloomberg-UTV Women in Leadership Award', 'Women at Work Leadership Award' by Bloomberg-UTV, the WILL Choice Awards' by WILL Forum and more.

1. The National Health Policy 2017 (NHP17) has come out after a gap of 15 years. Much has changed, but what do you think it means for patients, who are the ultimate recipients of healthcare?

The NHP says a lot about policy intent and principles that will govern services delivery and a host of initiatives. But has anyone asked patients themselves, what they think is in their interest? Many assumptions have been made about what patients and their families want, but I am not sure that they have been tested.

In 2013, a comprehensive survey conducted by IMS Health on 'Understanding Healthcare Access' found that physical reach and access to facilities, and availability/functionality of services were of much greater importance to patients than affordability. The same survey found that 61 per cent of patients in rural areas use private, rather than public, healthcare facilities.



In a follow up study in 2015, an IMS Health survey found that price controls didn't necessarily improve access to medicines. The survey actually found no significant penetration of price controlled medicines into rural markets is visible; in fact, consumption in rural towns decreased approximately 7 per cent over the previous 2 years. Compared to that, purchases of non-price controlled medicines grew by 5 per cent in that same period. So may be we are asking the wrong questions about patients' interests.

2. That's the new buzzword, patient centricity. What does that mean, exactly?

The language of the NHP includes it as one of the principles upon which policy is based: gender-sensitive, effective, safe and convenient healthcare services to be provided with dignity and confidentiality'. What that implies is that in policy formulation, patient interests will be put at the centre of all actions by all parts of the healthcare ecosystem.

The challenge for all participants in the healthcare system is to align their actions around that objective; in service delivery, in therapy, in diagnosis, it can be argued that the patient is at the centre since he/she is the recipient of all those actions. All said, it translates into different things for different participants. While the healthcare system exists for patients in principle, policy disruptions can change the dynamic, and shift attention to other priorities.

3. What does patient centricity mean for pharmaceutical companies?

In simple terms, patient centricity means putting the patient at the centre of business activity, to consider how business will affect the patient. This might seem a little far-fetched but think a little more deeply about it, and consider the various activities in a pharma company. Start with drug development: new epidemiology, shifting disease burden, anti-microbial resistance, all change the way you have to think about developing new medicines to treat conditions. That requires putting the patient first.

All the other aspects – from drug delivery systems through formulations, clinical trials, and supply chain management (remember patient safety is paramount) to communications and marketing – would not make any sense if we didn't put the patient at the centre. The eyeforpharma awards, an annual event in Europe, present the "Most Valuable Patient Initiative or Service" as a recognition for patient centricity.

Patient centricity also implies re-imagining the way companies do business, from business model innovation to understanding the competencies required for being a leading patient-centric company. I believe pharma companies think about patient centricity. the way they put it in the movie Patch Adams: "You treat a disease, you win, you lose. You treat a person, I guarantee you, you'll win, no matter what the outcome."

4. So, let's talk a little about marketing then, and the questions about the ethics of marketing in a business that offers so much hope. What is your position on that?

As you are no doubt aware, we have a Uniform Code of Pharmaceutical Marketing Practices (UCPMP). The government introduced this as a voluntary code almost two years ago, with the intent of making it mandatory across the pharmaceutical industry in due course. I believe we are very close to that point, and it's a good thing.

Ethics in marketing are not just about good behaviour; they also have implications for the safety of patients. The OPPI Code of Pharmaceutical Practices – which all members of the OPPI sign on to, which makes as good as mandatory for them – is an instrument of our member companies' communications practices.

There's an even more important reason why the governance of such communications matters. In India, pharma companies cannot advertise, for example. So we work with doctors to inform and

educate the public and patients about new therapies and treatments. The medicines that research-based companies produce and the scientific information they provide to physicians are important components of quality healthcare for patients.

As an aside, the OPPI and its member companies worked with the government to develop the UCPMP, and we are proud of our association with it. Because it is central to one of our core beliefs that interactions between pharmaceutical companies and healthcare professionals should always be appropriate and support good patient care.

5. How does that play out with the distribution network? Most people buy their medicines at the local pharmacy, who don't sign on to that code. What about e-pharmacies, which are likely to become reality soon?

A little context is essential to understand this. E-pharmacies are regulated under the purview of the Drug and Cosmetics Act 1940, the Drugs and Cosmetic Rules 1945, the Pharmacy Act 1948 and the Indian Medical Act 1956. Laws related to e-commerce are defined under the Information Technology Act, 2000, but those are unclear on e-pharmacies.

The current Drugs and Cosmetics Act, 1940 doesn't distinguish between online and offline pharmacies, and some people see that as a risk, if regulatory authorities find it difficult to control, monitor and track the sale of drugs over the internet, in the absence of clear guidelines.

Here is an area wherein all the important aspects of a good healthcare system come together: patient safety, the assured quality of medicines, ethical marketing practices and guarding against abuse (using forged or fake prescriptions, for example). All four of these are critically important to our member companies; given that online pharmacies are likely to become inevitable, the regulatory framework under which they will operate will have to be robust and compliance will have to strictly enforced.

Q&A with

DR. LINDA DISTLERATH

Deputy Vice President,
Global Alliances,
Pharmaceutical Research and
Manufacturers of America (PhRMA)

At PhRMA, Linda leads their efforts to engage patient groups and other stakeholders in key emerging countries – India, China, and Indonesia are some examples – to promote health reform in a manner that improves access to quality healthcare and medicines, both generic and innovative medicines.

We work together to create a mindset of patient-centered care among policymakers and promote healthcare outcomes that are meaningful to patients, while also promoting a pro-innovation policy environment that can sustain the continued development of new and innovative therapies. While the work can be challenging as healthcare reform is a grueling long-term process, Linda is inspired by the many patient advocate leaders who fearlessly stand up for the rights of patients and are determined to change the system to put the safety and well-being of patients at the center of health system reform.

1. You have been in the lab (as a post doc) and you have been in the pharma industry – what are your views on the fact that only focused R&D could help find cures for new diseases that patients are battling out?

Biopharmaceutical R&D is focused on addressing unmet medical needs of patients.

Despite advances in public health and medicine over the past decades – bringing safe and effective preventive measures and medicines to treat many infectious and chronic conditions – millions of patients await new interventions to treat various cancers, Alzheimer's disease, and rare disorders. We are now seeing the introduction of therapies unimaginable just a decade ago that attack disease at the molecular level and are tailored to the unique needs of individuals patients – immunotherapy and gene therapy are the leading examples. Today, 74 percent of new medicines in development globally are potentially first-in-class, meaning they use a completely different new approach to fighting disease.

2. What is your take on the role of science in patient care?

Decisions in the course of treatment and care for patients needs to be evidence-based, guided by research that provides the evidence whether a particular intervention – diagnostic, medical device, vaccine or medicine – delivers the intended or expected outcome. Treatment protocols and clinical pathways are examples of evidence-, science-based approaches to patient care that can improve overall effectiveness, quality and consistency in patient care. That being said, the science-based physician will still need to exert his or her clinical judgment on what's most appropriate for particular patients since disease can manifest differently among individuals considering genetic make-up, environment factors, and co-morbidities or other concurrent medical conditions.

3. You have worked with several patient care organisations in India and China and other parts of the globe. can you share the top three expectations of patients and care givers from 'care giving'?

Too often the delivery of healthcare to patients is organised by an institutional model (the hospital or clinic) and not organised around the patient and his or her unique needs. Take for example, chronic diseases such as hypertension, diabetes, pulmonary disease and mental illness. A middle-aged patient – and unfortunately even younger adults – may present not one chronic condition like diabetes, but may also have cardiovascular disease and depression, along with perhaps underlying infectious disease such as HIV. The clinic or hospital is divided into specialty departments – endocrinology, cardiology, neurology, and infectious diseases – which by definition fragments care to the patient. A patient-centered approach treats the patient holistically, not the individual diseases. This paradigm shift in health care delivery is recognized by health policymakers and providers in India, China, Indonesia, South Africa and beyond, but reorganising the care for patients from a patient vs disease

perspective is a challenge for all.

4. Patient organisations play an important role in addressing patient care and conversing with care givers, and with digitalisation and social media, their roles are further enhanced- what are your views on this?

The patient voice in health policy decision-making is virtually absent in India and other emerging economies, especially when addressing the big-picture issues of access to quality healthcare and medicines, affordability of healthcare (related to the extent of public and private insurance coverage), and means to redress medical and institutional wrong-going in health care settings. However, patient and consumer groups in India are increasingly organising their collective efforts to raise concerns with the medical community and policymakers in a constructive manner. Two good examples in India are the Patient Safety & Access Initiative of India Foundation and the Indian Alliance of Patient Groups which are using evidence-based advocacy – directly with government officials and through the media - to achieve policy changes that can improve the quality, accessibility and affordability of healthcare. The Partnership to Fight Chronic Disease is another effective entity that has promoted increased government investment in health and expansion of both public and private insurance to help reduce the high out-of-pocket costs borne by patients across India.

For more information, visit: www.phrma.org

Q&A with

MEENA GANESH
MD & CEO,
PORTEA HEALTHCARE

Meena is one of India's most successful entrepreneurs with nearly three decades of experience in industries including healthcare, consulting, technology, outsourcing, education and e-commerce.

As MD & CEO, Meena heads Portea Medical (www.portea.com), India's largest and fastest growing home healthcare company, which she co-founded in July 2013. The company, which was named 'Startup of the Year' in the 2016 NDTV Unicorn Awards in the Health-Tech category, and 'Emerging Health Brand of the Year' at the India Health Summit & Awards. It has more than 4000 employees and operations across 16 cities in India.

Portea brings in-home to patients, the full range of geriatric, chronic, post-operative care as well as allied healthcare services that are affordable and convenient to access.

1. How has digitalisation revolutionalised the in-house patient care market in the country? Please share the current and futuristic trends that will transform patient care in India.

Digital healthcare has brought in much needed transparency, affordability and efficiency in the healthcare ecosystem. Doctors and clinicians can come home to patients. Diagnostics come to your home and you can share the reports with a doctor

500 kms away with the help of electronic medical records as well as via point-of-care devices. So also, pharmaceuticals and medical equipment. In case hospital intervention is required, patients can find the right care provider for any complicated condition with information platforms such as PSTakeCare. Artificial Intelligence has paved the way for faster and more accurate results in imaging and diagnostics, which reduces the load on doctors and experts considerably, especially given the poor doctor:patient ratio our country faces. Digital and mobile technologies are a boon.

People are looking to answer two fundamental questions with regard to their health:
- How do I find out about my health?
- How do I keep track of it?

Coming to healthcare organisations specifically, tech/mobile strategies could envelop:
1. Healthcare solutions that are directly accessible on a mobile device
2. Solutions that enable mobile healthcare delivery

Technology adoption is picking up steadily, and at Portea, we are at the forefront of adopting technology to enable even greater convenience to accessing healthcare for our clients. However, from an overall standpoint, there are a few barriers:
A. Costs – Innovation is still being driven by the US and the costing is based on this and most devices are manufactured abroad, therefore, adjusting costs to the local environment is still a factor.
B. Infrastructure requirement - In India, in general bandwidth is a huge issue. Reliability and costs are prohibitive. The reliability of power is also a question which brings up the difficulties in handling remote healthcare monitoring.
C. Health consciousness is still not prevalent among the general population – Usage of devices is low.
D. Awareness and acceptability - Doctors are not comfortable dispensing treatment or advice without meeting patients and vice-versa, patients still prefer the conventional method of in-person meetings

Last but not the least, there is a lack of regulation and standardisation. Also, innovation is needed on the hardware side. Despite these impediments, technology is absolutely critical to scaling healthcare solutions and improving patient outcomes.

2. How do you see the market for patient-care evolving in India?

The consumer mindset is changing and the future healthcare consumer in India will be…

Aware and informed:
- Better informed on health risks and mitigating factors
- Better educated on importance of healthy living
- Able to differentiate products and services on quality and outcomes
- Exposed to more influencers (e.g. payers, doctors, user communities and social media)

Engaged and participative:
- Assuming greater responsibility for one's own health outcomes
- More tech savvy and willing to adopt new technology (e.g. wearables)
- An increasingly vocal and influential participant in the delivery value chain
- Demonstrating strong advocacy behaviour for quality services

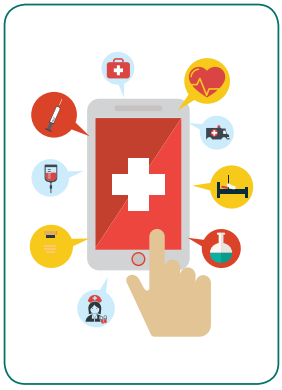
Discerning and value conscious:
- Offered a greater choice of healthcare providers (increased competition)
- Under insurance coverage (public or private) with greater overall consumption
- More value conscious due to individual responsibility (higher co-pays, deductions)
- Seeking total health and integrated health solutions

3. Are patients/caregivers demanding particular services and care?

When we started Portea, we thought of going with a set number of services. However, as we started to work with patients, we realised that they wanted us to be a one-stop-shop for all their needs. For example, if someone has had a knee replacement, they don't just need a physiotherapist but also some equipment, nurse to oversee their healing, and a nursing attendant to help them be mobile. Thus, from being a service provider for few services, we've become a comprehensive solution provider for patients. Based on the needs of the patients and their condition, we come up with the full solution and that's the big change that has happened in how we work with patients.

We run a Patient Support Programme under which our counsellors help patients who are identified diabetics, to manage their disease better. (Diabetes cannot be controlled only by drugs alone; behaviour identification, nutrition and maintaining activity levels are critical). The way the programme works is via periodic calls (24 touch-points over six months) where patients are contacted by our qualified counsellors who undergo a six-week training programme and are in a position to provide basic nutrition and lifestyle advice. Currently, we provide patient support of this nature to

nearly 30,000 diabetes patients across the country via this programme.



Home healthcare in India is a massive and strategic initiative for the country and addresses a huge gap. There are huge opportunities, the potential to create millions of jobs is vast, and finally, it could be a major contributor to better health for Indians. We are seeing the birth of a revolution and have the opportunity to make a big difference.

Geriatric care in India was a complete white space opportunity when we started Portea – There was essentially no organised senior care sector in India. We established Portea to allow people to heal at home bringing doctors, nurses, nursing assistants, physiotherapists and more, to people's doorsteps.

Home health care has emerged as a boon for those with chronic diseases, including elderly patients, physically challenged and people in need of medical care for extended lengths of time. And such care is not just limited to nursing care or physiotherapy. Even complex healthcare such as ICU, uncomplicated birthing services, dental treatments, and dialysis services, to name a few, can possibly be availed in the comfort of one's home. The ecosystem of the health care industry is witnessing a paradigm change with technology and portable equipment changing how health care is delivered.

Home healthcare saves one from the logistics of multiple hospital visits and the resultant time constraints. Others in the family can be with the person too, as they rest and recover at the convenience of their home. Such options can end up saving a family over 60% on the medical and time costs and reduces the chances of acquiring hospital borne infections. It is a known fact that people receiving routine care at home show improved results, as it leads to better mental and emotional health. Technology has made it possible to provide stellar medical care with expert attention, without major disruption of their daily schedules.

4. A brief profile of Portea.

Portea Medical is India's leading consumer healthcare provider and focusses on general primary health care, post-hospitalisation care, chronic disease management and allied services. The company offers home visits from doctors, nurses, nursing attendants and physiotherapists. In addition, Portea also provides collection of lab samples and offers medical equipment for sale / on hire, as well as patient assistance programmes for chronic disease management, bringing the entire gamut of healthcare services to a patient's doorstep. Since inception in 2013, Portea has completed more than 2.5 million patient visits across the country. The company manages more than 120,000 patient

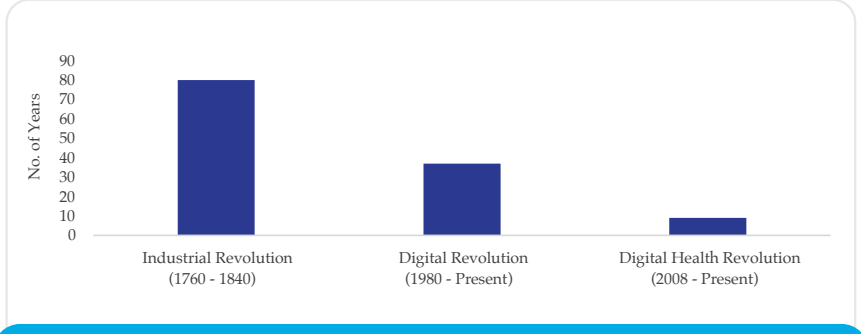
For more information, visit: www.portea.com

FUTURE TRENDS IN PATIENT CARE

This entire section has been contributed by: QuintilesIMS™

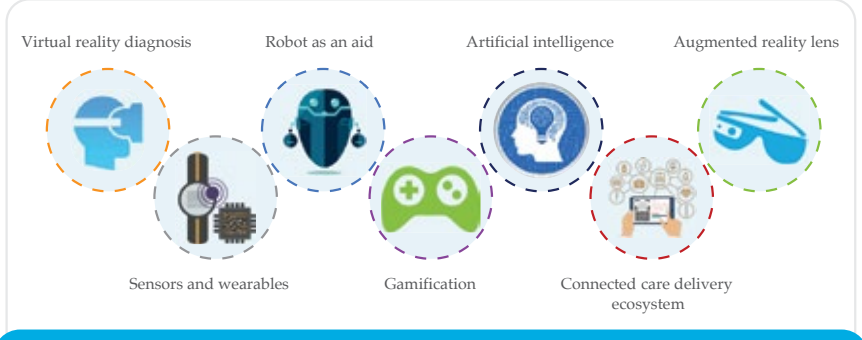
Digital technology has disrupted the healthcare sector pushing boundaries and opening a world of opportunities. Since the start of digital health revolution in 2008, healthcare industry across the globe has been adopting innovative technology solutions unprecedentedly. Digital health solutions are helping reform the complex, inefficient, expensive healthcare sector achieve key goals - Get care in convenient, cost-effective ways; patients as their own care managers; improved decision-making for both patients and providers.

For a revolution which is still in its early stages, received an investment worth $8 billion in year 2016 alone and a total investments worth $20 billion since 2010.



A few of the ground breaking digital innovations in the past few years

Over the past decade, Indian healthcare sector has been making steady progress in adopting the latest in digital and medical technology to overcome some of the inherent

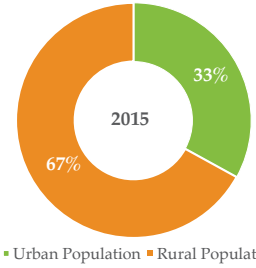


India is at the tipping point of this revolution…

challenges that exists in the system. The healthcare market is worth $100 billion and is

"It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change."
Charles Darwin

expected to grow at a 23% CAGR to reach $280 billion by 2020. The growth is pegged on the adoption of digital solutions with potential to address the key challenges – Accessibility, Quality, Affordability and Awareness.



60% of hospitals | **75%** of dispensaries | **80%** of doctors are catering to Urban Population

~2 mn Gap in bed capacity

Inadequate and skewed healthcare infrastructure…

<1% accredited delivery providers

Doctor ratio of 1:1500 in urban areas and 1:2500 in rural areas as compared 1:250 people in US

Density of Nurses is 1.3 / 1000 of population where the OECD average is 9.1 / 1000 of population

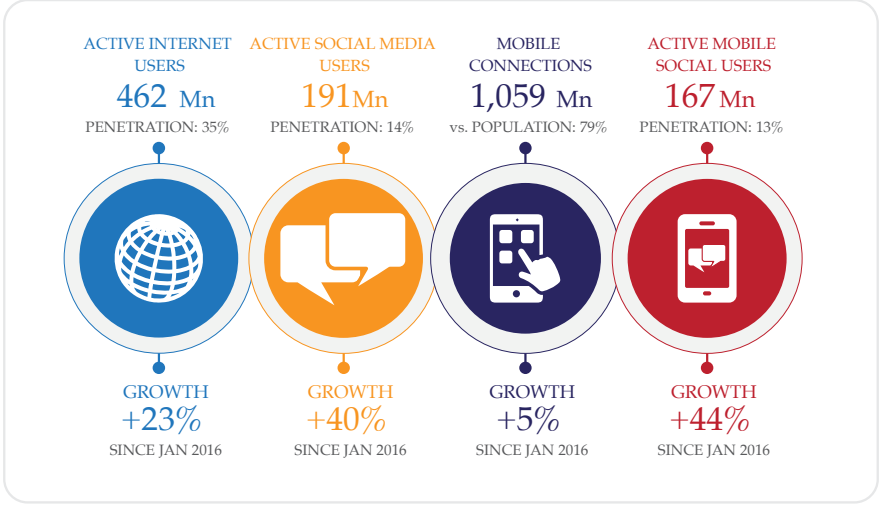
~97.9% skill gap across various health workforce categories. 88.7% of this gap is from the huge shortage of laboratory technicians

Scarce skilled resources, a serious challenge to timely and quality care…

The advent of smartphones and internet accessibility has given a significant boost to digital healthcare adoption, improving the access to care and patient outcomes at affordable cost. With the strong momentum in government reforms and telecom industry, increasing number of people from smaller cities and villages with internet connectivity are now getting doctors' advice and medicines on their smartphones or computers.

1.3%	~1%	~75%
Percentage of GDP as public spending on healthcare	Insurance as source of payment for medical treatments	population with no Health Insurance

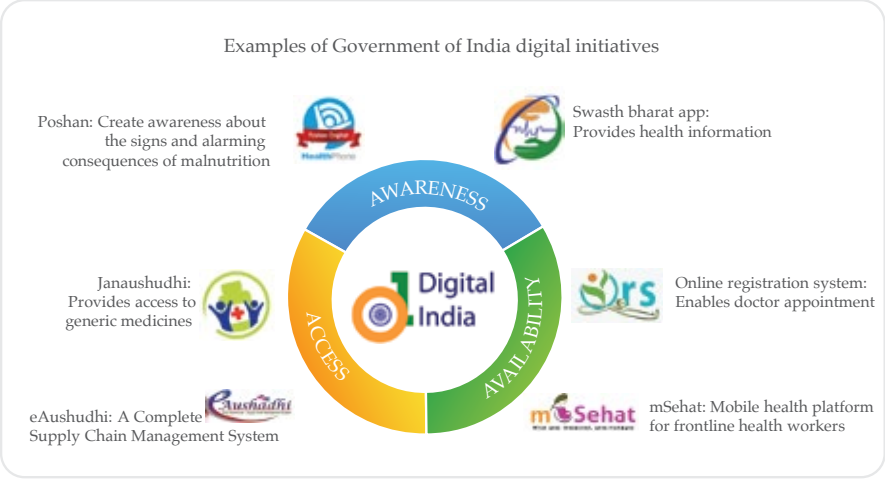
India's emerging digital health sector is on a journey to fix heavily burdened healthcare system with new digital healthcare models. The various stakeholders of the healthcare ecosystem – Policy makers, providers and pharma companies are getting on this bandwagon with singular focus on improved health outcomes at lower costs, making it more important than ever before to strengthen the patient engagement and experience. Recognising the significance of digital solution and its impact on healthcare, the



government of India is taking multiple measures. Roll-out of new "National Health Policy - 2017" focused on increased investments in healthcare infrastructure, allocating major proportion of resources to primary care and payor-provider segment synergies.

"I dream of a Digital India where quality healthcare percolates right up to the remotest regions powered by e-healthcare."
Prime Minister, Narendra Modi

The government's "Digital India"campaign also has emphasis on healthcare, launch of NeHA (National e-Health Authority) and CHI (Centre of Health Informatics) to regulate, develop and deploy digital health across the continuum of care. Some of the other initiatives include - Integrated Health Information Platform (IHIP) covering 10 states, digitalisation of government clinics and hospitals in selected few states, etc.
Pharma companies are investing on strengthening patient connect and engagement.



For example, MSD's "Sparsh" program is building a network between its patients and treating physicians, leveraging care counsellors to keep patients' educated and physicians informed with their patient's progress. Sanofi's "Saath 7" provides care counsellors for on-brand patients, making it more personalised experience.

Providers like Narayana Health has 800 telemedicine centers, Apollo Telemedicine Networking Foundation has 115 centers across the country, Aravind Eye Care System has over 40 telemedicine-enabled vision centers across Tamil Nadu. In addition, National Rural Health Mission (NRHM) is building telemedicine network for rural India.

Multiple startups are fast evolving and are working on innovative ways of providing the last mile connectivity – the patients. To name a few, DocApp provides online consultation across 17 specialties. It has a unique consultation fee payment option of paying through mobile recharge balance for rural patients. CrediHealth connects patients with hospitals and gets about 35% of its patients from smaller towns and villages; they have even created websites in regional languages. NetMeds, an online pharmacy delivering drugs in 850 towns and cities, currently gets 60% of its orders from semi-urban and rural areas and the rest from metros and Tier-I and 2 cities. At the other end of the spectrum, digital health is empowering patients with the intelligence to be

Online Clinic (Appts, Rx, Consultation, etc.)	ePharmacy (Online Order Fulfilment, Refill Reminders, etc.)	EHR/ EMR	Patient Monitoring (Apps, Medical Devices , etc.)	Patient Adherence (Counselling, Care Plans, Reminders, etc.)	Doctor Networking	Wellness (Nurtrition Tracking, Predictive Analytics)	Genomics	Medical Concierge	Home Health
Practo		Practo			Practo				
Lybrate					Lybrate				
			Portea						Portea
DoctorInsta	1MG	Docengage	Janacare		Curofy	Health Vectors	Mapmygenome	CrediHealth	
	Netmeds	eKincare	Biosense		DocPlexus	Healthifyme	OmixLabs	iKure	
	Medikart	iKure			Remedy Social	Obino			

*not a comprehensive list

A snapshot of digital startups focussed on patient care / engagement*

more involved in their care, take charge of their health and act upon it. They are armed with real-time information easily accessible via technologies such as Internet of Things (IoT), health apps, sensors and wearables; extensive material available on the internet providing information right from symptoms, diagnoses, stages of disease progression, therapies to possible outcomes; ability to network with other patients through blogs and online disease community websites. Equipped with all these knowledge, the patients today are demanding 'Value'.

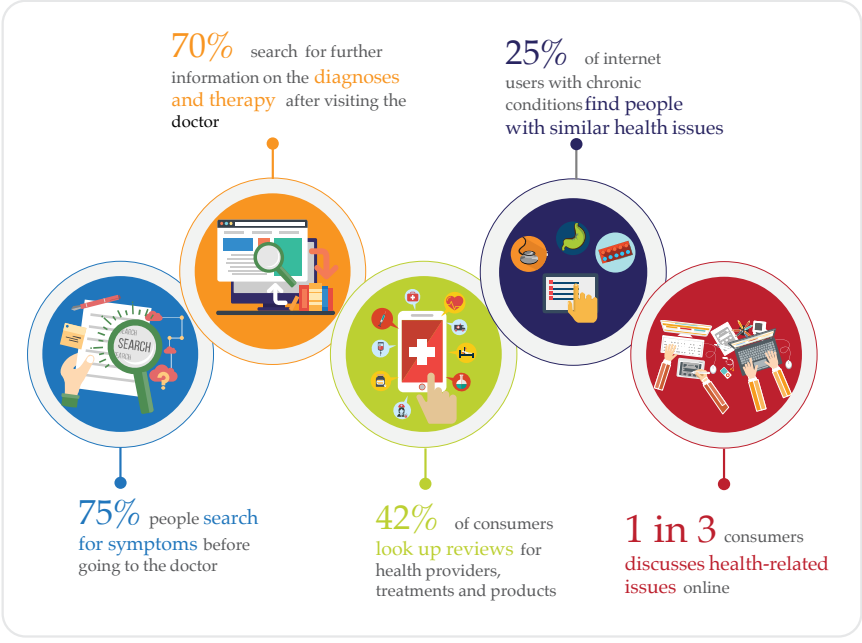
Multiple other industries have leveraged the digital wave to catapult the overall customer engagement to a new level. The healthcare sector in line with the government's initiatives around digitalisation will also see a paradigm shift in the entire patient care segment which essentially calls for infusing digital channels in the healthcare ecosystem. Out of the various challenges in the healthcare sector, in most chronic diseases the primary issue revolves around the awareness of the disease and control of its symptoms rather

> *"Social Media has created a historical shift from the historically powerful to the historically powerless. Now everyone has a voice."*
> *Sheryl Sandberg*

than the treatment of the disease. In various studies performed, it has been shown that awareness and education decreases the need for usage of healthcare facilities, improves disease control, management and the quality of life. Thus it also reduces overall healthcare cost considerably.

This digital health wave has the potential to transform the way that healthcare is

delivered and consumed. Patient centricity will be at the core of achieving improved patient outcomes at affordable cost. Although there are various healthcare programs launched across the nation, most patient support programs launched with patient care at its core, tend to lose the objective and end up as medication adherence programs.



Most patients drop out of these programs as they experience disconnect between their primary healthcare advisor, which is their doctor, and the counsellors who are not informed about the diagnosis and health reports.

There are multiple other reasons why patients drop out of the patient support programs, and the need is to deal with these gaps in a more comprehensive manner, which leads to a seamless integration of all stakeholders, such as the healthcare professionals, pharmacies, pathology and radiology labs, patient support centers and the patients on a single synergistic platform taking the patient care experience to the next level.

More and more technology startups in the country are focussing their efforts towards building extensive technology platforms which provide a single view of the patient to all stakeholders, especially the doctor and the counsellors, who interact at a very personal level with the patients. These platforms have the ability to manage the entire patient CRM database and provide clinical insights, which can be used by various stakeholders in studying the progression of the therapy and make informed decisions

in the treatment regime.

The critical factor as discussed earlier, is the awareness about the disease and the control of its symptoms. The digital platforms have the ability to provide awareness and education to the patients directly on their mobile devices in their preferred language through various channels such as text, audio and video. The digital platforms are completely transforming the manner in which educational information is created, distributed, understood and shared from one patient to another.

Patient centricity will be at the core of achieving improved patient outcomes at affordable cost.

Other issues pertaining to proximity to the doctor and follow up visits will also get managed to a larger degree as patient counsellors, doctors and labs will be connected to process and infer the patients electronic health records (EHR) on-the-go. Appointments will be scheduled online while patients will have their consultations with the doctors from the comfort of their home rather than travelling to doctors' offices.

Connected Healthcare - A futuristic view of the patient care

The EHR will help comprehensive record keeping on an ongoing basis for review by any other healthcare professionals involved in the care continuum, and for patients' it will provide better awareness about the disease and its management. Last but not the least, improved access to discounted medicines through online e-pharmacy stores for drug delivery to the doorstep will address the challenges associated with accessibility and affordability to a certain extent.

A major healthcare/patient care transformation is underway and the fact that the incumbent leadership at the center of the nation is driving the digital wave, India is indeed at the healthcare inflection point.

Disclaimer:

OPPI

ABOUT OPPI:

The Organisation of Pharmaceutical Producers of India (OPPI) was established in 1965 and represents the research-based pharmaceutical companies in India. OPPI remains committed to supporting the nation's healthcare objectives and collaborating with all stakeholders to find sustainable solutions. OPPI believes the need for innovation must be balanced with the necessity for more accessible medicines, within a robust IP environment.

For more information, please visit: www.indiaoppi.com

Printed in October 2017