

HEALTHCARE RADIUS

Aligning business and healthcare in India

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COMMENT
RE-USE OF MEDICAL DEVICES

INFRASTRUCTURE
DESIGN OF MAX MED CENTRE



सत्यमेव जयते
Ministry of Health
and Family Welfare



STRATEGIC PARTNERSHIP

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Indian Corporate Office: Schiller Healthcare India Pvt Ltd., Advance House, Makwana Rd,
 Off. Andheri Kurla Road, Marol Naka Metro Station, Andheri (East), Mumbai - 400 059.
 Tel.: + 91- 9323799863, +91-22 61523333/ 29209141 | Fax: +91-22-29209142

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A collaborative approach

The ambitious Ayushman Bharat - National Health Protection Mission, the world's largest government funded healthcare programme, is slated to change the paradigms of healthcare for the poor. Adequate funding is being provided for smooth implementation of this programme and various industry bodies are engaging with the Government to ensure that the programme reach all and is effectively rolled out.

Recently, the centre has included 1,354 packages in the programme ranging from Rs 1,000 to Rs 1.5 lakh- which is at 15-20% cheaper rates than the CGHS. Rates for over 20 specialties were included in the packages under the scheme which aims to provide a coverage of Rs 5 lakh per family annually and benefit more than 10 crore families belonging to the poor and vulnerable sections of the society. However, the rates were drawn from various Government-run schemes and private healthcare has found those untenable.

Considering that about 60% IP beds are with the private sector, it is inevitable that private sector will have an important role in the programme. Read the cover story to find out how the Government can collaborate with the private sector for the successful implementation of the programme. It is imperative that resources available with public and private sector are pooled to achieve the desired goals of universal health coverage.

Rita Dutta

Rita Dutta

Editor

rita.dutta@itp.com

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Notan Plaza, 3rd floor, 898 Turner Road
 Bandra (West), Mumbai – 400050. India
 T +91 22 6154 6000

Managing director: S Saikumar

Group publishing director: Bibhor Srivastava

Editorial

Editor: Rita Dutta

T +91 9980 588199 rita.dutta@itp.com

ADVERTISING

Director: Sanjay Bhan

T +91 9845 722377 sanjay.bhan@itp.com

STUDIO

Head of design: Milind Patil

Senior designer: Vinod Shinde

Contributor: Saili Bandre

PRODUCTION

Deputy production manager: Ramesh Kumar

CIRCULATION

Distribution manager: James D'Souza

T +91 22 6154 6006 james.dsouza@itp.com

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Customer Care (Toll Free): 1800-103-8182

NIHON KOHDEN CORPORATION

1-31-4 Nishiochiai, Shinjuku-ku, Tokyo
161-8560, Japan
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ImpactGuru.com raises \$2mn



Khushboo Jain, Co-founder & COO,
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ImpactGuru.com, India's leading healthcare, non profit and personal cause donation crowdfunding platform, has announced a Series A round of \$2 million (Rs 13 crore) co-led by Apollo Hospitals Group and Venture Catalysts India's first integrated incubator. ImpactGuru.com was incubated at Harvard Innovation Lab in 2014.

Singapore-based VC fund, RB Investments, an existing investor, also participated in the round along with Currae Healthtech Fund, India's largest healthtech fund by number of deals. Other key investors include various family offices and Indian diaspora from the US, Southeast Asia, and the Middle East.

The capital raised will enable ImpactGuru.com to scale crowdfunding in India by ramping up sales and marketing as well as technology development including artificial intelligence, machine learning, big data, and vernacular language support.

Healthcare crowdfunding is an alternative method of raising funds online for medical expenses, with the patient or his/her friends or family primarily relying on social media networks to mobilise donors to finance the relevant medical bills. Crowdfunding as a next generation financing method to pay for healthcare is particularly relevant for India's 25 crore strong middle class population as 80% of India's population doesn't have health insurance (NSSO), access to credit is limited, and the culture of generosity is increasing rapidly in India.

ImpactGuru.com will now be the preferred crowdfunding platform for all Apollo Hospital Group's patients nationwide effective immediately.

Aster's hospitals business has grown by 18%

Aster DM Healthcare, one of the largest private healthcare service providers in multiple GCC states and an emerging healthcare player in India, has announced its financial results for the quarter and full year ended March 31, 2018.

The revenue (excluding finance and investment income) improved by 13% to Rs 6,759.66 crore compared to Rs 5,962.95 crore. Additionally, the EBITDA higher by 79% Y-o-Y to Rs 651.32 crore compared to Rs 363.78 crore and PAT (pre-NCI) increased by 189% to Rs 281.68 crore compared to Rs.97.53 crore

Commenting on the company's performance for FY2018, Dr Azad Moopen, Chairman, Aster DM Healthcare, said, "Aster DM Healthcare has a 30-year rich legacy, starting from a single clinic in Dubai in 1987 to a presence across nine countries in the world today. We have been consistent in our mission to provide quality healthcare at affordable cost at the door steps of the people we serve, ever since we started the journey of "Caring Mission with a Global Vision" three decades ago."

Healthcare infra inadequate in CLMV

Export-Import Bank of India (Exim Bank)'s study entitled 'Enhancing India's Engagement in Healthcare Sector of CLMV Countries' has analysed the existing situation of the healthcare sector in the CLMV countries, the challenges in its development and strategies for improving the healthcare system in the region. The study notes that current healthcare infrastructure in the region is inadequate. The CLMV region has experienced an epidemiological transition in the recent years from communicable diseases to non-communicable diseases, requiring specialist hospitals to meet the requirements of the changing healthcare scenario in these economies. Insurance coverage is low in the region except for Vietnam, with high out of pocket expenditures on healthcare.

The CLMV region is expected to grow at a rate of over 6 % in the next five years, up above the global economic growth of 3.8%.



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mfine raises \$4.2 mn



Prasad Kompalli and Ashutosh Lawania

mfine, an app-based on-demand healthcare service, has announced that it has raised \$4.2 million in Series A funding. Prime Venture Partners led the round alongside existing investors, Stellaris Venture Partners and healthcare entrepreneur, Mayur Abhaya. The company will use the fresh funds to build the hospital network across cities, and further strengthen the technology team. The company is planning to achieve over

one Lakh consultations by the end of 2018 and also partner with more than 50 top hospitals across the country.

Launched in December 2017, mfine follows a unique model of partnering with leading and trusted hospitals instead of aggregating individual doctors on the platform. Hospital partnerships enable mfine to make high-quality care of trusted doc-

tors available on a digital channel - for the first time in the country. Top doctors from more than 15 leading and reputed hospitals in Bengaluru such as CloudNine, Aster, and Ovum consult with patients across nine specialties.

Within the first five months of launch, mfine has clocked more than 10,000 consultations. mfine's platform ensures that patients can reach the doctors on the network within 60 secs and start the consultation.

Genetic mutation causing rare colorectal disorder

Researchers at the Bengaluru-based genomic diagnostics and research firm, MedGenome Labs, have discovered a never-before-seen genetic mutation responsible for six members of a Gujarati family suffering from Familial Adenomatous Polyposis (FAP), a rare precancerous inherited condition accounting for 1-3% of cases of colorectal cancer. The mutation was also found in four other members of the family, leaving them highly susceptible to developing FAP later in life.

The first-of-its-kind genetic study, conducted in collaboration with Kailash Cancer Hospital & Research Centre (KCHRC) in Goraj, Gujarat, involved a 52-year-old patient, Paresh (name changed), and his immediate and extended family of 25 people.

The presence of benign polyps, between 100 to 1,000 in number, appear in the colon and rectum of patients in their teenage years. If left untreated, the polyps gradually turn malignant giving rise to aggressive and often fatal colorectal cancer by the age of 40-50 years.

Since FAP is an inherited condition, MedGenome Labs together with KCHRC collected clinical data and blood samples from members of Paresh's immediate and extended family ranging in ages 6-60 years. Genetic analysis of their blood samples revealed a never-before-reported mutation in the Adenomatous polyposis coli (APC) gene, not only in all six FAP-diagnosed family members, but also in four young individuals who have not yet been diagnosed with FAP.

'Patients First' continues as ISCR's theme

Patients First, a theme that acknowledges the role of patients in a clinical trial, will continue as the Indian Society for Clinical Research's (ISCR) theme for International Clinical Trials Day 2018. May 20 is celebrated world over as International Clinical Trials Day to commemorate the day in 1747 when Dr James Lind, a Scottish physician, conducted the first controlled clinical trial on a group of sailors suffering from scurvy.

"Our theme of Patients First addresses patients at two levels," said Dr Chirag Trivedi, President of ISCR. "It acknowledges the role of every patient whose participation in a clinical trial has contributed to a better understanding of medicine and helped bring newer drugs to the market. Also, it recognises patients who wait in hope of more effective treatment that will help them lead qualitatively better lives."

Apollo adopts IBM Watson for oncology



Apollo Hospitals - one of India's largest specialty hospital systems - has announced that it will adopt Watson for Oncology and Watson for Genomics. The two IBM cognitive computing platforms will help physicians provide patients with personalised, evidence-based cancer care. This agreement is the first-of-its kind Watson for Oncology & Watson for Genomics deployment in India.

Apollo Hospitals will build on its long legacy of clinical excellence with dedicated cancer care hospitals in India by implementing Watson for Oncology and Watson for Genomics across 10 of its 64 hospitals. Watson for Oncology will be available at the Apollo Chennai and Delhi

hospital from April 2018, followed by Hyderabad, Mumbai, Kolkata, Ahmedabad, Bhubaneswar and Madurai over the next few months.

Watson for Genomics will become available across the same locations in the following months. The Watson for Oncology and Watson for Genomics solutions will help oncologists at Apollo surface relevant data to bridge disparate sources of information and identify treatments that are personalised to each unique patient.

IBM Watson for Oncology, trained by Memorial Sloan Kettering (MSK), complements the work of oncologists, supporting them in clinical decision-making by enabling them to access evidence-based, personalised treatment options from more than 300 medical journals, more than 200 textbooks, and nearly 15 million pages of text providing insight and comprehensive details on different treatment options, including key information on drug treatment selections.

IBM Watson for Genomics analyses massive bodies of genomic, clinical and pharmacological knowledge to help uncover potential therapeutic options to target genetic alterations in a patient's tumour.

"Apollo Hospitals has been dedicated to providing patients with best-in-class cancer care for more than two decades now. Our collaboration with IBM is a reinforcement of our commitment to clinical excellence," said Preetha Reddy, Vice Chairperson, Apollo Hospitals Group.

Qure.ai partners with Teleradiology Solutions

Qure.ai, a healthcare AI provider, has announced that it has partnered with Teleradiology Solutions (TRS), a global pioneer in remote radiology interpretation and tele-health, and Telerad Tech (T2), a global health IT company and AI-enabled RIS-PACS provider, to enable smarter and faster diagnoses of X-ray and CT-scan data, and reduce costs.

Through this partnership, Qure.ai's chest X-ray technology will be integrated with Telerad Tech's proprietary RIS PACS platform - RADSpa that TRS uses to provide tele-radiology services globally.

"At Qure.ai, we are expanding the reach of our AI algorithms to help medical professionals deliver better outcomes to their patients," said Prashant Warier, Co-Founder and CEO, Qure.ai. "TRS and Telerad Tech are pioneers in their respective domains, and we are excited about the impact this partnership will have on the millions of patients' lives they touch."

160 mn Egyptian Pounds grant to Egypt's National Cancer Institute

The Big Heart Foundation, the Sharjah-based global humanitarian charity, has announced a donation of 160 million Egyptian pounds (around AED 33 million) to develop the main building of the National Cancer Institute (NCI) in the Egyptian capital. NCI is one of the most advanced oncology care centres in Egypt, providing medical care to more than 250,000 patients per year, 85% of the Egyptians receive treatment free of charge. The contribution will support development and rehabilitation work of the 13-storey building of NCI in Cairo's Qasr Al-Aini Street.

First heart transplant surgery in Kolkata



The heart was harvested at a Bengaluru hospital before it was airlifted to Kolkata.

In a landmark event, a team of doctors at Fortis Hospital, Anandapur, Kolkata, has successfully transplanted a live heart. The live heart was transported through a 18 kms green corridor from the airport to the hospital in a record 18 minutes time. The heart was harvested at a Bengaluru hospital before it was airlifted to Kolkata early morning.

The team of doctors who performed this surgery included Dr Tapas Raychaudhury, Director, Cardio Thoracic

& Vascular Surgery and Dr K M Mandana, Director, Cardio Thoracic & Vascular Surgery along with Dr Saikat Bandopadhyay, Senior Consultant, Cardiac Anesthesiologist & Intensivist from Fortis Hospital, Anandpur. The heart transplant was conducted under the expert supervision of Dr K R Balakrishnan, Director, Cardiac Sciences and Dr Suresh Rao, Chief Cardiac Anesthetist from Fortis Malar Hospital in Chennai.

A patient from Jharkhand, who was suffering from dilated cardiomyopathy was the recipient of the heart. He was on the waitlist since January 2017.

The 21-year-old donor was declared brain dead after he met with a tragic road accident. The family decided to donate his heart. The cardiac transplant team from Fortis Hospital rushed and harvested the donor heart. A detailed plan to transport the live heart was worked out between various authorities to execute the green corridor. A green corridor was created from the hospital to Bengaluru airport. Another green corridor in Kolkata started from the airport to reach Fortis Hospital in Anandapur, covering 18 kilometers in record time of 18 minutes.

Faridabad's first ABO incompatible kidney transplant

Fifty-four-year old Surender Yadav was admitted at Sarvodaya Hospital & Research Centre, Faridabad, with the condition of cardiac arrest and later it was found that Surender is taking up dialysis regularly. His kidney condition was bad and he needed an immediate transplant. Unfortunately, the same blood group kidney was unavailable and the health condition was deteriorating.

His wife came as a saviour. Though her blood group was not same, the kidney was transplanted to Surender. He got a new lease of life from his wife Poonam under the expert team of Dr Sri Ram Kabra, HOD, Centre for Dialysis and Kidney Transplant and Dr Tanuj Pal Bhatia, HOD, Institute of Laser Urology. Sarvodaya Hospital, marked Faridabad's first ABO incompatible kidney transplant. "These days, ABO incompatible blood type kidney transplants are a reality and we did it successfully. Two to three weeks after the operation, the medications and treatment regimens are the same as for blood group compatible transplant patients, although such patients are more closely monitored post-transplant.," said Dr Kabra.

United Way Mumbai spreads awareness regarding lung cancer

United Way Mumbai, an NGO working on health issues in Mumbai, has kick started a fortnight long campaign for building awareness on lung cancer, in collaboration with city hospitals. United Way Mumbai's kiosk, set up at various hospitals is manned by a trained team who give out information about lung cancer, its causes, risk factors, prevention, and municipal hospitals offering treatment, etc. to visitors. Communication material has been developed in multiple languages and is being displayed and distributed at the hospitals. The aim is to identify and bridge the gaps in awareness regarding lung cancer. With an increase in knowledge about the disease, patients can seek appropriate treatment.

CEO, Jaslok Hospital & Research Centre



Jaslok Hospital and Research Centre, a multi-specialty hospital at Peddar Road in Mumbai, has announced the appointment of Jitendra Haryan as the Chief Executive Officer effective June 1st, 2018.

He has nearly two and half decades of experience in the industry at large. He has a strong track record of executing business turnarounds and managing very successful associations. In a note, the board mentioned that it believes that he is the right person to lead the dream project of refurbishment at Jaslok that is in pipeline, with a mission of transforming healthcare services at large.

Haryan has been working very closely

with all the members of the hospital and has been an essential part of the system at Jaslok Hospital since 2014 in the capacity of CFO.

He has worked in the cost transformation process of the hospital and has managed to achieve significant success to boost the bottom-line health of the hospital. In his career, he has worked in different areas of the healthcare industry including managing an integral role in quality initiatives in earlier assignment and different areas of finance which includes budgeting, business-restructuring, and other key areas in finance and operations of the hospital.

CEO, Sir HN Reliance Foundation Hospital

Reliance Foundation has announced the appointment of Dr Tarang Gianchandani as the Chief Executive Officer of the Sir HN Reliance Foundation Hospital at Girgaum, Mumbai.

"With her vast administrative and clinical experience, both in India and abroad, and organisational skills she will steer the hospital in its quest to rank among the very best in India, delivering quality care," said Jalaj Dani, a representative of the Trust.

Gianchandani was previously with Jaslok Hospital & Research Centre, Mumbai, as its CEO since 2012. She did her Masters of Business Administration in 2007 from Singapore, with specialisation in Healthcare Management from the National University of Singapore, Business School. She has also worked with the Ministry of Health, Hospital Services in Singapore, where she managed strategic development and promotion of integrated and holistic healthcare.



COO, CK Birla Hospitals



Dr Simmardeep Singh Gill has recently assumed charge as COO of CK Birla Hospitals. In this role, he would be heading the operations on BMB, CMRI and RBH and will report to Uttam Bose, Group CEO.

Dr Simmar did his MBBS from Assam University and then completed his post graduate diploma in healthcare and hospital management from Symbiosis Centre of Healthcare, Pune. He

joined from Fortis Healthcare where he spent over 17 years in various clinical and administrative roles. His last stint was as Zonal Director of Gurgaon's FMRI and its subsidiaries. He also had an international stint in Fortis, where he was posted in Mauritius from 2011 to 2015.

He brings with him in depth knowledge of medical administration, operations, patient services, quality, growth and development.



Strategic Partnership

How the Government can collaborate with the private sector for successful implementation of Ayushman Bharat Scheme

BY RITA DUTTA

The Government of India in its budget proposals for year 2018-19 has announced the Ayushman Bharat - National Health Protection Mission that will have a defined benefit cover of Rs 5 lakh per family per year as well as the opening up of 1.5 hundred thousand health and wellness centres. A beneficiary covered under the The National Health Protection Scheme (NHPS) will be allowed to take cashless benefits from any public/ private empanelled hospitals across the country. To control costs, it was announced the payments for treatment will be done on package rate (to be define by the Government in advance) basis. For giving policy directions and fostering coordination between Centre and States, the Government has proposed to set up Ayushman Bharat National Health Protection Mission Council (AB-NHPMC) at an apex level chaired by Union Health and Family Welfare Minister. And states would need to have State Health Agency (SHA) to implement the scheme.

Indu Bhushan, CEO, Ayushman Bharat-PMRSSM, has stated: "We need to design the scheme to ensure that the targeted beneficiaries get maximum benefits and we can expand access to quality health services in rural areas and tier-II and III cities."

Looking at the quantum of work load, it would be imperative that resources available with public and private sector are pooled, utilised and managed to achieve the desired goals- under the overall gambit of universal health coverage (UHC). Firstly, this can happen for the launch of 1.5 hundred thousand Health & Wellness Centres (HWCs) to bring promotional, preventive and primary healthcare system closer to the homes of people. These centres will provide comprehensive healthcare, including for non-communicable diseases and maternal and child health services. These centres will also provide free essential drugs and diagnostic services.

Reference to the HWCs was made in the national health policy released on 15th March 2017. A few states including Haryana, Punjab and J&K are known to have initiated converting some of their sub-centres in



Dr Harish Pillai, CEO - Aster Hospitals and Clinics (India), Aster DM Healthcare



Dr Girdhar J Gyani, Director General, Association of Healthcare Providers (India)

1. It would be imperative that resources available with public and private sector are pooled, utilised and managed to achieve the desired goals.

to HWCs. The Haryana and Punjab governments have planned to train community health officers, who would manage these centres, with specialist doctor from nearby PHC or CHC visiting HWCs on a regular basis.

Says Dr Girdhar J Gyani, Director General, Association of Healthcare Providers (India), "The private sector has an opportunity by adopting few sub-centres as HWCs. AHPI has proposed to the Government that its member hospitals will be willing to manage some of the HWCs within the same budget, which the Government provide for existing sub-centre. The manpower would be fully deployed by the private sector provider, with provision of specialist doctor visiting on a need basis from main hospital or consulting through telemedicine as appropriate." The entry of private sector will also generate healthy competition as well as cooperation between public and private sector.

Swasthya Suraksha Mission (PMRSSM) that has been designed to provide financial protection and prevent catastrophic health-care expenditures to over 10 crore poor and vulnerable families and endow a cover for cashless hospitalisation services of up to Rs 5 lakh per family per year.

If there were adequate public sector hospitals, then scheme could have been delivered through a network of CHCs, district hospitals and Government teaching hospitals. "But considering that about 60% IPD beds are with the private sector, it is inevitable that private sector will have an important role in NHPS. The scheme, however, should ensure self-sustenance of hospitals," says Dr Gyani.

It is estimated that the scheme will nearly require 20,000 hospitals/ nursing homes to be empanelled. Most of secondary care procedures could be delivered by Government district hospitals and small hospitals. For tertiary care procedures, the Government will need support from private specialist hospitals. The



Dr. Dharminder Nagar, MD, Paras Healthcare

2. Accessibility to rural healthcare needs to be looked at.

The private sector has a massive role to play in the Pradhan Mantri Rashtriya



2

MOHFW is working on simple empanelment criteria. The government is also planning to incentivise private hospitals under the scheme to ensure that more quality hospitals come up in aspirational districts. Hospitals certified by the NABH for entry-level would get 10% more as incentive and those certified for advanced level would get 15%.

Hospitals offering MD and DNB would also get 10% more. Hospitals set up in as backward and rural districts would get an additional 10%. The scheme would target poor, deprived rural families and identified occupational category of urban workers' families, 8.03 crore in rural and 2.33 crore in urban areas, as per the latest SECC data.

Says Dr Dharminder Nagar, Managing Director, Paras Healthcare, "For years healthcare stakeholders involved in public and private care have pondered over the road map to achieve Universal Healthcare Coverage and finally an ambitious scheme that covers 41.3% of the population and provide Rs 5 lakh health coverage for the entire family looks like a good beginning to a marathon leading to 'Swasth Bharat'. With the new 1% health and education cess funding the project of more than Rs 11,000 crore and empowering the poor common man with specialized treatment with premiums at Rs 1,100 per family, the union government has set the stage by increasing the federal health budget by 11.5% for 2018-19." He added that one should give priority to empanelment of private hospitals in tier II and tier III cities. To ensure access, the NHPS team needs to ensure that the entire focus should be on the tier II and tier III cities.

The centre has included 1,354 packages in its ambitious plan under which treatment for coronary bypass, knee replacements and stenting among others would be provided at 15-20% cheaper rates than the Central Government Health Scheme (CGHS). The rates for over 20 specialties, including orthopaedics, cardiology, cancer care and neurosurgery were included in the packages. The document also details the

SUGGESTIONS FOR EFFECTIVE FUNCTIONING OF PROPOSED HWCs:

- Maintenance of electronic family file for every house in the community should become integral part of the proposed HWCs, so that community statistics is adequately monitored and whenever required corrective steps could be taken. There should be a separate division/ agency to conduct community surveys to keep track of life style diseases, infections, immunisation and other illnesses.
- Creating specialty clinics in some of the most underserved areas of the country as per local requirements for specific disease/epidemic control, where doctors could visit these centres on a periodic basis engaging in both treatment and preventive care.
- Telemedicine services can be effectively utilised to connect remote areas with taluk and district hospitals, in view of the scarcity of qualified doctors. With good penetration of mobiles in the country, this should be easily possible. There is a requirement for having paramedical staff to provide primary care in rural areas as there is a huge gap in the availability of doctors/nursing staff.
- App based remote monitoring technologies for creating awareness and improving treatment/ management of chronic conditions (home health care) wherever frontline healthcare workers are involved, use digital connect to transform them into "knowledge supervisors".

minimum number of days of hospitalisation required to make a claim as well as pre-surgery and post-surgery investigations needed for approval.

Under the 205-page draft model tender document which was shared with the states, knee and hip replacements were fixed at Rs 9,000 each, stenting at Rs 40,000, coronary artery bypass grafting (CABG) at Rs 1.10 lakh, caesarian delivery at Rs 9,000, vertebral angioplasty with single stent at Rs 50,000 and hysterectomy for cancer at 50,000.

According to Indu Bhushan, the rates of packages were finalised after analysing the Rashtriya Swasthya Bima Yojana (RSBY) and CGHS rates and are on average 15-20% lower than that of the CGHS.

According to experts, the Government needs to suggest a more viable tariff. Says Dr Harish Pillai, CEO - Aster Hospitals and Clinics (India), Aster DM Healthcare, "The tariff suggested by the Government is not viable specially for a state like Kerala where



Dr Nagendra Swamy, Group Medical Director, Manipal Hospitals



Lalit Mistry,
Healthcare
Consultant

3. Few states including Haryana, Punjab and J&K are known to have initiated converting some of their sub-centers in to HWCs.

the capital cost is high due to the Minimum Wages Act for nursing staff. The Government needs to engage with various industry bodies to arrive at a viable tariff rate after a scientific study. How the Government has different DR allowances for different cities, so should be the case with the tariff for different cities under the PMRSSM programme."

According to healthcare consultant, Lalit Mistry, "Designing acceptable PMRSSM tariffs to be offered to providers based on availability of health services, quality of infrastructure, geographic location, cost of operations and demand of services. Various health system such as the UK have undertaken scientific pricing approach to assess the cost of operations/ services and permissible margins for providers that enables to build transparent and acceptable system for both Government and private providers."

Incentivising providers and doctors for setting up and providing services in rural areas would also mitigate the challenges of lack of healthcare resources. "Timely reimbursement by state health authority/ insurance company would be critical for buying and sustaining private providers to PMRSS," says Mistry.

According to Dr Nagendra Swamy, Group Medical Director, Manipal Hospitals, "For successful implementation of the programme, identification of appropriate service providers from both the Government and private sectors with healthy PPP model is essential." He added that there has to be stringent monitoring of the programme through technology intervention to avoid misappropriation. Also, proper audit mechanism is required to prevent misuse. According to experts, NHPS may designate



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an independent quality regulator who would lay out clear guidelines with respect to re-use of single use device, use of generic medicines and others applicable for all empanelled providers under the scheme.

The NHPS system would be digitised, where hospitals can submit bills on-line and even the payment should be made on-line. For the scheme to be viable, experts suggest it would be essential that the payment to the hospitals should be reimbursed in a time-bound manner. "Experience from central Government schemes like the CGHS has been unpleasant and the industry will look to have better arrangement. In case of delay, there should be provision to pay interest," says Dr Gyani. This aspect is important as present schemes have failed largely on the account that payments are delayed for months. State government schemes like the ones in TN, Telengana and AP have transparent

and efficient system of digital tracking of patients and treatment line which can be studied and adopted for NHPS.

Experts suggest that private providers need to design delivery models with focus on PMRSSM and weave volume based model to ensure low cost of operations and sustainable margins. "The private providers will have to move away from capital intensive and high-end facilities to low cost healthcare models. Also, there is a need to reconfigure existing facilities to cater to the demand generated by the scheme," says Mistry.

Additionally, private providers could play a role in training and skilling of healthcare workforce for PMRSSM, mainly deployed in rural areas. Private providers could also be leveraged to develop clinical protocols, provide tele-medicine, remote ICU and monitoring support to existing district hospitals, lacking extensive clinical expertise. [HR](#)

4. The Government needs to use scientific methods to arrive at fixed pricing.



1

Through the digital looking glass

Some dominant EHR vendors are building out their platforms for the emerging needs of health systems

BY PADDY PADMANABHAN

An analysis of the financial and market performance of the top 15 publicly held global technology consulting firms tells us one thing; in 2017, global IT consulting firms struggled in the healthcare segment.

Our report, we call out the WITCH companies (an acronym for Wipro, Infosys, Tata Consultancy Services (TCS), Cognizant, HC), mostly saw declines in growth rates for their healthcare businesses.

One firm, Wipro, saw a YoY decline in revenue from 2016 to 2017, while at the other end, Cognizant saw the HLS business outgrow the company.

The outlook for 2018 seems a little blurred for all companies we reviewed. Policy uncertainties at the beginning of the year seem

to have given way to anxieties about the overall demand environment for traditional IT consulting companies. As a result, they all are trying to figure out their next play in the healthcare markets.

Our latest annual survey report on healthcare IT demand tells us that there is a clear shift toward value-based care in the markets and a focus on digital transformation led by patient engagement and care transformation initiatives, with data and analytics being key enablers for the transformation. IT consulting companies are responding to market signals and classifying everything as “digital,” which is proving to be a meaningless term when assessing their healthcare market strategies.

Yesterday’s disruptors who built multi-billion-dollar businesses over the past two

1. WITCH companies (an acronym for Wipro, Infosys, Tata Consultancy Services (TCS), Cognizant, HCL) mostly saw declines in growth rates for their healthcare businesses.

decades primarily on the back of a labour arbitrage model are now being disrupted themselves by technology shifts in the marketplace. Automation, AI, and cloud are changing enterprise computing in ways that threaten the existence of many traditional technology consulting firms.

For some like Infosys, public boardroom battles leading to CEO Vishal Sikka's resignation in mid-2017 have complicated their efforts to regain industry-leading growth rates. For Wipro, an ill-timed acquisition of Health Plan Services (HPS), which relied heavily on the now-defunct public health insurance market places, has shaken the foundation of the healthcare business and has dragged down the overall company's operating margins. Even major multi-national firms such as Accenture have felt the impact on policy changes on their healthcare business growth.

India's biggest IT firm, TCS, seems to have effectively abandoned a vertical market strategy in favour of a horizontal strategy. On the other hand, Cognizant is deepening its vertical market strategy while maintaining its focus on digital.

European firms such as Atos and Capgemini who have been relatively less burdened by the changes in US healthcare policy environments have seized the opportunity to make aggressive acquisitions and strengthen their foothold in the market. Japanese technology major NTT's acquisition of Dell's services business and the merger of CSC and HP services to form the newly christened DXC have also emerged as significant players in the competitive landscape. While consulting firms are struggling, it does not necessarily mean that the healthcare IT demand environment is weak.

Fueled by the digital transformation of healthcare and the shift toward value-based care, dominant electronic health record (EHR) vendors such as Epic and Cerner are building out their platforms for the emerging needs of health systems. The emerging digital health startup ecosystem continues to receive billions in VC money, though exits



are not keeping pace. These are happy hunting grounds for global consulting firms with large cash piles looking to acquire their way into innovative platform solutions.

However, valuations for successful digital health startups are high, and some global firms with high cash piles are choosing to return money to shareholders through buy backs (or are being forced into it by activist shareholders) than to risk losing it on misplaced bets.

As all companies look to make a mark in the high potential healthcare market, they will be exploring a new fantastical world of opportunities in digital transformation. Some of these opportunities will be an outcome of the healthcare industry consolidation (Aetna-CVS, Cigna-Express Scripts) and the emergence of a new category of healthcare player who could be technology buyers as well as sellers (Amazon, Apple).

The next few years will be a fascinating and transformative period for technology firms in healthcare. Our research tells us that all the existing players are committed to growing their healthcare businesses. Our only cautionary note would be that the path to profitable growth will be different for everyone, and each must choose their path wisely. **HR**



Paddy Padmanabhan is the author of 'The Big Unlock: Harnessing Data and Growing Digital Health Businesses in a Value-Based Care Era'.

2. The valuations for successful digital health startups are high.

A neighbourhood hospital

Micro-hospitals are primarily used to assess and treat less acute inpatients closer to a patient's home

BY DHANRAJ CHANDRIANI



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1. Micro-hospitals are set up in smaller geographies and underserved areas, where the cost viability of a full-service hospital is absent.

In the western world, the healthcare industry has seen the value that 'micro hospitals' offer. Healthcare system providers are establishing small, comprehensive hospitals in neighborhoods where people reside and also looking at such facilities to create a competitive edge by outspreading their brand to bridge gaps in the market. These facilities, as opposed to urgent care centres and stand alone emer-

gency departments, provide similar services to the community as a traditional hospital, though on a smaller scale with quicker yet compassionate care.

Micro-hospitals are set up in smaller geographies and underserved areas, where the cost viability of a full-service hospital is absent. Yet they must be within a reasonable distant from a larger, multi-disciplinary hospital to ensure timely transportation of



an acute patient. Most of all, micro-hospitals are simple, less expensive and faster to set up than conventional ones.

This concept is very much applicable to India, what with the categorisation of cities into metros, II and III tier. The last two are clear candidates for micro-hospitals. Despite its scale, it is essential that micro-hospitals maintain standards of healthcare delivery and comply with all applicable

central and state licensing and regulatory requirements as traditional hospitals. This would also make their patients eligible for better health insurance reimbursement.

The west has adopted an approach that uses a retail-focused delivery model focusing on patients' desire for convenience in the delivery of healthcare services. This service is available 24x7. Importantly, the planning and design norms cannot be much different from the acute care norms. Hospital planners would still have to adhere to best practices of the industry.

Micro-hospitals could be planned in approximately 16,000 to 20,000 square feet facility with approximately two to three emergency bays and 15 to 20 in-patient beds. OPD and diagnostic facilities such as radiology and imaging could be on the ground floor in clear view of the patients entering the facilities, thus giving them the comfort of coming to a proper hospital and not just an urgent care facility. IPD rooms and an administration block could be built on the upper floor/s, height permitting.

Whilst micro-hospitals provide overnight stays, they are primarily used to assess and treat less acute inpatients closer to a patient's home and in a more cost efficient manner than a full-service hospital.

Hospital architects could simplify the design and inpatient and allied room sizes would need efficient and a tighter design. Operating rooms could be approximately to 300/350 square feet, concentrating more on out-patient surgeries.

However, micro-hospitals must provide for basic mandates like hand-washing sinks and storage, or those features that patients have come to expect, including family areas. No doubt it's a challenge to be at the bare minimum to reduce cost. Owing to limited space, these patient care centres may have reduced public spaces (and hence costs) such as waiting rooms; outsourcing dietary and laundry services, which not only consume large areas but also are also expensive to provide.



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Whilst micro-hospitals have a lesser capex than traditional ones, economies of scale could differ where the cost per bed is often higher. To contain costs, these facilities could opt for modified design standards of a larger hospital and substitute materials and finishes that are similar in look and feel but are less expensive. This, no doubt, could be challenging at times, as patients would expect the classiness of a hospital environment with the accessibility of a neighborhood outpatient centre.


Yet, it is possible for a micro-hospital to get branding through its design as a key factor besides just the patient experience. There is also the possibility to create a uniform, branded look for multiple micro hospitals belonging to one single group just as retail goods franchise.

How does one differentiate a micro hospital in India from the already existing 'nursing homes' and small hospitals in the healthcare landscape? For example, micro-hospitals would have inpatient beds and would be fully licensed hospitals with an emergency department, pharmacy, lab, and imaging. Some micro-hospitals could also

offer primary care, telemedicine, dietary services, women's services, and surgery.

Then again, micro-hospitals are different from satellite hospitals/centres where the former may have 25-30 beds with sizes ranging from 20,000-25,000 square feet, whereas satellite hospitals typically would be larger.

It is clearly established that a micro-hospital is not a rural hospital. They would typically be established in more affording townships that are within 20-30 kms of a conventional hospital where patients could be transferred for advanced care.

In conclusion, a micro-hospital model is a concept to make access to a hospital more convenient for patients and closer to their homes. It is more appropriately sized for the neighbourhood population compared to larger, more complex facilities. All in all, it is 'value based care'. 

2. Micro-hospitals could be planned in approximately 16,000 to 20,000 square feet facility.



*Dhanraj Chandriani
is Managing Director
with Technecon
Healthcare Pvt. Ltd.*

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1

Rising above the chaos

Self-governance and holding each other accountable for good medical care is the need of the hour

BY DR GARIMA SINGH

Everyday you hear of doctors being roughed up, hospitals being vandalised. Fundamentally, it's the mistrust manifesting itself and a belief that society at large does not protect individual interest, and it's ok for things to be taken in their own hands as lawlessness abounds. When this helplessness sets in it's but natural that extreme behaviour will manifest itself.

In recent times, medicine as a profession has been singled out by the Government, media and public at large. Underlying notion is that doctors and healthcare provid-

ers are only interested in filling up their pockets. No profession particularly as noble as medicine needs to bear the blemish of such disparaging comments. A profession comprises scores of individuals with their own ethics and values. To say that doctors and hospitals in private are out to mint money (implying malpractise) is like saying all lawyers except public prosecutors are liars. Every profession requires individuals to take informed decision in line with codes and ethics listed by their professional bodies. Individual greed cannot be assumed to be practised at large. There are many

1. To say that doctors and hospitals in private are out to mint money is like saying all lawyers except public prosecutors are liars.

sides to a situation. Have we or the people who report one sided stories pertaining to private healthcare taken time to evaluate what the current healthcare scenario in India is like?

- To serve a population of 132.42 crores, we need 4,97,189 doctors more.
- We need 2.6million beds over the course of next decade,
- India's current health expenditure per capita (CHE) as a percentage of GDP is 3.9%, much lower than world average of 6.78% (according to WHO's statistics for 2018).
- India's CHE per capita is also low at \$63; in countries with low CHE, proportion of spend in health to total expenditure is higher among households.
- Most developed nations like France, the UK, the US, Canada spend about 8% of their GDP on health.
- India allocates less than 6% of Govt resources to health, less than many African countries.
- Govt spending in healthcare as a percentage of GDP has fallen over the years and led to consequent rise in private healthcare.
- Private health sector: It consists of 58% of the hospitals in the country, 29% of beds in hospitals and 81% doctors. As per the National Family Health Survey-3, private medical sector remains the primary source of healthcare for 70% urban households and 30% rural households.
- Majority of population living below the poverty line (ability to spend Rs 47 per day in urban areas and Rs 32 per day in rural areas) rely on under financed and short staffed pubic sector for its healthcare needs.
- Growth in Indian healthcare sector is attributed to the private equity and foreign investments in the sector. These boost innovation and advanced healthcare delivery. However, these are largely focused on private healthcare, making public health system largely underfunded.

Now visualise the heavily burdened infrastructure (both Government and private). Is this problem even in focus? As a citizen of this great country we are stuck since, on one hand, public hospitals have long queue, apathetic staff and poor compliance to standards and protocols and, on the other hand, private hospitals are prohibitively expensive on account of their high costs and to meet obligations to their funding sources.

Let's also reflect on medical fraternity- as a fraternity, physicians have abhorred peer governance, data sharing, reporting outcome measurements in India leaving the door wide open for fingers to be raised against our good doctors. Self- governance and holding each other accountable for good medical care is the need of the hour.

Now that we have understood different facets of our healthcare environment let's try to understand some of the recent events which have hogged media attention; and sometimes it's best to refer to age old wisdom when grappling with unexpected situations. Evident mistrust between doctor and patients and amongst the fraternity in India can probably be addressed by referring to Hippocrates oath which came about in 500 BC. Hip-

2. Most developed nations like France, UK, US, Canada spend about 8% of their GDP on health.





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pocrates remains the most famous figure in Greek philosophical medicine. The oath represents a prevailing ethos rather than professional edict but it still regarded as the fundamental governance of the medical profession. It mostly talks of the following:

1. Coordinated instruction and registration of doctors - intention being that the public has to be protected as far as possible from charlatan (try and apply the bridge courses for AYUSH doctors recently being suggested to this principle).
2. Doctor is there for the benefit of his patients and to the best of his ability he must do them good and he must do nothing that will cause harm (principle of beneficence and non-maleficence).
3. Limitation of one's practice to that in which one has expertise (it may be interpreted as self and peer governance in today's world).
4. Doctor cannot take advantage of doctor patient relationship.
5. Patient confidentiality.

3. Modern medicine is expensive in countries where health is mostly provided by private sector.

Modern medicine is expensive in countries where health is mostly provided by private sector which are mostly funded by PE firms and usually tend to have high costs with little or no subsidies. In the western world, philanthropy and religious orders sustain neighbourhood hospitals and hospices which are vastly different from the current scenario in India.

Questions that I leave you with are: Is the bulk of today's discontent against private healthcare arising out of failure to meet the financial obligations when receiving medical attention? Who is responsible for making health accessible to the citizens of India? Can access to healthcare be improved if appropriate funding can be deployed in public sector and subsidies in costs are provided to private healthcare? [HR](#)



Dr Garima Singh is Sr. VP, Strategic Initiatives with Max Healthcare.



Defining scope and demand

On the international nurses day, a special healthcare summit was conducted by Dr VN Bedekar Institute Of Management Studies

The healthcare sector in India is growing at a phenomenal pace, in terms of revenue and employment. As the Government has opened the gates for FDI in healthcare, we see Indian companies entering into mergers with foreign and other domestic players.

Corporate have ventured into hospital chains, wellness centers, health insurance, lifestyle centers, healthcare equipment rental, organ transplant centers and the whole gamut of primary, secondary & tertiary healthcare services. These companies require expert and specialised talent to manage various roles in operations, marketing, finance, HR, technology and administration.

On the international nurses day, a special healthcare summit was conducted by Dr VN Bedekar Institute Of Management Studies, to educate healthcare and non-healthcare professionals about the future scope in the industry.

The summit witnessed over 170 attendees that included eminent doctors, nurses, senior members of the healthcare associations, academicians in the medical field, pharma industry professionals, professionals from the

bio-medical and bio-informatics fields etc.

The speakers for the Summit were, Dr Manjeet Singh - Senior Consultant, Fortis Hospitals, Shubhanand Shinde - Founder, Professional Nurses Bureau and Dr Yogesh Pathak - Administrator, Vedant Hospital.

Dr Manjeet Singh said, "The growth in medical tourism has propelled a phenomenal development in the healthcare segment. The young generation and also the non-clinicians currently in healthcare have ample avenues to make successful and sustainable career in this segment. A course in healthcare management can help them lead this career path."

Dr Nitin Joshi, Director - BRIMS, said, "The healthcare Industry is witnessing approx 22-25% growth per year and this industry will require management professional from various backgrounds like HR, operations, IT and overall administration." Anjula Lazarus, Principal of Trained Nurses Association Of India (Mumbai City Branch) & Retired Principal of MGM College of Nursing, said, "Dedication, duty and diligence is our motto. So while the doctor is the brain of the hospital, nurses function as the heart of the hospital." **HR**

The speakers emphasised on the need of skilled professionals in the industry as well as talent gaps and new-age requirement.



Enhancing patient experience

mCURA will incorporate its health-tech platform with HP Hardware infrastructure



mCURA, a health-tech company which has been working with hospital OPDs and clinics to provide state-of-the-art IT infrastructure, has partnered with HP Inc. India, the IT giant. Under this partnership, HP will install the Hi-tech devices at the doctors' OPDs which includes double-side screen systems, which would help the doctors to go through the e-prescription entered by the clinical staff, NFC enabled tablets, automated kiosks and patient education displays at waiting area. The technology developed and implemented

by mCURA at different hospital OPDs and clinics will smoothen work flow of the doctors and enhance experience for the patients visiting the hospitals. With this partnership, hospital/clinics will be ultra-modernised promising best experience to patients and doctors.

Talking about the partnership, Madhubala Radhakrishnan, Founder and President of mCURA, said, "Our partnership with one of the big giants like HP India will provide next-generation experience at the hospitals and clinics. With our association, we aim to bring in Smarter Healthcare IT System and remove the current major barriers to the healthcare industry."

"HP has been committed to improving experiences with innovative technology. Healthcare is an exceptional setting, and we are glad to partner with mCURA to deliver solutions that are safer, smarter and secure for healthcare sector," said Vickram Bedi, Senior Director, Personal Systems, HP Inc India.

mCURASmart OPD - India's first technology platform converts desk services into integrated mobility services that covers end-to-end patient experience, increase IT adoption and accomplish additional revenue. Rendering a technology + infrastructure+ implementation services, mCURA is resolving the problems faced in OPDs such as long patient wait times, better doctor consulting time management and revenue enhancement.

The innovative "Tap & Pay Model" & "Shortest Service Path" models offer patients minimal counter visits while completely eliminating necessity of spending valuable time at billing and registration counters. It also enables doctors, pharmacy and labs to move into a digitally secure EMR system allowing for faster patient turnarounds, speedier diagnosis, enhanced revenues and happier patients.

mCURA, a health-tech start-up, has been working in the evolving domain of mHealth. The company is known for its innovative solutions in the areas of healthcare information technology.

The company is a complete, scalable, and effective solution for the entire healthcare community with a flexible, open framework that can leverage and integrate with all modules and with external systems too. The company's plan is to develop high-performing healthcare system, where all those engaged in the care of the patient are linked together in secure and interoperable environments, and where the flow of clinical data directly enables the most comprehensive, patient-centred, safe, efficient and effective delivery of care where and when it is needed most – at the point of care.



Madhubala Radhakrishnan

The technology developed and implemented by mCURA at different hospital OPDs and clinics will smoothen work flow of the doctors and enhance experience.



1

Reuse of devices

Accreditation lays down standards for management of reuse of single use device

BY DEEPAK AGARKHED

1. The label displayed on device package clearly indicates item as disposable after single usage.

The single use device means a device that is intended for one use, or on single patient during a single procedure. The label displayed on device package clearly indicates item as disposable after single usage. It does not provide instruction for re-processing. The

term reuse of any medical device is usage on same or different patient with applicable reprocessing between uses like octopus being used in cardiac surgery.

In one the hospital, the staff used to term cardiac catheters and guide wires with 'Oxford' as reusable and 'New York' as brand new!

We come across single use devices at various clinical areas in different hospitals like ambubag at emergency crash cart to octopus used in cardiac surgeries. Most of the healthcare manufacturers bring out various medical devices instead of using it multiple times, looking at patient safety and enhancing the recurring business of product. As per the WHO report on health at India, total expenditure on health per capital for Indian is 267 dollar which is much lower than 3453 dollar on average for 35 OECD countries. The percentage of out of pocket spent in India on health is 62.4%.

The natural question that arises among everyone is that can India afford to spend more money on healthcare when the total expenditure on health per capital in public is only 25%. The medical devices and consumables form substantial share in patient bill especially for surgical patients, the care full adoption of re-usage of single use device will help patient to afford for our of pocket expenditure to some extent.

The sterility, integrity and functionality of device play a major parameter to decide on how to use single use device multiple times. Both NABH & JCI accreditation have standards for identification, implementation of process of management of reusage of single use device. The single use medical devices can be grouped as:

- ▶ Open and unused wherein there is breach of sterility or sterile package has been opened.
- ▶ Open and used like dialyser
- ▶ Unopened and expired.

The risk are associated with re-usage of single use device are primarily the potential of increased risk of infection, unacceptable performance of post reprocessing. The hospitals should follow the state policy as guidelines before adopting practice in their respective hospital.

The following are the practical challenges the hospitals faces while adopting any single use device for re-usage.



- ▶ Methodology to identify the frequency of usage to be considered as median value for tracking number of usages.
- ▶ Methodology to track the number of actual usages of devices either at user level or at central sterilisation supply department level.
- ▶ The billing of patient on particular device whenever the device loses its efficacy before the defined frequency.
- ▶ Protocol on cleaning, disinfection and sterilization of each of these devices.
- ▶ The tracking of patients on whom the device is being used whenever any adverse event occurs and preventive, corrective action initiation.

The single use devices will be recalled from clinical usage if repetitive incidents or reporting from within or hospitals are noticed. The hospital team should carefully evaluate medical devices for each procedure and come with action plan with fine trade of cost to patient and quality/ safety of patient before deciding to include any device in this group. [HR](#)



Deepak Agarkhed is General Manager-clinical engineering, quality and facility, with Sakra World Hospital, Bengaluru.

2. Single use devices are used at various clinical areas in different hospitals like ambubag at emergency crash cart.



Catering to process requirements

The unique design of Max Med Centre - a standalone immigration health check-up centre

BY RITA DUTTA

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1. The centre caters to mainly to immigration health check-ups for people aspiring for immigration to Canada, the US, the UK, Australia and New Zealand.

Max Med Centre, a standalone centre for immigration health check-ups, was launched recently at Lajpat Nagar in Delhi. The centre, spread across 4,906 square feet, was designed in a fit-out that was meant for commercial space. The centre caters to mainly to immigration health check-ups for people aspiring for immigration to Canada, the US, the UK, Australia and New Zealand. This is the only state-of-the-art standalone immigration centre of the Max Healthcare group, and the same is being replicated at

Mohali. In the immigration space across India, such centres are run privately by clinicians or part of hospitals. This was a first time foray of a private hospital to create a standalone immigration health check-up centre.

This Max Med Centre has been designed, overcoming the challenges faced in the other immigration health check-up centre located at Panchsheel- which is being run for seven years. At the Panchsheel centre, there was a mixing of crowd - OPD, IPD and immigration applicants which led to embas-



sies being worried about confidentiality, fraud detection or personalised care.

The model was also plagued by a lack of dedicated clinician time for immigration patients as well as a dearth of dedicated infrastructure for immigration patients. Also, the TAT of check up was four to five hours and reporting would take four to five days. There were also bottlenecks like high volume of call centre queries due to delayed reporting and some parts of SOPs for different countries could not be adhered to due to infrastructural issues. None of these pain

points could be addressed at Panchsheel due to lack of space. Mixing of immigration and other patients had begun to impact service experience for patients and patients had to clamber up and down three floors for all their check ups. The immigration volumes were increasing by 20% CAGR, and thus a business call was taken to create a standalone centre.

Says Arpita Mukherjee, Vice President - Operations, MAX Healthcare, "We decided to design the new centre as per the guidelines that were provided by the consulates



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2. The centre has also complied with the International Panel Physician Annual (IPPA) guidelines.

3. Max wanted to ensure a hassle free and quick immigration experience with increased throughput and reduction of processing time.



3

of Canada, the US, the UK, Australia and New Zealand. We also complied with the International Panel Physician Annual (IPPA) guidelines with demarcated documentation and medical area, sputum and DOT room and comfortable attendant area.”

The TAT had to be expedited in this centre. “If a sample was given before 12 pm,

then the reports had to be within 24 hours else within 48 hours for all countries. And for the UK, same day reporting was required,” says Mukherjee.

The brief given to WARD FOUR Consulting, the firm that designed the project, was to craft an immigration centre to carry out the medical check required as per the required protocols of the countries. “We wanted to ensure a hassle free and quick immigration experience with increased throughput and a reduction of processing time. Privacy and contamination or dilution of data/ results /samples were of key concerns to the client consulates. Fraud detection through robust process and infrastructure, improvement in throughput and patient experience was also emphasised on,” says Mukherjee.

Detailed country-specific workflows were laid out by eliminating all non value added steps through value stream mapping. A detailed mapping of services to specific process requirements of each country was created. Says Siddharth Puri, Director- Architecture for WARD FOUR Consulting, “We decided to separate the patient and attendant in the first step of the process and to generate a café like atmosphere to improve pa-

The programme:

- Registration Desk
- Documentation Area
- Attendant Area
- Security Check
- Changing Rooms
- X Ray
- Vitals and Vision
- Lab
- Washroom for sample
- Dirty Utility Room
- Panel Physician Consult
- Vaccination Room
- Nursing Station
- Sputum Collection room
- DOT Room
- Back office
- Café Coffee Day
- Meeting space

tient and attendant experience. Max wanted to have spacious area for attendants (usually one immigration applicant comes with four to five attendants and family members) and the centre to be compliant with CDC and other intra Government protocols.”

The project has a kid friendly zone as young couples immigrating aboard come with children and adoptees, besides creating a dedicated on-boarding/document check and process area and separate clinical and non-clinical spaces. The project has created a linear operational flow as well as has a focus on infection control for sputum and TB testing. The centre is completely paperless system- from billing to documentation to nursing to doctor consultation and radiologist. It has imparted technical and behavioral training for doctors and staff and has a dedicated call centre executive to manage only immigration queries.

The project has used vitrified tiling and as with other Max Healthcare projects, branding has been a key part of the design. Max brand colours have been integrated in all aspects of design such as vertical screens.



Customised seating has been provided for space efficiency. Transitional spaces have also been designed, such as a Zen garden has been provided to enhance user experience. Light subtle colours have been used to open up the space.

There were a slew of challenges to overcome in the project, though. “A major concern was that the floor plate was divided into two wings connected by a narrow corridor and this led to increase in percentage of circulation. The problem was solved by pushing the programme to the edges and utilising the central space for waiting and circulation. Apart from providing generous waiting, this also increased the sense of spaciousness and contributed to the desired café like environment,” says Puri. In the centre, the TAT for check up has reduced from 4.5 to 1.5 hours and process efficiency has increased from 8% to 24%. Patient satisfaction scores has increased from 43% to 86%, number of complaints per 1,000 reduced from 5.8-0.4 and applicants volumes have increased significantly. Over all, it has turned out to be a project that has been designed effectively. **HR**

4. Due to the effective design of the project, the TAT for check up has reduced from 4.5 hours to 1.5 hours

5. As with other Max Healthcare projects, branding has been a key part of the design.

Powered by artificial intelligence

The healthcare industry is placing AI to undertake the task of diagnosing patients more quickly and efficiently

BY DR GSK VELU

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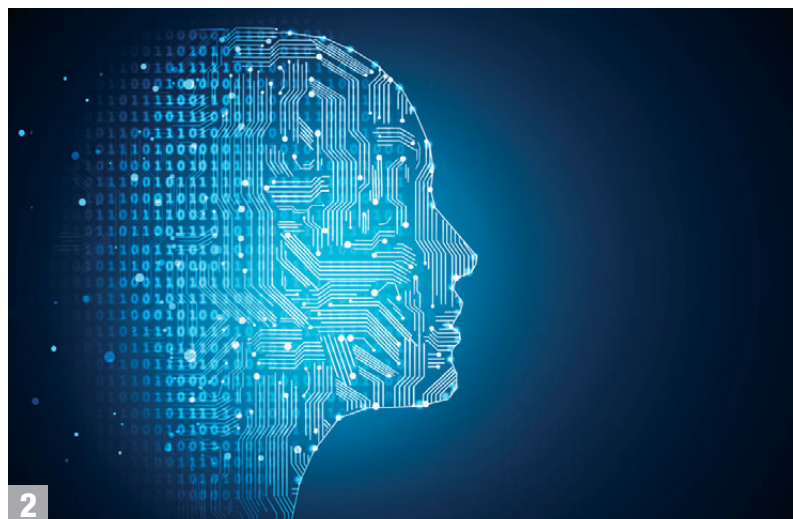
1. AI assists healthcare providers with precise treatment plans post analysis of data and monitors treatments thoroughly.

The 21st century has witnessed many disruptive medical marvels due to the influx of new technologies which has enabled the healthcare sector to emerge as the sunshine sector globally. Artificial Intelligence has played a significant role in the healthcare sector and contributed towards multiple medical practices. From utilising AI based systems for routine clinical situations to receiving intelligent decision support for interpreting diagnosis, Artificial Intelligence (AI) has evolved to provide real time medical solutions for health-related problems.

The increase in need to produce timely and accurate medical diagnosis demands a differential approach. The capacity of computer systems has addressed this need

to take up tasks for individuals and has improved efficiency by making every industry virtual, including manufacturing to transportation. Now, the healthcare industry is getting into the game, placing AI to undertake the task of diagnosing patients more quickly and efficiently in the emergency room and rationalise communication between doctors to reduce the risk of complications and provide accurate treatments.

AI has contributed extensively to advance the quality of healthcare treatments. It assists healthcare providers with precise treatment plans post analysis of data and monitors treatments thoroughly. AI has the ability to quickly and accurately identify signs of diseases in medical images such as MRI, CT scans, ultrasound, and X-ray. Hence,



it gives scope for faster diagnosis, reduces the chances of delays for patients and accelerates treatment options.

Now a days, patients demand faster and effective results. Addressing this need, AI helps both doctors and patients with clear insights in real time. Patients are now benefited with immediate answers to their queries, get more information and reminders about taking medications, provide medical reports to physicians with ease and gain stronger medical support using AI. Virtual assistance also helps the doctors with tracking prescriptions, monitoring their patients and ensuring the correct medication for patients.

While doctors have a clear advantage, AI and machine learning algorithms are

promptly becoming vital tools for radiologists as well. Not only can they systematise monotonous tasks, but they have the potential to magnify human intelligence by improving skills, undertaking the clinical role of a radiologist and advance the quality of patient care.

AI in healthcare has the potential to advance results by 30- 40% and reduce the cost of treatment massively by approximately 50%, as per a study by Frost and Sullivan. Enhancements in precision and efficiency mean fewer human errors, leading to a decrease in doctor visits. Doctors can gather information from the data base and anticipate risk of diseases to prevent hospital re-admissions.

AI has clearly enhanced the scope of providing quality solutions to the healthcare industry. Today, many technology vendors are significantly investing in AI, considering the solutions and services that can be provided with use this technology. AI, alongside proficient clinicians, is likely to continue to be the current course for many healthcare organisations across the globe.

There is a need to amplify the focus on AI and expand its contribution to the current healthcare industry in order to provide accurate diagnosis to patients and reap the multiple benefits it provides. ^{HR}



Dr GSK Velu is Chairman and Managing Director with Trivitron Healthcare.

2. AI helps both doctors and patients with clear insights in real time.



1

The popularity of E-clinics

Online telemedicine practice is growing as it is time and cost effective

BY AYUSH MISHRA

Advancement in healthcare technology has created a ripple that enhances the user experience. Telemedicine is one recent innovation that is constantly improving and truly enables provider and patient mobility. Technological advancements have brought about a noticeable change in the medical field. It allows doctors to diagnose, evaluate and cure patients using telecommunications technology, in remote and urban areas. Though traditional, in-person

visits to the clinic always exist for critical and sensitive illnesses, online telemedicine practice is growing as it is both time and cost effective.

E-clinic is a very new concept in India. E-clinics are like healthcare centres set up in remote areas to provide basic health amenities to the masses. Many telemedicine centres have been set up in the country but there is still a need for quality E-clinics to grow and cater to medical needs. The rural population has difficulty meeting their

1. E-clinic is helpful to patients who live in rural areas.



doctor in-person, as they have to travel a long distance to the city for proper medical treatment.

The burgeoning of E-clinics is a blessing in such a case. They are helpful to patients who live in rural areas and are set up in the vicinity of 1-2 kms, to enable an easy accessibility to OPDs, discounted diagnostics and full-time medical staff. So, instead of potentially missing appointments, these services allow patients to connect with the doctors via technology-enabled devices like mobile phones which they already own.

The Government under the Digital India Initiative has been able to set up roughly 110 clinics so far in rural areas. Not only rural, the urban part of the country too needs proper and quality care for correct medical surveillance. Tier II and III cities in South India, UP and Maharashtra have seen a host

of telemedicine centres, too. Notable cities like Meerut, Jalgaon, and Bareilly have a greater need for E-clinics as the population has the buying power but no availability of quality healthcare facilities. In a critical situation or a natural calamity, access to medical emergency is difficult; access to telemedicine can be a boom then. The centres offering basic telemedicine can be converted to more advanced care centres in the future, if the local society responds to it positively. That will be a big step towards quality healthcare for all in India. National and international qualified doctors, having a vast clinical experience and a sound knowledge in their respective fields, are in the panel of doctors at these E-clinics.

However, the only challenge that continues today is the reluctance of doctors and hospitals to accept the digital wave and offer telemedicine. More awareness needs to be created on the advantages of having E-clinics, which also offer counseling to patients on homeopathic treatment, assist in creating case histories of patients and connect patients to the relevant doctors. It will be a fair assumption to say that E-clinics will cater to advanced care and emergency care in the next 10 years.

Advent of telemedicine has benefitted both the patients and the doctors. Doctors get benefitted from smaller number of appointment cancellations and are well informed in advance. Telemedicine has access to the internet and wireless devices which help patients to get specialised information regarding their health and help them to lead a healthy lifestyle with the help of several apps. It is clear that with the growth in technology, the telemedicine sector will also see a rapid growth in the coming years in India. [HR](#)



*Ayush Mishra
is Co-founder of
Tattvan Eclinics.*

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Advancements in IVD

In IVD, technology is increasingly playing a role in almost all processes, patient testing to report delivering, says Nitin Srivastava, National Sales Manager-IVD, Nihon Kohden India



How has the company expanded its product portfolio over the years?

Nihon Kohden India is a leader in the hematology segment and installed more than 4,000 equipment across India by strong sales team deployed in every metro and tier 2 cities, covering B2B & C2C, targeting and positioning new products as per customer requirement.

Already we are having different types of models of hematology equipment and recently added in our product portfolio, Serum protein Analyzer Model CHM 4100 and Autoloader Hematology Analyzer with 33 parameters Model MEK 9100 has been launched.

What has been the contribution of the company towards the technological advancements in healthcare?

The reach of technological innovation continues to grow, changing all industries as it evolves. In IVD, technology is increasingly playing a role in almost all processes, patient testing to report delivering.

Nihon Kohden has upgraded their equipment technological as per demand of tropical region, robust technology, less maintenance (micro interior installation base) affordable patient testing with quality products.

What is the USP of the company?

The USP of Nihon Kohden-IVD is 'world class quality product with affordable cost to the patient'.

What are the products that you have for home healthcare, an emerging focus area in healthcare?

Nihon Kohden India –IVD is having Hematology Cell Counters and Serum protein analysers which are used by medical professionals at their pathology laboratories only. There is no product which is related to home care by Nihon Kohden-IVD.

Which are the segments that the company enjoys the numero uno position and what are plans to consolidate that position further?

Nihon Kohden India-IVD retained its number one position of the top three players amongst 3 PDA Hematology Cell Counter for the seventh straight year, but there have been widespread changes in the pecking order beneath it.

Nihon Kohden India now has two models of 3 PDA in the top five, and two model in 5 PDA in the top five bestselling Hematology Cell counters in 2017-18 in the Indian IVD industry. Our plan to consolidate and maintain the position further is to first and foremost providing world class proven quality product with affordable prices to patients. Especially, tier 2 and tier 3 cities will be focused more.

What is in the pipeline from the company?

Presently, we have different models of hematology cell counters, serum protein analyser and fully auto biochemistry analyser. In the pipeline, we have more products in immunochemistry, critical care and coagulations.



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