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MARCH 2019, ₹50

Peter Sands

**Executive Director.** The Global Fund

1st EDITION



# DISSECTING THE FUTURE OF **DIAGNOSTICS**

The first edition of Dx Summit brought together the best minds to deliberate and debate on the right strategies to shape a sustainable future for diagnostics business in India





**PRESENTS** 



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# START UP CORNER DIAGNOSTICS



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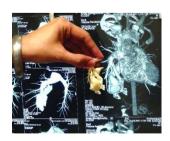
## OPINION

**PARTNERSHIPS** FOR HEALTH –
INDIA NEEDS THEM

IS YOUR DOCTOR **BURNT OUT YET?** 

# CASE STUDY

**RAISING THE BAR IN TECHNICAL EDUCATION** 



# IT@HEALTHCARE

AI IN HEALTHCARE - INDIA NEEDS TO **PRIORITISE** MATERNAL AND **CHILD HEALTH** 



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# Regulating medical devices

he Bloomberg Healthiest Countries Index for 2019 saw India slip one place from 119 to 120, while China improved its rank by three place to 52. Sri Lanka, Bangladesh and Nepal rank significantly above India but one could argue that India's sheer geographic size and population add multiple layers of complexity to the issue. Hence, a comparison with these three nations may not be fair.

The ranking compared 169 countries, and took into account criteria like life expectancy, and also downgraded countries for unhealthy habits like tobacco use and obesity. The rankings also considered environmental factors such as sanitation and clean water, according to a report.

It will be interesting to observe how fast recently launched health schemes like Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (PM-JAY) impact such rankings. This scheme has reportedly delivered treatment to more than 12 lakh people in the first 150 days since its launch last September.

India's slip in the Healthiest Countries Index is minor and cannot negate many gains in terms of MDGs. Also, the devil lies in the details and we'd have to know more about the exact methodology before we pass final judgment.

Rather than knee jerk reactions to such rankings, we have to take a more holistic view. Regulations and policies are long-term measures and take time to be framed and implemented. In a country like India, the consultative approach, a hallmark of democracy, adds checks and balances, which are very crucial especially in healthcare. But the flip side is that arriving at a consensus among different stakeholders add layers of complexity. The process of listening to each stakeholder and finding a balance could take months and even years.

For instance, experts in medical devices manufacturers' associations like Association of Indian Medical Device Industry (AiMeD) and patient groups have been on opposing sides of the fence in debates on medical devices regulations. The latter group has sometimes accused the regulator of not listening to their side of the story.

But when the health ministry recently released the draft of the medical devices regulations in mid February, both sides were united in pointing out the flaws. In a press note dated February 9, AiMeD hailed the outcome of the first meeting called by the Central Drugs Standard Control Organisation



The process of listening to each stakeholder and finding a balance could take months and even years

(CDSCO) India's national regulatory authority for medicines and medical devices. The meeting had participants from both overseas and Indian manufacturers and AIMED's press note said the discussions on the road map to regulate medical devices was 'applaudable.'

But a day later, the CDSCO released a notification which apparently went against this understanding. In a press note dated February 14, Rajiv Nath, Forum Coordinator, AiMeD said that the notification released the same evening of their February 8 meeting, was in conflict with their discussion regarding a phased step-by-step approach. The association says there is no logic to the choice of devices regulated in the notification. Secondly, the deadline of 2020 is too short and AiMED has recommended that at least five years should be given as a transition phase. The rationale is that this transition phase is required for both industry to put in place the infrastructure as well as the regulatory departments to scale up inspection labs etc.

AiMeD followed this up with a tie up with the Association of Healthcare Providers (India) (AHPI) to promote the India Certification of Medical Devices (ICMED) Scheme, touted as the country's first indigenously developed international class quality assurance system for India manufactured medical devices. The medical devices sector is going the same way as the pharmaceutical sector, where global norms like those of the US FDA for good manufacturing practices, take precedence over national norms. The difference is that the US FDA GMP inspections are for facilities exporting to the US. Local medical devices players argue that local certifications should be applied for locally used devices. But hospitals and doctors seem to mistrust devices which meet only local certifications and prefer to use imported devices which meet global norms. The issue will need to be addressed both on the quality and price front. The medical devices industry should learn from the experience of the pharma sector, where there is concerted move to move towards harmonisation of global GMP standards.

Ultimately, all segments have to keep the patients in mind. Whatever adds value to the patient will add a competitive edge to the stakeholders in the long run.

VIVEKA ROYCHOWDHURY Editor viveka.r@expressindia.com

# **MARKET**



# Washington University in St Louis organises Forum for India

The event held in Mumbai discussed the current trends, personalised medicine and the future of healthcare

Tashington University, a leader in the emerging field of personalised medicine, recently organised Forum for India in Mumbai. The focus of the event was on personalised medicine, and what the future of healthcare holds in India. The event was attended by Washington University's leading medical scientists — Dr Philip Payne, Director of the Institute of Informatics, Dr Rajendra Apte, the Paul A Cibis Distinguished Professor at Washington University School of Medicine in St. Louis and Kurt T Dirks, Vice Chancellor, International Affairs and Director of the Mc Donnel International Scholars Academy for Washington University and Gerard Baker, Editor at Large, The Wall Street Journal, who shared their cuttingedge research.

Mark S Wrighton, Chancellor, Washington University said, "The university has been at the forefront of discovery and research when it comes to genetic sequencing, having played an integral role in the Human Genome Project. We continue to push forward this important work and look forward to discussing collaborative approaches with our partners in Mumbai."

Leading researchers from Washington University's School of Medicine--along with corporate leaders and cli-



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nicians based in India discussed their research, shared insights and explored collaborative opportunities centred around personalised medicine and healthcare innovations.

The first keynote speaker was Dr Apte.

"As the population ages, we are confronted with diseases reaching epic proportions," said Apte. "The problems associated with ageing are immense and acutely felt in South-east Asia. Alzheimer's disease, glaucoma and diabetes-related retinopathy affect tens of millions of people in India. We want to make meaningful, fundamental discoveries in the lab, then develop individual therapies and cures. It is a bench to bedside approach, and doing it collaboratively-with partners in In-



dia and beyond--gives it a lot of power."

The other keynote speakers

were Dr Payne and Robert J Terry Professor, Professor of Medicine, Division of General Medical Sciences and Professor of Computer Science and Engineering at the School of Engineering and Applied Science at Washington University.

Dr Payne said, "India is making some very interesting moves to implement broader access to health insurance and healthcare for all parts of their population."

"Given the size of India's population and the complexity of delivering care at that scale, in many ways, a country like India could leapfrog the United States in terms of thinking about data driven approaches to improve wellness in the population," he said.

In addition to the keynote speeches, Gerard Baker, spoke on the economics of healthcare. There were two panels that addressed the financial and regional impacts of healthcare and personalised medicine during the day.

# 150 days, two crore cards under Ayushman Bharat: **Dr Indu Bhushan at MFI 2019**

Government of India has shown its commitment towards strengthening the healthcare eco-system in the country by increasing the investments to 2.5 per cent, Bhushan said at the three-day Medical Fair India organised in Delhi

By Akanki Sharma New delhi

IN A bid to support India's ambitious dream of Ayushman Bharat and Universal Healthcare, the 25th edition of MFI 2019 was held in Delhi. Global medical devices manufacturers, industry bodies and associations, healthcare experts, think tanks and policy makers from over 25 countries participated in the three-day medical trade show organised by Messe Dusseldorf India.

Addressing Medical Fair India in a message on the first day, Jagat Prakash Nadda, Minister of Health and Family Welfare stated, "The Government of India, under the ambit of Ayushman Bharat is committed towards ensuring Universal Healthcare to all, a system which is devoid of any



financial hardships and improving quality of life for people. I am confident that Medical Fair India will act as a platform for healthcare experts and stakeholders to share and discuss tangible solutions to diverse healthcare bottlenecks, challenges and issues of concerns."

"Medical Fair India is well known for its ability to detect trends and respond to new innovations. Keeping pace with the global developments in medical and healthcare space, MFI 2019 will successfully demonstrate the potential of Indian healthcare sector on the world map," said Thomas

Schlitt, Managing Director, Messe Düsseldorf India.

MFI 2019 hosted a variety of attractions including CLIN LAB India, Future for Health (FTR4H), REHAINDIA and the Make in India Pavilion. Technology Mela by Kalam Institute of Health Technology was a key attraction at MFI

On the second day of MFI, Indu Bhushan, CEO, Ayushman Bharat, inaugurated the 4th VOH International Conference on Viable Healthcare for all. He said, "For the first time in the history of independent India, the health sector has become a political commitment.

## **MARKET**

Government of India has shown its commitment towards strengthening the healthcare eco-system in the country by increasing the investments to 2.5 per cent. We have completed 150 days and have issued two crore cards. We are issuing four to five lakh cards every day. 15000 hospitals have joined the movement, and 15 per cent of these are private hospitals. The future of this movement lies in a good integration between the private and public healthcare entities. I urge all entities to not sit on the fence and wait for the change. Join in and make the change happen."

Also, talking about the flaws and a lackadaisical attitude of people in the system, Bhushan mentioned, "We want to eliminate fraud and abuse in the system. Globally, six to eight per cent cases can be termed as fraud. However, we want to have a system where our money is useful for the benefit of people."

Sharing their ideas and suggestions on e-pharmacies, panellists informed that incentivisation of startups by the government in terms of minimal tax and single-window clearance for projects will make healthcare more accessible to the people in rural areas. "At present, we are producing a force of 1.5 lakh pharmacists in India," said one of the panelists.

Colonel Hemraj (Retd), CEO, BR Life Hospitals informed that currently, there are 300 medical colleges in the country. In the long run, perhaps, all district hospitals would be converted into medical colleges.

VG Somani, Joint Drug Controller General (India) talked about the contribution of Indian pharmacy to the world. "India is providing medicines to 40 per cent population of the world. Our medicines reach 205 countries," he informed.

There were also deliberations on various challenges faced by the healthcare sector. With several hospitals facing lack of beds, a panelist informed that government hospitals have more beds as compared to private ones, but 50

per cent of these are not functional due to lack of manpower. Also, Dr Anil Kohli, Past President, Dental Council of India, Consultant to President of India said that there is a need for public-private partnership so that society can experience better healthcare.

With regards to Ayushman Bharat scheme facing challenges in some states, Mahendra Pala, VP - Business Development, Gleneagles Global Hospitals, informed that none of the hospitals are empanelled in Ayushman Bharat in Telangana.

Mobile application Meddo — India's first end-toend aggregated private clinic chain — was also launched at the conference. "Patients have to keep running here and there because everything is not being collected at one place. What that leads to is, no data being aggregated and thereby insurance not being penetrated into the way it should. We are trying to create a network that can then enable into an OPD care for people through one single gate-Saurabh Kochhar, wav." Co-founder and CEO, Meddo,  ${\rm told}\, {\it Express\, Health care}.$ 

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# Dx SUMMIT 2019

# 1st EDITION



The first edition of Dx Summit brought together the best minds to deliberate and debate on the right strategies to shape a sustainable future for diagnostics business in India









# DISSECTING THE FUTURE OF DIAGNOSTICS







**AGENDA DAY 1 22 February 2019** 

# Dx Summit 2019

Welcome address by Viveka Roychowdhury, Editor, Express Healthcare & Express Pharma

Special address: Dr Avinash Phadke, President and Mentor, SRL & Founder

Dr Avinash Phadke Labs

Enhancing lab productivity through latest generation flow cytometry and automation solutions for sample prep: Dr Avinash Sahoo, Product Manager-Dx Flex, Beckman Coulter and Dr Radhakrishnan Srinivas, **Beckman Coulter** 

Panel discussion: The next disruption in diagnostics Dr Ajay Phadke, Centre head, SRL Dr Avinash Phadke Labs (moderator) Dr Vidur Mahajan, Executive Director, Mahajan **Imaging** 

Dr Anu Acharya, CEO, Mapmygenome Dr Pranav Anam, Founder, Gene Box Dr Vedam Ramprasad, COO, Medgenome Labs

## **Current and future perspectives in tissue** diagnostics within India

Sanjeev Nair, CEO, HISTOXPERT

#### Networking tea break

#### ADAMTS-13: An aid in diagnosing TTP

Dr Nikaulas Binder, Technoclone Gmbh, Austrian for

#### Panel discussion: Is diagnostics business in India an opportunity or a challenge?

Dr Avinash Phadke, President and Mentor, SRL & Founder, Dr Avinash Phadke Labs Sanjeev Vashishta, MD & CEO, PathKind Diagnostics Dr Sanjay Arora, Founder, Suburban Diagnostics Raelene Kambli, Special Correspondent, Express Healthcare (moderator)

#### **Express Healthcare Dx Leadership Awards nite**

Address by Viveka Roychowdhury, Editor, Express Healthcare & Express Pharma

Address by Narendra Varde, General Manager, **Abbott Diagnostics** 

# **Welcome address**



Welcome address by Viveka Roychowdhury, Editor, Express Healthcare & Express Pharma

# FIRST EDITION OF DX SUMMIT HELD IN HYDERABAD

The summit brought together best minds to deliberate and debate on right strategies to shape a sustainable future for diagnostics business in India

ndian Express and the Express Healthcare launched the first edition of Dx Summit in Hyderabad on February 22-23, 2019. The two-day summit attracted around 80 top notch leaders from the diagnostic sector who deliberated on the business opportunities, business models, trendsetting developments, milestones, diagnostic technologies, challenges and regulatory issues within the sector. The event also attracted clinical experts and academic experts associated with Invitro Diagnostics (IVD), Molecular Diagnostics, Rapid Testing, Point of Care Diagnostics/Testing (POCT), Precision Medicine and associated regulatory matters, R&D and Technology transfer.

The summit offered unparalleled insights through its comprehensive conference programme and networking opportunities with key opinion leaders in the industry. The discussions during the conference comprised of the next disruption in diagnostics, Is diagnostic business in India an opportunity or a challenge? Automation-Costs, rewards and risks, QC/QA in diagnostics, precision medicine and its way forward, impact of NEDL and

Industry stalwarts and leaders such as Dr Avinash Phadke, President and Mentor, SRL Diagnostics & Founder, Dr Avinash Phadke Labs; Dr Sanjay Arora, Founder, Suburban Diagnostics; Dr A Velumani, Founder and CEO, Thyrocare; Sanjeev Vashishta, MD and CEO, Pathkind Labs; Dr Vidur Mahajan, Executive Director, Mahajan Imaging, Zoya Brar, Founder and CEO, Core Diagnostics; Dr Kamini Walia, Sr Scientist ICMR; Dr

V Jyotsna, Lab-Head, Telangana Diagnostics; Sanjeev Nair, CEO, HISTOXPERT; Dr Ajay Phadke, Centre Head, SRL Dr Avinash Phadke Labs; Dr Anu Acharya, CEO, Mapmygenome and more were present at the two-day summit.

Dr Phadke, during his special address, threw light on the challenges at hand for the diagnostic sector in India. He said that it is paramount for companies to align their businesses to the growth of the sector. The need of the hour is to look for models, differentiators that can make businesses more sustainable while ensuring that patients receive the best quality care. Dr Velumani in his address shared his story of grit and glory. He emphasised on the relevance of risk taking in business and spoke about his model of cost disruption in order to serve the population as well as run a sustainable business.

Dr Kamini Walia on the other hand spoke on the impact of NEDL on the sector in the coming years. She said that EDL will expand the comprehensive basket of diagnostic test for patients and will bring in the required standardisation of diagnostic services. Moreover, the panel discussions on the next disruption focussed on how to effectively harness disruption and disruptive technologies to further improve the quality, value and patient experience in diagnostic services as well as enhance career and company growth effectively.

The panel on 'Is diagnostics business an opportunity or a challenge in India?' delved into understanding the challenges and find ways where

**23 February 2019** AGENDA DAY 2



(L-R) Dr Nikaulas Binder, Technoclone, Austrian for Compact, Sachin Malhotra, CEO, Tech Care for All India, Dr Sanjay Arora, Founder, Suburban Diagnostics, Sanjeev Vashishta, MD & CEO, PathKind Diagnostics, Roger Low, Senior Manager Marketing - South Asia, Abbott Diagnostics, Singapore, Dr Avinash Phadke, President and Mentor, SRL diagnostics & Founder Dr Avinash Phadke's Labs and Viveka Roychowdhury, Editor, Express Healthcare and Express Pharma

companies can outdo the road blocks and adopt practical approaches to initiate, achieve, and sustain profitable growth—today and tomorrow.

Similarly, the panel discussion on 'Automationcosts, rewards and risks emphasised on more affordable treatment, accuracy and efficiency, increased volumes as more patients are treated, longer-lasting equipment and less risk of lawsuits. The panel on 'Building a quality conscious diagnostic sector' urged the audience to look for major factors that influence high quality diagnostic services.

Dr V Jyotsna, Lab-Head (Operations), Telangana Diagnostics while giving the special address said, "The main aim of Telangana Diagnostics Central Hub is to bring in quality and affordability. In last nine months, we have delivered 12 crores worth of medical tests (25 lakh tests) at a

fraction of cost. Nearly 1.6 lakh patients utilised these tests and 3.12 lakh samples are tested."

Talking on 'Diagnostics beyond 2020: The decade of data', Zoya Brar said, "Between 2020 and 2030, healthcare will generate 20 zetabyte data. Hence, the next decade will be the decade of data."

Lastly, the panel on precision medicine examined the possibilities on genomics, personalised medicine and more in India. It also looked at various factors that can restrict the growth of such services and provided idea to enhance clinical research in this direction.

Dx Summit also launched the first edition of Dx leadership Awards commemorating the contribution of leaders in diagnostic services. The winners of the same were:

#### **CATEGORY 1: LEADING LIGHTS**

- ◆ Dr Arvind Lal. Chairman and Managing Director, Dr Lal PathLabs
- ◆ Dr Sushil Shah, Founder and Chairman of Metropolis Healthcare
- ◆ Dr Avinash Phadke, Founder, Dr Avinash Phadke Pathology Labs & President -Technology,

**SRL Diagnostics** 

#### **CATEGORY 2: STALWARTS**

- ◆ Dr Subhendu Roy, MD, Drs Tribedi & Roy Diagnostic Laboratory
- ◆ Dr S Surender Reddy, Chairman & MD, VijayaDiagnostics
- ◆ Ameera Shah, Managing Director of Metropolis Healthcare
- ◆ Dr Sanjay Arora, MD, Suburban Diagnostics

#### **TROPHIES CATEGORY 3: LEADERS**

- ◆ Zoya Brar, CEO & Founder, Core Diagnostics
- ◆ Dr Anu Acharya, CEO & Founder,
- Mapmygenome ◆ Sanjeev Vashishta, CEO, Pathkind
- Diagnostics ◆ Dr Ajay Phadke, Head, SRL Dr Avinash Phadke Labs
- ◆ Dr Kamini Walia, Sr Scientist, ICMR
- ◆ Dr Ravi Gaur, COO, Onquest Diagnostics

#### **CATEGORY 4: ACHIEVERS**

- ◆ Dr Abhik Banerjee Director Quality Assurance & Sr Consultant - Patholoist, Suraksha Diagnostics
- ◆ Dr Barnali Das, Consultant pathologist, **KDAH**
- ◆ Dr (Col) Jyoti Kotwal, Sr Consultant-Hematology & Clinical Pathology, Sir Gangaram Hospital

# Dx Summit 2019

Special address: Dr A Velumani, CEO, Thyrocare

Unifying across the care continuum for measurable impact to patients, payors, clinicians and entire health system

Roger Low, Senior Manager Marketing - South Asia, Abbott Diagnostics, Singapore

#### Panel discussion: Automations - Costs, Rewards and Risks

Dr A Velumani, Founder and CEO, Thyrocare; (moderator)

Dr Sujata Dhanuka, National Technical Head, Apollo Diagnostics:

Yash Mutha, CFO, Krsnaa diagnostics;

Dr Ravi Gaur, COO, Onquest;

Saurabh Chadha, CFO, SRL Diagnostics

#### The impact of EDL

Dr Kamini Walia, Sr Scientist, ICMR

Special address: Dr V Jyotsna, Lab head, Consultant BioChemistry, Telangana Diagnostics

#### Panel discussion: Building a quality conscious diagnostic sector for India

Prof Ashok Rattan, Adviser-Laboratory Operations, PathKind Labs, PathKind Diagnostics; (moderator)

Dr V Jyotsna, Lab head, Consultant BioChemistry, Telangana Diagnostics

Dr Abhik Banerjee, Director-Quality Assurance & Senior Consultant- Pathology HPLC & LC-MS/MS Division, Suraksha Diagnostic;

Dr Bhaskar Bhattacharya, Laboratory Director, Genu Path Labs; Dr Barnali Das, Consultant, Biochemistry & Immunology Division, Kokilaben Dhirubhai Ambani Hospital & Medical Research Institute;

Dr Sunita Deshmukh, HOD- lab medicine, Paras Hospital

#### Diagnostics beyond 2020: The decade of data

Zoya Brar, Founder&CEO, Core Diagnostics

#### Reaching the next millions: New tools and market innovation for healthier India

Sachin Malhotra, CEO, Tech Care for All India

## Panel discussion: The precision medicine era: Is India ready?

Dr Jyoti Kotwal, Chairperson & Prof, Dept of Hematology, Sir Ganga Ram Hospital & GRIPMER; (moderator)

Dr Anuradha Udumudi, Chief Scientific Officer & Founder, Genetech;

Dr Sudha Rao, Co-Founder and Executive Director, Nanopore - Genotypic and

CN Chaudhari, Head-Laboratory Services, Apollo Hospitals

Vote of thanks by Prathiba Raju, Special correspondent-Express Healthcare

# Dx SUMMIT 2019

# **SPECIAL ADDRESS**

# DR AVINASH PHADKE, PRESIDENT AND MENTOR, SRL & FOUNDER, DR AVINASH PHADKE LABS

# HIGHLIGHTS

- ♦ In genomics or specialised oncology tests there are niche areas which can further growth but larger corporates still need to look into such niche products
- ◆ Medicines are trying to move to the patients' bedside. So we need to be cost friendly
- ◆ We need to move towards becoming more patient friendly labs
- ◆ Opportunities for the diagnostics industry are huge. However, we should make country specific strategies





In India, diagnostics is facing disruptive changes. One such revolution is led by the WHO list of essential drugs

# **ENHANCING LAB PRODUCTIVITY THROUGH LATEST GENERATION FLOW CYTOMETRY AND AUTOMATION SOLUTIONS**

# HIGHLIGHTS

- ◆ Beckman Coulter has a varied range of advanced kits, which helps labs in advanced testing
- ◆ Our products have fast turn around time, automated solutions for flow sample preparation
- ◆ We offer complete innovative solutions which every lab needs



Dr Radhakrishnan Srinivas, Product Manager, Automation



Dr Avinash Sahoo, Product Manager-Dx Flex, **Beckman Coulter** 

# HIGHLIGHTS

- ◆ CytExpert from Beckman Coulter can help save time, reagents and sample for labs
- ♦ It has multiple clinical research applications and can be used to test for several clinical flow tests
- ◆ It has been installed in cities. and premier institutes across the country

# **PANEL DISCUSSION**

# THE NEXT DISRUPTION IN DIAGNOSTICS

# HIGHLIGHTS

- ◆ Preventive genomics has a lot of scope in India, but the clinical knowledge in this field still needs to be developed
- ◆ Baseline data for preventive genomics is extremely crucial for the future of the sector
- ◆ Lifestyle change is an important element to reduce healthcare costs, hence early detection if diseases will be key
- ◆ Radiology backed by AI will be a gamechanger Nutrigenomics will be a positive disruptor in future



(L-R) Dr Vidur Mahajan, Executive Director, Mahajan Imaging; Dr Pranav Anam, Founder, Gene Box; Dr Anu Acharya, CEO, Mapmygenome; Dr Vedam Ramprasad, COO, Medgenome Labs and Dr Ajay Phadke, Centre head, SRL Dr Avinash Phadke Labs (moderator)



Data biology in future will be the key driver for further evolution of diagnostic sciences in India

# **CURRENT AND FUTURE PERSPECTIVES IN TISSUE DIAGNOSTICS WITHIN INDIA**

# HIGHLIGHTS

- ♦ Tissue diagnostics is gaining momentum in India
- ◆ Molecular diagnostics will record the highest growth in the coming years
- ◆ China and India are the fastest growing markets for tissue diagnostics
- ◆ Digitisation of pathology will be the next big thing in diagnostics



Sanjeev Nair, CEO, HISTOXPERT



Cancer incidence, advances in cancer treatment, personalised care, tech transformation, growth of organ transplants are the key drivers for tissue diagnostics in India

# Dx SUMMIT 2019

# PANEL DISCUSSION

# IS DIAGNOSTICS BUSINESS IN INDIA AN OPPORTUNITY OR A CHALLENGE?

# HIGHLIGHTS

- ◆ As there are no entry barriers, a lot of people have entered the business. Local players, with access to funding, are giving tough competition to large diagnostic chains
- ◆There is a difference between value and valuation. Earlier everyone believed that diagnostics is a gold mine but have gradually realised that constantly adding value is a tall task
- ◆ Lack of entry barriers, no set standards and regulations to ensure of quality standards, inability to provide constant value and improving the valuation of the business are reasons why it has become difficult to consolidate the
- ◆The diagnostics industry needs to tackle a lot of aspects such as water issues, lack of robust tech infrastructure, lack of connectivity etc to improve their reach and expand their business to underserved areas
- ◆ The diagnostics industry will get disrupted in the days to come. Technology, volumes, price capping etcwill drive the disruptions



(L-R) Dr Sanjay Arora, Founder, Suburban Diagnostics; Dr Avinash Phadke, President and Mentor, SRL and Founder, Dr Avinash Phadke Labs; Sanjeev Vashistha, MD & CEO, Pathkind Diagnostics and Raelene Kambli, Special Correspondent, Express Healthcare (moderator)



The diagnostics industry will become more and more CAPEX and OPEX intensive

# **ADAMTS-13** AN AID IN DIAGNOSING TTP

# HIGHLIGHTS

- ◆ Knowledge on TTP disease has evolved over time
- ◆ We have number of treatment options and ancillary tests for diagnosing
- ◆ We need highly skilled technician required to perform complex tests
- ◆ ELISA assay takes at least four hours to complete



Dr Nikaulas Binder, Technoclone, Austrian for Compact



Analysing the role and diagnosis of ADAMTS-13 is crucial

# **SPECIAL ADDRESS**

# DR A VELUMANI, CEO & FOUNDER, THYROCARE

- ◆ People today understand the power of B2B business
- ◆ Automation plays a key role in increasing the volumes of test in a lab, in tern it also creates value
- ◆ Cost disruption is essential in in Indian healthcare
- ◆ Risk taking is important to any business organisation



Dr A Velumani, CEO& Founder, Thyrocare



No one opens the syringe until the patient opens the purse

# UNIFYING ACROSS THE CARE CONTINUUM FOR MEASURABLE IMPACT TO PATIENTS, PAYORS, CLINICIANS AND ENTIRE HEALTH SYSTEM

# **HIGHLIGHTS**

- ◆ The lab can improve its impact on patients and clinicians satisfaction
- ♦ It is not easy to deliver value in diagnostics without improving operational efficiencies in a lab.
- ◆ A mindset change is extremely necessary to transform labs from a manufacturing site to a decision engine



Roger Low, Senior Manager Marketing - South Asia, Abbott Diagnostics, Singapore



A mindset change is extremely necessary to transform labs from a manufacturing site to a decision engine

# Dx SUMMIT 2019

# **PANEL DISCUSSION**

# **AUTOMATIONS - COSTS, REWARDS AND RISKS**

- ◆ Automations is a subject that is not understood correctly. The analysers have evolved over the years
- ◆ Levels of automation has progressed over the years. The advantage of automation reduces cost, enhances quality. improves turnaround time of labs. It helps in pre analytical to post analytical process
- ◆ Volume plays a great role in deciding on how much should be spent on automation
- ♦ In pathology practice, automation helps in each stage, be it pre analytical, analytical or post analytical stage



(L-R) Dr Sujata Dhanuka, National Technical Head, Apollo Diagnostics; Yash Mutha, CFO, Krsnaa diagnostics; Dr A Velumani, Founder and CEO, Thyrocare; (moderator); Dr Ravi Gaur, COO, Onquest and Saurabh Chadha, CFO, SRL Diagnostics



Automations lessens manual interventions and reduces errors. It helps to decide on the right type of sample, which in turn helps us to fetch good results

# THE IMPACT OF EDL

# **HIGHLIGHTS**

- ◆ The NEDL will be a key instrument to improve quality in diagnostics and increase investment in diagnostics which is currently meager in India
- ♦ EDL alone cannot have an impact. It requires an integrated, connected, tiered loboratory system with adequate human resources, training, infrastructure and regulatory and quality assurance system
- ◆ Impact also requires member states to adopt and adapt the EDL to develop national or regional EDL



Dr Kamini Walia, Sr Scientist, ICMR



EDL will expand the comprehensive basket of diagnostic test for patients and will bring in the required standardisation of diagnostic services

# **SPECIAL ADDRESS**

# DR V JYOTSNA, LAB HEAD, CONSULTANT BIOCHEMISTRY, TELANGANA DIAGNOSTICS

# HIGHLIGHTS

- ◆ The main objective of the Telangana Diagnostics Central Lab is the availability of a minimum set of diagnostics appropriate to the level of care
- ◆ The initiative by the Telangana government reduces the high out of pocket expenditure. The central lab helps in screening patients and it enables primary healthcare
- ◆ The Telangana programme is implemented in 126 facilities. Currently, 59 tests are done free of cost and test results are published online



Dr V Jyotsna, Lab Head, Consultant BioChemistry, Telangana Diagnostics



The initiative by the Telangana government reduces the high out of pocket expenditure. The central lab helps in screening patients and it enables primary healthcare

# **PANEL DISCUSSION**

# **BUILDING A QUALITY CONSCIOUS DIAGNOSTIC SECTOR FOR INDIA**

# **HIGHLIGHTS**

- ◆ Quality is doing the right thing at the right time and in the right
- ◆ Primary R&D is crucial for maintaining quality
- ◆ Currently, the Indian diagnostics sector is seeing a lot of inequalities in quality which needs to be addressed on an urgent basis
- ◆ More emphasis on costs can negatively impact quality. Quality and cost need to be balanced
- ◆ People do not realise that not focusing on quality will increase



(L-R) Prof Ashok Rattan, Adviser- Laboratory Operations, PathKind Labs, PathKind Diagnostics; (moderator), Dr Sunita Deshmukh, HOD- lab medicine, Paras Hospital, Dr Bhaskar Bhattacharya, Laboratory Director, Genu Path Labs; Dr Barnali Das, Consultant, Biochemistry & Immunology Division, Kokilaben Dhirubhai Ambani Hospital & Medical Research Institute; Dr V Jyotsna, Lab head, Consultant BioChemistry, Telangana Diagnostics and Dr Abhik Banerjee, Director- Quality Assurance & Senior Consultant- Pathology HPLC & LC-MS/MS Division, Suraksha Diagnostic



Quality will be remembered long after the costs have forgotten

# Dx SUMMIT 2019

# **DIAGNOSTICS BEYOND 2020** THE DECADE OF DATA

# HIGHLIGHTS

- ◆ Big data matters because an average hospital generates 600 Tbytes per year.
- ♦ In between 2020 to 2030 healthcare will generate 20 zetabyte data. Hence, the next decade will be the decade of data.
- ♦ 80 per cent of healthcare data is diagnostics.
- ◆ Data can provide new insights into lifesciences



Zoya Brar, Founder & CEO, Core Diagnostics



In between 2020 to 2030 healthcare will generate 20 zetabyte data. Hence, the next decade will be the decade of data

# **REACHING THE NEXT MILLIONS**

# **NEW TOOLS AND MARKET INNOVATION FOR HEALTHIER INDIA**

# HIGHLIGHTS

- ◆ We are a digital health tech company wanting to help accelerate and scale-up while operating locally
- ◆ We believe in focusing on performance, step change and design digital road map to market
- ◆ We are currently focusing on creating a medical learning hub, harness telemedicine and create frugal EMR/EHR platform
- ◆ Telemedicine will go long way in healthcare



Sachin Malhotra, CEO, Tech Care for All India



Telemedicine is a unique opportunity for labs to add value services to patients, at minimal expense while maximising resource utilisation

# **PANEL DISCUSSION**

# THE PRECISION MEDICINE ERA: IS INDIA READY?

# **HIGHLIGHTS**

- ◆ There is an explosion of data, if not analysed appropriately will bring the precision medicine era to an
- ◆ Genomics is not the only tool to be checked while practicing precision medicine. Precision medicine is much beyond genomics
- ◆ We are not yet ready for the precision medicine era
- ◆ Pharmacogenetics has the key to solve many complex medical puzzles. In future pharmacogenetics will be an integral part of medical practice
- lacktriangle TEducating clinicians on the actual meaning and the various factors of precision medicine is paramount
- ◆ TCarrier screening is yet to be explored in India. We therefore not capable enough to design smaller screening tools for certain diseases
- ◆ TOur medical education system needs to include genetics



(L-R) CN Chaudhari, Head-Laboratory Services, Apollo Hospitals, Dr Jyoti Kotwal, Chairperson & Prof, Dept of Hematology, Sir Ganga Ram Hospital & GRIPMER; (moderator), Dr Sudha Rao, Co-Founder and Executive Director, Nanopore - Genotypic, Dr Anuradha Udumudi, Chief Scientific Officer & Founder, Genetech



# Precision medicine is the epitome of evidence-based medicine



# Dx SUMMIT 2019

# DX LEADERSHIP AWARDS



Leaders and winners during Dx Leadership Awards



CN Chaudhari, Head-Laboratory Services **Apollo Hospitals** 



VijayaDiagnostics' Dr Surender Reddy received recognition



Dr Avinash Phadke, Founder, Dr Avinash Phadke Pathology, Labs & President - Technology, SRL Diagnostics



The Indian Express Group and Express Healthcare, through its Dx Leadership Awards, recognised and rewarded business and scientific excellence across all spectrum

of diagnostics.

Narendra Varde, General Manager, Abbott
Diagnostics, while giving a perspective on  $\operatorname{Dx}$  Leadership Awards, provided a vision on the company's vision for diagnostics and expounded on the rationale behind associating with Express Healthcare on the awards.



Dr (Col) Jyoti Kotwal, Sr Consultant- Hematology & Clinical Pathology, Sir Gangaram Hospital



Dr Kamini Walia, Sr Scientist, ICMR



Dr Lal PathLabs



Dr Sanjay Arora, MD, Suburban Diagnostics



Dr Anu Acharya, CEO, Mapmygenome



Dr Ajay Phadke, Centre head, SRL Dr Avinash Phadke Labs



Dr Abhik Banerjee, Director- Quality Assurance & Senior Consultant- Pathology HPLC LC-MS/MS Division, Suraksha Diagnostic



Saurabh Chadha, CFO, SRL Diagnostics Fortis Hospitals



Sanjeev Vashishta, MD & CEO, PathKind Diagnostics



Dr Ravi Gaur, COO, Onquest



Dr Barnali Das, Consultant, Biochemistry & Immunology Division, Kokilaben Dhirubhai Ambani Hospital & Medical Research Institute



Zoya Brar, Founder&CEO, Core Diagnostics

# START UP CORNER

# Ucare is a preventive healthcare safety and wellness service platform

Vikrant Gugnani, Founder and MD, Ucare, shares with Prathiba Raju on how the digital preventive healthcare platform provides best possible health, wellness, care and emergency services

#### How did the concept of U Care evolve?

UCare was evolved from a very personal need of giving care to my aging parents and taking care of my own health as well. With the evolution of the nuclear family, more and more of us are moving away to achieve our professional goals. Our parents are often getting left behind alone vulnerable to fend for themselves. At the same time the reality of losing a number of colleagues and friends to heart diseases, at a young age was really hard hitting and hence the conception of 'UCare.'

#### What differentiators do you offer in respect to other products in the segment?

First-of-its-kind digital preventive healthcare and wellness platform that helps your family and you stay healthy and secure anywhere, anytime. Reimagining the shift of care from reactive to preventive using technology. Gradual change of an individual's role from being passive/ reactive to self managing and taking responsibility - "My health in my hands!'

#### How will it enhance the preventive healthcare, safety and wellness services?

It is a digital platform that provides the best possible health, wellness, care and emergency services all on a single seamless platform at the touch of the button. Our mission is to improve the lives of families and caregivers by helping them connect in a reliable and easy way.



#### Who are your target audience?

We primarily focus on the age group of 30+ or anyone who is conscious about their health and fitness, and travels frequently for professional purposes.

#### How does U Care help maintain healthy lifestyle among the patients?

The platform combines a smart wearable, an ECG Machine, along with services like 24x7 ambulance, personal safety and assistance, diagnostic and

doctor appointment, book a ride, insurance cover, health vault and mobile app to make sure you live by our motto 'LivSmart LivStrong.' Our AI platform monitors patient's heart health and is able to help you gauge your medical needs and emergencies. Our objective is to alert you well in advance about any arriving criticality.

What is your user base now and how many consultations happen in a month and how much do you want to achieve by the

#### next fiscal?

We currently have on-board 800+ customers. These customers have paid full two years of subscription upfront. Our objective is to cross 100,000 paid customers in the first 12 months.

#### Do you think patients are aware of such apps, how do you see the adoption level of your app?

There is an element of education that we are committal to drive in the near future, as it demands a behavioural change in the

mind of the customer. It will be upfront as soon as they comprehend the urging requirement of it.

#### Tell us about your funding activity and what is the scope of startups future in the healthcare sector?

Currently, we are bootstrapping preventive healthcare as a sector which is still in a nascent stage and what we see forward is the beginning of a new world in healthcare.

prathiba.raju@expressindia.com

# **POLICY**

# Committed to end TB, AIDS and malaria

Peter Sands, Executive Director, The Global Fund, elucidates to Prathiba Raju on how the programme is focusing on to fight the three diseases and build stronger health systems in the next three-year cycle and the role of India as an implementer nation

#### What is Global Fund's role on the ground?

The Global Fund raises and invests money to support programmes run by local experts in countries and communities most in need. One of the principles of the Global Fund is country ownership. This means that countries and people determine their own solutions to fighting the three diseases, and take full responsibility for them. The Global Fund does not have offices outside its headquarters in Geneva and does not implement programmes on the ground.

#### Any specific reason to choose India which is an implementing country to kick start the sixth replenishment meeting? Will this continue in the coming years? Reasons.

India is a strategic partner of the Global Fund, both as an implementer and as a donor. The Government of India has shown extraordinary leadership and commitment in the fight against infectious diseases, especially tuberculosis. The Preparatory Meeting of the Global Fund's Sixth Replenishment marked the first time an implementing country hosted such a meeting. Without India, we are not going to achieve Sustainable Development Goal 3 "health and well-being for all." If we are going to win the battle against TB, for example, we need to win the battle in India, so it makes a lot of sense to kick off the Global Fund's Sixth Replenishment in India.

How much will be the total fund required to combat these three diseases



#### globally and specifically for India?

The Global Fund is seeking at least \$14 billion to fund programmes to fight the three diseases and build stronger health systems in the next three-year cycle. Raising \$14 billion for the Global Fund, when combined with sustained levels of other external funding and significantly scaled-up domestic financing, would help us to get us back on track toward the Sustainable Development Goal 3 target of ending the epidemics by 2030. The total funding needed to meet the SDG target of ending the epidemics by 2030 globally is estimated to be \$101 billion over the 2021 to 2023 period. This comprises \$53.9 billion for HIV; \$27.1 billion for TB; and \$19.9 billion for malaria.

#### How much of the fund goes towards treatment and how much would be the mobilisation and administration costs?

The Global Fund's operating expenditures in 2017 were \$295 million, which represents slightly more than two per cent of grants under management. In recent years, the Global Fund has been highly effective in containing operating expenses while improving and expanding its scope of operational work, through disciplined cost control and adherence to the budgeting framework. Since 2012, the Global Fund has succeeded in keeping operating costs within \$300 million per year.

What will be the role of India as an implementer and as a donor nation? The Global Fund has

disbursed \$2.1 billion in programmes to fight HIV,  ${\rm TB}$ and malaria and strengthen health systems in India, India has contributed a total of \$39.5 million to the Global Fund as of end 2018.

#### Is India spending enough on all these three communicable diseases?

India has been significantly stepping up its domestic financial resources in the fight against HIV, TB and malaria, and the Global Fund encourages these efforts. During the current allocation implementation period (2018-2020), India has more than doubled its financial commitments to the three programmes compared to 2015-2017. On TB, to give an example, domestic resources have increased to \$740 million from \$333 million. The Government of India has

very strong national programmes on HIV, TB and malaria. The central government budget for the National AIDS Control Programme, Central TB Division and the National Vector Borne Disease Control Programme in fiscal year 2018 is about \$1 billion. This figure does not include state governments, which provide a major share of the total budget. The Global Fund financed about 17 per cent of the central government's budget for the three disease programmes in fiscal year 2018. Like many other countries in the world, India can do more. As the Government of India has acknowledged, India needs to increase its investments in health to meet its goals, particularly TB.

What is more challenging,

#### getting the funds, treatment or getting people to the point of treatment?

All the aspects you mention are challenging. We cannot underestimate the challenge of raising at least \$14 billion. nor making sure that all the people who need quality prevention, care and treatment are getting equitable access. To achieve our mission, we must step up the fight with more innovation, more collaboration and more effective execution. And we need more funds.

#### Can you state us the biggest challenge—in each communicable disease in terms of HIV prevention, TB identification and diagnosis?

A main challenge on TB is finding the missing cases. Every year, more than a

million people with TB in India are 'missing', meaning they are not diagnosed, treated or reported. This is a serious problem, and contributes to the growing problem of drug-resistant TB. India is home to a quarter of all estimated patients with drug-resistant TB. This is why Global Fund grants are geared toward supporting India's goal of ending TB by 2025 through many aspects of work, including active case finding and the purchase of Gene Xpert machine equipment, which is used for early detection of drugresistant TB. Global Fund investments are also being used to expand programmes aimed at engaging private healthcare practitioners to ensure proper diagnosis, treatment and support is provided to patients using private services, and to

increase case notification among private care practitioners. It is estimated that up to 70 per cent of patients in India go to a private physician as their first point of contact for tuberculosis, so closer publicprivate engagement is essential to make progress.

When it comes to HIV, the Global Fund is acutely aware that gender inequality and human rights barriers to health fuel the spread of the epidemic. We need to look beyond biomedical solutions. Removing human rights- and gender-related barriers to health, so everyone can access the health services they need, is a key principle of the Global Fund. The Global Fund supports community outreach and engagement as an important component to ensure equitable access to health services. In India, we

are helping local groups to build awareness of health issues and providing support to marginalised groups such as transgender communities. men who have sex with men and people who use drugs. who would not otherwise be able to access the services they need. This human rights work increases the effectiveness of Global Fund grants by providing health for all. The Global Fund recognises that civil society has played a key role in the fight against HIV in India and is partnering with civil society to reach out to key affected populations, to ensure that the needs of people living with HIV are adequately addressed.

#### What is India's status in all the three communicable diseases? In which area should we focus more in each of the diseases?

TB is a major challenge in India. India has the world's highest burden of TB, with 27 per cent of all global cases. It is also home to a quarter of all estimated patients with drug-resistant TB. The Global Fund is supporting India's goal of ending TB by

India has the third largest number of people living with HIV in the world, with an estimated 2.1 million people. India has an estimated 88,000 new HIV infections and 69.000 AIDS-related deaths. Since 2010, new HIV infections have decreased by 46 per cent and AIDS-related deaths have decreased by 22 per cent.

And on malaria, India accounts for four per cent of the estimated global malaria cases and 68 per cent of reported cases in the WHO South-East Asia region. Since 2000, malaria cases have halved. The last WHO world malaria report singled out India for its impressive gains against the disease: the country recorded a 24 per cent reduction in cases in 2017 compared to 2016.

Do you think our target to eliminate TB by 2025 is achievable? How do you find

#### India's efforts to tackle these diseases?

The Global Fund commends India for its plan to end tuberculosis by 2025, five years ahead of the targets set in the Sustainable Development Goals. It is an ambitious goal, but you need to be ambitious to defeat epidemics. India has significantly increased its domestic financial resources and is taking up more responsibility in the fight against the three diseases. India has more than doubled its financial commitments to the three programmes during the current allocation implementation period (2018-2020) compared with 2015-2017. On TB, for example, domestic resources have increased to \$740 million from \$333 million. The Global Fund strongly commends India for these efforts.

#### How does Global Fund view the Indian government's recently launched Prime Minister Jan Arogya Yojana (PMJAY - Ayushman Bharat) the health insurance scheme?

The Global Fund applauds India's efforts to improve the health needs of its citizens, particularly the poor, and advance towards the delivery of universal health coverage.

#### Avushman Bharat does not include HIV. But it does cover TB, Malaria and other 'opportunistic infections' that anyone can have because of HIV. How do you see this?

The Global Fund applauds India's efforts to improve the health needs of its citizens. Countries determine their own solutions to fighting the three diseases.

#### Should we spend more on treatment or on prevention?

We should not see this as a dichotomy. We need both. We need an integrated and person-centered approach to fight these diseases. We should step up investments on both treatment and prevention.

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# STATEMENT ABOUT OWNERSHIP AND OTHER PARTICULARS OF EXPRESS HEALTHCARE, MUMBAI, AS REQUIRED UNDER RULE 8 OF THE REGISTRATION OF NEWSPAPERS (CENTRAL) RULES, 1956

# FORM - IV (SEE RULE 8)

- 1. Place of Publication
- 2. Periodicity of its publication
- 3. Printer's Name Whether citizen of India Address
- 4. Publisher's Name Whether citizen of India Address
- 5. Editor's name Whether citizen of India
- 6. Name and address of individuals who own the newspaper

## AND

Shareholders holding more than One per cent of the total capital

- Express Towers, 1st Floor Nariman Point, Mumbai-400 021
- **MONTHLY**
- Ms. Vaidehi Thakar
- Yes
- Express Towers, 1st Floor Nariman Point, Mumbai-400 021
- Ms. Vaidehi Thakar
- Express Towers, 1st Floor Nariman Point, Mumbai-400 021
- Ms.Viveka Roychowdhury
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- : Mr. Viveck Goenka & Mr. Anant Goenka Express Towers, 1st Floor, Nariman Point Mumbai 400021
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I, VAIDEHI THAKAR., hereby declare that the particulars given above are true and to the best of my knowledge and belief.

sd/-VAIDEHI THAKAR Publisher

Date: 1/3/2019

# Al in healthcare – India needs to prioritise maternal and child health

Al in maternal and child health will have far reaching benefits for individuals and communities across the world. This will go a long way in attaining one of the most important sustainable development goals. An insight by **Dr Arvind Kasaragod**, Director – Medical Services, Cloudnine Group of Hospitals

he honourable interim finance minister Piyush Goval has made an allocation in the recently announced interim budget for a National Center for Artificial Intelligence (NCAI) and a national AI portal. This will have far reaching implications in many fields and the biggest impact will be if AI is used effectively in healthcare. In fact, the buzz words in healthcare recently are, machine learning (ML) and AI. There has already been significant interest in AI in healthcare in India and around the world. In my opinion, we have not even scratched the surface and should use the initiative shown by the finance minister to make the best use of it in healthcare. The use of AI in maternal and child health holds a lot of promise and is required most among all medical specialties.

The current healthcare indices in maternal and child health are far from desirable in India, India ranks 128th in terms of meeting the United Nations' (UN) health-related Sustainable Development Goals (SDGs) by 2030, with low scores on air pollution, sanitation, hepatitis B and child wasting. India is home to 46.6 million stunted children, a third of world's total. With 46.6 million children who are stunted, India tops the list of countries followed by Nigeria (13.9 million) and Pakistan (10.7 million). One third of all women of reproductive age in India have anaemia. India tops the list of 10 nations contributing 60 per cent of the world's premature deliveries. The SDG targets for 2030 will reduce the global maternal mortality ratio to less than 70 per 100,000 live births. By 2030, end preventable deaths of newborns and chil-



dren under five years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births. It is very clear from the above data that maternal and child health should get top priority as it will have long-term benefits by ensuring that the future of our country stays healthy by having the best outcomes for mothers and their babies. A healthy mother leads to an entire population that is healthy. AI in maternal and child health will have far reaching benefits for individuals and communities across the world. This will go a long way in attaining one of the most important sustainable development goals.

There are many reasons why maternal and child health lends itself to artificial intelligence. The whole period of pregnancy, child birth and preventive care in mother and child is defined and extends from preconception to five years of age. The period of pregnancy has very clear protocols for the number of visits. the lab and radiology investigations that need to be done, the medications that need to be taken, the complications that need to be looked for and a definite end point which is the birth of the child. Similarly, the care of the child is also dictated by protocols in both the immediate care after birth and preventive care for five years till the immunisations are completed. The data for the above touch points are available in many settings of maternal and child care like government clinics and hospitals, NGOs, insurance companies and private healthcare organisations.

#### What India needs to do?

First and foremost, we need to identify the use cases and questions to be answered where AI will give us the best bang for our buck. Second, we need to identify what data is needed for the use cases. Third, we need to find out where we can get the retrospective data from and how. This will be required to enable machine learning. Fourth, we need to figure out a methodology of collecting prospective data that will enable both machine learning and artificial intelligence. Fifth, we will need the computing power and technology to utilise all this information in the most practical manner. Sixth, we need to write algorithms that will help us solve real world problems. Seventh, we need to implement

solutions that are generated by artificial intelligence to help improve maternal and child health.

After having identified the

why and what, we need to have a plan regarding how we can accomplish this. We need to have key opinion leaders to identify the use cases and questions that need to be answered. There should be representation from healthcare providers from a wide cross section of providers in the maternal and child health field. The data that is required should be identified by the subject matter experts. We will then have to identify the sources of such data and find out the best way of gaining access to that data and collating it. This should include both retrospective and prospective data. For the data to be used meaningfully, we need to create a data ingestion tool that helps machine learning. Algorithms will need to be prepared by medical and technology experts working closely together. These algorithms should help us identify high risk pregnancies, women at risk for anaemia, pregnancies that may lead to pre-term deliveries, infants and toddlers at risk for being unimmunised, babies in the neonatal intensive care units that are at risk for sepsis and poor outcomes. With huge volumes of data, ML and AI can actually even suggest methods of improving outcomes. Once we have solutions suggested by artificial intelligence, we need to have concerted and coordinated efforts by all stakeholders to implement them on the ground in a practical and realistic manner to improve maternal and child

The allure of AI is great and I

believe it will help us solve many problems faster than we ever imagined we could. However, while the cliché is that the "devil is in the details" but in this case "the devil is in the data"! There be machine learning or AI without data. Unfortunately, this is often forgotten in many discussions. Medical data is pleomorphic. It is unstructured, fragmented, unreliable, illegible, written, digital, inaccessible and also in various other shapes and forms. It is going to take a humongous effort to compile the data required in the manner required to enable ML and AI. This alone will require a number of stake holders to work together. This will include patients as well as it is their data that is going to be used. The government will have to give the necessary impetus by framing the rules to enable easy availability of data for the greater good. All agencies private and government will have to share data and input the data into the common data ingestion tool. There needs to be collaboration with the government, teaching hospitals, Gates foundation, UNICEF and health insurance providers for getting as much as data as possible. Agencies like Nasscom should be the liaison agency between the data sources and the technology companies to optimise ML and AI. The steps outlined above will be required for use of ML and AI in all medical specialties not just maternal and child health.

All this will be difficult but not impossible. I am an eternal optimist and a complete believer in technology and will bet on this happening. Given the importance of maternal and child health I hope it happens sooner than later.

# West Bengal's CTM project with Sodexo: Moving in the right direction

PPPs in healthcare usually fail in India, due to lack of transparency, team work and clear vision from all stakeholders involved. West Bengal government's partnership with Sodexo and HLL has been a case in point that reflects true team work, high productivity, efficiency and transparency bringing in economies of scale. By Raelene Kambli

odexo along with the Government of Bengal introduced a Clinical Technology Management (CTM) service in India with a vision to bridge the gap of inadequate technical expertise to service modern and highend medical equipment within the healthcare industry. It was introduced in partnership with HITES (HLL Infra Tech Services Limited) and is said to enhance the functioning and monitoring of healthcare PPPs within the state. This system provides for a wide range of services from inventory management which includes management of medical equipment warranty and equipment utilisation analysis to implementation of planned maintenance programme which includes risk-base assessment and corrective and reactive maintenance.

The project offers comprehensive maintenance of all biomedical equipment from smallest hospital unit PHC to medical colleges through preventive and corrective maintenance protocols. The aim is to achieve maximum uptime, repair existing non-functional equipment and maintain warehouse for spares. The tie-up with OEM's for some critical equipment and periodical calibration of equipment and lastly recommend condemnation of equipment has gone beyond economic repair.

When asked about the rationale behind the partnership and the programme initiated. Simon Scrivens - Global Marketing Head for Healthcare-Sodexo said, "Hospitals want to ensure the highest possible uptime of medical equipment as



Sambit Sahu, Country Segment Director-Healthcare, Sodexo India

the equipment is key to diagnose and treat patients. Maintenance of medical equipment requires specialised expertise and is not the core expertise of hospitals. Moreover, these are expensive items, which if not dealt with required skill may develop error and result in wrong diagnosis and treatment. Sodexo has such expertise in India and globally to perform the service as per international protocols and best practices.



Simon Scrivens - Global Marketing Head for Healthcare- Sodexo

#### The uniqueness of the project

The CTM project (Bio-Medical Equipment Maintenance) is aligned with the government's Biomedical Equipment Management & Maintenance Program (BMMP ), informs Sambit Sahu, Country Segment Director-Healthcare, Sodexo India. He further states that as an empanelled partner with HITES (a subsidiary of HLL), Sodexo worked on a proposal to address the needs of

the Government of West Bengal and consequently entrusted to provide comprehensive maintenance services around 50,000 equipment at 460 hospitals in the state.

This project is powered by the comprehensive Asset Maintenance management system called the CTM which provides a total control of the medical equipment maintenance programme and relieves the burden of managing multidepartmental, multi-vendor equipment services throughout the healthcare facility. According to Scrivens, this programme delivers a seamless and well-integrated system that exceeds patient and staff expectations and makes the facility the provider of choice in your community. The system also claims to guarantee immediate cost reductions through comprehensive and all-inclusive CAMS (Capital Asset Management Services) programme.

Scrivens informs that Sodexo, through this CTM offers a Healthcare Technology Management System that maximises patient throughput, improves efficiencies

reduces costs - all delivered by a partner with expert technicians capable of servicing and maintaining all brands of clinical equipment on site. It delivers a seamless and well-integrated system to ensure equipment perform maximum uptime.

#### Sodexo deployed a few solutions as part of their service delivery

- ▶ Mobile App for asset mapping and tagging (First time done in India, a paperless initiative to create an inventory of all medical equipment)
- Decreating a GS1 standard barcode
- ▶ Set up a 24/7 IVR-based call centre with toll-free number to log requests.
- Digitalisation by providing a live dashboard reporting for the Government of West Bengal

#### Improving cost efficiencies for the government

While this system ensures riskbase assessment and timely maintenance of medical equipment leading to increased productivity, it also promises cost efficiencies. Sahu informs that through this programme, the entire maintenance work which was mostly done by local vendors with many issues on quality of services has come under one comprehensive platform. This initiative brings more transparency and productivity, which results in costeffectiveness as they work on the economy of scale.

Likewise, these efficiencies enhances patient experience and service quality. Benefits to healthcare providers and patients



Doctors are assured that the equipment is well maintained, duly calibrated to give an accurate diagnosis. "After this programme is initiated in Bengal, a lot of equipment which were lying dysfunctional have been repaired for immediate use. Through a proper maintenance programme, the asset life cycle has increased hence it is direct saving for the government. The live dashboard provides realtime information of all maintenance activities in the state, which otherwise was not possible. This programme has a direct impact on the well being of the patients as well," added Sahu.

#### **Fixing technical** challenges

While ensuring that every stakeholder in this project is at a benefit, Sodexo, the government and HIT also stepped on to road block that could have hampered the success of this project. Nevertheless, team effort and their clear vision motivated them to outdo these challenges.

"The biggest challenge for the government was to create and maintain a proper inventory of clinical assets. This got addressed by tagging, which was done by Sodexo as per GS-1 standards giving a unique identity number to each equipment in the state. The maintenance of the assets was fragmented and majorly done at hospital level with some local vendors. The government was finding it tough to get the entire scope under one programme and seamless information on maintenance

# **FACTS ABOUT THE PROJECT**

- Strategic partnership with HITES enables biggest CTM contract win in healthcare
- The comprehensive scope of maintenance of Bio-Medical Equipment for the state of West-Bengal, Presidency Division
- CTM services to cover 55,000+ medical equipment for over 445 healthcare facilities in the Capital Region
- 100+ Sodexo technical professionals deployed to ensure that the critical medical equipment always perform at its peak efficiency
- Digitalisation, live dashboard reporting and mobile application-based services are the highlights of the new contract

# **MEASURABLE OUTCOMES**

- Creating an inventory of medical equipment and its valuation
- Periodic revision of inventory as some would be added and some which would be condemned
- Maintaining maximum uptime of Medical equipment (>90 per cent)
- Providing IVR backed Call centre and complaint resolution within seven days

# **IMPORTANT CHARACTERISTICS OF THE SYSTEM**

- All assets have been mapped and tagged with a unique ID
- The complaint log system is an IVR-based call centre
- Compliant to be mandatorily resolved in seven days of the call log
- Live dashboard for the government to monitor services
- Trained technicians deployed on site and off site with good connect with OEM and spares vendor



could be shared. There was no provision on logging a complaint centrally. The compliant turnaround time wasn't specified due to which equipment was lying unattended for a long period of time, affecting the patient treatment and recovery," Sahu explains on how they resolved this maior issue.

While all challenges and technicals issue were taken care of and the outcomes of the projects being impressive for the government, can this initiative be replicable in other states?

#### Replicability of the project

As per Sodexo, their system has proven technical capability and solutions which are replicable. According to them, the right solution is the backbone of this vast operation, this includes adequate deployment of trained technicians both onsite and mobile teams. IT tools for mapping and dashboards which provides real-time information to institutions.

"Our global expertise and connect with OEM's will come handy again when we expand to other states. With our good experience in West Bengal, it'll relatively be easier for us to implement the programme in states," other informed Scrivens.

In future, partnering with HITES, Sodexo plans to introduce similar projects in other states and will be willing to customise initiatives as per their requirements.

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# Partnerships for health – India needs them

Resources from the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) constituted almost 17 per cent of India's health budget for HIV. TB and Malaria in the fiscal year 2018. With the Global Fund Replenishment round coming up in October, and India hosting a prereplenishment round for the first time this February, **Bharathi Ghanashyam**, founder/editor, Journalists Against TB, explains why an added commitment from India's political leadership, in terms of an increased pledge to Global Fund is crucial for the country's progress towards better health outcomes and human rights

hen I first mooted the idea of the Global Fund, people said I was dreaming... I love dreams. It always starts with a dream." - Kofi Annan, Former Secretary General United Nations Changing lives

On December 12, 2013, the Supreme Court of India overturned a Delhi High Court verdict that had set aside a law framed in 1860 and decriminalised consensual sex among adult homosexual men. Justifying its ruling, it said, "The High Court overlooked that a miniscule fraction of the country's population constitute lesbians, gays, bisexuals or transgenders and in last more than 150 years. less than 200 persons have been prosecuted for committing offence under Section 377."

Rajesh Srinivas, Executive Director, Sangama (an organisation that works for the rights of individuals oppressed due to their sexual preference and gender identity), Bengaluru, says, "In one stroke, the judgment had erased our existence. Miniscule though we may be in terms of numbers, each of these numbers has a face, a body and the capacity to feel joy, pain and sorrow. And yet, this judgement had negated our space on earth. It also shattered lives as there were people who had declared their sexual orientation after the Delhi High Court judgment and began to feel threatened again. We then launched 207 against 377, where 207 grassroots organisations protested and fought for the judgment to be set aside. It took five years but the Supreme Court of India ruled in our favour and decriminalised a part of Section 377 of



the IPC which criminalises consensual unnatural sex. The Global Fund stood by us during this fight."

Saroja Puthran, Treasurer, Karnataka Network of Positive People expresses similar sentiments. She says, "India has provided for everything that PLHIV require. The gaps however occur in access. We still face a lot of stigma, even at healthcare settings and while accessing our other entitlements. It helps that we are empowered to demand our rights. I attribute this to our association with projects of the Global Fund and others, which have strengthened our capacities to face challenges."

Saroja and Rajesh are but two but they echo the voices of millions of people like them who have benefitted from partnerships such as the Global

#### A bit of history

The year: 2001: The then UN Secretary-General Kofi Annan proposed the creation of a Global Fund dedicated to the battle against HIV/AIDS and other infectious diseases at the African Summit on HIV/AIDS, Tuberculosis and Other Infectious Diseases in Abuja, Nigeria. Established in 2002 as a unique partnership between

governments, civil society, affected communities and the private sector, the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) has since achieved impressive results and changed lives. It has mobilised and invested nearly \$4 billion a year to support programs run by local experts in countries and communities most in need. Health programs supported by the Global Fund had saved 27 million lives by the end of 2017. In 2017, 17.5 million people were on ARV treatment, 5 million people with TB were treated and 197 million bed nets were distributed to prevent malaria.

India in particular has benefitted greatly from the Global Fund. Having contributed a total \$39.5 million to the Global Fund as of 2018, it has received \$ 2.1 billion in programmes to fight HIV, TB and malaria and strengthen health systems.

#### Partnerships are important

India is a high burden country for HIV, TB and malaria. To illustrate, a quarter of global TB cases occur in India i.e. 2.79 million cases. While the Government of India has very strong national programmes, backed by resources for all three, it is still not on track. Public spending on health is still around 1.2 per cent of the GDP, which is significantly lower than countries of similar income levels. With low priority accorded to health by the government, a majority of the Indian population pays out-ofpocket for healthcare.

"The Government of India needs to take progressive steps immediately and increase health expenditures from 1.2 per cent to 2.5 per cent of its GDP by 2025 and increase state sector health spending to over 8 per cent of the budget by 2020 to reach the targets set by the National Health Policy adopted in 2017," says Dr Sonal Mehta, Chief Executive, India HIV/AIDS Alliance.

#### The future lies in strengthening partnerships

Against this background, it is important to note that Global Fund resources constituted almost 17 per cent of the health budget for HIV, TB and Malaria in India in the fiscal year 2018.

Dianne Stewart, Head, Donor Relations of Global Fund says, "We complement the efforts made by Government of India to fight the three diseases. Global Fund grants in the last few years supported the establishment of laboratories and Gene Xpert machine equipment for early diagnosis of drug-resistant TB. The grants have also supported the purchase and distribution of insecticide-treated nets in seven North Eastern states, and Jharkhand, Chhattisgarh, Odisha and Madhya Pradesh, which accounted for 87 per cent of reported malaria cases in India. Global Fund grants also complement investments by the government to achieve the 90-90-90 targets for HIV and elimination of mother to child transmission of the virus."

Most importantly, Global Fund grants go beyond drugs and diagnostics. The support is at several levels and includes

patient support for MDR TB to help adherence, and engagement of private healthcare providers to ensure proper diagnosis, treatment and support. Human rights and gender-related barriers to health are addressed, so access to health services is equitable. This work greatly enables health for all.

Abhina Aher, Associate Director. India HIV/AIDS Alliance, who has worked on HIV/AIDS issues for 24 years says, "I have built my own capacities tremendously and am an example of how Global Fund resources can help to position key communities not as beneficiaries, but as equal stakeholders in the fight against HIV/AIDS and TB."

#### Time to step up

2019 marks the Sixth Replenishment Pledging Conference of the Global Fund to be held in October in Lyon, France.

What remains now is added commitment in terms of an increased pledge to Global Fund

Government of India has announced it would host the Global Fund's Preparatory Meeting of the Sixth Replenishment in February 2019. The meeting is an important milestone to mobilise funds to end AIDS, TB and malaria and build stronger health systems. Jagat Prakash Nadda, Minister for Health and Family Welfare,

Government of India has observed, "India has long been a strategic partner of the Global Fund, both as an implementer and as a donor. The government of Prime Minister Modi is honoured to further deepen this collaboration by hosting the Preparatory Meeting of the Sixth Replenishment in our country." This move is one of many that the Government of India has made towards better health outcomes. Prime Minister Narendra Modi earlier this year called for India to end tuberculosis by 2025, five years ahead of the global target.

On a closing note, it is evident that India is committed to achieving better health outcomes for all. The Supreme Court has added its voice by including the 'miniscule population' into the larger landscape. The ground is set. What remains now is added commitment in terms of an increased pledge to Global Fund. Dianne adds, "The Global Fund is aiming to raise at least \$14 billion for the next three years to help the world get back on track to end HIV. TB and malaria and accelerate progress toward Sustainable Development Goal 3, health and well-being for all. The Global Fund welcomes India's political leadership and we hope that India would continue to invest in the way promised. India is a key partner of the Global Fund."

Bill Gates in a recent tweet has said, "I look at a lot of global health data and one trend stands above the rest. Global health groups like Global Alliance for Vaccines and Immunisation (GAVI). Global Fund (GF), Global Polio Eradication Initiative (GPEI) and the Global Financing Facility (GFF) are some of the best investments the world can make." India, are you listening? We the people are waiting for you to step up for us!



# Is your doctor burnt out yet?

Dr Arjun Kalyanpur, CEO & Co-Founder of Teleradiology Solutions, expounds on the reasons for burnout among clinicians that extends beyond overwork

DURING MY first year of training in the US, I was an intern at a busy hospital in New Jersey. where my schedule routinely involved starting work at 7 am, working through that day, then all through the night and then without missing a beat working through the next day. At the end of the second day, I got to go home and sleep. I would then wake up the next morning, come back to the hospital and do it all over again. Over and over. This was routine not just for me but for pretty much every resident physician in the US. And in most other parts of the world as well. Goes with the territory of being a doctor, most would accept.

It has always been an established fact since the beginning of the profession that the life of a physician is not an easy one, with some specialities, especially the surgical ones, having even heavier workloads than others. What is intriguing though is that in recent times, a word that did not previously exist in the physician's lexicon has crept insidiously into it. That word is burnout.

#### **Alarm bells**

According to a recent survey of more than 15,000 doctors in the US, about 42 per cent of physicians report feeling burned out. The highest rates of burnout were reported in the specialties of critical care (48 per cent), neurology (48 per cent) and family medicine (47per cent). (1) A survey of 482 Indian physicians showed high rates of burnout on all the parameters that were studied for all physician demographics in the study population. (2) Even niche specialists such as radiologists like myself are exhibiting high burnout rates. (3,4)

And while burnout no doubt exists in other professions as well, a study showed that there was an approximately 10 per cent higher level of burnout and 17 per cent higher level of dissatisfaction among physicians as compared to the general popula-

Physician burnout has been clinically defined and identified by three symptoms, namely physical and emotional exhaustion, feelings of depersonalisation (cynicism, negativity and a sense of being persecuted) and a decreased sense of professional fulfilment. Interestingly, the psychologic tool used to evaluate these symptoms goes by the somewhat grim title of a 'burnout inventory'. Unlike stress and exhaustion, the symptoms are persistent and endure despite taking a break or a vacation.

As the global population increases and healthcare issues mount, physician burnout is becoming an established global phenomenon. Physicians today across the world are finding themselves working harder than ever before. The reason for burnout however extends bevond overwork.

#### **Reasons for burnout** extend beyond overwork

For one, there is significantly more to be learnt and relearnt. Medical science has evolved so rapidly that in parallel there has been an exponential increase in the amount of data that requires to be processed by the mind of the physician. This puts greater stress on both the medical student as well as on practicing physicians to constantly be updating themselves at an increasingly rapid rate to avoid professional obsolescence.

Second, the concept of emergencies has changed along with the standard of care. The traditional concept of "take 2 aspirins and call me in the morning' would today be considered a gross breach of medical standard of care. Today, emergencies require immediate and thorough attention at any hour of day or night. Further the scope of what constitutes an emergency has



greatly expanded and emermedicine has itself emerged as a growing subspecialty within medicine, driven by the need for immediate care of life-threatening conditions. The need for such an immediate response from the physician perspective can understandably be stress and burnout inducing.

More documentation and more electronic interfaces are another cause of doctor burnout. With the introduction of electronic medical records, the onus is on the physician to not only see the patient but document every element of the interaction and examination in their

As one physician puts it "For me, burnout is not the types of patients I see, the working environment, the hours, or the physstress, but dealing with the encumbrance of being a highly paid data entry person". (6) A loss of control leads to helplessness and burnout.

Worldwide, the dark suits have taken over medicine, a necessary evil from the perspective of bringing in streamlined process, better financial practice, regulation and oversight. However, the net result has

been that physicians feel disenfranchised in their own domain, and this perceived loss of control has also contributed to burnout.

Change in the physician patient relationship has occurred and the pendulum has swung to where the 'doctor as God' phenomenon in India has very rapidly transitioned into one where the physician is perceived as an avaricious and untrustworthy shark.

Incidents of patient family rage especially when outcomes are poor (often not through the fault of the physician) are growing in prevalence, with incidents of vigilantism and vandalism becoming rampant. This can lead the physician to wonder if it is worth being a doctor at all and accelerate professional burnout. A 2018 Medscape physician survey listed lack of respect as one of the primary causes of physician burnout.

#### **Implications and impact**

What is the impact of this phenomenon?

A large study <sup>(7)</sup> of hospitals across the US and UK that was published in the Journal of the American Medical Association found that in the presence of symptoms of burnout the risk of medical error significantly increased (effectively doubled).

Further physicians who demonstrated signs of burnout were found to be twice as likely to deliver suboptimal care to patients owing to low professionalism, and three times more likely to receive low satisfaction ratings from patients on surveys.

The famous Libby Zion case of New York City was probably the first in which it was clearly demonstrated that resident physician overwork and exhaustion could result in poor decision making which in this case led to the untimely death of a young

The CEO of Mayo Clinic, Dr John Noseworthy, has referred to physician burnout as a 'health care crisis.' Clearly therefore this is an issue of considerable medhealth and public significance.

#### What can be done?

Medical Associations the world over are now beginning to recognise (the enormity and significance) this entity and to advise their medical communities on how to prevent burnout. Interventions include regular exercise, relaxation techniques, communication training, and schedule restructuring.

However, the solution can only begin with awareness, and insight, and acceptance that such a problem exists in the first place. And from a general public standpoint continuing to respect our physicians and to recognise and appreciate that they battle significant odds to take care of us is paramount to keeping physician burnout at bay.

The expression 'Physician, Heal thyself' is variously attributed to the Bible and to ancient Greek literature. Regardless of its origin, however, it seems clear that it is as relevant today as when it was first expressed.

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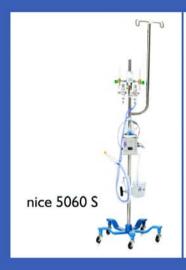
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# Raising the bar in technical education

Contribution of 3D printing technology in minimally invasive surgeries and precise procedures, will lead to enhanced patient safety and huge reduction in operation time. An insight by Guru Nanak Dev Engineering College

he Department of Production Engineering at GNDEC has an established Manufacturing Research Lab (MRL), at Guru Nanak Dev Engineering College (GNDEC), which is involved in rapid and additive manufacturing activities. The department has published roughly 150 research papers in the area of FDMR (fused deposition modeling) and rapid prototyping, in addition to holding four Indian patents.

#### **Assisting healthcare** professionals through **latest technology**

The MRL at GNDEC is a place that sees a lot of activity. Students, researchers, and faculty make abundant use of the facility for their respective projects. The GNDEC MRL also honours requests for expert assistance in product development from various sectors such as industry and healthcare. Some of those requests pose greater challenges in execution. One such request came from Dr Harinder Singh Bedi, Chairman of Cardiac Sciences, Ludhiana Mediways Hospital.

Α 23-year-old consulted Dr Bedi for bluish discoloration of his body and shortness of breath since childhood. The patient had not undergone any specific treatment and it was initially thought that he had a heart problem. When his skin colour started getting worse, he approached Ludhiana Mediways Hospital and was promptly referred to Dr Bedi.

Considering the delicate nature of the surgery and potential danger to the patient's life, Dr Bedi chose a very unconventional and novel approach. He decided to study and understand the precise nature of the malformation



closely and to the minutest detail. To enable this, he fell back on the latest in technology 3D printing and approached the MRL at the Production Engineering Department of GNDEC.

Dr Bedi observed that the patient's heart scans were normal and hence suspected a lung problem. He prescribed a CT scan to clarify his suspicion and start the correct line of treatment as soon as possible. The results were startling. The scan detected a large connection between the right pulmonary artery and the vein, which was bypassing the patient's lung. Dr Bedi diagnosed that his blood was entering the heart without picking up oxygen from the lung. In medical terms, this condition is referred to as large pulmonary arteriovenous malformation (AVM) and is a rare disease. Dr Bedi realised that the AVM could suddenly burst and lead to life threatening

#### Case study

The CT scan showed the



malformation to be extremely complex, with the arteries and veins hopelessly intermixed. Dr Bedi concluded that an early intervention was the only hope for the patient. However, the intricate nature of the pathology was expected to cause major problems during the procedure because both X-ray and CT scan images were two-dimensional and didn't give absolute clarity in terms of the exact com-

The MRL team, led by Prof Rupinder Singh, decided to use FDM technology to 3D print a prototype of the malformation based on the CT scan images. The MRL team chose the uPrint SE 3D Printer from Stratasys to print the life-size prototype from ABS thermoplastic.

The result was nothing less than outstanding. The 3D printer created the exact replica of the malformation and made Dr Bedi's quest of examining it extremely easy. Dr Bedi could easily rotate the prototype and view it from all crucial angles before the

surgery. He studied it closely and understood the nature of its complexity. Armed with crucial knowledge and understanding of the malformation, Bedi performed minimally invasive surgery on the patient with ease.

The 3D prototype helped Dr Bedi in more ways than anticipated. The surgery otherwise would have taken at least four hours to complete and had the risk of failure because a mistake of even one millimetre could have triggered bleeding, putting the patient's life in danger. But because Dr Bedi knew exactly where to operate, he was able to successfully complete the surgery in just one hour and 30 minutes with only 100 ml of blood loss, which, otherwise could have required at least two units of blood. The surgeon was able to achieve this rare feat purely because of the knowledge he had gathered from the 3D prototype. After the surgery, the patient recovered rapidly and his bluish colour was replaced by a healthy normal pink as his

oxygen levels immediately jumped to normal. The patient was discharged from the hospital only two days after the surgery.

Professor Rupinder Singh of the MRL team feels that the marvels of FDM technology can be used in meeting many other challenges in healthcare and believes that it should spread rapidly across the country. Dr Bedi was ecstatic that a complex medical malformation could so easily be understood with 3D printing. I foresee an immense contribution of 3D printing technology in minimally invasive surgeries and precise procedures, which will lead to enhanced patient safety and huge reduction in operation time, he said.

Professor (Dr) JS Grewal, Head of the Department of Production Engineering agreed. I think 3D printing is of great help to society and the medical fraternity. We are more than happy to help such patients and are ready to take up more such cases from the medical fraternity, he said.

# TRADE AND TRENDS

# BPL Medical aims to be the strongest player in India in next five years

Express Healthcare speaks with Sunil Khurana, CEO & MD, BPL Medical Technologies, on the company's growth plans and its vision for the Indian market

#### What is BPL's vision for 2019?

BPL carries its legacy back to 1969 as the first Indian company to manufacture ECG device in India. BPL has always been a preferred noninvasive cardiology brand in the fraternity of medical practitioners whereby it has ECG Machines, defibrillators, stress test systems, cardiac analysers to offer to its customers. Today, we have evolved from being known as an ECG brand to one of the largest Indian medical devices company offering a wide range of products and solutions to our customers. Today, we operate across six product segments namely cardiology, critical care, women and child care. imaging, home care and consumables and accessories.

Our vision is to indigenise and manufacture more medical devices in India, and to transform the organisation as one of the largest Indian medical devices company. These equipment are designed keeping Indian patients and hospital ecosystems in mind with highest standards of radiation safety and user friendliness. Today, we operate across six product segments namely cardiology, critical care, women and child care, imaging, home care and consumables and accessories.

#### What is BPL's current market share?

Different products have different market share. We have more like a 30 per cent in the ECG range, in ultrasound. our share is around five per cent since it is a new product. So, our market share could be in the range between 5 - 30 per cent.

#### What strategies will you adopt to meet your vision for this year?

We started four and half years back with one modality, i.e. non-invasive cardiology. Since then we have kept on adding to our portfolio with critical care, radiology, consumables etc. Thus, we are entering various spaces. However, all these segments are adjacencies. Today, the company offers products as well as services thereby serving as a one-stop-shop for medical equipment. Our strategy is to have a good selection of products. Secondly, we are also trying to add to our portfolio, for instance make the entire range of X-rays. We are trying to tailor-make products based on India's need.

Our investor is interested in partnering us for the next level of growth. I don't see any issues in raising funds for our next phase of growth. However, getting the right manpower is a challenge. Therefore, we are trying to do a lot of campus recruits and training to get good resources. Our partners are very supportive of any good growth plan that we have.

#### Striking a balance between cost and quality is a big issue in India. How do you think BPL works on these aspects?

BPL is dedicated to the pursuit of excellence in production. We have been delivering cutting-edge technologies adhering to Quality Management Systems at the start-of-the-art facility at Palghat, Kerala. Our ISO 13485:2016 certified manufacturing facilities in India, have been 'Making in India', since 1967. Our



collaboration with the best brands across the world and our high-quality manufacturing facilities provide our customers the latest technology at affordable prices. Our collaboration with the best brains across the world and our high capacity manufacturing facilities provide our customers with latest technologies at affordable prices. We will continue to introduce innovative products and expand our customer support network to enhance the productivity of healthcare.

#### How is BPL bringing in costeffective within innovative product range?

Our state-of-the-art factory at Palakkad, Kerala, spearheads pioneering efforts in medical technology and innovation, keeping with its legacy since 1967. Synonymous with trust, BPL's products and systems are certified by national and international quality standards and adhere to safety regulations. With our

commitment to making in India, we help our valuable customers experience uncompromised quality products that benefit patient

Secondly, selling a product and ensuring constant service to these products is a big task. This is where we have an edge. Our distributors also provide after sales services. Even if one can buy a product slightly cheaper from a freelancer, he can disappear tomorrow. That is not the case with us and this is our advantage. We differentiate ourselves by going into territories where even now the competition is not very high, i.e. we have improved our reach dramatically. We are one of the companies which can confidently say that we serve the last mile. It is even part of our vision statement.

#### BPL has tied-up with leading MNC's to launch critical healthcare devices, right? Can you throw more light on these partnerships? In the critical care segment, in

2015 we acquired Penlon, a company based in Abingdon UK which is a 75-year-old strong brand offering anesthesia products globally.

Recently, we have partnered with Löwenstein, Germany and added range of ventilators to our offerings thereby completing our  $product\ basket\ in\ the\ critical$ care segment.

In Imaging, we partnered with South Korean-based Alpinion to offer co-branded ergonomically designed ultrasound machines with superior image quality.

We have also designed and developed fully indigenised range of C-Arm and X-Ray

products, which are manufactured at our ISO certified facility located at Palakkad. This is in line with our vision to indigenise and manufacture more medical devices in India.

We have recently partnered with Atom from Japan which is a global leader in neonatal segment known for its superior quality products. With this partnership, we have added high-quality warmers and incubators along with our other products such as foetal doppler and foetal monitor to become a solution provider for maternal and infant care segment.

India's large population and under penetrated healthcare infrastructure make preventive health and care at home very important; so that the existing infrastructure is optimally utilised by the needy patients. We see a huge demand for preventive health in the coming years with rising disposal incomes and increased focus on health.

Home care is an important segment for BPL Medical as it helps us to connect with the end users directly. In the home care segment, we have a host of products ranging from BP machines, weighing machines, thermometers, air purifiers etc., which are connected through our wellness app BPL 'Be Well.'

#### How is BPL working towards creating a sharedvalue culture within the organisation, its partners and its customers?

BPL Medical enjoys a legacy of being a 50-year-old medical

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# PM Modi inaugurates MPMMCC at Varanasi

PRIME MINISTER Narendra Modi formally inaugurated the Mahamana Pandit Madanmohan Malaviva Cancer Center (MPMMCC) at Varanasi. The hospital has been set up to cater to the population of Uttar Pradesh and Bihar.

The Prime Minister was taken through a guided tour of MPMMCC, led by Dr RA Badwe, Director-Tata Memorial Center (TMC), Mumbai, Dr Satvaiit Pradhan, Deputy Director- MPMMCC; Dr Pankaj Chaturvedi, Dy Director - Cancer Epidemiology, TMC. The biochemistry laboratory was established and started under the guidance of Dr Sangeeta Desai, Prof and Head, Pathology- Tata Memorial Hospital (TMH), Dr Nitin Inamdar, Incharge, Dept of Biochemistry, TMH by Dr Geeta Rathnakumar, Lab Manager, Dept of Biochemistry, TMH and Dr Prati-Gavel. Asst



Biochemistry, HBCH and MP-MMC. While on his round of the facility, the Prime Minister also visited the biochemistry laboratory and inaugurated XL-1000, Transasia's, Made in India, fully automated, clinical chemistry

One of the most trusted in the clinical chemistry segment, XL-1000 is designed for high workload. With a capacity to conduct 1000 biochemical tests / hr. it is most suited for specialised institutes that have a requirement for testing of large number of samples. Infact, it is the first-of its-kind in Uttar Pradesh. XL-1000 is a result of Transasia's in-house R&D efforts and indigenous manufacturing capabilities. The MP-MMCC under the aegis of Tata Memorial Centre, Mumbai has been built at a cost of Rs 580 crores. Situated within the BHU campus, this 350-bedded 'patient-centric care' facility, is expected to cater to the healthcare needs of about 40 lakh patients from the city and nearby areas. The full fledged biochemistry laboratory at the hospital has been set up with joint efforts of Dr Rathnakumar and Dr Gavel.

Suresh Vazirani, CMD, Transasia Bio-Medicals said, "We are feeling a sense of great pride that our Make in India product XL-1000 has been inaugurated at MPMMCC, the second biggest cancer institute in India, through the hands of the visionary of Make in India campaign. This cancer institute is a great initiative and I am sure it will be a big contributor to the Ayushman Bharat Scheme. XL-1000 is a fully automated analyser with no manual intervention right from blood collection to report issuance, thereby ensuring accuracy and speed of reporting. A lot of patients, who will be coming to MPMMCC from remote locations, can now go back with the results on the same day itself. Importantly, it offers a complete testing profile for the heart, liver and renal function tests that are critical to early cancer diagnosis and evaluating the disease progression. Moreover, being locally manufactured equipment, we are able to ensure that we can offer cost-effective treatment to the patients, and contribute to the Avushman Bharat Scheme."

# **BPL** Medical...

Continued from Page 41

devices company from India. BPL Medical was the first company to manufacture ECG in India and has been known as a great brand with its customers in non-invasive cardiology.

During the last five years, we have diversified from a cardiology brand across various segments such as critical care, women and child care, imaging, consumables and homecare and accessories.

We have strengthened our presence in critical care through an overseas acquisition of UK-based Penlon, which is a known brand amongst anesthetists.

We are very hopeful that BPL Medical will become a very strong emerging player as an Indian brand in India and in the next five years and probably we should be ahead of the top MNCs. As our vision statement states, we serve to the last mile of the market which is backed by our strong sales and service distribution network across the country. Service is an important aspect and it is important not only to sell to our customers in Tier II and III cities, but also to be able to provide timely service of these equipment and ensure high uptime for these equipment. This is something that we can effectively manage through our PAN India distribution.

We are taking painstaking efforts in recruiting the right manpower, a lot of effort is spent in ensuring that the candidate we recruit is of the right cultural fit, and meets the set stringent requirements which is a big challenge. Therefore, we are trying to do a lot of campus recruits and training to get good resources. Our partners are very supportive of any good growth plan. Today, we are investing heavily on marketing activities across various communities and across the country to strengthen our relations and create a pull for brand BPL Medical.

EH News Bureau

# ERBA Group showcases its latest technologies at MEDLAB 2019

AT THE recently concluded MEDLAB expo, the ERBA Group, a leading global In-vitro Diagnostic Company, launched their latest hematology analysers, H 360 and H 560. Designed for improving lab efficiency, these systems are paving the way for better healthcare outcomes in over 100 emerging market countries.

These latest additions are targeted at small to medium laboratories and complement the larger automatic Elite 580 hematology analyser launched at MEDLAB 2018. The newly launched, H 360 3-part differential analyser can run up to 60 samples/hr and requires only 9 microlitres of blood. The H 5605-part differential analyser also runs 60 samples/hr and requires only 15 microlitres, which is highly beneficial in paediatric cases. In both systems, interpretation of results is aided using an advanced 3D scattergram.

ERBA also displayed the latest version of its powerful Laura XL platform, which is a fully auto-



mated urine chemistry and sediment analyser. Using digital microscopy and AI technology, it auto-recognises 16 urine sediment elements. Moreover, the photometric urine strip reader aids in precise determination of 10 analytes using ERBA's standardized test strips DekaPHAN.

The ERBA group also hosted an education session by Dr Mir Majid Mossalaeie, Vice President, Iranian Association of Clinical Laboratory Doctors on the effectiveness of AMH ELISA test kits, which helps childless couples conceive though better estimation of ovarian age. Dr Mossalaeie commented on the high quality of ERBA's AMH kit which is made by its US subsidiary, Calbiotech, along with 200 other immunoassay products. Further, the ERBA team of experts provided first-hand experience to the delegates on the new systems with more than 10 demonstrations being conducted each day!

The Director-General of Dubai Health Authority, His Excellency Humaid Al Quatami, visited the booth.



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