NATHEALTH®
Healthcare Federation of India

6th Annual SUMMIT 2019 Report

Summary of Discussions

INTEGRATE, COLLABORATE AND RE-IMAGINE TO STRENGTHEN INDIA'S HEALTHCARE GROWTH TRAJECTORY

About the 6th Annual Summit

Mr. Siddhartha Bhattacharya, Dr. Harsh Mahajan, Dr. Sudarshan Ballal, Dr. Vinod Paul, Dr. Indu Bhushan, Dr. Preetha Reddy & Mr. Badhri Iyengar

Assessing the healthcare landscape of India is like the "Tale of Two Cities".

On one side, there is the "double-burden of disease" story with rising cases of non-communicable disorders amidst still unfinished agenda of infectious/communicable diseases. With one of the highest global levels of maternal and infant mortality, NCDs have begun to account for almost 60% of all mortalities in India, as per the WHO. Additionally, NCDs account for around 40% of hospital stays and nearly 35% of all recorded Out-Patient Department (OPD) visits. Further, India accounts for ~20% of the global disease burden, but the existing Indian healthcare infrastructure is far from adequate. With a mere 0.6 doctors and 0.9 hospital beds per 1,000 people, as compared to the US, which stands at 2.7 doctors and 3.1 hospital beds respectively, availing quality and affordable medical care remains a key challenge. With less than 15% population having some form of health expenditure support from government or privately funded insurance schemes, and with more than 55 million people falling into poverty because of catastrophic health expenditure every year, it is no wonder that the Global Burden of Disease Report 2017 ranked India at 154 out of 195 countries in terms of accessibility to healthcare.

The other side presents a different, rapidly changing picture, where healthcare is increasingly being positioned at the forefront of the country's policy agenda and India is being touted as the destination for medical value travel, offering high quality healthcare at 1/10th of US costs. In 2018, the launch of the world's largest non-contributory public healthcare scheme - Ayushman Bharat-PMJAY – has promised to transform the lives of nearly 40 crore vulnerable people by providing them financial access to affordable and cutting-edge treatment services. Parallelly, the government committed to growing healthcare spends from 1.4% to 2.5 % of GDP by 2025.

Further, according to the Department of Industrial Policy and Promotion (DIPP), between April 2000 and December 2018, hospitals and diagnostic centres in the country attracted Foreign Direct Investment (FDI) worth US$ 6 billion. In 2018 alone, some of the investments made in the Indian healthcare industry included

23 partnership deals worth US$ 679 million. The key drivers for this sector- specific growth have been increased healthcare consumption and insurance penetration, growing investment from PE models and diversified delivery mechanisms.

Barriers that need to be addressed

While the above scenario presents an interesting paradox, there are multiple barriers that need to be overcome if India were to achieve the aim of Healthcare for all by 2030. More funding needs to be made available to the sector, either in the form of public or private investments. While the GoI has made an explicit commitment to increase public spending to 2.5% of GDP, the same needs to be matched with annual targets. The existing fragmentation of providers in the healthcare space limits any form of integration or collaborative quality improvements. Steps needs to be taken to formulate consolidation of this sector. The concentration of Healthcare Infrastructure in Metro and Tier 1 cities limits access to Healthcare in Rural areas. Simultaneously, new forms of healthcare promote care at home and in ambulatory centres.
The digital Health Landscape is mostly limited to having some sort of HMIS play with limited functionalities activated with minimal interoperability. The same needs to be invigorated so that a comprehensive EMR landscape can be developed, along with focus on Health Data Dictionary, Health Registries and interoperability standards.

Further, amongst all, there is a palpable and recognized need to herald a paradigm shift in the way the sector is perceived to grow. The trust barometer among the providers, payers, regulators and the end consumers in the healthcare ecosystem has spiralled down to new lows. In the last three years, a slew of issues pertaining to pricing of essential drugs, hospital and diagnostic costs, quality of service, patient-doctor communication or faulty medical devices have plagued the sector. Another cause for concern is a lack of transparency, where all players inadvertently tend to operate in silos (Transparency International 2016).

A possible solution would arise if the lack of transparency among the stakeholders in both the private and the public healthcare sectors is used as an opportunity to create solutions by arriving at minimum common programs (MCPs). The imminent achievement of these MCPs would create an atmosphere conducive to building trust and openness among the stakeholders. This can be achieved by pooling bold innovation, ideas, knowledge, cutting-edge technology and funds and building an enabling roadmap.

An example of a successful Public-Private-Partnership approach to improve healthcare can be witnessed in the success of development and operation of a state-wide network of advanced diagnostic facilities, including fully equipped and staffed radiology and pathology laboratories, in Jharkhand. Traditional delivery models are not seen as sufficient to address the demographic constitution of the country and new models are required to address new age healthcare challenges. A population the size of India, with diverse health profiles, needs an innovative, flexible, optimized, and effective prototype that can be adapted to and altered according to rising demands and shifting consumer focus.

Role of Innovation- Require Innovative Thinking linked to visible pathways for scale across a fragmented ecosystem

While the Government has the wherewithal to implement schemes and devise policies to revolutionize the Indian healthcare sector, it also has the power to harness and mobilize the expertise of all relevant stakeholders, to prepare a joint strategy to provide access to universal healthcare. In its first tenure, the current Government focused its attention on providing access to healthcare. The various programmes and schemes launched in the past five years substantiate its intent and desire to make affordable and cutting-edge healthcare accessible to all. Important announcements, pertaining to the healthcare sector, were made, such as achieving universal health coverage for its population with publicly financed healthcare insurance, active engagement with the private sector by encouraging private investment in rural and supply-deficit areas, boosting local manufacturing of drugs, and reducing dependence on imports as well as facilitating collaborative research between traditional and modern systems of medicine. The Jan Aushadhi

scheme was another novel project launched by the government with an intent to provide quality medicines at affordable prices for all.

Following the announcement of the National Health Policy, the government showed its commitment to attain the highest possible level of health and well-being for all, at all ages, through a preventive and promotive healthcare orientation. The success of the vision, therefore, depends upon the concerted efforts of both public and private sectors to create an efficient, affordable and patient-centric healthcare system that can deliver a comprehensive package of services and products to meet the immediate healthcare needs of all citizens.

The new Government can provide the much-needed impetus to the existing schemes and programs and help create new dimensions of growth, infuse positive conversations, besides building a stronger narrative for healthcare in India. As outlined in NITI Aayog's Strategy for New India @75, it is keen to establish partnerships with the private sector and other stakeholders as part of the Skill India and Make in India programmes to identify gaps and design appropriate curricula for training programmes. It will also partner with hospitals and medical practitioners to skill-train medical workforce. PPPs have been identified as an effective model to increase the accessibility and affordability of healthcare across the country, as the current physical infrastructure in the public system is inadequate to cater to the healthcare needs of a transforming economy.

At the same time the Government of India has also launched the ambitious Ayushman Bharat: Pradhan Mantri Jan Arogya Yojna (AB PM-JAY). It is the key flagship healthcare scheme of the Government of India which aims to increase the access, quality and affordability of healthcare. Deemed as the world's largest publicly funded healthcare scheme, PM-JAY provides financial protection of Rs. 5 lacs per family per year to cover more than 10.74 crore vulnerable families for secondary and tertiary treatment. Through PM-JAY, beneficiaries can complete cashless and paperless access to health services at the point of service. The scheme was launched on September 23rd by the Hon. Prime Minister of India and since its launch has provided free treatment to more than 60 lakh individuals, amounting to around 9000 cr. INR.

The National Health Authority (NHA) provides the overall vision and stewardship for design, roll-out, implementation and management of AB-PMJAY in alliance with state governments. PM-JAY has caused considerable demand shock towards healthcare access by providing financial cover against catastrophic health expenditure to bottom 40% of India's population. However, Indian healthcare providers currently lag on several key fronts such as quality and affordability of healthcare services. There is also a high shortfall on the capacity and efficiency, of healthcare service delivery in India. To cater to the above challenges there is a common consensus that leveraging innovations is the need of the hour to improve access to healthcare, quality of healthcare delivery and healthcare affordability. NHA has also established an Innovation strategy to facilitate creation of a robust innovation pipeline to bring much needed innovations to the health ecosystem. The two major components of NHA's Innovation Strategy include: Ayushman Bharat Start-up Grand Challenge and Market Access Programme (MAP). The Grand Challenge is a call to action for the Indian start-up community to generate cutting-edge solutions for supporting NHA towards effective implementation of PM-JAY and empowering 500 million people to gain access to affordable healthcare. At the same time the Market Access Programme, is a holistic structured programme of the NHA Innovation Unit to provide support in accessing market created by Ayushman Bharat PM-JAY in order to accelerate adoption of innovations in the Indian healthcare ecosystem. MAP will facilitate support for procurement, funding, testing and validation to selected start-ups.

Opportunities for value creation: Creating an inclusive platform

Today, we stand at crossroads of time which is ready for change. The path to achieve this holistic goal hinges on collaboration, where all the key industry stakeholders can come together, deliberate, cooperate and work in tandem to bridge the vital gaps in service delivery. The Government has the power to effectively change the present narrative by assuming ownership for this initiative. To facilitate private investment & participation on a sustainable basis in making Ayushman Bharat a big success, it is imperative to take actions to reduce cost of creating new infrastructure as well as running healthcare operations.

At NATHEALTH, we believe that there is a compelling need to create a unique platform conducive to meaningful dialogue that paves the way for collaboration among various stakeholders. With the support of the Government, we envision a high-impact national two-day summit around the themes of Digital Health, Investment, Skilling and Mainstreaming Innovation, to drive a stronger healthcare narrative and achieve impeccable delivery of a Modern Healthcare System "Made in India" for India.

The Summit will revolve around the pillars of healthcare - Investment in Healthcare, Digital Health, Skill Development and Mainstreaming Health Innovations. It will offer a unique platform conducive to meaningful dialogue that will pave the way for collaborations, deliberations, discussions, building ideas, sharing best practices, networking, showcasing technological innovations, providing sectoral insights, and much more. It will open engagement gateways amongst academia, start-up incubators and accelerators, private industry and investors. A rare knowledge platform with inspiring keynotes, intense deliberations and participate panel discussions to drive a stronger and purpose-driven healthcare narrative for India. Thought leaders from the industry, think tanks, and decision makers from the Government, domain experts, academicians, innovators, enterprises and start-ups are expected to participate.

Expected outcomes

As an expected short-term outcome of this summit, NATHEALTH in partnership with the Government intends to carve-out a working group consisting of representatives from the government and the industry. This group will work to initiate ideas for collaborative models and build long-standing relationships of trust with all the important stakeholders within the healthcare space. **The long-term outcomes would be greater engagement and dialogue at multiple levels** to drive policy consensus, ensure enforcement of necessary mechanisms and guidelines to enable healthcare service delivery providers to operate within an established framework efficiently. An added goal of this summit will be to create a harmonized voice for the industry with inclusive participation and clear communications on key issues across industry federations.

NATHEALTH® Healthcare Federation of India 6th Annual SUMMIT 2019

ANNUAL SUMMIT 2019

NOVEMBER 28-29, 2019 I The Lalit, New Delhi

REIMAGINING COLLABORATION TO STRENGTHEN INDIA'S HEALTHCARE GROWTH TRAJECTORY

DAY 1 – 28th November 2019

Inaugural Session

Presenting the Event Theme & Agenda:
Siddhartha Bhattacharya, Secretary General, NATHEALTH

Welcome Address- NATHEALTH 2.0 Vision & Roadmap:
Dr. Sudarshan Ballal, President NATHEALTH

Reimagining Collaboration:
Ms. Preetha Reddy, Senior Vice President, NATHEALTH

Balancing Growth, Quality & Sustainabilty Agenda:
Dr. Harsh Mahajan, Vice President, NATHEALTH

Special Address- Public Private Partnerships and NATHEALTH Role
Dr. Prathap C Reddy, Founding President, NATHEALTH & Chairman Apollo Hospitals

Keynote Speaker:
Dr. Indu Bhushan, CEO- National Health Authority

Inaugural Address by Chief Guest:
Dr. Vinod Paul, Honourable Member (Health, NITI Aayog)

Launch of NATHEALTH Diagnostic Study by Dr. Vinod Paul in presence of
NATHEALTH Leadership Team and Diagnostic Forum Leaders

Concluding Remarks & Vote of Thanks
Mr. Badhri Iyengar, Secretary, NATHEALTH

Session 1: Digital Solutions: Driving Transformation in the Healthcare Industry to enable next wave of accessibility and affordability			
Setting the context: **Mr. Sanjay Prasad, GC Member, NATHEALTH & Track Leader: Digital Health**			
Keynote speaker 1: **Sri J Satyanarayana, Former Chairman, UIDAI**			
Keynote speaker 2: **Dr. Sangita Reddy, Joint MD, Apollo Hospitals**			
Digital Health Demo: **Future Digital Health Platform (Mr, Girish Krishnamurthy, TCS; Ms. Priyanka Aggarwal, BCG)**			
Leveraging technology for the new healthcare ecosystem (Highlight the importance of Digital India programme to achieve better governance and last mile delivery) and enabling an improved ecosystem through industry support funding and mentorship	**Mr. Kiran Anandampillai** (National Health Authority) **Dr. Vikram Chhatwal** (MediAssist) **Mr. Rohit Sathe** (Philips) **Mr. Sajeev Malthora** (NASSCOM) **(Honorary) Brig. Dr. Arvind Lal** (Dr. Lal PathLabs) **Ms. Yasha Huang** (APACMed) Moderator: **Dr. Anoop Amarnath** (Manipal Hospitals)	Panel Disscussion	This Session will highlight Digital Health as an important pillar for new India and the ecosystem enablers to propel the path forward
Collaboration of NATHEALTH with Start-Up Nation Central (SNC), Israel **Dr. Sudarshan Ballal, President NATHEALTH & Mr. Wendy Singer, Executive Director, SNC Central**			
Concluding Remarks for Digital Health Session- **Dr. Sudarshan Ballal, President NATHEALTH**			

Session 2: Arogya Bharat – Creating an ecosystem to increase investments & momentum towards Universal Health Coverage (UHC)			
Game-changing priorities for Arogya Bharat (Each presentation including Q & A is 10 mins)	Session introduction by **Mr. Karan Singh** (Bain & Co) **Mr. T V Mohandas Pai** (Manipal Global Education) on 'Frontier Technology- How it will disrupt Healthcare' **Mr. Kaushik Sen** (Healthspring) on 'Organising, scaling primary/ preventive care' **Mr. Ashok Kakkar** (Varian Medical Systems) on 'Value Based Care' **Mr. Mitesh Daga** (TPG) on 'Disruptively scaling healthcare infrastructure'	Ted Talk format + audience Q & A	The ecosystem to strengthen our commitment to Arogya Bharat includes a well thought out expansion of preventive health, supply side infra, outcome financing and innovative models to build tier 2/3 delivery models. This requires policy push to continue our journey towards Universal healthcare encompassing Ayushman Bharat and beyond- from Cure to Care
Investments in Tier 1/2/3 and barriers that need to be overcome to build supply side capacity constraints	NATHEALTH/AHPI Paper: Presented by **Mr. Sunil Thakur** (Quadria Capital) **Mr. Raju Venkatraman** (Medall) **Mr. Abhishek Kapoor** (Regency) **Dr. Vivek Desai** (HOSMAC) **Mr. Prabal Chakraborty** (Ikizia Advisors) Moderator: **Ms. Preetha Reddy**, Apollo Hospitals	Panel Discussion	This session looks at bringing investors, health infra specialists, MedTech, Operators and care providers to discuss the opportunities and possible options to expand supply side infra and provide "Health for all"
Concluding Remarks- Mr. Alok Kumar (NITI Aayog)			

Session 3: Moving towards skilled & High-Quality Healthcare System in india to achieve the vision of Health for all			
Affordable Excellence- How India can move towards better value at scale as measured by Outcome/Cost?	**Dr. Murali Srinivasan** (Manipal Hospitals) **Dr. Shravan Subramaniam** (Roche) **Mr. Joy Chakraborty** (P.D. Hinduja Hospital and MRC) **Mr. Sumeet Agarwal** (Midmark) Moderator: **Dr. Nandakumar Jairam** (Columbia Asia Hospital)	Panel Discussion	Access & Affordability is the current mantra in India's Healthcare. Where does quality feature as a key differentiator? How can government and industry move towards solutions that can scale equitably with better outcomes?
Dr. Abhijat Sheth, President National Board of Examinations on PPP opportunities on Skilling			
Enabling a supportive environment to address medical workforce challenges	**Dr. Rajiv Yeravdekar** (Symbiosis Institute of Health Science) **Mr. Ashish Jain** (Health Sector Skill Council) **Dr. Shubnum Singh** (Max Healthcare Institute) **Mr. Gaurav Malhotra** (Ikizia Advisors) Moderator: **Mr. Gautam Khanna** (P.D. Hinduja Hospital)	Panel Discussion	This session will highlight how the government and the private sector can play roles of a catalyst in skill development: increase number of doctors and skilled staff and skills upgradation required for better healthcare outcomes
Session 4: CEO Round Table on NATHEALTH Diagnostics Study			

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REIMAGINING COLLABORATION TO STRENGTHEN INDIA'S HEALTHCARE GROWTH TRAJECTORY

DAY 2 – 29th November 2019

Sesion 5: Innovation and Entrepreneurship in Healthcare

Start-up Carnival Inauguration by **Dr. Indu Bhushan,** CEO - National Health Authority

Innovation and Entrepreneurship- a perspective on Innovation in Healthcare. What system needs to be in place?	Context Setting: **Mr. Amit Mookim** (NATHEALTH) **Mr. Varun Jhaveri** (National Health Authority)	Presentation	The need to drive innovation in this sector and what it can help us achieve. Examples of Global Innovation System and Impact
Innovation and Ayushman Bharat: Seeding Innovations & Creating Pathways For Scale	**Dr. Amit Shah** (USAID) **Mr. Nalinikant Golagunta** (GE Healthcare) **Mr. Sumit Nadgir** (True North) Moderator: **Dr. Harsh Mahajan** (Mahajan Imaging)	Panel/Fireside	What innovation ecosystem is needed to make Ayushman Bharat a success? How will the Government support this? What is required from Industry & Investors?
Framework for Mainstreaming Innovation-What does it take?	**Dr. Sowmya Shashidhara** (Indian School of Business)	Presentation	Evaluating Start-ups What attributes do successful start-ups carry? What frameworks are applicable for India?

Creating standardization mechanism for validating innovations and promoting public procurement	**Mr.Neeraj Jain** (Path) **Mr. Rajesh Singh** (Wish Foundation)	Panel discussion	How to establish a standardized transparent mechanism to give innovators a boost in public procurement and foster industry partnerships?
NHA & NATHEALTH Joint Session	Walkthrough sessions with start-ups • **Mr. Anshul Sharma** Redwing Labs • **Mr. Sunil Chopra** Healthcubed • **Mr. Himanshu Gandhi** NIRAMAI Health Analytix • **Dr. Manuj Garg** myUpchar • **Ms Sonia Vohra** Gramin Healthcare	Pitch Sessions	Establish Partnerships and Scaling opportunities for high potential innovations
Incubation & Acceleration to drive wellness & preventive health	**Mr. Rajiv Kapahi** (Boston Scientific India) **Mr. Kshitij Bhotika** (Practo) **Dr. Om Manchanda** (Dr. Lal PathLabs) **Mr. Mayank Bathwal** (Aditya Birla Insurance) **Mr. Badhri Iyengar** (Smith & Nephew) **Moderator: Dr. Niti Pall** (Well Tech)	Panel discussion	Create a continuum of care to deliver optimized care: One challenge in India is the focus only on hospitals' secondary and tertiary care. How can one address the needs of patients in geographies with high hospital utilization rates by screening people for comprehensive primary care that can help manage risk factors. This could help keep them healthier, achieve better outcomes, and lower costs. What will enable this shift?

Mainstreaming innovations - Role of Industry	**Mr. Vipin Pathak** (Care 24) **Mr. Pavan Chaudhary** (Vygon) **Mr.Prashant Sharma** (Charnock Hospitals) **Mr. Manish Sardana** (Polymedicure) **Ms. Ruma Banerjee** (Neotia Health) **Ms. Meenakshi Nevatia** (Stryker) **Mr. Vikram Thaploo** (Apollo Hospitals) Moderator: **Mr. Ravinder Dang** (Baxter)	Panel discussion	How can industry help assess healthcare innovations from varied perspectives such as clinical, technical, impact, sustainability and scalability to participate in piloting, testing, adopting and scaling innovations? What can be the go-to-market support model across Tier I, II and III cities, and rural areas?
The story of start-ups and the funding ecosystem with global insights	**Ms. Wendy Singer** (Start-up Nation Central) **Mr. Mohit Khullar** (O3 Capital) Start-up 1: **Mr. Rishabh Gupta** (Redwing Labs Kams Pvt.Ltd.) Start-up 2: **Mr. Asaad Joubran** (Zipline International Inc.) **Dr. Shirshendu Mukherjee** (BIRAC) Moderator: **Mr. Ashwin Raguraman**, (Bharat Innovation Fund)	Panel discussion	What ecosystem on funding is required to drive innovations? How can industry enable an ecosystem for healthcare innovations access private industry support, funding from private capital and other funders and mentorship from clinical, technology and business experts?
The Final Word-Patient-Doctor interaction	2 Patients Speakers-**Dr. Shakti Kumar Gupta** (AIIMS) Speaker-**Dr. Chandy Abraham** (Healthcare project ITC) Moderator: **Mr. Amit Mookim** (IQVIA)	Panel discussion	Managing patient expectations. How are patient needs changing and how can we move towards a system that bulids the doctor patient trust each time, every time.
Concluding Remarks by NHA & NATHEALTH			

Day 1

NATHEALTH®
Healthcare Federation of India
6th Annual SUMMIT 2019

Inaugural Session

Dr. Harsh Mahajan, Dr. Sudarshan Ballal, Dr. Vinod Paul, Dr. Indu Bhushan & Dr. Preetha Reddy

The session saw a convergence of industry stalwarts at a single stage, who shared their views on the sector and its next wave of change.

The industry is standing at crossroads as India's healthcare tackles the double burden of disease with rising cases of non-communicable disorders, with the unfinished agenda of infectious and communicable diseases, and one of the highest global levels of maternal and infant mortality.

The cities have begun to account for nearly 60% morbidity in India as per the WHO. Additionally, they also account for around 40% of hospital stays and nearly 35% of all recorded out-of-pocket department visits. What's more? India accounts for 20% of the global disease burden, while the existing Indian healthcare infrastructure is far from adequate. With less than 15% population having some form of pre pooled health expenditure support from the government or privately funded insurance program and with over more than 55 million people falling into poverty because of catastrophic health medical expenditure, it is a time for a drastic change.

The event was hence created to bring together distinguished industry leaders, major associations affiliated to healthcare, senior government officials, acclaimed academicians, innovators, think tanks and NGOs – to discuss the way forward for the sector.

The panelists dwelled on how the great fragmentation in India's financing delivery and governance systems impacts access, affordability and quality in the delivery of care. While a completely different side presents a rapidly changing picture, the one where healthcare is increasingly being positioned at the forefront of the country's policy agenda.

A case in point - in 2018, the launch of world's largest non-contributory public healthcare scheme Ayushman Bharat PMJAY, which has promised to transform the lives of nearly 40 crore population. Parallelly, the government has committed to grow the healthcare spend from 1.4% to 2.5% of the GDP by 2025.

Experts spoke on how healthcare is a strategic sector that underpins India's aspiration to be a leading global economy. The key drivers for this sector are driven by healthcare consumption, insurance penetration, growing investments from private equity, long-term patient capital, infra lenders, and diversified integrated delivery mechanisms.

The path to achieve this holistic goal hinges on collaboration, where all the key industry stakeholders associated with healthcare can come together with the ecosystem, deliberate, co-operate, and work in tandem with the government to bridge the vital gaps in service delivery.

It is critical to advocate the cause of healthcare sector through all participants by sustained communication and education campaigns to catalyze innovation and by bringing the collective experience to resources and mentor start-ups as well. For all this to happen, it's very important that all stakeholders speak in the same voice.

Here, technology also will be the key in scaling up the reach of affordable healthcare across the country. The national digital health blueprint is an important policy document in this direction & NATHEALTH would like to be the catalyst for innovation in healthcare. Additionally, elderly healthcare is going to be a serious issue in India & the ageing population is a big factor in planning India's healthcare system. India has the second largest population of elderly next only to China.

If the government sector and private sector can collaborate as beautifully as a fabric, which is woven, and keep up the density of what holds it together, India will have all the answers to its healthcare woes. If the government could work with the private sector on patient capital, it will further strengthen the entire system. There is a need to focus on human capital and if the rules of the game have to change, then a change is required in the way the industry is functioning.

The formula here is to keep people out of hospital beds, because the future is to find ways and methodologies to keep people well. The industry should look at preventive healthcare, because no amount of intervention can cope with the onset of disease eventually.

Globally, nations spend the largest amount of money for delivering healthcare and well-being; about 8.2 trillion dollars across the world, despite this, unfortunately, less than 20% of the world's population has access to good quality healthcare. Nations simply do not have 16 trillion dollars to cover at least half the world's population. Hence, changing the model of delivery is required, and this cannot happen in silos. Here, a platform like the NATHEALTH summit helps bring everyone together to plan and pool in resources and elevate the healthcare status of India.

India has a unique opportunity to demonstrate a truly innovative model for healthcare that epitomizes quality at affordable prices. The country's aspiration to be a leading 5 trillion-dollar economy has to have a strong foundation of a robust health system.

India is a young country. More than 60% of the population is less than 30 years of age. This is India's strength. To get dividends out of this vast human resource, it is important that the citizens must be healthy, educated and hence productive.

While Ayushman Bharat has been a bold step by the government, the industry requires certain policy changes. Declaration of healthcare as a national priority and providing it infrastructure status is a request hanging since many years. Provision of easy access to capital at lower interest rates, modification of tax structures, including GST, giving incentives to build new infrastructure, reduction of customs duty on medical equipment devices and consumables that are not manufactured in India, are some of the asks that are well-known and necessary.

There are also issues pertaining to the need for supply side incentives, particularly infrastructure. India's supply is just 1 bed per 1000. No country with whom India compares itself has beds less than 2 per 1000. Japan has 5, Brazil and other emerging economies have around 3 to 3.6. Hence, India's status needs a big boost.

Even if the country works with the goal to double the hospital beds, 10-15 lakh more beds are required, which translates into thousands of hospitals. Hence, the state governments need to open doors wide for the private sector to work in. The private sector can do much more, provided the entry barriers are lessened or removed and easier policies are made.

India should look at the overall health goal, rather than making it a public vs. private battle.

The panel agreed that India is a nation with one of the best talents in the world & the country needs to take steps to increase the number of doctors, nurses, technologies and build great strength in the health sector.

For instance, Ayushman Bharat has, in just 14 months, gained some good momentum. Close to 63 lakh treatments and e-cards to more than 11 crore people have been given, more than 20000 hospitals are on board right now and almost half of those are private sector hospitals. Plus, the government has now committed close to 10,000 crores for this scheme together with the state governments.

Additionally, IT has played a vital role in reaching all of the above numbers. The scheme's I.T. system is helping provide treatment to more than 10 people per minute, is generating more than 5 cards per second, it has linked more than 20,000 hospitals with 50 crore people and 33 states, plus the payments are being done electronically.

Fraud prevention analytics and forensic analytics will also be soon put up in place.

A fast-track certification process has also been put in place for hospitals empanelled with Ayushman Bharat. So that the quality of services can get a fillip. More than 100 applications have been received already in less than one month since the fast track certifications were launched, and about 20 hospitals have been certified as well. These certified hospitals will also get better rates from the government, as compared to non-certified ones.

The government is also supporting medical audits, which will help in ensuring that the right protocols and treatments are being followed. Patients will also have a significant role; their feedback on the services will play a pivotal role in the rating system of hospitals.

Another challenge to tackle is of manpower, wherein there is a huge deficit. Even the specialist pipeline is bleak. India's need for specialists is roughly 5 times of what is available today. For instance, if we have 60,000 obstetricians, we need 3,00,000. So on and so forth for paediatricians, orthopaedics, and others.

Here, the medical education system needs an overhaul to cover up the deficit areas. India's nursing systems also need to be brought up, in terms of monetary compensations given. While doctors are usually paid a hefty salary, nursing staff lags behind. Empowering them and investing in their capacity will also help improve healthcare quality levels.

The session also mentioned that over the last three decades, private healthcare players have made a major impact over a portion of the Indian population in bringing the same facilities that are available for them anywhere in the world. However, India also needs to focus on bringing a significant impact on the NCDs and ensure that NCDs do not create a threat. India should remember that the World Economic Forum has said that 80% of the deaths in India will be from NCDs and the country's affected population can die at half the age. The cost burden of NCDs will be USD 30 trillion. For India, it can be almost 100% of the GDP.

It was reiterated that the private healthcare players would be more than willing to work with the government to halt the NCDs. It was also discussed how India is already technologically advanced and the country's outcomes in every field like, transplants or oncology have been the best with a fraction of the global cost.

Launch of NATHEALTH Diagnostics Study

For India's healthcare to reach the desired levels of quality, it is imperative that the industry and the government shares knowledge and experiences, best practices, new operating models and technology advancements, to steer the best possible solutions.

India should look at adopting new methodologies, innovativeness, smart financing, affordable and low-cost health, digital tools to a level where it will really make a difference, to rural and urban areas.

The country is going beyond curative care to bring health education, disease prevention and rehabilitation into the fold. It is time to build a sustainable, long-term strategy forging together innovative ideas, knowledge, cutting-edge technology and funds to mobilise access to universal healthcare.

The session also deliberated on how India should become the first country in the world to dissociate healthcare from the affluent class. It can be made possible in the next 5-10 years, especially with Ayushman Bharat and the stress on medical education.

The session also dwelt on the challenges of increasing cost of healthcare, the public perception of healthcare providers. To surmount these problems, an intense approach is required.

The industry stakeholders echoed that all are more than willing to work collaboratively with NATHEALTH for improvements, since the ultimate goal is to converge the voice of healthcare and achieving quality and affordable UHC. It is important to chart a roadmap for the national health agenda, and it can successfully yield results if the industry and the government shares knowledge, experience, and best practices to steer the best possible solutions.

The Inaugural session ended on a positive note that steps have started in the right direction, it is now just a matter of giving a strong push every now and then, to reach the levels that the sector desires.

Session Quote

If the government sector and private sector can collaborate as beautifully as a fabric, which is woven and keep up the density of what holds it together, India will have all the answers to its healthcare woes. If the government could work with the private sector on patient capital, it will further strengthen the entire system. There is a need to focus on human capital and if the rules of the game have to change, then a change is required in the way the industry is functioning.

Key Takeaways

- Indian cities account for nearly 60% morbidity in India as per the WHO
- India accounts for 20% of the global disease burden
- Less than 15% of Indian population has some form of pre pooled health expenditure support from government or privately funded insurance program
- More than 55 million people are falling into poverty because of catastrophic health medical expenditures
- The government has committed to grow the healthcare spend from 1.4% to 2.5% of the GDP by 2025
- Industry stakeholders are more than willing to work collaboratively with NATHEALTH to converge the voice of healthcare and achieve quality and affordable UHC

Scan to Watch the Collaboration Video

Scan to Watch the NATHEALTH Video

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Session 1: Digital Solutions: Driving Transformation in the Healthcare Industry to enable next wave of accessibility and affordability

Mr. Siddhartha Bhattacharya, Shri J. Satyanarayana & Dr. Sangita Reddy

India has reached a stage where healthcare in its completeness is going through a tectonic shift and new areas are being created. Digital interventions will interweave and create a narrative that will make sure that the ecosystem is alive, vibrant, throbbing, thriving and moving forward.

Technology has been a sideways interjection, never an interruption, but an interjection. The National Digital Health Blueprint is a step in this very digital direction by the government. With Aadhar, India already has a good base for identification of people digitally and in a paperless manner. The panel discussed how, at the bottom of all this, lies the concept of Federated Architecture. Rules should be in place for any kind of ecosystem to work, even for digital. The dignitaries discussed how rules should be in place for all kinds of ecosystems to work, even for digital. Whether it is the public sector or the private sector, it is imperative to build a system and go by it. Minimality also works wonders. That is why Aadhar has been a success as it is minimalist in nature. The system for Aadhar only collects information that is really required.

Coming back to the Blueprint, the panelists informed how the government had taken inputs from the healthcare industry while the formation was underway. Certain redefinitions were also done after feedback from the players. Like- data protection privacy was further strengthened and the role of center and state was better clarified. Most importantly, the need for creating a window or several windows for innovation was included.

Getting new technologies and the entire start-up community together, how can that be achieved? The answer to this, is a true representation of a federated architecture.

Also, building architecture around digital will have to happen in phases, the entire building cannot be made at a go. An encouraging phase is the suggestion of creating a national digital health mission with its own budget. Its job will be mainly to focus on the core building blocks and enable creation of the other building blocks by defining the standards, education, etc. under digital health.

Under this, certain areas have been identified to be taken care of by all stakeholders. Bringing in technology, adoption of the technology, adoption of the standards is vital. Also, it is important to make EMR, lab standards, domestic standards, and more interoperate with the big picture.

Patient records should also be maintained appropriately. If the hospital is unable to do it, maybe a service provider can be hired for the same. Hospitals can keep the records in repositories, which can be digitally shared. A lot of value-added services can also be given by the start-ups and I.T. industry.

A good thing is that India is among the top 5-7 countries in many digital parameters. However, of the 7.3 billion people across the world, unfortunately, around 3.5-4 billion people are denied the highest standards of care. However, the panel shared that out of those 4 billion people, 1.8 billion will have an online presence in some way, in some format over the next 24 months. Even if half of this denied population will access a digital platform, whether it's for financing, or shopping, or anything else, all the data will point in the direction of the consumer driving us.

For instance, Flipkart gets 60% of its business from Tier 3 cities, which nobody had expected. So, the question to be asked here is – how can we tap these 1.8 billion data and provide them access to healthcare? It should not be very difficult. Especially, if we consider the capability of an Indian doctor and the Indian infrastructure. Both can deliver global healthcare at one-tenth of global prices!

In fact, India has the lowest per capita spend among a series of countries and 76% of the population is either uninsured or underinsured, while no significant outpatient or blocks are set for significant transformation.

Hence, to get this going, the panel suggested that the players should not wait for the central government, they should start working with the states. It is not tough. Look at the example of the 1st universal health insurance in India that started in Andhra Pradesh. It was the first state to take a bold step to try and cover the whole country. India then launched RSBY and now Ayushman Bharat. This is a significant accelerator in the access to care for the country.

The providers should also not forget about the evolving patient. He/she has access to Google, is reading up about things, doing anytime-anywhere banking, is paying television bills in a very different way – this evolving patient is driving the transformation and the changing paradigms of healthcare. In this changing paradigm, India no longer has the doctor as the epicentre of care. Not only this patient, but its family members are also changing the way medical interventions happen; and this is getting further accelerated by technology.

Another important shift is that the site of care, which was the hospital, is now moving to the clinic, and from the clinic to patient home and from the home to a 24x7 ubiquitous access to care. And this is further accelerated and catalyzed by the fact that 65% of current disease presentation is the non-communicable disease. In this environment, one cannot change a lifestyle related problem by 15 minutes in an outpatient room. However, one can change it by continuous interventions and that again is being driven by technology, by this whole shifting point of care. Additionally, things are getting minimally invasive, smaller. Technology is playing a role in this as well. And thus, there is a great need for doctors to continuously upgrade their skills.

In fact, the panel deliberated that in the next five years, most surgeries will not be done without a robot. Such kind of delivery will need tremendous training.

Another important point discussed was out of hospital care. About 65% of patients who come in for a cardiac intervention have 3-5 vessels blocked. How come the patients do not turn up at hospitals when they still have only 1 vessel blocked? This is why the sector has to start thinking outside the hospital. This is how a nip in the bud can take place, and it will only happen with technological interventions.

For example, the industry can create a network of mobile medical units for primary care. These units can screen, detect, prevent and look at tele-advice, prediction. They can also have a point of care testing, artificial intelligence, multi-language chat bots, and more.

Here, an example of Apollo Hospitals was shared to provide more clarity. It seems, over the last 20 years, Apollo has been working on simple tele-consults to advanced ICU remote management, for over 270 beds outside of the Apollo ecosystem. Over 5000 telecom cells are happening per day outside the Apollo ecosystem and many of these are handheld devices.

All this started in 2000, when a little village in Andhra Pradesh was connected to the High-Tech City in Hyderabad and to Apollo Chennai. Where Apollo diagnosed a young girl with a hole in the heart. One person was in high tech city, holding the camera, one was in the village where Apollo had convinced the telephone company to put together three lines because Apollo didn't have the bandwidth. So, 3 telecom lines were merged to get adequate bandwidth.

We have come a long way since then and are much better equipped to provide out-of-hospital care with transformations.

Apollo, with Microsoft has also come up with a cardiac AI Risk score; the results are at 40% accuracy right now, and the target is to reach a 90% accuracy. Apollo took the data of almost 8 million health check-up patients to form this score.

The panel ended with the thought that the future of healthcare is precision medicine. The sector has to figure out how to bring genomics and data integrally into changing the way sharing takes place and practice precision medicine. The way forward is only through digital transformation.

Key Takeaways

- Technology has always been a sideways interjection, never an interruption
- 1.8 billion Indians will have an online presence in some way, in some format over the next 24 months – a huge market to tap through digital health
- Industry players should not wait for initiatives by the central government, they should start working with the states, and take a step towards digitalization
- There is shift in the site of care; from the hospital to the clinic, and from the clinic to patient homes and ultimately to a 24x7 ubiquitous access to care
- In the next five years, most surgeries will be done only with a robot
- The future of healthcare is precision medicine with digital transformation

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Shri J. Satyanarayana's Presentation

Digital Health Demo: Future Digital Health Platform

Mr. Girish Krishnamurthy & Ms. Priyanka Aggarwal

The discussion mainly revolved around an instance from TCS, about a concept called Digital Nerve Center. This Center was launched mainly with a focus on oncology and cancer care from the tertiary care perspective. Then it moved on to see how primary and secondary care can make a difference. This is when a big challenge was identified – about the connectivity and the bandwidth in rural India. Hence, the team at TCS went to the grassroots to work with the public health system. They worked in few districts in Karnataka, Andhra Pradesh, Telangana and Himachal Pradesh. They experimented their model in connecting the primary health center to a sub center and making the sub-center into a wellness center and see how all these things play out. They realized that a patented technology developed in India is not just a technology, it's a whole healthcare delivery model, and they were just at the start of it. The team then worked on this idea to create a platform for the future.

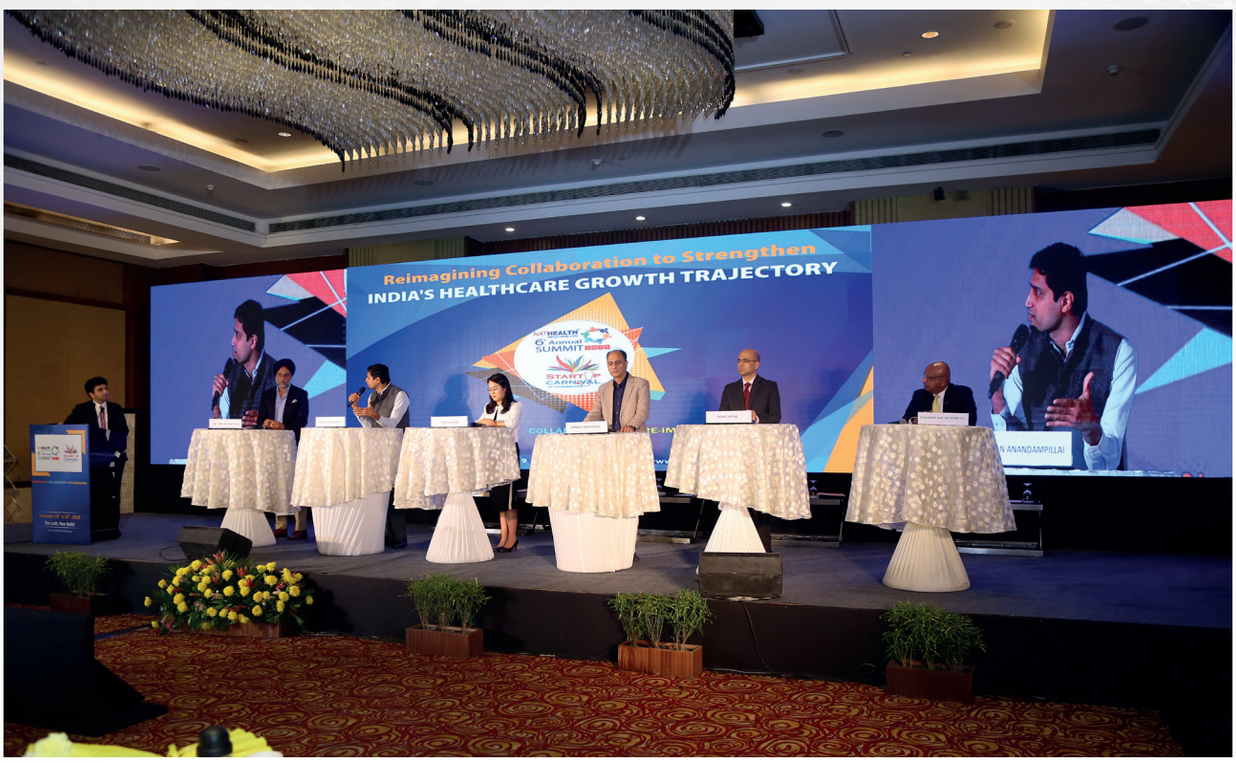
The team at TCS also discovered that they should focus more on the 'delivery' of healthcare. As that is a pain point in India. For this, 2 things were to be taken care of: one was to look at the episodic nature of healthcare requirements and the second was to tackle disjointed care.

They found out that there are about 3300 different standard processes in tertiary care and about 2700 processes in the primary and secondary care. If all of this needs to move into a digital world, reimagining and revitalizing were needed. For instance, a study of about 1000 oncologists showed that 52% of their time was spent on non-clinical activities. If reimagined, this 52% of the time can be brought into capacity increase. Hence, the demo highlighted how the future of digital health platforms can be planned appropriately for best results.

Key Takeaways

- There are about 3300 different standard processes in tertiary care and about 2700 processes in the primary and secondary care
- Players should look at the episodic nature of healthcare requirements & tackle disjointed care
- A study of about 1000 oncologists showed 52% of their time was spent on non-clinical activities. By using reimagined, this 52% time can be brought into capacity increase

Leveraging technology for the new healthcare ecosystem and enabling an improved ecosystem through industry support, funding and mentorship



Dr. Anoop Amarnath, Dr. Vikram Chhatwal, Mr. Kiran Anandampillai, Ms. Yasha Huang, Mr. Sanjeev Malhotra, Mr. Rohit Sathe & Hon'ble Brig. Dr. Arvind Lal

The discussion touched upon the fact that before India can actually leverage the power of digital, the country needs to get some of its data plumbing right first. The National Digital Health Blueprint can provide the framework for this interoperability and to get this database right.

The panel discussed how the delivery of care will continue to be quite fragmented in India, as there is presence of multiple players, which are all part of completely different organizations. Hence, a question to ask here is – can India come up with a common set of standards that can essentially help the data flow together in the context of the patient?

It seems the answer is yes. Why? Because the NHA has a 2.2 vision, where it is trying to see how it can get India to a single standard for this clean processing to happen. Also, how can things move far away from people to have a completely electronic format. The vision is also trying to determine ways by which an e-claim document can be set into place.

The panelists shared the example of the diagnostic industry, which has also been at the forefront of digital health delivery in recent years. Here, an example of Dr. Lal PathLabs was given, wherein it was informed how the lab processed about 70,000 patients a day, has an app, and also provides results online. The lab chain also sees about 150 biopsies a day, which is a great achievement in terms of the turnaround time. All this is not achievable without a digital platform set in place. Apart from labs, insurance claims are also a great local medium for data collection. The insurance channel, although still under-insured in India, is still a robust enough channel to get and churn data from. All this data can be then transformed into machine readable formats.

Another technology that can be leveraged is the National Digital Health Blueprint, which can also work across country borders. India can make its digital system more efficient by leveraging the resources and talented technologists from other countries. The only way to do this, is to create an enabling policy framework where the systems can talk to each other and where the standards are harmonized. It is more a matter of finding out how this data can be used and analyzed further to help the patient better manage his/her health.

Here, interoperability was also discussed, as the whole infrastructure is targeted to be based on an open architecture. The panelists discussed how data should be collected from different sources to enable the doctor to make the right diagnosis. For instance, if all this data from the digitally enabled labs can be synced with other healthcare data available, it can all be tabulated in one place to assist a clinician better. The repository sitting in the hospital is sacrosanct but is not the only repository available anymore. Hence, when the industry talks about interoperability, it should start moving and putting these pieces together. There are various other sources of data sitting out in the community.

To help the sector move towards digitalization, an instance of NASSCOM was discussed, where they access a hospital's digital preparedness. They have a life science and healthcare innovation center to train and bring together all the concerned groups and then vet them and finally decide whether they are ready to be deployed at a particular hospital, in terms of the digital preparedness.

Digitalization can also be used to control costs. For example, diagnostic labs can use the digital medium to offer value addition to consumers. For instance, if a patient has visited a lab a few times, the next time he/she visits, the lab can give the patient a cumulative report and also a comparative analysis of his/her health & vital statistics. Maybe, labs can also recommend the next steps for the patient's healthcare needs. In a cost-sensitive market, digitalization can offer that much-required respite.

Another area where digital health can be leveraged to the advantage is the government's health and wellness centers. There is a plan to roll out 150,000 health and wellness centers, and these will be mostly run by mid-level health providers. To provide comprehensive healthcare up at that front line, there is a requirement of one unit for every 5000 enumerated population. Hence, to ensure a good job, there is a need to access and study the data. Doctors sitting at different locations should be able to look at the data and work with it, for the industry to start seeing the change value from an individual perspective. Right now, the data is digitally collected by various levels of patient interaction, across the industry like hospitals and labs. If this data is collected in one place, instead of in snapshots, then trend predictions can take place more accurately with better analysis.

The panelists also shared that India has taken a huge leap forward with the recent announcement that does way with the physical submission of files for insurance claims. Even if the submission pours in the form of a scanned image & not a structured data, but it will still enable the healthcare system to move towards a more electronic way of functioning.

Yet another part of the ecosystem, that needs improvement through digitalization is - regulation of medical products. As the devices move towards software, the traditional way of regulation cannot give results. For instance, previously, the regulators reviewed the devices by looking at all the safety and efficacy data. Now, in a software there can be more than 16000 pages of code! A more practical way to regulate is hence required.

The discussion ended with yet another figure, it was discovered that under certain areas, close to 1.2 million patient co-ordinations can take place in a tertiary care facility alone. And this is just one data point. It can only be imagined the number of data points there are and how they can be scaled up and leveraged further. It is now up to the industry, on how it scales this further.

Key Takeaways

- A platform that can be leveraged to work across country borders is the National Digital Health Blueprint
- Data should be collected from different sources, analysed & then should be used to enable a clinician to make the right diagnosis
- Close to 1.2 million patient co-ordinations can take place in a tertiary care facility alone – there are various such data points
- NASSCOM has a life sciences and healthcare innovation centre accessible for hospitals' digital preparedness
- Digitalization can and should be utilized extensively to control healthcare costs
- Improvement through digitalization is required to regulate medical products

Collaboration of NATHEALTH with Start-Up Nation Central (SNC), Israel

Mr. Siddhartha Bhattacharya, Dr. Sudarshan Ballal, Ms. Wendy Singer & Ms. Vered Mivtzari

At the Summit, an MOU was signed between NATHEALTH and Start-up Nation Central, Israel, an independent not for profit organization that promotes Israeli innovations worldwide. It also builds bridges for Israel innovations, connects business, government, NGO, and leaders from around the world. And operates and provides access to high potential innovations in previously inaccessible markets.

The MoU has been formed on two broad areas. One is to connect the healthcare ecosystem and two, to create a bridge between India and Israel in the technical areas around digital health.

The collaboration will identify experts that can share experience from Israel and vice versa in the areas of digital health standards, to achieve a robust digital health ecosystem in India, as envisaged in the Digital Health India roadmap. The collaboration will also explore the possibility of working with SNC Central to be granted with a license in India, for the Israeli global finder platform, which is a cluster of all the innovators in Israel. Start-up Nation finder is essentially a database or a platform that maps all the R&D centers, all the innovative companies, all the VCs and even the technologies coming out of academia.

The tie-up will also help in getting certain healthcare puzzle pieces together, like Artificial Intelligence, data analytics, preventive health, clinical decision support systems, and more.

The MoU fits perfectly, as India is at the forefront of building models that can bring healthcare to a country on the order of more than a billion people. Digital health solutions are required to tackle the twin challenge of accessibility and affordability. The country is showing the world what can be done to provide healthcare that's both low cost and high quality.

While Israel is at the forefront of the digital health revolution in global healthcare. As far as innovation is concerned, the problem-solving skills and determined spirit of Start-up Nation are very much embedded in the digital health sector. It has over 600 innovative companies in digital health. The country has about 25 years of e-commerce experience and a lot of expertise in the deep tech such as AR, VR, and Big Data.

Dr. Sudarshan Ballal & Ms. Wendy Singer

Start-up Nation Central has identified digital health as a strategic sector. Therefore, it's one area where they focus on connecting Israeli digital health solutions to other markets around the world, with a special focus on India. Hence, their first step forward was in the area of mapping. There is a tremendous impact that deep mapping can bring to a tech ecosystem. Therefore, they decided to go global and share the methodology of mapping a country's ecosystem, with other countries, so that they can do the same. The MoU fits into this seamlessly.

The vision of Start-up Nation to take their solutions globally, gels perfectly with the need of NATHEALTH to elevate the digital health status of Indian healthcare.

Key Takeaways

- The MoU it to connect the healthcare ecosystem and to create a bridge between India and Israel in the technical areas around digital health
- The collaboration will explore the possibility of granting SNC Central a license in India, for the Israeli global finder platform, which is a cluster of all the innovators in Israel
- Israel has used e-commerce for about 25 years and has lot of expertise in deep tech such as AR, VR, and Big Data

Scan to Access
Ms. Wendy Singer's Presentation

Speakers - Session 1

Mr. Sanjay Prasad
President & CEO,Mission of Mercy Hospital & Research Centre

Shri J. Satyanarayana
Former Chairman, UIDAI and Chairman, NDHB Committee

Dr. Sangita Reddy
Joint MD, Apollo Group of Hospitals

Mr. Girish Krishnamurthy
Vice President – Healthcare, Tata Consultancy Services

Ms. Priyanka Aggarwal
Partner & Director, Boston Consulting Group

Dr. Sudarshan Ballal
President, NATHEALTH and Chairman, Manipal Group of Hospitals

Ms. Wendy Singer
Executive Director, Start-up Nation Central

Panelists - Session 1

Mr. Kiran Anandampillai
Technology Advisor, NHA

Dr. Vikram Chhatwal
Chairman of the Board,
MediAssist

Mr. Rohit Sathe
Vice President – Philips Health
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Mr. Sanjeev Malhotra
CEO - Centre of Excellence
for IoT & AI, NASSCOM

Hon'ble Brig. Dr. Arvind Lal
Chairman and MD,
Dr. Lal PathLabs

Ms. Yasha Huang
Director, Regulatory
Affairs, APACMed

Moderator - Session 1

Dr. Anoop Amarnath
Chief of Clinical Services,
Manipal Hospitals

Scan to Watch Session 1
Digital Solutions: Driving Transformation
in the Healthcare Industry

Session 2: Arogya Bharat – Creating an ecosystem to increase investments & momentum towards Universal Health Coverage (UHC)

Mr. Karan Singh, Managing Partner, Bain and Company

NITI Aayog has recently released a book titled “Building 21st Century Health System in India”. Through the book, NITI Aayog has tried to disseminate the larger trends that are emerging and its diagnosis of the problem.

India is looking at a 10-15 years of timeframe to reach universal coverage. Health systems across the globe have taken decades to reach at desired levels. Germany took 200 years to reach universal health coverage, Japan took 40 years, Thailand took about 30-35 years, while Brazil took 30 years.

Hence, it is important to keep expectations realistic. Although India is ambitious and 15 years is a challenging time, but all the stakeholders are committed to the cause and hence it may be an attainable goal after all.

India’s position in the world is not at the level it should be. Under out-of-pocket spending index, India stands at 180, out of 191 nations in the world.

Indian healthcare is at an inflection point. Depending on the choices that are made today, the healthcare system could end up in any one of these healthcare categories: either a very costly system without getting value for money or a very high outcome with a reasonable amount of spending.

The government is focusing highly on the development of healthcare sector. In fact, it has now moved from a schematic approach to healthcare to a systemic approach to healthcare. This is a welcome change as it represents small steps in the larger scheme of things. NITI Aayog will also release separate working papers on wellness & prevention and also on the human resources angle.

Also, an aspect of healthcare is deep fragmentation with dominance of small payers small providers. Even the people attending this event represent a minority of the health system. The majority who deliver the health services are really never on the discussion table or gotten into this kind of summit at all.
This is a major challenge.

For all of it to fall in place, an organized approach is required. All stakeholders need to think on - how do you create the regulatory architecture for the systems to evolve? Right now, it is mostly unregulated and it is the citizens who are roaming around this whole system, finding their own way through it. Even insurance companies have their different ways of functioning with different compliance for all. It places undue pressure on the system.

ESIC is another issue that's highlighted in the book. It seems that while the ESIC money gets collected with the government, they are unable to priced services of the same value. As a result, each year the surplus gets added, while the previous amount lies unused. What can the government do about it, is a s olution to look at.

Can we think of a leased model too? Similar to software technology parks, which the government made and set up shells. The shells were then handed over to companies who were in the business of producing software. Can the government look at a healthcare park as well?

In fact, NITI Aayog has been assured by the government for support in all initiatives related to healthcare. The only assurance the government needs in return is – ensuring that the supply side constraints get taken care of, especially at tier 3 and further levels.

Also, the mid-level of hospitals need more funding and attention, as they form a major back bone of healthcare delivery at district levels and more.

Sharing model should also be looked at. Many public sector hospitals are lying under utilized as they cater only to the public sector patients. There is an inefficient use. Can we look at the private sector to take over the management of such hospitals, while assuring that the public sector patients will be taken care of, while using the additional/free capacity for private beds?

Before looking at greenfield projects, there is a large number of brownfield ones which could be offered on a partnership basis.

To make a disruptive difference, all players should look differently at the same things.

There should be a question raised on the capacity to measure population health outcomes at different periods of time and to hold the providers accountable for those population health outcomes. Right now, India does not do this.

Scan to Access
Mr. Karan Singh's Presentation

Game-changing priorities for Arogya Bharat

Mr. T. V. Mohandas Pai, Chairman, Manipal Global Education

The session started with the thought that great access without great quality, is just not a good system. Great access with high cost is just not sustainable, and a great system that does not provide good access is just not fair. Also, it is high time that preventive care gets its due. In such a scenario, how can the industry bring about a paradigm shift from sickness to wellness? The value of intervening early, of treating early, is also much less costly. Hence, there is a need to scale up primary care infrastructure in a much more substantial manner. Plus, funding and financing are an absolute critical imperative for primary care.

The panel also dwelled on a big issue of India – aging, which is a big issue to tackle, if the country has to achieve UHC. How? This way – while India is a country of 1.37 billion people, population growth has come down to 1.11. The panelists also shared some fertility data. It seems that the whole of South India has a fertility rate of 1.8, West Bengal is 1.6, Punjab is 1.6, while Jains are at 1.2, Sikhs have a fertility of 1.56, Muslims have come to 2.6 from 3.2.

This shows a 30% decline in 10 years, mainly because of the education of women. Hence, population growth is not India's big problem. It is aging.

What's more? India has about 150 million people around the age of 60 right now and it is the fifth largest economy in the world, as per the panelists. Between 1991 and 2019, India grew from 275 billion to 2.73 trillion; 8.6% growth a year in dollars each year, for 28 years. This is the second fastest growth in human history for any large country, first has been China with 9.5%. While this is good news, the contribution of healthcare towards economic growth should not be ignored. Rising life expectancy, chronic diseases, lifestyle diseases, is a problem India faces.

To tackle all of this, India should tap into technology, to generate that momentum. In fact, technology should not just be restricted to exploring AI and machine learning. An upcoming field is the DNA bio 3D printing. It has the capacity to give a huge technical boost for UHC. Data mining is also vital here. The panelists shared how

Mr. Kaushik Sen, CEO and Co-Founder, HealthSpring

everything is in patterns, and if the stakeholders can contain hundreds of data points, a checkup of detailed data can be done, it can be compared, the fitting pattern can be found and thus a data set can be created.

To generate that momentum towards UHC, a strong focus on primary healthcare is also needed. It creates a backbone for a really scalable and sustainable Ayushman Bharat and various other public health systems, by reducing the overall health system costs. One of the unique things seen from a robust primary healthcare system is that there is potential of focusing on early prevention and control of NCDs, as well as on an appropriate level of care to reduce unnecessary escalation throughout the system. However, in the past few years, due to various reasons, primary healthcare providers have pushed patients up the ladder unnecessarily to secondary or tertiary levels. This created a huge trust deficit among the patients. Transforming the standards and adhering to them, may bring back some trust in the primary health system. Primary healthcare is in a unique position to play a proper preventive gatekeeper role for health insurance and reduce escalation to hospitals to appropriate levels. Training primary health force needs to be focused on as well. Right now, there is dearth of training systems available to scale this section up.

The discussion then steered towards how India has a unique opportunity to actually leapfrog into value-based care and not go through the path and make the mistakes which many of the advanced economies have done. Hospitals need to minimize waste to ensure that the cost to the patient is optimal. Here, cost is not just the one to the provider, but cost to the patient too. However, India's hospitals currently are volume-based rather than value-based. To become a more attractive sector for investments, India can learn from economies like the US, Netherlands or Japan, who are experimenting for the last one decade with value-based care, where organisations are made more accountable.

In absence of such result-based and viable systems, India has pushed 55 million people into poverty, by a healthcare incident in just a single year. India still needs at least 10 lakh beds over the next 5-6 years to make universal healthcare a reality. With some very conservative estimates, 10 lakh beds convert into a 40-billion-dollar investment amount. Even if it is assumed that two thirds of this can be death financing, India still needs about 12-13 billion dollars of equity investments to make this a reality. That's about two X the current run rate at which equity investments are happening in the sector. Such kind of investments cannot happen with a linear approach. It requires a disruptive thinking.

The panel spoke about how the healthcare industry can bring disruption and learn from other industries. Disruption in business is to create a new market opportunity with a set of values, which are different from the

existing ones. For example, in the mid-80s when the first production automobile came into being. The horse carriages were not replaced by them. It was not disruption. It was an expensive luxury. It took almost three decades until Ford came out with low price mass models of cars. Indian healthcare today is primed for a disruptive change.

A similar example in healthcare is that the sector saw an emergence of corporate hospitals and a surge in corporate hospital chains in the late 90s and early 2000s, leading to an achievement of world class outcomes. And redefinition of patient experience. However, these chains have contributed to less than 5% of the total capacity of hospital beds in the country. This is not disruption. This is expensive luxury, just like the first automobile. The industry now has a chance at real disruption. The government has attempted to create a new market that needs a new set of values to create this disruption.

Healthcare in India has virtually been an out-of-pocket spend market. Leading to the fact that the addressable market has only been the top 20% of the population in the country. More than three quarters of the population has either not had access to quality healthcare or has been served by various fragmented

Mr. Mitesh Daga, MD, TPG Capital Asia

state schemes, which led to a very underserved and fragmented demand. UHC promises to finance this segment of the population and create a consolidated demand pool. However, the sector faces a two-fold problem here. There is a significant trust deficit between the public and the private side. People need to

be convinced that the government will pay and will pay on time. The panel shared that the government has had a very poor track record of payments across various government schemes. Average receivables run over 250-270 days. There are some government schemes that do not pay for up to three years. There are some PPP arrangements which are falling now because the government has not been paying. Hence, when the government expects the private sector to invest 30 billion dollars or 40 billion dollars in just hospital infrastructure, that trust deficit needs to be bridged to create the confidence for someone to come in with that capital upfront.

The second problem is that price points are not working. Ayushman Bharat today covers prices only up to 40-80% of the typical price of a territory provider; and in some procedures the prices are even below that variable cost.

This needs fixing. Payment risk can be eliminated by perhaps using a central counterparty instead of various state government counter parties. The sector can learn from the solar power industry, where in 2015 the government made NTPC as a single purchaser of solar power in the country. This was a change from having a solar power operator deal with multiple state discounts. Thus, India saw a surge in solar power capacity in the country. From a growth rate of 13% compounded annual, it moved to a 65% compounded annual growth rate. The healthcare industry can also adopt a similar system.

Lower prices cannot be achieved in isolation. The panel spoke about how the government has today put pressure from all angles on a private operator by capping prices, raising minimum wages, creating regulatory burden; this in the end starts breaking up the trade. It is a delicate balance between volume price and quality, which needs to be achieved. Push the price too much will lose quality. On the other hand, if prices have to be pushed, maybe the government can find a way to give volumes to hospitals. There is a need to remove the inefficiencies that a tertiary care provider has today in terms of marketing cost, customer acquisition cost, idle capacity, by giving up minimum guarantees zoning exclusivity.

The discussed summarized with yet another disruption value that can be brought by enforcement of regulatory strength and clarity. It is said that today, less than 1% of hospitals and less than 1% of labs in the country are accredited by a central body. There has to be incentives for self-regulation and compliance. Maybe it can help to create an insulated medical talent for patient safety and have higher alignment between central and state policies.

Key Takeaways

- Between 1991 and 2019, India grew from 275 billion to 2.73 trillion; 8.6% growth a year in dollars each year. The second fastest growth in human history for any large country
- An upcoming field is the DNA bio 3D printing. It has the capacity to give a huge technical boost for UHC
- Primary healthcare creates a backbone for a scalable and sustainable Ayushman Bharat and various other public health systems
- To become more attractive for investors, India can learn from economies like the US, Netherlands or Japan, who are experimenting for the last one decade with value-based care
- India needs about 12-13 billion dollars of equity investments. It is 2x the current run rate at which equity investments are happening in the sector
- The government has attempted to create a new market that needs a new set of values to create disruption

Scan to Access
Mr. Kaushik Sen's Presentation

Scan to Access
Mr. Mitesh Daga's Presentation

Scan to Access
Mr. T. V. Mohandas Pai's Presentation

Investments in Tier 1/2/3 and barriers that need to be overcome to build supply side capacity constraints

Mr. Sunil Thakur, MD, Quadria Capital

The panel opened on a positive note that it is an exciting future for healthcare, which requires reinventing. There is no question in an investor's mind that there's a huge potential for investment in India. However, there are a few hoops that needs crossing over to get to a position where the Indian market can be termed as stabilized.

India is an under penetrated market with significant amount of disparity in the infrastructure and has disproportionate resources. The panel suggested that the stakeholders should spend some money on creating parity, training, skilling, which can bring some stability into the system. As, investors look at stability and cohesiveness, especially because it's a large ecosystem with many stakeholders, elements and components.

To increase investments, India also needs to give regional specific incentivization to encourage entrepreneurs in different parts of the country. Another important element is to accelerate and leapfrog access and quality control.

The panelists opined that if India can manage the triple As of access, accountability and affordability, the country can do some really path breaking work.

Indian healthcare is basically facing 2 types of challenges. First is that healthcare needs a lot of investments in the infrastructure, and the second is that people who are setting up hospitals, are going through a lot of challenges. Like the cost of land, working capital requirements. In fact, many times, the cost of land in tier 2 & 3 cities is even more than a lot of places in NCR. In such a scenario, how can optimization be achieved – is a question.

Here, the panel spoke on how a low-cost quality healthcare facility can be established. Hospitals can also be built in a space of 2500-3000 square feet, and with quality infrastructure. Larger pieces of land are not a necessity, it seems. In fact, hospitals also need not invest heavily in medical equipment. They can just do an internal check to find which medical equipment is really required by their facility.

Medical devices are a vital element to build supply side capacities. However, even they are faced with certain challenges. To overcome the hurdles, companies which represent this particular industry, should think in terms of a segmented portfolio. They should think in terms of integrated healthcare pricing mechanism.

A shift in investments is also required to move from urban to rural and semi-urban areas. Almost 50% of India's population lives in rural areas, and close to 65% in semi-urban, still, most of healthcare's focus seems to be in the urban areas. Hence, there is a need for this shift. Providers should focus on where the demand is.

Another prick in the system, the panel spoke about, is when people talk about achieving economies of scale in tier 2 & 3 cities; the industry feels that economies of scale is a tough proposition even in tier 1 cities, leave alone further levels.

The discussion closed with the thought that to overcome the barriers, healthcare sector should also open itself to a proper costing system. As per the panel, many hospitals and providers today are resistant towards a proper costing mechanism. In such a scenario, it is tough to make the sector stabilized and attractive for investors. Stakeholders should mull on this.

Key Takeaways

- Investors see huge potential for investments in Indian healthcare
- Stakeholders should spend money on creating parity, training, skilling & bring stability into the system. Investors look at stability and cohesiveness, especially because it's a large ecosystem with many stakeholders
- To increase investments, India needs to give regional specific incentivization to encourage entrepreneurs in different parts of the country
- Almost 50% of India's population lives in rural areas, and close to 65% in semi-urban, but the focus is in the urban areas. There is a need for this shift. Providers should focus on where the demand is
- If India can manage the triple As of access, accountability and affordability, the country can do some really path breaking work

Scan to Access
Mr. Sunil Thakur's Presentation

Concluding Remarks by Mr. Alok Kumar (NITI Aayog)

Mr. Alok Kumar, Advisor, NITI Aayog

The talk explored various initiatives by NITI Aayog, undertaken for UHC. For starters, NITI Aayog has recently released a book titled “Building 21st Century Health System in India”. Through the book, NITI Aayog has tried to disseminate the larger trends that are emerging and its diagnosis of the problem.

The book informs that India is looking at a 10-15 years of timeframe to reach universal coverage. This is an enviable timeframe, considering that the health systems across the globe have taken decades to reach at desired levels. Germany has taken 200 years, Japan 40 years, Thailand 30-35 years, while Brazil has taken 30 years.

Although India is ambitious and 15 years is a challenging time, but it seems all the stakeholders are committed to the cause and hence it may be an attainable goal.

It was opined that India’s position in the world is not at the level it should be. Under out-of-pocket spending index, India stands at 180, out of 191 nations in the world.

experts believe that Indian healthcare is at an inflection point. Depending on the choices that are made today, the healthcare system could end up in any one of these healthcare categories: either a very costly system without getting value for money or a very high outcome with a reasonable amount of spending.

The government is focusing highly on the development of healthcare sector. In fact, it has now moved from a schematic approach to healthcare to a systemic approach. This is a welcome change as it represents small steps in the larger scheme of things. After the book, now NITI Aayog is also looking to release separate working papers on wellness & prevention and also on the human resources angle. This will also help gain momentum and perhaps show a path to move faster towards UHC.

Challenges were spoken about too. For instance, Indian healthcare is deeply fragmentation with dominance of small payers & providers. The majority who deliver health services rarely make it to the discussion table, to talk about the way ahead.

For all of this to fall in place, an organized approach is required. All stakeholders need to think on creating the regulatory architecture for the systems to evolve. Right now, systems are mostly unregulated; with most stakeholders finding their own way through it. Even insurance companies have different ways of functioning with different compliances for all. Such discrepancies places undue pressure on the entire system.

To achieve UHC, the problems under ESIC should also be sorted. It seems that while the ESIC money gets collected with the government, they are unable to provide services of the same value. As a result, each year surplus keeps getting added, while the previous amount lies unused. The government should look at resolving this.

A suggestion here for the government is to look at a leased model. Similar to software technology parks, which the government had made and had set up shells. The shells were then handed over to companies who were in the business of producing software. Maybe something similar can also be done for healthcare.

The session also shared how NITI Aayog has been assured by the government for support in all initiatives related to healthcare. However, there is an assurance the government needs in return, that the stakeholders ensure the supply side constraints get taken care of, especially at tier 3 and levels below.

Another talking point for UHC is taking care of the mid-level of hospitals. While they form a major back bone of healthcare delivery at district levels, they lack the required funding and attention. Another angle is to look at a sharing model, between public and private. It is a known fact that many public sector hospitals are lying underutilized as they cater only to the public sector patients. There shows inefficiency. Maybe the government can give over the management of such hospitals to private players. In return, the private players can assure proper care of the public sector patients. Also, before the system looks at more greenfield projects, there is a large number of brownfield ones that can again be offered on a partnership basis. To make a disruptive difference, all players are required to look differently at the same things.

The session ended with a question, which should be raised on the capacity to measure population health outcomes at different periods of time. A question should be raised to hold the providers accountable for those population health outcomes. Right now, India does not do it.

Key Takeaways

- Under out-of-pocket spending index, India stands at 180, out of 191 nations in the world
- Indian healthcare is at an inflection point, it can end up being either a very costly system without value for money or have a very high outcome with a reasonable amount of spending
- The government should look at a leased model, similar to software technology parks, shells can be set up & leased out to healthcare companies
- Mid-level hospitals form a major back bone of healthcare delivery at district levels, but lack the required funding and attention

Speakers - Session 2

Mr. Karan Singh
Managing Partner, Bain and Company

Mr. T. V. Mohandas Pai
Chairman, Manipal Global Education

Mr. Kaushik Sen
CEO and Co-Founder, HealthSpring

Mr. Ashok Kakkar
MD, Varian Medical Systems

Mr. Mitesh Daga
MD, TPG Capital Asia

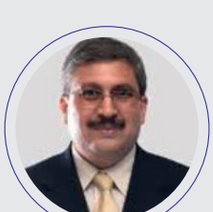
Mr. Alok Kumar
Advisor, NITI Aayog

Panelists - Session 2

Mr. Sunil Thakur
MD, Quadria Capital

Mr. Raju Venkatraman
MD & CEO,
Medall Healthcare Pvt. Ltd.

Mr. Abhishek Kapoor
SVP, Strategy, Regency Healthcare



Dr. Vivek Desai
Founder, Hosmac India Pvt. Ltd.

Mr. Prabal Chakraborty
Managing Partner,
Ikizia Advisors

Moderator - Session 2

Dr. Preetha Reddy
Senior Vice-President, NATHEALTH and Vice-Chairperson, Apollo Group of Hospitals

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Mr. Kaushik Sen's Presentation

Session 3: Moving towards Skilled & High-Quality Healthcare System in India to achieve the vision of Health for All

Mr. Joy Chakraborty, Mr. Sumeet Aggarwal, Dr. Nandakumar Jairam, Dr. Murali Srinivasan & Mr. Shravan Subramanyam

Affordable Excellence- How can India move towards better value at scale as measured by Outcome/Cost?

The forum started the discussion with the thought that medical quality is not just clinical quality, it's the quality of processes as well. A fact was shared that medical error is the third leading cause of death in the United States of America, which speaks of how even a developed country suffers from lack of quality. Although, India still should target higher goals to improve the penetration of quality in the country.

The panel also spoke about how NABH has covered close to about 6000 hospitals, and it does 400 or 500 audits every month. Still, there are about 1 lakh hospitals to be covered, and it may take a couple of decades to cover this fully. Hence, the government has come up with fast-track certifications, which will ensure some form of quality at most hospitals. The aim, in the next five years, is to bring at least 30000 hospitals under some form of certifications. This is how India can move towards better value.

The panel also discussed how hospitals compromise on quality to cut costs and for financial reasons. Though there are reasons given, like resource constraints, the ultimate result is quality compromise. Here, one solution to reduce the pressure on resources, is to keep patients out of hospitals. For this, certain guidelines should be established and adhered to. Plus, it should be ensured that these guidelines are localized and relevant.

Now, creating guidelines in a cost-sensitive market like India is another challenge that the industry has to tackle.

Hence, it's vital to weave a fabric of quality and patient outcomes, with a policy framework and financing, which is adept with technology.

Manpower quality is also an area of concern. As per the WHO standard, healthcare personnel density per 100,00 of population should be 44.5, while India stands at 29. So, the gap is huge. Unfortunately, that makes the system dependent on semi-skilled manpower, up to an extent. This has an impact on quality and this value. The panel suggested to have stricter norms in the accreditation and the training processes, which will ensure quality of the personnel working on the healthcare delivery side.

Here, an initiative of Midmark India was shared, wherein, along with the government of UP, they are training GDAs. They provide about 620 hours of training to make the trainees readily deployable into the workforce. Through this programme, 2000 young women have graduated so far. Hence, PPP is also a solution to solve manpower quality issues.

Another issue spoken about is the lack of emphasis on outcome or quality measurement, from the doctors or nurses' side. There are no KPIs in place to ensure this. Although it seems that NABH does focus on a few manpower quality standards, but in most of the cases these are not maintained and the benchmark is also not set. As a result, outcomes are not that great. Even for allied health professionals, who participate in delivering care along with the nurses and doctors, a small number of institutes provide training. That too, in most cases, it's a short programme, which meets the requirement only partly. Process improvement with clinical pathways development should also be looked at. All of the above is required to gain that momentum.

The parting thought of the panel was - quality has to trickle down from the leadership of an organization, which is not the case in most places. If the industry does not act swiftly on this, it may reach a stage when cutting costs, which ultimately compromises quality, will start being highly counterproductive because the cost of care ultimately will go up drastically. In many cases, this is already happening. Time for the sector to wake up.

Key Takeaways

- The government's aim in the next five years, is to bring at least 30000 hospitals under some form of certifications
- It's vital to weave a fabric of quality and patient outcomes, with a policy framework and financing, which is adept with technology
- India's healthcare system depends on semi-skilled manpower up to an extent, which has an impact on quality and value
- Process improvement with clinical pathways development should also be looked at to gain momentum

PPP opportunities on Skilling

Dr. Abhijat Sheth, President, National Board of Examination

The talk started with the focus that to impart skills and education, it is vital to integrate and understand the behavior, the culture, attitude and aptitude of an individual in the healthcare organization. This is the key to ensure a successful venture on a large scale.

The session informed that recently an apex organization was formed in the country for training of doctors. It also shared that currently, India has 539 medical colleges. However, due to lack of integration, the capacities are not fully utilized. Also, as far as improved skill development is concerned, India should update and provide additions to the learning resources, as medicine has changed over all this time and the curriculum was formed long back.

Plus, there is inequitable distribution of medical colleges in the country. It is a known fact that India has 65% of medical colleges in South, while over 65% of all our population lives in other parts.

Also, it was stressed that for better skilling, a large scale should be covered – like nurses and also allied health professionals. India is concerned about the doctor shortage, but the key decision makers tend to overlook the shortage of these other vital elements.

Not only this, India should cover the quality gap that spans 11% of sub centers, 13% of PHCs, 16% of CHCs; and hence they all fall short of standards. Also, about 58% of urban doctors and only 19% of rural doctors are qualified with proper medical degrees. Around 66% of nurses and midwives do not have an education beyond secondary education while 89% of them do not have appropriate certifications or qualifications. Tackling all these issues is imperative to resolve the skilling gaps of Indian healthcare.

Here, an easy and open entry for PPPs should be made viable. People with adequate resources should be brought together, where they can discuss and find practical ways of improving skilling in healthcare.

Plus, the healthcare workforce should be imparted professional education on communication, medical ethics, patient safety, leadership & managerial skills. Adapting to new technology, doubling up the learning aptitude, research and innovation should also be focused on.

It was informed that when the National Board was started, it had a 4000 plus seats; now in 2020, it is expected to increase to more than 10,000 seats. However, increasing just the quantity won't help, quality integration is also key. Hence, the Board has now started a training arm, where technologies like simulations are given importance.

Also, next year the National Board is coming up with its first center in Delhi along with the National Training Center, where along with simulations, physical training complete with knowledge of robust digital platforms will also be imparted.

The ending of the talk focused again on how to achieve all of the above, PPP models should be looked at. As the private sector has better access to technology & the government comes with its own set of valued resources.

Key Takeaways

- Only about 58% of urban doctors, 19% of rural doctors are qualified with proper medical degrees
- Around 66% of nurses and midwives do not have an education beyond secondary education, about 89% of them do not have appropriate certifications or qualifications
- For better skilling, a large scale should be covered – like nurses and also allied health professionals
- The healthcare workforce should be imparted professional education on communication, medical ethics, patient safety, leadership & managerial skills
- An easy and open entry for PPPs should be made viable, people with adequate resources should be brought together, to find practical ways of improving skilling in healthcare

Enabling a supportive environment to address medical workforce challenges

Mr. Gautam Khanna, Mr. Gaurav Malhotra, Dr. Shubnum Singh, Mr. Ashish Jain & Dr. Rajiv Yeravdekar

The panel started with addressing the challenge of skill gap. There are tremendous number of people in the sector, who have job roles, but have no certification. Until recently, when a push was given for 'recognition of prior learning'. Prior to this, there was no way that professionals could get a certificate for work that they had done for 30-40 years. However, along with this, workforce should also be enabled to clear certain exams that are recognized, this will establish their skills and also help in the reduction of medical errors in hospitals.

Another way to provide a supporting environment is that organisations can ease up their norms regarding certifications required for hiring. The latest skill certifications that have been launched in the sector (apart from the older type of certifications) should be given some levy. As certain areas of the industry do not have extremely strict norms, hence things can be eased up to remove entry barriers for such certified professionals.

Plus, healthcare organisations should look at re-skilling of the existing staff to reduce the skill gap.

The panel also brought forth an idea that incentives should be improved for the industry, which can promote healthcare providers to participate and enable an optimum healthcare care delivery system.

Additionally, there is less focus on primary healthcare and a neglect of paraprofessionals. Healthcare is beyond medicos too. Skilling and proper trainings should be provided to these sets of professionals as well.

The panelists shared that the skills required for the future are very different from what is seen today. Future is about artificial intelligence, about block chain in healthcare, about machine learning, data analytics, health informatics and more. Hence, upskilling and reskilling will be the mantra of success. However, currently, a lot of healthcare organizations shy away from investment in training. It is important for them to understand that continuous skill enhancement will be the only sustainable competitive edge for them.

The findings of a McKinsey study were quoted, wherein data was showed of using skilled vs. non-skilled workers. The findings said that use of skilled workers increases the productivity of a hospital, plus the

patient satisfaction level also goes up. All of this ultimately brings down the entire cost of operation for a hospital by 15%.

The panel also informed that knowledge changes every 73 days; and skilling requirements will change even faster and soon it will come down to a matter of weeks and days. If today someone is working as a nurse, tomorrow he/she will have to be a data entry operator. That kind of flexibility as well as creativity in the system is very critical.

For this, organisations should take the first step. They should recognize the people who are already within the system, with certifications. They should also start moving away from traditional diplomas BSCs etc. for entry level people. They should asses the skill and competency of individuals across the board, and train people as per their competencies. In fact, to enable this assessment, the government has an excellent NSQ framework.

Another way to look at improving skilling is to consider some modular or small programs too. This can serve as a 'top-up' to an already-existing higher-level degree or certification that the professional may already have. This may work quicker in enhancing the skills of a workforce and in helping them improve their output.

The industry should also talk about adaptive agility, ability to work outside silos, and work in team because healthcare providers typically work in silos in their own ivory towers. Most importantly, the adoption of simulation should be considered. In the future, no longer can the industry use patients as guinea pigs. No longer will this be tolerated and accepted by the society in the future. Hence, patient-based simulation training is a vital spoke of the skilling wheel here.

A glaring point to also consider here is – if the industry does not pay well to these trained and skilled manpower, we are at a risk of losing them to a different country. Hence, skilling has to be accompanied with adequate financial compensation.

The panel ended on a strong note of including more women in the system. Healthcare is already the largest employer of the woman workforce right now in India, but the national average has gone down from 34% to 27%. Here, the healthcare sector can contribute in making India reach the global average of 48% for inclusion of women in the workforce.

Key Takeaways

- Healthcare organisations should look at re-skilling of the existing staff to reduce the skill gap
- Incentives should be given to the industry, which can promote healthcare providers to participate and enable an optimum healthcare care delivery system
- There is less focus on skilling of primary healthcare workforce and paraprofessionals
- Having skilled workers increases the productivity of a hospital and brings down the entire cost of operation for a hospital by 15%
- Knowledge changes every 73 days; and skilling requirements will change even faster, will come down to a matter of weeks and days

Speakers - Session 3

Dr. Abhijat Sheth,
President, National Board of Examination

Mr. Siddhartha Bhattacharya
Secretary General, NATHEALTH

Panelists - Session 3

Dr. Murali Srinivasan
Chief of Clinical Services, Manipal Hospitals

Mr. Shravan Subramanyam
MD, India and Neighbouring Markets at Roche Diagnostics India Pvt. Ltd.

Mr. Joy Chakraborty
COO, P. D. Hinduja Hospital & Medical Research Centre

Mr. Sumeet Aggarwal
MD, Midmark

Dr. Rajiv Yeravdekar
Dean, Faculty of Health & Biomedical Sciences, Symbiosis International University

Mr. Ashish Jain
CEO, Health Sector Skill Council

Dr. Shubnum Singh
Founder Member, Max Healthcare Institute Ltd.

Mr. Gaurav Malhotra
Managing Partner, Ikizia Advisors

Moderators - Session 3

Dr. Nandakumar Jairam
Chairman & GMD,
Columbia Asia Hospitals

Mr. Gautam Khanna
CEO, P. D. Hinduja Hospital &
Medical Research Centre

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High-Quality Healthcare
System in India

Scan to Access
Dr. Abhijat Sheth's
Presentation

Session 4: CEO Roundtable on NATHEALTH Diagnostics Study

The NATHEALTH diagnostic study is one of the first studies, which has been undertaken by NATHEALTH to understand the strategically important laboratory diagnostics segment and India's healthcare.

This report assumes great significance as it paves the way for a dialogue between the government and industry on how to harness the potential of preventive screening and wellness to improve health outcomes.

The report is also available on the NATHEALTH website (Click here to Download).

The launch panel discussed challenges and possible solutions regarding the diagnostics sector.

The heart of the solution of NCD problems, lies in primary prevention and secondary prevention. Primary prevention is when individuals themselves take charge of their health. While secondary prevention is with policy implications, like regulating smoking by controlling tobacco or alcohol usage. Also, by way of making available timely interventions and patient requirements like insulin.

Diagnostic players hence form a major part of the entire healthcare ecosystem and hence are a vital wheel in the cog.

The Study comes in at the right time, when all stakeholders are required to join hands and each one has to play its own part. The Study, thus focusses on the part of diagnostics in the overall system.

Key Takeaways

- NATHEALTH's 1st ever study to understand the strategically important laboratory diagnostics segment
- The report paves way for a dialogue between the government and industry to harness the potential of preventive screening and wellness to improve health outcomes
- The stakeholders agree that the heart of the solution of NCD problems, lies in primary prevention and secondary prevention, where diagnostics play a huge role

Scan to Access the NATHEALTH Diagnostic Study

Day 2


NATHEALTH
Healthcare Federation of India
6th Annual
SUMMIT 2019
सत्यमेव जयते
national health authority
START UP
CARNIVAL
29th November 2019

Inauguration of the Start-up Carnival by NHA & NATHEALTH Leadership Teams

As part of its 6th Annual Summit, NATHEALTH in partnership with the National Health Authority conceptualized, planned and organized a first-of-its-kind carnival for healthcare start-ups. With the idea that start-ups have been playing a catalytic role in driving innovations in the healthcare sector. The main purpose of the carnival was to support healthcare start-ups with access to capital, industry partnerships, mentorship and technology development assistance.

The industry strongly supports the presence of start-ups. It is an accepted view that there is a positive reliance on the energy and enthusiasm of start-ups, innovators and entrepreneurs.

The start-up carnival put together on the same platform multiple players –start-ups, government, industry, innovators and investors together. The idea was for all stakeholders to act in concert and come together to support each other.

Start-ups that participated, came from different segments of healthcare sector like diagnostics, digital health, and medtech. Nearly 50 start-ups and 200 representatives infused and added value to the ecosystem at the Summit.

Such forums serve as an opportunity to define a common vision and understand what are some of the industry's priorities and tenets in the upcoming years, and work together to achieve the goals.

Ambitious schemes like Ayushman Bharat need the energy and innovation spirit of the young India. The Carnival's target was for start-ups to provid solutions to bridge the current demand-supply gap and ensure quality service to 500+ million people.

Prominent leaders from the Indian healthcare sector who mentored the participating start-ups, included Dr. Sudarshan Ballal, Dr. Arvind Lal, Dr Indu Bhushan (NHA), Mr. Himanshu Baid, Dr. Harsh Mahajan, Mr. Amit Mookim (Managing Director, IQVIA South Asia), Mr. Sunil Thakur (Quadria Capital), Mr. Vipin Pathak (Care 24), Mr. Manish Sardana (Polymedicure), Mr. Ravinder Dang (Baxter), Ms. Ruma Banerjee (Neotia Healthcare), Mr. Mohit Khullar (03 Capital), among others.

Sessions with mentors and storytelling along with funding opportunities (B2B Meetings) and exclusive video on the start-ups were the main highlights of the Carnival. During the B2B meetings, start-ups and their representatives explored huge business opportunities as well.

From the start-up space, Health Vectors, Wellthy Therapeutics, PeeSafe - Redcliffe Hygiene Private Limited, Cyclops Medtech, OncoStem Diagnostics Pvt. Ltd, Kvayat Medical Pvt. Ltd., Doxper, IMPACT GURU, CARING (Mahajan Imaging), NanoHealth, Niroggyan, Akna Medical, Medikabazaar, VVP Healthcare, Stay Happi, Sanskritech Smart Solutions, Incredible Devices, InnAccel, BeatO (Health ARX Technologies), HealthCubed, Zipline International, NIRAMAI Health Analytix, Meddo, among others showcased their products and services at the kiosks at the carnival. The session also opened engagement gateways amongst academia, start-up incubators and accelerators, private industry and investors. It is a fact that start-ups need guidance on the evolving ecosystem. Hence, during the day-long Carnival, they were made aware of policy reforms, incentives, incubation prospects and industry linkages. The stage also provided an insight into the evolving start-up ecosystem, to students and researchers from various tech institutes.

The Carnival was aimed at creating a major opportunity for the industry and the government to work with each of the innovators and create solutions that can be tested, prototyped, adopted and scaled to improve the delivery of healthcare in India.

It was received by all the attendees and participants with great positivity and enthusiasm.

Session Quote

Entrepreneurship and a vibrant start-up ecosystem are an absolute necessity to compete with the circle of innovation in healthcare. Start-ups came from different segments of healthcare sector like diagnostics, digital health, and medtech. Nearly 50 start-ups and 200 representatives infused and added value to the ecosystem at the Summit.

Such forums serve as an opportunity to define a common vision and understand what are some of the industry's priorities and tenets in the upcoming years, and work together to achieve the goals.

Ambitious schemes like Ayushman Bharat need the energy and innovation spirit of the young India. The Carnival's target was for start-ups to provide us the solutions to bridge the current demand-supply gap and ensure quality service to 500+ million people.

Key Takeaways

- Nearly 50 start-ups and 200 representatives infused and added value to the ecosystem at the Summit
- Prominent leaders from the Indian healthcare sector mentored the participating start-ups
- During the B2B meetings, start-ups and their representatives explored huge business opportunities
- The session opened engagement gateways amongst academia, start-up incubators and accelerators, private industry and investors

Speakers

Dr. Sudarshan Ballal
President, NATHEALTH
and Chairman, Manipal
Group of Hospitals

Dr. Indu Bhushan
CEO, PMJAY and National
Health Authority, GoI

Scan to Watch Start-up
Carnival Video

Session 5: Innovation and Entrepreneurship in Healthcare

Day 2 started off with an energizing inaugural ceremony for the Start Up Carnival. It set the tone right and strong for the day ahead. NATHEALTH's innovative idea to highlight the start-ups of the industry is a forward-thinking approach, as the future lies in the hands of such innovativeness, that these unique start-ups bring to the table.

Mr. Varun Jhaveri & Mr. Amit Mookim

Innovation and Entrepreneurship – a perspective on Innovations in Healthcare. What System needs to be in Place?

The session straightway dealt sharply with the healthcare crisis that the industry is facing currently. It was mentioned that an urgent need is to come up with solutions across the board of the industry, else there may be a need to deal with an even bigger crisis in the future. In India, diabetes, hypertension, cancer, arthritis, cardiovascular issues are all topping the charts. This number is growing in double digits year after year. About 70% of the infrastructure caters to 20-25% of the population. Hence, there is a need to have innovators at the point of access, so that they can come up with solutions to build more access.

Though the industry thinks that Ayushman Bharat is doing great while balancing this 70-30 situation, a lot more is needed to supplement the universal healthcare initiative. Another worry point is the cost of care, which even at the global lowest, is still outside the hands of many of India's own citizens.

Thus, quality maintenance with low cost – should be the aim. Start-ups should look at this. Right now, the biggest examples of start-ups are in FinTech, out of the 19 unicorns in India. Only 1 unicorn is in healthcare, which is also catering to the global market, and not India. Start-ups can be disruptive models only on the basis of bringing infrastructure together and offering everything at a very different cost base than what is already being offered.

Another point is that interestingly, software is being looked at as a pill. A perspective that innovators should look at is - How to bring in technology beyond the physical pill that somebody is taking or the bed that somebody is laying on, to get cured?

It was shared that 2 young girls from Columbia University have created an infant cap called Neotia, which has a chip embedded. They have given it to be used in various locations in Africa, while the creators sit in one place from where they can monitor six vitals of each infant that wears the cap. Data gets transmitted to them. This is an example of a simple intervention that can bring disruption in care delivery, and close the demand-supply gap.

Although the overall sentiment for start-ups is hopeful, these companies should be careful about their death value. As per estimates, their death value is high, as the applied innovation sometimes becomes too complex to be driven, making people resistant to it.

Also, while globally almost 7 billion dollars got spent last year in innovations, it is important that the money should be carefully applied to areas that will yield results. Another area that start-ups can innovate is in machine learning. A book by Yuval Noah Harari - 21 lessons for the 21st century – was quoted here, which says that automation will hugely benefit 2 sectors mainly - healthcare and transportation.
This gives hope to innovators.

Also, it is vital that start-ups are not supported just in silos, but the investments should happen as a cohort. This way, each healthcare start-up can learn off and benefit from each other. Platform-based models should be made, and accelerators and incubators can do this. NHA has built a platform for this and it is a welcome initiative because, it will bring various stakeholders together. Academic collaboration also needs innovations in India. A bridge should be created between the corporate sector, the government, the industry and research to come together.

If all this does not fall into place, India may face a loss of almost 80% start-ups next year. Building communities, mentorships by industry leaders, right investments, will make start up innovations prolific.

Also, in the last 6 or 7 months, it was informed that NHA has spoken to various stakeholders – regulators, start-up incubators, and at the NATHEALTH Annual Summit, with the industry too. It is encouraging that in the last 14 months, Ayushman Bharat has provided free treatment to more than 63 lakh beneficiaries, and has already verified around 11 crore beneficiaries. More than 50% of empaneled hospitals are private, which is a boost. Around 33 states and union territories out of the 37 are also implementing Ayushman Bharat. Thus, the government is actively working to know better about the supply gaps which exist, so that innovations can be brought in to cover these up.

The government is now also enabling a ‘demand shock’ and has a focus on mainstreaming the innovations happening right in the healthcare ecosystem.

The fact is, innovations are multifold - done by the hospitals, by the industry, the pharmaceutical companies, by academics & by start-ups. The government, thus, is looking to give a structured position and support to such innovations & start-ups. This will enable a system to fall into place. The government has around 3000 healthcare start-ups right now registered with the DIPT. However, the type of investment is dismal as compared to global markets. Hence, the NHA has spoken to more than 400 stakeholders to improve this situation.

The NHA is also trying to understand the growth hindrances and hurdles of the start-ups. It seems that the scaling of innovations gets affected by lengthy certification process and procurement. Start-ups’ time & efforts get absorbed in this process. That is why it is advisable to come up with a standardized model & a certification process. It can enable start-ups to run a pilot in just one state, and then simply make the required adoptions and subjective changes for all other states.

If standardization comes in, it will solve the liquidity crunch that start-ups face. This crunch usually makes them less attractive to VCs, and it pushes them further away from ‘that one big order’; while most investors want to see that ‘one green shoot’ before placing a bet on a start-up.

Another issue to tackle is of market access, especially of start-ups’ entry into the government sector. The government needs to invite and open the doors to innovation. A siloed ecosystem cannot work. Hence, the

government has now started the search for start-ups that can align with PM-JAY's vision. The government will be facilitating 'test beds' for start-ups to pilot their tests, after which a standardization piloting system will be put into place, which can eventually be accepted by every stakeholder in the sector.

The government is also targeting setting up a fund for the start-ups to test and run pilots, and is inviting the private sector to have a dialogue on a possible collaboration on this front. The government will provide the grants to hospitals to facilitate pilots, so that neither the hospital nor the start-up has to think twice before getting their show on the road.

The session ended on another positive note – that the government is working on adopting an e-market based approach. Steps will be put in place to remove the stringent 'tender condition', which prevent start-ups from even approaching or competing in a financial bid. Listing of start-ups will be done on a particular platform, enabling them to enter the government market. All the government buyers will be listed on this platform. Once 20-30 different procurement of the start-ups happen, that will initiate a ripple effect and get things rolling. A good start indeed.

Session Quote

Globally, almost 7 billion dollars got spent last year in innovations, but the money should be carefully applied to areas that will yield results. Another major point is that in healthcare, investing should happen as a cohort, because each healthcare start-up can learn off and benefit from each other. Platform-based models should be made, and accelerators and incubators can do this. NHA has built a platform for this and it is a welcome initiative because, it will bring various stakeholders together. Academic collaboration also needs innovations in India. A bridge should be created between the corporate sector, the government, the industry and research to come together. Also, certification process and procurement for start-ups will be made easier by the government, providing them with an enabling environment.

Key Takeaways

- About 70% of the infrastructure caters to 20-25% of the population, there is need to have innovators at the point of access, to build more access
- As per estimates, death value of start-ups is high, the applied innovation sometimes becomes too complex to be driven, making people resistant to it
- Globally, almost 7 billion dollars got spent last year in innovations
- Start-ups should not be supported in silos, but as cohort, so that each healthcare start-up can learn off and benefit from each other
- The government is looking to give a structured position and support to innovations & start-ups

Speakers

Mr. Amit Mookim
MD, IQVIA
South Asia

Mr. Varun Jhaveri
Officer on Special Duty to CEO,
Ayushman Bharat (GoI)| Leading
Innovation Strategy @ NHA

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Mr. Amit Mookim's Presentation

Innovation and Ayushman Bharat: Seeding Innovations & Creating Pathways for Scale

Dr. Amit Shah, Dr. Harsh Mahajan, Mr. Nalinikant Golaguntta & Mr. Sumit Nadgir

The panel mentioned that the figures of Ayushman Bharat will further improve once the middle class too comes under the ambit. A pertinent question was raised - How will India meet the challenge of the empowered millions with money in their pockets to avail healthcare?

Innovation can be an answer here. Newer technologies, ideas will help.

The discussion steered towards the kind of innovations seen now a days and the pathways that are created for sustainability and skill. It seems that India's annual health resources are borrowing 40 million USD, which are invested in different healthcare segments. Though a question was raised whether these segments are the ones that really need attention.

For example, health and wellness are one of the most vital pillars of healthcare delivery. Even for PMJAY to be sustainable in the long run, the programme's Health and Wellness Centers will play an important role. Has there been enough concentration on this segment till date? The answer is a No.

However, the panel informed that USAID's role over the last year and a half has been exactly to tackle this issue – to support the health ministry in rolling all of the health and wellness center across 12 states.

It was said that USAID is the lead partner for operationalizing 30,000 health and wellness centers across the country. Within this, the panel shared, there is huge scope for innovations – starting from service delivery packages to training to empowering the staff at centers to deliver the right services.

Another point to note is Indian sector has always been reward-based instead of an outcome-based model focused on quality. USAID, along with Rockefeller Foundation and Bill and Melinda Gates Foundation, is working on this innovation to bring value into the culture. It will basically be aligning both the providers as well as peers along with the end outcomes with keeping the client in the center, while maximizing the limited resources.

The wellness centers will not only have an expanded service of packages, but there will also be enhanced manpower. Linking these centers to the PMJAY facilities will still require innovation. For instance, ensuring the referral linkages (upward & downward) between the 21,000 facilities on the panel and these wellness centers.

Another innovation spoken about was PMJAY's NABH accreditation project work in Rajasthan for 400 maternity care hospitals. It was done to bring the hospitals under the umbrella of Ayushman Bharat.

Another valid point discussed was how technology and innovations can also address the issues of shortage & quality of manpower. It is a huge gap that needs to be filled soon and adequately.

The government has taken a step in this direction by creating a new cadre of Community Health Officer. In the next 5 years, there will be around 150,000 fully trained CHOs taking care of service delivery for Ayushman Bharat.

The panelists spoke about how manpower does exist in India but in pockets and not in the 'way one would need it'. Plus, concern was raised over the assets and infrastructure gaps too. Connectivity it also a challenge. Here, GE Healthcare's example was shared, where the company has tried to create a model network in the last year, where 4 sub-centers are connected to a first referral unit of Guwahati Medical College, which is the nodal center that GE has digitally enhanced. The company upgraded the digital infrastructure for this & also provided training to improve staff quality. This way, they created a well-functioning network, which starts at the bottom and goes till the first referral unit.

GE Healthcare found that 10% of investment in primary healthcare reduces 6% of hospitalisations. Hence, over the next 6 months, GE will work with the Assam government to create that sliver, which can then become a model. GE Healthcare is also working with start-ups, they have created a start-up platform & its job is to find and support 6 start-ups in 6 months, which can impact Ayushman Bharat.

The audience interaction during the session was also immense. One instance of it from an international delegate:

A participant from Saudi Arabia invited NATHEALTH to join hands with the country & enable the start-ups in India to collaborate with players in Saudi Arabia. He mentioned that the country is looking for innovations to help them scale healthcare for their 60-70% population, that's under 30 years of age. They also have recently invested in a Center for Artificial Intelligence. It a technology-savvy country with young people, for whom Indian start-ups can provide just the kind of ideas & innovation they may need to grow.

Yet another important element discussed was - what would it take to create a social impact with a bond financing mechanism for start-ups. Where the upfront risk could be taken in some way by philanthropy and then this platform provides the ability for the start-up industry to come together & test the idea jointly. After which, scaling of the private capital can come in.

Points were discussed on how can an Ayushman Bharat hospital become attractive for an investment firm, considering the low margins that the entire model is working on. Especially, as there is need of at least 1000 hospitals to be added in the entire PMJAY scheme. Immediate viable business models taking advantage of Ayushman Bharat is not being seen currently. As existing hospitals that are empaneling with Ayushman Bharat, are doing it sub optimally.

Though healthcare is ripe for disruption, there is high information asymmetry, high patient dissatisfaction & high inefficiencies, which is derailing the whole process. Another major contention bone, the panel said, is that our entire delivery system is designed around the clinician. However, with time, and it has already started, patients will demand to be a decision maker, which will then bring actual disruption here. The clinician's role will change from an instructor to an advisor perhaps.

The innovation will come here as a way of adopting a patient centric thought process; and organisations failing to do so may just have to step aside. One more food for thought here is standardization. Players who

will manage to standardize operations, clinical protocols, data entry or claims, will be able to automate & become digitized; making themselves more efficient.

Moreover, the current scenario, where even the tertiary care facilities are used for primary care, will vanish. It will all move out to primary clinics or better still, to patients' home. This will free up the capacity of super specialized facilities and improve healthcare delivery. Such innovations will also ensure that hospitals become super-efficient for investors.

For Ayushman Bharat, it is important to understand how many tertiary care hospitals are really required. They need a lot of thinking through & investments.

Secondary care is also a sweet spot. As per statistics, 85% people availing Ayushman Bharat scheme had secondary care requirements. For organizations focusing on this and single speciality, it has so beautifully played out in terms of not only standardizing the whole protocol system, standardizing the resource requirement but also thinking about how capital expenditure will change in the future. The discussion summarized on the idea that all of the above steps can change the whole equation of ROC, as the organizations improve their top line, their numerator and also reduce their denominator by reducing the Capex. When the systems are standardized, it becomes a lot easier to define the clinical outcome KPIs. Definitely, investments & innovations are highly important to scale up the entire ecosystem.

Session Quote

How technology and innovations can also address the issues of shortage & quality of manpower. It is a huge gap that needs to be filled soon and adequately. The government has taken a step in this direction by creating a new cadre of Community Health Officer. In the next 5 years, there will be around 150,000 fully trained CHOs taking care of service delivery for Ayushman Bharat.

Moreover, the current scenario, where even the tertiary care facilities are used for primary care, will vanish. It will all move out to primary clinics or better still, to patients' home. This will free up the capacity of super specialized facilities and improve healthcare delivery.

Such innovations will also ensure that hospitals become super-efficient for investors.

Key Takeaways

- India's annual health resources are borrowing 40 million USD, which are invested in different healthcare segments
- In the next 5 years, there will be around 150,000 fully trained CHOs taking care of service delivery for Ayushman Bharat
- There is need of at least 1000 hospitals to be added in the entire PMJAY scheme
- Healthcare is ripe for disruption, but there is high information asymmetry, high patient dissatisfaction & high inefficiencies, which is derailing the process
- As per statistics, 85% people availing Ayushman Bharat scheme had secondary care requirements

Panelists

Dr. Amit Shah
Deputy Director, Health Office, USAID

Mr. Nalinikanth Gollagunta
President & CEO, GE Healthcare | MD, Wipro GE Healthcare

Mr. Sumit Nadgir
MD, True North Co

Moderator

Dr. Harsh Mahajan
Founder, Mahajan Imaging

Framework for Mainstreaming Innovation - What does it take?

Dr. Sowmya Shashidhara, Associate Director, Max Institute of Healthcare

The talk informed the audience on how can evaluation be done or a framework be used to help start-ups in being successful. It was told that ISB conducts conversations with start-ups, entrepreneurs and the innovators in the ecosystem and also works with analysts for the same.

The session shared how most of the innovators are from technology background and not necessarily from the healthcare ecosystem. So, it becomes important to have them understand the complexity and the nuances of the healthcare market.

Also, Indian healthcare is dominated by the private sector, but the corporate sector forms a very small aspect of this whole ecosystem. There are many nursing homes and really small setups, which are still struggling to establish clinical protocols & standardizations. So, the industry is an unorganized and fragmented one. Cost of acquisition and scaling is very high and therefore many start-ups at various levels of maturity, struggle after they gain some momentum.

Next point to note is that healthcare is not purely a technology play. Working solely with technology did work for the financial services as it's basically e-commerce, where it is very easy to identify a product and buy it and replicate it online.

However, it is tough to apply this directly in healthcare. Hence, innovators should understand the landscape and the framework in which their product or service is going to play. ISB helps them trace the disease lifecycle. They start with good health, then risky behavior, and go on to the onset of diseases, and then undiagnosed disease and then move to diagnosis, treatment and treatment management, moving on to disease related complications.

Taking the innovators through the stakeholder's map is also imperative. They are also explained about community development administrative clinical support to clinical aspects of decision making. It is also important to view technology as an enabler and not as a solution by itself.

The talk stressed on the need to understand the role of hospitals and doctors in a successful business model.

In summary, product positioning becomes very important for any start-up to understand. The start-ups should have clarity on – what is the product really trying to solve, will it replace the doctors, or work with the doctors, will it replace or work with the nurses and make them more efficient.

A lot of food of thought was given in the presentation, for the start-ups.

Session Quote

Most of the innovators are from technology background and are not necessarily from the healthcare ecosystem. So, it becomes important to have them understand the complexity and the nuances of the healthcare market. innovators should understand the landscape and the framework in which their product or service is going to play.

Key Takeaways

- ISB conducts conversations with start-ups, entrepreneurs and the innovators in the ecosystem and also works with analysts
- Cost of acquisition and scaling is very high and therefore many start-ups at various levels of maturity, struggle after they gain some momentum
- Product positioning is very important for any start-up to understand

Speaker

Dr. Sowmya Shashidhara
Associate Director,
Max Institute of Healthcare

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Dr. Sowmya Shashidhara's Presentation

Creating standardisation mechanism for validating innovations and promoting public procurement

Dr. Neeraj Jain, Mr. Rajesh Ranjan Singh, Mr. Varun Jhaveri & Mr. Siddhartha Bhattacharya

The session started by informing that public procurements usually happen on a lowest cost basis, while in some cases, through a blended mechanism or where cost and the technical parameters are together computed in some fashion. But the whole context of a start-up is about coming up with an innovation, where one can't compare any previous parameters for decision making. So, there's no precedent about how a start-up product or solution or service may look like. Hence, while people are geared up and encouraged to procure services from start-ups, often it is seen that there's not an established methodology in place nor a defined framework on how the start-ups can participate and also compete with some of the more established players. The panel then went on to discuss the norms that exist both in India and outside for this purpose.

Wish Foundation's example was shared, about how they overcame this issue and came up with an innovative partnership. The foundation works on transforming primary healthcare through innovation.

It seems the difference lies in how innovation is approached and how is it introduced, how it is placed and scaled. The panelists spoke on the missing links of primary care, and how the industry does not have any innovations and tools for the diagnostics to reach the last mile. It was opined that major focus of stakeholders is on the clinical aspect, but if there is no basic diagnostic facility at the last mile, how will the screening really happen, is a question to ponder.

The foundation is also working on an innovative health technology assessment, which they have started with a medical college in Bhopal. It seems the finding will help in positioning the innovation with the State. A tripartite MoU with the State, Wish Foundation & the innovator has been signed, which helped the innovator to place the product. After the health technology assessment, the scientific data got published, media coverage was also given about the 1st pilot. Post which, it became easier to enable the buying from the state. This was a solid instance of how systems can be validated and promoted.

An interesting fact was shared that under National Health Mission (NHM), when the state Program Implementation Plans (PIP) are made, there is a fixed percentage, of 12-15%, which is supposed to be dedicated for innovations and innovative products launched. This is a great window of opportunity for innovators & start-ups to play in.

Another opportunity is with Ayushman Bharat, where the trouble with health & wellness centers will be to ensure proper and regular screening mechanisms. This is again an opportunity for innovators (and some are already playing the field), to come up with point of care devices and technologies and fill this vacuum. Especially as the focus here is on prevention, communicable & non-communicable disease burden.

Another area for innovators under procurement is to come up with ideas on data for primary care. If the innovator can use the right approach, methods and tools to protect and create a safety net for data and contribute to the model of health and wellness centers, that will open up another competent case for procurements.

It was told that NHA has an innovation unit and they are looking at deploying the public funds to join the big pieces here. However, concerns were expressed over the fact that innovations have only scratched the surface where public procurements are concerned, and one major detriment to this are the regulations.

To enable this and make the situation, better, it is vital to first take stock of what the state requires. Before innovating, start-ups should find out the needs of that particular state. Until that information asymmetry is rectified, there will prevail a mismatch with regard to what is required and what is getting delivered.

Next point discussed was with regard to the backward linkage. Right now, the start-ups and the companies are placed on the same pedestal when it comes to things like tenders and pre-qualification criteria. Under pre-qualifications, there are conditions like a necessity of having a turnover of at least 50 crore and many more such tough barriers. Such clauses cannot let a start-up even get entry in the financial bid, leave apart their selection.

To break this barrier, the government has created a parallel procurement system, which happens to be the government e- marketplace, called GEM. Essentially, it is a platform where all the government buyers, ranging from hospitals to your clinics etc., are listed. At the same platform, innovators and start-ups can list their products as well. If the demand and supply fits, and supply fits, a business case ready! There are certain thresholds too here, like if the procurement order is below 25,000, then it can be a direct procurement. The listing on GEM will ensure that the innovation gets visibility at all levels, which is exactly the type of intervention that should be looked at.

It was informed that the government is open to adapting and adopting innovations and latest technologies. Hence, work is on to make the government marketplace as friendly as the private one, to access and work in. Work is also on to make the regulations associated with start-ups and their tenders, more relaxed. Also, if the start-up is recognized by the Department for Promotion of Industry and Internal Trade (DPIIT), then the qualification criterions are further eased up.

Next, perspectives were shared on the global evidences and how innovations can have a mass application in a country like India. An instance was quoted where PATH had worked with China with their family planning programme. The conclusion was that the angle should be turned around and focus should be on the ‘impact’ of a particular innovation. The industry should look at the best solutions for the healthcare system, rather than looking at it from the point of – what’s being innovated & then trying to fit it into the systems.

This will also help innovators to see the road ahead and the solutions to innovate for and also sell profitably. India has some great minds, but they will be useful and their businesses will work only if the entire ecosystem is solutions-driven.

This can then be taken up on a global level too. The Impact Lab that PATH has set up in India in partnership with Tata Trusts and IIT Delhi, is coming up with great solutions that have immense possibility not only for India but also for the world, because at some level, healthcare issues are the same worldwide.

Some questions that start-ups should ask themselves are – Is there really an understanding of the public health system? What does this system need? What can work operationally and not? That operational validation of solving the problem is absolutely critical in understanding the market dynamics and the health economics. It is imperative that all these links join, else a huge budget loss can happen. Even Ayushman

Bharat is on a budget; and if the primary care system does not hold its ground, eventually the load will keep transferring to tertiary and secondary, which will increase the number of claims. In fact, the panelists agreed that GEM is also just one piece of this puzzle. As it is simply a platform to buy "if" you want the innovation. It is still not talking about what solutions are required to be catered to, nor about the competition, no about what will be operationalized. All this is absolutely important to change the health indicators of India. Even when there is talk about AI or machine learning or block chain, the industry is looking at fitting the technology into the health system. Whereas, it should be about how the technology can support the system, it should be about creating an enabling environment which is going to take things forward.The audience interaction also brought forth some significant highlights. Like,

India should look more at the global ecosystem and also collaboration. For instance, India can learn from China, which has set up an artificial intelligence partnership platform where the government will work with the start-ups, right from the R&D phase. They are looking to provide a solution starting from the ideation phase right till product commercialization, including all the regulatory approvals, reimbursements, bringing together the academia, the knowledge partners –everybody together from the beginning. All of this highly increases the possibility for start-ups to succeed. Also highlighted was the point of how start-ups are facing issues during scaling up phase. Whether it is funding, platforms to showcase their products on, or the supply chain, the start-ups feel a dire need of industry mentors, who can guide them in scaling things up. The time of full-scale deployment is where they need assistance from the already-established players and leaderships.

Further audience interactions brought forth issues like stringent specifications in a government tender, and how start-ups with innovative ideas cannot fall into this bracket as their product is new and does not fall under any re-existing specifications. In this case, the panel suggested the government should roll out tenders in the form of the 'solution' they are looking at. For instance, solution required for reaching from point A to B – and innovators can provide solutions for this.

This can be regardless of the technology being used to cover the distance between point A and B. A difficult part for innovators is to determine the price point of a new innovation. Is there a way that they can determine the government spending on their idea or pricing issues that are subjective in nature? Here, the panelists said, the role of commercial pilots can come in, which can look at pricing from a neutral standpoint. They can provide evidence, making it much easier for the government to believe that the price is right.

The panel informed that through a new commercial pilot program, the government is extensively focusing on this particular validation piece. To make sure that all the products, which are getting validated, can have some sort of discovery of a particular prize. Commercial pilots are ideal for this. The panel ended with a convergent vision on this very important journey.

Key Takeaways

- Under National Health Mission, when the state Program Implementation Plans (PIP) are made, there is a fixed percentage of 12-15%, dedicated for innovations and innovative products launched
- Innovations have only scratched the surface where public procurements are concerned, and one major detriment here are regulations
- Under pre-qualifications, conditions like a necessary turnover of at least 50 crore, create entry barriers for start-ups
- The government has created a parallel procurement system, the government e- marketplace (GEM)
- If the start-up is recognized by the Department for Promotion of Industry and Internal Trade (DPIIT), then the qualification criterions are further eased up

Session Quote

While people are geared up and encouraged to procure services from start-ups, you often see there's not an established methodology in place nor a defined framework on how the start-ups can participate and also compete with some of the more established players.

An area for innovators under procurement is to come up with ideas on data for primary care. If the innovator can use the right approach, methods and tools to protect and create a safety net for data and contribute to the model of health and wellness centers, that will open up another competent case for procurements.

Under National Health Mission (NHM), when the state Program Implementation Plans (PIP) are made, there is a fixed percentage, of 12-15%, which is supposed to be dedicated for innovations and innovative products launched. This is a great window of opportunity for innovators & start-ups to play in.

Panelists

Dr. Neeraj Jain
Country Director, India, Path

Mr. Rajesh Ranjan Singh
COO, Wish Foundation

Mr. Varun Jhaveri
Officer on Special Duty to CEO, Ayushman Bharat (GoI)| Leading Innovation Strategy @ NHA

Moderator

Mr. Siddhartha Bhattacharya
Secretary General, NATHEALTH

NHA & NATHEALTH joint Session - The Story of 5 Start-ups

REDWING LABS

Mr. Anshul Sharma, Co-founder, Redwing Labs

In Papua New Guinea in 2018, they had an Ebola outbreak. This was because vaccines were not able to reach the last point centers, purely because of the unfriendly terrain, the topography and the geography. Even the northern province of the country had a polio outbreak. At this point, the Gates Foundation and the Center for Disease Control and Prevention (CDC) stepped up their efforts towards the global imminent immunization program.

This was Red Wings' first pilot in Papua New Guinea.

After which, we started looking at the Indian market, where our focus was on blood delivery. Initially, it was a major sticking point, purely because of the statistical reasons. The first reason being that India has about 2,708 blood banks for a population of 1.3 billion. That means, for every 45 lakh people, there is 1 blood bank currently. This number is still on that same parameter over the course of many years, despite increased access and other efforts in this direction. At the same time, you have a shortage scale of about 30 lakh units of blood. Hence, we were able to see that there is a fundamental imbalance in the supply chain for blood, plus we also discovered that there is wastage, and simultaneously a shortage too.

So, the question is - why does this inherent problem in healthcare logistics exist? We're able to find 4 key answers. Number one is that all blood products and all medical products specifically have a limited shelf life. And the red blood cells expire in 30-35 days. Platelets expire in 7 days. So, there's a limited shelf life. Number two is about the cold chain. Now it's one thing to procure and another thing to maintain the temperature in cold storage and yet another thing to have a good induction backup unit as well. So, the CapEx and the OpEx for maintaining the cold chain inherently has been quite high.

Our whole idea is - the places where you live, shouldn't decide how long you live for. Drone delivery is a logistical system that will not differentiate on the basis of where the population is living, to give that universal access of healthcare to people.

-Mr. Anshul Sharma

Number three is the unpredictability of the geography. In any other logistical system, you can basically predict the demand. However, demand forecasting in healthcare is tricky because of the undecided and uncontrolled factors.

And number four is to deliver in-time critical products. When a mother is undergoing post-partum haemorrhaging and she needs blood immediately, this is where the conventional mode of transportation really becomes challenging to rely on.

That's why drone delivery, which is what our start-up is about, made sense as the vehicle of choice. But this was just the vehicle. We also needed to design an entire logistical system around this core piece. Hence, we came up with vertical takeoff and landing drones. They can take off more quickly and then move like an airplane. Also, ours is a cloud-based operation. This manages the vehicle and then we have a management system combined with data to give us demand forecasting and to supply in both – restocking and emergency cases.

While drone delivery is expensive than conventional delivery methods, it gives the desired RoI. Our main value proposition is to reduce burden on the current supply chain and not to rely so much on the physical cold chain infrastructure.

The moment you have an on-demand mode of logistics, you don't need to have that physical infrastructure, instead a virtual cold chain will work. If you require blood within the next one hour, on-demand logistics makes that happen. The reliance on the cold chain physical infrastructure dramatically reduces.

For better understanding, we have drawn a parallel analogy to what happened with the aircraft cargo industry over the period of last 50 years. Nearly 80-90% of the U.S. cargo has shifted from land based or naval based to an aircraft carrier or air cargo-based mode of transportation.

Plus, drone delivery is not meant for just doing very small number of deliveries. If we increase the number of flights annually, that is when the convergence point with conventional mode of logistics really happens. Essentially, in terms of impact, one logistical system is able to cover an area of about 8000 sq. kms., which usually covers about 8 million people.

Also, our focus is mainly to reach the hard to reach areas, particularly the Northeastern states, and even the rural parts essentially. We've also won awards for our SA Boeing Lockheed Martin and Airbus.

Our whole idea is - the places where you live, shouldn't decide how long you live for. Drone delivery is a logistical system that will not differentiate on the basis of where the population is living, to give that universal access of healthcare to people.

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HealthCube
SMART DIAGNOSTICS START HERE

Mr. Sunil Chopra, President-Sales and Marketing, HealthCube

I would like to start with the introduction of our state-of-the-art portable multi parameter diagnosis system. It is just the size of a small laptop that can be deployed rapidly to enable quick accurate diagnosis anywhere in the country. The system can be operated by anyone with an 8th standard education, and with a few hours of training.

Smart diagnostics and artificial intelligence allow for rapid screening of patients for everything from heart conditions, anemia, diabetes, malaria, dengue, chikungunya and many more conditions. The device is connected to an easy to use software interface. And an extremely robust and secure centralized cloud database. This ecosystem maintains detailed records of all tests with identity, phone number, photo, geo location, data, time stamp and test results on the mobile app and backs it up to the cloud.

Detailed tracking traceability and analytics on the program execution are monitored and reported in near real time. We have forged strategic alliances with various government and corporate CSR programs and have already touched half a million lives with one million tests successfully conducted across 22 states. Family health screening and diagnostics on 32 related tests, including pathological test, blood, sugar, hemoglobin, blood pressure and many more issues are diagnosed before they turn into a major illness.

We provide impact at scale by effortlessly meeting the needs of any healthcare program. The product's light weight and battery powered capability enables it to operate online and offline in the remotest of locations. Our systems are highly accurate and reliable and are comparable to laboratory tests with rapid testing and results within a few minutes. Enabling timely diagnosis, treatment and better patient outcomes.

Let me now share a bit about our journey. It started about 4 years back. Our idea had stemmed from the fact that despite all the advances in science and medicine in diagnostic, logistics, infrastructure, grants from the governments, and from benevolent funds, almost 4 billion people on the planet remain underserved for primary healthcare. And a large part of that population came from our own country. Hence, we decided to make in India and for India.

Thus, we made this laptop sized device under 2 kg, which is a portable mobile device that can be taken anywhere. It does over 28 tests and these are across various parameters. We had also seen that there were other portable devices in the market, which were doing individual tests like vitals, biochemistry, testing for infectious diseases, NCD, EEG markers, cardiac markers, cancer markers, and so on and so forth. However, there was practically nothing out there which very elegantly could combine all of that into one single integrated device.

> **We decided to make in India and for India.**
> **We innovated this laptop sized under 2 kg, which is a portable mobile device that can be taken anywhere. It does over 28 tests and these are across various parameters.**
>
> **-Mr. Sunil Chopra**

Our device does vitals including a 12 lead ECG and this is with interpretation with the Glasgow algorithm, which backs that up with biochemistry, blood glucose, hemoglobin, cholesterol, uric acid. And we also do the WBC and the lipid profiles, which again are attached to the same device, so you don't need to go outside of the ecosystem. We also do cardiac markers with urine parameters.

In the near future, we expect this to become almost a 75-tests device. Again, completely portable & easy to use. People don't even have to worry about how will the upgrades happen. The ecosystem includes EzDx, which is a software on the Android platform, and extremely easy to use. We can train a 14-year-old to run this device in a couple of hours.

Plus, we can have the reports available practically in seconds for most of the tests and the reports are also available on cloud. This is done with data security, a German banking level security software. Hence, patient privacy is also taken care of.

We can also give physical printouts of the tests including the ECG reports to the beneficiaries.

One of our directors Vivek Wadhwa from the Bay Area and our team were invited by the Prime Minister of India and there was a mention of Health Cube by him and how the device is trying to change healthcare. The Holy Dalai Lama had also asked us to come screen the impact within the population in his area with this device, which is a huge honor for us.

We were awarded one of the top finalists globally in the UCSF digital awards we were the only non-unicorn there. We were the only Indian company out of 500, which was not having a U.S. footprint, yet we were there as one of the finest in the telemedicine category.

Lastly, we are a very active part of the Ayushman Bharat program. We have done over 50,000 screenings of school kids in the age of group of 6-16 in 9 states over the last year and we have saved a lot of young kids from blood transfusion and many more healthcare issues. We are an organization for profit, but for profit with a purpose, and our purpose precedes the profit.

Scan to Access HealthCube's Video & Presentation

Niramai

Mr. Himanshu Madhu, Tech Lead, Niramai

We are a 2-year-old start-up, which was a part of a project in Xerox Labs in Bangalore. Dr. Geeta, our Founder, bought it out as a start-up. While me and some more of our colleagues followed and joined the start-up. Niramai in essence means Non-Invasive Resources And using Machine Artificial Intelligence.

> **"In our breast cancer screening, there is no radiation, because we are only capturing the heat emittance. Also, there is no touch involved, which takes away the discomfort patients feel while screening."**
>
> **-Mr. Himanshu Madhu**

Our work started out with the fact that breast cancer has now become the leading cause of deaths in women. We were looking at a solution to prevent and cure. The most significant aspect of it is early detection. Though a lot of work is taking place in this space, there are still gaps. We worked on filling those gaps. We looked at a solution that will aid in covering the areas that can go undetected on the skin.

So, we have devised a product that works on the principle of body heat. Our sensors capture the heat emittance and pattern. We use it to distinguish if the heat pattern is abnormal or there are some other benign conditions. Plus, there is no radiation with our methods, because we are only capturing the heat.

Also, there is no touch involved, which takes away the discomfort patients feel while screening. We have small private booth whether patient walks in, the technicians are outside the booth and they guide from outside about the process of screening. It starts with the cooling period first. After 6-8 minutes of cooling

period, we take the temperature to 180 degrees. Then the images are analyzed through thermal imaging, and stored on cloud with security. The data is then analyzed and studied.

The basic principle is, as doctors will agree, that whenever a cancer cell is generating, it tries to be very aggressive and tries to fight with the neighboring cells. This creates more blood to be pumped. And when that blood pumping happens, it creates a heat pattern. And that's what we're trying to capture. All of the data we capture along with AI helps us arrive on a conclusive diagnosis.

There are different types of reporting that we do. Through camps in tier 2 or 3 locations at PHCs, which is where we also suggest if a follow up is required or not. We provide a radiologist certified report too. We recently published an article in American Society of Clinical Oncology (ASCO), where we wrote about a trial we did on 769 subjects, where we had got 80% specificity on 76 subjects. We are conducting many more studies to put the more validation into our work. One study is being done with ICMR too.

We work with hospitals, different council places, corporates, apartment settings; all of where we can conduct camps. Sometimes, the hospital takes an entire solution with the flow center. We also work on a model where service providers can use their own images, use our Application Programming Interface (API) to run the algorithm and come to a diagnosis.

myupchar

Dr. Manuj Garg, Co-Founder, myUpchar

We are a black digital platform that was built for India. Basically, we provide healthcare content in regional/ Indian languages. We started 3 years back and now conduct about 12 million sessions on our platform. All of our content is created by doctors and healthcare professionals. We serve 25 million people every month & 90% of that traffic is from tier 2 & 3 cities in India.

The genesis came from a simple insight that globally there is a dearth of accurate healthcare content. However, India was our focus. When we did our research, we came to know that there was hardly any healthcare content available in Indian languages. We're hitting a population that typically healthcare digital platforms in India haven't taken notice of till now. In our country, 95% traffic is mobile. Unsurprisingly, ever since Jio launched, everyone's on the web through a mobile phone!

> **"We provide healthcare content in regional/Indian languages & all of our content is created by doctors and healthcare professionals. We serve 25 million people every month & 90% of that traffic is from tier 2 & 3 cities in India."**
>
> **-Dr. Manuj Garg**

We also run a You Tube channel for the same kind of content. There are a million subscribers to our channel and 15 million views every month on our health videos. The total average watch time is around 55 minutes. There is a huge need for quality healthcare content outside of the few cities that most players focus on.

After we were successful with the content, we took it a step ahead. After reading about a certain health condition most of us feel the need to talk to a doctor and re-confirm our doubts and get clarity on our condition. Hence, based on all of this, we started organically building the services on top, after we saw a huge demand for connecting our audience with doctors. We worked on it. And now we connect 100,000 people every month with doctors and their chat is kept completely private. We are not privy to it and it's free for customers.

There is also a huge demand for medicines and lab tests. However, despite our best efforts to partner with others in the ecosystem, it did not work out. To fill the gap, we started lab services ourselves, at least in a couple of cities. Through this, we service not just the city but also the area of about 50 kilometers outside the city. Additionally, we started medicine deliveries, about 3 months back and have already touched 20,000 medicine deliveries.

Scan to Access
myUpchar's Presentation

GRAMIN HEALTH CARE

Ms. Sonia Vohra, Head – Operations, Gramin Healthcare

I would like to share our journey of last four years, wherein we have been trying to create healthcare ecosystem in the underserved rural areas to ensure health services at a distance that they can travel, at a cost they can afford, and with a dignity that they deserve. Gramin Healthcare is working only in Tier 3 locations and below and this journey started with the launch of our helpline. It was a call center, wherein we invited the villagers to call and talk to our doctors and get the consultation. Within three months, we realized that though we were getting lots of calls and villagers wanted to speak to our doctors, they were really not able to share the actual issues that they were facing. The doctors were not able to diagnose what the problem was and even if they would, the prescribed medicines were not available.

Hence, we evolved a little bit and introduced our medical mobile units. These medical mobile units would go once in a week 100 kms from where our help line or the call center was, to these villages, to meet patients and try and give them solutions. But then we realized that it's just once a week. What if the patient really needs intervention or help within that week, while we are not there?

That's when we decided to have a physical presence of the mobile unit, which should be accessible to the villagers at any time. Within six months, we were able to open 120 centers across 7 states with a qualified paramedical team. Then yet another issue was unavailability and unwillingness of doctors to actually go and visit these centers. This is where we made use of technology. We created a model, which we now call assisted telemedicine. Our primary centers, where we have our nurses, cater to the patient and do their preliminary diagnosis. We then connect them with the doctor on the phone, capture all their health vitals, create an electronic health record. This helps the doctor to do the provisional diagnosis and prescribe the patient with the right medicine. We further evolved and created a hub and spoke model, wherein within a radius of 10-15 kms, we created 10 primary centers, which were supported by one polyclinic. This also helped us to hire doctors, who finally agreed to join us. Via the primary centers, we are able to serve patients

> **Through our 120 centers, Gramin has been able to touch more than 4 lakh lives. In addition, we create and maintain digital health records for all the patients that we cater to. We only work in tier 3 locations and beyond.**
>
> **-Ms. Sonia Vohra**

six days in a week. The doctors visit these primary centers once in a while and interact with patients. Which helps in trust building. Through these 120 centers, Gramin has been able to touch more than 4 lakh lives. In addition, we create and maintain digital health records for all the patients that we cater to.

We also enabled end to end care and fixed the continuum of rural healthcare in India. For this, we collaborated with the government, the co-operative community and the industry. These partners bring knowledge sharing capacity and help in diagnosis and identification of solutions to the emotest of the areas.

Currently, we have more than 150 women who work at our centers. We empowered them with the technology know how, we trained them to utilize the technology platform. We trained them on the latest medical interventions, which are available and we are able to do this with the help of our strategic partners like Dabur, Novartis, Medtronic, Dr. Reddy's, and more.

We also have a mechanism, wherein we involve and engage the community through various programs. We do at least 500 outreach programs every month, through our 120 centers. The plan is to scale it to around 1000 centers in next three years.

Concluding Remarks by Mr. Arun Seth, Chairman, Nasscom Foundation

Mr. Arun Seth, Chairman, Nasscom Foundation

When I was in college, I wanted to be an entrepreneur, but I couldn't. Because there were no angels around. I went to the bank, I got an ancillary at Lucknow, and they said you have to give a mortgage. But we had nothing. We came from very low middle-class family. However, I've now been an angel for about 20 years and it is the first time I'm seeing this kind of collaboration between the government and the industry in the start-up area. There were certainly talks around collaborations earlier too, but this is the first time I'm actually seeing it happening.

If we can collaborate on platforms like NATHEALTH, the government, and Nasscom, we can actually scale and do the things that the NASA people have done! I would like to congratulate everyone here who has played a role in scaling the level up for start-ups. Especially for fixing the fundamental issue at the procurement level. In fact, this issue is not just with the public sector, even the private sector has many restrictive entry points.

If public & private sectors can cover these hurdles successfully and provide start-ups with market access, they may just not need any external money. Most start-ups' requirement is essentially market access. Once that is achieved, then their customers will give them the money. Investors may not be required at all.

As an industry, we just need to give them the first 5-7 orders, support them and also pay them on time! Although I am a late entrant into NATHEALTH's community, I am amazed at the kind of energy and connectivity I have seen at the forum.

Key Takeaways

- If stakeholders can collaborate on platforms like NATHEALTH, Nasscom can assist in scaling up and emulate the things up to a high level, like that of NASA
- If public & private sectors can provide start-ups with market access, they may just not need any external money
- The industry can just give start-ups their first 5-7 orders, support them and also pay them on time!

Incubation & Acceleration to drive wellness & preventive health

Dr. Om Manchanda, Mr. Rajiv Kapahi, Mr. Badhri Iyengar, Dr. Niti Pall & Mr. Kshitij Bhotika

Healthcare is all about the consumer. It's all about the patient, it is all about trust, empathy, expertise and information. The panel discussed how it is important to understand the customer journey, which is probably the best thing to focus attention on, from the point of view of wellness and prevention.

However, India till date has not given prime importance to this sector. Although platforms like Practo, said the panel, which focus on this angle are trying to solve the problem between the consumer and the provider. Such technologies are trying to make the interaction between the consumer and provider of higher quality, more convenient and more affordable.

Essentially, India has three different large markets, and for such platforms to work, it is vital to work closely in all these markets, plus with the providers and the doctors too.

The panel discussed how major focus is still on Tier 1, which is the cities with more tech savvy people, who are more willing to pay online. However, this only forms the first 10-12 cities. Many of the next 300-400 cities form the other set of people.

Another trend that's picking up in our country is of wellness and preventive health packages. In India, these packages are relatively easier to avail, as they are more like an OTC. Most consumers now a days are able to decipher a pathology report. Making such packages viable. However, these reports only take care of 80% of the job, as the consumer still needs a doctor consult. They need to know what to do after the reports come in hand.

The panel also discussed how it is important to segregate wellness and prevention. Preventive health is more functional in nature. Where customers want to see the physical parameters, they want their social well-

being. while preventive health is an option that a consumer exercises, an option when he/she is healthy and chooses to remain so and avoid going to a doctor. Hence, it clearly operates like any consumer brand.

A behavioral change, which actually becomes, over a period of time, an attitudinal change is what is required of preventive health. As per statistics, at any point in time, only about 1% of the population is visiting a doctor. Which means that 99% is available for preventive. It's a huge market and has the capability to make a vast difference to our nation's healthcare index.

Also, the panel said that India does not have a proper prevention drive. Most consumers opt for a check either as they have a health scare or fancy the data gathering or end up in a hospital with someone else and opt for it. All these categories are either small in number or are random in nature, which means they lack consistency to push the preventive quotient of the country up and healthcare costs of people down.

So, the question really is - how to activate systems or governments to actually get them interested in innovating in this space? Ayushman Bharat has a focus on wellness & prevention, but even they are going to run out of money very shortly and innovation is the way ahead for them too.

A model elucidated here was of the UK NHS, where the system is government funded but paid privately. This works well in the primary and the preventive side. The other example shared was of Israel, which probably has one of the best health management models, which is digitally linked and uses a lot of telemedicine.

The panel also shared an example of Health Spring, a chain of primary care centers, which has presence in almost 100 plus locations. It seems that the organization has been able to crack the model on primary and preventive health in a big way. The panel suggested that the Indian government can learn from such models.

Another learning can come from Bangladesh, which has something called as gramin banks, and healthcare centers are associated with these banks. It is a frugal model; a small amount is deducted for healthcare from the microfinance loan that is given to the family. Another frugal innovation cited in the discussion was of an ultrasound device, which can work in a remote location without the need for electricity. This is a helpful innovation to reduce maternal mortality and infant mortality through primary clinics. The panel also suggested that tie ups with telecom companies can be explored, wherein a small fee can be deducted for primary and preventive care and it would simply end up being on customers' monthly bills.

A challenge to push primary care in India, the panel discussed, is incentivizing prevention in a model where everybody is being commercially driven to do as much activity as possible and drive that activity through the chain. India has still not created a comprehensive ecosystem and is also struggling to commercially fund the healthcare systems. The context setting is absolutely important in wellness and prevention.

The panel opined that the citizens should look at going back to the basics, to their homes and their kitchens, which traditionally have been the best clinics. India did have certain age-old systems in place, which took care of the nation's health for a long time. However, these systems are now forgotten. It may be a workable idea, as the ownership will rest with the citizens, giving them more control over their health.

The panelists also spoke about using data to innovate, as the industry has a lot of data available. Though it is fragmented, but by using right mechanisms and algorithms, it can yield some innovative business models. A framework needs to be created, wherein it is possible to get into the ecosystem the biggest decision makers, the biggest influencers, who can create the right wellness and prevention culture. India needs a model that will create less burden on the healthcare systems. The country needs an intervention, and the planning needs to start now.

The panel suggested that people can start using symptom checkers to read their symptoms or to find out how they have been feeling in the last six months or so. This way, a model can be created where the consumers can do the first level of investigation, and figure out whether a doctor visit is required or not.

Another point brought to fore was of healthcare content that's available online. India has a huge population with access to the internet. A platform can be built for tier 2 & 3 cities, to disseminate information, which can enable people to access primary healthcare.

Patients empowerment has also not yet reached the desirable level in India. An instance of a patient group in San Francisco was shared, which is run by patients, for patients. They have created their own closed loop pancreas system. They have hacked the pumps, hacked the libraries, hacked the glucose monitoring and more and then connected all to create this pancreas system. Then they have monetized it. This group has already created an artificial closed loop pancreas, for which people have been waiting for long. And they have done that by using algorithms.

A lesson to learn here is how a pool of patients can drive their own healthcare need, and can drive how they see wellness and prevention.

The panel concluded with the thought that the government too has a huge role to play in ensuring the quality of health from the base level. The milk, chicken and other foods the citizens are consuming are full of oxytocin and antibiotics. If India keeps neglecting this, any other work on prevention or wellness can prove to be a failure.

Session Quote

A behavioral change, which actually becomes, over a period of time, an attitudinal change is what is required of preventive health. As per statistics, at any point in time, only about 1% of the population is visiting a doctor. Which means that 99% is available for preventive. It's a huge and a big market. Along with the wealth account, if people start maintaining their health account too, it will make a vast difference to our nation's healthcare index.

Right now, India does not have a proper prevention drive. Most consumers opt for a check either as they have a health scare or fancy the data gathering or end up in a hospital with someone else and go for it. All these categories are either small in number or are random in nature, which means they lack consistency to push the preventive quotient of our country up and healthcare costs of people down.

Key Takeaways

- It is important to segregate wellness and prevention; preventive health is more functional in nature
- At any point in time, only about 1% of the population is visiting a doctor, which means that 99% is available for the preventive market
- By using data with right mechanisms and algorithms, preventive health can yield some innovative business models
- A model can be created where the consumers can do the first level of investigation, and figure out whether a doctor visit is required or not

Panelists

Mr. Tushar Sharma
MD & GM, Abbott Vascular
India & South Asia

Mr. Rajiv Kapahi
Senior Director,
Boston Scientific India

Mr. Kshitij Bhotika
SVP Product, Practo

Dr. Om Manchanda
CEO, Dr. Lal
PathLabs

Mr. Mayank Bathwal
CEO, Aditya Birla
Health Insurance

Mr. Badhri Iyengar
Cluster MD, Smith & Nephew

Moderator

Dr. Niti Pall
Medical Director, KPMG's
Global Health Practice

Mainstreaming innovations – Role of Industry

Mr. Manish Sardana, Mr. Pavan Chaudhary, Mr. Prashant Sharma, Ms. Meenakshi Nevatia, Mr. Ravinder Pal Singh Dang, Ms. Ruma Banerjee, Mr. Vikram Thaploo & Mr. Vipin Pathak

The discussion started with two key questions. Whether the industry should participate in mainstreaming innovation? And if yes, how should it participate? The biggest concerns with a subject like this, as per the industry, are: how to address mortality and how to improve the scale.

As per the panel, it seems that the industry does not have a choice when it comes to being a part of mainstream innovation. This is imperative for all stakeholders to remain viable in business.

Moreover, there is a need to innovate on the patient side. As the disease form is changing, the way the disease behaves is changing, the requirements are changing, the procedures are also changing today. Plus, there is increased focus on accessibility and affordability. Hence, players are required to go leaner in their business models. Thus, innovation is not just about the product, it is also about the business model. It is a need, rather than a choice.

However, the panel said, what is hindering the processes is regulatory overload, which neither creates an encouraging nor an enabling environment for innovation. This further creates entry barriers and impacts viability.

Also, the private sector is relatively young. Just about 35 years old & the industry feels it is yet to find its footing. If one looks at aviation, hotels or any other sector, they are much more advanced and process perfect. While in healthcare, even now, the players are facing operational and financial issues. Hence, innovation is probably the only way that the industry can look at newer models, at newer profit centers.

The panel said where mainstreaming is concerned, it is not just about the metros, it's significant to even check how innovations can reach tier 2 & 3 locations and be affordable. So that the service providers here do not have to lose business to the metros. They need to have a value proposition for people to stay and avail services in tier 2 & 3 locations.

Innovation has to be viewed as a collective experimentation. The healthcare delivery system is going to see a disruptive change, to adopt this change, the industry has to integrate their systems and align its system

with the new way of service delivery. To facilitate this, there is no other choice for the industry, but to function as a full-time partner in this heterogeneous innovation system or the network.

A project in Himachal Pradesh was quoted by the panel, wherein a problem of emergency care was resolved by innovating the entire business model. The project worked by connecting the health devices; and in last 4 years, the project has saved close to 1100 lives along with the support of the government, and through just three centers. Daily emergency services are provided, from cardiac issues to emergencies like skull fractures or a snakebite. Thus, the golden hour has been massively utilized by innovation.

Content validity was also spoken about, in terms of mainstreaming involvement of the industry. Companies are hacking the SEO pattern for their own benefit and it leads to passing of wrong information to patients. For instance, every small issue one has, Google's first few pages will lead the answer to cancer. If the mainstream industry does not participate in this content creation, in validating the content, then patient empowerment will happen in a wrong way.

Discussions on artificial intelligence also did the rounds. For instance, innovating an AI enabled cane/ walking stick for older patients, which can alert the attendant in case of a wobble or a shake; indicating the elderly patient using it has lost or losing balance while walking. Also, the panel shared that about 21% of the nurses' time get used up in locating medical devices. May be an innovative device which has a voice- or sensor-enabled technology, can help here. Then, all that the nurse has to do is call out a device's name and the device can respond saying – Yes, I am here.

The panel also raised the concern of counterfeit medicine, which is killing 200,000 people every year. In fact, USD 30 billion is reportedly the turnover of the counterfeit medicines' industry. Here, the panel suggested, a technology like block chain can have a major impact, although there is still time for it to really start working in an impactful manner.

Also, the panelists opined that while not all stakeholders can be innovators, they can surely be enablers. Like a hospital can provide a testing ground for innovators, the facility can spare a small amount or just provide entry to innovators into their set-ups, to come and test their products and technologies 'live'.

The discussion summarized with the idea that upgrading a hospital has become a necessity now a days. Every now and then, a new technology or a new device hits the market, and hospitals are compelled to throw out their old utilities. However, not all hospitals have the budget to fully replace, say a hospital bed, every few years. The panel discussed how a basic innovation, like innovating 'attachments' that can be fixed to the existing beds, to upgrade the beds, could change the game and save a hospital huge money and ultimately reduce the cost paid by the patient.

Session Quote

When mainstreaming is concerned, it is not just about the metros, it's significant to even check how these innovations can reach tier 2 & 3 locations and be affordable. So that the service providers here do not lose business to the metros. They need to have a value proposition for people to stay and avail services in tier 2 & 3 locations.

Innovation has to be viewed as a collective experimentation. The healthcare delivery system is going to see a disruptive change, to adopt this change, the industry has to integrate their systems and align its system with the new way of service delivery. To facilitate this, there is no other choice for the industry, but to function as a full-time partner in this heterogeneous innovation system or the network.

Key Takeaways

- Players are required to go leaner in their business models; thus, innovation is not just about the product anymore
- Innovation is probably the only way that the industry can look at newer models, at newer profit centers
- In mainstreaming, not just the metros but it's significant to check how innovations can also reach tier 2 & 3 locations and be affordable
- Not all stakeholders can be innovators, but can be enablers; and hospitals can provide a testing ground for innovators

Panelists

Mr. Vipin Pathak
Co-Founder and CEO, Care24

Mr. Pavan Chaudhary
CEO and MD, Vygon India Pvt. Ltd

Mr. Prashant Sharma
MD, Charnock Hospital

Mr. Manish Sardana
President, Poly Medicure Ltd.

Ms. Ruma Banerjee
Vice-President, Neotia Healthcare Initiative

Ms. Meenakshi Nevatia
MD, Stryker India Pvt. Ltd.

Mr. Vikram Thaploo
CEO, Telehealth & Government Businesses at Apollo Hospitals

Moderator

Mr. Ravinder Pal Singh Dang
VP, Commercial Excellence, Asia Pacific & General Manager, India at Baxter

The story of Start-ups and the funding ecosystem with global insights

Mr. Ashwin Raguraman, Mr. Rishabh Gupta, Ms. Wendy Singer, Mr. Asaad Joubran, Dr. Shirshendu Mukherjee & Mr. Mohit Khullar

The forum started with the thought that for disruptions and innovations, adoption of technology is imperative.

As things tend to move a little slower in large enterprises, the systems should ideally be complimented with the start-up world, where there is a lot of nimbleness and the ability to innovate quicker. Interventions will better work this way. The panel also mentioned that the availability of capital needs to be extremely high for an innovation to succeed. Entrepreneurs need capital not just to experiment, but to fail, to get up, and to experiment again.

Also, healthcare is a fairly complex system, making it difficult for start-ups and innovators with limited resources to be able to navigate. And therefore, it is extremely important that each of the pieces of the ecosystem work together.

An instance was shared of Israel, where eligible high school graduates (both men and women) are enrolled in the military for 2-3 years. Where they get exposed to using hi-end technology, including digital health, which gives them a deep technical strength. Additionally, the Israeli medical system has been accumulating EMR for 25 years. So, it means that 98% of their medical records are digitized and therefore an Israeli HMO is actually number two in the world in storage of big data.

Not only this, the Israeli government also launched a 300-million-dollar fund about a year ago and this was in recognition of digital health being seen as the next engine of economic growth. A part of this fund is used to connect Israeli digital health start-ups with foreign healthcare systems. As per latest figures, over 600 million dollars have already been invested in digital health start-ups through this. India can learn from such global systems.

It was shared that there is huge interest in India of global investors, especially on the tertiary care sector. Although, investors are still on the learning curve on medical products, as it's not one sector, there's a bunch

of 20 sectors under it, and one needs to understand their nuances. Single specialty has also garnered interest among global investors, as the return on capital is faster and higher.

Also, capital availability has grown in healthcare, but it's the capital allocation, which is a challenge. Despite all, the global investors' interest in Indian market is much higher than perhaps 5 years back. A relevant step in funding is also to look at the innovation in entirety; and not just fund the solution but also enable to take it to the market. Young innovators also need training on writing a good grant application, making attractive business plans, planning a good exit strategy, and more.

The panel spoke on how Start-Up Nation Central has created a network of around 40 incubators in India. They also have a London base of incubators, where the innovators visit, and gain the requisite mentorship; London, in fact, also provides the infrastructure set-up for innovators, along with the grant. In addition, they have a concept called First Hub, which is conducted every first Friday of the month from 2:30 to 6 o'clock. Where the entire team is supposed to be present, and not have any other meetings. They then have the Open Darbar, wherein any innovator can walk into their offices, people can also join by Skype or telephones and a regulator from CBS Corp also sits with the team. The ICMR team and the Ministry of Health also joins them. All of these combined together try to solve challenges of innovators. The idea behind is to make the bottom of the innovator pyramid wider, as out of 100, only 5-6 inventions become successful.

One major drawback, in providing start-ups with a valid 'live' location at hospitals is that hospitals are in the work of saving lives. Hence, as compared to any other industry, hospitals find it riskier to work with start-ups. A solution here is to ensure that some kind of a gold standard is followed by start-ups, which can give confidence to hospitals and they can open doors for the start-ups.

One issue global investors face while putting in money for Indian innovators, is that of scale. While investors may believe in a certain innovation, they are usually concerned about how will the innovation be accessed by the market. India surely is a huge market, however, if the access of the innovation is not till the right/end point, it may fail to make a difference and also reap financial results. This makes investing a cautious game.

The discussion ended on a positive note that the future will see higher number of large corporate hospital groups forming incubation platforms or being open to the idea of giving access to their data, on an anonymous basis, to the start-ups. They may even give access to the premium products of these start-ups in the patient portfolio. Couple of hospital groups are already doing this. The future it seems is bright here.

Session Quote

One issue global investors face while putting in money for Indian innovators, was that of scale. While investors may believe in a certain innovation, they are usually concerned about how will the innovation be accessed by the market. India surely is a huge market, however, if the access of the innovation is not till the right point, how will it make a difference and also reap financial results? This makes investing a cautious game.

The future it seems, higher number of large corporate hospital groups forming incubation platforms or being open to the idea of giving access to their data, on an anonymous basis, to the start-ups or giving access to the premium products of these start-ups in the patient portfolio. Couple of hospital groups are already doing this.

Key Takeaways

- Slower large enterprises should ideally be complimented with the start-up systems, where there is more nimbleness and the ability to innovate quicker
- Healthcare is a complex system, making it difficult for start-ups and innovators with limited resources to navigate
- One issue global investors face while putting in money for Indian innovators, is that of scale
- If the access of the innovation is not till the right/end point, it may fail to make a difference and also reap financial results

Panelists

Ms. Wendy Singer
Executive Director, Start-up Nation Central

Mr. Mohit Khullar
Director, O3 Capital

Mr. Rishabh Gupta
Co-Founder, Redwing Labs

Mr. Asaad Joubran
Business Development, Zipilne International

Dr. Shirshendu Mukherjee
Mission Director, Programme Management Unit (DBT-BIRAC-BMGF-Wellcome Trust)

Moderator

Mr. Ashwin Raguraman
Founding Partner, Bharat Innovation Fund

The final word – Patient-Doctor interaction

Dr. Chandy Abraham, Mr. Amit Mookim & Dr. Shakti Kumar Gupta among others

The panel was joined by two patients from Sikkim and one from Delhi. The discussion revolved around the patient's perspective on Ayushman Bharat and how they think it's benefitting and the challenges they are facing.

It was shared that AIIMS receives about 16,000 patients a day in the OPD & more than 60% come from outside Delhi, and spend out-of-pocket. In one day, each doctor at AIIMS sees about 50-100 patients. In a study, the institute found that a doctor is able to spend only 2.04 minutes with a patient, on an average. In such a scenario, patient satisfaction cannot be achieved.

The panel discussed that the challenge for the industry is developing the lost confidence of the patients on the healthcare providers. Yet another point of concern is the involvement of patient in the decision-making process. Especially, as now a days, patients have expectations. Gone are the days when the patients used to accept a doctors' views as the gospel truth. Thus, patient information of the wrong kind, floating on the internet, is also a cause of major worry. The patient visits the hospital with half or fully inaccurate information. This raises patient expectations unreasonably. Here, the panel suggested, proper listening, realistic expectations setting and empathizing, should be done by the doctor and the hospital.

In fact, doctors can follow ALERT – acknowledgment, listen, enquire, review and trust. However, it requires time to follow such a system, which is woefully in inadequate quantity with Indian doctors now a days. Faith building cannot won't happen in an instant. Hence, doctors should make sure to spend more time with patients.

From the innovation point of view as well, the innovation and innovator should be at the hospital, with the end customer, only then the real output will be seen and proper feedback can be received. One cannot expect a product to work, if it's made and tested sitting outside of a hospital set-up.

Another chief area to focus is of the communication gap. The panelists further clarified this by saying that the communication does not mean just between the patient and healthcare providers, but also between doctors and the other staff, between nurses and the patient, or with other paramedics.

The panel suggested that hospitals can appoint patient co-ordinators and patient care managers, who can fill the gap, and are already actively doing so in many hospitals currently. Plus, priority counters for senior citizens should be allocated, and feedback from patients should really be understood and thought about. All this will improve service delivery and increase patient satisfaction levels. Along with adopting all of the above, a hospital should also improve its performance levels, like reducing waiting and billing times.

The voice of the patient is an important aspect and hospitals should provide high focus on it.

Session Quote

Nowadays, patients have expectations. Gone are the days when the patients used to accept a doctors' views as a gospel truth. Patient information of the wrong kind, floating on the internet, is also a cause of major worry. The patient then comes to the hospital with information that may be half or fully inaccurate.

This raises patient expectations unreasonably. Here, proper listening, realistic expectations setting and empathizing, are the jobs of the doctor and the hospital.

Doctors can follow ALERT – acknowledgment, listen, enquire, review and trust. All of this takes time, which is woefully in inadequate quantity with our doctors now a days.

Faith building works in a big way, but it won't happen in an instant. Hence, doctors should make sure to spend more time with patients.

Key Takeaways

- A challenge for the industry is developing the lost confidence of the patients on the healthcare providers
- Patient information of the wrong kind, floating on the internet, is a cause of major worry
- Proper listening, realistic expectations setting and empathizing, should be done by the doctor and the hospital
- Hospitals can appoint patient co-ordinators and patient care managers, who can fill the communication gap

Panelists

Dr. Shakti Kumar Gupta
Professor and Medical Superintendent, AIIMS

Dr. Chandy Abraham
CEO, ITC's Healthcare Project in India

Moderator

Mr. Amit Mookim
MD, IQVIA South Asia

Scan to Access
Event Presentations

Concluding Remarks

Mr. Varun Jhaveri, Dr. Sudarshan Ballal & Mr. Siddhartha Bhattacharya

The event ended with an encouraging message that was echoed by everyone involved. It was – NATHEALTH was able to bring all vital stakeholders on a single platform!

The summit was able to reinforce the belief that the government and the private sector can work together; and the young and the old can work together. Inhibitions on both sides are reducing. There is now a disposition where the private sector is very keen to work with the government and the government has also opened its doors. NATHEALTH had come forward to work together and liaise with the government and other bodies & taken the common cause of 'health for all' forward. Another take home message was the fact that all stakeholders are keen on the practice of ethical medicine and NATHEALTH, along with its partners, would certainly work in making this possible in the near future.

A massive highlight of the summit was the Start-up Carnival. It saw a large number of innovators with brilliant ideas that have the capability to take healthcare delivery levels ahead, with apt utilization of technology and innovation. This is perhaps also the best way to take healthcare to the masses.

Another positive outcome was that the industry expressed its willingness to work with the NHA and make sure that an increasing number of new innovations see the light of the day.

Three key fundamental things should be taken care of on priority. One is bridging the trust deficit between public and private sector. The second important area is to have an established leadership. While the industry is fragmented, there are a lot of good ideas, good people with great experiences, expertise, and a creative vision that can align and bring the thought leadership onto one platform. And the third area is the need to create a composite set of capabilities from the industry that can help propel the sector towards a shared vision with the government on the road ahead.

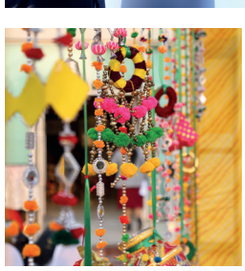
The event focused on creating an environment of openness and collaboration. It was about imagination, integration and collaboration. The summit hope to reach a point where the industry and the government

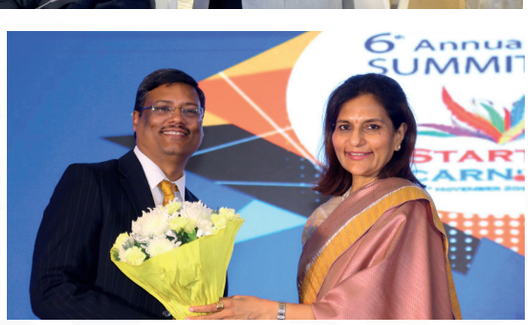
can ideate and create a common work space. A space where challenges can be discussed and tackled by bringing in the strengths and expertise and the right set of people to deliver it.

And as the stakeholders come up and test those ideas, there will be ownership and it will accelerate India towards universal health coverage. The event participants agreed that the same spirit should be maintained in the journey ahead.

The event ended on a green note, when NATHEALTH announced that it has planted five trees in each of their dignitaries' names; a total of 500 trees, as part of its Green Initiative!

Key Highlights from the Event





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About NHA

NHA is constituted with an objective of providing overall vision and stewardship for design, roll-out, implementation and management of Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY) in alliance with state governments. Inter-alia, this includes, formulation of PM-JAY policies, development of operational guidelines, implementation mechanisms, co-ordination with state governments, monitoring and oversight amongst others. ABPM-JAY is targeting over 10 crore poor and vulnerable beneficiary families. Thus NHA is playing a critical role in fostering linkages as well as convergence of AB PM-JAY with health and related programs of the Central and State Governments. Visit https://pmjay.gov.in/about-nha to know more.

About NATHEALTH

NATHEALTH is a leading Federation of healthcare organisations in India. NATHEALTH has been created with the Vision to "Be the credible and unified voice in improving access and quality of healthcare". Leading Healthcare Service Providers, Medical Technology Providers (Devices, Equipment & IT), Diagnostic Service Providers, Health Insurance companies, Health Education Institutions, Medical Journalism companies, Biotech/ Lifesciences related companies, Healthcare Publishers, Healthcare Consultants, Home Healthcare companies, PE & VC companies and other stakeholders have come together to build NATHEALTH as a common platform to create the next level of momentum in Indian Healthcare. Visit https://www.nathealthindia.org/ to know more.

NATHEALTH Initiative Areas - Issues Identified

Ayushman Bharat-PMJAY	Comprehensive Healthcare Models	Quality & Skill Development	Digital Health	Funding & Financial Drivers
Scale-up private healthcare infrastructure in Tier 2/3 cities.	Create a comprehensive medical value travel program: Heal in India	Increase capacity to address the shortage of healthcare professionals by Government investments & subsidies	Drive uniform adoption of Digital Health Blueprint (NHDB) Leverage technology to improve health access, fast track creation of NDHM and co-opt industry at an early stage	Enable easy access to capital at lower rates. Declare National priority status to Healthcare & accord infrastructure status
Establish clear and viable delivery models based on rational package pricing taking into consideration the private sector input costs with quality service delivery.	Inclusion of home healthcare in Healthcare services. Create a special working group on Elder Care including Government & Industry to come up with a joint vision	Enhance role of private sector in skilling across doctors, nurses and allied health sector workers	Mainstream Tech enabled innovation by creating a ready testing and validation infrastructure across country where start-ups can validate/certify concepts	Review tax structures & incentives to build new infrastructure & Ignite Make in India for Healthcare Value Chain
Introduce value-based care and rationalized pricing that incentivizes quality	PPP on Preventive Health and Population level NCD Screening.	Increase capacity of DNB program	Test new delivery models like Telemedicine and remote diagnostics/ Data Analysis to be scaled by purchaser arrangements based on PPP contracts	Reversal of custom duty hikes on Medical Diagnostics and consumables. Establish a clear roadmap around pricing stability and intended regulatory interventions

Ayushman Bharat

1. Scale-up private healthcare infrastructure in Tier 1/2/3 cities & Metros

Background: The Ayushman Bharat-PMJAY scheme is expected to increase demand in tier 2 and 3 markets where there is a definite opportunity to increase the quality of healthcare services. However, the pricing of healthcare service is significantly lower than the real costs incurred by the providers to deliver the services after accounting the fixed and variable costs. In an environment as such, it is imperative to focus on scaling-up the infrastructure and incentivize private healthcare to drive desired performances sustainably.

Recommendations:

a. **Establish a rational, predictable package pricing** which is arrived at based on input pricing linked to cost indices that can be indexed to medical inflation.

b. **Provide relief on cost of real estate**: Consider subsidizing the cost of real estate and infrastructure as recommended in the NATHEALTH AHPI study

c. **Provide power and utilities at subsidized rates:** Government hospitals are allowed the benefit of subsidized rates of power. Whereas, private hospitals pay full commercial rates, which are very high. The government may provide similar relief to private hospitals

2. Introduce value-based pricing slabs

Background: The overall design of Ayushman Bharat may not be sufficiently robust for establishing or assessing (package) rates for services provided in private hospitals. The dynamics of public and private sector are very different in terms of capital allocation and cost structure, as well as service levels. A like to like comparison without considering service levels may not be a fair assessment and could limit scale-up

Recommendations:

a. Move away from across the board price capping and adopt a **scientific costing and market based far and transparent pricing** would be a crucial step in getting the private sector to work with the government on Ayushman Bharat and needs to be done with neutral experts both within and outside of the country

b. **Revisit CGHS package rates:** Creamy layer Government employees being covered under CGHS, institutional consumers, such as large PSUs, and insurance companies / GIPSA should be advised to pay prices, which will fully cover the cost of care, along with a return on net invested capital for the provider.

3. Enhance focus on comprehensive screening and diagnostics programs

Background: India is at a great risk of NCDs. It is estimated that by 2030, the cost of NCDs for India's economy will be close to 6 trillion USD, a burden that the country cannot bear. It is important that definitive steps are taken now to fight NCDs in our country.

Recommendations: Launch comprehensive screening programmes, target specific disease profiles, which are relevant for the indigenous population, and specific communities. For e.g. Prostate Cancer, Breast Cancer, Cervical Cancer, which are common in India, can all be detected early, giving the patients an opportunity to be completely cured. In addition, include cardiac risk profiling and management which can reverse and significantly improve heart disease management.

a. Consider subsidizing the cost of screening, and partner with the private sector in implementing **nationwide screening programmes**

b. Increase **tax exemption for preventive healthcare checkup** from current INR 5000 to INR 10000, and extended to multiple family members and dependents

c. Consider **reimbursements of diagnostics services** in outpatient setting as part of insurance package and incentivize preventive checkups by linking compliance to curative premium rates.

Comprehensive Healthcare Models

1. Create a comprehensive medical value travel program: Heal in India

Background: India is among the most preferred destinations globally for medical tourism. It accounted for 5.5% of the global revenue and 3.8% of total number of medical tourists worldwide, in 2014. Medical Value Travel (MVT) presents itself as an immense opportunity. We can position India as the global healthcare destination of choice, and strongly cement a leadership position for several decades to come

Recommendations:

a. The synergies offered by Integrated healing - Ayurveda, Yoga and Rejuvenation (AYUSH medicines) - India offers a unique value proposition to the world. We can deliver an outstanding experience, and truly invite the world to **"Heal in India"**

b. **Creation of Healthcare Zones:** Consider creating specified healthcare zones, complete with hospitals, hotels, leisure and fitness activities

c. **Exemption from Income Tax:** Income tax exemption for earnings from Medical Value Travel

d. **Medical Visa Reforms:** Visa on Arrival to be introduced for high-priority countries. Rationalization of fees for Medical visas (to be on par with tourist visa)

2. Inclusion of home healthcare in Healthcare services

Background: Service tax department has taken a view that Home healthcare services (Physiotherapy, Nursing, Nursing Attendant/Home Health Aide, Doctor Visit, Lab Tests, Newborn Baby & Mother Care and Elder Care) do not fall under definition of "Healthcare Services" and hence are not exempted from service tax

Recommendations:

a. Home healthcare service providers should be **categorized under "healthcare services"** and should be exempted from the levy of service tax as per the

b. Mega Exemption Notification

Quality & Skill development

1. Increase capacity to address the shortage of healthcare professionals

Background: With a mere 0.6 doctors and 0.9 hospital beds per 1,000 people, as compared to the US, which stands at 2.7 doctors and 3.1 hospital beds respectively, availing quality and affordable medical care remains a key challenge. The Government and the private sector together can make a significant impact in improving quality of skilled healthcare professionals in our country.

Recommendations:

a. Address shortage of professionals – identify doctors, nurses, paramedics, and technicians, who are willing to work on a sustained basis in Tier 2/3 cities.

b. Urgent need is to double the number of doctors. **Follow the fall/summer pattern** adopted in foreign universities. With this, the number of seats in existing medical colleges can be doubled (incremental 200,000 seats), by introducing a new batch for the academic year FY19-20, which can start in November/ December 2019.

2. Enhance role of private sector in skilling

Background: Every bed, whether in public sector or in private sector, should not only be used for care, but also to train our health specialists. There is a need to promote government and private partnerships in medical education. Only three examples of partnerships exist, where a private entity is working with a district hospital and also serving as a medical college - Chittoor, Bhuj and Sikkim.

Recommendations:

a. Credible and established healthcare skilling institutions, which have a good record of accomplishment (e.g. MedSkills) may be permitted to **introduce two-year detailed Diploma programs in various healthcare skills,** especially medical technologists, which are then accorded equal recognition to a Degree programme, and certified for recruitment into healthcare facilities

3. Increase capacity of DNB programme

Background: The gap in the availability of doctors in all government hospitals is significant, especially in districts. In the light of the urgent need for specialist doctors, conscious amendments to the DNB programme would go a long way in allowing private hospitals to offer DNB seats to their true potential

Recommendations:

a. Enable eligibility for **accreditation at group level,** instead of individual hospital unit level: This limits the number of eligible units and subsequently the total number of DNB seats in a hospital chain. If they can rotate their DNB students in different units of the same hospital group, it will result in increase in capacity

b. **Increase fee structure of DNB programme** to make it viable for hospitals: Government could provide interest free or concessional student loans for those who need to avail these loans to meet the course fee.

c. **Reduce stipend cost for resident doctors:** Bring uniformity in states and board norms. Allow Hospitals to use CSR funds to financially support the students.

d. **Teaching Faculties Deficiencies:** Increase Doctors to students' ratios to 1:5 in medicine and 1:3 in surgery.

Digital Health

1. Drive uniform adoption of Digital Health Blueprint (NHDB)

Background: Adoption of digital services in healthcare in India has been extremely slow, the advent of newer technology and increasing significance of healthcare data be it processes or integration with diagnostic decision making (personalized medicine) has made digital health impossible to ignore.

Recommendations:

a. **Harmonize regulatory framework** for adoption of digital health solutions

b. Need legislation to **enforce adoption NHDB:** Offer incentives for EHR adoption and penalties for non-adoption, supported by legislation

c. Need to bring strict legislation to ensure the Doctors are compelled to make use of the results from the diagnostics the patient undergoes and there is no need for insisting for fresh diagnostics.

d. Need to **define execution timelines for NHDB:** Digital Adoption initiatives, same or similar to the scale of NHDB, took nearly 10-15 years before adoption in advanced countries

e. Imperative to have **clarity on pricing models** for modules developed by private players (and/or handed over to NDHM)

2. Leverage technology to improve health access

Background: Leveraging digital technologies to implement innovative business models will have a major impact on healthcare in the near future. There is an opportunity to look at such models with a strategic intent and integrate them with traditional healthcare delivery services

Recommendations:

a. **Telemedicine:** All district hospitals should connect with advanced tertiary and quaternary care centers through Telemedicine. Tele-ophthalmology and Tele-radiology are well proven models, which can be scaled rapidly to cover large sections of our population.

b. **Pilot and scale-up E-UPHCs program:** For example, a leading NATHEALTH provider engaged with a state Government in a PPP project, covering 182 Electronic Urban Primary Healthcare Centres (E-UPHCs). With a footfall of 12,000 on a daily basis, the program has touched 5.2 million lives over two years and has brought quality healthcare within the reach of all citizens, by significantly leveraging technology. This can be replicated to other rural areas with various private players

c. **E-ICUs** can be set up in semi-urban and rural areas, and connected to a central monitoring hub

d. Ensure **nationwide admissibility of Facsimile Signature** on diagnostic investigation report

Funding & financial drivers

1. Enable easy access to capital at lower rates (Priority Sector & Infrastructure lending Support for Healthcare)

Background: The first major issue around setting up of healthcare is the cost of real estate. The prices have almost caught up with prices in Tier 1 cities as we go into secondary cities. As an offshoot, cost of living in these cities has also increased, and this has resulted in increased costs of running business – including salaries, outsourced services, transport etc.

Recommendations:

a. **Provide lower cost financing:** Declaring healthcare as a National Priority sectors, and classifying it on the same lines as Agriculture (priority-sector lending), will give the banks flexibility to lend to private healthcare institutions on longer tenures, and lower rates

b. **Promote foreign direct investment (FDI)**: Government should consider a package of incentives to encourage FDI inflows to the sector, and through regular interactions, reassure the investor community that it welcomes investment, and will not seek to over-regulate and cripple the industry

2. Reversal of custom duty hikes on diagnostics

Background: India imports 60% of its diagnostics to serve the public and private health systems. Most of India's imports from US include hi-end complex testing methodologies like molecular & immunology testing, which caters to life threatening diseases like Cancers and infectious diseases. Government India's schemes like PMJAY and NHM strive to increase access to diagnostics to common man but unprecedented steep tariff hikes on diagnostics reagents is likely to have a negative impact on our endeavor of increased access

Recommendations:

a. Government to rationalize import tariffs for healthcare products while keeping patient service as top priority
b. Create long term policy & regulatory roadmap that allows both domestic and importers to plan their business for contingencies and transitions

3. Review tax structures & incentives

Background: Tax incentives are required to give an impetus to private sector investments which will lead to an active participation from the sector and thereby help get access to best-in class healthcare and trainer manpower across India.

Recommendations:

a. **Zero-rating GST for healthcare services,** (or) Introducing a 5% GST slab rate on healthcare services delivery (or) rationalization of GST for healthcare input services at 5% would lead to unlocking of the differential input credit and will ease costs for all healthcare providers including nursing homes, clinics and hospitals. This saving will be passed on to the end consumers and will lower the cost of care.

b. **Reinstatement of 150% deduction u/s 35AD:** Earlier available to new healthcare projects, but withdrawn, should be reinstated quickly. Alternatively, Provide tax incentives for both existing and new healthcare projects. For new projects, provide tax holiday period of 15 years. For existing projects, provide tax relief for 10 years as re-investment support

c. **Increase in number of skilled healthcare professionals** – Two batches every year in medical school, use of e-learning rooms and simulators to overcome shortage of teachers. Number of nurses in each batch should be equivalent to number of doctors (i.e. ~ 250 per batch).

4. Mandatory Insurance towards Universal Health Coverage

Employees in the organized sector should be mandated to be covered by the employer (with the premium being recovered from salary, partly or fully) under an attractive group insurance scheme which can be a part of the employee benefits provided by the employer. This mandate should include cover for employees, who are currently covered under ESI.

a. As ESI employees will be covered by insurance, the Government may consider subsuming the ESI hospitals across the country for deployment on the Ayushman Bharat scheme, which will substantially increase the infrastructure and beds available under the Scheme

b. Mandatory Health Insurance for self-employed professionals – Professionals such as Lawyers, Doctors, Chartered Accountants, Architects etc., should be mandated to obtain health insurance cover for themselves and their dependents, and disclose the same in their Income Tax Returns.

c. Affordable Insurance Policy for Elders (aged 55 and above) to cover specific health risks arising from vulnerabilities of old age such as Parkinson's, Falls, Alzheimer's, Incontinence, Vertigo, Osteoporosis (among women) etc.

d. Increase in quantum of deduction towards payment of medical insurance premium u/s 80D: In order to provide an incentive for health insurance, and encourage voluntary purchase, the present annual deduction limit of Rs. 25,000/ u/s 80D should be enhanced to Rs. 50,000/ for self and family, and the current annual limit of Rs. 30,000/ in respect of dependent parents enhanced to Rs. 50,000/. The Government may also consider expanding the ambit of dependents eligible for this deduction.

These steps will create the change in behavior among healthcare consumers and will create sufficient risk pooling for insurers which can help in eventually making Mandatory Health Insurance a reality.

5. Create Enabling and a Fair and Transparent playing field for Medical technology Products under "Make in India"

a. With 80-85% import dependence on medical devices, recommend a step wise approach to PPO 2017, in terms of USFDA/ CE products, to ensure quality products and good patient outcomes and establish a level playing field to ensure quality and safe while encouraging local manufacturing

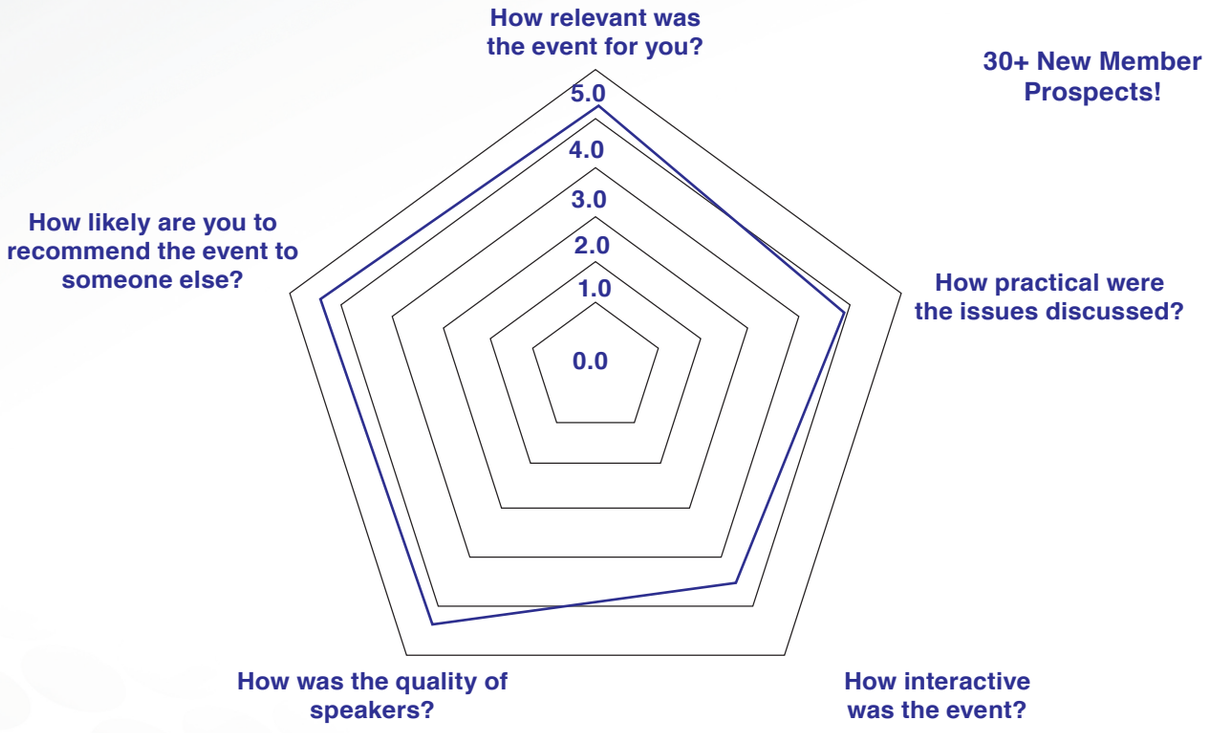
b. Harmonized approach to medical device regulations and segmenting the market based on bottoms up market realty and global best practices

c. Ease of doing business - one window for investors in "Make in India", Intergovernmental departments may coordinate and ensure industry gets an aligned shared vision and is able to operate in a predictable policy and regulatory environment.

d. Implementation of pant report on TMR for all med devices starting with price to stockist as first point of TMR application

Attendees' Feedaback

- Keep it up!
- Very well conceptualised and executed
- Better networking opportunities
- Quality vs quantity
- Value based and best industry platform



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