Disruptive Innovations in Secondary and Tertiary Healthcare in India to improve health outcomes and patient experience

Healthcare in India is evolving rapidly to meet diverse needs of its populations. Innovative approaches are needed for India to achieve the Sustainable Development Goal (SDG 3) of Universal Health Coverage (UHC) with financial risk protection and universal access to health services by 2030.

Nearly 60% of secondary and tertiary health facilities are concentrated in a handful of large cities across the country. Workforce shortages and limited rural infrastructure hinder equitable access to health services. Emerging technologies can assist delivery of more efficient and affordable patient care, but to truly reach all of India’s population requires more than telehealth or digital healthcare apps. Innovation is needed to overcome historic financial, geographic and social barriers to healthcare access; and to build capacity despite workforce shortages and limited rural infrastructure.

Participants

Dr. Giridhar Gyani
Director General
Association of Healthcare Providers (India)

Dr. Shubnum Singh
Advisor, Health – Confederation of Indian Industry (CII)
Consultant Emeritus - Max Healthcare, Government Board Member - Health Sector Skills Council

Dr. Atul Mohan Kochhar
Chief Executive Officer
National Accreditation Board for Hospitals & Healthcare Providers (NABH)

Dr. Ashok Grover
Chairman,
Vision Eye Center, and Department of Ophthalmology,
Sir Ganga Ram Hospital

Dr. MC Mishra
Former Director, AIIMS and Head of Department of General Surgery
Laparoscopic surgeon, Sitaram Bhartia, Hospital

Dr. K Madan Gopal
Senior Advisor, Health, Niti Aayog

Dr. Vijay Agrawal
President, Consortium of Accredited Healthcare Organisations (CAHO)
Advisor to Max Healthcare

Co-Chairs

Dr Indu Bhushan
Ex CEO Ayushman Bharat
Ex-Director General, Asian Development Bank

Dr. Ashley McKimm
Director of Innovation and Improvement, BMJ
Editor-in-Chief, BMJ Innovations
On 24th August 2022, a roundtable discussion, sponsored by Pristyn Care, was organized by BMJ India in New Delhi. The meeting brought together subject experts from government, insurers, hospitals, professional associations, patient organisations and technology start-ups, to discuss how disruptive innovations can improve health outcomes and patient experience in secondary and tertiary care in India. Dr Indu Bhushan, Ex CEO Ayushman Bharat, and Dr. Ashley McKimm, Editor-in-Chief, BMJ Innovations, chaired the meeting. They began by asking participants to share their vision for healthcare in India in 2030, challenges to achieve this vision, and knowledge of innovations that have already helped to address some of the barriers to better patient care.

Dr Shubnum Singh said that there are fundamental flaws in the design of the healthcare system in India to be able to address evolving demands. It was time to reach out to other stakeholders, moving beyond doctors and hospital administrators, to achieve the vision for public health. People participation and understanding what they want is critical. Healthcare professionals must be open to failure and mistakes to innovate and redesign the system.

Drawing on his experience in quality and accreditation with the NABH, Dr. Atul Kocchar, identified healthcare infrastructure, workforce shortages, and affordability as key challenges. India has centres of excellence in several specialities providing world-class care, but these services are not uniformly accessible. Training professionals in remote areas, enhancing skills of paramedical professionals through hands-on training in procedures, and hub and spoke models of care delivery, can bridge this gap. There is also a need to explore approaches like a single window for booking a hospital bed online, and home-based care.

Dr. Giridhar Gyani, representing the Association of Healthcare Providers in India, agreed that the private sector is accessible and affordable only to a few. A shortage of medical seats results in a dearth of doctors to serve at community health centres in remote areas. He emphasized that health needs to become an election agenda so that healthcare needs of the majority in the country are addressed.

Dr. K Madan Gopal shared that the ASHA program in India has been a major disruptive innovation in maternal and child health. It sets an example for a successful partnership between government and NGOs in improving accessibility, community participation, and health outcomes. The healthcare scenario in India is evolving and has moved from a disease-focus to health for all. Interventions have attempted to address this need through health coverage schemes for financial risk protection, and comprehensive primary health care and more recently, transforming primary health centres into health and wellness centres. More focus is now required in secondary and tertiary care. The main challenges here are regulation of the private sector and infusing trust between the government, private sector, and patients. Teleconsultation, which was not legal earlier, has been approved by the Medical Council of India during the covid-19 pandemic. This is an example of a disruptive innovation in healthcare service delivery.

Redesigning undergraduate and postgraduate medical education was recognized as a priority by the group. Dr. Ashok Grover shared his insights on this from ophthalmology. Some centres are exceptional training institutes for postgraduate residents, while others have almost no hands-on training. Sub-specialities must be encouraged to enable investments and advanced in high-quality care. Concurrently, he stressed the importance of strengthening training of paramedical professionals. Others in the group commented on the dearth of doctors and nurses in the country, and a skewed distribution. There is a lack of data on medical professionals by specialty and geography.
“By 2030, we need to have a wide variety of quality healthcare in India which is reliable and affordable,” said Dr. Indu Bhushan summarizing the discussion. Reliability is an important issue with the rise in unnecessary tests and treatments, particularly in the private sector.”

The co-chairs then asked participants to reflect on areas of biggest potential where disruptive innovation can help India deliver world-class affordable care for all more rapidly and share recommendation on practical steps that key stakeholders can take. The main recommendations are summarized below.

AFFORDABILITY

“The Ayushman Bharat scheme is one step in addressing affordability, but we need ways to make it more effective,” said Dr. Indu Bhushan. It is not clear what proportion of the population who would benefit from the scheme are enrolled in it. Further there are several government schemes (CGHS, ECHS, Railways, ESI, PSUs etc.) with different empanelment criteria, rates, contracting, and inspections. These are neither efficient nor equitable. These could be merged to give the government better bargaining power with providers.

The group recognized that healthcare is not sustainable with present financing and a lack of government investment. Corporatisation of healthcare has made advanced surgeries, earlier limited to high-income countries, being performed routinely in India. Yet private hospitals are mostly not financially viable, and are often taken over by larger foreign investors.

Dr. Singh added that, “Money allocated in health budget not utilised to address availability and affordability. It is not possible to have financial sustainability till the entire value chain is fixed.” There was consensus that health must on the political agenda with increase in healthcare expenditure as percentage of India’s GDP.

There was a suggestion that healthcare in public hospitals need not be free. A tiered system can be created where those below the poverty line can be provided healthcare at no charge. Others can be charged a co-payment based on their income.

There was a recommendation to make explicit that healthcare in government facilities is subsidized and not free. The government can do a costing of procedures or admission and issue a bill, stating this has been fully or partially subsidized by the government. This would help people know the cost of healthcare, and remove negative perception and distrust of private hospital because of charges.

It was recognised that investing in preventive healthcare along with health education of communities will save more money from curative healthcare services. Insurance companies need to incentivise preventive check-ups and modify premium according to disease parameters for lifestyle diseases. This is happening to a small extent. Further, there can be schemes to incentivise healthy behaviours.

REDESIGN SYSTEM

There is a large variation in quality and availability of specialist services in rural and semi-urban areas. A skewed distribution of healthcare workforce and infrastructure exists, with concentration in cities. Many patients in these parts have to travel all the way to cities for specialised care, which overburdens the secondary and tertiary hospitals.

Dr. Singh suggested establishing a system of urgent care in rural areas with repackaging district or community health centres into urgent care centres, with appropriate investments and technology. to see This would help more people in rural areas receive care close to their residence, and reduce their dependence on city hospitals. A good referral mechanism must be established between public and private hospitals. Private hospitals can focus on highly specialised complex surgeries which would provide them revenue. It is important to bring the system to the patient, so they understand where to go for what services or care, she added.

To address the skewed distribution of secondary and tertiary hospitals, Dr. Singh recommended having criteria for establishing future services based on unmet need in that area. Dr. Mishra added that innovative models can be scaled up to improve access to specialised services. He shared an example from Tier 2 and Tier 3 cities and towns (semi rural) where standalone clinics are provided telemedicine equipment to link with diagnostic centres and super-specialists and enable specialised consultations in remote areas.
PATIENT PARTICIPATION

Dr. Ashley McKimm expressed how patients are at the centre of what BMJ group does, and it will be important to think from their perspective to improve patient experience of the healthcare system.

A participant shared that India has patients across a range of economic strata, literacy levels, regions, and access. It is unlikely to have a common expectation from health systems and likewise, solutions need to be tailored to the community that the hospital serves. It will be important to look at the bottom of the pyramid, and address first the concerns and expectations of those most vulnerable or deprived. For the poor, affordability and access are important concerns, while quality of care and empowerment in terms of accountability is an expectation from those who can afford or easily access services.

Patient reported outcome and experience measures must be given due importance in hospitals, and are expected to be measured by accreditation agencies. India has several traditional systems of medicine under AYUSH. Patients often rely on these for care. There is a need to sensitise practitioners of modern medicine about these systems, and to ensure their reliability and integration.

QUALITY OF CARE

Increasing volume of surgeries at lower rates impairs quality. There must be greater reimbursements for better quality care so excellence is promoted, and states and hospitals can invest in better manpower, infrastructure, equipment.

Dr. Singh said, “Healthcare is extremely personal, and highly contextualised in India. Health habits of people from any geography vary. Active engagement with the community is vital to understand and support their health needs. Healthcare was earlier episodic. Today it is ongoing and incorporates a holistic perspective. There is a demand to be healthy and active. The healthcare system has to respond to this.”

In addition to affordability and access, lack of knowledge about patient rights and where to go for care, are barriers to appropriate care. There have been initiatives to improve health literacy and knowledge dissemination. Further innovation must enable one-stop resource or guide for patients. Involving pharmacies and chemists in dissemination of accurate and reliable information, insurance and referrals can help bridge the gap to reach the last mile as they are often the first stop for patients in urban and rural areas.

Technology adoption is likely to be a game-changer. It will be important to make the community and providers ready. Ayushman Bharat Digital Mission has huge potential in providing accurate information, portability of cases, and quality data. Its adoption by medical services must be accelerated. There is huge potential in using big data to support clinical diagnosis and decision-making. Further, it can also help curb unethical practices such as overdiagnosis and overtreatment. For example, irrational use of antibiotics has resulted in a huge burden of antimicrobial resistance. This can be addressed using data from e-pharmacies to ensure more accountability in prescribing and dispensing of drugs.

Accreditation agencies must promote good practices, even in hospitals not accredited, particularly in smaller hospitals. Often hospitals strive for the stamp of accreditation without really developing a culture of safety or institutionalising good practices. These can cut medical errors including delayed diagnosis, misdiagnosis, wrong treatment, and reduce preventable deaths.
Dr. Atul Kocchar said that there must be minimum standard requirements for running a hospital to ensure quality of care. The Clinical Establishments Act attempted to introduce this at a national level, but its implementation has been difficult as healthcare is a state subject in India.

Further, private hospitals must attempt to remove the projection of luxury when most are not financially profitable. Instead, clean, basic amenities must be ensured along with quality of care as is a feature of many private hospitals in South India. Luxurious boutique hospitals catering to the very rich can be a small proportion of the overall health services.

**MEDICAL EDUCATION**

There was concern that present day medical education does not produce doctors who can be employed immediately. Training is not standardized across medical colleges and a large proportion of medical graduates lack necessary skills and knowledge for clinical practice. Postgraduate training has similar challenges where many resident doctors may not be able to operate on completion of years spent training in a particular specialty.

Since 2019, a competency based medical curriculum has been introduced. Students have clinical postings from the first year of medical college and internship is more rigorous to ensure medical graduates are clinically competent and confident. Medical curriculum must further incorporate finance, technology and communication to make doctors job-ready.

It was suggested to have an exit exam to improve standards of training, as is done in the United Kingdom. Continuing medical education is important in addition so doctors stay updated on changes and advancements in the field for evidence-based practice.

There is an opportunity to learn from successful interventions and models implemented in different states. For example, Tamil Nadu is more self-sufficient in health workforce due to a good number of colleges for medical students, paramedics, administrators.

The rise in violence against doctors and hospitals over the last decade has led to a negative perception and fear about a career in medicine. Young people need to see a good future and fulfilling career in medicine. More needs to be done to ensure safety of doctors and to address the loss of trust and negative perceptions about health systems in society.

**FUTURE DIRECTION**

Dr. Ashley McKimm concluded the meeting acknowledging that this was a starting point to identify priorities for healthcare innovation in India. In the future, deep dives into issues such as trust, medical education, and different models for healthcare delivery could be focussed on to identify concrete recommendations and actions. He thanked participants and invited them to contribute their insights to summary documents from the meeting, and to suggest any areas where BMJ could serve as a platform to support advocacy or action towards change.