



A Prescription For The Future

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(The editorial is based on the article “A Prescription For the Future” which appears in The Hindu for 28th November 2018.)

The world is changing very fast and global mega-trends like the increasing demand for food, water, and energy, the changes in demographic patterns etc., reinforce this fact.

The Internet has taken over our lives, smartphone penetration is growing rapidly. There are dramatic changes in the lifestyle and behavioral changes occurring every day, with strong implications for the future of our planet and its inhabitants. Healthcare is no stranger to this change - **the most impactful transformations in human life have happened in healthcare itself.**

Why the use of technology is imperative in the health sector of India?

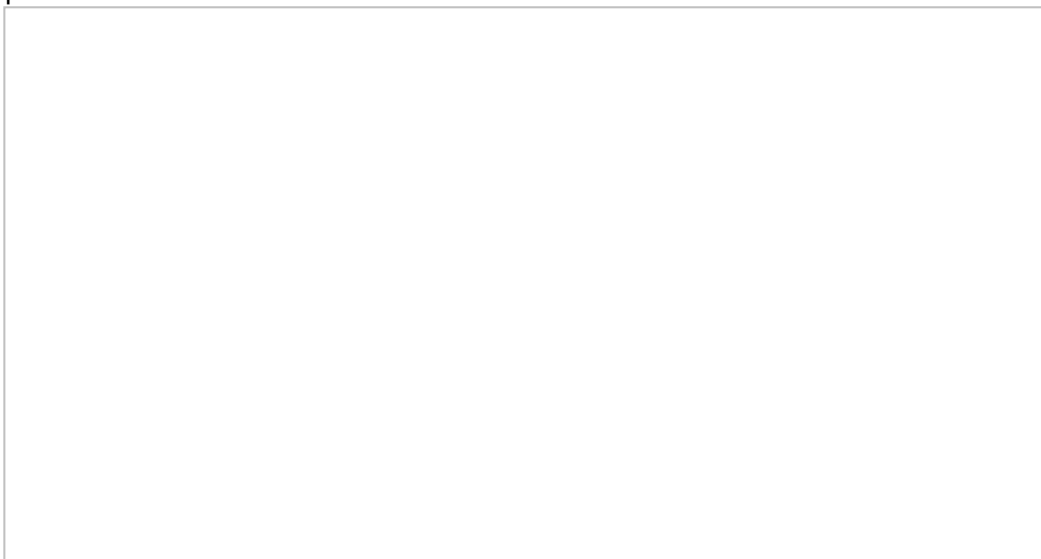
- **For achieving Sustainable Development Goal 3**, the country's strategy in health is focused on providing essential services to the entire population, with a special emphasis on the poor and vulnerable groups.
- **For achieving National Health policy aims:**
 - Establish regular tracking of DALY Index (Disability Adjusted Life Years) as a measure of the burden of disease and its trends by major categories by 2022.
 - Reduction of TFR to 2.1 at national and sub-national level by 2025.
 - Reduce Under Five Mortality to 23 by 2025 and MMR from 130 to 100 by 2020.
 - Reduce infant mortality rate to 28 by 2019.
 - Reduce neonatal mortality to 16 and stillbirth rate to “single digit” by 2025.
- **For achieving Government targets to eliminate:**
 - Kala-Azar and Filariasis by 2017
 - Leprosy by 2018
 - Measles by 2020
 - Tuberculosis by 2025
 - Malaria 2030

Challenges to Adoption of Technology

- **One of the primary challenges is to effectively coordinate data generated by the various stakeholders in the healthcare ecosystem.**
- **The fundamental unit of digital healthcare is the electronic health record or the EHR.** But, the vast majority of healthcare interventions in India take place non-digitally.
- In the primary healthcare centers that serve the vast majority of our rural hinterland, data is often logged on paper or at best in Excel, making their value as a digital asset questionable.
- Lack of healthcare facilities where less than 2% of hospitals in are accredited also pose challenges to adoption of technology in the health sector.
- Government health expenditure is very low, that makes it difficult to adopt new technologies in public healthcare centers.
- Shortage of qualified physicians and well-trained medical staff also makes it difficult to implement new technologies. This gap in human resources viz. Technology is alarming in the Indian context.

There are several examples of modern technology in healthcare:

- **Telemedicine has already brought healthcare to the remotest corners of the country.** Telemedicine is the remote delivery of healthcare services, such as health assessments or consultations, over the telecommunications infrastructure. It allows healthcare providers to evaluate, diagnose and treat patients using common technology, such as video conferencing and smartphones, without the need for an in-person visit.
- **The use of artificial intelligence for preventive and predictive health analytics** can strongly support clinical diagnosis with evidence-based guidelines and also prevent disease.



- From the **virtual reality (VR) of 3D-printing**, we are now moving towards **augmented reality (AR)**, by which, for example, every piece of a node in a malignant melanoma can be completely removed, thereby eliminating the risk of cancer spreading to any other part of the body.



- **Biotechnology, cell biology, and genetics** are also opening up whole new paradigms of understanding of human life and disease, and have made **personalized medicine** a way of life.

Way Forward

- India needs to rapidly adapt to, embrace and drive change if it wishes to stay relevant in the global healthcare order.
- **India's change imperative has become even more pronounced with the launch of the Pradhan Mantri Jan Arogya Yojana, or National Health Protection Mission (NHPM), under the ambit of Ayushman Bharat.**
- The vast scale of Ayushman Bharat requires reimagining an innovative model which will transform healthcare delivery in the country. By leapfrogging through smart adoption of technology and using emerging platforms, significant improvements are possible in healthcare operations and costs.

- Engagement of Private sector to make sure welfare programme reaches the most vulnerable and the underprivileged, for whom it is intended is also urgently required.
- **For India to grow, healthcare as an engine of the economy needs to flourish.**
- The private sector, which has contributed over 80% of the bed additions in the last decade, needs to earn healthy rates of return on investment to continue capital investment in infrastructure, technology upgrades, and to have the ability to acquire top clinical talent, which can lead to differentiated outcomes.
- In a quest to achieve low-cost healthcare, the government should not inhibit the potential for growth, nor isolate the country's health sector from exciting global developments.
- There is also a need to achieve a balance between staying at the cutting edge of clinical protocols, technology, and innovation and continue to deliver world-class care while finding increasingly efficient ways of operating to continuously lower the cost of care and bring it within the reach of those who cannot afford it.

