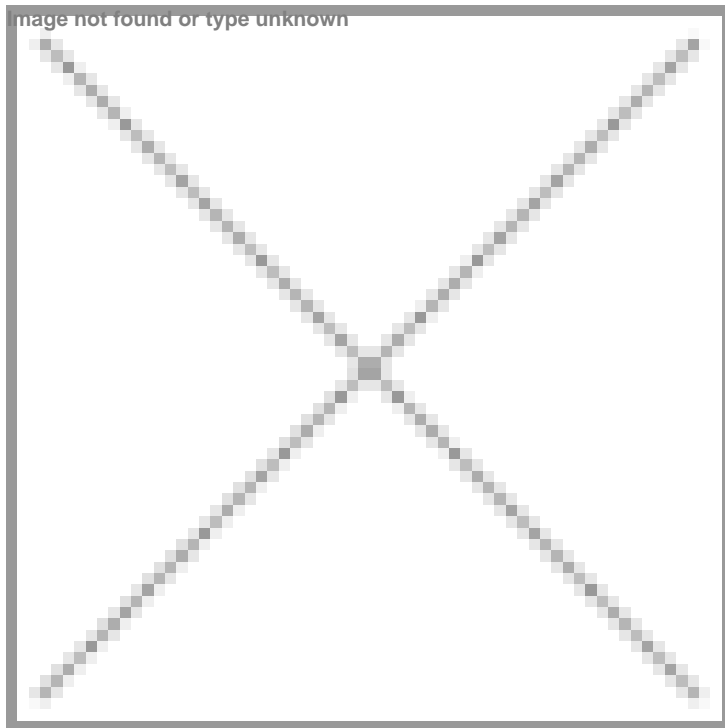


## India's Transformative Leap in Medtech

31 December 2024 | Views | By Tanaz Buhariwalla, Director - South Asia, IDA Ireland

India's medtech and diagnostics sector is poised for a transformative journey in 2025. The blend of technology, innovation, and a continued growing commitment to accessibility reshapes the healthcare landscape. While the country is tackling challenges like infrastructural gaps and unequal access, it also draws inspiration from global practices in countries like the US, the UK, and Ireland to create a uniquely Indian healthcare solution. The coming year promises a convergence of emerging trends redefining how healthcare is delivered, experienced, and sustained.



### AI-driven Diagnostics

The application of artificial intelligence (AI) in healthcare has moved beyond experimentation to become a cornerstone of modern diagnostics. Globally, AI has proven its potential to detect diseases with unparalleled precision. For example, in the US, AI-driven systems have achieved an impressive 95 per cent accuracy in early cancer detection, demonstrating its ability to significantly reduce diagnostic errors.

In India, startups are using AI to address complex health challenges like Niramai uses AI for pain-free breast cancer screening and Qure.ai developed a deep learning algorithm to interpret radiology scans in just a few seconds. Ireland, known for its advanced medtech research, has also been pioneering AI applications in diagnostics. One notable example is Ireland's Health Innovation Hub, which facilitates collaborations between healthcare providers and AI startups to develop cutting-edge diagnostic tools. Drawing from such practices, India could foster partnerships between academia, startups, incubators and healthcare institutions to bridge gaps in diagnostic accessibility, particularly in rural regions.

### **Enhancing healthcare accessibility with POCT**

Point-of-care testing (POCT) could make healthcare accessible across India, including rural India. According to Statista reports it is transforming the way diagnostics are conducted by enabling real-time, accurate testing at or near the patient's location. Innovations in biosensing, microfluidics, and paper-based diagnostics are enhancing affordability and diagnostic precision, while improving healthcare delivery, especially in rural settings. Indian companies like Agappe, Cipla Diagnostics, Mylab, and TransAsia Biomedicals have products in use in the market, and they continue to innovate. We see the widespread adoption of POCT is helping address infectious diseases like tuberculosis and dengue, and this is just the beginning.

As per Grand View Research Data, the Indian diagnostics market was valued at about \$13 billion in 2023 and is expected to grow twice its current size by 2028, while the global market size of this industry was valued at \$44.24 billion in 2023, and it is projected to grow at a CAGR of 6.1 per cent from 2024 to 2030.

We see the impact of the deployment of POCT in developed countries too. For example, in the UK, the National Health Service (NHS) has effectively used POCT to diagnose conditions such as sepsis quickly, often saving lives in critical situations.

Ireland's medtech industry, which accounts for 8 per cent of its GDP, has excelled in producing compact, portable POCT devices designed for global markets. Companies like Randox and Abbott Diagnostics Ireland have contributed significantly to revolutionising how care is delivered in emergency and rural settings.

### **Indispensable Wearables**

Wearable devices continue to evolve from the time they were used as fitness gadgets. Wearables are essential tools for monitoring and managing health. Today's sophisticated devices track metrics like heart rate, glucose levels, and blood pressure and are becoming indispensable for managing chronic conditions and promoting preventive care. Increasing use of wearable devices offers an incredible opportunity to improve individual and population-level health outcomes. Wearable technology when properly integrated into healthcare systems where data is interoperable and shared, rather than siloed, can play a key role in understanding the key factors which affect health at a population level and can deliver actionable insights to improve health and well-being.

Ireland has a national health strategy that is focused on delivering the right care, in the right place, at the right time. Data, analytics, AI and wearable technology are supporting the realisation of this strategy, although there are several challenges to overcome.

India has also witnessed the rise of affordable wearables developed by startups like GOQii and BeatO. These devices are integrated into digital health ecosystems, allowing patients to take greater control of their health while enabling physicians to provide more informed, timely care.

### **New era of Precision Medicine**

The study of genomics is shaping the future of healthcare by enabling treatments tailored to an individual's genetic makeup. Precision medicine, driven by genomic insights, has shown promise in effectively treating complex diseases while minimising side effects.

The Genomic Medicine Ireland initiative is driving forward advancements in personalised medicine in Ireland. This initiative aims to collect and analyse genetic data to improve disease diagnosis and treatment on a global scale. In India, genomic research is beginning to address diseases such as cancer and rare genetic disorders. With similar initiatives tailored to its

population diversity, India could not only expand its genomic capabilities but also contribute to global research. We see the emergence of Indian companies operating in this field, including Yoda Diagnostics. The global precision medicine market is expected to grow from \$80 billion in 2022 to \$168 billion by 2028, indicating a 13.3 per cent CAGR. In India, the adoption of precision medicine is still in its nascent stages although it is gaining momentum and significant growth is predicted in the coming years. This will be spurred by increasing private sector investments in R&D and the rising incidence of chronic diseases.

### **Sustainability through Medtech Innovation**

The medtech industry is aligning its practices with global sustainability goals. Ireland, a country committed to sustainable development, has made significant strides in adopting green manufacturing practices within its medtech sector. Companies like Medtronic and Stryker are setting benchmarks in reducing carbon footprints and incorporating renewable energy into their operations.

In India, while sustainability in healthcare is still at a nascent stage, medtech companies are beginning to explore environmentally friendly solutions. While India's medtech and diagnostics sector is growing rapidly, there is much to learn from global leaders. Ireland's ability to foster collaborations between government, academia, and industry has been instrumental in its rise as a medtech hub. Similarly, the US invests 3.1 per cent of its GDP in R&D, fostering a culture of continuous innovation, while the UK's focus on training and upskilling healthcare professionals ensures the seamless adoption of new technologies.

### **India's Opportunities and Inspirations**

For India, increasing investment in R&D, fostering public-private partnerships, and developing a skilled workforce will be critical in sustaining growth and innovation. Adopting global best practices while tailoring them to India's unique healthcare challenges could accelerate progress across the medtech ecosystem, which is on the cusp of significant transformation. With a unique blend of local innovation and global inspiration, the country is well-positioned to accelerate redefining healthcare delivery in 2025. By focusing on technology, accessibility, and sustainability, India can address its healthcare challenges while setting a global benchmark for emerging economies.

Collaboration among stakeholders, increased investment in innovation, and a commitment to equitable healthcare will be essential. As India picks up best practices from countries that have seen success in this area, it has the potential to not only transform its medtech landscape but also ensure a healthier, more sustainable future for its 1.4 billion citizens.

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