

India's Strategic Shift Towards High-Quality, Low-Cost MedTech

30 November 2025 | Views

India's healthcare infrastructure continues to face significant strain from the rising prevalence of noncommunicable diseases (NCDs), contributing around 66 per cent of the mortalities in the country, underscoring the need for scalable continuous monitoring, early diagnosis, and therapeutic devices. Yet, advanced imaging systems, analysers, surgical tools, or robotic devices remain very expensive due to import reliance, high logistics costs, and maintenance/service contracts. Segments showing strongest traction today are diagnostics (point-of-care devices, rapid tests, compact imaging devices), remote monitoring/wearable devices, and therapeutic devices such as surgical robotic systems, renal care systems, and wound care devices.



The MedTech segment is now beginning to bloom for four reasons: policy stimulus, increased demand, favorable startup ecosystem, and increasing investments. According to the survey of medical devices clusters, 2023, the MedTech landscape has around 800 domestic medical device manufacturers, including 736 active units in 21 medical devices clusters spread over 9 states. Policy interventions like the Production Linked Incentive (PLI) scheme, Assistance to Medical Device Clusters for Common Facilities, and Medical Devices Park scheme are catalysing the domestic manufacturing of affordable (low-cost) medical devices in India. The nation's healthcare sector not only meets domestic needs but has also emerged as a global hub for medical tourism, welcoming about 2.36 million patients from 210 countries between 2019 and 2024. The startup ecosystem is fueled by Invest India MedTech initiative and the India MedTech Expo platform. There were 17 licensing deals during the India MedTech Expo 2025 - public-research innovations in areas such as diagnostics transferred to the private sector for scale-up. With respect to investments, between April 2000 and December 2024, the MedTech sector accumulated \$3.9 billion in FDI equity, reflecting strong investor confidence in India's evolving healthcare innovation landscape.

As the fourth largest medical devices market in Asia and among the top 20 globally, India is driving a new era of low-cost medical device innovations in diagnostics and therapy that are making healthcare more accessible and equitable across all layers of the society.

India's Leap Towards Accessible Healthcare

With strong policy support—such as the National Medical Devices Policy, 2023—and a favourable ecosystem for developing low-cost, high-impact diagnostic and therapeutic solutions, India is witnessing a surge in home-grown diagnostic and therapeutic innovations. Across 21 medical device clusters housing over 736 operational industries (including 20 per cent micro and 31 per cent small enterprises), startups are driving the creation of affordable, deployable diagnostics and therapy devices suited for rural areas, mobile clinics, and primary care settings. These innovations progress through India's Central Drugs Standard Control Organisation (CDSCO)-regulated commercialisation pathway under the Medical Devices Rules, 2017, ensuring quality, safety, and compliance before market entry.

Diagnostics Use-Cases

Forus Health (Bengaluru) has innovated a low-cost, artificial intelligence (AI)-enabled eye screening device to detect diabetic retinopathy and glaucoma at nearly 1/10th of the cost of imported imagers. The company has screened over 20 million patients globally and demonstrates how indigenous innovations are embraced in other countries. Sascan Meditech (Thiruvananthapuram), a startup supported by Biotechnology Ignition Grant (BIG) of Biotechnology Industry Research Assistance Council (BIRAC) and Department of Science & Technology (DST), has developed OralScan (CDSCO-approved and CE-marked), a hand-held fluorescence imager that enables early detection of oral cancer at a fraction of biopsy costs—around Rs 200 (\$2.5) per scan compared to Rs 3,500–20,000 (\$42–240) for an oral biopsy—significantly reducing invasive procedures and diagnostic expenses. Niramai Health Analytix (Bengaluru) uses thermal imaging and AI in their Thermalytix (CDSCO-approved, CE-marked, and FDA-approved) for early breast cancer screening at a cost 20 times lower than mammography. The equipment and operating expenses are only 10–20 per cent of traditional screening methods, making it a highly affordable and accessible diagnostic alternative. To offer instant cardiac risk detection, Tricog Health India (Bengaluru) integrates AI and 12-lead ECG sensors in their flagship device, InstaECG (CDSCO-approved). With this technology, ECG interpretation time duration has fallen from 24–48 hours to under 10 seconds in rural centers, while in urban hospitals it dropped from up to 60 minutes to under 3 minutes. Also, a cardiac screening using Tricog Health's ECG solution costs about Rs 50 (\$0.6) per test, compared to Rs 200–800 (\$2.4–9.6) for a conventional ECG. These are just a few among many home-grown innovators that are reshaping India's MedTech landscape to provide affordable and accessible, patient-centric diagnostic innovations.

Therapeutics Use-Cases

SS Innovations (Gurugram) has pioneered India's first and only indigenously developed surgical robotic system SSI Mantra priced around Rs 5 crore (\$563,725) which is one-third of the cost of imported robotic systems. The SSI Mantra redefines accessibility in robotic surgery with advanced features designed for precision, surgeon comfort, and improved patient outcomes, thereby bringing the benefits of robotic surgery to every corner of the country. Renalyx Health Systems (Bengaluru) is resetting the cost of renal care with the introduction of RxT21 launched in June 2025, which is an advanced cloud-enabled and AI-powered smart hemodialysis machine with real-time remote monitoring and clinical connectivity. At a price point of Rs 6.7 lakh (\$7,500) the device costs 20–25 per cent less than that of imported dialysis machines which along with features like real-time remote monitoring and clinical connectivity is expected to improve access to safe, quality and affordable care to end-stage renal disease patients especially across semi-urban and rural regions in India. Going forward, the company plans to scale their manufacturing capacity and reduce the total cost of ownership of the RxT21 by 40 per cent compared to imported machines. To address the critical gap in accessible, outcome-driven chronic wounds management, MedVital (Gurugram) has developed NoWound, a compact, digitally enabled, and low-cost negative pressure wound therapy device for Indian settings. It uses highly simplified pump, reusable dressings and digital monitoring rather than the expensive international alternatives to lower the cost of treatment of wounds such as diabetic ulcers and pressure sores.

Key Growth Opportunities

As affordability is as much about pricing innovation as about product innovation, MedTech companies in India developing diagnostic and therapeutic devices should focus on pay-per-use or subscription models that would allow hospitals and clinics in semi-urban and rural areas to access advanced technology without requiring upfront investment. Leveraging business models such as leasing equipment under revenue-share arrangements for devices such as medical imaging or surgical robotic systems can improve utilisation, guarantee uptime, and accelerate return on investment - critical for sustainability in smaller markets.

Device manufacturers should also partner with health insurance companies to offer discounts on health insurance premiums or other incentives to patients using diagnostic and therapeutic devices such as remote monitoring or wound-care products. This approach offers a win-win deal for the patients as they save on health insurance premiums while also maintaining good health.

India's cost-efficient innovation model fits healthcare systems in low and middle-income countries in regions such as Africa, Southeast Asia, and Latin America. By partnering with World Health Organization (WHO) prequalification of medical products and regional procurement agencies, MedTech companies can export validated low-cost therapy and diagnostic devices addressing similar public health burdens in these countries. This would allow India to position itself as a global supplier of high-quality and affordable diagnostic and therapy devices, much like it did with generic pharmaceuticals.

Authors-

Dr Isai Pratha Karthik, Senior Research Analyst, Medical Devices & Imaging, Frost & Sullivan

Neeraj Nitin Jadhav, Senior Industry Analyst & Team Lead, TechVision, Frost & Sullivan