



India's MedTech Transformation: Building Scalable Care, Diagnostics, and Manufacturing Capabilities

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Introduction

Indian Healthcare Ecosystem: Scale, Demand and Policy Momentum

Healthcare has become one of India's fastest expanding sectors, driven by demographic change, a rising disease burden, and increasing public investment. Home to more than 1.46 billion people¹, India is witnessing a steady increase in life expectancy and a growing elderly population. The number of people aged 60 years and above is projected to be approximately 17.3 crore in 2026, accounting for nearly 12% of the country's population². As age is a major risk factor for chronic diseases such as diabetes, cardiovascular diseases, cancer and neurological disorders, demand for long-term healthcare, regular diagnostics and continuous patient monitoring is expected to increase substantially. Budget allocations are beginning to reflect this shift from episodic care to continuous care. Recognizing these trends, healthcare has remained a priority in the Union budgets. The Ministry of Health and Family Welfare received ₹1,06,530 crore in the Union Budget 2026-27, an increase of about 10% over the allocation of ₹96,895 crore in 2025-26. The budget also includes a ₹980 crore allocation over three years to strengthen allied healthcare education, including the training of 1.5 lakh geriatric caregivers to support the country's growing elderly population. This allocation directly responds to the demographic aging trends outlined above.

TOP BUDGET HEADS- HEALTHCARE, 2026-27

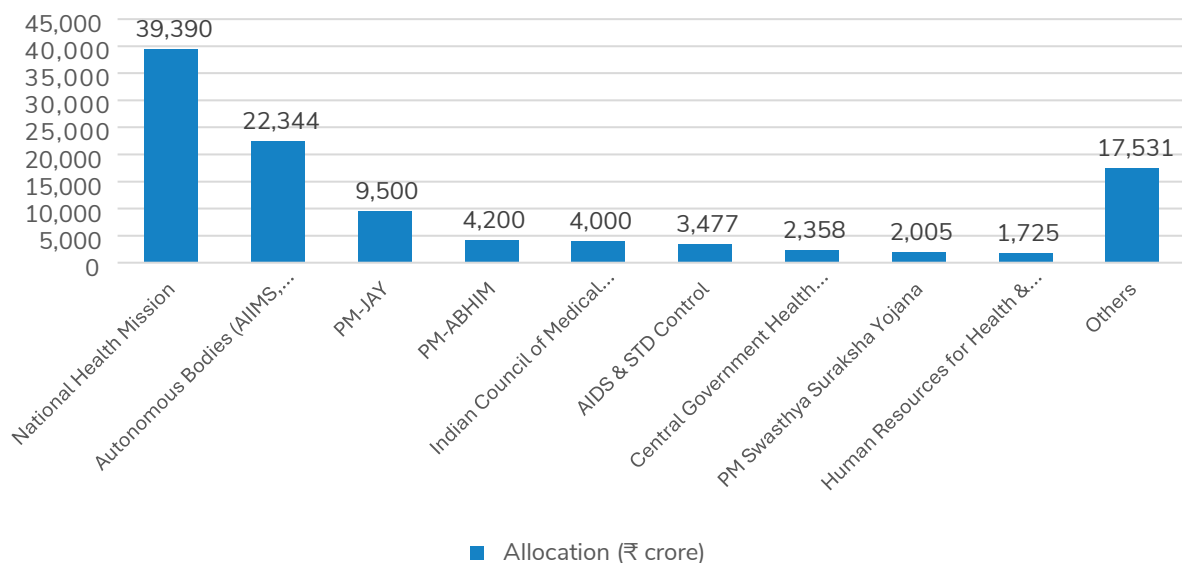


Figure 1: Major Expenditure Heads under the Ministry of Health & Family Welfare, Union Budget 2026-27

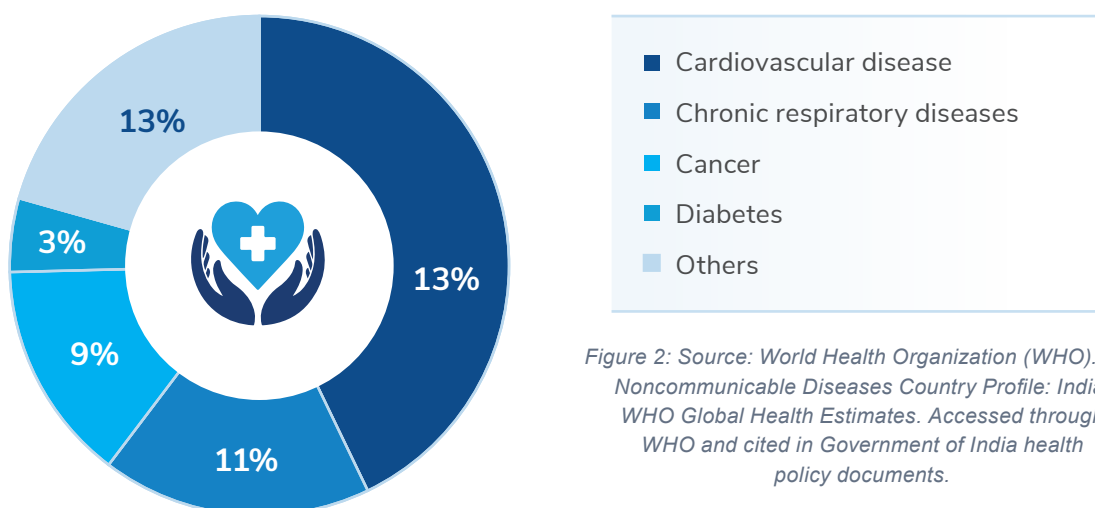


The allocation pattern highlights three key priorities:

- ▶ Improving access to healthcare through primary care and health insurance
- ▶ Strengthening healthcare infrastructure, research and workforce capacity
- ▶ Preparing the health system for future challenges such as population ageing and chronic diseases.

These priorities are interconnected. Improved access increases the need for infrastructure, while infrastructure delivers better care only when supported by a skilled workforce. These investments are expected to help India's healthcare system manage the growing burden of chronic diseases through prevention, early diagnosis and long-term care.

DISTRIBUTION OF MORALITY BY DISEASE CATEGORY IN INDIA



With nearly 63% of all deaths attributed to non-communicable diseases (NCDs), India's healthcare priorities are increasingly focused on prevention, early detection and long-term management of chronic conditions, shaping both policy priorities and resource allocation. This shift is reflected in the expansion of diagnostic infrastructure under PM-ABHIM, with 744 Integrated Public Health Laboratories and 2,151 Block Public Health Units approved nationwide to strengthen diagnostic and public health capacity³.

India has also recognized that a country with one of the world's largest disease burdens cannot continue to depend heavily on imported high-end medical technologies. To strengthen these capabilities, the government has introduced several initiatives across medical devices, biotechnology and biopharmaceuticals.

¹ WORLD POPULATION TO 2300, United Nations; <https://www.worldometers.info/world-population/india-population/>

² Ministry of Social Justice & Empowerment on Population of Senior Citizens; PIB Release ID: 2244485

³ PIB Release ID: 2239631



The Biopharma SHAKTI initiative has an outlay of ₹10,000 crore over five years. It aims to strengthen domestic production of biologics and biosimilars, establish 1,000 accredited clinical trial sites, create three new National Institute of Pharmaceutical Education and Research (NIPERs), and upgrade seven existing NIPERs to strengthen research, skilled workforce and industry-academia collaboration.

Complementing these efforts, the BioE3 (Biotechnology for Economy, Environment and Employment) policy provides a national framework to advance high-performance biomanufacturing through bio-AI Hubs, biofoundries and biomanufacturing Hubs. Together with the National Medical Devices Policy 2023 and the Production Linked Incentive (PLI) Scheme for Medical Devices, these initiatives are strengthening India's capabilities across diagnostics, medical devices, biotechnology and advanced manufacturing. Alongside building a stronger domestic healthcare manufacturing ecosystem, the government is also attracting foreign investment and global partnerships to accelerate innovation across pharmaceuticals, biotechnology and medical devices. India is expanding its MedTech value chains through increased domestic manufacturing, higher exports and greater participation in international markets.

CETA

India-United Kingdom | Signed

- 56 pharma tariff lines at 0% duty
- Duty-free access for key medical devices
- Regulatory & quality standards cooperation
- Expands UK healthcare market access

FTA

India-New Zealand | Under Negotiation

- 90 pharma tariff lines at 0% duty
- Improved market access for Indian generics
- Opportunities in biotech & clinical research
- Expands healthcare exports to Oceania

CEPA

India-Oman | Under Negotiation

- Improved access for pharma & APIs
- Gateway to GCC healthcare markets
- Supports generic medicine exports
- Enhances regional trade connectivity

EFTA & TEPA

India- European Union | In process

- Access to US\$572B healthcare market
- Tariff liberalization for pharma & MedTech
- Supports technology collaboration
- Boosts high-value healthcare exports

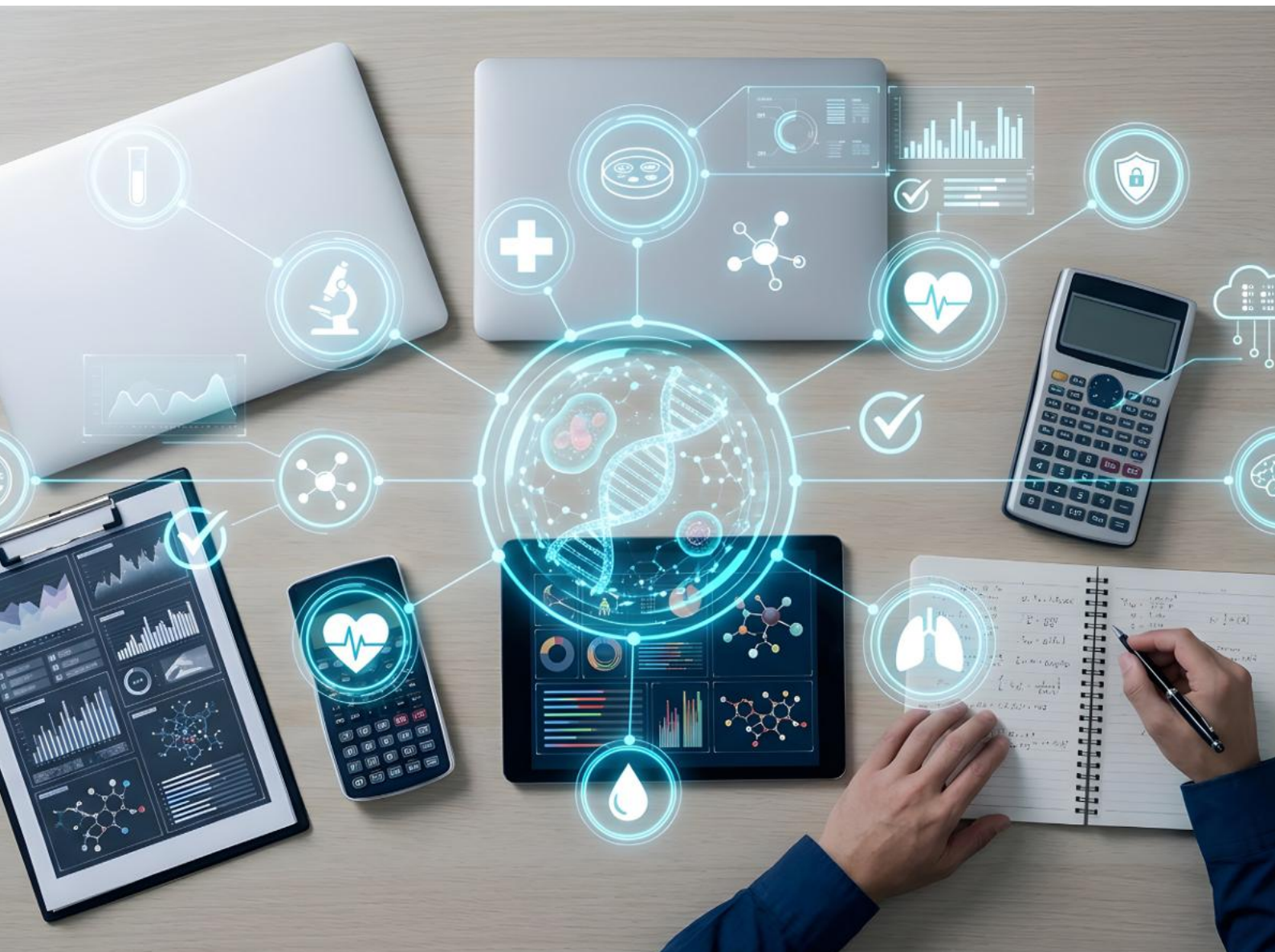
BTA

India- United States | Under Negotiation

- Pharma & MedTech market access
- Lower tariff and non-tariff barriers
- Strengthens healthcare supply chains
- Regulatory cooperation



Figure 3: Strategic Trade Agreements Shaping India's Healthcare Sector. Source: PIB
Release ID: 2243248



India's evolving trade strategy further reinforces this transformation. Rather than merely improving cross-border market access, the recent agreements create strategic pathways for technology exchange, investment inflows and integration into global healthcare value chains. According to the Ministry of Commerce, India's FTA network now spans 38 countries, with most recent expansion occurring between 2021 and 2026⁴. This strategy marks a departure from nearly a decade of cautious FTA engagement, during which the country remained highly import dependent. Since 2021, the focus has shifted toward strategically selected partnerships that combine market access, investment, technology collaboration, and resilient supply chains, creating a more conducive environment for growth across pharmaceuticals, medical devices and life sciences.

⁴ PIB Release ID: 2236134



FOREIGN DIRECT INVESTMENT IN PHARMACEUTICALS AND MEDICAL DEVICES (₹ CRORES)

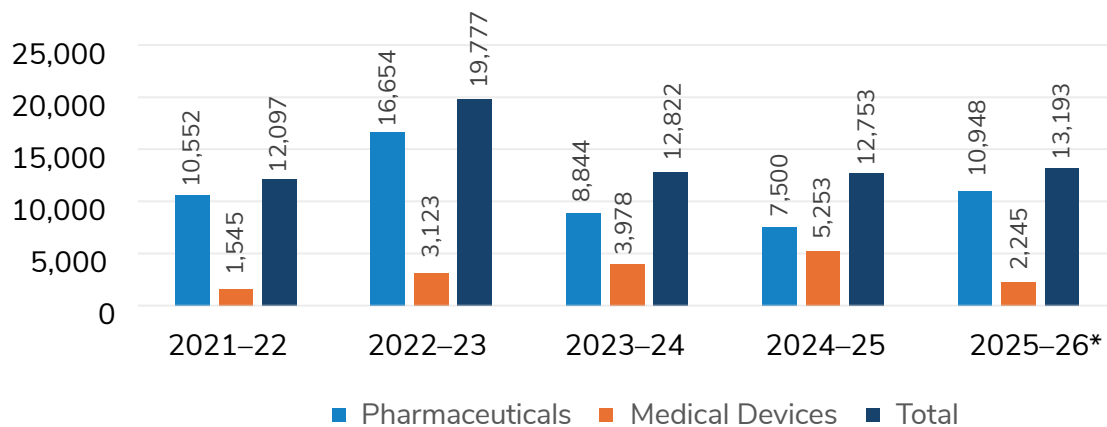


Figure 4: Annual Foreign Direct Investment (FDI) Inflows into India's Pharmaceuticals and Medical Devices Sector (FY2021-22 to FY2025-26*). Source: Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry, Government of India

The strengthening of India's healthcare innovation ecosystem is also reflected in increasing investment activity. Between April 2000 and June 2025, the pharmaceuticals and medical devices sector attracted cumulative foreign direct investment (FDI) of ₹1,80,554 crore, of which ₹1,52,654 crore was invested in pharmaceuticals and ₹27,900 crore in medical devices. The sustained inflow of foreign investment is translating into tangible manufacturing capacity across India's healthcare sector. In pharmaceuticals, investments are supporting domestic production of critical APIs, key starting materials and complex formulations, while in medical devices, the PLI scheme has enabled commercial production of high-end technologies including MRI and CT scanners, linear accelerators and mammography systems, that were previously dominated by imports.





Advances in Diagnostics and Laboratory Innovations

Diagnostics have become a critical component of modern healthcare. The rising burden of chronic and infectious diseases has increased the need for robust laboratory networks. In response, the government has expanded investments in laboratory networks, molecular diagnostics and translational research to improve disease detection, strengthen public health surveillance and accelerate the adoption of newer diagnostic technologies.

DEPARTMENT OF HEALTH RESEARCH FUNDING (2025–26)

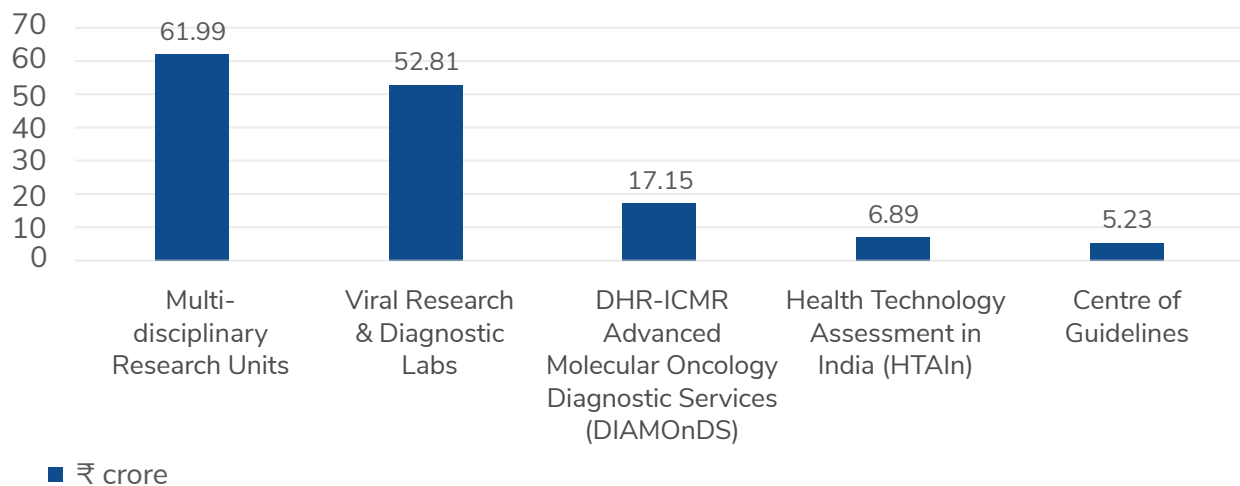


Figure 5: Department of Health Research: Programme-wise Budget Allocation (2025–26).
Source: The Union Minister of State for Health and Family Welfare, PIB Release ID: 2243767





To create the foundation for earlier disease detection, precision medicine and stronger public health surveillance, the government has adopted a balanced investment strategy across laboratory infrastructure, translational research, and molecular diagnostics. One example is the DIAMOnDS programme, which is accelerating the adoption of molecular diagnostics in cancer care. As of 2025-26, the programme has established 25 centers across India, supported more than 33,000 patients and performed more than 1.6 lakh biomarker tests. In addition, nearly 3,000 healthcare professionals have been trained, strengthening national capacity for precision oncology⁵. Complementing these efforts, NITI Aayog is developing a Cancer Care Imaging Biobank comprising more than 20,000 cancer patient radiology and pathology profiles to support AI-assisted cancer diagnosis, biomarker research and precision oncology⁶. These initiatives are building complementary layers of the same data infrastructure: DIAMOnDS generate biomarker data, while the biobank aggregates imaging and pathology profiles at the population level. Together, they could enable AI-assisted diagnostic tools to be trained on Indian patient data, rather than adapted from datasets built on other populations.

Alongside advances in molecular diagnostics, India has strengthened its laboratory network for infectious disease surveillance. The COVID-19 pandemic highlighted the importance of rapid diagnostic capacity, while recurring outbreaks and emerging viral threats such as Nipah virus, Mpox, dengue, and avian influenza continue to reinforce the need for a resilient nationwide laboratory system. In response, the Department of Health Research (DHR) and the Indian Council of Medical Research (ICMR) have significantly expanded the Viral Research and Diagnostic Laboratory (VRDL) network to strengthen the outbreak surveillance across the country. The network currently comprises 167 laboratories, including 11 regional VRDLs, 27 state VRDLs and 129 medical college VRDLs, covering 27 States and 5 Union Territories⁷. Led by the National Institute of Virology (NIV), Pune, and supported by regional reference laboratories, the VRDL network has strengthened India's capacity for molecular diagnosis, pathogen surveillance, diagnostic assay development and rapid laboratory response during public health emergencies.

Strengthening of India's diagnostic infrastructure has created a favorable environment for innovation as well. Supported by government programmes, incubators and increasing private investment, Indian companies are developing next-generation diagnostic technologies ranging from molecular diagnostics and AI-assisted imaging to portable point-of-care testing and wearable health monitoring.

⁵ Department of Health Research, MoHFW, Government of India

⁶ <https://static.pib.gov.in/WriteReadData/specificdocs/documents/2026/feb/doc2026213788701.pdf>

⁷ Department of Health Research, MoHFW, Government of India



COMPANY	TECHNOLOGY	SUPPORTING ECOSYSTEM	KEY INNOVATION
Molbio Diagnostics, Goa	Portable Molecular Diagnostics	Supported by DBT- BIRAC	Truenat platform;>10,000 systems across 80+ countries
Mylab Discovery Solutions, Pune	Molecular & Point-of-Care Diagnostics	Technology Development Board and BIRAC	India's first indigenous RT-PCR kit; rapid diagnostics portfolio
Genes2Me, Gurugram	Genomics & Precision Diagnostics	Centre For Cellular And Molecular Platforms (C-CAMP)	Oncology, NGS, reproductive health
MapmyGenome, Hyderabad	Consumer Genomics	T-Hub (Telengana)	Preventive genomics & personalized health
4baseCare, Bengaluru	Precision Oncology	C-CAMP and BIRAC	AI-enabled genomic testing & cancer decision support
PredOmix Health, Bengaluru	Liquid Biopsy	IISc spin-off; BIRAC	Blood-based early cancer detection
SigTuple, Bengaluru	AI Diagnostics	C-CAMP	AI-assisted pathology & microscopy
Aindra Systems, Bengaluru	AI powered cytology	Bangalore Bioinnovation centre (BBC)	AI-assisted cervical cancer screening
Bigtec Labs, Bengaluru	Molecular Diagnostics	Society for Innovation and Development (SID), IISc	Portable PCR & infectious disease diagnostics
MedPrime Technologies, Thane	Multiplex Molecular Testing	Society for Innovation and Entrepreneurship, IIT Bombay	Smartphone-enabled digital microscopy for pathology

Figure 6: Representative examples illustrating the breadth of India's diagnostics innovation ecosystem





The companies highlighted in Figure 6 demonstrate the growing maturity of India's diagnostics innovation ecosystem. Rather than operating independently, many have emerged from strong innovation networks supported by organizations such as BIRAC, C-CAMP, and IISc, underscoring the importance of translational research, incubation and public funding in accelerating commercialization. A notable pattern is the geographic concentration of these companies around established research and technology hubs including Bengaluru and Hyderabad, where academic institutions, skilled talent, investors and clinical collaborators are closely connected. While this clustering has accelerated innovation, expanding similar innovation ecosystems to other regions will be important for building a more geographically distributed diagnostics industry.

India's diagnostic infrastructure has expanded considerably for infectious disease surveillance, whereas capabilities for chronic disease diagnostics and precision medicine remain at a relatively earlier stage of development. Going forward, this infrastructure will provide a strong foundation for scaling molecular diagnostics for chronic diseases and precision oncology in India.





Digital Health and Connected Care Delivery

Digital technologies have become central to healthcare delivery across hospitals, clinics and home settings. Rather than introducing isolated digital solutions, India is building a digital public infrastructure that enables patients, healthcare providers, laboratories, pharmacies and insurers to securely exchange health information. The Ayushman Bharat Digital Mission (ABDM) forms the foundation of this transformation by creating interoperable digital health records and consent-based information exchange across the healthcare ecosystem.

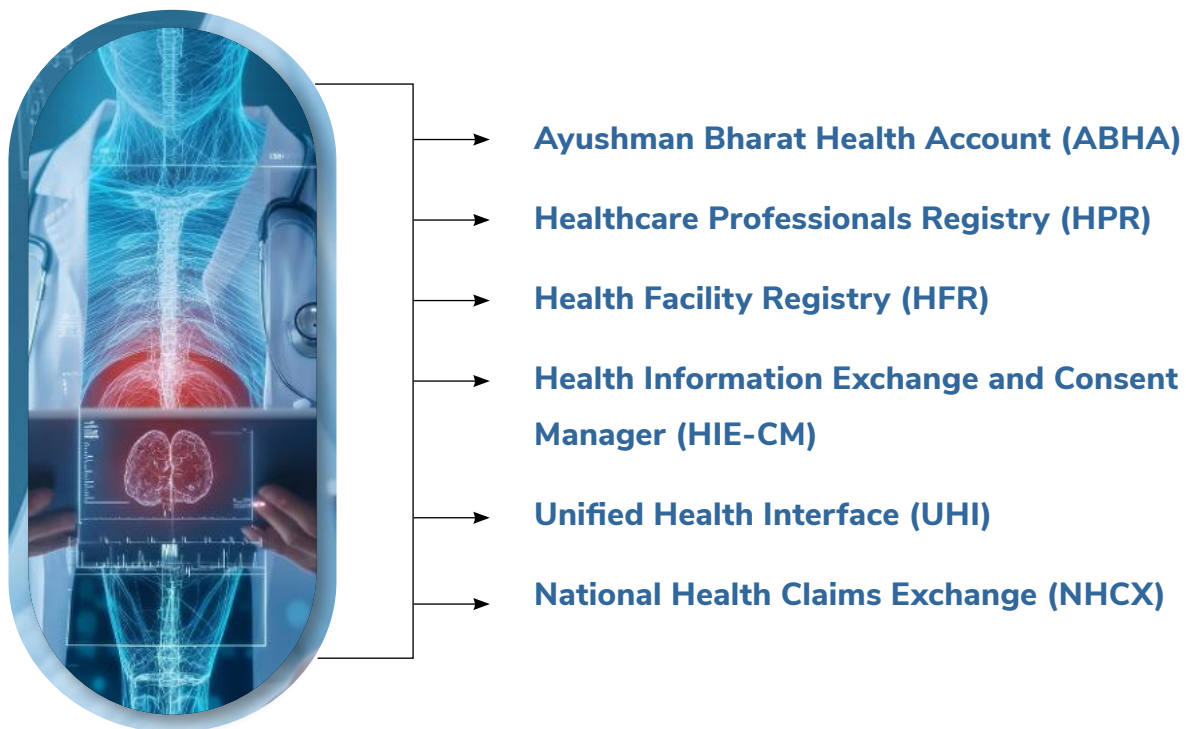


Figure 7: Core Digital Building Blocks of the Ayushman Bharat Digital Mission

Through interoperable digital building blocks, ABDM enables secure health information exchange across the healthcare ecosystem. As of May 2026, the platform had created more than 90 crore ABHA accounts, linked more than 100 crore health records, and integrated more than 450 digital health solutions, demonstrating its rapid adoption across India's healthcare system⁸. However, account creation continues to outpace the depth of linked health records. The impact of this digital infrastructure is evident in the rapid growth of eSanjeevani. The platform has delivered more than 47 crore teleconsultations and onboarded over 2.34 lakh healthcare providers as of June 2026, making it the world's largest government-owned telemedicine service⁹. Given India's large population and outpatient care volumes, its full potential will depend on integrating telemedicine

⁸ PIB Release ID: 2264241

⁹ <https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2269699®=48&lang=2>



with e-prescriptions and routine care, while expanding its use across both public and private healthcare systems. It also offers significant potential to improve specialist access in rural areas and reduce unnecessary hospital visits through virtual follow-up consultations.

AI is also being integrated into routine healthcare delivery. Since 2023, the AI-enabled Clinical Decision Support System (CDSS) has supported 28.2 crore eSanjeevani consultations, helping clinicians capture structured clinical information and improve decision consistency. The 'Cough Against TB' initiative uses artificial intelligence to analyze cough sounds as a rapid screening tool for tuberculosis. Between March 2023 and November 2025, it screened over 1.62 lakh individuals and detected 12-16% additional TB cases as compared to conventional screening approaches. MadhuNetrAI uses AI to support diabetic retinopathy screening, reducing dependence on specialist ophthalmologists at the point of care. As of December 2025, it had been deployed across 38 healthcare facilities in 11 states, assisting in the analysis of over 14,000 retinal images and benefiting more than 7,100 patients.

The Government is also expanding support for healthcare AI. Three Centers of Excellence have been established at AIIMS Delhi, PGIMER Chandigarh and AIIMS Rishikesh. The launch of the Strategy for AI in Healthcare for India (SAHI) and Bharat One Digital Health (BODH) in 2026 provides a national roadmap for responsible AI adoption. The Government introduced the Digital Personal Data Protection (DPDP) Rules, 2025, to strengthen data privacy and consent, alongside MeitY's AI Governance Guidelines, which provide a risk-based framework for AI deployment across sectors, including healthcare. The next priority is to translate these frameworks into healthcare-specific AI standards, stronger cybersecurity protocols, and coordinated implementation across the digital health ecosystem.

Supported by national digital health infrastructure and AI-focused initiatives, Indian health technology companies are expanding beyond product innovation towards scalable healthcare solutions. For example, Tricog applies AI to cardiac diagnostics in regions without on-site specialists, while SigTuple and Dozee use AI for pathology automation and continuous patient monitoring. Going forward, the priority should shift from developing AI solutions to scaling their implementation by strengthening digital infrastructure in underserved regions, improving interoperability across healthcare systems, expanding clinician training, and establishing robust validation and regulatory frameworks.



Medical Device Manufacturing in India

India is undergoing a significant transformation in the medical technology (MedTech) sector. With one of the world's largest healthcare systems, a rapidly growing middle class, an increasing disease burden, expanding healthcare infrastructure, and strong government support, the country is emerging as a preferred destination for medical device manufacturing. India's medical devices industry is currently valued at over USD 15 billion, making the country the fourth largest medical devices market in Asia after Japan, China, and South Korea, and one of the top 20 globally¹⁰. The industry's growth has been supported by several transformative policy initiatives led by the Government of India's Department of Pharmaceuticals to promote indigenous manufacturing of medical devices, including high-end and high-precision instruments. The schemes implemented by the Department to promote indigenous manufacturing of medical devices in the country include the following:

- **Production Linked Incentive Scheme (PLI) for Medical Devices:** The Scheme has an outlay of ₹3,420 crore with production tenure from FY 2022-23 to FY 2026-27, and provides incentives on eligible incremental sales in four target segments covering radiology and imaging, cancer-care / radiotherapy, anesthetics / cardio-respiratory / renal-care devices and implants¹¹. As of July 2026, 27 applications had been approved, with reported actual investment of ₹ 1,153.07¹² crore enabling domestic production of medical devices such as mammography systems, MRI and CT equipment, LINACs, C-arms, heart valves, ultrasound equipment and stents.
- **Promotion of Medical Device Parks:** The Scheme, with an outlay of ₹300 crore, supports common testing, sterilization, warehousing, incubation, prototyping and other infrastructure, with Central assistance up to ₹100 crore per park¹³. Three parks are under implementation at Noida, Uttar Pradesh; Ujjain, Madhya Pradesh and Kanchipuram, Tamil Nadu.
- **Scheme for Strengthening of Medical Device Industry (SMDI):** The Scheme has an outlay of ₹ 500 crore for FY 2024-25 to FY 2027-28. and comprises the following sub-schemes: Common Facilities for Medical Devices Clusters (CFMDC), the Marginal Investment Scheme for Reducing Import Dependence (MIS-RID), the Capacity Building and Skill Development in Medical Device Sector Scheme, the Medical Device Clinical Studies Support Scheme and the Medical Device Promotion Scheme¹⁴.

¹⁰ PIB Release ID: 2291191

¹¹ PIB Release ID: 2288770

¹² PIB Release ID: 2288770

¹³ PIB Release ID: 2288770

¹⁴ PIB Release ID: 2288770



Applicant	State	Approved Product/Component
Allengers Medical Systems Limited	Punjab	CT Scan, X Ray Equipment, Mammography, C-Arm and Cath Lab
Deck Mount Electronics Limited	Andhra Pradesh	Oxygen concentrator
Envision Scientific Private Limited	Gujarat	Stents, PTCA Balloon Catheter
Meril Healthcare Private Limited	Gujarat	Hip Implants, Knee Implant, Trauma Implant
SkanRay Technologies Pvt. Ltd.	Karnataka	X-ray tubes
Panacea Medical Technologies Pvt. Ltd.	Karnataka	6 or 9 MeV LINAC-based intraoperative electron radiotherapy equipment
Vimek Bioconcept Pvt. Ltd.	Maharashtra	Point-of-care testing/FIA analyser and reagents (cardiac markers)
Auxein Medical Pvt. Ltd.	Haryana	Arthroscopy and trauma instrument set
GRK Medical Devices Pvt. Ltd.	Telangana	Peripheral coils
Iscon Meditech Pvt. Ltd.	Rajasthan	Polymer tubing components
Varex Imaging Manufacturing India Private Limited	Andhra Pradesh	Digital X-Ray Flat Panel Detector
Wipro GE Healthcare Private Limited	Karnataka	CT Scan, Cath Lab and Ultrasonography

Figure 8: List of State-wise Projects Approved under PLI and SMDI Source: Frost & Sullivan, PIB Release ID: 2288770



These initiatives have helped in commissioning 24 greenfield projects in the country, resulting in production of 57 products, which include high-end medical devices on which the country has been import-dependent, such as linear accelerators, MRI, ultrasound, CT scans, mammograms, C-arm and X-ray machines. Till December 2025, cumulative eligible sales of ₹13,624.5 crore, including exports worth ₹6,425.4 crore, have been made under the scheme.¹⁵ Exports were particularly impressive, with growth observed across several product categories, including consumables, diagnostic reagents, implants, surgical instruments, and electromedical equipment.

Some of the success stories arising due from government schemes are listed below.

Success Stories

Varex Imaging Corporation

In July 2025, Varex Imaging Manufacturing India Private Limited, a subsidiary of Varex Imaging Corporation, started its second advanced manufacturing facility at Andhra Pradesh MedTech Zone (AMTZ). Through this facility, Varex is set to expand its imaging technology capabilities by establishing two advanced manufacturing lines: India's first manufacturing facility for Cesium Iodide (CsI) coating, used to enhance digital X-ray image quality while reducing radiation exposure, and another for medical-grade glass tubes essential to X-ray and CT imaging systems. These technologies will be localized for the first time in India, thus bringing the full imaging hardware value chain, from detector fabrication to X-ray tube assembly, under one roof. This move will strengthen Varex's manufacturing capabilities while supporting Indian OEMs, component suppliers, and diagnostic innovators across the country.

Meril Life Sciences

In October 2024, Meril Life Sciences inaugurated its advanced medical device manufacturing facility in Vapi, Gujarat developed under PLI Scheme for medical devices. The facility is designed to manufacture high-end medical devices that were previously largely imported. Meril has used the plant to manufacture advanced medical devices such as coronary stents, PTCA balloon catheters, hip and knee implants, hernia surgical mesh, linear staplers and linear cutters domestically. Through this initiative, Meril is strengthening domestic supply-chain resilience and increasing indigenous value addition. Furthermore, the PLI-enabled expansion complements Meril's broader strategy of fostering innovation in high-end critical medical technologies such as surgical robotics. The company successfully executed this strategy with the 2024 launch of MISSO, a surgical robotic system for knee replacement surgeries. The system has been fully developed and manufactured in India and is expected to cost nearly 66% less than available systems.

¹⁵ PIB Release ID: 2239576



Rehabilitation: Advancing Inclusive and Patient-Centric Care

India is witnessing a paradigm shift in rehabilitation and assistive healthcare. Traditionally focused on conventional physiotherapy, wheelchairs, walkers, and prosthetics, the rehabilitation ecosystem is rapidly embracing smart rehabilitation gloves, virtual reality rehabilitation, smartphone-based digital therapeutics, robotics, and advanced prosthetics. Rising incidence of stroke, spinal cord injuries, cerebral palsy, dementia, osteoarthritis, amputations, and musculoskeletal disorders, coupled with growing awareness of disability inclusion and accessibility, is accelerating the transformation in this space.

Smart rehabilitation gloves are particularly promising for upper-limb rehabilitation. These gloves incorporate finger-motion sensors, force sensors, haptic feedback, motion tracking and AI-based assessment. These devices can be effectively used for neuro care in patients' home for stroke recovery and treating neuro-muscular hand dysfunctions through automated flexing, and mirror therapy.

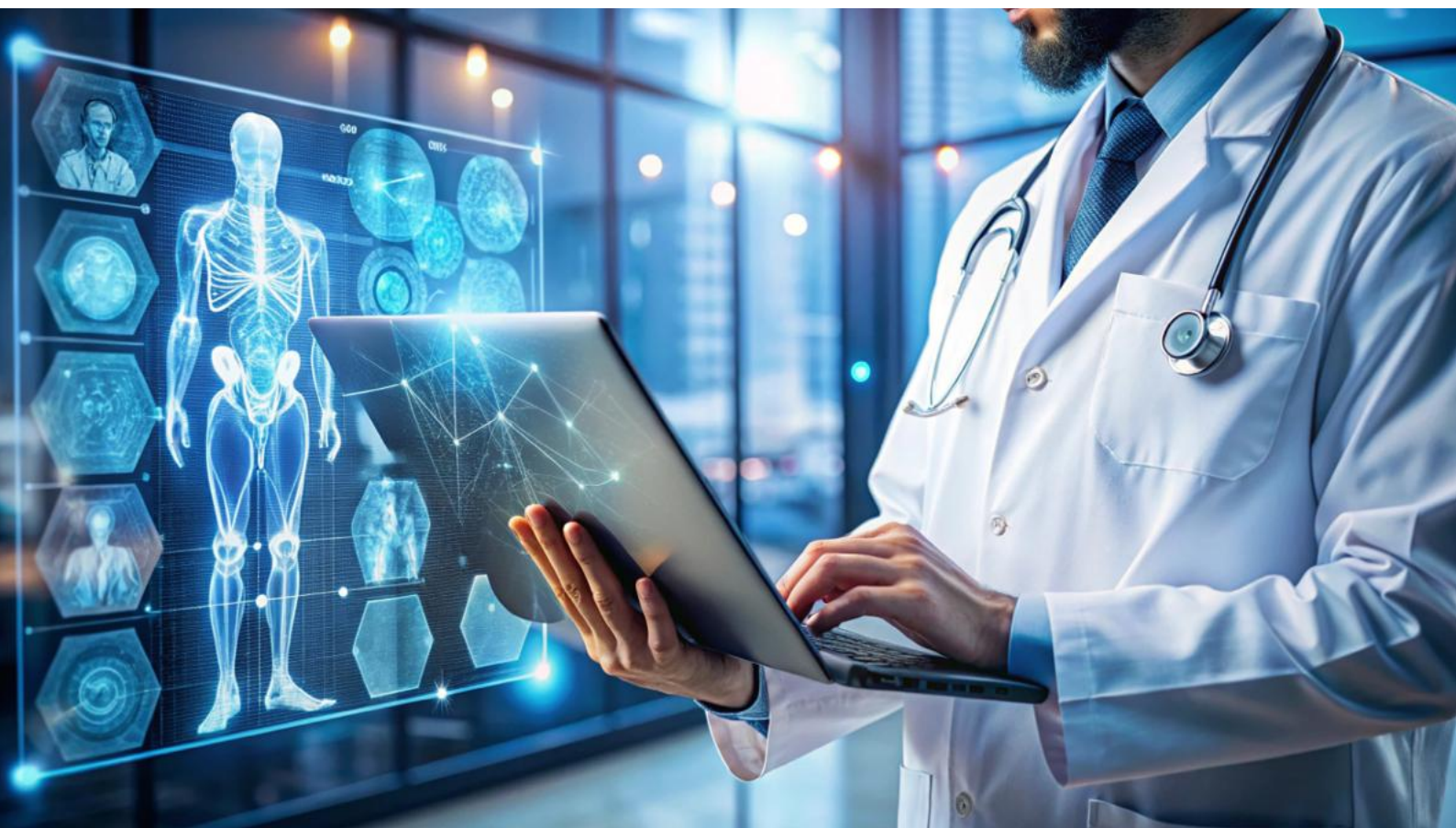
Virtual reality rehabilitation technologies are transforming repetitive rehabilitation exercises into interactive experiences. The use of immersive gaming environments with AI is accelerating recovery for patients from strokes, spinal cord injuries, and neurological disorders by promoting neuroplasticity and tracking motion metrics. Furthermore, assisted rehabilitation living spaces, which are purpose-built residential environment designed for people who require a combination of rehabilitation, physiotherapy, and nursing support are also leveraging virtual reality rehabilitation to improve patient care. For instance, in August 2026, Athulya Senior Care launched its third Geriatric Care Centre in Karnataka that will be leveraging virtual reality-based rehabilitation, along with specialized memory care infrastructure to promote active ageing and holistic wellbeing among senior citizens.

Smartphone-based digital therapeutics are software-driven interventions that aim to support cognitive function, daily functioning, behavioral management, and caregiver support for elderly patients. These interventions offer structured exercises targeting specific cognitive functions, behavioral and emotional support, memory exercises, medication support and reminiscence therapy aimed at combating cognitive decline in senior citizens with dementia and other neurodegenerative conditions. Smartphone-based digital therapeutics are particularly important for India because they can potentially extend geriatric care support for neurodegenerative issues from specialist clinics into homes, assisted-living communities, and rehabilitation centers thus improving healthcare accessibility to the elderly population.



Robotics is a key emerging technology in rehabilitation space. New-generation rehabilitation robots include robotic gait trainers, upper-limb rehabilitation robots, robotic hand therapy systems, lower-limb exoskeletons and soft robotic exosuits. Robotic systems can provide repetitive and measurable therapy while allowing therapists to adjust intensity and monitor performance. For example, Unik Exo developed by Kerala-based Astrek Innovations, is a wearable lower-limb robotic exoskeleton that combines robotics, machine learning and motion-capture technology to support people with lower-limb mobility impairments. The combination of sit-stand-walk functionality, exercise mode, motion tracking, machine learning, modularity and portability makes it particularly relevant to India's emerging rehabilitation-technology ecosystem

Advanced prosthetics technology is moving from passive mechanical devices toward electronically controlled systems. Myoelectric prostheses, including upper and lower limbs are using electromyographic (EMG) signals generated by the muscles to potentially control hand grip patterns, finger positioning and leg movements. Furthermore, these systems are leveraging AI to learn the user's pattern and identify their intended movement. For instance, Kerala-based Bendita Bionics has developed the Angel myoelectric bionic hand that leverages real-time EMG signals monitoring and AI pattern recognition to enable effective hand movements and grip accuracy.





Strategic Insights & Recommendations

India is Transitioning from Healthcare Expansion to Healthcare Innovation

The Union Budget 2026-27 and recent policy initiatives indicate a shift in India's healthcare strategy. Programmes such as Biopharma SHAKTI, BioE3 and the Medical Devices PLI Scheme reflect a coordinated effort to build domestic capabilities across biotechnology, medical devices and advanced manufacturing. By December 2025, products approved under the Medical Devices PLI Scheme had generated ₹13,624.5 crore in cumulative sales, including ₹6,425.4 crore in exports, demonstrating that these initiatives are beginning to generate measurable industrial outcomes. However, translating research into globally competitive products remains the next stage of India's healthcare transformation. The government has already initiated this transition through the establishment of 1,000 accredited clinical trial sites, the expansion of NIPERs, and strong industry–academia collaboration under Biopharma SHAKTI. Recent initiatives such as the ABDM Sandbox, BODH for AI model validation, and regulatory reforms by CDSCO are also creating structured pathways for innovators to test, validate and deploy new healthcare technologies. The next phase should focus on scaling these initiatives by strengthening technology transfer offices, expanding translational research funding, and creating faster pathways for clinical validation and commercialization. This will accelerate the journey from laboratory research to commercially viable healthcare innovations.

The existing PLI scheme has supported domestic manufacturing of finished devices in selected medical-device categories, and the Department of Pharmaceuticals has published approved applicant lists and subsequent modifications. The next-generation PLI should increasingly reward domestic R&D, Indian patents, higher domestic value addition, and the employment of skilled domestic engineers. One of India's biggest vulnerabilities, especially in medical device manufacturing, is dependence on imported components. The ecosystem should develop domestic capabilities for components such as electronics, including sensors, printed circuit boards, microcontrollers; imaging, including detectors, magnets, and X-ray components; and digital technologies, including connectivity modules, and chips. The focus should not be only on assembling finished products in the country, but also on developing a domestic ecosystem for critical components, subassemblies, materials, electronics, and precision technologies. The next strategic step is to move from “Made in India” finished devices toward a deeper “Made in India” medical-device value chain.





Interoperability Will Define the Next Stage of India's Digital Health Transformation

India's digital health ecosystem is now extending beyond patient records to provider and facility digitization. More than 9.85 lakh healthcare professionals and 5.3 lakh health facilities are registered on the ABDM ecosystem, creating one of the world's largest interoperable digital healthcare networks¹. The next opportunity lies in leveraging this network to support population health analytics, clinical research and AI-driven healthcare delivery. Hence, the next phase should focus on increasing interoperability across public and private healthcare providers, and expand participation from diagnostic laboratories, pharmacies and home-based care providers. For a country serving more than 1.4 billion people, digitization alone is not sufficient. The challenge lies in bringing together fragmented data generated across public and private healthcare ecosystems into a unified, interoperable ecosystem. This will enable population health intelligence, strengthen disease forecasting, support evidence-based resource allocation and improve healthcare planning at both national and state levels. The near-term lever for this is expanding participation in the recently launched Unified Health Interface and National Health Claims Exchange, bringing private labs, pharmacies and insurers onto these interoperability layers rather than building new infrastructure from scratch.





Pathways for Scalable Healthcare Growth

India's healthcare expenditure is on a gradual upward trajectory, supported by sustained public investment and healthcare reforms. Healthcare spending is projected to increase from 3.3% of GDP in 2022 to 5% by 2030. While this reflects growing policy emphasis on healthcare, overall expenditure remains much below that of several major economies, including United States (17.2%), Germany (12.3%), China (5.2%), South Korea (8.4%), Japan (10.6%) and the United Kingdom (11.1%)¹⁷, indicating continued opportunities for investment in healthcare infrastructure, workforce development and innovation. The focus must shift from expanding capacity alone to building a self-reliant healthcare ecosystem where domestic innovation, manufacturing and digital technologies improve access for India's population while strengthening the country's position in global healthcare markets.

Over the past few years, significant investments have been made across diagnostics, biotechnology, digital health, artificial intelligence and advanced manufacturing. The next phase of growth will depend less on expanding these capabilities independently and more on integrating them into a unified healthcare innovation ecosystem. Recent initiatives such as the release of 10,000 whole genome sequences through the Genome India Project mark an important step towards building population-specific evidence for precision medicine, while the National One Health Mission reflects a broader shift toward integrated disease surveillance and health security. India is also establishing the research infrastructure needed to support clinical innovation through initiatives such as the National Cancer Tissue Biobank, Cancer Care Imaging Biobank, and the Bharat Cancer Genome Atlas. Scaling these repositories nationally will generate larger, more representative datasets that can enable the development of diagnostics, biomarkers and therapies tailored to the genetic, clinical, and demographic diversity of the Indian population.

India's greatest advantage lies in its unique combination of scale, diversity and digital maturity. Very few countries can generate health insights from such a large and diverse population. If harnessed responsibly, this ecosystem can generate real-world evidence at an unprecedented scale, accelerating the development of new diagnostics, AI-enabled clinical tools, precision therapeutics and preventive healthcare strategies tailored to Indian populations.

Looking ahead, healthcare data will increasingly evolve from a clinical record into a strategic national asset. Integrating diagnostics, genomics, digital health platforms, connected medical devices and artificial intelligence can enable population health intelligence, predictive disease surveillance, precision public health and more efficient healthcare resource allocation. As these capabilities mature, India will be well positioned to address its own healthcare challenges and develop scalable, affordable healthcare innovations for other emerging economies facing similar demographic and disease profiles.

¹⁷ OECD (2025), Health at a Glance 2025: OECD Indicators, OECD Publishing, Paris, <https://doi.org/10.1787/8f9e3f98-en>



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About Medical Fair India

Medical Fair India, Organised by Messe Düsseldorf India, is India's premier trade fair for hospitals, health centers, and clinics, held every year alternatively in Mumbai and New Delhi.

Over the years, Medical Fair India has continuously seen the higher and better-quality attendance around the world, giving the right leads to close deals and ultimately achieve the business goals.

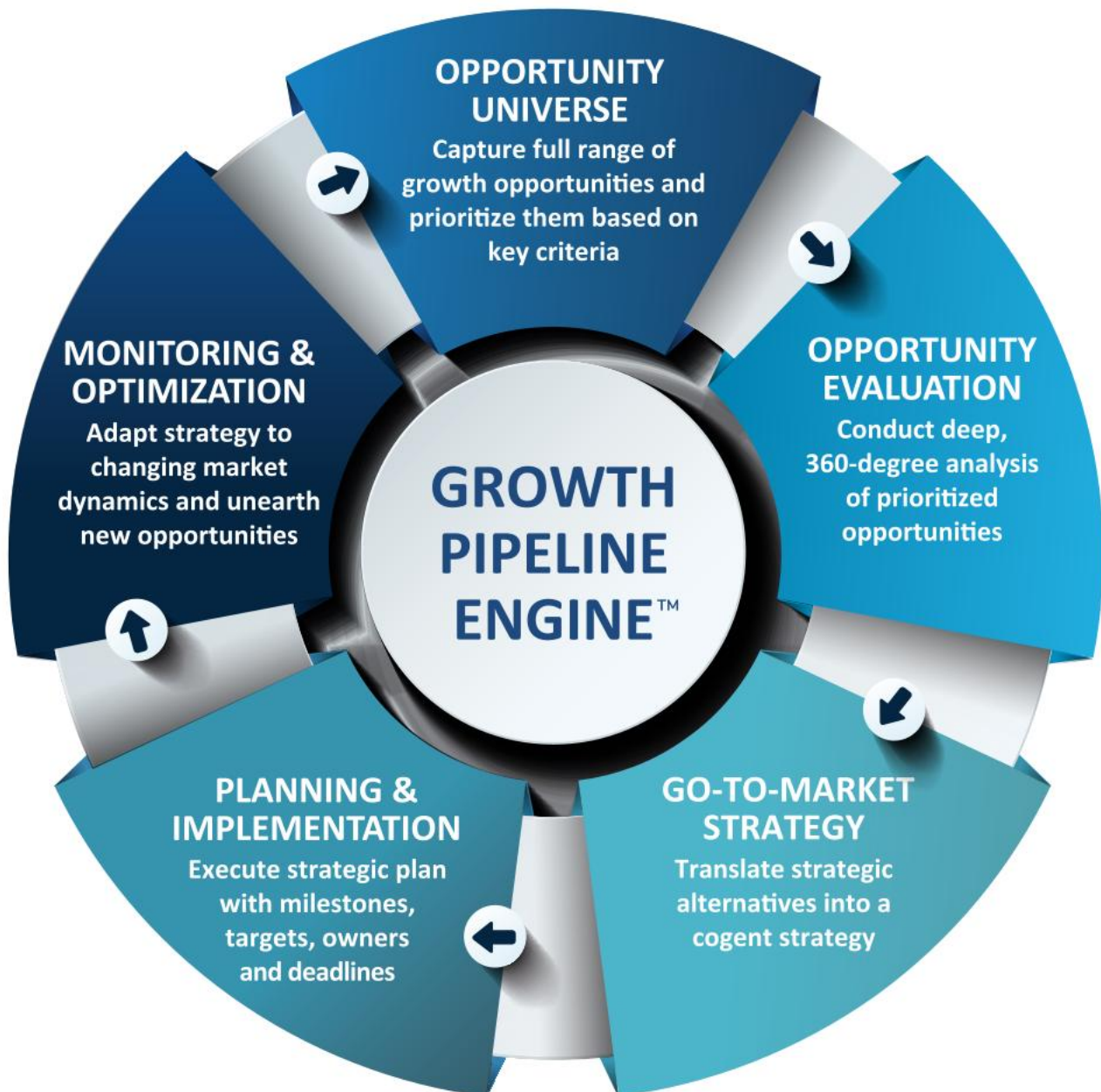
MEDICAL FAIR INDIA is an initiative by MEDICARE ASIA - the central business platform for all attendees to Messe Düsseldorf's current portfolio of nine medical and healthcare exhibitions throughout Asia. It seeks to foster strategic alliances, innovate new offerings and develop customer-centric strategies to engine our portfolio for growth in the vast and diverse continent - Asia. It also seeks to build a strong channel from Asia to our global-leading trade shows in Düsseldorf - MEDICA, COMPAMED, and REHACARE. Through MEDICARE ASIA, attendees will benefit from harmonized offerings that are tailored to their needs, central point of contact and stronger business platforms – both in Asia and Düsseldorf.

About the Organiser

Messe Düsseldorf India Pvt. Ltd. is a wholly owned subsidiary of Messe Düsseldorf GmbH, one of the world's leading trade fair organizers. Messe Düsseldorf India organizes major exhibitions, including Medical Fair India, India Essen Welding & Cutting, wire India, Tube India, METEC India, FAMDENT Show & Awards, glasspex India, glasspro India, ProWine Mumbai, In-Store Asia, and Valve World Expo India. The company also serves as the exclusive representative of Messe Düsseldorf Group in India, assisting Indian firms in participating in Messe Düsseldorf exhibitions worldwide.



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