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SPECIAL ISSUE

Interview
Sugandh Ahulwalia
Board Member and CSO, ISIC Multispecialty Hospital

25 PRIORITIES: ONE HEALTHCARE FUTURE

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Healthcare's fault lines, flash points and the search for balance

As India gears up for the upcoming Union Budget 2026-27, industry is lining up its laundry list of expectations.

For instance, Pavan Choudary, Chairman, Medical Technology Association of India (MTaI) hopes the upcoming budget will address the high cumulative tax burden (BCD, Health Cess, Surcharge, and GST) on essential medical devices which reaches up to 30 per cent in some segments, especially important for products where domestic manufacturing remains limited or absent. He also believes that current tax levels directly inflate the cost of critical care - specifically in surgery, management of NCDs, and diagnostics - pushing families into financial hardship. With rising input costs due to supply-chain disruptions, calibrated duty reductions are no longer a concession, but a public health imperative to ensure affordability. Aligning MedTech Customs and GST structures with other priority sectors will expand healthcare access, improve patient outcomes, and foster a more resilient, globally competitive ecosystem, in Choudary's opinion.

This will of course be opposed by the domestic medtech sector. Rajiv Nath, Forum Coordinator, AiMeD looks forward to decisive policy execution—raising tariffs to 10–15 per cent to support domestic manufacturing, adopting ICMED certification in procurement over foreign approvals, updating labelling to disclose domestic content, and incentivising suppliers with over 50 per cent local value addition.

There are bound to be many more flash points between opposing factions.

For instance, the proposed plan to launch an integrated MBBS-BAMS course, with students graduating from modern/allopathic and Ayurvedic schools of medicine. On the face of it, both streams have their benefits but the integration will need to be phased. If done right, India can create a blueprint for merging the wisdom of ancient traditional medicine systems with modern evidence based protocols. But if done in a hurry, it will end up creating more chaos, and rather than giving India's healthcare workforce and sector an edge, might result in a blunting of this competitive edge. Both systems need to complement without conflict.

2026 will see the tug of war between the online and offline pharmacies played out in the diagnostics sector as well. An RTI activist-pathologist Rohit Jain's contempt petition has alleged that the "illegal health services" of diagnostic services offered by online e-commerce aggregators like Amazon are operating in Delhi in violation of the Clinical Establishments (Registration and Regulation) Act, 2010, and other applicable laws. The Kerala's diktat to fix minimum wages for private hospital workers has also split the sector. While employees are rejoicing that they are finally getting their dues, hospital managements are objecting. There are concerns that smaller healthcare facilities, especially in tier 2 and 3 cities, will not be able to foot the salary bill. The Kerala government's aim is to create a retention strategy to prevent brain drain of healthcare workers overseas, which is understandable as Kerala is probably the state which loses the most of its healthcare workforce to long term international migration.

In spite of the policy friction and flash points ahead in 2026, India's healthcare sector is predicted to show market resilience

In spite of the policy friction and flash points ahead, India's healthcare sector is predicted to show market resilience. Mythri Macherla, Vice President and Sector Head, Corporate Ratings, ICRA predicts that the performance of the Indian hospital industry is expected to remain strong in FY2026 on the back of healthy occupancy and ARPOB. ICRA expects occupancy of its sample set companies to remain robust at 62-64 per cent in FY2026 (63.5 per cent in FY2025), while the ARPOB is expected to expand by 6-8 per cent. Cost optimisation efforts along with an improving case and payor mix will support operating profit margin (OPM) of 22-24 per cent for the sample set companies in FY2026 (23.6 per cent in FY2025). Despite ongoing debt-funded capital expenditure, debt metrics for the sample set companies are expected to remain comfortable backed by healthy cash accruals. ICRA thus continues to have a positive outlook on the Indian hospital industry.

2026 will see the sector grappling with rising medical inflation, even as health insurance coverage widens. Hospitals will have to strive to improve operating profit margins, even as they ramp up infrastructure. The growth spots will be in Tier 2 and 3 cities, but will the metrics be the same, in a population that may not have the same spending power? Some TIer 2 and 3 cities could, in time, become medical tourism hubs. This could enable patients to get better medical care and infrastructure at hopefully reasonable prices, while hospitals improve operating margins thanks to overseas patients.

Kerala's experimentation with health workforce wages could be the start of a movement to value this vital talent pool at all levels. The war for talent will need to be about integrating upskilling initiatives and monitoring productivity, while making the talent a part of the success story. Digital systems can integrate all these initiatives, in step with India's changing demographics and shifting disease burdens. Provided they are rolled out with transparency and empathy.

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INTERVIEW

Ethical neurotech is simple: be accurate, be honest, protect the user

Abhijeet Satani, Research Scientist and Inventor, Brain Computer Interface, shares insights into how neurotechnology and BCIs are moving from futuristic concepts to practical clinical and consumer applications in an exclusive interview with **Swati Rana.** He also discusses the role of AI, ethical innovation, and scalable design in shaping the next decade of brain–computer technologies

The neurotechnology sector has been growing rapidly in recent years. How do you see the current landscape of BCI and neurotech evolving in the next 5–10 years, both in terms of technology and market demand?
Honestly, I think the next decade is when neurotech stops feeling futuristic and starts feeling normal. In hospitals, you'll see brain monitoring become as routine as heart monitoring, lighter devices, wireless systems, and BCIs supporting surgery, rehab and neurological care. On the consumer side, we'll move toward simple, comfortable wearables that don't just show you brain signals, but actually translate them into: "Hey, you're mentally overloaded," or "Your focus is dipping." The real leap won't be hardware; it'll be AI making brain data easy and useful for everyday life.

What are some of the most exciting recent breakthroughs in neurotechnology that could soon become mainstream in clinical or consumer markets?
Actually, a few things excite me. Non-invasive EEG has become shockingly good, with dry electrodes, fast setup, and genuinely clean data. Then there's minimally invasive BCIs helping people with paralysis communicate or move again, which is remarkable. And finally, closed-loop systems: devices that sense your brain state and adjust therapy or feedback in real time. All three are moving from research labs to actual users, which wasn't imaginable a few years ago.

BCIs are moving from niche medical applications to consumer-focused solutions. What do you think are the key drivers behind this shift, and how can companies ensure that these technologies are both effective and scalable?
A mix of things. The hardware just isn't intimidating anymore. People care about mental health and performance as much as fitness now. And AI can make sense of brain signals instantly, that was the missing piece.

The challenge for companies is to be honest about what the tech can do. Keep the experience simple, keep the claims grounded, and let science lead the way.

In your research, you mention applications for both clinical and lifestyle uses. Can you break down how the market for BCI technology will differ between these two domains? What are some challenges in making BCIs effective for both healthcare providers and everyday consumers?
Clinicians need precision and reliability; their decisions depend on it. Consumers need comfort, affordability and ease.

So the same technology has to behave differently: medical systems must be strict and exacting; consumer systems need to be friendly and lightweight. The tricky part is balancing those two worlds without compromising either.

How do you see neurotechnology being applied to emerging conditions like cognitive decline, metabolic health, and stress disorders?
Are there any specific therapeutic areas that are currently underexplored but hold significant promise?

We're learning that the brain shows subtle changes long before symptoms appear. So, neurotech may become an "early warning system", spotting cognitive fatigue, stress dysregulation or even metabolic shifts before they become real problems.

These areas are still underexplored, but the potential is huge.

One of your innovations is the Brain Control Interface Module. Could you elaborate on its clinical use cases today and the road ahead for scaling this technology for broader consumer applications?
Right now, it's helping doctors, especially in neurosurgery and neuro rehab, understand the brain's state more clearly during critical moments.

The long-term plan is to take the same intelligence and put it into smaller, everyday devices so anyone can track their mental load, stress or cognitive state without needing a medical setting.

Can you walk us through how AI integrates with neurotechnology to provide actionable insights, and how companies can ensure the technology is both ethical and accurate in these applications?
AI cleans the noise, spots the patterns, and turns raw brain activity into something meaningful. But it has to be built carefully, with transparent models, good quality data, and absolutely no exaggeration of what the tech can do.

Ethical neurotech is simple: be accurate, be honest, protect the user.

Do you foresee AI-powered neurotechnology being used to monitor or optimise cognitive performance in high-stakes industries such as healthcare, finance, or even elite sports? What challenges must be overcome to make this a practical reality?
Definitely. These fields are all about sustained attention and good decisions under pressure. Real-time brain monitoring could flag fatigue, overwhelm or cognitive dips before mistakes happen. The challenge is making the devices reliable in dynamic environments, where people are moving, stressed or multitasking. But we're getting closer.

What role do startups and tech giants play in accelerating the commercialisation of neurotechnology? Are there any notable partnerships or trends in the industry that could speed up the adoption of these technologies?
Startups bring bold ideas, they move fast, take risks and experiment. Big tech brings scale and trust. When the two collaborate, things move quickly. That's when neurotech stops being niche and becomes something the world actually uses.

Finally, as a leading innovator in this space, what are your long-term goals for how neurotechnology and AI can improve human cognition, health, and well-being, and how can industry stakeholders align to make these goals a reality?
For me, the dream is simple: neurotech that feels as natural as checking your heart rate or your steps. Tools that help us understand our minds, catch issues early, and support better emotional and cognitive health.

And for the industry, I hope we move toward accessibility and honesty, making brain technology something that empowers people, not something that intimidates them. If we get that right, neurotech can genuinely elevate how we think, feel and live.

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INTERVIEW

Large private hospitals can play an important role in strengthening preventive health and community awareness

Indian Spinal Injuries Centre (ISIC) recently announced the launch of its new identity: ISIC Multispeciality Hospital. **Sugandh Ahulwalia,** Board Member and Chief Strategy Officer, ISIC Multispecialty Hospital talks about this transition in an interview with **Kalyani Sharma**

ISIC is transitioning from a specialised center to a multispeciality hospital. What is the core strategic vision driving this transformation?

The transition of ISIC into a multispeciality hospital is a natural extension of the founding vision laid down by Major H. P. S. Ahluwalia. His aspiration was to create a healthcare institution that provided comprehensive and dignified care under one roof and not remain limited to spinal injury management alone.

Over the last three decades, ISIC has grown into a leading centre for spinal injuries, orthopaedics, and neuro-musculo-skeletal disorders. At the same time, India's healthcare needs have evolved. The rise in lifestyle diseases, chronic illnesses, trauma cases, and the growing needs of an ageing population require a more integrated and multidisciplinary care model.

Our strategic vision is therefore to provide a full spectrum of speciality services while preserving the heart of ISIC, which has always been compassion, rehabilitation excellence, and patient centricity. The hospital is expanding into Cardiac Sciences, Renal Sciences, Neurosciences, Gastro Sciences, and subsequently Oncology. Throughout this transition, the institution continues to remain anchored in its EVEREST values which represent Excellence, Vision, Empathy, Resilience, Ethics, Service, and Teamwork. These values ensure that the organisation grows without losing the ethos on which it was built.

How is ISIC leveraging technologies like AI to create a more inclusive and patient-centric system, and what defines a future-ready hospital in your view?

At ISIC, technology is viewed as a way to improve access, convenience, transparency, and inclusivity in healthcare. The hospital has adopted an integrated digital ecosystem that includes a Hospital Information System, WhatsApp based patient communication, mobile applications for accessing reports and appointments, and digitised billing and admission processes.

Artificial Intelligence is further being explored for deployment to support clinical decisions, analyse operational patterns, enhance patient flow, and strengthen rehabilitation through digital tools. These innovations would help create an environment where patients receive information easily, where elderly individuals and people with disabilities can navigate the system with reduced dependency, and where caregivers can focus more on personalised attention.

A future-ready hospital is one that uses technology to make healthcare easier rather than more complicated. It is defined by transparent communication, connected care pathways, predictable and reliable systems, accessible infrastructure, and an approach where precision medicine and empathy coexist. For us, the most vulnerable patients must experience the greatest ease of care, and this principle guides our digital strategy.

How do you see the role of strategic healthcare leadership evolving in the next five years?

The role of healthcare leadership will transform significantly over the coming years. Leaders will need to combine financial responsibility, strong ethical governance, clinical sensitivity, digital literacy, and emotional intelligence.

At ISIC, this balanced philosophy is reflected in two important organisational initiatives-

The first is the Everest Base Camp programme. Every year, selected employees undertake a two week expedition to the base of Mount Everest. This journey, inspired by Major Ahluwalia's own experience, strengthens discipline, perseverance, teamwork, and emotional courage. These qualities form the foundation of leadership in a complex healthcare environment.

The second initiative is Anantam, the institution's structured employee well-being and emotional resilience programme. Anantam is based on the understanding that it is difficult to pour from an empty cup. Caregivers who are mentally centred and emotionally supported are better equipped to deliver compassionate and attentive care. The programme emphasises mindfulness, work life balance, reflective practice, and emotional well-being.

In the next five years, successful healthcare leaders will be those who can protect clinical quality while ensuring financial sustainability, support the autonomy of clinicians, guide digital transformation with sensitivity, and build emotionally resilient teams that remain committed to the organisation's purpose.

How can large private hospitals play a stronger role in regional community health and preventive care?

Large private hospitals can play an important role in strengthening preventive health and community awareness. Beyond delivering tertiary care, they have the capacity to influence behavioural change, improve early detection, and support accessibility for vulnerable populations.

ISIC's community initiatives illustrate this approach. The hospital runs preventive screening programmes, health education sessions in schools and colleges, first responder training in CPR and AED use, and awareness programmes on spinal and orthopaedic safety. It also supports accessibility by installing ramps, grab bars, and mobility aids in old age homes and community facilities. Ergonomic and workplace health programmes help reduce preventable injuries and chronic conditions.

By working closely with public institutions, civil society organisations, and local communities, private hospitals can help build a more inclusive ecosystem. Strengthening prevention, early detection, accessibility, and public awareness can significantly reduce the national healthcare burden and improve long term health outcomes.

With your background, how crucial is the integration of expertise from non-clinical fields in improving patient experience and operations?

The integration of disciplines such as hospitality, behavioural sciences, technology, and operations management is essential to the functioning of a modern hospital. Patient experience today is influenced not only by clinical outcomes but also by the environment, communication, service quality, and the emotional intelligence of the care teams.

At ISIC, these non-clinical disciplines are incorporated through empathetic communication training, digital patient navigation tools, experience oriented campus design, and process excellence frameworks that improve flow and reduce delays. Anantam, our employee wellness programme, plays an important role in sustaining compassionate care. It reminds us that caregivers need emotional balance and psychological well-being to offer meaningful support to patients. As we often say within ISIC, it is difficult to pour from an empty cup.

The future of patient experience lies in creating an environment where clinical excellence is complemented by comfort, dignity, clarity, warmth, and emotional support. ISIC remains deeply committed to this combined approach.

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Smart automation, compassionate care: How Rajagiri Hospital Kochi is redefining diagnostic excellence

Rajagiri Hospital Kochi, guided by its mission of delivering affordable quality care, has taken a decisive step towards future-ready healthcare by investing in Roche Diagnostics' Total Lab Automation (TLA)

In today's healthcare landscape, diagnostics play a defining role in shaping clinical outcomes, patient confidence, and overall treatment efficiency. Rajagiri Hospital Kochi, guided by its mission of delivering affordable quality care, has taken a decisive step towards future-ready healthcare by investing in Roche Diagnostics' Total Lab Automation (TLA). This strategic move is not merely about upgrading technology; it is about strengthening trust, improving accuracy, and ensuring that high-quality diagnostics remain accessible to all.

At the heart of this transformation is the Rajagiri SmartLab—an end-to-end automated laboratory designed to combine precision, efficiency, and scalability. According to Fr. Johnson Vazhappilly CMI, Executive Director and CEO, Rajagiri Hospital, this investment reflects the institution's long-term vision of sustainable, patient-centric healthcare. "Quality is ensured through precision and reliability, dramatically reducing the potential for human error. The affordability stems from the massive gains in efficiency and standardisation," he says.

By streamlining processes and reducing wastage through minimal touchpoints, the hospital is able to offer world-standard diagnostic services without escalating costs for patients.

One of the most significant advantages of the SmartLab lies in its ability to eliminate pre-analytical errors, which may be common in conventional laboratories. Automation enables higher consistency and reliability in test results. Rajagiri Hospital's lab addresses this challenge through preanalytical automation with image capture technology, tube type detection, and volume detection. This system automatically flags and holds outlier samples, such as those with insufficient volume or compromised quality, ensuring that only valid samples proceed for analysis. The result is error-free diagnostics from the very start, with robotic precision replacing subjective human inspection.

Despite being compactly built over just 1,300 square feet, the SmartLab is scalable to deliver up to 70,000 tests a day. This unique combination of a small footprint and high throughput positions the hospital to effectively manage the anticipated 18–20 percent CAGR growth in Kerala's medical tourism sector over the next five years. The design allows efficient use of expensive real estate while maintaining superior quality standards, making it a benchmark for standalone hospital labs in high-demand regions.

Fr. Johnson Vazhappilly CMI, Executive Director & CEO, Rajagiri Hospital

Beyond infrastructure and automation, the transformation has also reshaped the role of laboratory professionals. With repetitive manual tasks handled by automation, lab technicians are now focused on validation, quality assurance, and process improvement. The navify Lab Operations system supports this shift by providing a fully automated, decision-supported workflow. Technicians monitor sophisticated instruments, leverage digital dashboards, and engage in complex problem-solving—elevating their roles from manual operators to skilled analysts and quality experts.

From a clinical perspective, the impact of TLA extends far beyond faster turnaround times. Dr Gigy Kuruttukulam, Medical Director, Rajagiri Hospital, emphasises that the real value lies in the confidence it offers to both clinicians and patients. "While faster Turnaround Time (TAT) is an operational benefit, the TLA system delivers something more profound: unquestionable confidence in the diagnosis," he explains.

Standardised processes and digitally enabled workflows ensure that results are uniform, highly reproducible, and instantly trustworthy, allowing clinicians to act faster and with greater certainty.

This reliability is especially crucial for international patients seeking care in a competitive medical tourism market. Accurate, timely diagnostics minimise the risk of misdiagnosis or treatment delays, offering peace of mind to patients who are far from home. The reassurance that care is guided by precision and trust enhances Rajagiri's reputation as a preferred healthcare destination.

Importantly, Rajagiri Hospital has been mindful of concerns that advanced automation may feel impersonal or costly. The hospital addresses this by reinforcing that technology is a means to serve compassion. Reduced errors, fewer sample redraws, and quicker results directly translate into lower patient anxiety and a smoother care journey. Process optimisation also helps maintain affordability, ensuring that patients perceive strong value for money alongside high-precision diagnostics.

For Dr Sunitha Thomas, Lab Director, Rajagiri Hospital, the choice of automation partner was as much about expertise as equipment. "We weren't just acquiring equipment; we were collaborating to shape a future," she notes, highlighting the importance of Roche's global experience and digital ecosystem. With thousands of automation systems installed worldwide, the partnership ensures that Rajagiri's lab is aligned with best-in-class global workflows and remains future-ready.

Through smart automation, Rajagiri Hospital demonstrates that advanced diagnostics and compassionate, affordable care can go hand in hand setting a new standard for laboratory excellence in India's evolving healthcare ecosystem.

25 PRIORITIES: ONE HEALTHCARE FUTURE

SPECIAL ISSUE

As **Express Healthcare** completes 25 years of shaping conversations and driving thought leadership in India's healthcare sector, the January 2026 special issue offers an opportunity not only to reflect on this transformative journey but also to spotlight the path ahead.

It highlights 25 healthcare priorities that can accelerate India's progress towards becoming a global healthcare powerhouse by 2047, aligning with the vision of Viksit Bharat

Strengthening primary care

Recognising the importance of strengthening health and transitioning towards prevention and wellness, the Government of India had launched the Ayushman Bharat Comprehensive Primary Health Care Programme in 2018, which transformed primary health care delivery by upgrading existing health sub-centres and primary health centres into Health and Wellness Centres, now renamed as Ayushman Arogya Mandirs.

Many companies have supported it through their CSR budgets. Abbott's aim to upgrade over 300 Primary Health Centres (PHCs) across 12 states in India by the end of 2026 is one such venture. This initiative, in collaboration with Americares India Foundation, will potentially benefit 9.8 million people by enhancing access to quality and affordable healthcare in un-

Poonam Sharma

derserved communities. Since the programme's inception in 2022, Abbott has upgraded 216 PHCs.

Poonam Sharma, Director-Global Citizenship and Sustainability, Abbott India said, "Upgrading PHCs advances access to affordable healthcare services and infrastructure, and fosters proactive health-seeking behavior within communities, promoting early diagnosis and effective treatment. This is particularly crucial to help address India's significant burden of non-communicable diseases (NCDs). Demonstrating the impact, we have seen positive outcomes with increased footfall for availing health services in these upgraded centres. This effort aligns with Abbott's goal of expanding access to quality care in India."

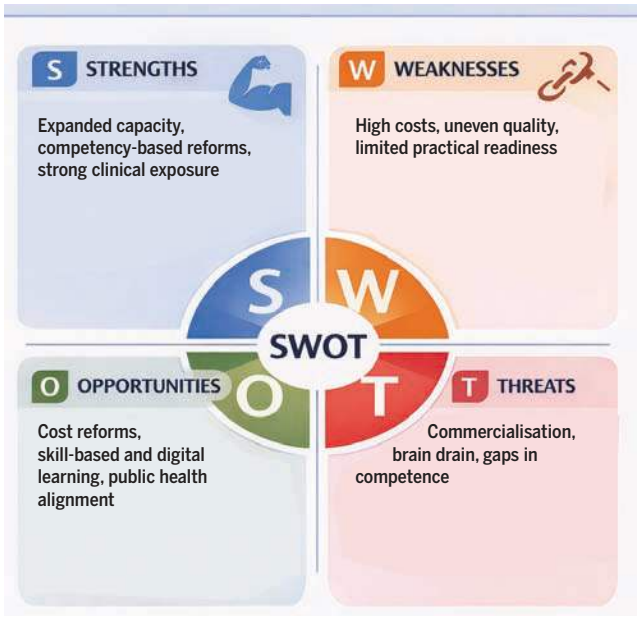
An analysis of the first 127 upgraded PHCs surveyed at the end of 2024 revealed a significant rise in patient trust and service uptake. There was a close to 76 per cent increase in laboratory diagnostic tests, enabling earlier and more accurate disease detection. A 67 per cent increase in visits by patients with hypertension and 59 per cent increase in outpatient consultations for patients with diabetes, reflected improved management of chronic diseases. Similarly, an 18 per cent overall increase in patient outpatient (OPD) attendance, showed a growing confidence in public primary healthcare facilities and a 9% rise in institutional deliveries indicated stronger maternal and child health services.

From expansion to excellence: The next phase of medical education

India's medical education system is a critical priority, but it is also at a crossroads. Over the past decade, India has expanded the number of medical colleges and undergraduate and postgraduate seats. But the more pressing challenge now is to make medical education more affordable, relevant, and aligned with the realities of healthcare delivery on the ground.The Economic Survey 2024-25 draws a direct connection between medical education and healthcare affordability. It states, "By reducing the cost of medical education, we can contribute to lowering healthcare service costs." It also flags a persistent concern, "fees remain high – at Rs 60 lakh to one crore or more in the private sector." Such high costs limit access for many students and push thousands of aspiring doctors to pursue

Dr Abhijat Chandrakant Sheth
Source: ANI

medical education overseas. The Survey underlines the equity challenge, noting that "if universal coverage is the goal, prioritising cost and equity in medical education will be key to achieving it."However, reform cannot stop at affordability alone. There is growing recognition that how doctors are trained matters just as much as how many are trained. Speaking at the 11th Convocation Ceremony of the Atal Bihari Vajpayee Institute of Medical Sciences (ABVIMS) and Dr Ram Manohar Lohia Hospital, Dr Abhijat Chandrakant Sheth, Chairman, National Medical Commission, emphasised the need for "innovative initiatives ... such as integrating skill-based and virtual learning alongside traditional physical education, to fulfil the requirements of competency-based medical education."



Quoted in a PIB release, he stressed that "medical education must focus on creating competent Indian medical graduates who can meet the healthcare needs of the country," reinforcing the shift from exam-oriented learning to outcome-driven training.Together, these insights point to a clear direction.

If India wants affordable, accessible and high-quality healthcare, reform must begin with medical education. Lowering financial barriers, strengthening clinical exposure, investing in faculty development, and embracing competency-based, technology-enabled learning are essential.

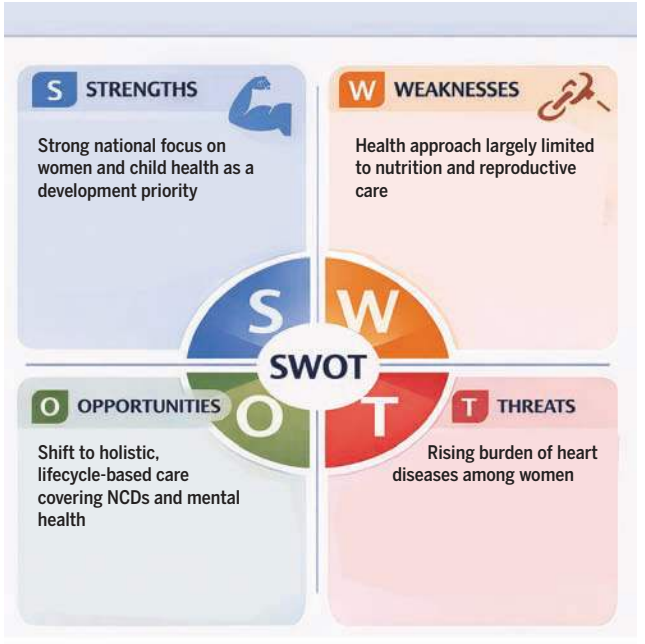
Women and child health: Foundation of Viksit Bharat

As India advances towards the vision of Viksit Bharat 2047, women and child health must move from being a sectoral concern to a central development priority. Women's health outcomes directly influence family well-being, workforce participation, productivity, and long-term economic resilience.

Dr Poornima Prabhakaran, Deputy Director and Head-Environmental Health and Senior Research Scientist, Centre for Chronic Disease Control (CCDC), explains, "From the millenium development goals to the sustainable development goals, the focus on maternal and child health was centred on addressing overall improvements in health of women and children as a key strategy for overall health and economic progress everywhere.

Dr Poornima Prabhakaran

The vision for Viksit Bharat to transform the country into a self-reliant and prosperous economy by 2047 outlines key priority areas as : Zero-poverty, hundred percent good quality education, access to high quality, affordable and comprehensive healthcare, hundred percent skilled labour with meaningful employment, seventy percent women in economic activities and farmers making our country the "food basket" of the world. Central to all of these stated aspirations is the strategic focus on the health of our women and children."



She highlights that, "From improved nutritional health, better antenatal care, enhanced focus on pregnancy and lactation phases to improve reproductive and child health outcomes and moving to a distilled focus on overall women's health including cardiovascular health will translate into healthier families and societies. Initiatives such as the "Swasth Nari, Sashakt Parivar Abhiyaan" and the RMNCH-A programme signal a shift towards comprehensive, lifecycle-based care.

As Dr Prabhakaran notes, "the focus must shift to holistic health that includes a focus on cardiometabolic health, cancers and mental health of women thereby ensuring the goal of healthier women for healthier societies for a Viksit Bharat."

Nursing and allied health workforce strengthening

As India charts its journey towards becoming a global healthcare powerhouse by 2047, healthcare upskilling particularly of nurses and allied health professionals will be one of the most decisive levers of transformation. While infrastructure, technology, and innovation continue to advance, the strength of India's healthcare system will ultimately rest on the availability of skilled, future-ready caregivers who can meet both domestic needs and global demand.

India is already recognised as a key supplier of healthcare talent to the world, especially in nursing and allied health services. However, rising demand, ageing populations across geographies, and increasing complexity of care delivery are exposing gaps in training capacity, curriculum relevance, language readiness, and ethical deployment pathways. Addressing these gaps

Mayank Kumar

requires a shift from fragmented skilling efforts to a structured, standards-driven national strategy that aligns education with global healthcare expectations.

As Mayank Kumar, CEO and Co-Founder, BorderPlus, underscores, "If India wants to emerge as a global healthcare leader by 2047, strengthening the nursing and allied health workforce has to be a clear national priority. Demand for skilled caregivers within India and abroad is rising fast, and this requires us to expand training capacity while ensuring quality and ethics stay intact. Our curriculum also needs an upgrade built not just for India, but aligned with global standards, and designed for an ageing world where care is as important as cure." This means modernising education, integrating technology into training, and embedding language proficiency and cultural readiness early in the learning journey, so that Indian caregivers are prepared to work confidently in multilingual, multicultural environments. Kumar also mentions, "Indian nurses are already respected worldwide for their competence and compassion; what they need now are structured, worker-first mobility pathways and deeper collaboration between government, industry, and global healthcare partners. When we focus on building sustainable, globally competitive careers not just filling roles, we strengthen families, our domestic health system, and India's global reputation. Investing now in better standards, language readiness, and digital innovation will help India become one of the world's most trusted healthcare talent hubs."

Biowaste management: Pillar of environmental health

India's expanding healthcare infrastructure spanning hospitals, diagnostics, medical colleges and laboratories has led to a sharp rise in biomedical waste generation. When managed responsibly, this waste can be neutralised without harm. However, gaps in segregation, treatment and disposal can turn healthcare facilities into sources of environmental and public health risk.

Dr Souradeep Chowdhury

As Dr Souradeep Chowdhury, Associate Consultant, Internal Medicine, Medanta Hospital Noida, points out, "Biomedical waste incinerator operations that are poorly managed are an ongoing public health hazard; a less visible threat to the wellbeing of the planet...because these incinerators emit a variety of harmful toxic pollutants: Dioxins, Furans and Heavy Metals...that persist in the environment (i.e., Air, Soil, Food Chain) and are linked to the development of certain cancers, respiratory illnesses, hormone disruption...etc. All of these toxins disproportionately affect plant workers and surrounding communities. Additionally, poorly managed biomedical waste also serves to increase antimicrobial resistance (AMR) through the seepage of antibiotic residues, resistant bacteria and antimicrobial resistance genes into hospital wastewater and then into municipal wastewater, creating the optimum selection pressure to promote continued spread of multidrug-resistant organisms (MDROs).

Therefore, good segregation, disinfection and treatment of hospital wastewater are critical elements of AMR control strategies within a One Health framework. Fortunately, new technologies are emerging which provide a more efficient, sustainable method of controlling medical waste (ex: Plasma Pyrolysis, Microwave Disinfecting and Advanced Autoclave/ Shredding systems) as compared to the traditional incineration processes...and when used in conjunction with sound regulation and renewable energy, these technologies will allow developing nations to migrate towards safer, more sustainable, environmentally-friendly and future-ready biomedical waste management applications."

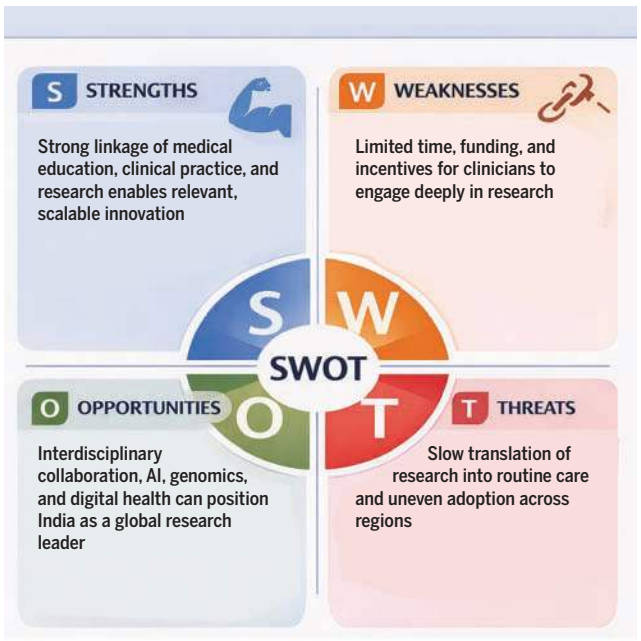
From classrooms to clinics: Strengthening research and innovation in Indian healthcare

Research and innovation will be central to India's journey towards becoming a global healthcare powerhouse by 2047. When medical education is linked with clinical practice, research stays relevant and innovation becomes a sustained national capability.

Dr Yashraj P. Patil

Dr Yashraj P. Patil, Trustee & Treasurer, Dr. D. Y. Patil Vidyapeeth (Deemed to be University), Pimpri, Pune suggests, "For India to lead globally, the foundation must be a strong academic and research culture within medical institutions. Interdisciplinary collaboration will also accelerate progress. Partnerships between medicine and engineering can strengthen device development. Collaboration with data science can strengthen clinical decision support and health system planning. Such models create solutions that are practical, scalable and aligned with India's needs.

Innovation will expand India's leadership through precision and scale. Genomics can support tailored prevention and treatment. Artificial intelligence can assist early detection and clinical decision making when it is validated and used with accountability. Advanced diagnostics can improve speed and accuracy. Digital health platforms can strengthen continuity of care and support clinicians with better information. When these capabilities are guided by ethics and patient safety, they raise standards and enable India to contribute credible evidence to the global community.



Research that serves population health is equally important. Community based studies and implementation research can strengthen care for non communicable diseases and infectious diseases. This work also supports maternal and child health and helps convert proven practices into routine care across diverse settings.

By 2047, India's influence will be shaped by our capacity to generate knowledge and validate new approaches. It will also depend on how effectively we translate innovation into routine care, with medical education continuing to be the cornerstone of this national ambition."

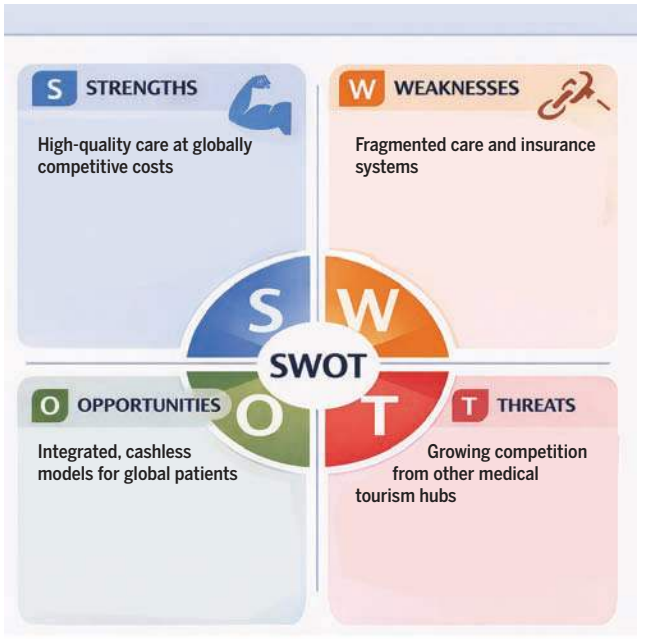
India's medical tourism moment: Integrating care, insurance, and technology

Medical tourism is emerging as a key pillar of India's ambition to become a global healthcare destination, driven by world-class clinical outcomes, cost efficiency, and a rapidly advancing digital health ecosystem. As international patients increasingly seek reliable, affordable, and seamless care experiences, India's ability to integrate healthcare delivery with insurance and technology will define its competitive edge.

"If India is to truly emerge as the world's healthcare hub by 2047, we must lead in building the most inclusive, tech-enabled, and outcome-driven healthcare system on the planet. In many ways, the foundation for this transformation has already been laid by policy-makers," said Alok Bansal, Co-founder and Executive Vice Chairman, PB Fintech.

Alok Bansal

He further adds, "The next stage of growth lies in creating an integrated model where care delivery and insurance are seamlessly aligned - removing friction, improving transparency, and most importantly, delivering better health outcomes for every Indian or international patient choosing India for care. The Health Maintenance Organisation (HMO) model, like PB Health ensures that incentives are aligned across the board. Preventive healthcare becomes a win-win, where hospitals and health systems benefit when people stay healthy, not just when they fall ill.



Medical tourism will play a pivotal role in this journey. India already offers world-class clinical outcomes at globally competitive costs, but the next frontier lies in building a frictionless, fully cashless, and assurance-driven ecosystem for international patients. The economic multiplier effect - from hospitals to hospitality to health-tech - will accelerate our progress toward becoming a global healthcare powerhouse. The future of healthcare in India must be affordable, proactive, cashless, transparent, and designed around the individual's needs - whether that individual is an Indian citizen or an international patient choosing India for care."

Forward-looking policies to drive 'Make in India'

India's ambition to emerge as a global healthcare leader by 2047 has placed the medical device sector under sharp focus. Rajiv Nath, Forum Coordinator at the Association of Indian Medical Device Industry (AiMeD) believes the sector is at a decisive turning point..

"The vision of Viksit Bharat cannot be realised without a strong, self-reliant and innovation-driven domestic manufacturing ecosystem for medical devices. We have the talent, engineering capability, and entrepreneurial drive to emerge among the world's top five manufacturing hubs yet our industry continues to grapple with the consequences of high import dependence, cost disabilities and policy asymmetry."

According to Nath, policy imbalance and structural costs continue to limit India's competitiveness despite clear capabilities. Addressing these gaps is essential if domestic manufacturers are to scale and compete sustainably.

Rajiv Nath

"For India to truly become "Atmanirbhar" in medical devices, we need predictable, supportive, and forward-looking policies that encourage local value addition. A calibrated tariff structure, similar to what enabled India's emergence as a global mobile phone manufacturing hub, can create the right conditions for domestic production to scale sustainably. Rationalising duties on raw materials while modestly increasing tariffs on finished devices will help correct the inverted duty structure and safeguard investments made by Indian manufacturers."

Beyond tariffs, the sector requires stronger quality systems, deeper R&D investment, and reliable design and testing infrastructure to compete globally.

"With the right reforms and empathetic support from policymakers, clinicians, and consumers, India can reduce import dependence to below 30 per cent over the next decade and establish itself as a trusted global hub for high-quality, affordable and innovative medical devices," states Nath.

Nath believes transparent procurement, faster clearances, and Make in India preference can unlock confidence, attract global collaborations, and position domestic manufacturers as integral partners in international supply chains.

PPPs: A catalyst for building future-ready healthcare

Partnerships have always played a catalytic role in strengthening India's healthcare architecture. But as we look toward 2047 with a clear ambition to build a globally competitive, truly patient-centred system - their importance becomes even more profound.

NATHEALTH has taken a practical look at what it will take to scale PPPs meaningfully and what emerges is a tremendous opportunity.

Dr. Sangita Reddy, Senior Vice President, NATHEALTH & Joint Managing Director, Apollo Hospitals informs that India has the headroom to expand hospital-led PPPs at scale - adding nearly 100,000 beds in Tier-2 and Tier-3 cities, creating over 200,000 direct jobs, attracting USD 12 billion in investment, and enabling care for 10 million more patients in the near to medium term.

Dr Sangita Reddy

She underscores, "These are not abstract projections; they are achievable outcomes that can significantly accelerate our journey towards Arogya Bharat and universal health coverage.

To unlock this, we must strengthen the PPP ecosystem with clarity, predictability, and shared accountability.

- Robust referral pathways from government facilities will enhance confidence for operators.

- Systematic mapping of centrally located land parcels, along with inflation-linked Viability Gap Funding (VGF) support, can materially improve project viability.
- Timely reimbursements, asset-light co-creation models, and unbundled contracts that allow specialised partners to play to their strengths will further expand participation.
- And equally important are governance reforms: single-window clearances, standardised contracts, periodic revision of scheme rates, and greater use of digital enablers such as remote monitoring and teleradiology to drive efficiency, transparency, and oversight.

If we build these enablers with intent, PPPs can become one of India's most powerful levers to expand equitable access, accelerate capacity creation, and build long-term resilience. When public and private sectors work collectively - guided by a shared mission of ensuring that high-quality care reaches every citizen, irrespective of geography in India. Together, we can build a healthcare system that is future-ready, innovation-led, and capable of serving the needs and aspirations of the coming generations."

Genomics: Shaping the future of healthcare

As India advances towards the vision of Viksit Bharat, genomics-driven precision medicine is emerging as a powerful force reshaping the country's healthcare landscape. By moving beyond one-size-fits-all treatment models, genomics is enabling a shift from reactive, symptom-based care to predictive, preventive and personalised healthcare—an approach critical for improving outcomes in both common and complex diseases.

India's growing disease burden, marked by cancer, rare genetic conditions, chronic illnesses and infectious diseases, demands deeper biological insights to guide clinical decision-making. Increasingly, clinicians are recognising the value of genomics in accurately classifying diseases, identifying underlying risk factors and tailoring therapies to individual patients. This evolution is helping reduce diagnostic uncertainty, avoid trial-and-error treatments, and improve long-term patient outcomes.

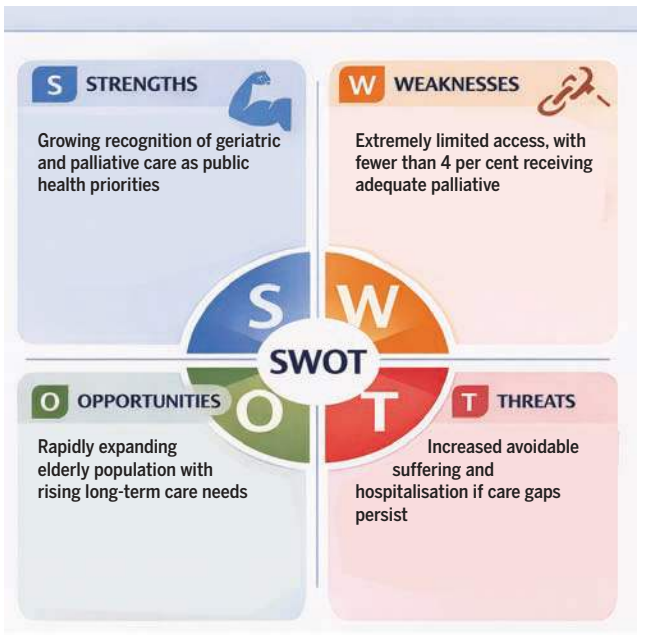
Vedam Ramprasad

As Vedam Ramprasad, PhD, CEO, MedGenome, explains, "Genomics, and largely omics, is transforming India's healthcare system and shifting our approach from symptom-based treatment to predictive, preventive, and personalised care. Today, more clinicians are adopting genomics into their clinical practice, using genetic insights to classify diseases more accurately and to guide treatment choices in complex disease areas such as oncology, rare genetic disorders, reproductive health, and infectious diseases. From identifying actionable mutations and pathogenic variants to inherited risks and chronic disease predispositions, omics-led early intervention is transforming patient care and driving improved healthcare outcomes across multiple disease areas."

"Genomic testing in India has come a long way over the past decade. However, its penetration remains below global levels. As we advance toward the goals of Viksit Bharat, integrating genomics into routine healthcare can significantly improve early risk detection, expand the use of targeted therapies, and raise the overall standard of care. With growing awareness, better affordability, and active collaboration between industry and government, omics can become a core component of India's healthcare ecosystem and an important driver of improved public health", he added.

Scaling geriatric and palliative care

Ishaan Khanna



As India advances towards the vision of Viksit Bharat 2047, the healthcare system must urgently adapt to the realities of a rapidly ageing population and a growing burden of chronic disease. Scaling geriatric and palliative care is no longer a niche concern—it is central to building a humane, resilient and future-ready public health ecosystem.

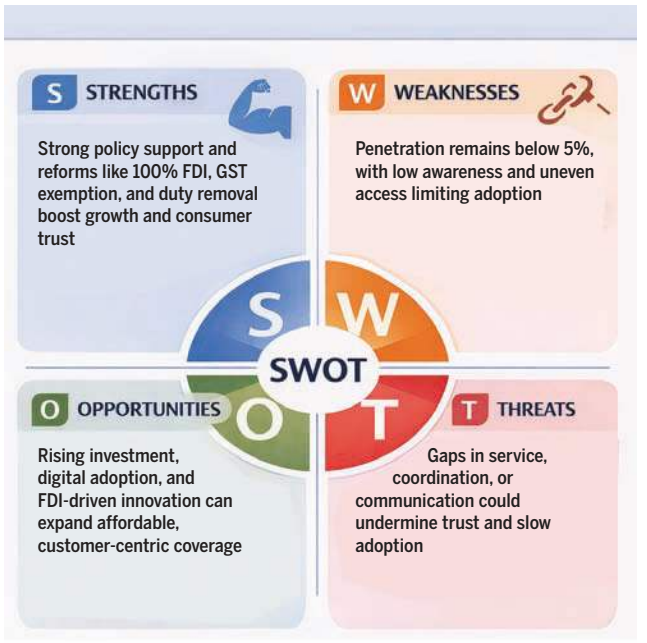
India is undergoing a profound demographic shift. Longer life expectancy, changing family structures and urbanisation are reshaping care needs for older adults. At the same time, non-communicable diseases are emerging as the dominant cause of morbidity and mortality, often requiring prolonged care, symptom management and psychosocial support rather than episodic hospital-based treatment.

As Ishaan Khanna, CEO, Antara Assisted Care Services, notes, "As India moves toward the vision of Viksit Bharat 2047, the demographic and disease trends make it imperative to treat geriatric and palliative care as core public health priorities. Recent studies show that one in eight older Indians about 12.2 per cent meet validated criteria for supportive or palliative needs, a demand profile that will only widen as the country's 60+ population nearly triples to 350 million by 2050. Concurrently, the rising burden of non-communicable diseases (cardiovascular disease, cancer, chronic respiratory disease, diabetes) and serious health-related suffering among older adults is projected to accelerate demand for symptom management, long-term care and psychosocial support."

"However, despite this growing demand fewer than 4 per cent of those who need palliative care in India can access adequate services. This stark gap results in avoidable pain, repeated hospitalisation and significant emotional and financial strain on families underscoring the urgency for both structured geriatric care and timely palliative interventions. We must therefore reframe palliative care as an integral part of geriatric care, embedding early palliative interventions into primary and home-based senior care services, expanding workforce training, and building a care ecosystem that moves beyond viewing it as 'end-of-life support'. Palliative care must be recognised as care that upholds quality of life at every stage of ageing", he added.

Health insurance penetration and efficiency

Amitabh Jain



India's healthcare journey is entering an exciting new phase as the country looks toward 2047, with reforms and industry actions converging to improve health insurance penetration and efficiency. According to Amitabh Jain, COO, Star Health and Allied Insurance, "India's healthcare journey is entering an exciting new phase as we move toward 2047. We are witnessing stronger public investment, rapid digital adoption and the steady expansion of medical infrastructure across emerging cities."

Recent policy decisions are expected to accelerate this momentum. Jain notes, "The government's decision in the recent Budget to allow 100 per cent FDI in insurance adds meaningful momentum to this progress." He adds that the move "will attract global capital, encourage innovation and help expand insurance coverage in a market where penetration remains below five percent." These steps align with the regulator's long-term goals.

Affordability has also come into sharper focus. Highlighting fiscal relief measures, Jain says, "The removal of customs duty on 36 critical medications, including cancer treatments, will also make essential therapies more affordable for people across the country." Alongside this, the 56th GST Council meeting announced full GST exemption on health insurance premiums, expected to encourage first-time buyers.

Beyond policy, growing awareness is reshaping consumer behaviour. "Penetration has been rising and more people today recognise the importance of protection," Jain observes, noting that trust in insurance allows providers to focus on care while families manage medical needs with confidence.

Insurers, he says, must match this trust with responsibility. "We continue to strengthen the way we communicate and respond to customers so that their experience at critical moments is clear, timely and reassuring." He further notes, "Partnerships with hospitals aim to make the care journey simpler and more transparent."

Looking ahead, Jain underscores the national vision: "India's vision for a Viksit Bharat will be realised when health security becomes a source of confidence in every home." Nationally.

Healthcare financing:Backbone of Viksit Bharat 2047

Healthcare financing is emerging as a central pillar in India's ambition to build an inclusive, resilient, and globally competitive health system by 2047. Experts agree that without reforming how care is funded, the vision of Viksit Bharat cannot be realised.

Dr Anuj Tiwari, COO, Lata Mangeshkar Hospital and Ranjit Deshmukh Super Speciality Hospital, Nagpur, emphasises the foundational role of funding. "Healthcare financing is crucial for building a durable and inclusive health system. Robust financing system -- This requires increasing public health expenditure, expanding health insurance coverage, and ensuring efficient allocation of resources to minimise out-of-pocket expenses while helping increase access and quality for health across urban and rural areas." He adds that India is already a leading destination for medical services, exports, and health tourism, but long-term stability relies on a healthier population and controlled healthcare costs.

Dr Anuj Tiwari

Tiwari further stresses that effective financing must go beyond treatment. "This holistic financing model also accounts for equitable funding, new financing sources, payment structures covering health care, technology, healthcare coverage, prevention, and infrastructure," he explains, noting that universal, per-capita affordability is key to delivering quality healthcare for all and positioning India as a global leader.

Echoing this urgency, Dr. Hriday Deshmukh of VSPM Academy of Higher Education and Lata Mangeshkar Hospitals links national health outcomes with financing reform. "India's Viksit Bharat 2047 dream is simple: every family lives healthier, longer lives-past 85 years-with care that reaches everyone, no matter where they are, and turns our health system into a global export powerhouse. But none of this happens without fixing how our citizens pay for healthcare."

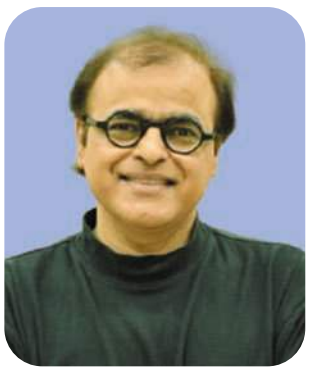
Dr Hriday Ashishrao Deshmukh

Deshmukh advocates smarter purchasing and prevention-led spending, including risk pooling, capitation, DRG-based payments, and outcome-based incentives. Highlighting current initiatives, he says, "Ayushman Bharat PM-JAY is already doing this for 50 crore people with ?5 lakh cover yearly." He adds that telemedicine, AI, digital records, and preventive care will reduce costs, improve access, and make India a global hub for healthcare and medical tourism by 2047.

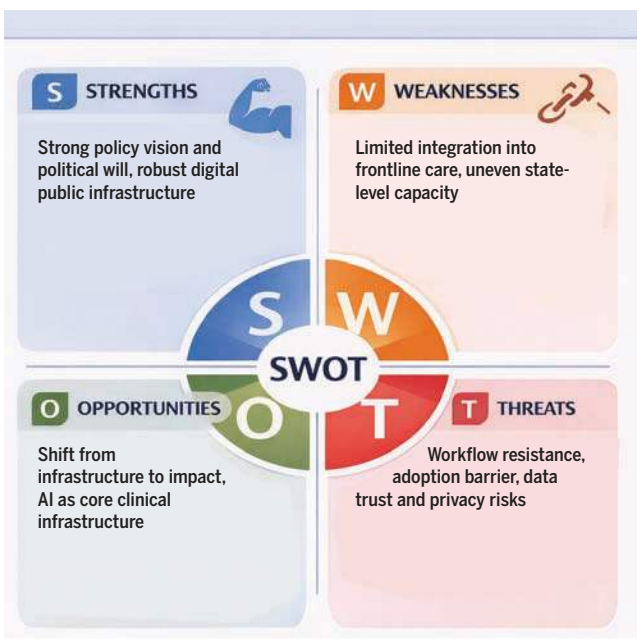
India can lead the race for digital health leadership

India's digital health journey commenced with the launch of Ayushman Bharat Digital Mission (ABDM) in 2018 as part of India's National Health Policy (NHP). Today, India's NHP is a template for other nations, proving that "ambitious national digital health programs succeed when they are insulated from short-term disruptions and guided by long-term institutional memory," analyses Dr Rajendra Pratap Gupta, who served as the advisor to the Union Health Minister from 2016-2018.

As the founder of global healthcare think tank Health Parliament and Digital Health Associates, Dr Gupta believes that even though India's achievements in digital health are unprecedented (over 840 million ABHA IDs now form the world's largest digital health identity framework, more than 430 million digital consultations delivered through eSanjeevani), this is just the beginning. The next phase is to go from infrastructure to impact, "converting this capability into measurable health outcomes, workforce efficiency, cost containment, and system intelligence."



Dr Rajendra Pratap Gupta



He feels that the coming years will determine whether India can fully leverage its digital health foundations. Success will depend on:

- Deep integration of ABDM into clinical workflows, insurance, public health surveillance, and medical education
- High-quality, consent-driven data flows under the Digital Personal Data Protection (DPDP) Act, 2023
- AI embedded into care pathways—not as pilots, but as routine clinical infrastructure
- Outcome-linked financing and procurement models
- State-led innovation, with progressive states acting as digital health laboratories

As a parting shot Dr Gupta cautions, "The race for digital health leadership has begun. India has built the track, written the rules, and anchored the institutions. Now it must run, and the world is watching."

Mental health: India's quiet healthcare shift

India's mental health ecosystem is undergoing a clear transformation as awareness, acceptance, and demand for professional care steadily rise. Martin Peters, COO, Samarpan Health, observes, "The mental health landscape is greatly changing in India, as more people are becoming open to recognising that seeking professional help is far different from going to a guru or having a chat with a family member." This cultural shift marks an important step toward mainstreaming mental health care.

However, growing demand brings structural challenges. Peters notes, "With this comes further challenges; these, in particular, will be around standards, regulation, ethics and training, which will need to be boosted if India is to become a global leader in the field of mental health." Strengthening governance and professional accountability will be essential as services expand nationwide.

Martin Peters

Education and workforce readiness remain central to sustainable growth. Peters stresses "the need for the private sector to work closely with educational institutes and for more focus on clinically based training." He highlights that adapting curricula using feedback from care providers can help graduates enter clinical environments faster, with realistic expectations, rather than struggling with academically driven models.

Regulatory efforts are moving in a positive direction. "Moves to bring in regulations around people working with mental health are greatly welcomed," Peters says, while emphasising that regulation must be supported by better public understanding of mental health professions, clearer differentiation between disciplines, and proper enforcement to ensure ethical practice.

Yet, workforce retention poses a major hurdle. "The big challenge for India is to improve opportunities for mental health professionals to be paid suitably and given better working conditions and career pathways," he explains. Without these reforms, skilled professionals may continue to seek opportunities overseas.

Peters also flags the need for gender balance, pointing to "a significant need to attract males into the profession" to strengthen psychology and psychotherapy across India today.

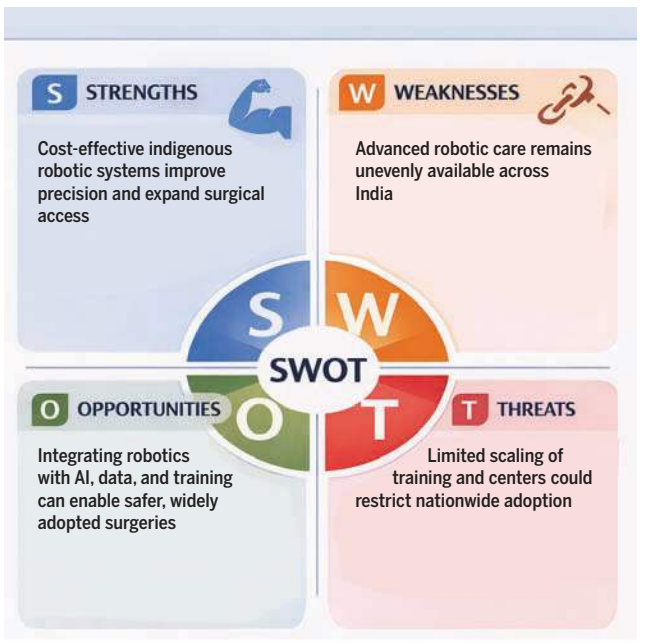
Robotics and MIS: The next surgical frontier

Robotics and minimally invasive surgery are increasingly shaping the future of healthcare delivery in India, offering the potential to improve surgical precision, expand access, and strengthen system resilience as the country moves toward long term national health goals. Dr Vishwa Srivastava, CEO – APAC, SS Innovations International, Inc., believes this shift will be central to India's progress.

"Robotics and minimally invasive surgery represent one of the most transformative shifts in India's healthcare trajectory, and their strategic adoption will play a defining role in building a healthier, more resilient Viksit Bharat by 2047. At SS Innovations International, our mission has always been centered on democratising surgical robotics by developing world-class technologies that are accessible, cost-effective, and designed specifically for the clinical needs of India and its underserved populations."

Dr Vishwa Srivastava

While India performs millions of surgeries each year, advanced technology driven care is not uniformly available. Dr Srivastava points out that indigenous innovation is helping bridge this divide by making sophisticated tools affordable and scalable beyond large urban hospitals.



"India performs millions of surgeries annually, yet access to advanced, precision-led surgical care remains uneven. Indigenous robotic systems such as the Mantra 3 are changing this landscape by dramatically reducing costs, enabling wider adoption across Tier 2 and Tier 3 cities, and empowering surgeons with enhanced precision, visualisation, and clinical versatility."

Looking ahead, the integration of robotics with artificial intelligence and data analytics is expected to redefine surgical outcomes, improving safety, recovery time, and overall patient experience across care settings.

"The future will belong to surgical ecosystems that combine robotics, AI, and data-driven insights to deliver safer surgeries, faster recovery, and overall better patient outcomes."

"As we scale manufacturing, expand training programs, and build India's largest network of robotic-assisted surgical centers, we remain committed to ensuring that advanced surgical care is not a privilege but a standard," he adds, noting innovation strengthens India's standing.

Public health preparedness: Resilience before the crisis

Public health preparedness is key for India. The recent pandemic has underscored the need for a strong public health system.

Prof. K. Srinath Reddy, Chancellor, PHFI Institute of Public Health Sciences, Hyderabad, highlights that public health preparedness calls for, "health promotion measures to build a healthy population that has high levels of natural immunity and low levels of risk exposure to disease causing agents." This is especially relevant for India which has a high burden of NCDs that reduces resilience of the population during infectious disease outbreaks.

Early detection is the next critical layer. Prof Reddy emphasises on "robust surveillance systems which can readily detect microbial pathogens and their spillover across species (One Health)."

Preparedness must also be rooted in strong primary care. As Prof Reddy explains, it depends on "primary healthcare teams which can conduct symptom-based 'syndromic surveillance' for infectious diseases and identify co-morbidities like non-communicable diseases while providing early care, triage and referral when needed."

Prof. K. Srinath Reddy

Supply-side readiness is equally vital. Prof Reddy highlights the need for "self-sufficiency in the production of drugs, vaccines and medical equipment" along with "dependable supply chains and distribution networks."

He also advocates for "a suitably trained and well distributed health workforce," "adequate hospital and laboratory infrastructure across India," and "realtime data collection and data transmission systems."

Prof Reddy also calls for "public health expertise in central, state and district health system management; excellent inter-agency coordination within central and state governments; consultative planning, coordinated implementation and coherent monitoring processes linking central and state governments".

Finally, he underscores that "strong community engagement at all levels; clear and trustworthy public communication at all stages of response to a public health emergency and cooperative engagement with international health agencies for global monitoring of pandemic threats" are key to raise public health preparedness in the country.

Together, these elements make it clear that public health preparedness must be strengthened continuously to protect lives and livelihoods.

Skills, standards and safety: Healthcare skilling priorities

India's healthcare sector is expanding rapidly. Yet, infrastructure growth alone cannot deliver better outcomes. The defining factor will be whether India has a future-ready workforce that can deliver safe, patient-centric care at scale.

Ashish Jain, CEO, Healthcare Sector Skill Council (HSSC), points out, "As healthcare infrastructure expands, advanced technologies enter clinical settings, and digital health systems scale rapidly, one defining question emerges: do we have a future ready skilled workforce capable of translating these investments into improved patient outcomes?" His observation underscores a critical reality. Without the right skills on the ground, even the most advanced infrastructure risks underperforming.

He highlights that globally, healthcare labour markets are moving toward skills-first hiring models, where competencies, modular training and micro-credentials complement or even replace degree-centric recruitment. India's skilling ecosystem is also aligning with this shift, to meet domestic workforce and to position Indian healthcare professionals for global mobility and employability.

Ashish Jain

He adds, "The healthcare skilling ecosystem is a critical enabler in providing a future-ready workforce for hospitals, diagnostics, long-term and home-based care, AYUSH, and preventive and wellness services."

Jain further emphasises the need for relevance and quality, noting, "The focus of healthcare skilling is to provide competency based curricula aligned with clinical standards, simulation-based practical learning, AI and digital health literacy, gender-responsive programs providing pathways for women and rural youth, and robust systems for workforce mobility." These elements are essential to ensure that skilling translates into improved patient outcomes.

He also informs that HSSC is driving this transformation by defining National Occupational Standards, enabling employer-trusted certification, formalising informal skills through recognition of prior learning, and strengthening trainer capacity across the country.

Skilling is not just about jobs; it is about quality, safety, and trust in healthcare delivery. India must build a workforce that is globally competitive, technologically adept, and committed to high-quality care. The future of healthcare will be shaped not just by infrastructure, but by the people who power it.

Home healthcare: Foundational pillar of India's future

India's home healthcare market is growing fast and becoming a key part of the country's health system. Care is steadily shifting from hospitals to homes as patients seek comfort, continuity and lower costs.

An ageing population, rising chronic diseases, shorter hospital stays and post-acute care needs are accelerating this transition.

Industry estimates underscore the scale of this opportunity. A report by the IMARC group informs that in 2024, the home healthcare market in India was valued at around $14 billion and is projected to expand to about 64.4 billion by 2033, growing at a CAGR of ~16.5 per cent.

As Vishal Lathwal, CEO, Apollo Home Healthcare, notes, "Indian healthcare is sitting at a multi-decadal opportunity. The

Vishal Lathwal

market remains massively underserved, and hospitals alone cannot bridge India's widening demand-supply gap. Home healthcare offers a systemic unlock allowing hospitals to focus on acute and complex cases while materially lowering the overall cost of care delivery."

He adds, "Continuity of quality care at home improves clinical outcomes, reduces avoidable readmissions, and enables more complete recovery journeys." Technology is strengthening this shift through remote monitoring, teleconsultations, digital health records, and connected devices that improve clinical oversight beyond hospital walls.

However, scale will require a strong ecosystem. Lathwal emphasises that "to truly scale, Indian healthcare, homecare in particular, must evolve towards a value-based, patient-centric ecosystem." This, he adds, will depend on "clear regulatory recognition, faster participation from insurers and providers, and health-tech innovation that strengthens clinical governance, workforce capability, and outcomes measurement."

As India reimagines its healthcare future, home healthcare is no longer an alternative care model. As Lathwal aptly concludes, "Home healthcare is truly a foundational pillar of India's next-generation healthcare system."

Aligning India's diagnostics sector with Viksit Bharat

It is a well known fact that as much as 70 per cent of clinical treatment depends on accurate diagnostics. As India's population ages, the need for predictive and preventive diagnostic tests will increase. And the diagnostics sector is stepping up to the challenge, with clear goals for 2026 and the decade ahead.

As Ameera Shah, Promoter and Executive Chairperson, Metropolis Healthcare puts it, "Over the past few years, and particularly through 2025, India's healthcare journey has entered a more decisive phase—moving from incremental improvement to structural transformation. Nowhere is this more evident than in diagnostics, which has rapidly evolved from a support function to a strategic pillar of modern healthcare. Expanded laboratory networks beyond metros, combined with investments in automation, molecular testing, digital reporting and data platforms, have significantly strengthened diagnos-

Ameera Shah

tic capability and clinical confidence."

She also points out how "emerging technologies such as artificial intelligence, genomics and advanced analytics are redefining the future of precision diagnostics. AI-enabled interpretation, genomic screening and data-driven risk stratification are creating opportunities for earlier detection, personalised care pathways and more effective population health management. In this context, diagnostics truly represents the first line of defence—shaping clinical decisions long before treatment begins."

However, she cautions about critical gaps,"While scale and technology adoption have accelerated, quality and accreditation have not advanced uniformly. A majority of laboratories continue to operate without formal accreditation, resulting in uneven standards, avoidable errors and variability in trust. Quality assurance in diagnostics cannot remain voluntary, fragmented or dependent on geography; it must be universal, transparent and enforceable."

Pointing to the way forward, Shah says, "Strengthening India's diagnostics ecosystem now requires a shift from isolated centres of excellence to system-wide consistency—supported by mandatory accreditation, harmonised regulations, a skilled workforce and modern digital governance frameworks. From a policy standpoint, diagnostics must be recognised not merely as a healthcare service, but as a strategic enabler of national health security, preventive care and economic resilience."

"As India advances towards Viksit Bharat@2047, the coming decade will be defined by execution. The real opportunity lies in translating technological capability into measurable outcomes—ensuring that innovation strengthens equity, reliability and public trust. A robust, high-quality diagnostics network will be central to achieving that ambition, both domestically and on the global stage," concludes Shah.

Health infra: Enabler of India's global health ambition

As India accelerates its journey toward becoming a global healthcare powerhouse by 2047, strengthening health infrastructure has emerged as a critical national priority. While capacity has steadily improved, persistent gaps in hospital beds, public health spending, workforce readiness, and last-mile access continue to challenge equitable care delivery.

Nilachal Mishra, Partner and Head, Government & Public Services, KPMG in India believes health infrastructure will be one of the most decisive enablers of India's ambition to become a global healthcare powerhouse by 2047. Despite steady progress, India continues to face a structural demand-supply gap in healthcare capacity, with around 1.3 hospital beds per 1,000 people, well below global benchmarks.

Nilachal Mishra

However, bridging this gap requires sustained investment not only in hospitals, diagnostics and emergency services, but also in strong primary care systems that form the foundation of universal health coverage.

According to the States Economic Survey 2023-24, public health spending has increased to around 1.9 per cent of GDP yet remains significantly below the global average of 6 per cent.

Mishra opines, "A step-up in financing, particularly for district hospitals, frontline facilities and primary care, can materially reduce out-of-pocket expenditure, which still accounts for nearly half of total health spending."

He underscores, "Physical infrastructure alone will not be sufficient. In my view, India must simultaneously address the healthcare workforce gap. While medical education capacity has expanded rapidly, the absence of a mandatory system for continuous learning and skill renewal limits quality and productivity. A National Healthcare Professionals Registry and Skilling Platform, supported by a focused national task force, can help align skills with evolving care needs and bridge demand-supply mismatches across regions.

Digital infrastructure will be the key integrator. Driving the Ayushman Bharat Digital Mission to the last mile, enabling interoperable health records, and scaling telemedicine and virtual care can extend specialist services beyond physical constraints. At the same time, the development of regional medical hubs or Medicities linked to education, research and manufacturing can anchor globally competitive healthcare ecosystems."

AMR: From crisis to strategic opportunity for India

Antimicrobial resistance (AMR) is rapidly emerging as a defining challenge for global health systems, threatening the effectiveness of life-saving medicines and straining healthcare economies worldwide. In India, where the burden of infectious diseases remains high, AMR poses both a serious risk and a unique opportunity. Addressing resistance through innovation, diagnostics, policy reform, and multisectoral collaboration can strengthen healthcare resilience while positioning India as a leader in affordable, globally relevant solutions.

Dr. Ratnakar Palakodeti, President - Healthcare & Life Sciences said, Antimicrobial resistance (AMR) is one of the most pressing global health threats, driven by biological evolution, irrational antimicrobial use, inadequate diagnostics, and weak health systems. If left unaddressed, AMR threatens to reverse medical progress and impose significant economic and public health costs. For India, however, tackling AMR presents a strategic opportunity to strengthen its health ecosystem and accelerate its journey toward becoming a global healthcare powerhouse by 2047."

Dr Ratnakar Palakodeti

Beyond scientific challenges, Dr Palakodeti opines, financial and regulatory barriers have slowed antimicrobial development globally. He adds, "high research costs, low returns on investment, and complex approval pathways discourage industry participation. Regulatory initiatives such as fast-track approvals and priority reviews have proven essential in revitalizing antimicrobial pipelines. India's growing innovation capacity is evident in successes such as Wockhardt's first-in-class antibiotic Zaynich receiving fast-track designation from the US FDA, highlighting India's ability to deliver globally relevant solutions for unmet medical needs."

He further suggests, "India has also adopted a multisectoral approach to AMR through initiatives like the India AMR Innovation Hub, which integrates One Health principles, stewardship, surveillance, and innovation. Complementing this, the CSIR Open-Source Drug Discovery model promotes collaborative, low-cost drug development aligned with public health priorities. By combining policy reform, diagnostic-driven care, public–private collaboration, and global cooperation, India can contain AMR while strengthening healthcare resilience. Addressing AMR is therefore not just a public health imperative, but a strategic lever for India's emergence as a global healthcare leader by 2047."

Course corrections for achieving UHC

It has now been seven years since the launch of Ayushman Bharat - Pradhan Mantri Jan Aarogya Yojana (AB-PMJAY), the Government of India's initiative to achieve affordable universal health coverage (UHC). While there have been gains, it's also important to identify and fill the policy and implementation gaps.

As Dr Vinayak Sonawane, Associate Director - Health, Ambuja Foundation, analyses,"In the Indian context, UHC is not only about access to services; it is about enabling people to seek care early and affordably. This is increasingly critical as rural and underserved communities face a growing burden of non-communicable diseases such as diabetes, hypertension, cancers, and mental health challenges—often compounded by distance, limited awareness, and over-

Dr Vinayak Sonawane

burdened public health systems. Too often, care is sought only after illness has progressed, leading to poorer outcomes."

Therefore he advocates "a shift towards proactive, preventive, and promotive healthcare" believing that when workers are trained, supported, and trusted, they become the crucial link between communities and the health sstem—reaching people early, identifying high-risk individuals, enabling timely referrals, and supporting long-term disease management and prevention.

Reinforcing this belief he says, "At Ambuja Foundation, our experience shows that progress towards UHC depends on strengthening this last mile while building community awareness across the life cycle, especially among children, adolescents, youth, and women. This requires sustained investment in capacity building, stronger referral linkages, support for public health infrastructure, and action on social determinants that directly impact health outcomes such as nutrition, water, sanitation, and livelihoods."

Summing up, he says, "UHC cannot be achieved through isolated interventions; it demands long-term partnerships, collaboration between civil society, CSR initiatives and government systems, and health approaches that are responsive to India's diverse socio-economic and geographic contexts."

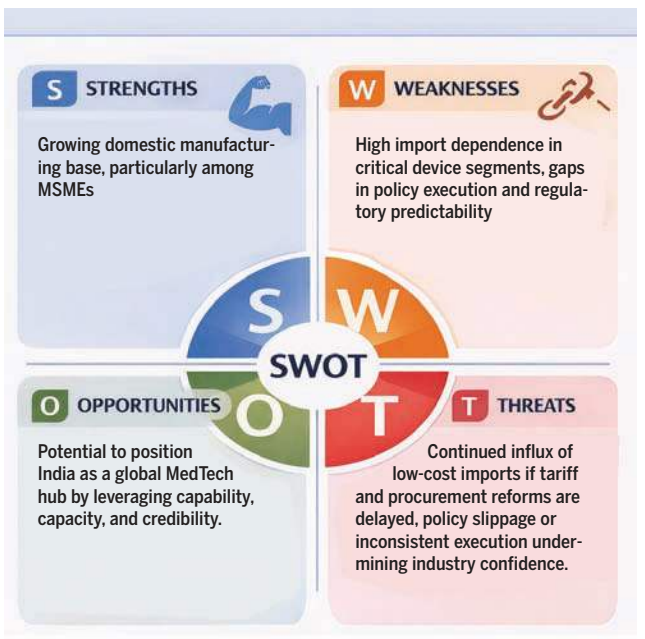
India's medtech sector needs tariffs for growth, labels for transparency

2025 has seen considerable policy focus on India's medical devices sector, with further refinement on the National Medical Devices Policy 2023. But for India to emerge as a global medtech innovation hub, 2026 needs to be about nuanced interpretation and speedy implementation of existing policies as well as measures to protect the domestic sector.

As Rajiv Nath, Forum Coordinator, AiMeD, analyses, "2025 witnessed deeper engagement on the Medical Devices Policy 2023, alongside constructive discussions on regulatory predictability, domestic manufacturing capacity, and the urgent need to reduce import dependence in critical device segments. For Indian manufacturers, particularly MSMEs, 2025 has laid the groundwork for a more

Rajiv Nath

balanced and enabling operating environment—one that prioritises quality, affordability, and trust while encouraging innovation and global competitiveness. At AiMeD, our efforts have remained centred on advocating a level playing field, ethical procurement practices, and policy frameworks that support sustainable growth across the value chain."



Putting the agenda for 2026 succinctly, he says, "Tariffs for growth, labels for transparency.

As we step into 2026, the focus must shift decisively towards consistent policy execution and deeper industry–government collaboration. Key steps include raising tariffs to 10–15 per cent from the current 7.5 per cent to support domestic manufacturing, adopting quality based criteria in public procurement with preference for ICMED certification over foreign approvals, updating labelling norms to disclose domestic content percentages, and incentivising suppliers with over 50 per cent local value addition. These reforms, coupled with measures to enhance global competitiveness, can help India translate its capability, capacity, and credibility into lasting outcomes—positioning our nation as a leading global MedTech hub."

Green hospitals: Protecting people and the planet

As India builds more hospitals and expands healthcare access, sustainability must be treated as a core healthcare priority. Hospitals consume large amounts of energy and water and generate significant biomedical waste. If this is not managed well, it can harm both people and the planet. This is where green hospitals matter. They address this challenge by designing and operating healthcare facilities in ways that reduce environmental impact while improving patient and staff outcomes.

The World Health Organization has repeatedly warned that climate change is one of the biggest threats to public health. When hospitals reduce emissions and pollution, they directly contribute to cleaner air, safer water and healthier communities. Green hospitals are especially important for the vision of

Dr S Gurushankar

Viksit Bharat. A developed India needs healthcare systems that are strong, affordable and resilient. Sustainable hospitals are better prepared for heatwaves, floods and power disruptions.

In India, sustainability is also becoming part of healthcare quality. Accreditation systems promoted by the National Accreditation Board for Hospitals & Healthcare Providers (NABH) encourage better waste segregation, energy efficiency, and safer infrastructure.

Healthcare leaders are already demonstrating what this looks like in practice. Meenakshi Super Speciality Hospital recently acquired the prestigious LEED v4 Platinum Certification from the US Green Building Council (USGBC). In a press statement, Dr S Gurushankar, Chairman, Meenakshi Mission Hospital & Research Centre, says, "Green building practices are more important than ever due to rising energy demands and environmental challenges. For hospitals, they ensure sustainable, energy-efficient facilities that support patient well-being. LEED-certified designs reduce energy and water consumption, improve indoor air quality, and create comfortable environments that aid recovery and staff performance."

At the end of the day, green hospitals heal patients today while protecting the environment for tomorrow. That is why sustainability in healthcare is essential for building a healthier, stronger Viksit Bharat.

Why less is more in hospital design

Arti Gugnani, Partner, Vijay Gupta Architects (VGA) stresses that simplicity is not minimalism for its own sake. It is a measured approach that clears the path by removing visual noise, resolving confusing circulation, and shaping spaces that work with the pace of care

In architecture, the phrase "Less is More" appears often, yet its deepest resonance is felt in healthcare design. Hospitals are layered environments where emotions shift quickly, precision matters every moment, and well-being shapes every decision. As advancements surge and medical infrastructure grows, the idea of expanding facilities or adding newer elements tends to dominate the conversation. But a quieter principle holds enormous power: creating space that breathes, guides, and supports. Sometimes, the most meaningful transformation emerges when design steps back and allows clarity to lead.

The case for simplicity in hospital design

A hospital is an ecosystem shaped by the rhythms of patients, caregivers, clinical staff, and families. Design becomes a tool for creating ease in situations that often feel overwhelming. When spaces feel intuitive, and environments stay calm, people navigate their journeys with greater confidence. Simplicity is not minimalism for its own sake. It is a measured approach that clears the path by removing visual noise, resolving confusing circulation, and shaping spaces that work with the pace of care. A simplified plan also strengthens daily operations. Clear axes and legible zoning prevent unwanted overlap in movement. This has a direct bearing on infection control and on the daily flow of activities that keep a hospital functioning. When circulation patterns make sense immediately, the building supports both emotional comfort and operational clarity.

The science behind "Less" in healing spaces

Organised, uncluttered environments help people understand where they are and what lies ahead. Cognitive load reduces when visual cues are coherent. Anxiety eases when light, air, and natural views enter the frame. Healthcare research continues to show that calm spatial environments support better healing. These ideas are not abstract; they surface in small everyday moments.

> Organised, uncluttered environments help people understand where they are and what lies ahead. Cognitive load reduces when visual cues are coherent. Anxiety eases when light, air, and natural views enter the frame

My own time as a caregiver to my parents sharpened this understanding. The ability to see the sky from a corridor window, the sound of leaves moving outside a patient room, even the soft wash of natural daylight across a wall, these elements shaped the emotional atmosphere and allowed space to hold the weight of difficult days.

Biophilic cues give orientation, create rhythm, and help patients and caregivers settle into an environment that feels less clinical and more humane. These gestures also help staff sustain their energy through long shifts, since natural light and clear layouts reduce sensory fatigue.

Designing for people, not just processes

People arriving at hospitals carry anxieties, questions, and hopes. Intuitive circulation eases those first moments of uncertainty. Natural light provides direction, acoustic comfort softens overstimulation, and tonal materials create warmth without overpowering the senses. Technology integrates into this framework without dominating it. Diagnostic suites, digital systems, and high-performance equipment are planned early, fitting naturally into the spatial order. When this integration is seamless, the hospital feels current while still maintaining a welcoming presence.

Balancing budgets, efficiency and growth

Responsible design respects budgets and enhances function. Clarity in structure, efficient spans, and simplified service routes reduce costs without affecting care. Each space earns its purpose. Institutions can expand gradually and sustainably when planning decisions are made with intention. Smaller facilities also benefit from these principles.

Supporting staff and long-term sustainability

Hospitals function through the dedication of medical and support teams. A clear plan shortens unnecessary travel, reduces fatigue, and gives staff environments that feel manageable through intense work cycles. Simpler forms and reduced material redundancy also help buildings age gracefully. Maintenance becomes more predictable, energy use stays balanced, and the spatial framework adapts easily to future needs.

Designing for cultural realities

Indian hospitals receive families who arrive together, seek reassurance, and form an important support system around the patient. Corridors widen into shared waiting zones, small courtyards invite pauses, and spill-out spaces create breathing room for conversation and rest. These in-between spaces are part of the hospital's emotional infrastructure and carry cultural significance.

Armed with experience: Defence doctors in civilian care

The feature explores how India's retired defence-trained doctors, with their operational discipline, crisis-tested skills, and leadership experience, contribute to the broader healthcare ecosystem and how systematically integrating their expertise in civilian hospitals could bolster national healthcare resilience, reports **Neha Aathavale**

In April 2021, as part of a series of emergency orders issued during the second wave of COVID-19, the Defence Ministry authorised the temporary re-engagement of retired and prematurely retired medical officers of the Armed Forces Medical Services. The contracts were short-term, location-bound, and explicitly linked to pandemic care.

The move was explicitly temporary and crisis-driven. What it did not trigger was a wider assessment of whether retired defence medical professionals could represent a structured human capital resource for civilian healthcare outside emergency situations, leveraging their skills in both operational and management roles so that, in the future, the nation could be better prepared for public health emergencies and other unforeseen challenges.

To explore this, it helps to first examine what defence medical training actually produces and how it differs from civilian medical education.

Beyond medical education, the environment teaches you discipline, soft skills, punctuality, empathy for the patient, the ability to interact with your seniors, peers and colleagues

Dr (Lt Col) Priscilla Joshi (Retd.)

-Professor and Head of Radiodiagnosis, Bharati Vidyapeeth Medical College, Pune

Defense medicine is inherently diverse and shaped by operational environments

Col. (Dr) Sunil Rao

-Medical Director and COO, Sahyadri Hospitals, Pune

What defence medicine instills

Defence medicine begins with an assumption that uncertainty is the default condition. It shapes them to function under pressure, with limited resources, and in unpredictable environments. Dr (Lt Col) Priscilla Joshi, now Professor and Head of Radiodiagnosis at Bharati Vidyapeeth Medical College, Pune, traces this conditioning back to her earliest years at the Armed Forces Medical College. She recalls that beyond medical education and training, the environment "teaches you discipline, soft skills, punctuality, empathy for the patient, the ability to interact with your seniors, peers and colleagues." These, she notes, are not add-ons but traits that become ingrained and persist long after one leaves defence service.

Her clinical career within the Army Medical Corps unfolded across a spectrum of settings, from smaller hospitals in Bhatinda to larger tertiary-care service hospitals like Command Hospital Poona, Army Hospital (Research and Referral) Delhi, and Base Hospital Delhi. "As a radiologist, I supported trauma care, emergency services, and specialty clinical units," she says. The cumulative effect, she suggests, is an early exposure to the demands of high-stakes, high-pressure medical practice.

Col. (Dr) Sunil Rao, Medical Director and COO, Sahyadri Hospitals, Pune, underscores the operational diversity of defence medicine. High-altitude postings in Ladakh, Siachen Glacier, and other forward areas brought him face to face with conditions such as high-altitude pulmonary edema, frostbite, hypoxia-related complications, and pulmonary hypertension. Alongside this, battlefield trauma care demanded rapid stabilisation of injuries from mine blasts, bomb explosions, and combat situations, often in field hospitals under constrained conditions. "Defense medicine is inherently diverse and shaped by operational environments," he summarises.

Preparedness in defence medicine extends beyond clinical acumen. "All defence medical officers are trained in field surgery, emergency response, and trauma stabilisation," he explains, noting that this training is inseparable from logistics, evacuation planning, and resource optimisation. Whether in aviation medicine, naval hyperbaric care, or routine troop health surveillance, the underlying emphasis remains the same: structured protocols, anticipatory planning, and the ability to function effectively when systems are stretched.

However, what distinguishes this training from civilian pathways is not superior medical knowledge, as Dr Joshi is careful to clarify, but the context in which that knowledge is applied. "The core medical knowledge and clinical standards are comparable," she says, "but the context and conditioning differ markedly." Defence-trained doctors are accustomed early on to limited resources, high patient load, time-critical decision-making, and adverse environments. Clinical composure, adaptability, and prioritisation emerge not as optional skills but as survival tools. "In civilian settings, these traits often develop later and largely through experience rather than structured training," she notes.

Dr Rao, who has been part of the national quality movement through NABH and was nominated by the Directorate General of Armed Forces Medical Services, further emphasises the structured nature of this preparation; "From the outset, clinicians are trained to work within clearly defined protocols—whether in trauma care, emergency response, or disaster management. The Indian Armed Forces' structured response during natural disasters is a strong example of protocol-led, outcome-focused healthcare delivery. These same principles are highly transferable to civilian hospital networks. Defense-trained clinicians are accustomed to clinical governance, adherence to protocols, and continuous quality improvement."

The transition cliff

While defence medicine equips doctors with skills that are structured, operationally tested, and context-ready, their transition into civilian healthcare does not follow a similar systemic pathway. Lt Gen (Dr) AK Das, PVSM (Retd), an ENT Surgeon and Presidential Awardee with over four decades of experience spanning healthcare strategy, governance, administration and employee welfare, describes this process; "At present, the transition of retired defence medical professionals into civilian healthcare remains largely ad-hoc and opportunity-driven rather than guided by a structured national hiring or deployment framework."

He notes that while many hospitals, teaching institutions,

and corporate healthcare groups actively engage former defence clinicians for roles in clinical governance, quality assurance, hospital administration, and medical education, these engagements are typically driven by individual reputation, personal networks, or immediate organisational needs. There is currently no dedicated agency, standardised credential-mapping mechanism, or central database that systematically aligns defence medical experience with civilian healthcare opportunities.

Lt Col (Dr) Lavneesh Tyagi (Retd.), Head of Hospital at Sancheti Institute for Orthopaedics & Rehabilitation, Pune, adds, "At present, the transition of retired defence medical professionals into civilian healthcare remains largely ad-hoc and opportunity-driven, rather than guided by a nationally structured hiring or integration pathway. Though some of the agencies do liaise with the Retirement and Demobilisation section of the Armed Forces, there is no formal bridge mechanism that maps defence-acquired competencies—clinical, administrative, or leadership—onto civilian healthcare roles in a predictable manner. As a result, many highly capable professionals navigate this transition based on personal networks, individual visibility, or chance opportunities."

Some mechanisms do exist at a broader level. The Directorate General of Resettlement (DGR) and the Army Welfare Placement Organisation (AWPO) organise job fairs and placement initiatives connecting veterans with private employers. Dr Das points out, "these efforts are broad-based and not specifically designed to channel senior medical talent into healthcare leadership, academic, or system-strengthening roles."

At present, the transition of retired defence medical professionals into civilian healthcare remains largely ad-hoc and opportunity-driven rather than guided by a structured national hiring or deployment framework."

Lt Gen (Dr) AK Das, PVSM (Retd.)
-Army Veteran

Defence systems are designed around worst-case scenarios—mass casualties, polytrauma, delayed evacuation, and prolonged rehabilitation, requiring seamless coordination across the entire continuum of care

Lt Col (Dr) Lavneesh Tyagi (Retd.)

-Head of Hospital, Sancheti Institute for Orthopaedics and Rehabilitation, Pune

Seeing the system

What emerges next is less a question of intent, and more one of interpretation: whether this routine transition can be more deliberately situated within India's evolving healthcare architecture. Viewed at a system level rather than through individual placements, Dr Das suggests the issue intersects with broader structural realities.

He observes that "India's healthcare system remains fragmented across capacity, quality, governance, and workforce dimensions. For a nation committed to universal health coverage, addressing these structural gaps is a critical policy priority."

From this perspective, retired defence clinicians represent what Dr Das describes as "an emerging policy opportunity rather than a missed one, provided it is deliberately aligned with existing national health programmes." He emphasises that military medical leaders bring "a distinctive combination of clinical credibility, administrative rigour and crisis management capabilities that translate seamlessly into civilian healthcare environments."

The practical pathways for such integration, he suggests, include lateral entry into senior governance roles, faculty positions in medical colleges, and advisory roles within institutional or national health frameworks. These avenues, according to Dr Das, could allow the "nationally available expertise [to be] systematically redeployed to strengthen healthcare delivery and governance." With a sense of where the talent fits, the next question is how the system itself can orchestrate that impact.

Orchestrating impact

If retired defence medical professionals are to be more intentionally integrated into civilian healthcare, clarity over collaboration becomes central. Dr Das emphasises that such a model cannot be led by a single stakeholder. "Given that healthcare is a state subject, it requires a government-anchored framework with distributed execution down to the state-level bodies," he says.

In this vision, the Government of India, through the Ministry of Health and Family Welfare in coordination with the Ministry of Defence, would provide the policy anchor. This includes linking defence medical talent to priority areas such as district hospital strengthening under the National Health Mission, filling faculty and leadership gaps in new AIIMS and government medical colleges, and contributing to emergency preparedness under national and state disaster management plans. The Armed Forces Medical Services (AFMS) could function as the structured talent pipeline, mapping competencies across hospital command, specialty care, public health, and faculty roles, and translating these into civilian-recognisable positions well before retirement. Dr Das notes that this preparation could allow for systematic lateral entry, rather than the current opportunity-driven model.

Regulatory and accreditation bodies, particularly the National Medical Commission, would act as validators. Defence medical experience is already recognised for teaching appointments, and Dr Das suggests that frameworks could evolve to formally acknowledge such experience for institutional leadership, clinical governance, and quality oversight roles, especially in publicly funded institutions.

Finally, public and private hospital networks emerge as the execution layer. These institutions, particularly those empanelled under schemes like Ayushman Bharat, could deploy defence-trained talent to ensure scale, standardisation, and accountability in patient care, administrative efficiency, and emergency response preparedness. Dr Rao observes that in corporate healthcare, defence-trained clinicians bring operational discipline, protocol-driven planning, and leadership experience that can be leveraged in both routine hospital operations and larger system-level programmes.

Scaling readiness

Once the architecture of such a workforce model is discussed, the question naturally shifts from who deploys this talent to where its impact is most visible. While defence-trained clinicians are relevant across healthcare settings, their integration becomes particularly visible in tier-2 and tier-3 hospitals, where system depth, emergency preparedness, and leadership frameworks can vary widely.

Dr Das notes that retired defence clinicians are "particularly well suited to play high-impact capacity-building roles in tier-2 and tier-3 hospitals, where their contribution can be both immediate and transformative."

The emphasis, he suggests, is not only on clinical service but on institutional readiness. Former Armed Forces doctors can strengthen emergency preparedness, introduce SOP-driven workflows, and mentor clinical leaders in structured decision-making and escalation protocols. Their experience in audits, training, and handling human resources contributes to efficiency without major capital investment, allowing outcomes to improve without proportionate cost escalation. In this context, capacity building extends beyond infrastructure to the organisation and leadership of care.

Dr Tyagi, expands on the clinical dimension. In orthopaedics, trauma care, and rehabilitation, the most valuable contributions lie not in any single technique, but in the preparedness mindset that underpins defence medicine. "Defence systems are designed around worst-case scenarios—mass casualties, polytrauma, delayed evacuation, and prolonged rehabilitation—requiring seamless coordination across the entire continuum of care," he observes.

Dr Sunil Rao situates this discussion within a broader geographic context. "Many regions across India—particularly border and remote areas such as Arunachal Pradesh, Jammu & Kashmir, Kargil, and parts of the Northeast—remain underserved by civilian healthcare infrastructure. Defence medical personnel, especially ex-servicemen and reservists, are highly trained in emergency medicine, trauma care, and disaster management." In such settings, system-oriented leadership and preparedness can have an outsized impact on care delivery.

Taken together, the contribution of defence-trained medical professionals in tier-2 and tier-3 hospitals demonstrates how system thinking can reshape care delivery at the institutional level. The question that follows is whether these principles can travel further, beyond individual hospitals into the wider architecture of civil–military collaboration that is already taking shape across India.

Bridging the divide

India has seen growing collaboration between the Armed Forces Medical Services and civilian healthcare institutions. These efforts include joint research and development with AIIMS and ICMR, shared infrastructure agreements, dual-use technologies, and even civilian treatment within military hospitals. Yet, as Dr Tyagi observes, these collaborations "still function largely as a collection of well-intentioned but fragmented initiatives, rather than as a fully articulated national strategy."

He notes that most civil–military medical partnerships remain MoU-driven and institution-specific, dependent on alignment between individual leaders rather than systemic integration. While these arrangements demonstrate intent, they often lack mechanisms for scale, such as structured talent exchange, shared platforms for research and registries, and frameworks for measuring long-term impact.

Dr Tyagi suggests that for convergence to evolve into a strategically scalable model, it would need a formal policy framework recognising civil–military medical integration as a national health asset. Structured talent exchange and secondment programmes could map defence medical experience onto civilian hospital and health system roles, while joint centres of excellence in trauma, rehabilitation, disaster medicine, and medical logistics could provide hubs for knowledge transfer and training. Shared digital infrastructure could facilitate research, outcome analysis, and registries, enabling systematic tracking and assessment.

Viewed in this way, existing collaborations are not a lack of capability but a reflection of fragmented intent. Without national-level coordination, the expertise embedded in defence-trained medical professionals remains underutilised, limiting the potential to strengthen preparedness, trauma care, and governance across civilian healthcare. Dr Tyagi's assessment points to a pathway where civil–military convergence could be systematised and scaled, translating isolated hospital-level gains into broader, measurable improvements across the national healthcare landscape.

Looking forward

India's healthcare system has consistently turned to defence medical expertise in moments of strain, even as that expertise remains largely outside routine planning. As Lt Gen (Dr) AK Das notes, the challenge lies not in capability but in how experience is positioned within the system. Whether this expertise continues to surface only when systems are stretched, or finds a place within everyday healthcare architecture, is a question that quietly shapes how institutional memory is built in Indian healthcare.

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Healthcare in 2026: India's MedTech moment

Himanshu Baid, Managing Director, Poly Medicure Ltd stresses that a defining force shaping MedTech in 2026 will be the deep integration of artificial intelligence (AI) and digital technologies

As we look ahead to 2026, healthcare in India is entering a defining phase, one where MedTech will play a central role in shaping access, affordability, and outcomes. The coming years will not merely be about incremental growth; they will be about positioning India as a globally trusted, innovation-driven MedTech partner delivering quality at scale.

At the heart of this transformation lies innovation. Indian MedTech is steadily moving beyond cost competitiveness to value creation, designing products that are clinically relevant, technologically robust, and aligned with global quality benchmarks. By 2026, innovation will no longer be a differentiator; it will be the baseline expectation. Indian manufacturers are increasingly investing in R&D, clinical validation, and intellectual property, enabling the development of devices that address both domestic healthcare needs and international demand. This shift is critical in establishing India as a credible innovation hub rather than just a manufacturing base.

A defining force shaping MedTech in 2026 will be the deep integration of artificial intelligence (AI) and digital technologies. AI-driven diagnostics, predictive analytics, connected devices, and remote monitoring solutions are already redefining patient care pathways. Over the next year, these technologies will mature further becoming more interoperable, secure, and outcome-focused. Importantly, the government's ongoing consideration of software standardisation and the development of a structured regulatory framework for software-based medical technologies is a welcome and timely step. A clear, harmonised framework will provide certainty to innovators, encourage responsible adoption of AI, and enhance trust among clinicians and patients alike.

Equally important is the evolution of the regulatory ecosystem. By 2026, there is an expectation that India's regulatory system will move decisively toward digitisation enabling transparency, predictability, and speed. The industry is hopeful for progress toward a single-window front-end system, seamlessly integrated at the backend with multiple regulatory authorities across central and state levels. Such integration would significantly reduce compliance friction, eliminate duplication, and accelerate time-to-market, especially for innovative and high-technology devices. A digitally enabled regulatory architecture will be essential to support the pace at which MedTech innovation is advancing.

Another critical pillar shaping the future is the development of a robust component and raw material manufacturing ecosystem. Today, while India has made meaningful progress in finished medical devices, the supply chain for key components, specialty polymers, electronics, sensors, and rare earth materials remains import-dependent. Concerted efforts are underway to address this gap. Government's initiatives aimed at encouraging domestic manufacturing of components and raw materials are strategically important, not only for cost competitiveness but also for supply chain resilience.

In this context, the government's consideration of Quality Control Order (QCO) exemptions for components, raw materials, and rare earth materials is a pragmatic step. Such exemptions can help manufacturers access critical inputs without disruption, while domestic capacity is being built in parallel. A phased and balanced approach combining quality assurance with ease of sourcing will be vital to sustain growth and avoid bottlenecks in manufacturing.

From an industry standpoint, the vision for the next decade is clear and ambitious. The Indian MedTech sector aspires to reach USD 50 billion in market size, while fundamentally reshaping the country's trade profile. Today, India continues to import nearly 70-75 per cent of its medical device requirements. In 2026 and beyond, the collective goal is to progressively reverse this imbalance strengthening domestic manufacturing, expanding exports, and reducing reliance on imports, particularly in high-volume and high-value segments.

Achieving this vision will require deep collaboration between industry and government. Policy stability, regulatory predictability, infrastructure support, and skill development must move in tandem with industry-led investments in technology, quality systems, and global market access. Encouragingly, the dialogue between policymakers and industry has become more structured and forward-looking, reflecting a shared commitment to long-term outcomes rather than short-term fixes.

In 2026, India's MedTech journey will be increasingly defined by trust - trust in quality, trust in regulation, and trust in innovation. As Indian companies demonstrate consistent adherence to global standards and deliver clinically meaningful solutions, India is well positioned to emerge as a preferred MedTech partner for both developed and emerging markets.

The road ahead is challenging, but the direction is unmistakable. With innovation as the cornerstone, digital technologies as accelerators, and collaborative policymaking as the enabler, India is steadily moving toward its larger ambition: to become the MedTech capital of the world, delivering affordable, high-quality healthcare solutions while shaping the future of global healthcare.

Reimagining Indian MedTech: How Truevis is redefining imaging, innovation and self-reliance

Milind Deshpande, Joint Managing Director, Truevis Technologies, outlines how India's MedTech ecosystem is undergoing a structural shift driven by rising diagnostic demand, healthcare self-reliance and the expansion of advanced care beyond metros

India's healthcare system is at a pivotal juncture. Rising diagnostic demand, expanding insurance coverage and national priorities around healthcare self-reliance are reshaping how advanced medical technologies are deployed across the country. As diagnostic and therapeutic capabilities move beyond metropolitan centres into Tier-2 and Tier-3 cities, the need for accessible, reliable and cost-effective medical technology has never been greater. In this evolving landscape, Truevis Technologies—with manufacturing at the Andhra Pradesh MedTech Zone (AMTZ) in Visakhapatnam—is emerging as a next-generation MedTech company focused on building advanced imaging and oncology solutions tailored for India.

Democratising access to advanced imaging

Advanced imaging modalities such as PET-CT have traditionally been limited to large tertiary hospitals due to high capital costs, import dependence and complex service requirements. This concentration has restricted access for patients in regional markets and slowed the expansion of comprehensive oncology diagnostics. Truevis is addressing this gap through a localised manufacturing and lifecycle-cost optimisation model. By designing, assembling and servicing systems within India, the company is enabling hospitals beyond major metros to adopt technologies once considered out of reach, supporting national initiatives such as Ayushman Bharat and advancing healthcare equity.

Engineering depth and global collaboration

At the core of Truevis's approach is a strong blend of engineering depth and global collaboration. Its teams include professionals with decades of experience across leading international imaging companies, bringing deep clinical and technical insight into product development and deployment. These capabilities are strengthened through structured technology partnerships that enable knowledge transfer, joint validation and advanced training. The emphasis remains on adapting proven global platforms to Indian clinical workflows, infrastructure realities and operational constraints—ensuring systems are robust, intuitive and easier to maintain in high-volume hospital environments.

Product portfolio: From diagnosis to therapy

Diagnostic imaging

- Digital PET-CT systems designed for high image clarity, faster scan workflows and improved lifecycle economics
- CT platforms engineered for reliability in high-throughput clinical environments

Oncology therapy

- Linear accelerators for precision radiation treatment
- Scalable configurations suitable for both comprehensive cancer centres and regional oncology hospitals

Innovation roadmap

- MRI systems
- AI-enabled imaging analytics
- Cloud-connected diagnostics and predictive maintenance platforms

Building capability through training and experience

Beyond manufacturing, Truevis has invested in capability building through a dedicated Experience and Training Centre at AMTZ. The centre provides radiologists, clinicians and biomedical engineers hands-on exposure to imaging systems, software interfaces and data-processing workflows. By allowing stakeholders to engage directly with technology before deployment, the facility supports informed decision-making, smoother installations and faster clinical adoption—critical elements in accelerating advanced imaging penetration across India.

Digital PET-CT for precision oncology

One of the company's early flagship offerings is a next-generation digital PET-CT platform developed through collaboration with Neusoft Medical Systems. Built on a digital architecture rather than conventional analogue designs, the system delivers improved image clarity, faster scan times and enhanced long-term serviceability. Engineered to balance performance with affordability, it is suitable for both leading oncology centres and growing regional hospitals. Localised manufacturing and service support significantly reduce total cost of ownership while ensuring consistent clinical outcomes, making advanced PET-CT imaging more accessible across diverse care settings.

Expanding into oncology therapy with linear accelerators

Truevis's portfolio extends beyond diagnostics into oncology therapy, addressing another critical gap in India's cancer care infrastructure. The company has added Linear Accelerators through collaboration with Shinva Medical Instrument, bringing advanced radiation therapy technology into its India-centric ecosystem. These systems are designed for precision treatment delivery, robust beam stability and compatibility with modern treatment planning platforms. Localised installation, commissioning and service support make them well suited for both established cancer centres and emerging oncology hospitals, enabling broader access to high-quality radiotherapy beyond major urban hubs.

Make in India, built for real-world healthcare

- Headquartered at the Andhra Pradesh MedTech Zone (AMTZ), Visakhapatnam
- Localised manufacturing, assembly and system testing within India
- Reduced import dependence, lowering total cost of ownership
- Faster service response through India-based teams and spare availability
- Systems adapted to Indian infrastructure, power conditions and workflows
- Expands access to advanced diagnostics and oncology therapy in Tier-2 and Tier-3 cities

Service innovation as a core differentiator

In diagnostic and therapeutic systems, uptime is as critical as image quality. Recognising this, Truevis has built a national service architecture focused on reliability and responsiveness. A 24×7 command and control centre, AI-enabled predictive maintenance, remote diagnostics and rapidly deployable field teams work together to minimise downtime and ensure operational continuity. This proactive service model provides healthcare providers with confidence that their systems will perform consistently, even in demanding, high-throughput environments.

A vision aligned with healthcare self-reliance

Looking ahead, Truevis is developing a long-term innovation roadmap that integrates AI-driven imaging analytics, cloud-connected diagnostic platforms and predictive maintenance technologies. With ambitions to serve emerging global markets alongside India, the company is contributing to the country's evolution from an import-dependent buyer to a competitive global MedTech manufacturing hub. As India moves toward technological leadership in healthcare, Truevis stands at the intersection of innovation, accessibility and clinical impact—helping hospitals deliver advanced diagnostics and oncology therapy closer to where patients live.

INTERVIEW

Integrated digital solutions: the future of progressive healthcare

In an era where hospitals are rapidly transitioning from paper based workflows to connected, intelligent systems, BPL Medical Technologies is emerging as a strong Indian player shaping the digital backbone of care delivery. With decades of trust and a rich legacy in medical devices, the company is now expanding its portfolio to digital health solutions that unify workflows across operating theatres, ICUs, and radiology. In this conversation, **Dr Shravan Subramanyam,** MD, BPL Medical Technologies shares insights into BPL's digital health vision, the growing role of automation and AI, and how integrated digital platforms are redefining clinical efficiency for hospitals and diagnostic centres. As digital health continues to evolve, he elaborates how BPL Medical Technologies aims to bring simplicity, intelligence, and reliability to hospitals navigating the next phase of healthcare transformation.

BPL Medical Technologies is a legacy brand that has been a trusted name in technology for generations. How is this legacy influencing your identity as a prominent med tech player in the healthcare segment ?
BPL MedTech's journey in healthcare has always been rooted in reliability and clinician trust. Over the years, our devices have been an integral part of hospitals across the country, supporting doctors in critical moments of care. Our key strength has always been adapting to the needs of the end user and preempting future market demands With that approach - it's obvious that our focus is on creating digital solutions that are practical, dependable, and aligned with real clinical workflows. We see digital health as a natural extension of our device legacy, one that simplifies processes, improves coordination, and maintains the reliability that hospitals have always associated with BPL MedTech.

Digital transformation means different things to different industries . What real world gaps are BPL's digital health solutions designed to address?
Many hospitals today operate with fragmented systems where data sits across multiple platforms and departments. This leads to manual work, delays, and information gaps that affect both efficiency and care quality. Our digital health solutions are designed to bridge these gaps by creating a unified digital layer across departments. By bringing structure and continuity to patient data, we help hospitals move away from siloed operations towards more coordinated, informed clinical decision making.

Operating rooms are among the most data intensive environments in a hospital. How do your digital solutions simplify OT workflows?
Operating theatres generate large volumes of critical data, yet much of it is still recorded manually. This not only adds to clinician workload but also increases the risk of errors or missed information. Our digital solutions streamline OT workflows by digitising documentation, capturing clinical data in real time, and organising it into structured records. This reduces manual charting, improves accuracy, and allows surgical teams to focus more on patient care rather than paperwork.

BPL Medical Technologies often speaks about continuity of care and integration of digital solutions. Could you elaborate?
Continuity of care becomes challenging when patient information does not move seamlessly across departments. Our digital platforms are built to ensure that as a patient transitions from the OT to the ICU or undergoes diagnostic imaging, their clinical data travels with them. This continuity eliminates information gaps, reduces duplication of work, and gives clinicians a comprehensive view of the patient's journey, supporting faster decisions and better outcomes. Our platform provides digital integration within departments and across centres too.
Tell us about the challenges of Interoperabilityin hospital digitalisation and how you think it can be solved
Hospitals often hesitate to adopt digital solutions because of concerns around compatibility with existing infrastructure. We address this by designing our platforms to integrate smoothly with both legacy and modern equipment. Our solutions are compatible with patient monitors, anaesthesia systems, hospital information systems, and imaging platforms, allowing hospitals to digitise progressively with the existing workflows and without large scale infrastructure changes.

An often debated topic with regard to adopting AI in our ecosystems - Is digital transformation going to be a Man vs Machine kind of revolution for clinicians and

technicians?
I believe that the code of ethics and the real control will always be wielded by a human hand. What we hope to achieve is that clinicians who spend a significant amount of time on documentation and administrative tasks will be relieved of simple chores and can focus on higher levels of diagnostics, data analysis, patient care and monitoring of workflows. Automation plays a critical role in improving the efficacy and speed of preliminary diagnosis and data monitoring across workflows. By enabling real time data capture and automated report generation, our digital solutions reduce repetitive manual work and ensure accurate documentation, allowing clinicians to focus more on direct patient care.

How is BPL integrating AI into its devices and digital platforms?
AI is going to be a key enabler in BPL MedTech's future roadmap. Our initial focus is on diagnostic and monitoring devices, where AI can deliver immediate and meaningful impact. Areas such as AI enabled ECG interpretation, advanced patient monitoring, and intelligent imaging systems offer significant opportunities to improve diagnostic accuracy, reduce clinician workload, and support faster clinical decision making.

Over the longer term, we see AI shaping the next decade of growth at BPL. AI-driven diagnostic and monitoring solutions, advanced imaging technologies including ultrasound and X-ray systems, and connected devices that extend digital health beyond hospitals into home care will define our future portfolio. Our approach is to integrate AI in a way that strengthens clinical confidence and seamlessly supports everyday care delivery.

India's hospitals operate in diverse and often high-pressure environments. How does this influence your product design?
Indian healthcare settings vary widely, from large urban hospitals to smaller facilities in remote areas. Our digital solutions are designed with this diversity in mind. They are built to be intuitive, scalable, and robust enough to handle high patient volumes and varied skill levels, while remaining cost-effective and reliable.

With your current digital solutions in place, how do you see the digital health portfolio evolving in the coming years?
Our focus is on building a connected digital ecosystem that supports hospitals across multiple departments. Currently, our digital platform covers OT, ICU and Radiology. We plan to deepen integration across critical care, diagnostics, and imaging, while strengthening data intelligence and interoperability. The long term goal is to enable hospitals to function as connected environments where information flows seamlessly and supports proactive care delivery.

As hospitals begin or accelerate their digital journey, what guidance would you offer when selecting the right technologies?
Digital transformation works best when approached in phases. Hospitals should prioritise solutions that integrate easily with existing systems, scale over time, and address everyday workflow challenges. Most importantly, technology should make clinical work simpler, not more complex, ensuring long-term sustainability and value. By focusing on automation, continuity of care, and intelligent integration across departments, healthcare providers can focus on being more connected, efficient, and supporting patient-centric care environments.

Revolutionising urinalysis: How automation is transforming a vital diagnostic tool

Shobhit Jain, Sr. Manager, Product-Clinical Chemistry and Urinalysis, Sysmex India Pvt Ltd highlights that over the past decade, Sysmex has continuously innovated in urinalysis testing, starting with fully automatic urine particle analyzers (Fluorescence Flow Cytometers)

Urinalysis, despite its potential to provide crucial diagnostic information, has long been a segment of in vitro diagnostics (IVD) that largely relies on conventional, manual techniques. Most laboratories still prefer these traditional methods over automated urine examination, even though urine tests offer vital insights into various health conditions. The clinical utility of urinalysis has been significantly hampered by the limitations of these manual methods, encompassing both biochemical analysis and microscopy. While reagent strips have improved biochemical analysis, the microscopic examination has continued to pose challenges.

The need for automation in urinalysis

Several factors contribute to the limitations of manual urinalysis, including:

◆ Lack of standardisation: Manual processes often lead to inconsistencies in results.

◆ Person-to-person variation: Human involvement introduces variability in sample preparation and interpretation.

◆ Preanalytical: Centrifugation and slide preparation.

These challenges highlight the critical need for a fully automated system that minimises human involvement and maximises efficiency.

Sysmex recognises urinalysis as an informative and non-invasive diagnostic tool crucial for clinicians to diagnose a range of ailments, such as UTIs and CKD. Over the past decade, Sysmex has continuously innovated in urinalysis testing, starting with fully automatic urine particle analyzers (Fluorescence Flow Cytometers). This journey has progressed to integrated systems combining fully automated urine particle and urine chemistry analyzers.

Sysmex now offers a comprehensive solution that includes: Urine particle analysis (Fluorescence Flow Cytometry), Urine chemistry, Urine digital imaging powered by a 2.5-million-pixel camera. This advanced technology has revolutionised urine examination by introducing unique parameters like:

◆ Bacteria gram's classification

◆ Epithelial cell classification (Renal Tubular Epithelial Cells, Epithelial Cells, Non-Squamous Epithelial Cells, and transitional cells)

◆ RBC Morphology

◆ UTI and AtypC flagging

◆ Osmolality and conductivity

These parameters have proven to be significant markers for the early diagnosis of CKD, urothelial malignancies, and other routine diagnoses. Furthermore, this technology can also be used for body fluid investigations without requiring license activation or additional reagents.

Technological advancements in both biochemical and microscopic examination aspects of urinalysis have helped standardise processes and minimise pre-analytical and post-analytical errors. Automation has transformed laboratory operations, improving testing, reporting, and documentation with enhanced quality and reduced turnaround times.

Key features and benefits of automation in urinalysis include:

● **Traceability:** Ensuring clear records of every step in the process.

● **Standardisation:** Providing consistent and reliable results.

● **Quality control:** Implementing rigorous checks for accuracy.

● **Added clinical values:** Offering more detailed and insightful diagnostic information.

● **Data management:** Streamlining the handling and analysis of large volumes of data.

● **Accuracy:** Delivering precise measurements and interpretations.

● **Reproducibility:** Guaranteeing consistent results across different tests.

In conclusion, the revolution in urinalysis, driven by automation, has transformed a once-tedious and subjective procedure into a powerful, objective, and indispensable diagnostic tool. The future of urinalysis will undoubtedly be characterised by continued innovation, with even more sophisticated automated platforms that integrate seamlessly with electronic health records and provide deeper insights into patient health. This ongoing evolution ensures that urinalysis will be at the forefront of medical diagnostics in future, providing a non-invasive yet comprehensive window into the body's health and disease states.

How Medika Business Solution is transforming hospital procurement

MBS acts as a one-stop solution, offering hospitals and clinics access to a wide range of consumables, medical equipment and devices, and pharmaceuticals all under one roof

Running a hospital is not just about treating patients it also means ensuring that the right medicines, equipment, and consumables are always available when needed. Unfortunately, procurement is often one of the most stressful parts of hospital operations.

Hospitals and clinics face constant challenges such as:

Stockouts of life-saving medicines, consumables, or devices at critical moments.

Dealing with multiple vendors, each with different timelines, pricing structures, and service levels, which leads to confusion and inefficiency.

High procurement costs, especially when items are sourced in smaller quantities.

Unpredictable deliveries that disrupt smooth hospital operations.

Limited access to branded products in tier 2 and 3 cities, forcing hospitals to compromise on quality or availability.

Manual inventory tracking, which increases the chances of mismanagement and unnecessary expenses.

Most importantly, MBS extends these benefits to tier 2 and tier 3 cities, where procurement challenges are often even more severe due to limited local suppliers. Hospitals in smaller cities can now enjoy the same access to quality products and brands as those in metro areas, ensuring that patients everywhere receive the care they deserve

These hurdles not only affect hospital staff but also impact patient care, making procurement a key area in need of transformation.

This is where Medika Business Solution (MBS) steps in as a reliable partner. MBS acts as a one-stop solution, offering hospitals and clinics access to a wide range of consumables, medical equipment and devices, and pharmaceuticals all under one roof. By bringing everything together, MBS eliminates the need to juggle multiple vendors and ensures smoother operations.

Why Medikabazaar Business Solutions?

Cost savings: Hospitals can save significantly through bulk buying and optimized procurement.

Access to multiple brands: Wide choice across leading, trusted brands to meet diverse needs.

Inventory planning and analytics: Tools that help hospitals forecast demand, plan stock, and prevent shortages.

Hassle-free deliveries: Reliable, timely supply of essential products so hospitals can focus on care.

Flexible payment options: Tailored solutions to ease financial pressure and improve cash flow.

Most importantly, MBS extends these benefits to tier 2 and tier 3 cities, where procurement challenges are often even more severe due to limited local suppliers. Hospitals in smaller cities can now enjoy the same access to quality products and brands as those in metro areas, ensuring that patients everywhere receive the care they deserve.

By reducing costs, saving time, and guaranteeing availability, Medika Business Solution is not just simplifying procurement it is strengthening the backbone of healthcare delivery across India.

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Vessel Loops: A Critical Tool in Modern Surgical Procedures

Introduction

In the world of surgery, precision and safety are paramount. Among the wide range of medical devices that support surgical excellence, vessel loops stand out as an indispensable tool. These flexible, biocompatible loops are used by surgeons to isolate, retract, and identify blood vessels, nerves, and ducts during complex procedures.

At Ami Polymer Pvt. Ltd. (APPL), we manufacture high-quality silicone vessel loops designed to meet the demanding requirements of healthcare professionals. With our expertise in medical-grade silicone processing, we ensure consistent performance, patient safety, and reliability in every product we deliver.

Raw Material: Why Silicone?

We at Ami Polymer have chosen medical-grade silicone as the exclusive raw material for vessel loops. This choice is driven by several advantages:

- **Biocompatibility:** Silicone is highly inert and does not cause adverse reactions with tissues.
- **Flexibility & Elasticity:** Ensures easy placement, stretching, and retraction during surgeries without causing trauma.
- **Durability:** Silicone resists tearing, deformation, and degradation, making it suitable for critical procedures.
- **Sterilization Compatibility:** Withstands autoclaving, gamma irradiation, and ETO sterilization.
- **Non-Absorbent:** Prevents fluid retention and bacterial growth.

Classification of Vessel Loops

Vessel loops can be categorized based on their function and surgical requirements:

- **Standard Vessel Loops** – Used for general isolation of veins, arteries, and nerves.
- **Micro Vessel Loops** – Smaller loops for delicate microsurgical applications.
- **Large Vessel Loops** – For handling thicker arteries, veins, or ducts in major surgeries.

All of our loops are manufactured in smooth, non-latex silicone to reduce irritation and enhance usability.

Production Process at Ami Polymer

Our vessel loops are manufactured with stringent process controls to ensure consistency and compliance with medical standards.

- **Raw Material Selection:** Only certified medical-grade silicone is procured.
- **Extrusion & Molding:** Advanced extrusion processes ensure uniform diameter, smooth texture, and precise sizing.
- **Cutting & Finishing:** Loops are cut and finished to eliminate sharp edges or surface irregularities.
- **Color Coding:** Loops are pigmented with medical-grade, non-toxic colors for easy identification.
- **Sterilization:** Supplied sterile or non-sterile depending on customer requirements.
- **Quality Control:** Each batch undergoes tensile strength, and elongation stesting.

Applications of Vessel Loops

Silicone vessel loops are widely used across multiple surgical disciplines:

- **Cardiovascular Surgery:** Temporary occlusion, identification, and isolation of arteries and veins.
- **Neurosurgery:** Handling delicate nerves and small vessels without trauma.
- **General Surgery:** Retraction and isolation of ducts, ureters, and intestinal loops.
- **Plastic & Reconstructive Surgery:** Microsurgical isolation of small vessels.
- **Organ Transplant Surgery:** Secure handling of multiple vascular structures.

Why Different Colors?

Color coding plays a crucial role in surgical efficiency:

- **Red** – Indicates arteries (oxygen-rich vessels).
- **Blue** – Used for veins (oxygen-poor vessels).
- **White** – Commonly used for nerves and ducts.
- **Green/Yellow** – For marking or differentiating additional structures.

This visual differentiation reduces surgical errors and helps surgeons work with precision, especially in complex multi-structure procedures.

How Ami Polymer Stands Out

As a manufacturer, Ami Polymer Pvt. Ltd. differentiates itself in several key ways:

- **Customization:** We can develop vessel loops in different sizes, lengths, and thicknesses as per surgeon and hospital needs.
- **Superior Silicone Processing:** Decades of expertise in high-performance silicone ensures reliable, defect-free loops.
- **Global Export Capability:** Supplying worldwide with strong packaging and supply chain support.
- **Wide Product Range:** Alongside vessel loops, APPL offers a full portfolio of critical care, gynecology, respiratory, and customized silicone solutions—making us a one-stop partner.
- **Consistent Quality:** Backed by stringent internal testing protocols to meet global hospital expectations.

Conclusion

Vessel loops may appear to be a small component in the surgical toolkit, but their importance is immense. At Ami Polymer Pvt. Ltd., we recognize the life-saving role these loops play and manufacture them with the highest standards of precision, safety, and reliability.

By focusing exclusively on medical-grade silicone, offering color-coded options, and enabling customization for surgeons worldwide, we ensure that our vessel loops contribute to safer and more efficient surgical outcomes.

Written by: Atharwa Mishra
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