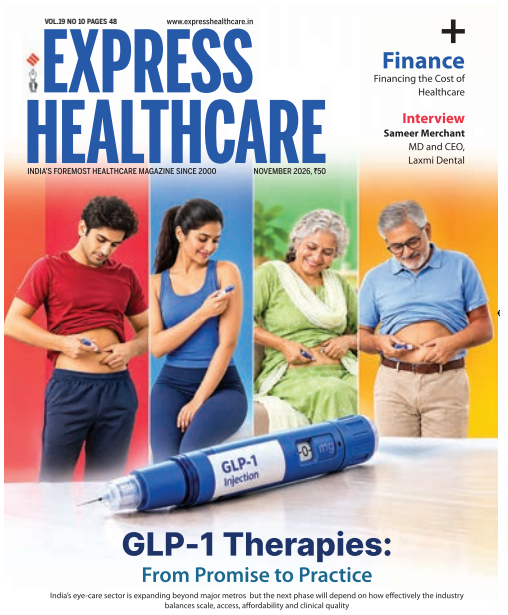
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+ Finance

Financing the Cost of Healthcare

Interview

Sameer Merchant
MD and CEO,
Laxmi Dental



GLP-1 Therapies:

From Promise to Practice

India's eye-care sector is expanding beyond major metros but the next phase will depend on how effectively the industry balances scale, access, affordability and clinical quality

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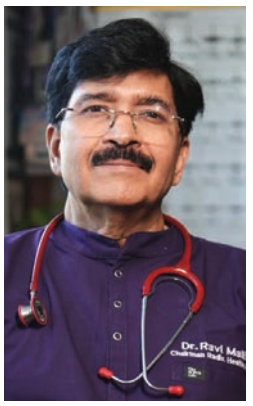
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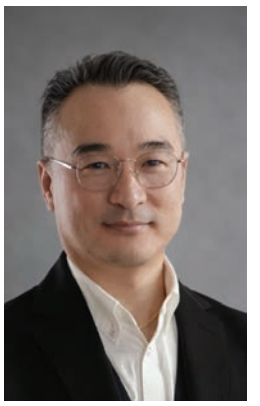


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Are trade margin caps and SUD bans the full answer?

Policymakers have unveiled measures to reduce healthcare prices for patients but while the intent is commendable, will they be sustainable, given the reality of India's healthcare system?

For example, the capping of trade margins on 137 anti-cancer medicines at 30 per cent and more recently the prohibition of reuse of single-use devices (SUDs) have patients' interest at heart but could end up doing more harm in the long run.

No one questions that the October 16 directive from the Directorate General of Health Services (DGHS) prohibiting the reuse of single-use medical devices (SUDs) and disposable surgical items across public and private healthcare facilities is a long overdue step towards infection prevention and control measures. If implemented properly, it will combat Healthcare-Associated Infections (HAIs), and enhance patient safety across the country. The DO specifies that this directive had already been issued to CGHS empanelled hospitals a decade back, in December 2016.

The reuse of properly sterilised equipment brings down the procedure costs but this is rarely disclosed to patients or passed on in the final billing. As the DGHS DO points out, the DGHS has observed that patients, or the government in the case of reimbursement schemes, are charged the full cost even when resused/resterlised items are used during procedures.

Industry associations of medtech companies welcome the decision but there are concerns on its enforceability and liabilities.

As Medical Technology Association of India's (MTaI) position statement on the prohibition on reuse of SUDs cautions, the directive's effectiveness will now depend on consistent enforcement by state authorities, regulators and healthcare institutions. Equally important is raising patient awareness, empowering them to understand and assert their rights to safe and ethical care.

While the Association of Indian Medical Device Industry (AiMeD) welcomes the directive, Rajiv Nath, Forum Coordinator, AiMeD points out, "Where a product is used contrary to its labelled instructions, such as being reused, any failure or harm cannot be attributed to the manufacturer. Responsibility must rest with the person or establishment that reused it. We ask that this be clearly reflected in enforcement and in any liability framework."

AiMeD's recommendations include strict, regular inspections of healthcare establishments, with traceable records of device use and disposal; clear action under the Medical Devices Rules, 2017 and the Clinical Establishments Act, 2010 against reuse; awareness and training of hospital staff on infection prevention and biomedical waste handling; a clear statement that manufacturers are not liable for failures arising from reuse contrary to labelling; and support for safer and more affordable single-use alternatives, so that cost is no reason to reuse.

Besides monitoring and enforcing the SUD directive, healthcare experts point out that policymakers will need to take into account the environmental cost of SUDs, as the volume of biowaste will increase exponentially. The increased demand for new devices is also sure to strain the resources supply chain over time.



All stakeholders need to find a balance between India's socio-economic and clinical realities, aiming for patient safety, affordability, access, and environmental sustainability

As a practising surgical oncologist working on the ground, Dr. Sandeep Nayak, Chairman of Oncology, MACS-Renova Oncology Institute, KIMS Hospital, Bengaluru, sees a fundamental tension between these two mandates. In his view, on one hand, policymakers want to drastically lower healthcare costs for families; on the other, they are outlawing controlled practices that currently keep high-end, advanced surgical care within financial reach.

As an example, he points out that high-end surgical instruments - such as an advanced vessel sealer, ultrasonic shears, or specialised robotic accessories— are crafted from durable surgical alloys and engineered polymers that withstand validated reprocessing without structural or functional degradation. When proper, standardised sterilisation procedures are executed, these complex instruments can be reused safely multiple times.

Similarly Dr Nayak explains that capping trade margins on non-scheduled immunotherapies and targeted drugs reduces overall hospital bills by 5 per cent to 25 per cent, but strictly enforcing a single-use policy on ₹80,000 energy devices or robotic tools could mean that equipment costs alone could exceed the entire surgical fee.

Dr Nayak cautions that the ban on SUDs might push doctors and hospitals toward cheaper, inherently lower-quality equipment labelled as "reusable" or low-cost single-use alternatives, to keep surgical bills viable for patients.

He recommends that instead of an absolute prohibition, a pragmatic compromise exists—one already demonstrated by leading medical technology innovations: multi-use validation directly from manufacturers. If medical device manufacturers are incentivised or required to validate and label advanced instruments for a certified number of uses rather than applying a blanket "single-use" label to protect commercial turnover, hospitals could maintain strict safety guarantees while offering affordable access. Dr Nayak cites the example of how certain robotic surgical platforms operate: instruments come built with integrated tracking chips and are validated by the manufacturer for a specific, safe number of uses (e.g., 10 or 20 procedures) before auto-disabling.

Importantly, he points to where the true risk lies: substandard sterilisation protocols. Instead of absolute prohibition, he recommends that India needs a practical regulatory approach spanning category-based regulation, manufacturer-defined multi-use limits and mandatory sterilisation audits.

The October 16 DGHS directive is thus a start but the direction needs to come from a collaborative approach, with inputs from medical device manufacturers and the clinical and hospital management fraternity. Together all stakeholders need to find a balance between India's socio-economic and clinical realities, aiming for patient safety, affordability, access, and environmental sustainability.

VIVEKA ROYCHOWDHURY, *Editor*
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Epigenetic clues in the autistic brain

Dr Chandrashekhar Thodupunuri, Founder Chairman of the Resplice Autism Research Foundation & Institute spoke to Express Healthcare to learn more about the Smart Clan programme and the epigenetics–autism connection

What Do Post-Mortem Studies Tell Us?

If you're not scientifically minded, you might be unaware of the potential link between environmental toxins, epigenetics and autism. From the moment children are conceived, they begin interacting with the environment and are indirectly exposed to factors that could affect their development. In short, epigenetics studies tell us how your genes and environment interact and affect how your genes work. A fetus interacts with the environment through the placental supply. For this reason, throughout pregnancy, physicians should recommend foods, diets, or regimens to support the fetus' brain development. Of course, many uncontrollable environmental factors during development can affect a child's growth. Some of these environmental influences can impact development at the genetic level. Changes in gene expression caused by epigenetic mechanisms do not alter the underlying DNA sequence; they are distinct from mutations. There are many neurological conditions that some researchers believe may involve epigenetic dysregulation, and one area of investigation is autism spectrum disorder (ASD).

As the name suggests, autism is a spectrum of neurodevelopmental differences that may include differences in communication and social interaction, repetitive behaviours, and restricted or focused interests. Autistic people vary widely in their strengths, support needs and everyday experiences. For this reason, a combination of genetic and non-genetic factors is thought to contribute to the diverse ways autism presents. Although researchers have not identified one single cause of autism, studying epigenetics may help explain how genes are regulated during development and how genetic susceptibility interacts with environmental influences. Let's examine what research can—and cannot yet—tell us about the relationship between epigenetics and autism.

Resplice Autism Research Foundation & Institute, which operates two FMT centres in India, one in Hyderabad and the other in Mumbai, is developing the Smart Clan programme, focused on preconception planning and biological risk assessment. Resplice's work includes research into faecal microbiota transplantation (FMT) in autism. The safety and effectiveness of FMT for autism remain areas of investigation, and outcomes should be assessed through appropriately designed clinical research.

What is epigenetics, and why is it relevant to autism?

Epigenetics refers to molecular mechanisms that regulate gene activity without changing the underlying DNA sequence. These include DNA methylation and hydroxymethylation, histone modifications, chromatin organisation and non-coding RNAs. Fetal brain development requires the precisely timed activation and suppression of many genes. Disruption of these regulatory processes could affect aspects of neuronal development, making epigenetics an important area of autism research.

Is there direct evidence of epigenetic alterations in autistic brains?

Yes. Multiple studies examining post-mortem brain tissue from autistic people have reported differences in gene expression, alternative splicing patterns, DNA methylation and other epigenetic marks compared with control tissue. Findings



have been reported in regions including the prefrontal cortex, temporal cortex, cerebellum and subventricular zone. Results are not uniform across studies, suggesting that molecular differences may vary by brain region, developmental stage and individual. Post-mortem findings show associations; by themselves, they cannot establish whether a change caused autism or arose alongside other developmental processes.

What is one of the most interesting findings?

Post-mortem brain tissue studies have reported differential gene-expression patterns involving more than 1,000 genes and differential alternative-splicing patterns involving more than 800 genes in research on neurodevelopment. One intriguing line of investigation concerns the subventricular zone in post-mortem autistic brains. Researchers have identified altered DNA-methylation patterns associated with neurodevelopmental pathways when compared with developmental reference datasets. These findings raise questions about whether some molecular developmental programmes differ, but the interpretation depends on the study design, sample size, tissue characteristics and reference datasets used.

Are specific genes involved?

Several biologically important genes and pathways have been investigated. MECP2 encodes a protein involved in interpreting methylated DNA and regulating chromatin; altered expression or methylation has been reported in some studies. GAD1, which contributes to GABA synthesis, has also been examined in epigenetic research, linking gene regulation with inhibitory neuronal signalling. RELN (Reelin) is of interest because it plays a role in neuronal migration and cortical organisation. These findings point to biological pathways involved in brain development; they do not establish a single epigenetic signature that defines autism.

What about hydroxymethylation and non-CpG methylation?

The neuronal epigenome has specialised features. In addition to conventional CpG methylation, neurons contain substantial non-CpG methylation, and 5-hydroxymethylcytosine (5hmC) is particularly abundant in brain tissue. Research has investigated differences in these marks in autism, highlighting the complexity of neuronal gene regulation. Results need to be interpreted in light of tissue composition, age, brain region and technical methods.

Where does research go from here?

The next generation of autism research will benefit from integrating genomics, epigenomics, transcriptomics, metabolomics and microbiome science with detailed clinical phenotyping. A central question is how genetic susceptibility and the developmental environment interact to regulate genes involved in brain development. Post-mortem studies provide an important molecular window, but establishing timing and causality will require carefully designed longitudinal studies, including research that begins before conception or early in pregnancy where feasible and ethical.

Can we prevent these epigenetic alterations?

There is currently no proven intervention that can prevent or reverse autism-associated epigenetic changes, and no established method to prevent autism by targeting epigenetics. Research is examining whether factors such as maternal nutrition, environmental exposures, inflammation, metabolic health and the microbiome influence fetal development. Preconception care can support general reproductive and maternal health, but claims that a particular programme reduces autism incidence require direct evidence from rigorous studies.

What is Resplice doing in this area?

Resplice is developing the Smart Clan programme, focused on preconception planning and biological risk assessment. The programme aims to consider parental health and relevant genetic, metabolic and environmental factors before pregnancy, while supporting research into maternal–fetal health and early developmental outcomes. Any risk assessment should be evidence-based, communicate uncertainty clearly and avoid presenting autism as something that can be reliably predicted or prevented through a single test or intervention.

"The emerging question in autism research is no longer only which genes are altered, but how developmental mechanisms regulate when, where and to what extent those genes are expressed."

For further details about the Smart Clan programme, doctors can call 9821529653.

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How can integrity become a long-term business advantage in healthcare?

Sonia Gill, Compliance Manager-India & South Asia, GE HealthCare, discusses the role of integrity in building stakeholder trust, embedding compliance into innovation, and helping healthcare organisations navigate uncertainty while pursuing sustainable growth

In healthcare, trust is not just a reputation metric, it directly impacts patients, providers, and communities. How do you see integrity contributing to long-term trust and growth?

In healthcare, trust is not abstract. It influences decisions that affect lives. So, when we speak about trust in healthcare, we do not look at it as a perception metric. It is deeply personal. It shapes decisions that can directly impact patient care. Clinicians need confidence in the technologies they use, health systems need confidence in the organizations they partner with, patients and communities need confidence in the care ecosystem that serves them.

This underlines why integrity is not simply a compliance obligation or a corporate value; it is foundational to how trust is earned every day. Integrity is how organisations earn that confidence. Integrity means doing the right thing, the right way, even when no one is watching. It means acting in both the spirit and the letter of our principles and commitments; being transparent about capabilities and limitations; prioritising quality and safety; and following through on what we say we will do.

When those behaviours are demonstrated consistently over time, they create trust. And when trust is sustained, it becomes credibility, a reputation for being dependable, responsible and accountable. That credibility has tangible business value. It strengthens relationships, increases stakeholder confidence, supports long-term partnerships, and helps organisations navigate challenges more effectively.



> When trust and integrity are built into decision-making from the start, organisations can innovate with greater confidence, adapt more effectively to change, and pursue growth while continuing to earn the trust of the people they serve

Agility: In the pursuit of growth and innovation, how can organisations ensure that trust and integrity remain non-negotiable?

Trust and integrity must be built into the culture of innovation from the start. We often describe this as "Integrity by Design" or "Compliance by Design." It means putting people first, being candid about what we know and where we need to improve, and holding ourselves accountable for the decisions we make. Organisations move faster when expectations, principles, and decision-making boundaries are clear. Trust cannot be something we assess at the end of the innovation process. It has to be built into how decisions are made from the beginning— not a check at the end. That means asking important questions early: Are we acting in the best interests of the patients and clinicians we serve? Have we considered potential risks as carefully as the opportunities? Are we acting in both the spirit and the letter of our commitments?

Responsible AI is a good example of how this approach can be applied in practice, particularly when innovation is advancing rapidly and the potential benefits and risks must be considered together. At GE HealthCare, our publicly stated Responsible AI principles reflect that mindset. They call for AI to be accountable and transparent, fair, explainable and interpretable, valid and reliable, secure and resilient, private, and safe. More broadly, they reinforce the importance of embedding responsibility into innovation from the outset rather than treating it as a final checkpoint.

When trust and integrity are built into decision-making from the start, organizations can innovate with greater confidence, adapt more effectively to change, and pursue growth while continuing to earn the trust of the people they serve.

Growth Driver: How can organisations turn integrity from a compliance requirement into a source of long-term business value?

Organisations create long-term business value when integrity shapes everyday decisions, not just compliance processes. Consistent, transparent, and accountable behaviour build stakeholder confidence and strengthens reputation. Over time, trust becomes a strategic asset, enabling organisations to strengthen stakeholder confidence, navigate uncertainty more effectively, and create sustainable business value and credibility.

A strong culture with resilience means creating an environment that is designed to detect early, learn from failures, and act.

Integrity creates value because it influences how stakeholders choose to engage with an organisation. Customers, partners, employees, and communities are more likely to work with organisations they believe will act responsibly, honour their commitments, and do the right thing, even when faced with difficult decisions. That confidence supports lasting partnerships, strengthens reputation, and helps organizations navigate challenges more effectively.

A strong culture means creating an environment that is designed to identify issues early, learn from them, and take action quickly. Accountability is strongest when people understand both the organisation's expectations and their responsibility to uphold them. At GE HealthCare, we keep it simple— act with integrity, speak up early, and take responsibility. When people feel empowered to raise

concerns and leaders consistently reinforce the right behaviours, organisations become stronger, more resilient, and better equipped to earn trust over time.

Eventually, integrity builds trust, trust builds credibility, and credibility becomes a source of long-term competitive advantage.

Resilience: Why do some organisations emerge stronger from periods of uncertainty, and what role does compliance play in that resilience?

Uncertainty is now an operating condition rather than an occasional interruption. Disruption doesn't create organisational character — it reveals it. It is during periods of uncertainty that an organization discovers what it has truly built. Organisations that emerge stronger from uncertainty tend to share one trait: they have already decided what they will not do. Sounds like a constraint? In practice it's an accelerator! When the boundaries are settled in advance, people don't stop to relitigate them mid-crisis. Decisions get made faster, not slower, because the hard conversation happened before the pressure arrived. That's where 'compliance & integrity' earns its their place —as pre-installed clarity.

A well-designed compliance framework is essentially institutional memory about risk. In volatile periods, business partners become far more selective about who they do business with. Being the organization whose conduct is predictable becomes a genuine competitive advantage. Integrity isn't only the right thing; it's increasingly the differentiated thing. The failure mode – treating integrity as something you have rather than something you practise. Resilience isn't a policy document — it's the accumulated result of small decisions made consistently when no one was watching and there was no obvious reward for making them.

For leaders, we believe in three simple strategies. First, decide your non-negotiables while waters are calm; disruption is not the moment for ethical reasoning. Second, make it genuinely safe to raise problems & concerns early — most failures are visible to someone long before they are visible to leadership. Third, be honest that integrity sometimes costs you a deal, and be equally honest about why that trade was worth making. Colleagues calibrate to what leadership rewards, not to what it announces.

Future: What will be the biggest differentiator for organisations in the future: innovation, scale, or trust?

The future will need all three – innovation, scale and trust. That said, while Innovation may open doors, trust will keep them open. With innovations, we create possibility, with scale, we create impact. But it's trust that earns you a place in a patient's heart, in a clinician's practice and a stakeholder's vision. Trust is the 'care' in healthcare.

Take, for instance, stakeholders expect organisations to be transparent, accountable, and willing to act when something needs to be corrected. Clinicians need confidence in the tools they rely on, patients need confidence in the care they receive, and communities need confidence that organisations will act responsibly and remain accountable for the outcomes they help enable.

In the future, the greatest differentiator will not be who can innovate the fastest or scale the furthest. It will be who can do both while remaining worthy of trust. Because trust is ultimately what transforms innovation into adoption, partnerships into long-term relationships, and performance into sustainable value. Organizations that consistently act with integrity create a reservoir of trust that helps them navigate uncertainty, sustain relationships, and pursue growth with confidence.

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GLP-1 Therapies:

From Promise to Practice

As GLP-1 therapies gain traction, their safe and effective integration into India's diabetes care ecosystem will depend on clinical evidence, affordability and long-term monitoring

By Kalyani Sharma




GLP-1
Injection
0
mg

GLP-1 therapies are becoming an increasingly important part of the conversation around diabetes and obesity management in India. The entry of lower-cost semaglutide options has brought greater attention to their potential, while clinicians are considering their role beyond blood glucose control and weight reduction. Their use, however, raises important questions around patient selection, affordability, treatment continuity and the monitoring needed to support long-term outcomes.

India's clinical context adds another dimension. Body composition, metabolic risk at lower BMI levels, dietary patterns and differences in access to specialist care all influence treatment decisions. As more patients and clinicians consider these therapies, the focus is shifting towards identifying who is most likely to benefit and how treatment can be integrated into routine diabetes and obesity care.

Moving beyond weight loss

The expanding discussion around GLP-1 therapies reflects a broader understanding of metabolic health. Their role cannot be assessed through weight reduction alone, particularly when patients may have multiple conditions that influence treatment choices.

Dr Rajiva Gupta, Senior Consultant, Internal Medicine and Diabetes, CK Birla Hospital, Gurugram, says, "I think we are moving from seeing these medicines mainly as 'sugar-lowering drugs' to understanding their wider role in diabetes and obesity care. For the right patient, they can help with blood glucose and weight, and some therapies have shown benefits for cardiovascular , liver and kidney outcomes too."

This broader role also makes individual assessment essential. Treatment decisions need to account for the patient's health risks, existing conditions and ability to sustain therapy, rather than being driven by the expectation of rapid weight loss.



Starting the medicine is only one part of the job. We need to explain how the dose is increased, what side effects to expect, when to contact the doctor and why follow-up matters

Dr Rajiva Gupta
Senior Consultant,
Internal Medicine and Diabetes,
CK Birla Hospital



The discussions concerning GLP-1 drugs have shifted. Patients want to know whether they can use these medications for weight loss, and clinicians are thinking about using them as part of the management of diabetes and obesity in general

Dr Vimal J. Pahuja
Associate Director,
Department of Medicine, Metabolic Physician & Diabetologist, Dr L H Hiranandani Hospital



Cost may be an impediment since the treatment will continue for years

Dr David Chandy
Director of Endocrinology and Diabetology,
Sir H. N. Reliance Foundation Hospital



GLP-1s are no longer a niche, expensive option in India. With generic semaglutide now in the market, they are becoming part of everyday practice, which is welcome but needs some discipline

Dr Phulrenu Chauhan
Consultant, Endocrinology, P. D. Hinduja Hospital & Medical Research Centre

Dr Vimal J. Pahuja, Associate Director, Department of Medicine, Metabolic Physician & Diabetologist, Dr L H Hiranandani Hospital, Mumbai, says, "The discussions concerning GLP-1 drugs have shifted. Patients want to know whether they can use these medications for weight loss, and clinicians are thinking about using them as part of the management of diabetes and obesity in general, and their complications, in particular. The key questions here are: "What health condition do you want to improve?" A person who has diabetes, obesity and cardiovascular disease should be discussed in a completely different way than an individual interested in weight loss before getting married. Selection should include indications, benefits, nutritional status and treatment persistence."

The Indian population also presents specific considerations around body composition and metabolic risk. A single measure such as BMI may not fully capture the risk profile of an individual, making clinical assessment and appropriate treatment goals important.

Dr Phulrenu Chauhan, Consultant, Endocrinology, P. D. Hinduja Hospital & Medical Research Centre, Mahim, says, "GLP-1s are no longer a niche, expensive option in India. With generic semaglutide now in the market, they are becoming part of everyday practice, which is welcome but needs some discipline. We need to choose the drug by the patient's main problem, whether that is glycaemia, weight, fatty liver, kidney disease or cardiovascular risk, rather than prescribing the same thing to everyone."

Greater availability, therefore, does not remove the need for careful prescribing. The clinical decision has to consider the intended benefit, the patient's wider health status and the support needed alongside medication.

Dr Bhawna Attri, Consultant-Endocrinology, Sarvodaya Hospital says, "GLP-1 receptor

agonists are gaining attention in India for their role in managing type 2 diabetes and obesity. These therapies help regulate blood glucose, improve satiety and support weight loss, making them an important option for selected patients who need additional support beyond conventional treatment. Some agents have also demonstrated cardiovascular and kidney benefits in specific patient populations. However, their use must be guided by clinical need rather than the expectation of rapid weight loss."

For clinicians, the challenge is to distinguish appropriate medical use from the growing perception of these medicines as quick weight-loss solutions. That distinction also depends on how well patients understand the purpose and limits of treatment.

Dr Himika Chawla, Senior Consultant- Endocrinology, PSRI Hospital, New Delhi, says, "GLP-1 drugs provide an additional tool for managing diabetes 2 and obesity among other conditions. However, I want to emphasise that these medications should not be viewed as a means for weight loss or normalising blood glucose levels alone. For a number of selected patients, they can also reduce the probability of some heart and kidney risks. The key is to understand who actually needs them and whether they are suitable for that person's overall health."

Dr Shubhra Gupta, Sr. Consultant-Physician, RG Hospitals, Delhi, East Of Kailash, says, "These therapies may be particularly useful for patients with type 2 diabetes who also have obesity or are unable to achieve their treatment goals with existing medications. However, lifestyle modification, dietary counselling and physical activity must remain central to treatment."

The scale of diabetes and obesity in India makes access to appropriate treatment an important consideration. Yet adoption also depends on awareness, patient acceptance and the capacity of clinicians to explain treatment choices.

Dr Vyankatesh Shivane, Consultant Diabetologist & Metabolic Physician, Department of Endocrinology, Jaslok Hospital & Research Center, Mumbai, says, "India, Considered as Diabetes Capital of the world with prevalence at rise. Equal number of pre diabetics who are in wait list to become diabetic in future. 50 per cent still unknown about their diabetes status. A typical Indian Type 2 diabetes young onset even in third decade or sometimes second decade of life, poorly controlled, having huge belly fat (abdominal obesity), overweight or obese and more prone for complications to diabetes at younger age."

The adoption question is also about whether treatment decisions are based on a patient's overall condition and long-term goals. Prescribing should include a discussion of potential benefits, possible side effects and the practical implications of continuing treatment.

Dr Sandeep Kharb, Associate Director– Endocrinology, Asian Hospital, Faridabad, says, "GLP-1 medicines have provided yet another valuable tool in the management of type 2 diabetes and obesity However, the decision to prescribe them should go beyond a patient's blood sugar levels or weight. We need to consider at the person's overall health, existing medical conditions, treatment history and long-term goals. These medicines can definitely help a patient who is appropriate for treatment, but it is not a medicine for everyone One important aspect of treatment is setting realistic expectations."

The availability of more treatment options also brings the question of how evidence translates into practice. The clinical context in India, including metabolic risks at lower BMI levels, needs to inform the way patients are assessed and followed up.

Dr Piyush Lodha, Endocrinologist, Ruby Hall Clinic, Pune, points to the South Asian phenotype and body composition as an important area requiring further evidence:

The South Asian Phenotype



Although international clinical trials have established the effectiveness of GLP-1 therapies for specific indications, more India-specific evidence is needed to guide their long-term use

Dr Bhawna Attri
Consultant-Endocrinology, Sarvodaya Hospital



The key is to understand who actually needs them and whether they are suitable for that person's overall health

Dr Himika Chawla
Senior Consultant- Endocrinology,
PSRI Hospital



More research would be helpful from urban, semi urban and rural population for cost effectiveness of GLP-1 therapies

Dr Vyankatesh Shivane
Consultant Diabetologist & Metabolic Physician,
Department of Endocrinology,
Jaslok Hospital & Research Center



The treatment should be tailored to the patient, and the emphasis should be on health outcomes rather than simply weight loss

Dr Sandeep Kharb
Associate Director-Endocrinology,
Asian Hospital

and Body Composition: Indian patients frequently exhibit the "thin-fat" phenotype—higher body fat percentage and visceral adiposity alongside lower skeletal muscle mass, often at lower BMI thresholds. Global trials emphasize overall weight loss, but local evidence is needed to track whether rapid GLP-1-induced weight loss leads to clinically significant muscle loss (sarcopenic obesity) in Indian cohorts.

The question of who benefits most also extends to patients whose metabolic risk may not be apparent from weight alone. Treatment selection needs to reflect the patient's health profile rather than a uniform threshold.

Dr David Chandy, Director of Endocrinology and Diabetology, Sir H. N. Reliance Foundation Hospital, Mumbai, says, "For instance, in India, use has gone beyond lowering of glucose levels in type 2 diabetes and now includes management of chronic obesity based on availability of new options and generic semaglutide. The selection must include consideration of approved uses, obesity complications, cardiovascular and renal risk, nutritional status and affordability. Cardiovascular and renal benefits depend on specific medications and study groups. Tirzepatide, which is considered while GLP-1 medications are mentioned, is a dual GIP/GLP-1 receptor agonist."

The wider availability of therapies must be matched by appropriate medical assessment and counselling. This is particularly important when patients approach treatment with expectations shaped by public discussion of weight loss.

Dr Himanshu Sharma, Senior Consultant, Endocrinology, diabetes and metabolism, Yashoda Medicity, says, "GLP-1 therapies are changing how we approach type 2 diabetes and obesity, but the conversation in India is now moving beyond weight loss to who should receive these medicines, for how long and with what support. With semaglutide generics entering the market, access is expanding, but easier availability should not be confused with suitability for everyone."



Global trials emphasise overall weight loss, but local evidence is needed to track whether rapid GLP-1-induced weight loss leads to clinically significant muscle loss (sarcopenic obesity) in Indian cohorts

Dr Piyush Lodha
Endocrinologist,
Ruby Hall Clinic, Pune



The priority is not simply to initiate treatment, but to make it safe, sustainable and clinically meaningful

Dr Himanshu Sharma
Senior Consultant,
Endocrinology, diabetes and metabolism,
Yashoda Medicity



Studies should examine long term effectiveness, cardiovascular and kidney outcomes, treatment persistence, nutritional consequences, cost-effectiveness and the risk of weight regain after discontinuation

Dr Shubhra Gupta
Sr. Consultant-Physician,
RG Hospitals, Delhi,
East Of Kailash

Monitoring beyond the weighing scale

Starting therapy is only the beginning of the clinical process. Dose escalation, tolerability, nutritional intake and changes in body composition all need attention during follow-up. The aim is to assess whether the treatment is meeting its intended goals without compromising other aspects of health.

Dr Rajiva Gupta says, "Starting the medicine is only one part of the job. We need to explain how the dose is increased, what side effects to expect, when to contact the doctor and why follow-up matters."

A structured monitoring plan can help clinicians identify problems early and adjust treatment when required. It also gives patients a clearer understanding of what to expect during different stages of therapy.

Dr Pahuja says, "Follow-up should be more complicated than recording kilogram loss. A patient may be happy with quick weight loss, but he/she may have poor food intake, lack of energy, and problems with constipation. All this information should play an important role in the dose increase. Baseline evaluation should include metabolic parameters, renal function, medications, nutrition, and eye diseases. In the course of therapy, check out hydration, gastrointestinal symptoms, glucose levels, and physical abilities. Sometimes, doses of insulin and sulfonylureas need to be modified. Clinics require a good contact and recall system, and nutritional counseling between visits."

Nutrition and muscle preservation are particularly relevant when treatment results in substantial weight loss. Monitoring should consider whether patients are maintaining adequate dietary intake and physical function, rather than relying on changes in body weight alone.

Dr Chauhan says, "In Asian Indians, BMI understates the problem: we carry more visceral fat and often start with less muscle, so follow waist and body composition and push protein and resistance exercise to protect lean mass. The cardio metabolic and renal benefits are real, but most of the hard outcome data comes from Western trials, and we should be honest about that."

These considerations place greater importance on follow-up systems that extend beyond the prescribing consultation. Clinicians need to review the patient's response, address side effects and coordinate support where required.

Dr Attri says, "Patients prescribed GLP-1 therapies require structured monitoring, beginning with a comprehensive assessment of their medical history, weight, HbA1c, blood glucose levels and other relevant health parameters. Treatment is generally initiated at a low dose and increased gradually, depending on the specific medicine, tolerability and clinical response. Follow-up visits should assess gastrointestinal symptoms, hydration, nutritional intake, weight changes, glycaemic control and medication adherence."

Regular review also helps patients understand when to seek advice and why unsupervised changes to treatment can be problematic. The need for continuing medical support becomes particularly relevant

when patients experience side effects or have difficulty maintaining the treatment plan.

Dr Chawla says, "In my view, one of the biggest concerns is that people sometimes focus on the medicine itself and overlook the care that needs to go along with it. These drugs can affect appetite and digestion, and some patients may experience nausea, vomiting or other stomach-related problems. When someone starts eating much less, we also need to make sure they are still getting enough nutrition. This is why regular consultations matter. Patients should be able to discuss what they are experiencing and get proper guidance instead of trying to manage the treatment on their own."

Clinical assessment also needs to take account of existing medicines and health conditions. The requirements may differ between patients, making a standardised but individualised approach to care important.

Dr Shivane says, "In case of GLP-1 therapy, not one rule for all. To start GLP-1 therapies a complete clinical assessment is must by endocrinologists, physicians and cardiologist. It must be ensured that patient does not have any existing or possible pancreatic disease, gall bladder disease. Patient's pre-existing diabetic medicines like sulfonylureas or Insulin needs dose modification to avoid low blood sugars (hypoglycemia). Proper diet assessment and dietary modifications are required. Patient must be counseled about potential side effects of GLP-1 therapy and its mitigation."

Long-term follow-up also needs to assess the patient's experience of treatment and whether the plan remains practical. Expectations around the duration and cost of therapy should be discussed before treatment begins.

Dr Kharb says, "Prescribing a medicine without discussing the patient's ability to pay and continue the medicines long term can result in the same adherence challenges. It is the responsibility of the prescribing doctor to explain the duration, cost, risks and benefits of treatment before starting it. We also need more Indian evidence to understand long term implications of these therapies among various subgroups of our heterogeneous population, considering lifestyle and other metabolic risk factor differences. Research that reflects these differences can help doctors make more informed treatment decisions."

The availability of trained clinicians and follow-up support is another part of the equation. Patients need access to medical guidance through dose escalation and subsequent reviews, particularly when there are concerns about tolerability or other health risks.

Dr Chandy says, "The initial assessment needs to identify weight, waist circumference, HbA1c, kidney function, medications, medical history and intentions of pregnancy. It is important to start treatment with low dose and slowly increase it. The follow up during the dose increasing should include assessment of gastrointestinal side effects, hydration, intake of food and glucose with adjustments of insulin or sulfonylurea when needed. For patients with retinopathy, eye follow up will be required. At first, monthly follow ups should be done and then quarterly follow ups should assess metabolic effect, nutrition, strength and adherence."

A care pathway must also address changes in appetite, nutrition and physical function as treatment progresses. Such monitoring is particularly relevant when substantial weight loss may affect muscle mass or nutritional status.

Dr Sharma says, "Prescribing a GLP-1 therapy is only the beginning of treatment. The real clinical work lies in monitoring how the patient responds, managing side effects and ensuring that weight loss does not come at the cost of muscle mass or nutritional health. Along with blood sugar and weight, follow-up should assess gastrointestinal symptoms, hydration, dietary intake and physical function. Patients may need individualised nutritional guidance, adequate protein intake and resistance exercise to help preserve muscle, particularly during substantial weight loss."

The evidence gap around treatment duration and discontinuation is also important for clinical practice. Patients may face interruptions for financial or personal reasons, and clinicians need better information on how these changes affect metabolic outcomes.

Dr Lodha identifies post-discontinuation outcomes as an area requiring more study: Post-Discontinuation Outcomes and Treatment Durability: Because long-term therapy is frequently interrupted in real-world Indian settings due to cost or personal preference, there is minimal evidence on structured step-down strategies. Research is needed to understand rebound hyperglycemia, weight regain, and metabolic changes once treatment stops.

The experience of patients after discontinuation is closely connected to the question of whether they can sustain treatment over time. Clear communication about the likely duration of therapy and the possibility of weight regain can help patients make informed decisions.

Dr Rajiva Gupta says, "Despite reduced costs for certain brands and greater availability of lower-cost options, cost remains a major barrier, especially because treatment may need to continue for a long time. Additionally, patients need medicines with reliable action and safety and a clinician who can guide treatment."

Evidence, affordability and the care ecosystem

The growing use of GLP-1 therapies also highlights the need for more evidence from Indian patients. International trials provide important information, but clinicians need to understand how outcomes translate across different body compositions, diets, health profiles and patterns of healthcare access.

Dr Pahuja says, "What does India have in terms of evidence that speaks to practical prescribing dilemmas? What occurs when patients discontinue therapy due to expense? How do older individuals with low muscle reserves fare? What nutritional interventions are successful for vegetarians that don't get adequate amounts of protein? More extended Indian studies would investigate therapy continuation, body composition, muscle strength, complications, and quality of life. Loss of weight will not answer the question of whether a person's health improved. Multicentre registries would cover those endpoints in various practice environments."

Research that reflects routine clinical practice could help clarify which patient groups benefit most, how treatment is sustained and what happens when it is interrupted. It could also inform decisions on monitoring and resource allocation across different care settings.

Dr Chauhan says, "Most of what we know about GLP-1s comes from trials in which South Asians were barely represented, so we are partly extrapolating when we prescribe them here. We have very little long-term Indian data on how long the benefit lasts, what happens to muscle and bone, and how safe these drugs are over the years, including the pancreatitis and thyroid questions."

The need for local evidence extends to the practicalities of prescribing and continuing treatment. Research should account for differences in access, affordability and the ability to maintain follow-up beyond specialist centres.

Dr Attri says, "Although international clinical trials have established the effectiveness of GLP-1 therapies for specific indications, more India-specific evidence is needed to guide their long-term use. Research should examine outcomes across India's diverse population, including variations in body composition, dietary patterns, disease severity, socioeconomic status and associated health conditions. Long-term real-world studies are particularly important to understand treatment persistence, weight regain after discontinuation, adverse effects, cardiovascular and kidney outcomes, and the cost-effectiveness of these medicines in routine practice."

Dr Shubhra Gupta says, "An important evidence gap is the limited availability of long-term, real-world Indian data across diverse patient groups. Differences in dietary patterns, genetic and metabolic risk, healthcare access and the high prevalence of multiple metabolic conditions make locally relevant research essential. Studies should examine long-term effectiveness, cardiovascular and kidney outcomes, treatment persistence, nutritional consequences, cost-effectiveness and the risk of weight regain after discontinuation."

For clinicians, this evidence can support decisions about patient selection, treatment response and the point at which a change in management may be needed. It can also help build more practical guidance for patients who cannot continue treatment.

Dr Chawla says, "We also need to learn more about how these medicines work for Indian patients over the long term. People have different eating habits, health conditions and financial circumstances, all of which can affect their experience with treatment. More information from our own population would help doctors understand these differences and make better decisions. I believe the focus should be on treating the patient as a whole rather than relying on medication alone. Along with the right treatment, people need practical advice on food, physical activity and managing their condition in everyday life. Doctors also need to keep reviewing whether the treatment is working and whether it continues to meet the patient's needs."

Cost remains a central challenge because treatment may need to continue over an extended period. The initial price of a medicine is only one consideration; consultations, investigations, nutrition support and follow-up can also affect

whether a patient is able to remain on treatment.

Dr Shivane says, "Current evidence based medicine, has provided enough evidence about potential scope of GLP-1 in Indian scenario. Many of the marketed GLP-1 therapies and few which are in pipeline have undergone through clinical research in Indian subset of patients. It has been proven better safe and effective approach in managing Type2 diabetes and obesity. More awareness is required in India about ideal body weight, Body mass Index etc. This must be educated from school itself. India needs broad scale policies for awareness across urban as well as rural sectors. Healthy living is everyone's right and healthy lifestyle must be educated to everyone. More research would be helpful from urban, semi urban and rural population for cost effectiveness of GLP-1 therapies."

The broader healthcare system will need to support appropriate prescribing, follow-up and referral. Integration into diabetes care should also make it easier for patients to access relevant expertise without treating medication as a standalone solution.

Dr Kharb says, "GLP-1 treatments should be integrated into a comprehensive weight management plan. This demands inter-professional cooperation of clinicians, dietitians and others, coupled with well-established protocols for follow-up. The treatment should be tailored to the patient, and the emphasis should be on health outcomes rather than simply weight loss."

Access and affordability need to be considered alongside safety and prescribing standards. As the range of available products grows, clinicians and patients need clear information about approved uses and the practical requirements for sustained treatment.

Dr Chandy says, "Cost may be an impediment since the treatment will continue for years. Less expensive products may increase access, however, sustainable treatment involves cost-effective consultations, testing, and nutritional support. Lack of equal access to specialists, unequal counseling and the expectation of quick weight loss may reduce adherence. Injection fears and misinformation may also deter patients from the treatment. Nausea and vomiting need anticipatory counseling; severe abdominal pain persistently calls for urgent investigation. The prescription of this medication should adhere to the product-specific contraindications, which include personal and family history of medullary thyroid carcinoma or MEN2 if indicated."

The need for continuity becomes particularly important when treatment is interrupted because of cost, side effects or other barriers. Care pathways should address these situations rather than focusing exclusively on treatment initiation.

Dr Sharma says, "In India, we need care pathways that extend beyond the prescribing consultation. This includes planned follow-ups, medication reviews and access to dietitians and diabetes educators. As more patients explore these therapies, affordability and continuity of care will also matter. Patients should understand that stopping treatment can lead to weight regain, and that long-term management needs to be discussed from the outset. The priority is not simply to initiate treatment, but to make it safe, sustainable and clinically meaningful."

Affordability and appropriate prescribing are also linked to the regulatory and clinical responsibilities of healthcare professionals. Clear guidance can help clinicians distinguish medically appropriate use from treatment driven primarily by cosmetic expectations.

Dr Lodha highlights the importance of regulatory compliance and patient safety, *"Off-Label Prescribing and Regulatory Compliance:* The popular demand for weight-loss therapies has raised concerns regarding off-label use and informal dispensing without full medical evaluation. Under Indian healthcare regulations, including the Drugs and Cosmetics Act & Rules and the National Medical Commission (NMC) Registered Medical Practitioner (Professional Conduct) Regulations, 2023: *Approved Indications:* Clinicians must clearly distinguish between globally discussed indications and locally approved labeling by the Drugs Controller General of India (DCGI) for specific molecules and formulations. *Documentation & Informed Consent:* Prescribing off-label or for cosmetic weight reduction without documented medical evaluation, baseline screening, and informed patient consent increases medicolegal risk in cases of adverse events."

Guidelines and care pathways can help translate evidence into everyday clinical decisions, including patient eligibility, dose escalation, monitoring and referral. They also need to reflect the practical realities of long-term treatment and the range of professionals involved in patient care.

Dr Rajiva Gupta says, "Guidelines should make the practical decisions clearer: who is likely to benefit, how to initiate treatment, how to increase the dose, what to monitor and when to seek specialist advice. They should also explain what to discuss if a patient cannot afford treatment or needs to stop it. We need a team approach where primary care physicians, specialists , dietitians, and diabetes educators can support the patient."

The next stage of adoption will depend on whether the healthcare system can combine appropriate patient selection with accessible, consistent and coordinated care. GLP-1 therapies may offer meaningful benefits for selected patients, but sustained outcomes require attention to the wider factors that shape diabetes and obesity management.

The clinical objective is not simply to make treatment more widely available. It is to ensure that patients receive it for the right reasons, understand what it involves and have the support needed to manage their health over time.

The way forward

The next phase of GLP-1 therapy adoption in India will depend on how effectively the healthcare system moves from initial access to sustained, clinically supervised care. Wider availability must go hand in hand with appropriate patient selection, regular monitoring, clear guidance on treatment duration and support for maintaining outcomes over time. For clinicians, the priority will be to individualise treatment decisions based on each patient's metabolic profile, associated conditions and response to therapy, while helping patients understand that medication is part of a broader care plan. As evidence grows and treatment options evolve, stronger clinical guidance, continued research and better patient education will be essential to ensure that the promise of GLP-1 therapies translates into meaningful, long-term outcomes for India's diabetes care ecosystem.

Kalyani.sharma@expressindia.com
journokalyani@gmail.com



INTERVIEW

Making patient financing an integral part of healthcare delivery

Jose Peter, Co-Founder & CEO, Arogya Finance, in an interview with **Kalyani Sharma,** discusses the role of patient financing in improving access to healthcare, funding high-cost therapies and addressing India's healthcare affordability gap

You come from a retail finance and risk management background. What led you to focus on healthcare financing, and what gaps did you identify in the existing ecosystem?
Our entry into healthcare was quite accidental. After leaving the Tata group, we were working in a consulting capacity when Medtronic approached us to develop a patient financing programme.

Initially, we thought it should be relatively straightforward because of our experience in retail finance. However, we soon realised that healthcare financing was a very different and difficult space. It took us almost a year, with several iterations, including developing a psychometric approach to credit underwriting, before we started seeing success.

Once the programme was established, it scaled quickly. We started operating across four regions, customers were happy, and patients were demonstrating that they could and would repay. Around the same time, a World Health Organization report highlighted the extent to which medical shocks were pushing Indians into poverty. That made us realise that this was not simply a case of people being poor and therefore unable to afford healthcare. In many cases, healthcare expenses were contributing to people becoming poor in the first place.

We saw this as both an impactful space and one where there was a significant unmet need. Patients were



> In elective healthcare, areas such as IVF, weight management, hair and dental care have increasingly recognised financing as a useful tool. When financing is available, it can make it easier for patients to enter a treatment programme

demonstrating that they needed financial support and could be reliable borrowers, yet there were very few organisations willing to serve them. While many players recognised healthcare as an opportunity, they were primarily looking at the associated risks. We decided to approach it differently: understand the risks, identify the opportunity and build mechanisms to manage those risks.

That is how the journey began. We subsequently acquired a small NBFC and started building a holistic healthcare finance initiative. With Medtronic, our focus had been primarily on cardiac care. When we expanded, we started looking across healthcare more broadly. Today, we finance a range of patient requirements, including critical care, elective care and medical devices.

You have also worked on financing for high-cost therapies such as CAR-T cell therapy. What were some of the challenges involved in developing a financing product for such an expensive, one-time treatment?
It is a very difficult space. CAR-T patients are cancer patients, and many have already undergone multiple lines of therapy. In many cases, CAR-T is considered after other treatment options have failed. By that point, patients may have already exhausted a significant portion of their financial resources and are understandably tired of dealing with the disease and its treatment.

So, it is not an easy segment to develop a financing programme for. However, because of our experience in building healthcare financing programmes, we had the confidence to develop a solution for this segment.

We are now able to finance patients for significant treatment costs, including amounts of ₹25 lakh and more. The key is to understand the specific requirements of the therapy and structure the financing accordingly.

A large section of the population may not have conventional income documentation, collateral or a formal credit history. How do you assess creditworthiness while balancing financial inclusion with responsible lending?
Our approach is to ask: how do we make financing possible? It is relatively easy to say no. A conventional credit organisation may look at an application and decide whether it qualifies or does not qualify. If it qualifies, the loan is sanctioned; if it does not, it is rejected.

Our approach is to minimise the number of no's and find ways to make the financing work wherever possible. For instance, if we cannot rely on the patient's income, we may consider a family member's income. If one family member's income is insufficient, we may consider another family member. In some cases, friends or relatives may also be able to contribute.

We therefore try to structure the programme around the combined resources of the family and lend accordingly. We also use our experience and, in some cases, take a calculated leap of faith based on the information available to us.

One thing we have realised is that if you help people during their most difficult times, they do not forget it.

Does this mean your financing solutions are customised according to the treatment and the patient's financial circumstances?
Yes. We develop bespoke financing solutions.

If it is CAR-T therapy, we develop a programme that is suitable for that treatment. If

it is chemotherapy, immunotherapy or another form of treatment, we structure the financing accordingly. Each programme is effectively custom-built for the specific treatment environment.

That is an important part of why these programmes work. A standard, one-size-fits-all approach can be difficult to implement successfully in healthcare financing.

What are the biggest barriers to healthcare financing in India today, particularly for patients who may not have conventional income documentation or a formal credit history?
Thankfully, some of these challenges have changed significantly. When we started, many people did not have a bureau score or formal credit history. Even among those who did, the scores were not always strong.

Today, the situation is different. Digital financial journeys have expanded credit histories significantly. For instance, if someone has purchased a mobile phone on a three- or six-month EMI and repaid it on time, that contributes to their credit history. As a result, a much larger number of Indians now have some form of credit history.

If an individual does not have one, we can look at another member of the family who does. We also use a psychometric approach to assess the individual's intention to repay.

So, I would not consider the absence of a conventional credit history to be the biggest challenge anymore. The bigger challenge is convincing lenders to provide sufficient capital to this segment. Lending requires significant amounts of money, and banks and other lenders need to be comfortable with the underlying risk.

We have been demonstrating our model for around 12 years and have a performing portfolio, with delinquencies of less than one per cent. Yet when it comes to providing us with a larger line of credit, lenders can still ask whether healthcare financing is too risky and whether they should provide Rs 10 lakh or Rs 15 lakh when they may be more comfortable providing Rs 3 lakh.

But Rs 3 lakh does not necessarily solve the patient's problem when the treatment costs Rs 10 lakh or Rs 15 lakh.

It is a journey, but we are seeing success. Our disbursements have grown 12.5 times over the last five years, albeit from a small base. We expect that growth to continue, with disbursements projected to more than double from last year's level.

How is patient financing changing the way hospitals and other healthcare stakeholders approach affordability and accessibility?
We have seen two segments become increasingly comfortable with financing as an option: elective healthcare and pharmaceutical companies.

In elective healthcare, areas such as IVF, weight management, hair and dental care have increasingly recognised financing as a useful tool. When financing is available, it can make it easier for patients to enter a treatment programme.

Pharmaceutical companies have also recognised that affordability is a major barrier to accessing innovative therapies. Their biggest challenge in reaching these therapies to patients is often not the efficacy of the treatment but whether patients can afford it.

Arogya has therefore developed solutions at both the demand and supply sides. On the supply side, we work with pharmaceutical companies to make therapies more affordable. For example, we are working on an oncology programme where the drug can cost around ₹40 lakh for a year's treatment in India under the usual pricing structure. Most Indians cannot afford that amount. Under the programme, patients undergo a socio-economic evaluation and are categorised into three cohorts. One cohort gets the treatment at around 1/3rd the price, another at 2/3rd the price and a third at full price.

We also provide an interest-free EMI option and the patient can pay even the reduced price in 12 monthly, interest free, instalments.

The number of patients under the programme has increased from around 2,000 before we started it to about 10,000 last year, and we expect that figure to reach approximately 20,000.

The broader issue is that if 100 patients could benefit from an innovative therapy, perhaps only 10 or 12 may currently be able to afford it. With affordability and financing solutions, that number can increase significantly.

Hospitals are also gradually recognising the benefits. Many hospitals, including Apollo and others, have started offering financing options. We work with several hospital networks and, for example, facilitate around Rs 2-3 crore of financing every month with Apollo.

The hospital sector is gradually discovering the benefits of this model. If patients cannot afford treatment upfront, some may move to smaller hospitals or public facilities. That creates challenges on both sides. Hospitals potentially lose patients, while public facilities face additional pressure.

There is also the reality that even people with relatively stable incomes may struggle to pay Rs 5 lakh or Rs 10 lakh from their savings overnight. An EMI option can therefore make a significant difference.

Pharma and elective healthcare have adopted financing relatively quickly. Critical care within the hospital sector is opening up more gradually, so there is still considerable room for development.

How do you see private healthcare financing and government schemes such as Ayushman Bharat working together in the years ahead?
This is an area that requires considerably more work.

Government schemes such as Ayushman Bharat have an important role to play, but private healthcare also needs to participate, particularly because many private hospitals operate with high fixed costs. I have spoken to private hospitals enrolled under Ayushman Bharat, and some have raised concerns around the economics of the programme, including delayed payments.

At the same time, the government cannot address the entire healthcare financing requirement through public expenditure alone. India currently spends around one to one-and-a-half per cent of GDP on healthcare through government expenditure. There is a significant gap between that level of spending and the scale of healthcare needs.

Private healthcare therefore has to play a role, and the government can facilitate this through mechanisms that bring private capital into healthcare financing.

One possible approach is a first-loss guarantee mechanism. Let us say there are 100 loan applications from patients and we are able to approve 70. Another 30 may be rejected because we are uncertain about their ability to repay. Some may have no ability to repay, but there may also be a sizeable group of borderline cases where the patient has some repayment capacity but the risk is too high for a private lender to take on entirely.

These are often the patients with the greatest unmet need.

If a government or foundation-backed fund were created as a first-loss guarantee, it could potentially allow private lenders to extend financing to this segment. For example, a ₹10 crore first-loss support could potentially enable us to finance a much larger pool of loans, because the entire loan book would not be expected to default.

The objective would be to use the guarantee as a risk-sharing mechanism rather than simply subsidising interest.

In fact, interest is something we can already manage through partnerships. Around 87 per cent of the loans we provide are interest-free to the patient. The interest burden is generally managed through arrangements with hospitals or pharmaceutical companies.

Importantly, the patient does not pay a higher treatment bill because financing is being used. If the treatment bill is Rs 1 lakh, the patient pays Rs 1 lakh whether they pay in cash or through our financing programme.

The bigger issue is therefore managing credit risk. That is where government or philanthropic support could potentially make a meaningful difference.

Have you been in discussions with the government or trusts to develop such a model?
Not with the government in any significant way so far. Initially, we explored working with some trusts, including Tata Trusts, but there are several considerations around whether such a programme would qualify under CSR, how it would fit within the CSR framework and how it would be viewed under public scrutiny.

As a result, we have not yet been able to develop a programme of this nature.

One of our weaknesses has also been that we have not worked sufficiently with the government. That is an area where we need to do more and there is significant potential for collaboration.

What do you expect India's healthcare financing ecosystem to look like over the next five to 10 years?
Let me use an example from my experience in the Tata group. Tata Finance used to provide passenger car, two-wheeler and commercial

vehicle financing. When we started, around 80 per cent of passenger cars were purchased through loans, while around 80 per cent of two-wheelers were purchased with cash.

Within two or three years, the ratio for two-wheelers also moved towards around 80 per cent being financed. There was an inflection point where the behaviour and the ecosystem changed.

I think healthcare financing will go through a similar journey. There was a time when hospitals would ask why financing was necessary because they believed their patients could pay. Today, many of those hospitals are offering financing because they have understood the benefits.

Once that inflection point arrives, there will be more healthcare financing players, greater acceptance among hospitals and greater awareness among patients. Patients will begin to think about healthcare financing in the same way they think about financing a car or a house.

When someone sees a car priced at Rs 15 lakh, they generally do not ask whether they have Rs 15 lakh in their bank account. They ask whether they like the car and what EMI they would need to pay. I believe healthcare financing will gradually move towards a similar model.

Within five years, I expect to see a much more developed healthcare finance ecosystem spanning both critical and elective care, where patients have access to monthly payment options and can consider higher-quality treatments without having to arrange the entire treatment cost upfront.

This is particularly relevant for innovative therapies, where a significant proportion of treatment costs can still be paid out of pocket because insurance does not cover many of these therapies.

Today, a patient may know that an innovative treatment could be the most appropriate option but choose a lower-cost alternative because they cannot arrange the money. As healthcare financing develops, more patients should be able to consider these treatments based on their clinical needs and ability to manage the cost over time.

We are also seeing the ecosystem expand. We currently have partnerships with more than 800 multispeciality hospitals. Under our oncology programme alone, we work with 627 multispeciality hospitals and more than 2,000 oncologists.

The patient journey has also become simpler. A doctor recommends the therapy, and the patient can contact Arogya through the toll-free number. Our team then takes the process forward with the patient.

Ultimately, the direction is towards a healthcare ecosystem where financing becomes an established component of how patients access treatment, rather than something they consider only when they are unable to pay upfront.

Kalyani.sharma@expressindia.com
journokalyani@gmail.com

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INTERVIEW

AI must support clinical judgement, never replace it

Can hospitals move beyond AI pilots to improve patient care and operational efficiency? Baby Memorial Hospitals Group's recent MoU with DeepInfinity.AI aims to integrate AI across clinical and operational workflows. **Dr Anup Warrier,** Group Chief of Medical Services, BMH Group, discusses how hospitals can scale AI, measure its impact and safeguard patient safety, in an interaction with **Lakshmipriya Nair**

Where can AI make the biggest difference, and how should hospitals measure ROI?

I believe AI can make the biggest difference in areas where hospitals deal with high volumes of repetitive work and operational bottlenecks. This could be in patient flow and bed management, OT and diagnostics scheduling, discharge coordination, claims processing, supply chain or clinical documentation. These are not isolated technology problems; they affect how efficiently a hospital functions and, ultimately, how much time clinicians can devote to patient care. The focus should be on identifying where a specific application can solve a real problem, rather than adopting AI simply because the technology is available.

At BMH, our approach is to look at measurable outcomes from the outset. Hospitals need to establish a clear baseline before implementation and assess improvements against relevant parameters, such as length of stay, OT utilisation, reporting turnaround times, claim rejection rates and staff time spent on administrative work. The full cost of implementation—including integration with existing systems, staff training and governance—must also be factored into the return on investment. Equally, we should not look at ROI only in financial terms. If AI can reduce administrative burden, improve workflow efficiency and give clinicians more time to focus on patients, that is meaningful value. Ultimately, every implementation must demonstrate tangible benefits against clearly defined objectives.



> AI must be evaluated not just on whether it makes a process faster, but on whether it makes that process safer, more reliable and more effective for patients. Ultimately, clinical judgement and patient safety must remain central to how these technologies are used

How much can AI reduce doctors' administrative workload?

I think AI can meaningfully reduce the administrative burden on doctors, particularly in areas such as clinical documentation and summarisation, where a significant amount of time goes into recording and organising information rather than direct patient interaction. Ambient documentation, which captures consultations and helps generate clinical notes, is particularly promising. However, the extent of the benefit will depend on the specialty, language, accent, clinical context and how well the technology integrates with the hospital's existing systems. It would be misleading to suggest a single percentage reduction that applies across all settings.

At BMH, the important thing is to measure the impact in our own clinical environment rather than rely solely on vendor-reported figures. We need to assess how much time is actually saved, whether documentation quality is maintained and how well these tools fit into clinicians' workflows. Equally, saving time is only part of the equation. We must ensure that the time recovered translates into meaningful benefits for patients, whether through more attentive consultations, better communication with families or greater clinician engagement during ward rounds. The objective is not simply to help doctors do more in less time, but to enable them to focus more of their time and attention on patient care.

How should hospitals measure impact beyond faster reporting?

Faster reporting is an important operational benefit, but it does not necessarily mean better care. We need to look at the broader impact of AI on clinical quality, patient safety and the overall care experience. This includes whether diagnostic accuracy is maintained or improved, whether patients receive timely treatment, and whether there is any impact on readmissions or complications. We must also monitor safety indicators, including near misses, adverse events and instances where clinicians need to override or correct AI-generated outputs.

The patient's experience is equally important. Are waiting times improving? Is communication clearer? Are patients and their families better informed? We also need to ensure that these benefits are consistent across different age groups, languages and clinical settings, rather than assuming that a solution works equally well for everyone. AI must be evaluated not just on whether it makes a process faster, but on whether it makes that process safer, more reliable and more effective for patients. Ultimately, clinical judgement and patient safety must remain central to how these technologies are used.

What are the biggest barriers to scaling AI in Indian hospitals?

The biggest barrier to scaling AI in Indian hospitals is the combination of fragmented data, uneven digital maturity and the difficulty of integrating technology into existing clinical workflows. Many hospitals still work with a mix of digital and paper records, unstructured clinical notes and multiple languages, while limited interoperability between hospital information systems (HIS), laboratory information systems (LIS), radiology systems (PACS) and billing platforms makes it difficult for AI solutions to function seamlessly across the patient journey.

There is also a need for stronger validation in Indian clinical settings, where patient populations, languages and care practices can differ significantly. Equally important is clinician trust. AI must fit

naturally into established workflows, demonstrate reliability and support clinical judgement without adding to the burden on already stretched teams. Hospitals must also navigate data protection, regulatory requirements and appropriate clinical governance, all of which need to be addressed from the outset.

Perhaps the biggest challenge is moving beyond pilots to sustained implementation. This requires clear objectives, measurable outcomes, staff training and continuous monitoring, alongside investment in the digital foundations that make AI useful at scale. At BMH, our recent Integrated AI partnership model is intended to support this transition through a coordinated approach across multiple clinical and operational workflows, working alongside existing hospital systems and introducing applications in mutually agreed phases. Ultimately, successful adoption will depend not just on the capabilities of the technology, but on how well it integrates into clinical practice, earns the confidence of healthcare professionals and delivers measurable value without compromising patient safety.

How do hospitals balance AI insights with clinical judgement, and who is accountable?

AI must support clinical judgement, never replace it. Healthcare decisions depend on a patient's history, examination, co-existing conditions and circumstances that may not be fully captured in a dataset or generated summary. AI can help clinicians access and organise information, but the treating clinician must retain accountability for evaluating that information and making the clinical decision.

The hospital, in turn, is responsible for selecting appropriate tools, establishing their intended use, validating them in the relevant setting, training users and monitoring performance after deployment. Technology partners must be transparent about a tool's capabilities, limitations and performance claims. Clear processes are also needed for reviewing AI-generated documentation, recording decisions where appropriate, escalating concerns and reporting incidents.

At BMH Group, clinical governance remains central as we introduce AI across different workflows. The level of review and validation should reflect the risk of the application; for example, a tool supporting administrative reporting does not carry the same clinical implications as one involved in diagnostic interpretation. Accountability, escalation and override procedures must be established before a tool goes live. Responsible adoption means using AI to strengthen the work of healthcare professionals while keeping clinical authority and patient safety firmly in human hands.

Will AI favour large chains, or can smaller hospitals adopt it cost-effectively?

Large hospital networks do have certain advantages when it comes to AI adoption, including access to larger volumes of data, greater investment capacity and dedicated technology teams. However, I do not believe AI should be accessible only to large hospital chains. With the growing availability of cloud-based and managed solutions, smaller hospitals can also adopt AI cost-effectively, provided they identify the right use cases and avoid unnecessary complexity or expensive custom-built systems.

The starting point should be the problem a hospital wants to solve, whether that is reducing documentation workload, improving reporting turnaround times or streamlining administrative processes. Hospitals can begin with a few clearly defined applications, measure their impact and expand as the value becomes evident. Shared platforms and partnerships can also help reduce the burden of managing multiple technologies independently. Ultimately, scale can offer advantages in investment and standardisation, but successful AI adoption depends on choosing the right solutions, integrating them effectively into existing workflows and demonstrating tangible value. Those principles apply to hospitals of every size.

What are the biggest challenges in integrating AI across clinical and non-clinical functions?

The biggest challenge is not getting individual AI tools to work, but getting them to work together within the hospital's existing systems and day-to-day processes. Clinical, administrative and finance teams often operate differently, use different systems and have different priorities. Integrating AI across these functions requires reliable data exchange, workflows that make sense for the people using them, and clarity on who is responsible for the outcomes. The level of scrutiny also needs to vary by application. A tool supporting billing or administrative reporting carries different risks from one used in a clinical or diagnostic setting, where patient safety is directly involved.

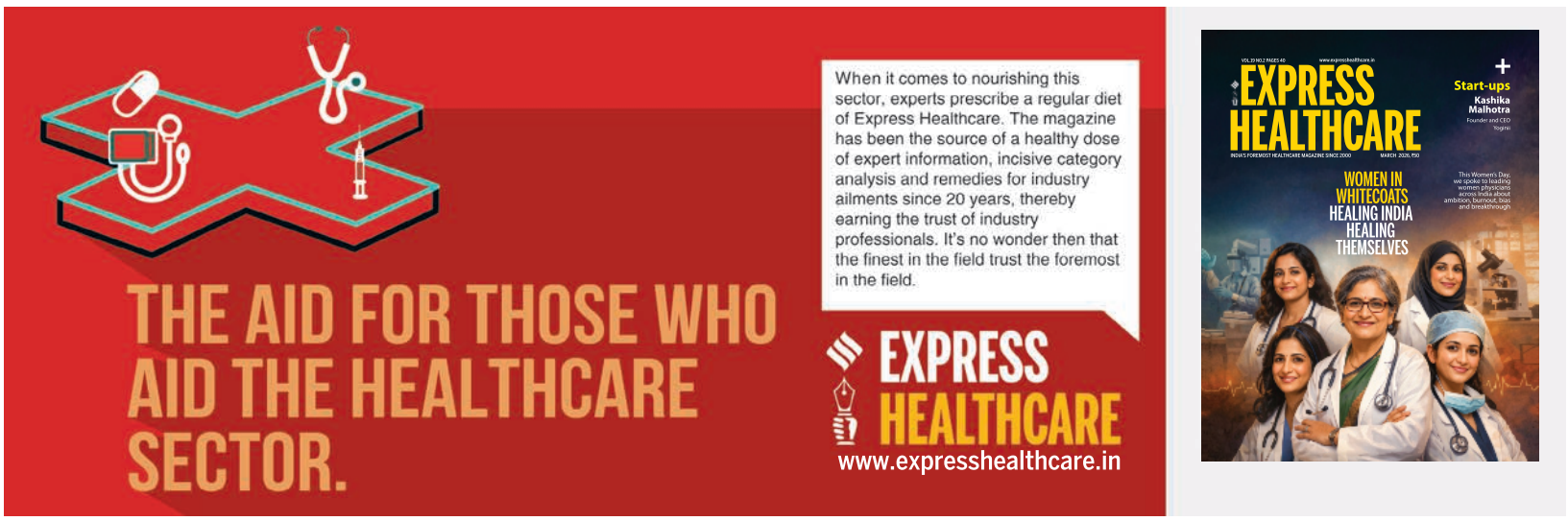
This is why I believe hospitals need to look at AI adoption as a broader integration exercise rather than a series of individual technology deployments. The real work lies in ensuring that these applications fit into clinical practice, that teams are comfortable using them, and that appropriate governance is in place. Ultimately, integration is as much about people, processes and accountability as it is about technology.

How will AI reshape hospital operations and competitiveness over the next three to five years?

Over the next three to five years, I expect AI to become part of the core infrastructure of hospitals, much like electronic medical records have become today. Simply having access to AI tools will not, in itself, give a hospital a competitive advantage as these technologies become more widely available. The real difference will be in how effectively hospitals integrate them into everyday clinical and operational workflows, how well they use their data, and how prepared their teams are to work with them.

This will require hospitals to rethink processes, invest in data quality, establish clear governance and help clinicians and other staff adapt to new ways of working. AI cannot simply be added on top of existing systems and processes with the expectation that it will automatically deliver better outcomes. At BMH, our integrated AI Partner approach reflects this longer-term view, bringing multiple applications into a coordinated framework and introducing them in phases based on clinical and operational priorities. Ultimately, the hospitals that create lasting value from AI will be those that treat it as a change in how the organisation operates, rather than simply another technology purchase. The measure of success will be tangible improvements in patient care, clinical workflows and operational efficiency.

lakshmipriya.nair@expressindia.com
laxmipriyanair@gmail.com



INTERVIEW

The system has to adapt to the user

Sabarinath Nair, CEO and Founder, Skillveri, discusses how the company is applying its industrial skills training expertise to VR-led stroke rehabilitation, with a focus on patient-centric design, remote recovery monitoring and the role of clinicians in treatment decisions, in an interview with **Neha Aathavale**

What made you identify healthcare, and specifically post-stroke rehabilitation, as the right market for you to enter? Beyond the obvious unmet need, what did you see in the healthcare ecosystem or patient journey that made you believe this was an area where your technology could create meaningful value?
Skillveri has been building solutions for high precision industrial skills training for the past 14 years. Every activity or task that a human performs in everyday life is essentially a skill which the brain has learnt over time, even though it may be so small or so natural that we don't think of it as a skill. A person affected by stroke is unable to use their limbs because the brain loses a part of it which knows how to do these activities. When we realised that stroke rehab is basically retraining other parts of the brain to relearn the skills it has lost, we felt this would be a very meaningful application for Skillveri's core strength of skill training. Using technology to deliver therapy will make it more engaging for the users and hence lesser chances of discontinuing. It also addresses the current limitations of availability of devices and trained therapists, and makes it possible to use therapist time more efficiently. It will also make a lot of difference as the recovery process becomes completely measurable, with clinicians and therapists being able to monitor progress continuously.



> Having more meaningful and actionable data equips clinicians to make the decisions that will result in the best possible patient outcomes

Skillveri has spent years building immersive training technologies for automotive and manufacturing. What did you have to fundamentally rethink when applying that expertise to rehabilitation, where patient safety, clinical outcomes and clinician acceptance are as important as the technology itself? How did your collaboration with SCTIMST influence those decisions?
The key thing to remember when building such a product is user empathy. While our training for industries focus on what the user 'must do', in a context like rehab it completely changes to what the user 'can do'. The system has to adapt to the user, instead of the user meeting the system's requirements. You have to keep in mind the limitations of the person using it, design it in such a way that it does not feel overwhelming, the user feels motivated to keep using it, yet meets all the clinical requirements. The team at SCTIMST helped with structuring it systematically - which joints to be focused on, which positions need what kind of movements, the sequence in which they should be built, etc. We brought in Skillveri's expertise in technology & gamification and converted those into user friendly modules.

XTend uses markerless tracking through the VR headset camera, without wearable sensors or wires. What specific limitation of existing rehabilitation technology were you trying to overcome with this approach? And as you move from controlled clinical environments to patients using the system at home, how do you balance ease of use with the level of accuracy required for meaningful clinical monitoring?
Keeping the entire system minimalistic, to just one single wireless VR headset, eliminates complex equipment and provides comfort and ease of use to patients. It can be carried easily anywhere, making it possible for therapists to take it to multiple patients' homes and deploy it under their supervision, instead of the patients needing to visit a clinic for continued therapy. The exercises are scientifically precise and have been designed based on continuous therapist inputs, so that the efficacy of the therapy remains at par or better with the clinical levels required at each step. The system is also meant to be used initially under the supervision of a therapist only, until the patient is ready enough for independent use.

XTend uses AI to adapt exercise difficulty and cloud-based monitoring to track recovery remotely. Where do you see technology genuinely improving rehabilitation, and where do you think human clinical judgement will remain indispensable? How are you defining that boundary as the product evolves?
We see technology as an aid for efficacy. The data will make it easier for the clinician to monitor progress over time, and make focused and individualised treatment choices, but it will be their experience and expertise that will decide the course of actions based on the data. Having more meaningful and actionable data equips clinicians to make the decisions that will result in the best possible patient outcomes. That judgement will be indispensable as they place the assistive technology within a wider context of various other factors unique to each patient.

What is the business model you see emerging for VR-led rehabilitation in India, and what will need to change across hospitals, clinicians, patients and reimbursement for a solution like XTend to scale beyond individual institutions?
The most viable model we think currently would be for hospitals and therapy centres to adopt the units and deploy it through their therapists, while we are also looking at the potential in the future for solutions that are more accessible to individual users themselves. The key thing needed for scale is to create awareness on the potential and possibilities of using technology like VR for stroke recovery, and look at it as a mainstream therapy solution instead of a niche option.

neha.aathavale@expressindia.com
nehaaathavale75@gmail.com

INTERVIEW

Rethinking India's cancer-care infrastructure

Dr Sanket Mehta, Founder & CEO, SSO Cancer Hospitals, discusses investment opportunities in surgical oncology, expanding specialised cancer care beyond metros, and the role of robotic surgery and indigenous medical-device innovation in an interview with **Swati Rana**

India's oncology sector is witnessing growing demand for specialised cancer care. What are the biggest investment and infrastructure opportunities in surgical oncology, and what challenges must healthcare providers overcome to build scalable, sustainable cancer-care models?

The biggest opportunity is not simply to build more hospitals; it is to build centres that can deliver complex cancer surgery consistently and at viable costs. India had about 1.41 million new cancer cases in 2022, IARC said. But investment in infrastructure must go beyond the operating theater and embrace specialist surgeons, critical care, advanced pathology, and reliable referral pathways. The commercial challenge is balancing high fixed costs with appropriate patient volumes. Organ-specific centres offer one solution: concentrated expertise, standardised pathways and better utilisation of specialised resources. The winning model will combine clinical depth with disciplined operations, rather than scale through beds and buildings alone.

CRS-HIPEC requires specialised infrastructure and skilled teams. How can hospitals make this treatment commercially sustainable and more accessible?

CRS-HIPEC is a high-complexity service, not a procedure that every hospital should attempt to offer. Its economics depend on selecting the right patients, maintaining an experienced team and managing the entire episode of care from surgery and intensive care to recovery. Low volumes can make infrastructure difficult to sustain; indiscriminate volumes can compromise patient selection. Hospitals should build referral relationships with oncologists across regions, establish clear eligibility protocols and track outcomes alongside costs. Affordability also requires structured packages and partnerships with public funding schemes or charitable trusts. The objective is to concentrate expertise where it can deliver results, while widening access to eligible patients.



> Indian manufacturers should focus on solving expensive, everyday surgical problems rather than attempting to reproduce every high-cost imported platform

How can healthcare providers expand specialised cancer care into Tier II and Tier III cities without compromising quality?

The mistake would be to replicate a metropolitan cancer hospital in every smaller city. That spreads scarce specialists and expensive equipment too thinly. A better approach is to decentralise access while concentrating expertise: establish local diagnostic and consultation services, develop selected surgical capabilities where teams and support infrastructure are ready, and connect complex cases to established centres. The model must specify which procedures can be performed locally and which require referral. Shared protocols, specialist mentoring, pathology quality assurance and outcome audits are essential. Expansion should follow clinical capability, not market demand alone. Patients should gain proximity without being asked to accept a lower standard of care.

As Founder and CEO of SSO Cancer Hospitals, how do you balance clinical excellence, operational efficiency and financial sustainability?

I start with a simple principle: financial discipline should remove waste, not influence which treatment a patient clinically needs. In oncology, the right specialist, the right diagnosis and the right sequence of treatment can prevent costly delays and inappropriate interventions. At SSO, our organ-specific model aligns expertise around the cancer being treated, rather than relying on a generalised surgical approach. Operationally, that means building focused teams, coordinating treatment decisions and using infrastructure efficiently. We also have to be realistic about affordability and the financial pressures patients face. A sustainable cancer hospital must deliver sound clinical outcomes, manage resources responsibly and remain accessible to the people it exists to serve.

Robotic surgery is gaining momentum in oncology. How should hospitals evaluate its costs, clinical benefits and return on investment?

A robot should earn its place in the operating theatre through clinical value, not marketing appeal. Before investing, a hospital must identify the specific cancer procedures where robotic surgery may offer an advantage over conventional laparoscopy or open surgery. It should model the complete cost: acquisition, annual maintenance, instruments, training, operating time and realistic case volumes. The clinical assessment must examine outcomes that matter: complications, recovery, functional preservation and length of stay, not merely the number of robotic procedures performed. Hospitals should

also consider whether patients can afford the additional cost. If the clinical benefit is unclear or utilisation is unrealistic, the investment may not be justified.

What opportunities exist for Indian medical-device manufacturers to develop cost-effective technologies for advanced cancer surgery?
Indian manufacturers should focus on solving expensive, everyday surgical problems rather than attempting to reproduce every high-cost imported platform. Opportunities exist in advanced laparoscopic instruments, energy devices, surgical visualisation, navigation, reconstruction tools and components that are easier to maintain locally. The critical gap is not just product development; it is clinically informed design, validation and adoption. Surgeons need to be involved early so that devices address real procedural needs. Manufacturers must demonstrate safety, reliability and performance against accepted standards, while building service and training capabilities. Hospitals, in turn, should evaluate devices on clinical utility and total cost of ownership. Affordable innovation succeeds when it earns trust in the operating room.

Can the hub-and-spoke model make specialised oncology commercially viable in smaller cities? What partnerships are needed to scale it?
Yes, but only if the hub-and-spoke model is designed around a clear division of clinical responsibility. The hub should concentrate complex surgery, subspecialist expertise and difficult multidisciplinary decisions. Spokes should provide services they can safely deliver early evaluation, diagnostics, selected treatments and follow-up with defined escalation pathways. This can extend the hub's reach without every place having to duplicate expensive infrastructure. Scaling will require formal partnerships with local hospitals, diagnostic providers, referring doctors, insurers and government health schemes. Shared records, referral timelines and outcome accountability are a must. The business case is based on co-ordinated patient flow and better utilization, not just a shifting of patients from one facility to another.

Where are the biggest gaps in India's oncology value chain, and where can private healthcare companies make the greatest impact?
The most consequential gaps occur between stages of care: a suspicious finding may not lead to timely diagnosis; a confirmed diagnosis may not translate into treatment; and treatment may be disrupted by cost or travel. Adding tertiary beds alone will not solve these failures. Private providers can make a measurable difference by strengthening diagnostic pathways, developing regional specialist networks, publishing outcomes and helping patients navigate financing. They can also create referral systems that connect community doctors with the right subspecialists earlier. The opportunity is to reduce the time, cost and uncertainty between suspicion and treatment. That requires investment in coordination as much as investment in clinical infrastructure.

How can hospitals collaborate with pharmaceutical companies, medical-device manufacturers and research institutions to accelerate oncology innovation?
Hospitals should bring industry partners real clinical questions, not just opportunities to introduce a product. For example, a surgical challenge may require a new instrument; an unmet treatment need may justify a clinical study; inconsistent outcomes may call for a shared registry. Funding, technology and scientific expertise can come from pharmaceutical companies, device makers and research institutions, while hospitals can provide clinical insight and appropriate research settings. The arrangement shall have provisions for patient safety and scientific independence through ethics review, informed consent, transparent disclosures and publication safeguards. Success should be measured by evidence generated and patient benefit not the number of collaborations signed. Innovation is valuable when it changes clinical decisions or outcomes responsibly.

Which oncology segments offer the strongest growth opportunities over the next decade, and how should healthcare businesses prepare for them?
I see strong opportunities in organ-specific surgical oncology, precision diagnostics, molecular pathology, minimally invasive and robotic procedures, and coordinated care beyond treatment. But the opportunity is not equally attractive everywhere; each segment requires different capabilities, capital and patient volumes. Businesses should first identify the unmet need in their target geography, then build the clinical team and evidence base before committing to expensive technology. Regional networks will also matter because specialised care cannot remain confined to major metropolitan centres. Finally, survivorship, rehabilitation and long-term monitoring need greater attention as more patients live beyond initial treatment. Sustainable growth will favour organisations that combine specialist expertise with credible outcomes and affordable delivery.

swati.rana@expressindia.com
Swatirana.express@gmail.com

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INTERVIEW

Building a more connected and predictable healthcare experience

Dhruv Rastogi, CAIO, Medi Assist Group reviews the evolution of the traditional healthcare benefits model, the missing links between different healthcare stakeholders and why he believes that the answer is not simply more technology, but interoperable infrastructure, common standards and simple processes that can work across India's diverse healthcare ecosystem, in an email interview with **Viveka Roychowdhury**

How is healthcare benefits management evolving beyond the traditional TPA model, and what should the industry be building towards next?
Healthcare benefits management is moving beyond simply processing claims or acting as an intermediary between insurers and hospitals. As healthcare becomes more digital, the expectation is that the ecosystem should work more seamlessly across the entire member journey, from access and eligibility to pre-authorisation, cashless care, claims and post-treatment support.

The next step is to build a more connected and predictable healthcare experience, where technology takes care of complexity in the background while members have greater clarity at each stage of their journey. This means better integration between insurers, hospitals, administrators and technology platforms, along with stronger use of data. The industry needs to move from transaction processing towards more proactive healthcare journeys, using technology to make healthcare easier to access, administer and navigate.

What are the biggest gaps preventing insurers, hospitals, patients, employers and healthcare administrators from operating as a truly connected ecosystem?
The biggest gap lies in the lack of meaningful connectivity between digital systems. Hospitals, insurers, employers, administrators, and technology platforms often capture different parts of the same healthcare journey. When these systems cannot communicate effectively, the friction ultimately reaches the patient through repeated documentation, limited visibility, and delays.



> The next priority is to make healthcare data more actionable. This means creating flexible, interoperable technology layers that can connect with existing systems, allow information to move across stakeholders, and turn fragmented data into usable intelligence without requiring organisations to rebuild their entire technology infrastructure

The industry, therefore, needs to move beyond digitising individual processes towards interoperability, where information can move securely between stakeholders and retain the context required to act on it. NPS Swasthya is an example of how this kind of connected approach can bring together participants across the pension and healthcare ecosystems, with technology helping coordinate processes that have traditionally operated separately.

The next priority is to make healthcare data more actionable. This means creating flexible, interoperable technology layers that can connect with existing systems, allow information to move across stakeholders, and turn fragmented data into usable intelligence without requiring organisations to rebuild their entire technology infrastructure. The goal should be fewer hand-offs, greater visibility, and one coordinated experience for the person receiving care.

Where can AI and data make the biggest impact in healthcare administration, and how can the industry balance faster technology-led decisions with trust, transparency and human oversight?
AI can play an important role in making healthcare administration more responsive. Its value is not simply in automating tasks, but in helping organisations identify what needs attention, prioritise it and act faster. This can be particularly useful across areas such as claims, pre-authorisation, documentation and fraud and risk management, where decisions often involve large volumes of information and multiple checks.

Medi Assist is already applying AI/ML to areas such as out-of-pocket cost estimation through MAven Navigator, discharge acceleration and fraud and risk management. The opportunity now is to use these capabilities to make interventions more timely and reduce avoidable friction for members, providers and insurers.

However, a prediction should remain an input into a decision, not the decision itself. Explainability, accountability, and human review are particularly important for complex or consequential cases. The objective should therefore not be to automate the most, but to improve the quality and timeliness of decisions while keeping human

judgement at the centre.

With healthcare data spread across multiple stakeholders, how can it be better leveraged to understand medical inflation, utilisation and changing patient behaviour?Healthcare data can provide insights beyond the cost of an individual claim. When analysed across providers, geographies, procedures and patient journeys, it can help identify changing treatment patterns, utilisation trends and the factors contributing to healthcare costs. At Medi Assist, our experience across healthcare administration gives us a view of how these patterns can emerge across different parts of the ecosystem. The opportunity is to use that information responsibly to understand what is driving utilisation and medical inflation, rather than looking at healthcare costs only after they have occurred. This requires more consistent data practices and responsible information sharing, with appropriate safeguards around patient privacy.

How is India's healthcare benefits ecosystem adopting technology today, and what are the key opportunities and challenges in scaling these efforts?India has made significant progress in digital healthcare administration, particularly across claims, cashless journeys, electronic documentation and member-facing services. The next opportunity is to connect these individual digital journeys rather than continue building isolated solutions around individual processes.

India's experience with digital public infrastructure, including UIDAI's Aadhaar Offline Verification Framework, shows how trusted digital identity can simplify access to essential services. In healthcare, this can translate into more secure identity verification, reduced paperwork and easier access to health benefits across journeys such as cashless admission and claims. The opportunity is to build on this kind of shared infrastructure while maintaining the safeguards healthcare requires around consent, privacy and sensitive health information.

Scaling will also require recognising the diversity of India's healthcare ecosystem. Large hospital networks may have sophisticated digital infrastructure, while smaller providers may operate very differently. Differences in connectivity, data quality and digital maturity need to be considered. The answer is therefore not simply more technology, but interoperable infrastructure, common standards and simple processes that can work across this diversity.

Over the next three to five years, how do you expect healthcare benefits administration and the patient experience to change?Healthcare benefits administration is likely to become increasingly invisible to the patient. Today, members often have to navigate what is covered, what documents are required, where to submit them and what happens next. Over time, more of that complexity should move into the system, with technology helping anticipate requirements and guide members through the journey.Data and AI will make administration more responsive and reduce unnecessary manual intervention. Ultimately, the real measure of progress should be whether people can access the healthcare they are entitled to with less uncertainty and friction. Technology will enable that change, while trust, transparency and human support will remain equally important.

viveka.r@expressindia.com
viveka.roy3@gmail.com

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INTERVIEW

Changing face of dentistry in India

Sameer Merchant, Managing Director and Chief Executive Officer, Laxmi Dental, in an interview with **Kalyani Sharma,** talks about changing patient needs, digital dentistry, technology adoption and the growth of dental care in India

The dental industry has changed significantly over the past two decades. How would you describe this evolution in terms of awareness and patient spending?

Over the last 25 years, the dynamics of dentistry in India have changed significantly. When I completed my dentistry in 2001, dental care was largely need-based. People would visit a dentist only when they had pain and when painkillers or other remedies did not work. That was the reality for a large part of the population.

From 2001 to 2010, dentistry remained largely need-driven, although we started seeing a shift from metal-ceramic crowns towards metal-free crowns. Patients who already needed treatment began asking for more aesthetic options.

Between 2010 and 2020, the first half of the decade saw a greater emphasis on aesthetics. The second half saw the emergence of clear aligners. Although aligners existed earlier, around 2015 they began gaining wider awareness. This became an important driver for people to visit dentists even when they did not have a major dental problem.

A large number of adults had missed orthodontic treatment when they were younger. Once they started earning, they wanted to straighten their teeth but did not want conventional braces because of the visibility and inconvenience. Aligners offered a discreet alternative, although they were expensive when they were first introduced.

Post-COVID, discretionary spending also increased, and people became more willing to invest in areas such as appearance and personal wellbeing. At the same time, digital dentistry started changing the patient experience. Digital impressions eliminated the discomfort associated with conventional impressions and made the process more convenient.



> Industry is now seeing both need-based and want-based demand. Need-based demand will continue to grow with the population, but want-based demand is becoming increasingly important

This has also influenced younger generations. Children are increasingly exposed to dental check-ups through schools. They know what a cavity is and understand that it needs to be treated. When a child becomes aware, the parents also become more aware.

So, the industry is now seeing both need-based and want-based demand. Need-based demand will continue to grow with the population, but want-based demand is becoming increasingly important.

Younger consumers appear to be changing their relationship with dentistry. How do you see this influencing the market over the next decade?

Awareness is creating demand. A child may not initially understand why a cavity needs to be treated, but once a dentist explains it, the child wants to get it fixed. Similarly, an adult may have lived with crooked teeth for years but, once they understand that they can straighten them discreetly with aligners, they begin to consider treatment.

We are seeing a similar trend in diagnostics, skincare and haircare. People are increasingly willing to spend on maintenance and appearance when they understand the science behind it.

Dentistry was ignored for a long time because people associated it with drilling, root canals, grinding and braces. Today, there are more comfortable and discreet treatment options. As awareness increases, we expect the proportion of people seeking such treatments to increase.

There is also a generational change in attitudes towards braces. Earlier, children with braces were often teased in school. Today, braces have become much more common and socially accepted.

The dental phobia that exists among adults is also likely to reduce over the next decade. Many people in their 30s and 40s did not visit a dentist during childhood, so dental visits were never part of their routine. Children today are getting access to dentists much earlier. They are growing up understanding that cavities, orthodontic problems and other dental issues need to be addressed.

Digital dentistry is changing how dentists, laboratories and manufacturers operate. Where does India currently stand in this transition, and what are the key barriers to wider adoption?

Digital dentistry has progressed significantly, particularly after COVID. Before COVID, adoption was slower because dentists were comfortable with existing processes. There was a mindset of, "What is the need to change something that is already working?"

A good comparison is digital X-rays. A decade or more ago, many dental clinics still used conventional X-rays, which involved developing the film and viewing it on a light box. Today, digital X-rays are standard in many practices. Digital impressions are following a similar trajectory.

Cost remains one of the biggest barriers. A digital scanner that cost around Rs 25 lakh about a decade ago is now available for around Rs 3 lakh. We expect the cost to come down further over the next two to three years, potentially bringing the scanner closer to Rs 1.5 lakh.

At present, a scanner and laptop together can cost around Rs 5 lakh. If that bundled investment comes down to around Rs 3 lakh, adoption could accelerate significantly.

The other barrier is the mindset of dentists. There will always be early adopters, followed by those who take longer to make the transition. According to our estimate, around 7-8 per cent of Indian

dentists currently own a scanner.

As more dentists adopt the technology, peer pressure will also play a role. If two dentists in an area have scanners and patients begin asking other dentists why they do not offer digital scanning, adoption is likely to increase.

Can digital dentistry also contribute to earlier detection of oral health problems, including conditions such as oral cancer?

Absolutely. We see digital dentistry as having two components: what happens inside the clinic and what can happen outside the clinic.

Inside the clinic, digital scanning allows dentists to examine the mouth digitally. But there is also an opportunity to enable patients to conduct preliminary assessments remotely.

Around nine months ago, we launched AI Dent, which includes a device called the Tooth Scope. It is a small device that can be attached to a smartphone and costs around Rs 2,000. Through the device and an app, a dentist can see a patient's teeth remotely over a video call and capture images.

This addresses a limitation of conventional smartphone cameras. When patients try to show their teeth over a video call, the camera struggles with focus and stability, particularly for close-up views inside the mouth. The Tooth Scope is designed to address that.

The idea is not to replace the dentist. It is to enable preliminary assessment and remote guidance. For example, a patient with a minor problem may not always need to travel to a clinic immediately. A dentist can examine the images remotely, provide initial guidance and determine whether the patient needs to come in.

This can be particularly useful for children and senior citizens. Parents often have to rearrange work schedules to take a child to the dentist, while taking elderly parents to a clinic can also be difficult. If a dentist can first conduct a virtual assessment, it can reduce unnecessary visits.

However, there is an important distinction between diagnosis and treatment. We believe diagnosis can be enabled remotely, but treatment requires an appropriate clinical setting.

How do you see AI contributing to preventive dental care and patient monitoring?

There is significant potential for AI-assisted dental monitoring. For example, patients could take a set of images periodically and use AI to identify indicators such as plaque, tartar, gum issues or swelling.

The AI can provide an initial assessment, but the final clinical judgement remains with the dentist. We see AI as an additional layer of guidance rather than a replacement for the dentist.

This can also improve preventive behaviour. I have seen this with my own child. Children do not always respond when their parents repeatedly tell them to brush properly. But when they receive an objective score or visual feedback from a device, they may take it more seriously.

Once a dentist explains the difference between plaque, which can be managed through proper brushing, and tartar, which may require professional cleaning, the child can start monitoring their oral health more independently.

The broader objective is to create an ecosystem where a patient can remain connected to their dentist even when they are outside the clinic or outside their city.

Laxmi Dental has built an ecosystem spanning dental laboratories, restorations, aligners and dental products. How do you see integrated dental platforms evolving as technology becomes more central to the industry?

The opportunity in dentistry is fundamentally linked to the number of people and the number of teeth that need care. Our thinking has evolved from looking only at the 32 permanent teeth of an adult to looking at the entire lifecycle of dental care.

Children have primary teeth before they develop their permanent teeth, which creates an opportunity in paediatric dentistry. Teenagers may require orthodontic treatment, adults may need restorations, crowns and aligners, while senior citizens may require implants and replacement teeth.

Our objective is to participate in dental care across this entire lifecycle, from childhood through adulthood and into old age.

That means building a portfolio across technology, products and services. If a family is using Laxmi Dental, the objective is to be relevant to different stages of dental care, whether it is paediatric dentistry, orthodontics, restorative dentistry, senior care or pre-diagnostic monitoring.

We are also developing a paediatric business in India, with plans to expand internationally subject to regulatory clearances.

Beyond the technology itself, what changes are required in dental practices, laboratories and technician capabilities to make digital workflows commercially viable at scale?

For dentists, the transition is relatively straightforward. Instead of taking a physical impression, they take a digital impression using a scanner and laptop. With basic training, most dentists can learn the process quickly because it is similar to taking a photograph or video.

The larger change happens at the laboratory level.

With a conventional impression, the impression has to be collected from the clinic, transported to the laboratory, unpacked and converted from a negative impression into a positive model. The process involves several manual steps and there is always the possibility of distortion or errors.

With a digital scan, the data can be transmitted almost immediately. The dentist can also view the scan at a much higher level of magnification and identify potential problems before sending it to the laboratory. This reduces the back-and-forth between the dentist and the lab.

It also improves turnaround time. A physical impression may take a day or more to reach a laboratory, whereas a digital scan can be received within minutes. This can potentially reduce the time taken to deliver a restoration from around five days to two or three days, depending on the location and workflow.

In some of our locations, we are already working towards much faster turnaround times. For example, within a city, a scan taken at 9 or 10 am can potentially result in a crown being delivered the following day.

For laboratories, however, digital dentistry requires significant investment in technology. This includes 3D printers, CNC machines, sintering equipment and laser-cutting machines. The laboratory has to build a completely different digital manufacturing workflow.

With only around 7-8 per cent of Indian dentists currently estimated to own scanners, what will it take to move digital dentistry into the mainstream?

I would divide the market into different adoption stages. The 7-8 per cent that has already adopted the technology represents the early adopters.

For perhaps another 30-40 per cent, the primary barriers are currently cost and mindset. As costs decline and adoption increases among peers, that group is likely to move faster.

Patient expectations can also create pressure. If two dentists in the same locality offer digital scanning and another does not, patients may begin asking about it. That can influence adoption.

The remaining segment is likely to take longer, particularly in smaller towns and Tier-II and Tier-III markets where patient volumes may not immediately justify an investment of ₹3 lakh or more.

We believe around 50 per cent of the market could potentially move towards digital adoption over the next five to 10 years, while the remaining segment may take longer.

India has a growing presence in global dental manufacturing and laboratory services. What competitive advantages can Indian companies build, and where does the country need to improve?

The global opportunity is very large. There is no fundamental reason why Indian dental manufacturers and laboratories cannot serve markets across the world.

One area that needs greater attention is government-level focus on dentistry. There is considerable discussion around medical tourism, AI and manufacturing, but dentistry does not receive the same level of attention. Oral health is closely linked to overall health, and issues such as oral cancer remain important public health concerns.

India also has a significant tobacco burden, which makes oral health awareness particularly important. Greater government focus on dental awareness and oral healthcare could create a substantial impact.

The second issue is manufacturing perception. India has built a strong reputation in services, with companies such as Tata, Infosys and Reliance becoming global names. Manufacturing has a different challenge.

When an Indian company manufactures dental products and sells them internationally, there can still be questions around quality and consistency. This is an area where the industry needs to continue investing.

Indian companies have the opportunity to establish themselves as credible global manufacturers, but product quality, consistency, technology and global regulatory compliance will be critical to achieving that.

Kalyani.sharma@expressindia.com
journokalyani@gmail.com

Why India's health system keeps women out of leadership

Sapna Kedia, Associate Director for Gender and Social Development, ICRW Asia, talks about the systemic barriers to women's leadership in healthcare and the institutional changes needed to address them

Women are everywhere in India's health system, until the door marked leadership appears.

They staff clinics, sustain hospitals and keep public health systems moving. Yet the closer one gets to senior decision-making, the more women disappear. Women constitute nearly 70 per cent of the global health workforce but hold only 25 per cent of senior roles. At the International Center for Research on Women (ICRW), our research suggests that this is not simply a question of representation, but of how institutions distribute opportunity and authority.

A 2024 study published in a Public Library of Science (PLOS) journal estimates that India has between 500,000 and 550,000 women medical graduates, but only 350,000 to 400,000 are in active practice or postgraduate training. Their continuation rate is 65 to 75 per cent, compared with 90 to 95 per cent for men.

In high-revenue specialties such as cardiology, orthopaedics, neurology, gastroenterology and oncology, women typically account for less than 10 per cent of practitioners. The same study found that only around 19.5 per cent of 46 professional medical associations were led by women, while broader estimates place women in 28 per cent of leadership positions across national health organisations.

This is not a shortage of talent. It is a failure of design.

For years, women's leadership has been framed as a pipeline problem. The diagnosis is familiar: women need more training, mentoring, confidence and ambition. These interventions may help, but they mistake an institutional failure for an individual deficit.



A qualified and ambitious woman can still be blocked by institutions that assume she will relocate after marriage, slow down after childbirth, avoid travel because of care responsibilities or accept lower pay because her income is considered secondary.

ICRW's report, From Barriers to Breakthroughs: Women's Leadership Journeys in Indian Healthcare Organizations, shifts the focus from women's preparedness to institutional accountability. Drawing on 55 interviews across 19 health-sector organisations, alongside workplace policies and workforce data, it finds that women's careers are shaped by the interaction of family expectations, organisational structures, law and social norms.

The breakpoints are predictable. Marriage can disrupt mobility. Relocation can erase professional continuity. Motherhood can turn a capable employee into a perceived risk. Career breaks weaken networks and re-entry pathways remain thin. Childcare becomes an axis of discrimination, shaping decisions about recruitment and promotion.

Women in India spend an average of 7.2 hours each day on unpaid care work, compared with 2.8 hours for men. Yet many workplaces continue to treat this inequality as a private domestic arrangement rather than a structural constraint on advancement.

The Maternity Benefit (Amendment) Act, 2017, has helped create more gender-inclusive workplaces. But maternity protection alone cannot correct a system in which care remains overwhelmingly feminised. Without stronger parental policies, care infrastructure and a redistribution of responsibility within households, it may reinforce the assumption that childcare is principally women's work.

This is how leadership pipelines break: not through one dramatic act of exclusion, but through accumulation. Promotion systems reward uninterrupted availability. Senior networks sponsor men more readily. Work cultures confuse aggression with authority. Policies may exist on paper while leaving everyday power relations untouched.

The issue, therefore, is whether institutions are designed to retain women, advance them and recognise the leadership they already exercise.

One effort to approach the problem differently is Chingaari, a Gender Transformative Leadership programme developed by ICRW with Women in Global Health India (WGHI). It works with 50 early- and mid-career professionals from Tier 2 and Tier 3 cities, including nurses, doctors, community organisers, clinic staff and health journalists.

These are not peripheral actors in India's health ecosystem. They are its daily infrastructure. Yet they are too often treated as implementers of policy rather than authors of it.

Chingaari's significance lies in its refusal to reduce leadership to etiquette. It does not assume that women must simply perform confidence more effectively in unequal rooms. It asks why those rooms remain unequal and whose authority they are designed to recognise.

Its conversations centre on gender, power, patriarchy, feminist leadership and rights-based healthcare. It also engages organisations, recognising that women cannot carry the burden of transformation alone.

If workplaces reward masculine models of authority, ignore caregiving realities, undervalue frontline labour and allow informal networks to determine who advances, individual confidence will not repair institutional exclusion.

That is the distinction between representation and feminist leadership. Representation counts women in the room. Feminist leadership asks whether they exercise authority within it, whether their labour is valued and whether institutions are prepared to redistribute recognition, resources and power.

The policy agenda is practical. India needs publicly available, gender-disaggregated data on workforce composition, retention, remuneration and leadership. Health organisations need transparent promotion pathways, equitable hiring, safe travel, childcare support, flexible work without career penalties and structured re-entry after caregiving breaks.

Parental leave must stop treating fathers as optional caregivers. Senior leaders must be held accountable not merely for approving gender policies, but for changing how authority, sponsorship and opportunity are distributed.

The question is no longer whether women are ready to lead. Across sectors, they are already leading, often without title, authority, pay or protection.

The real question is whether institutions are ready to stop applauding women's contribution while withholding power.

A pipeline does not leak by accident. It leaks because it was built that way.

If India is serious about women's leadership, the task is not to fix women. It is to redesign the systems that continue to waste their talent.

INTERVIEW

Building a stronger paediatric healthcare system beyond metros

Dr Ravi Malik, Director and Senior Pediatrician, Malik Radix Healthcare, in an interview with **Kalyani Sharma,** discusses the need to strengthen preventive paediatric care, address gaps in specialised child and neonatal healthcare, and improve policy support to respond to India's changing child health needs

How should paediatric care delivery evolve as lifestyle-related disorders become more prevalent among children?

Paediatric care needs to shift from treating illness to preventing it. Waiting for a child to fall ill is too late. We are seeing more children with obesity, type-2 diabetes and hypertension, and the main causes are sedentary habits and poor nutrition. That's a lifestyle problem, so the answer has to start with lifestyle.

In practice, this means clinics should bring paediatric nutritionists, behavioural therapists and fitness counsellors into routine care. Families shouldn't have to look for these services separately. At every wellness visit, paediatricians should also talk to parents about limiting screen time, sleeping well and eating well. These are small conversations, but they add up.

Clinics can't do this alone, though. Schools and community centres need to team up with healthcare systems so that children get the same message in more places. Prevention works best when it's built into the places where children spend their time.

Early tracking of metabolic markers is just as important. If something is going wrong, I'd rather we see it in childhood than in adulthood. Catching it early is how we stop this changing disease profile before it takes hold, and it's much easier to do while children are still young.



> We need strong policy action, both financial and infrastructural. The government should offer tax incentives, low-interest loans and subsidised land to private operators who set up paediatric ICUs in tier-2 and tier-3 towns

What are the biggest structural gaps in India's paediatric healthcare ecosystem today?

The biggest gap is the divide between urban and rural India, in both infrastructure and talent. Specialised paediatricians and neonatal intensive care beds are available in over 70 per cent of tier-1 metro cities. Rural facilities don't have the same access. They lack critical care equipment such as advanced ventilators, warmers and paediatric phototherapy units. Without this equipment, local doctors have limited options when a child needs urgent support.

The second problem is a shortage of sub-specialists. India has a serious deficit in areas like paediatric nephrology, oncology and cardiology. Children with complex conditions have very few places to go.

Third, there is no formal, nationwide paediatric referral network. When a child needs higher-level care, there's no clear path to the right hospital. This leads to delays in critical care. Families, who are already vulnerable, end up travelling very long distances just to get basic, lifesaving tertiary treatment.

Taken together, these gaps mean a child's chances can depend on where the family lives. For a sick newborn or a seriously ill child, time matters, and every hour spent travelling is an hour lost. Fixing this means building capacity outside the metros and connecting hospitals into one referral system.

Do existing national child health programmes need to be recalibrated to address today's disease burden? If so, where?

Yes. Programmes like the Rashtriya Bal Swasthya Karyakram (RBSK) need to expand their scope. They have done well in tackling infectious diseases, malnutrition and congenital defects, and that work should continue. But the health problems children face today are different, and these programmes now have to deal with non-communicable conditions too. The scope has to match today's disease burden.

I would add mandatory screenings for childhood lifestyle disorders, juvenile diabetes and mental health issues. Mental health matters most here. Since the pandemic, we have seen a sharp rise in anxiety and depression among adolescents, and these children need to be identified early so they can get support. Early screening gives us a chance to step in before things get worse.

Screening only works if someone is there to spot the signs. That's why front-line Anganwadi and ASHA workers need training to recognise early behavioural and metabolic red flags. They are often the first contact a family has with the health system. Once they are equipped for this, we will have a much stronger and more modern primary healthcare defence network. It's a practical step that builds on

what we already have in place.

What policy interventions are needed to improve access to specialised paediatric and neonatal care beyond metro cities?
We need strong policy action, both financial and infrastructural. The government should offer tax incentives, low-interest loans and subsidised land to private operators who set up paediatric ICUs in tier-2 and tier-3 towns. That lowers the cost of getting started, and without it there is little reason for private operators to look beyond the metros.

Public-private partnership (PPP) models can help upgrade the sick newborn care units (SNCUs) in district hospitals quickly. Standardised telemedicine policies would also help. They would let urban paediatric sub-specialists support rural doctors remotely, so a child in a smaller town can get specialist guidance without a long journey first. Both build on what is already there rather than starting from scratch.

The third piece is people. Statutory rural stints for paediatric postgraduates would help spread talent more evenly across the country. But the stints need to come with competitive pay and modern working conditions, otherwise doctors will see them as a burden. If the posting is a good experience, more doctors will be willing to serve outside the metros. Taken together, these steps can bring specialised paediatric and neonatal care closer to the families who need it.

With parents increasingly turning to social media for health advice, how can doctors rebuild trust and counter misinformation?
Parents today read a great deal before they come to the clinic. A mother may have watched several videos on fever or teething before she walks in. Some of that advice is sound and some of it can be harmful. Telling her the internet is wrong rarely helps. She needs to feel heard before she can take in anything else.

Speaking about health in the clinic and on television, I have found that people trust doctors who explain things simply. If a parent understands why the vaccine schedule is spaced the way it is, they are far more likely to follow it. The reasoning matters to them as much as the advice itself.

Doctors in busy OPDs have very little time with each family, so this can't rest on the consultation alone. Hospitals and medical associations can put out short, verified material in Hindi and regional languages, and share it on WhatsApp and YouTube. Paediatricians who are comfortable speaking to the public should be encouraged to do it more often.

Vaccine hesitancy and the casual use of antibiotics in children are two areas where wrong information does lasting damage. A trusted voice that reaches parents early can prevent much of it.

India has made steady progress on newborn survival. What should the next priority be for neonatal care in the country?
India has done well on newborn survival over the last two decades. Institutional deliveries have gone up, and sick newborn care units now exist in most districts. The next step is to look at how these babies do after they leave the NICU.

Preterm and low birth weight babies carry higher risks of hearing loss, vision problems from retinopathy of prematurity, and delays in growth and development. Many of these can be managed if they are picked up in the first year. In practice, a lot of families stop coming back once the baby is home and feeding well. By the time a delay becomes obvious, the best window for treatment has often passed.

We need structured follow-up for every high-risk newborn. That means routine eye and hearing screening before discharge, a clear schedule of developmental checks, and a named facility the family can return to. Early intervention services such as physiotherapy and speech therapy should be available at the district level, so parents don't have to travel to a big city for them.

Kangaroo mother care and breastfeeding support also deserve more attention. They cost very little, and they make a real difference to how preterm babies grow.

Kalyani.sharma@expressindia.com
journokalyani@gmail.com

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INTERVIEW

The next five years could be an important period for pharmacy automation in India

Building more hospitals is only part of the challenge; making them run smarter is just as critical. Can automation help Indian hospitals improve efficiency, control costs and strengthen medication safety? **PengHui He,** APAC Leader, Swisslog Healthcare, shares his perspective in an interaction with **Lakshmipriya Nair**

India is investing in hospital capacity. But are we paying enough attention to how hospitals actually run? Where do you see the biggest gaps?

India is adding hospital capacity at a significant pace, and I believe we need to give equal thought to how these facilities will function once they become operational. New capacity additions and the integration of facilities continue to put pressure on hospital margins, even as established units benefit from efficiency improvements. This makes the efficiency of day-to-day operations an important consideration as hospital networks expand.

The more pressing concern is how effectively hospitals connect their operations. A 2026 study by Grant Thornton Bharat and the Association of Healthcare Providers (India) found that while nearly 95 per cent of surveyed hospitals use hospital information systems, only 32 per cent have achieved full integration across their core digital platforms. Fewer than one in four use automation technologies such as robotic process automation.

This has implications for everyday operations, from managing medication inventories to dispensing medicines and moving critical supplies between departments. At Swisslog Healthcare, we believe automation can bring greater accuracy and consistency to these processes, while reducing the time clinical staff spend on routine tasks. As India's hospital networks expand, I would like to see the same attention given to the systems that support care as to the infrastructure in which it is delivered.



> The value of hospital automation needs to be evaluated over its entire operational lifespan, rather than through the initial investment alone. Medication wastage, inventory holding costs, dispensing errors and time spent on repetitive tasks all carry financial implications

Hospitals often see automation as a cost. How can they start looking at it as a long-term business investment?

The value of hospital automation needs to be evaluated over its entire operational lifespan, rather than through the initial investment alone. Medication wastage, inventory holding costs, dispensing errors and time spent on repetitive tasks all carry financial implications. In India, medication errors have been associated with additional clinical interventions and prolonged hospitalisation, while inefficient medicine inventory management can contribute to wastage and poor resource utilisation. Addressing these areas can help hospitals contain avoidable expenditure while strengthening medication safety.

Operational resilience is another factor worth considering. The disruptions to hospital services during healthcare workers' strikes in India this year have brought the importance of continuity in patient care into focus. While automation cannot replace clinical personnel or prevent such disruptions, it can reduce dependence on manual processes in medication handling and help maintain consistency in routine pharmacy operations. This is also consistent with wider investment priorities, with 76 per cent of Indian pharma executives identifying robotics and automation in manufacturing as a leading technology priority in 2026.

At Swisslog Healthcare, solutions such as UniPick which automates medication storage and dispensing, and PillPick Octave, which supports patient-specific unit-dose dispensing, illustrate how hospitals can improve pharmacy productivity and medication control. The financial case should be built around measurable improvements in reduced medication errors inventory losses, dispensing times and staff productivity, weighed against implementation costs, maintenance and system longevity. This gives hospital administrators a sound basis for assessing returns over time.

If benefits are clear, why hasn't hospital automation scaled faster in India? What is holding the market back?

The hesitation is understandable. Hospital automation involves substantial upfront investment, and administrators need confidence that the returns will justify the expenditure. Labour economics also influences these decisions. In India, the relatively lower cost of manpower can make labour-intensive processes more economical than investing in automation, making it harder for hospitals to justify the initial expenditure on purely financial grounds. Integrating

new technologies into existing infrastructure can also be demanding, especially when hospitals must maintain uninterrupted clinical services throughout implementation.

India has made considerable progress in hospital digitisation, although the transition to more advanced automation has been slower. Only 34 per cent of surveyed Indian hospitals have real-time enterprise dashboards, while 93 per cent of respondents identify documentation burden as a primary reason for pursuing digital transformation. Workforce preparedness presents another challenge, with 60 per cent of Indian healthcare providers identifying capability building and IT upskilling as a major obstacle to digital transformation. These findings point to gaps in information visibility and organisational readiness that hospitals must address alongside technology investments.

A more measured approach to implementation can help overcome some of these reservations. Hospitals can begin by automating specific functions, establish measurable improvements in accuracy and productivity, and expand as their requirements evolve. Equally important is involving clinical teams early in the process, ensuring that new technologies fit existing workflows and that staff have the skills to use them effectively. This can help build confidence in automation and make the transition more manageable for hospitals of different sizes.

India's hospitals vary widely in size and spending power. How can automation become viable beyond the large hospital chains?
Automation needs to be designed around the needs and financial capacity of individual hospitals. Among smaller Indian hospitals, 27 per cent cited budget limitations and 29 per cent cited inadequate IT infrastructure as concerns about adopting digital health solutions. This makes it important to offer solutions that are affordable, adaptable, and easy to integrate into existing facilities.

A phased approach can make automation more financially manageable. For hospitals with 300 beds or more, introducing automation in specific areas such as patient samples delivery, medication storage and inventory management can provide a starting point, with additional capabilities introduced as requirements evolve. At Swisslog Healthcare, our solutions are currently suited to hospitals of this scale and above, with options for centralised pharmacy operations and more complex hospital networks. For smaller healthcare facilities, hospital intralogistics automation solutions, such as a Pneumatic Tube System (PTS), can significantly improve operational efficiency with relatively low investment and minimal disruption to existing workflows.

Many hospitals automate one process at a time. Are they missing the bigger opportunity to connect pharmacy, medication management and hospital logistics?
Automating individual processes is a sensible starting point, but greater efficiency comes from connecting them. Even with automated dispensing, hospitals may experience delays if pharmacy orders, inventory records, and internal transport systems operate independently. Bringing these functions together can improve coordination and ensure medicines reach the right departments on time.

In India, hospitals implementing NABH Digital Health Standards saw system integration scores improve from 3.31 to 4.35, alongside gains in operational efficiency and clinical decision-making. This spotlights the importance of looking beyond isolated technologies towards more connected hospital operations.

Swisslog Healthcare has expanded its presence in India. What opportunities are you seeing here, and where do you see the biggest potential for growth?
India is a priority market in our Asia Pacific expansion strategy. With hospitals investing in new capacity and managing more complex clinical requirements, we see growing opportunities for automation in medication management, pharmacy operations and internal hospital logistics. Our presence in Gurugram brings us closer to healthcare providers, allowing us to respond more directly to their requirements.

We see the strongest potential in automated medication storage and dispensing, alongside hospital transport and cold-chain solutions. Being part of the KUKA Group also gives us access to a wider automation ecosystem in India. The recent appointment of Roshni Das as Managing Director of KUKA Group's companies in India marks a new chapter for the Group's local leadership. We look forward to building on this presence as we develop our healthcare business in India.

As automation becomes more common, how will the roles of pharmacists and hospital staff change? What should hospitals prepare for now?
Automation will give pharmacists greater scope to apply their expertise to clinical responsibilities, as routine activities such as medication picking, packaging, and inventory management become less dependent on manual effort. At the same time, advances in drug discovery and personalised medicine are introducing more complex treatments, requiring pharmacists to stay abreast of new therapies and provide more specialised guidance to patients. Their professional judgement will remain indispensable, while technology brings greater precision and consistency to medication handling.

The changing nature of healthcare work also calls for new skills. In India, 77 per cent of healthcare professionals expect new roles to emerge with wider AI adoption, while 45 per cent report limited or inconsistent training at their organisations. Although these figures pertain to AI, they highlight a broader need for hospitals to prepare their workforce for technology-led changes.

Training should cover the supervision of automated processes, interpretation of system alerts and handling of exceptions, alongside a clear understanding of clinical responsibilities. Involving pharmacists and other healthcare professionals early in implementation will help ensure that new systems complement established practices and earn the confidence of those using them.

As you work with hospitals across Asia-Pacific, what differences do you see in how they approach automation? What can India learn from these markets, and where might it need its own approach?
Across Asia-Pacific, hospitals have different priorities when it comes to automation, shaped by their healthcare infrastructure and workforce requirements. In Singapore, AI-enabled pharmacy tools are being introduced to support medication verification and reconciliation, with projected savings of up to 850 pharmacist hours each week upon full deployment. In Australia, the automated pharmacy at Perth Children's Hospital demonstrates how robotics can transform medication management by automating storage, retrieval, and dispensing processes, resulting in faster turnaround times, improved patient safety, and higher productivity without a proportional increase in staffing. These examples show how hospitals are using technology to address distinct demands within pharmacy operations.

India can learn from the emphasis on medication accuracy, efficient dispensing and reducing routine workloads. However, its approach must account for differences in technological readiness. Electronic medical record adoption in India is estimated at approximately 35 per cent, with adoption concentrated among larger urban hospital chains. For pharmacy automation, this makes compatibility with existing hospital systems, reliable medication data and staff training essential considerations. Hospitals should be able to improve individual pharmacy functions while developing the foundations for more integrated medication management.

Looking ahead five years, what needs to change for India to make a real leap in hospital automation? And what role would you like Swisslog Healthcare to play?
The next five years could be an important period for pharmacy automation in India. The country's pharmacy automation market is projected to grow at 8.71 per cent annually through 2030, with automated medication dispensing and storage systems emerging as the fastest-growing segment. The opportunity is to build on this momentum by making automated medication management a more established part of hospital operations, with greater attention to dispensing accuracy, inventory control, and patient safety.

For Swisslog Healthcare, our ambition is to bring our experience in pharmacy and transport automation closer to Indian healthcare providers. We want to work with hospitals to introduce solutions suited to their clinical requirements and contribute to more dependable medication management as the sector develops.

lakshmipriya.nair@expressindia.com
laxmipriyanair@gmail.com

Smarter diagnostics, more personalised care: Bringing precision medicine closer to every Indian

Ajinkya Upasani, Product Manager-CLIA & FIA, Transasia Bio-Medicals explains how immunology diagnostics and biomarker-led testing can help clinicians make more informed decisions and why wider access beyond metros matters

Healthcare is moving beyond one-size-fits-all treatment

Two patients can have the same diagnosis and still respond differently to the same medicine. One may improve quickly; another may need a different treatment approach. This is why healthcare is increasingly looking beyond symptoms alone to understand what is happening inside the body.

Immunology diagnostics, biomarker testing and genomics can give clinicians additional information about disease biology. Used alongside a patient's symptoms, medical history and clinical examination, these insights can support more informed decisions about diagnosis, treatment selection and follow-up.

This is the promise of precision medicine: the right information, for the right patient, at the right time.

From finding a disease to guiding the next step

Traditional diagnostic tests often help answer an essential first question: is a disease present? Newer diagnostic approaches can sometimes help answer further questions. What may be driving the condition? Is a patient responding to treatment? Could a particular therapy be suitable?

Tools such as immunoassays, flow cytometry, immune profiling, genetic testing and companion diagnostics can identify specific markers linked to a disease or treatment response. Not every test is suitable for every patient, and results must be interpreted by qualified healthcare professionals. But when used appropriately, these tests can add valuable evidence to clinical decision-making.



Why the immune system matters

The immune system plays a role in infections, allergies, autoimmune conditions, chronic inflammation and several cancers. In conditions such as rheumatoid arthritis, lupus, psoriasis, severe asthma and inflammatory bowel disease, patients may experience different symptoms and respond differently to treatment.

Immunology diagnostics can help clinicians investigate immune-related signals and, where supported by clinical guidelines, use that information to guide care. The aim is not simply to run more tests. It is to generate meaningful information that helps a doctor decide what to do next.

Biomarkers: small signals, useful clinical insights

A biomarker is a measurable feature of the body such as a protein, antibody, gene variation or immune cell—that may provide information about a disease or how a patient is responding to treatment.

Depending on the condition and the test, biomarkers may help with earlier detection, assessing disease activity, selecting a suitable therapy or monitoring response. In some areas of cancer care and immunology, biomarker-guided treatment is already part of clinical practice. In other areas, its role is still developing.

Precision medicine does not mean that every patient needs advanced genetic testing. It means choosing the appropriate test when the result is likely to help answer a clinical question.

The value for patients, doctors and healthcare providers

For patients, a more informed diagnosis can help reduce uncertainty and support timely care. When a treatment is selected using relevant clinical and biomarker evidence, it may improve the chance of benefit and help avoid exposure to therapies unlikely to work. Outcomes vary, and no test can guarantee a particular result.

For doctors, reliable diagnostic information can support clinical judgement and follow-up. For hospitals and laboratories, quality testing, appropriate test selection and clear reporting can strengthen care pathways. For the healthcare system, using advanced tests where they are clinically justified may help resources reach patients who are most likely to benefit.

The disease burden makes timely, informed diagnosis more important

India's healthcare system is managing a substantial and changing disease burden. The World Health Organization's country data estimates that non-communicable diseases accounted for 71.1 per cent of deaths in India in 2023. These include major conditions such as cardiovascular diseases, cancer, chronic respiratory diseases and diabetes. The figures underline the importance of prevention, timely diagnosis and continuity of care across the health system. (WHO, India country data, 2023.)

Cancer is one important part of this challenge. The International Agency for Research on Cancer's GLOBOCAN 2022 estimates recorded approximately 1.41 million new cancer cases and 916,827 cancer deaths in India in 2022. The burden spans multiple cancer types, reinforcing the need for awareness, appropriate screening and diagnostic pathways, timely referral and treatment planning. (IARC/WHO, Global Cancer Observatory, India fact sheet, 2022 estimates.)

For immunology and precision medicine, the relevance is specific rather than universal. Biomarkers and immune-related tests can support clinical decisions in selected cancers, autoimmune and inflammatory conditions, and other diseases when evidence and clinical guidelines support their use. They are not substitutes for population-level prevention, routine screening or a clinician's assessment; instead, they can add useful information for appropriate patients at key decision points.

The challenge is also geographic. When patients in smaller towns need specialised evaluation, they may face travel, cost, sample-transport or referral barriers. A stronger network linking local doctors and laboratories with regional centres can help patients access appropriate testing and follow-up sooner without implying that every

patient needs an advanced test.

India's opportunity and the need to widen access

India has a large and diverse population, a strong pharmaceutical industry and a growing biotechnology and diagnostics ecosystem. The Genome India project has created an important resource for understanding genetic variation across Indian communities. Over time, research of this kind may support diagnostics and therapies that better reflect India's population diversity.

However, access to advanced testing is not equal across the country. Patients in Tier 3 and Tier 4 towns may face long travel distances, limited awareness of specialised tests or fewer nearby facilities offering them. Cost, sample logistics, turnaround time and access to specialists can also affect whether a test is practical.

Expanding precision medicine therefore requires more than sophisticated technology. It calls for dependable diagnostic services, trained laboratory teams, clinician education, appropriate referral pathways and communication that explains the value of testing in clear, everyday language.

Making advanced diagnostics more accessible beyond metros

Depending on the condition and the test, biomarkers may help with earlier detection, assessing disease activity, selecting a suitable therapy or monitoring response. In some areas of cancer care and immunology, biomarker-guided treatment is already part of clinical practice. In other areas, its role is still developing

A practical approach is to strengthen the diagnostic pathway that patients already use. Depending on the test and local capabilities, this can include:

Supporting district and regional laboratories with appropriate, quality-assured diagnostic platforms.

Building referral and sample-transport networks so that specialised tests can be accessed without every town needing a high-complexity laboratory.

Helping clinicians understand when a biomarker or immunology test is relevant—and what its limitations are.

Providing clear reports and patient-friendly explanations, while protecting privacy and obtaining appropriate consent.

Working towards affordable testing options and transparent communication about cost, turnaround time and clinical purpose.

Using digital connectivity and laboratory information systems where available to support reporting and coordination.

The goal is not to promote testing for its own sake. It is to make the right test accessible when it can contribute to a better-informed clinical decision.

A role for diagnostics providers

Diagnostics providers can help bridge the gap between innovation and everyday healthcare by focusing on quality, usability, service support and education. This includes designing solutions suited to different laboratory settings, supporting reliable workflows, training laboratory professionals and helping healthcare teams understand the clinical purpose of a test.

For towns beyond major metros, practical considerations matter: dependable performance, manageable workflows, service and maintenance support, availability of reagents and consumables, and connectivity that fits local infrastructure. Partnerships among laboratories, hospitals, clinicians, industry and public-health programmes can help build a more connected diagnostic network.

The opportunity is to bring useful diagnostic information closer to patients—not to make advanced medicine feel complicated or out of reach.

Challenges that need honest attention

The adoption of precision medicine still faces barriers. Advanced tests can be expensive, specialised skills may be limited, and awareness among clinicians and patients needs to grow. Data privacy, informed consent and responsible use of genetic information are also essential.

Precision medicine is not a replacement for clinical judgement, nor is every advanced test necessary for every patient. Its value depends on choosing tests responsibly, validating their performance, interpreting results in context and ensuring that the findings can meaningfully influence care.

Looking ahead: precision medicine for more Indians

Advances in genomics, proteomics, immunology and artificial intelligence are expanding the possibilities for diagnosis and monitoring. As technology, infrastructure and service models evolve, access to relevant testing could extend further into Tier 2, Tier 3 and Tier 4 locations.

Progress will depend on collaboration: clinicians asking the right questions, laboratories delivering dependable results, technology providers supporting local needs, and healthcare systems making appropriate testing more accessible.

Precision medicine is ultimately about people, not just platforms or data. By combining sound clinical judgement with reliable diagnostics and by making that capability more accessible across India—we can move towards care that is more informed, more timely and more responsive to each patient's needs.

Better diagnostic insight should not be limited by geography. Let's bring reliable, clinically relevant testing closer to every community.



Truevis Technologies

Strengthening India’s medical equipment manufacturing ecosystem

With a planned investment of Rs 500 crore and the allocation of 50 acres in Haldia, West Bengal, Truevis Technologies is taking a significant step towards expanding domestic medical equipment manufacturing, strengthening localisation and supporting India's growing healthcare infrastructure

Building India's medical technology manufacturing capabilities

India's healthcare sector is undergoing a significant transformation, driven by increasing demand for advanced diagnostic imaging, precision cancer care and the expansion of quality healthcare infrastructure beyond metropolitan cities. At the same time, the country's focus on domestic medical technology manufacturing and reducing dependence on imports is creating new opportunities for companies to strengthen local capabilities.

Truevis Technologies Pvt. Ltd. is actively contributing to this evolving landscape through its integrated approach to medical technology, combining global technology partnerships, manufacturing, system integration, installation, clinical applications, engineering and lifecycle support.

Marking an important milestone in its growth journey, the West Bengal government has allocated 50 acres of land to Truevis Technologies in Haldia for a proposed medical equipment manufacturing facility. With a planned investment of Rs 500 crore, the project will become the company's second manufacturing base in India and its first in eastern India.

The development represents a significant step towards strengthening India's medical equipment manufacturing ecosystem while expanding Truevis Technologies' operational footprint across the country.

A Rs 500 crore investment in India's manufacturing future

The proposed Haldia facility is planned as a comprehensive manufacturing and assembly ecosystem, with investments across plant infrastructure, production and assembly lines, testing and calibration facilities, quality and regulatory systems, technology integration and workforce development.

The facility is expected to have an annual production capacity of more than 1,000 large medical equipment units, covering diagnostic imaging equipment, patient monitoring systems, radiotherapy and radiology equipment, along with related components and assemblies.

The project will be developed in phases, with a focus on progressively increasing domestic value addition through component localisation and the development of a supporting vendor ecosystem.

For Truevis Technologies, this investment represents more than an expansion of manufacturing capacity. It reflects a long-term commitment to developing domestic engineering capabilities, strengthening supply chains and contributing to India's ambition of becoming a stronger global medical technology manufacturing destination.

Creating employment and strengthening the regional ecosystem

The Haldia project is expected to generate more than 5,000 direct and indirect employment opportunities during its operational phase.

These opportunities are expected to span skilled manufacturing functions, including assembly, testing, quality control, biomedical engineering and field service, alongside associated activities in construction, logistics, supply chain, installation and maintenance.

The facility is also expected to support the development of local industrial capabilities by encouraging supplier participation, technical skill development and supporting services around medical equipment manufacturing.

With its strategic location in Haldia, the facility is positioned to serve hospitals, diagnostic centres and healthcare institutions across West Bengal, eastern India and the north-eastern region. Its proximity to port infrastructure also provides an opportunity to explore export markets as manufacturing operations develop.

Strengthening the Make in India vision

Domestic manufacturing and localisation have become important priorities for India's medical device industry. While international technology partnerships continue to play a significant role in bringing advanced healthcare technologies to the country, developing local manufacturing, engineering and component capabilities is equally important for long-term sustainability.

Truevis Technologies has been progressively strengthening its domestic capabilities through its operations at the Andhra Pradesh MedTech Zone (AMTZ), Visakhapatnam, where the company is developing local assembly and system integration capabilities.

The proposed Haldia facility will further complement these efforts by creating an additional manufacturing base in eastern India.

For healthcare providers, stronger domestic manufacturing capabilities can contribute to improved supply-chain resilience, better availability of equipment and components, and the development of technical expertise within the country.

An integrated portfolio of advanced medical technologies

Truevis Technologies offers a portfolio of advanced healthcare solutions spanning Computed Tomography (CT), Magnetic Resonance Imaging (MRI), Positron Emission Tomography-Computed Tomography (PET-CT), Digital Subtraction Angiography (DSA), Linear Accelerators (LINACs) and other medical technologies.

The company's approach extends beyond equipment supply, bringing together technology partnerships, project management, installation, commissioning, clinical application training, engineering and after-sales service.

As hospitals increasingly invest in sophisticated diagnostic and treatment technologies, the need for dependable technical support and lifecycle management becomes equally important.

Truevis is focused on developing multidisciplinary capabilities to support healthcare

institutions throughout the equipment lifecycle, helping improve equipment utilisation, operational reliability and continuity of clinical services.

Building a connected service infrastructure across India

Manufacturing expansion is complemented by the company's ongoing efforts to strengthen its service and spare-parts infrastructure.

In collaboration with Neusoft Medical Systems, Truevis Technologies has established a strategic spare-parts and service hub in Chennai. The facility is designed to strengthen the management and distribution of medical imaging components and accessories across India.

The Chennai Mega Hub connects international sourcing with centralised inventory management and demand-driven distribution. It complements the existing support facility in Visakhapatnam and supports a more organised supply-chain network for hospitals and diagnostic centres.

Such infrastructure becomes increasingly important as the installed base of advanced imaging equipment expands across the country. Timely access to critical components, responsive technical support and structured maintenance services are essential to maintaining equipment uptime and operational continuity.

Expanding access to advanced healthcare infrastructure

One of the key challenges facing India's healthcare system is the uneven distribution of advanced diagnostic and treatment infrastructure.

While metropolitan cities have relatively better access to sophisticated medical technologies, healthcare providers in Tier-II and Tier-III cities continue to require greater access to advanced imaging and cancer-care solutions.

Truevis Technologies has been expanding its presence across these emerging healthcare markets, with an emphasis on supporting hospitals through technology deployment, installation, clinical applications and long-term service capabilities.

Having completed its initial installations across India, the company has set an ambition of achieving more than 100 installations during the current year.

The proposed Haldia manufacturing facility, together with its existing infrastructure and expanding national support network, is expected to strengthen the company's ability to serve healthcare providers across different regions.

Looking ahead: Building a stronger Indian MedTech ecosystem

The Haldia project represents an important milestone in Truevis Technologies' long-term growth strategy. With a planned investment of ₹500 crore, the company envisages building a manufacturing ecosystem capable of producing more than 1,000 large medical equipment units annually.

The company's ambition is to achieve annual business of more than ₹1,000 crore within five years of commissioning the facility.

Beyond the business opportunity, the project reflects a broader commitment to domestic manufacturing, employment generation, technology localisation and the development of India's medical technology ecosystem.

By bringing together manufacturing investments, global technology partnerships, engineering capabilities and an expanding service network, Truevis Technologies is positioning itself as an integrated medical technology partner for India's evolving healthcare sector.

As the demand for advanced diagnostic imaging, radiology and precision cancer care continues to grow, the company's focus remains on making sophisticated medical technologies more accessible, locally supported and sustainable across India.

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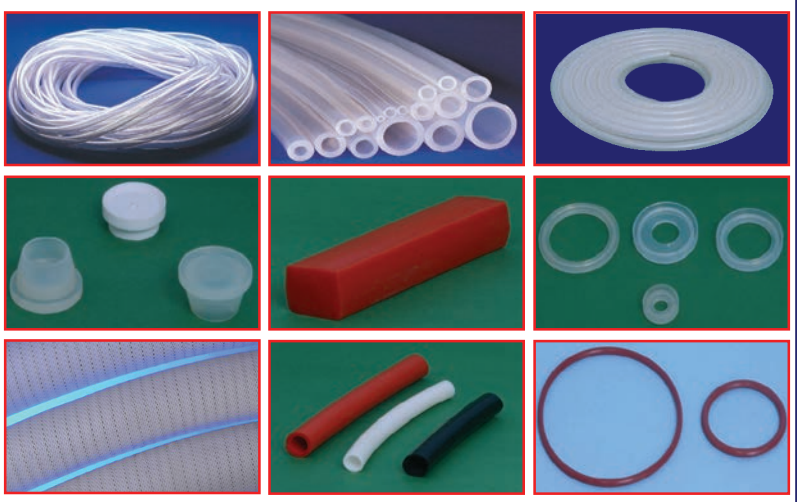
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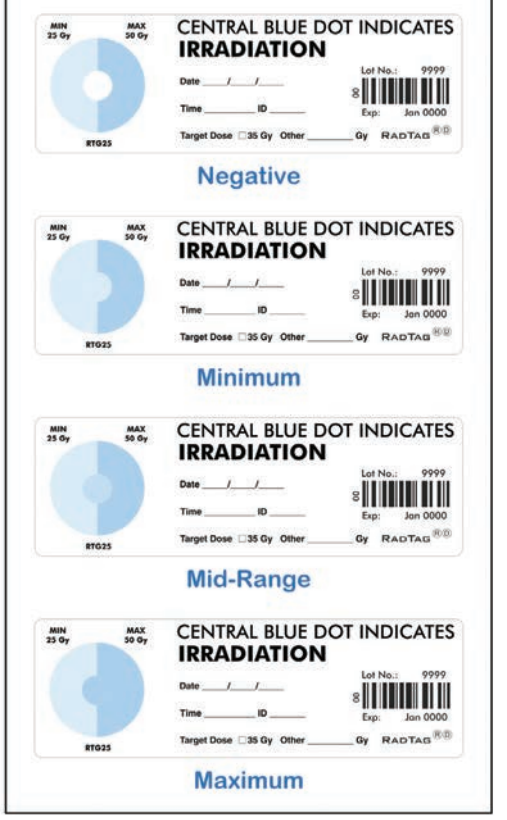


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