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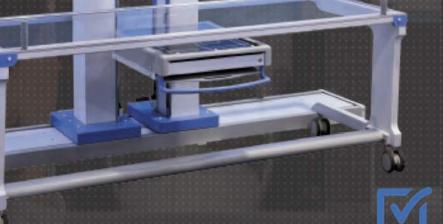
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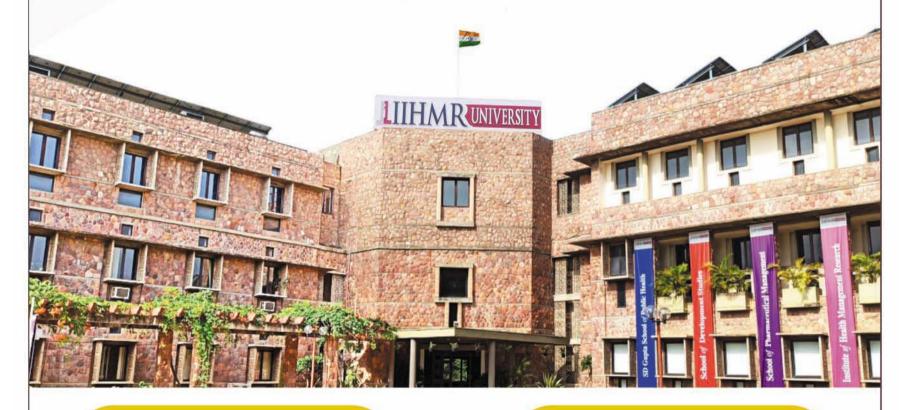
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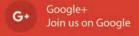
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WHY WOMEN'S LEADERSHIP IS CRITICAL TO THE FUTURE OF HEALTHCARE

PRIORITISING
CHILDREN AND
ADOLESCENT
HEALTH TO
COMBAT NCDS



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GST reforms promise affordability, growth, and public health boost

rime Minister Modi's advance 'historic Diwali gift to the nation', in the form of Next-Gen GST reforms has been hailed by all industry segments. But can the government ensure speedy implementation, and monitor that benefits filter down to consumers and patients, in letter and spirit?

While the streamlining of GST rates from a four to two slabs will reduce complexity for manufacturers, consumers will benefit from lower purchase prices in most cases, except for the so-called 'sin' category of goods and services.

In the healthcare sector, all the rate cuts are designed to make health products, from medicines to medical devices, and hospital and diagnostic services more affordable. The clear intention is to spur consumer demand, and in PM Modi's words, "give a new boost to the economy."

For instance, the GST Council's exemption of life and health insurance premia from the previous 18 per cent slab should encourage more people to buy life and health insurance. India's insurance coverage at around 4 per cent lags the global average of over 7 per cent so these GST cuts should help insurers expand coverage. As Rakesh Jain, CEO, Reliance General Insurance puts it, "The GST Council's decision to exempt health insurance premiums while allowing insurers to utilise input tax credits is a landmark step that combines consumer benefit with industry growth."

Hopefully this rate cut will make health insurance more affordable, especially for potential customers in tier 2/3 cities and rural areas, where price sensitivity has prevented insurance penetration so far. The rate cut is also aimed at encouraging a younger demographic to consider health and life insurance.

Increased insurance coverage has already resulted in higher demand for hospital services in urban areas and the same should be true as coverage expands. For families, insurance cover is some assurance that medical emergencies can be better managed, reducing the stress of paying hospitalisation bills.

Likewise, industry hopes that the GST cut from 5 per cent to 12 per cent on medical devices, diagnostic instruments, reagents and diagnostic kits will encourage more people to pivot to preventive care. Better adherence to annual health check ups benefits the diagnostic sector but more importantly, early diagnosis will also reduce medical expenses for patients

Similarly the reduction of GST on glucometers and test strips will make it more affordable for diabetics to manage their sugar levels. The GST cut on other medical devices like thermometers, and corrective spectacles should likewise reduce out-of-pocket health expenses.

All medicines too will become more affordable, with GST reduced from 12 per cent to 5 per cent. 33 lifesaving



The next steps would be to ensure speedy implementation, monitor that benefits are actually passed on to end users and smooth refunds of the accumulated GST for companies

drugs and medicines, as well as three lifesaving drugs and medicines used for treatment of cancer and rare diseases will have nil GST. This will reduce the daily cost of managing chronic conditions like diabetes, hypertension etc, hopefully spurring better patient

The next steps would be to ensure that these GST reforms, coming into effect from September 22, are implemented speedily, insurance companies and hospitals actually pass on these benefits to consumers and refunds of the accumulated GST due to the inverted duty structure are settled smoothly to free up working

Rajiv Nath, Forum Coordinator, AiMeD stresses that refund on accumulated GST due to the inverted GST structure should be made within seven days as informed. Secondly, he hopes that GST refunds are also available on GST paid on services and capital goods, pointing out that this is the case in countries like Australia, Singapore and Canada etc to enable the industry to be globally competitive. Thirdly, Nath hopes a transition period is provided to switch packaging material "to avoid persecution for profiteering though we intend to pass on the GST reduction to the end consumers by reducing MRP proportionately.'

Likewise, Jatin Mahajan, President, Association of Diagnostics Manufacturers of India urges "quick, unambiguous implementation with clear notifications, HS code alignment, and prompt refunds so benefits flow immediately to hospitals, labs, and citizens. Industry stands ready to pass through the gains, expand access to POCT and advanced immunoassays, and build globally competitive manufacturing at scale. This is a timely, growth-friendly reform that advances both public health and India's ambition to be a trusted IVD and medical-technology hub."

All in all, the Next-Gen GST reforms aim to ease consumer pain, spur confidence to spend more, thereby increase domestic demand and create a more positive business sentiment. However, as always, we will have to wait and see if the implementation is speedy, refunds are processed smoothly and most importantly, prices actually drop for end users and patients.

(For more industry reactions to the GST reforms, check out our coverage: https://www.expresshealthcare.in/news/ gst-reforms-industry-highlights-impact-of-insurance-and $medical\text{-}device\text{-}tax\text{-}changes/\hspace{0.1cm}450542/,\hspace{0.1cm}(https://www.$ expresshealthcare.in/news/industry-responds-to-gst-cutson-healthcare-and-medicines/450516/)

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From innovation to impact: Strengthening India's response to neonatal care

Preterm complications are the leading cause of neonatal mortality in the country and contribute to lifelong health challenges, including respiratory illness, developmental delays, and sensory impairments. Atul Chadha, Business Head - South Asia (PCS), Growth & Opportunity Driver, Digital Healthcare, GE HealthCare in an interaction with **Express Healthcare** talks about the medical challenges of premature babies and GE HealthCare's neonatal care solutions

With India accounting for over one-fifth of the world's preterm births, why is this such a critical healthcare concern, and what significant challenges are adding to the burden? India faces the highest burden of preterm births globally, with more than 3 million babies born prematurely each year.¹ Preterm complications are the leading cause of neonatal mortality in the country and contribute to lifelong health challenges, including respiratory illness, developmental delays, and sensory impairments.

The causes are complex and interlinked-maternal anaemia, hypertension, infections, inadequate nutrition, and adolescent pregnancies are common risk factors, compounded by environmental issues such as air pollution and poor sanitation. These medical and social determinants are intensified by systemic healthcare gaps. Access to timely prenatal care, skilled obstetric intervention, and advanced neonatal intensive care remains uneven, particularly in rural and semiurban areas where specialised infrastructure and trained personnel are limited.

The magnitude of the challenge necessitates deployment of advanced solutions to strengthen the entire continuum of carefrom pregnancy to postnatal support. GE HealthCare's maternal-infant care portfolio, including advanced maternal and fetal monitoring systems, scalable neonatal technologies, and AI-enabled





GE HealthCare's neonatal care solutions are designed to meet the complex and evolving demands of preterm and vulnerable newborns, while also addressing key neonatal care challenges in India, such as uneven infrastructure, high patient volumes, and resource constraints in smaller hospitals

decision-support tools, is designed to help clinicians detect complications early, manage high-risk pregnancies, and deliver quality neonatal care. This holistic approach supports improved survival rates and healthier outcomes for preterm infants nationwide.

How is GE HealthCare addressing the medical challenges of premature babies, especially those born before 30 weeks? Premature babies, particularly those born before 30 weeks, face critical health challenges, including underdeveloped lungs. difficulty maintaining body temperature, and vulnerabilities in brain development. Across India, where neonatal infrastructure and specialized care remain uneven, these infants require precise, high-acuity support. GE HealthCare addresse these challenges through its maternal-infant care solutions, designed to provide responsive, compassionate, and clinically advanced care. The Giraffe OmniBed Carestation ensures a stable. warm environment with intelligent thermal controls, while Panda and Lullaby^{TI} Warmers deliver rapid, uniform heat immediately after birth, vital for stabilizing infants in the first critical moments.

For respiratory support, the SLE6000 Ventilator provides gentle, precisioncontrolled airflow tailored to delicate lungs, and continuous oxygen monitoring through the Clinical View platform

enables clinicians to track SpO₂ levels over time. reducing the risk of complications such as Retinopathy of Prematurity. Beyond technology, GE HealthCare strengthens NICU (Neonatal Intensive Care Unit) outcomes through local clinical training, service partnerships, and guidance on best practices, ensuring hospitals are equipped to deliver high-quality care. By integrating innovative technologies with education and infrastructure support, GE HealthCare empowers clinicians across India to improve survival rates and long-term developmental outcomes for preterm infants, helping these most vulnerable patients thrive.

What differentiates GE HealthCare neonatal care technologies from those of other players, and how are they tailored to India's specific clinical and infrastructure needs? GE HealthCare's neonatal care solutions are designed to meet the complex and evolving demands of preterm and vulnerable newborns, while also addressing key neonatal care challenges in India, such as uneven infrastructure, high patient volumes, and resource constraints in smaller hospitals. GE HealthCare combines global clinical expertise with locally driven innovation and manufacturing, leveraging our largest global R&D centre in Bengaluru to develop technologies specifically tailored to India's neonatal care environment.

Our portfolio supports the

full continuum of neonatal care, from delivery to discharge. The Giraffe OmniBed Carestation integrates incubator and warmer functionalities, providing a consistently controlled, neuroprotective environment, while paired with the Giraffe Shuttle, it ensures safe intra-hospital transport with stable thermal regulation and continuous monitoring. For resourcelimited settings, solutions like the Lullaby Warmer Prime and Lullaby Incubator deliver reliable, easy-to-use thermal care, and the BiliSoft Phototherapy System treats neonatal jaundice effectively without interrupting motherbaby bonding.

Designed for durability, energy efficiency, and operational simplicity, these solutions bring advanced neonatal care to both highend NICUs and smaller hospitals. By combining technology, clinical insight, and local adaptation, GE HealthCare is helping clinicians across India deliver safer, more effective care for the country's most vulnerable newborns.

How is GE HealthCare supporting skill development among clinicians to ensure the effective use of high-end neonatal tech across India?

Ensuring that advanced neonatal technologies are used effectively across India requires more than just state-of-the-art equipmentit demands skilled clinicians. GE HealthCare supports this through structured training programs that give healthcare professionals practical experience in managing critical newborn care needs, including temperature stability. respiratory support, and neurodevelopmental monitoring. Recognizing the diverse healthcare landscape, we extend learning beyond major cities through digital platforms like e-learning modules, webinars, and mobileaccessible resources, helping clinicians in smaller towns and rural areas stay updated on best practices.

We also work closely with hospitals, medical colleges, and government initiatives to integrate neonatal training into broader healthcare education, fostering consistent standards and long-term clinical capacity. Complementing these programs are refresher courses and certification updates, ensuring professionals are equipped to apply evolving clinical guidelines effectively. By

combining technology with continuous learning and mentorship, GE HealthCare empowers clinicians across India to provide high-quality, responsive care, enhancing survival and outcomes for preterm babies.

How is GE HealthCare collaborating with ecosystem players to address neonatal care challenges in India?

Expanding access to quality neonatal care requires strong partnerships across the healthcare ecosystem. At GE HealthCare, we work closely with private hospitals, government stakeholders, and academic institutions to address the complex challenges of neonatal care in India. These collaborations go beyond supplying technology by focusing on clinical integration, workforce development, and sustainable innovation. With private healthcare providers, we cocreate solutions that include custom NICU workflows, standardised clinical protocols, and targeted training programs ensuring that advanced neonatal care tools are used effectively. particularly in the treatment of extremely premature infants.

Under initiatives like the Government of India's

Production Linked Incentive (PLI) Scheme, our local manufacturing capabilities support the development of high-end medical technologies in India. We also align with national programs such as the Ayushman Bharat Digital Mission to enable digital health integration. data-driven care, and remote monitoring in underserved areas. In partnership with public hospitals, we help deploy affordable and reliable solutions to strengthen neonatal care in district hospitals and special newborn care units (SNCUs).

Through our academic collaborations, we offer structured training in neonatology, critical care, and fetal medicine covering everything from simulationbased learning to certification programs. These partnerships reflect our commitment to building a stronger, future-ready neonatal care ecosystem across India.

What is GE HealthCare's long-term vision for advancing neonatal care in India over the next 5-10 vears?

Our vision is to create a future where every newborn. regardless of where they are born, has access to highquality, precise care. We are

advancing this goal by developing intelligent, connected medical technologies tailored to the unique needs of fragile neonates. Our efforts focus on expanding access across India, from large hospitals to smaller care settings in tier 2 and 3 cities, ensuring timely interventions for even the most premature babies. By empowering clinicians with smarter tools and actionable insights, we aim to advance more responsive. personalized care.

Beyond technology, we are committed to strengthening the broader healthcare ecosystem, Through education programs and partnerships with healthcare providers, academic institutions, and government initiatives, we aim to build clinical capacity where it is needed most. Additionally, we are deepening our investments in local R&D to ensure our solutions are not only clinically advanced but also affordable and locally relevant. Together, these efforts lay the foundation for a more equitable, resilient, and high-quality neonatal care system across India.

Reference

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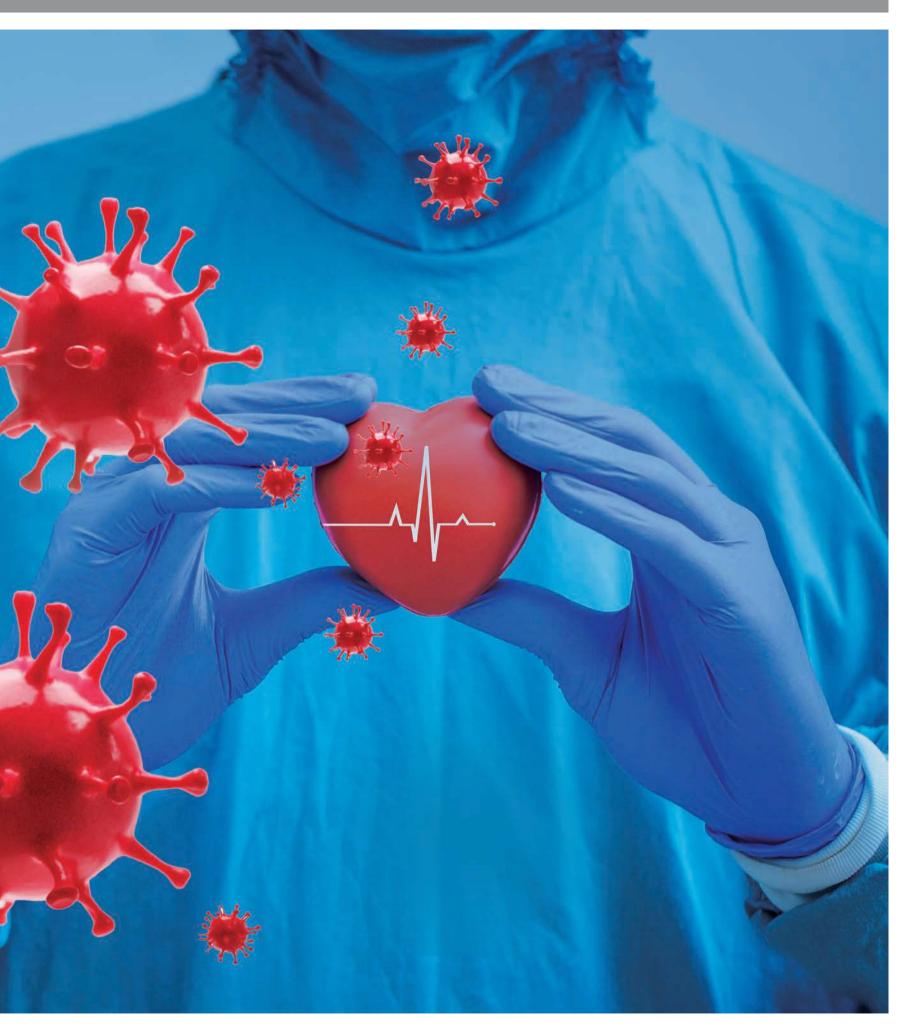
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ospital Acquired Infections (HAIs) have long been recognised as one of the concern in modern healthcare. These infections are seen across multiple hospital settings, but their impact is particularly devastating in Cardiac Care Units (CCUs).

Cardiovascular disease is the leading cause of death in India. With rise in demand for advanced cardiac care, tackling HAIs in cardiac units has become a matter of urgency.

Burden of HAIs in India: Scale of the problem

CCU patients are already fragile, recovering from major surgeries or on invasive devices. For them, an infection is not just an added complication but can be life-threatening. Infections such as ventilator-associated pneumonia (VAP), central line-associated bloodstream infections (CLABSI), catheter-associated urinary tract infections (CAUTI), and surgical site infections (SSI) prolong hospital stays, escalate treatment costs, and significantly increase the risk of mortality.

Dr Anil Kumar, HOD and Senior Consultant-Medical ICU, Sharda Care Healthcity, explains that, cardiac surgery ICUs (post-cardiac surgery units) differ from medical CCUs in their HAI profile because patients are highly invasive-device dependent in the immediate post-op period.

He also mentions, "Indian studies show 4-10 per cent incidence of HAIs after cardiac surgery, higher than medical CCUs (~1 per cent). Device-associated infections remain the main contributors because nearly all patients require mechanical ventilation, central venous lines. arterial lines, urinary catheters, and pacing wires. Mortality and morbidity are significantly increased when HAI occurs in post-cardiac surgery patients, especially due to mediastinitis and bloodstream infections."

Dr Nitin Prasar, Cardiologist, Silverstreak Multispeciality Hospital said, "HAIs in cardiac care units are around 1-4 per cent. They are predominantly



Al-powered infection monitoring systems, UV-C light cleaning equipment, and catheters coated with antimicrobials are now all used simultaneously in certain cardiac intensive care units.

Dr Surya Prakash. S Senior Consultant, SRM Global Hospitals, Chennai



Indian studies show 4-10 per cent incidence of HAIs after cardiac surgery, higher than medical CCUs (~1 per cent)

Dr Anil Kumar

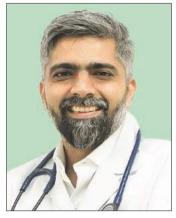
HOD and Senior Consultant-Medical ICU, Sharda Care Healthcity



Hospital-acquired infections in cardiac care units are around 1-4 per cent. They are predominantly device-associated HAIs

Dr Nitin Prasar

Cardiologist ,Silverstreak Multispeciality Hospital



The burden is real, but it is predictable and preventable when we standardise bundles, measure consistently, and act on our own data.

Dr Ranjan Modi

Senior Consultant & Head - Interventional Cardiology, Sarvodaya Hospital

device-associated HAIs: Ventilator-Associated Pneumonia (VAP), Central Line-Associated Bloodstream Infection (CLABSI), and Catheter-Associated Urinary Tract Infection (CAUTI). Indian ICU surveillance typically finds pooled rates around: VAP ~9-13, CLABSI ~5-11, CAUTI ~2-7 per 1,000 device-days (ranges vary by hospital and year)."

Dr Ranjan Modi, Senior Consultant & Head - Interventional Cardiology, Sarvodaya Hospital notes, "In high-acuity cardiac units, device use is intense, so our infection profile skews toward device-associated events. Across Indian ICUs, multiple surveillance efforts have shown double-digit rates per 1.000 device-days for ventilators, central lines, and urinary catheters: cardiac ICUs generally mirror this risk because of post-operative ventilation, multiple lines, and longer

"In our practice, ventilatorassociated pneumonia (VAP) and central line-associated bloodstream infection (CLABSI) lead the tally, with catheter-associated (CAUTI) close behind. Poststernotomy surgical-site infections are less frequent but particularly consequential, and sternal deep infection/mediastinitis, though uncommon, carries high morbidity. The microbial landscape is dominated by multidrug-resistant gram-negatives—Acinetobacter. Pseudomonas—alongside MRSA. The takeaway is simple: the burden is real, but it is predictable and preventable when we standardise bundles, measure consistently, and act on our own data."

Cardiac patients especially vulnerable: Why?

Infections in CCUs are majorly the outcome of various risk factors like combination of clinical vulnerability, spme invasive procedures and other comorbities such as diabetes, obesity or kidney diseases.

Dr Chhavi Gupta, Infectious

disease physician, Yashoda Medicity stresses, "Cardiovascular diseases are predominantly seen in the elderly population and individuals with chronic conditions such as diabetes and hypertension. These comorbidities, coupled with advancing age, contribute to a weakened immune system, making cardiac patients highly susceptible to a broad range of infections—especially HAIs. In India, HAIs remain a persistent concern in CCUs. Studies indicate HAI incidence in Indian CCUs ranges from 15 per cent to 25 per cent, significantly higher than the global average."

Dr Brajmohan Singh, Sr. Consultant Cardiothoracic and Vascular Surgeon, HCG Hospitals, Ahmedabad explains, "Cardiac patients are more vulnerable because most of them require invasive support like ventilators, central lines, and urinary catheters. They are also often elderly, have diabetes or kidney problems, and have weaker immunity. After heart surgery, their recovery phase makes them more prone to infection."

Infection Control and Prevention (IPC): What matters the most?

Experts agree that these infections are largely preventable with the right protocols, technologies, and systemic reforms.

Dr Neeta Shrivastava, Consultant Microbiology and Head Infection Control, Medicover Hospitals, Navi Mumbai highlights, "Strict adherence to sterile techniques during surgery and device insertion, along with timely removal of invasive lines, will help to reduce HAIs. Consistent hand hygiene, antibiotic stewardship, and dedicated infection surveillance are important for cardiac patients."

Dr Singh also shares that, "Simple, consistent practices give the best results - like proper hand hygiene, strict care bundles for ventilators and central lines, timely removal of unnecessary catheters, and correct antibiotic use. For surgical patients, maintaining blood sugar control, proper skin



While hospitals lead the implementation of protocols, visitors and caregivers also play a vital role by following hospital hygiene protocols, respiratory etiquette, avoiding overcrowding and unnecessary visits

Dr Chhavi Gupta

Infectious disease physician, Yashoda Medicity



Cardiac patients are more vulnerable because most of them require invasive support like ventilators, central lines, and urinary catheters. They are also often elderly, have diabetes or kidney problems, and have weaker immunity. After heart surgery, their recovery phase makes them more prone to infection

Dr Brajmohan Singh

Sr. Consultant Cardiothoracic and Vascular Surgeon, HCG Hospitals, Ahmedabad

Innovative technologies transforming IPC in CCUs

- Closed suction systems and antimicrobial-coated catheters
- Reduce the risk of VAP and catheter-related infections.
- Ultraviolet (UV) and Hydrogen Peroxide Vapor (HPV) disinfection systems
- Used for terminal cleaning, these technologies eliminate resistant pathogens from critical
- AI-powered infection tracking dashboards
- Enable real-time alerts and performance benchmarking, empowering IPC teams to respond swiftly to emerging threats.
- Remote monitoring and early warning systems
- Integrated with Clinical Decision Support Systems (CDSS), these tools aid in the early identification of sepsis and clinical deterioration.
- Simulation-based IPC training
- Enhances practical knowledge and compliance, particularly among junior doctors, nurses, and technical staff.

Source: Dr Chhavi Gupta Infectious disease physician, Yashoda Medicity

preparation, and using antibiotics at the right time before surgery are extremely impor-

Dr Kumar cites that device specific bundles are another successful method of IPC. A CLABSI prevention bundle for example includes certain steps taken by the staff (such as using a checklist to insert lines, daily assessment of the need for the line, and ensuring skin preparation includes the use of

chlorhexidine). A VAP bundle would include ensuring the head of the bed is elevated, encouraging daily breaks from sedation, and oral care with chlorhexidine.

Dr Gupta believes that

infection prevention is a shared responsibility. She mentions, "While hospitals lead the implementation of protocols, visitors and caregivers also play a vital role by following hospital hygiene protocols, respiratory etiquette, avoiding overcrowding and unnecessary visits. especially during outbreak situations."

This underlines a critical insights-preventing HAIs is more about relentless execution of basic hygiene and care protocols.

Dr Swarup Swaraj Pal, Chief CVTS surgeon, Cardiovascular and Thoracic, MICS, Trauma and Transplant surgeon, Gleneagles Hospital cites, "In CCUs, innovations like antimicrobial-impregnated lines, automated hand hygiene monitoring, and AI-driven infection tracking systems are helping reduce HAIs."

Dr Kumar believes that innovative developments in preventing healthcare-associated infections (HAIs) are moving away from using tried-and-true measures. One promising avenue of HAI prevention is the use of automated disinfection technologies, e.g., ultraviolet light (UV-C) devices and hydrogen peroxide vapor systems, which are employed in patient rooms after a patient is discharged, to supplement the manual cleanliness of the room. These automated disinfection devices are an effective way to decontaminate surfaces and decrease resilient pathogens such as Clostridium difficile or Methicillin-resistant Staphylococcus aureus (MRSA).

Dr Surya Prakash. S, Senior Consultant, SRM Global Hospitals, Chennai mentions, "AIpowered infection monitoring systems, UV-C light cleaning equipment, and catheters coated with antimicrobials are now all used simultaneously in certain cardiac intensive care units. Rapid pathogen detection kits make it simpler to identify and treat illnesses early on."

"Certain hospitals have also incorporated robotic disinfecting systems to provide thorough

cover)

surface sterilisation of important areas. Wearable biosensors are also in the pipeline to constantly monitor patients' vital signs and identify initial indicators of infection. Telemetrylinked infection alerting enables clinicians to act in real time, while antimicrobial dressing for surgical wounds of high technological value continues to minimise infection incidence in post-cardiac surgery patients."

Rapid diagnostic kits and molecular testing are another area of promise, as they allow clinicians to identify pathogens and resistance patterns within hours instead of days, reducing delays in targeted therapy.

However, as several experts pointed out, these innovations are resource-intensive and not yet widely accessible across India. "The challenge is that these tools are expensive, so not everyone can use them," admits Dr Manoj, Consultant Intensivist, VS Hospitals, Chennai.

Operational and systemic barriers

If prevention is straightforward and technologies are advancing, why do HAIs remain such a persistent problem? The answer lies in operational and systemic challenges.

"The challenges are mainly operational. In busy ICUs, following every step of the infection-prevention protocol is difficult, especially when patient load is high. Staffing shortages, frequent turnover of nurses and technicians, and limited availability of advanced equipment. also make it harder. Antimicrobial resistance is another growing problem." says Dr Singh.

Dr Manoj echoes this, highlighting that, "We don't have enough nurses for the number of patients we admit. Even the best infection-control plans falter when each nurse is stretched too thin. Infrastructure doesn't always help; many ICUs still don't have enough isolation rooms or even enough hand-rub bottles at the bedside. High patient turnover, constant crowding, and resistance to changing old habits make it worse. And in resource-limited



Strict adherence to sterile techniques during surgery and device insertion, along with timely removal of invasive lines, will help to reduce HAIs. Consistent hand hygiene, antibiotic stewardship, and dedicated infection surveillance are important for cardiac patients

Dr Neeta Shrivastava

Consultant Microbiology and Head Infection Control, Medicover Hospitals

In CCUs, innovations like antimicrobialimpregnated lines, automated hand hygiene monitoring, and Al-driven infection tracking systems are helping reduce



Chief CVTS surgeon, Cardiovascular and Thoracic, MICS, Trauma and Transplant surgeon, Gleneagles Hospital



We don't have enough nurses for the number of patients we admit. Even the best infection-control plans falter when each nurse is stretched too thin

Dr Manoj

Consultant Intensivist, VS Hospitals, Chennai

hospitals, infection prevention often loses out to more immediate needs like beds and ventilators.

Resource-limited hospitals often face additional issues: overcrowding, outdated infrastructure, inconsistent sterilisation, and limited diagnostic facilities. Moreover, antimicrobial resistance (AMR) compounds the challenge, narrowing treatment options and driving up costs.

Regulatory and policy changes

Experts agree that we need stronger national level policy ecosystem to tackle HAIs in CCUs. Currently, reporting is patchy, protocols are inconsistent, and accountability is weak.

Dr Singh said, "We need standard guidelines for all hospitals to monitor and report infections in the same way. Dedicated infection-control teams should be mandatory, with proper staff and training. Hospitals should also be encouraged to follow antibiotic stewardship programs, so that antibiotics are used wisely."

Dr Shrivastava also mentions, "Standardised IPC protocols, backed by audits and accountability measures, would help ensure consistent infection control across hospitals."

Dr Modi calls for universal, comparable HAI surveillance across cardiac units — both public and private — tied to national accreditation standards. "None of this requires cutting-edge tech; it requires standards, transparency, and steady resourcing so that the best practices in a few centres become the norm everywhere," he says.

Experts also advocate for mandatory HAI reporting, dedicated infection-control professionals, multilevel audits, and protected funding for IPC infrastructure and staff training.

Dr Prakash said, "In addition, establishing dedicated infection control units within every cardiac hospital, incentivising compliance through accreditation programs, and integrating AI-driven surveillance into national health databases could further enhance prevention. Public awareness campaigns about hospital-acquired infection risks and the importance of early reporting can also support safer cardiac care environments."

Way forward

HAIs are a silent threat in India's CCUs, where fragile patients face life-or-death stakes. Preventable yet persistent, these infections undermine the progress of advanced heart care. Can India make cardiac healing truly safe?

Dr Manoj said, "Every day in the CCU, we see patients and families put their trust in us at their most vulnerable moment. They come to us hoping for a second chance at life. The least we owe them is care that is not only advanced but also safe from preventable infections".

Proper execution of basic IPC measures, scaling up the adoption of technology, stronger policy frameworks, and adequate staffing and training is the need of the hour. Infection control in hospital should not be seen as an addon, but as integral part of the cardiac care ecosystem.

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DIAGNOSTICS

INTERVIEW

Methylation-based tools set to transform early cancer detection in the next 3-5 years

MedGenome recently launched country's first CNS Tumour Methylation Classifier Test. This diagnostic test can differentiate and classify over 90 classes of brain and central nervous system tumours into accurate subtypes, enabling doctors to make optimal and accurate treatment decisions. In an interaction with **Kalyani Sharma, Dr Vedam Ramprasad,** CEO, MedGenome, discusses the significance of this innovation and its potential impact on cancer care

Could you walk us through the journey of developing the CNS Tumor Methylation Classifier? What were the biggest scientific and operational challenges, and how did you ensure validation and global benchmarking?

In any cancer, significant changes occur in the DNA of the affected cells. One of the most important alterations is DNA methylation, which is highly specific to each cancer type. These methylation patterns are like unique signatures—for instance, breast cancers display a different profile from brain tumors. By studying these patterns, we can not only identify the type of cancer but also detect it at earlier stages than current methods allow.

Over the last 6-7 years. $research\,groups\,in\,the\,US\,and$ Germany have extensively studied methylation in brain tumors because of their heterogeneity—there are more than 120 subtypes, each requiring distinct treatment approaches. Recognising this, MedGenome optimised and validated the wet lab workflows and bioinformatics pipelines in India. We partnered with Heidelberg Epignostix team in Germany, leveraging their reference data models, but we are now developing an Indiaspecific model, which we expect to launch within a year. This will ensure even greater accuracy for our patient population.

One major challenge has been limited funding and incentives for such high-end research in India, despite the heavy patient burden here.



Nevertheless, we've made significant progress, and today, this test offers nearly 90 per cent accuracy, outperforming conventional histopathology in 6–10 per cent of ambiguous cases. Importantly, this is the first-of-its-kind test in India and South Asia.

Brain tumour diagnosis is often considered one of the most critical and complex areas in oncology. From your perspective, what challenges do doctors face, and what limitations of current diagnostics does this test address?

Brain tumors are highly heterogeneous. Pediatric gliomas, adult gliomas, astrocytomas, meningiomas—all differ in prognosis and treatment. Conventional histopathology sometimes struggles to precisely classify them, which is critical for

determining the aggressiveness of treatment.

Our classifier analyses methylation patterns and can distinguish among more than 90 brain and CNS tumor types. It does not replace histopathology but complements it, helping neuro-oncologists resolve difficult or ambiguous cases. This directly translates into more accurate treatment decisions and better patient outcomes.

Why is DNA methylation emerging as such a powerful tool in classifying complex tumors?

Every tumor carries a unique methylation "signature." By decoding these signatures, we gain deeper biological insights, which can then guide treatment strategies. While CNS tumors are a starting point, this approach is rapidly expanding. In the next 3–5 years,

methylation-based tools will likely play a major role in early cancer detection including hard-to-detect cancers like pancreatic and ovarian at stages where current methods fall short.

Could you share an example of how this test has impacted patient care?

There have already been several cases where ambiguous brain tumor samples, difficult to classify using histopathology alone, were precisely identified through our methylation classifier. This has enabled clinicians to tailor therapies more effectively. For example, in certain pediatric cases, what was initially thought to be an aggressive tumor turned out to be a subtype with a much better prognosis allowing doctors to avoid unnecessary aggressive treatment.

The shift from a "one-size-fits-all" approach to more personalised treatment in oncology is gaining momentum. How is this transformation unfolding in India?

Ten years ago, personalised medicine was seen as futuristic. Today, it is widely embraced. Precision diagnostics and targeted therapies have already improved survival outcomes by 40–50 per cent in several cancers. In India too, clinicians are increasingly relying on molecular and genomic insights to guide treatment, and patients are benefiting from more effective and less toxic therapies.

Beyond the CNS classifier,

what other in-house solutions is MedGenome developing for advanced cancer diagnosis?

We are working on early cancer screening solutions using methylation-based blood tests. Our focus is on detecting multiple cancers such as breast, ovarian, colorectal, cholangiocarcinoma, and head and neck cancers at earlier stages. Clinical trials are underway across 7–8 leading hospitals in India. We are also building an India-centric data model for early detection.

How do you see the role of genomics evolving in mainstream cancer care over the next 5–10 years?

Genomics is already integral to cancer management. In leukemia, for instance, genetic profiling is essential for treatment. Going forward, two parallel shifts will occur:

Treatment and diagnosis: Broader adoption of genomic and methylation tests as standard of care, providing more accurate classifications and treatment pathways.

Prevention and screening: High-risk groups—such as individuals with family history, smokers, or those above 50 will increasingly undergo preventive screening through advanced molecular tests.

Costs, though currently high (Rs 30,000 for our test vs Rs 1 lakh just five years ago), will continue to fall with scale and technological advancements, making genomic testing more accessible to patients in India.

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INTERVIEW

Liver cancer prevention cannot be siloed from broader metabolic health

Dr Ghassan Abou-Alfa, Gastrointestinal Medical Oncologist, MSK, discusses how clinicians. healthcare systems, and policymakers can collaborate to fight liver cancer through prevention-first strategies and advanced surveillance tools, in an exclusive interaction with **Lakshmipriya Nair**

Your article in The Lancet **Commission underscores** that nearly 60 per cent of liver cancer cases are preventable. So, for practitioners, how can prevention-first mindset translate into everyday clinical decisions?

Make prevention a default order set, not a poster. In practice that means, ensuring HBV vaccination status is checked at every touchpoint, offering catch-up doses, and routinely testing for hepatitis B and C with rapid linkage to treatment. It also involves making conversations about alcohol consumption, diabetes management, and weight control as part of standard counselling, supported by EMR prompts and surveillance pathways. Importantly, cirrhosis or high-risk HBV patients should be automatically enrolled in sixmonthly ultrasound and AFP monitoring programmes, with escalation to MRI when needed. By reframing prevention as a daily clinical decision, clinicians can intercept disease before it becomes a late-stage cancer, where options are far more limited.

Are there lessons from $regions\,with\,effective\,HBV$ vaccination or hepatitis C elimination programmes that other health systems can adopt?

The most successful regional programmes have one thing in common: they combine medical intervention with public health delivery. Countries that scaled up HBV vaccination at birth, enforced catch-up





Countries that scaled up HBV vaccination at birth, enforced catch-up immunisation, and streamlined access to HCV treatment have seen dramatic reductions in risk. For settings like India, adopting such models, adapted to local demographics and supported by state-level policy, can slow the rising tide of obesity and MASLD while continuing to tackle viral drivers of the disease

immunisation, and streamlined access to HCV treatment have seen dramatic reductions in risk. These examples demonstrate hepatitis screening as a routine, and patient pathways are now simplified. For settings like India, adopting such models,

adapted to local demographics and supported by state-level policy, can slow the rising tide of obesity and MASLD while continuing to tackle viral drivers of the disease.

Given that most liver cancers are diagnosed late, what kind

of policy support could make early detection more routine?

Even modest reductions in incidence; two to five per cent annually could prevent 9 to 17 million liver cancer cases by 2050, saving 8 to 15 million lives.1 Driving early detection through policy might include

prioritising surveillance for high-risk individuals, backed by insurance or government benefits, and coupling screening with clear guidelines and reminders. As MASLDrelated cases are rising, especially among those with obesity or diabetes, policy must also cover metabolic screening and education. Embedding such structured detection as a standard benefit could shift the system toward preventive oncology rather than late-stage reaction.

Which emerging tools, be it biomarkers, imaging technologies or digital health approaches, are most promising for both health systems and practitioners?

Early diagnosis has long been the weak link in liver cancer care, but innovation is changing that. Biomarker panels such as GALAD already outperform AFP and could soon make blood-based risk assessment more precise and scalable. Abbreviated MRI protocols are proving more sensitive than ultrasound, especially in cirrhotic livers, and may become the preferred frontline tool as access improves. Digital health is also advancing—EMR-integrated risk calculators can personalise surveillance intervals, while AI triage systems flag indeterminate nodules for urgent review.

The true promise lies in convergence: biomarkers to identify risk, imaging to confirm, and digital platforms to ensure no patient is missed. If embedded at scale, these tools could make early

detection routine rather than incidental. At Memorial Sloan **Kettering Cancer Center** (MSK), structured surveillance for patients with hepatitis or cirrhosis already demonstrates the impact of consistent monitoring and shows how emerging technologies can build on this model to transform outcomes globally.

How can public health interventions targeting obesity, alcohol, and diabetes prevention be more effectively integrated into cancer prevention strategies? Liver cancer prevention cannot be siloed from broader metabolic health. MASLD already affects an estimated third of the global population, and its severe form, MASH, is projected to increase by 35 per cent by 2050.2 Tackling obesity,

alcohol use, and diabetes requires a dual approach; at the clinic level, physicians need to integrate lifestyle counselling into routine care; at the system level, governments can support with measures like sugar taxation, alcohol pricing, and clear labelling. When prevention strategies address these risk factors collectively, they not only lower liver cancer risk but also strengthen the fight against multiple chronic diseases.

How is Memorial Sloan **Kettering Cancer Center** (MSK) translating the Commission's global findings into real-world care models? At MSK, we are translating these findings into tangible care models by combining prevention, surveillance and treatment within a single

continuum. All at-risk patients are systematically screened for hepatitis B and C, with proactive vaccination offered wherever indicated. Surveillance is embedded through regular ultrasound and AFP testing and escalated to advanced imaging as needed. Our multidisciplinary teams spanning hepatology, oncology, radiology and surgery, work to ensure that early-stage disease is promptly linked to curative options, while patients with advanced disease gain access to cutting-edge therapies and clinical trials. Just as important, patient education now explicitly frames HBV vaccination, hepatitis testing and lifestyle modification as cancer prevention measures. We are applying global evidence to local care delivery, while contributing back

through research and clinical trial innovation.

How can we build better synergies between academia. policymakers and healthcare practitioners to accelerate research in this area and make them part of clinical protocols?

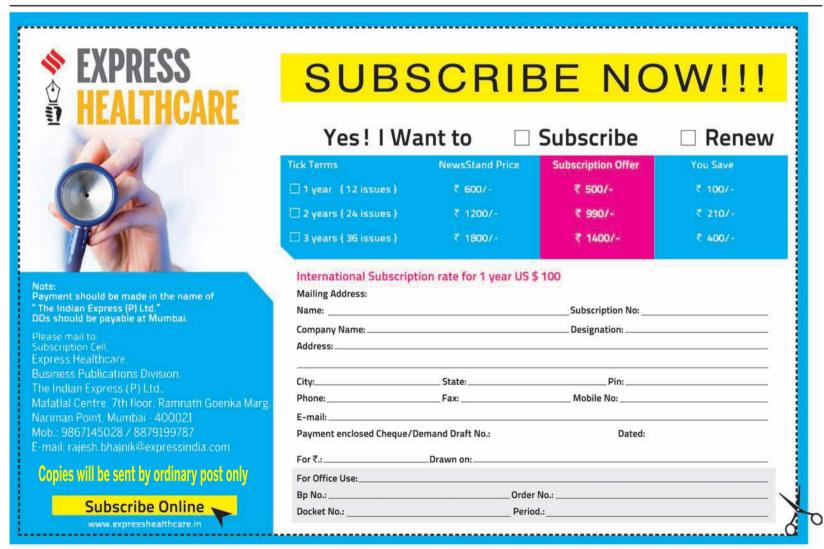
Accelerating progress depends on how well academia, policymakers, and practitioners work together. Researchers generate evidence on shifting risk factors like MASLD, health systems operationalise that evidence through screening and surveillance, and policymakers enable scale by embedding these interventions into national programmes. For example, sugar taxes or alcohol controls gain traction only when backed by clinical data

and frontline advocacy. Anchoring these efforts to WHO's 2030 elimination goals3 provide a shared framework, ensuring that science, policy and practice remain aligned in driving down the burden of liver cancer.

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Why women's leadership is critical to the future of healthcare

Dr Shravan Subramanyam, Managing Director, BPL Medical Technologies and Former President, NATHEALTH, along with Roshni Rathi, Managing Director and Partner, BCG, emphasise that increasing women's leadership improves outcomes at every level by expanding talent pools, reducing attrition, and enhancing access to care

'ndia's healthcare system stands at a critical inflection point. Investor-led hospital ownership, rising professionalisation, and the spread of NABH accreditation are formalising how care is delivered. As the sector expands through private investment, infrastructure growth, and quality standardisation, a central question emerges - who is leading this transformation, and how inclusive is that leadership? Women constitute over half of all medical graduates and yet remain strikingly absent from leadership roles. This moment offers a rare opening to weave gender equity into the very fabric of healthcare governance, making inclusion a core operating norm rather than a peripheral

An ecosystem in flux: Navigating the transformation of modern healthcare

India's healthcare ecosystem is a tightly connected network of providers-hospitals and clinics and allied sectors like pharma, med-tech, and diagnostics. These segments are mutually reinforcing: pharma and med-tech power clinical care, while diagnostics guide treatment decisions. Yet across this interdependent system, women who dominate frontline roles in outpatient care, ophthalmology, and maternal health remain markedly underrepresented in leadership. With over 25 listed and PE-backed hospital chains managing 60,000+ beds, leadership inclusivity has not kept pace with sectoral formalisa-

On the supply side, India is



Dr Shravan Subramanyam

producing more women healthcare professionals. Yet nearly 30 per cent of women MBBS graduates don't actively practice, and those who do often concentrate in fields like obstetrics and gynecology. Fewer than 10 per cent of surgeons or cardiologists are women. The lack of role models deters many, with -75 per cent of female students citing this as a reason for avoiding male-dominated fields. In nursing—a predominantly female domain-career progression remains limited, even as India faces a shortage of nearly 2 million nurses. Women are also entering adjacent domains, including biomedical engineering and health tech, feeding into allied sectors like med-tech and diagnostics. The result is a paradox: women are

highly visible at the entry level, but largely invisible at the

While gender equity is increasingly recognised as important, it often competes with other pressing business priorities. On the demand-side, conversations with hospital CEOs and promoters reveal that talent especially in leadership across clinical, operational, and nursing domains— is among the sector's most pressing constraints. Attrition exceeds 30 per cent in many private hospitals, and leadership pipelines remain shallow. In allied healthcare industries such as medtech and pharmaceuticals, this challenge is amplified by a persistent paucity of women in field-related roles such as engineering, maintenance, sales, and application support—posi-



Roshni Rathi

tions that typically serve as pipelines to leadership. Unless addressed, these leaks in the pipeline will compromise both patient access and institutional performance.

A seat at the helm: How women leaders strengthen healthcare organisations and systems

Inclusive workplaces can help address prevailing gaps - gender-concordant care improves outcomes by 2-3x in cardiac cases and 10-15 per cent in post-operative recovery, while institutions with stronger inclusion practices show improved retention.

Increasing women's leadership improves outcomes at every level expanding talent pools, reducing attrition, and enhancing access to care. Gender-concordant care improves cardiac outcomes 2-3x and post-operative recovery by 10-15 per cent. According to a study cited PharmaBoardroom, UK FTSE 350 companies with at least 25 per cent women on their executive committees achieved a 13.9 per cent net profit margincompared to just 8.9 per cent for those with no female executives. Equity in leadership is not just fair—it's a lever for better performance and public

Women contribute across healthcare from consultants and hospital administrators to nurses and rising leaders in pharma and med-tech. Yet persistent barriers hold them back: bias, limited mentorship, restricted access to strategic

roles, and inflexible work environments—especially during life stages like maternity. These challenges reflect a broader undervaluing of women's leadership, limiting both individual growth and system-wide resilience.

Ecosystem players must undertake proactive steps to address barriers across these role archetypes using pragmatic levers, tailoring interventions based on their organizational maturity and context. Using self-assessment diagnostic toolkits, players can evaluate internal gaps and choose from a spectrum of interventions such as flexible career pathways, modular onboarding. mentorship programs, and structured returnships. For example, ecosystem players can implement mentorship programs that accelerate career progression and specialty entry, build confidence and reduce isolation, and enhance

Policy-makers can accelerate progress by drawing from global and cross-sectoral benchmarks to design policies that incentivise inclusive HR practices and integrate gender metrics into accreditation frameworks

clinical and leadership skills. Further, modular clinical pathways can reduce the barriers to entry, enable career mobility and re-entry, and help strike a balance between career breaks and career growth. Lastly, creating visible role models can dispel entrenched biases around gender and specialty suitability, increase aspirational pathways for early-and mid-career women, and encourage institutional and peer acceptance of women clinical leadership. Evidence from exemplar hospitals such as Max, Dr. Agarwals, and Tata Memorial show that these measures are not aspirational ideals but practical realities already being implemented.

For nurses, well-defined career progression pathways spanning specialty and critical care, administrative, and nonmedical roles along with continued upskilling and incentivization meausres essential for retention and advancement into leadership. For management and operations roles, upskilling, mentorship and targeted inclusive hiring can help women grow into strategic roles. These efforts must be reinforced by enabling systems inclusive infrastructure (e.g. hostels near workplace, creche infrastructure). workplace safety (e.g. crisis response systems, late night work safety) and flexibility and re-entry pathways post career breaks (e.g. maternity). When embedded systematically, such enablers shift inclusion from an HR agenda to a core business priority.

Policy-makers can accelerate progress by drawing from

global and cross-sectoral benchmarks to design policies that incentivise inclusive HR practices and integrate gender metrics into accreditation frameworks. The development sector can act as a catalyst by convening stakeholders, funding high-impact pilots, generating evidence, and disseminating knowledge of best practices to drive systemic reform.

The case is clear - advancing women into healthcare leadership is not a "women's issue." It is a national imperative. It strengthens institutions, improves care quality. and ensures that India's healthcare transformation is both equitable and effective. As the sector continues to evolve, women must be at the forefront of its most impactful chapters. If India is to build a healthcare system that is world-class and people-centered, it cannot afford to leave half its talent behind.

Prioritising children and adolescent health to combat NCDs

Dr Nalini Saligram, Founder and CEO, Arogya World stresses that it is not possible to for any single sector to tackle the prevention of NCDs alone. Here, coordinated action is required

ndia stands at a critical juncture in its public health journey. The country has made considerable progress in combating infectious diseases and maternalchild health. However, a health crisis that cannot be ignored is looming large-the silent surge of non-communicable diseases (NCDs). According to World Health Organisation, 41 million deaths, around 41 million deaths occur every year accounting for 74 per cent of all deaths globally. The shift in demographics with children, adolescents, and young adults increasingly becoming vulnerable to NCDs such as cancer, diabetes, heart diseases, etc. is con-

cerning. Factors such as sedentary lifestyles, rapidly increasing urbanization, increased screen times have significantly contributed to the early onset of NCDs among the younger generation. Thus, there is an urgent need to address this and subsequently take necessary measures.

Understanding the surge in NCDs in India

Across India we are now witnessing a trend, where children as young as ten are suffering from health issues such as increased blood pressures, pre-diabetes or signs of early metabolic syndrome. According to a recent article

published in BMC Nutrition (2024), obesity and overweight children and adolescents are increasing rapidly in India, with a 10-year prevalence of almost 14-18 per cent prevalence in urban areas. Cities are witnessing a situation where nearly one-third of children are overweight or obese- While correlated to the rise in sedentary lifestyles, screen addiction, and poor dietary habits.

The surge in NCDs in India can be attributed to factors such as urbanisation, socio-economic factors, the changing food environment, and the lack of public awareness. With about 65 per cent of India's population under

the age of 35 years, and a significant number still in schools, the potential to see a full NCD epidemic in the next 20 years is certainly possible.

New research is beginning to demonstrate the urgency to address the growing burden of NCDs in the country. The study involving over 600 scientists across 500 institutions conducted by researchers from Hyderabadbased CSIR-CCMB found that 25-30 per cent of Indians developed adult obesity from when they were healthy without obvious signs of obesity. This study, part of a worldwide study, provided new genetics for obesity, as well as a polygenic risk score (PRS) for

predicting risk of developing obesity from the age of five. To identify at-risk children at such an early stage allows us to think much differently and proactively than just being reactive. Currently, polygenic risk scores and the early identification of children's risk for NCDs remain largely absent from India's public health discourse and planning frameworks.

Schools, screens, and sugar: Understanding the importance of shaping everyday health habits

Schools are, alongside the family, arguably the most powerful settings and sys-

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tems influencing the child's whole being. Dietary guidelines as well as the discontinuation of the sale of junk food in schools have been enacted by the CBSE board and other state boards, but enforcement and adherence to these policies is something that needs to be ensured. Today, we are witnessing that schools are creating feasible solutions to these issues cafeterias or canteens have a "sugar board" or an "oil board" which children can see to understand how much sugar or oil is in their food. these nudges are useful, but effective implementation and adherence to these initiatives is the need of the hour.

We will do better when health education is more systematically embedded in school curriculum. Students should learn how to read food labels, understand the value of having a balanced meal. and learn to be active. Physical education is not a class, it is a commitment to a healthy life, it should be as essential as math or science. Annual health checks in schools should become routine (BMI, blood pressure, vision screening, mental well-being etc).

Parental awareness is equally important. Many parents consider children who are "chubby" to be healthy without realising that obesity in childhood puts children at a drastically increased risk for obesity-related diseases for life, including diabetes, heart disease, and some can-



cers. Furthermore, we cannot ignore the effect of social media and advertising on children's diet choices. Marketing unhealthy foods to children (especially sugary beverages, salty snacks, and packaged meals) is directed precisely at children - sometimes through social media! and these influences to stay unhealthy eating habits are

being instilled in children's eating habits long before the age of comprehension and choice happens.

Why multi-sectoral collaboration is essential

Meaningful coordination among governments, private industry, and civil society including academia are imperative for achieving sustainable change. This is because it is not possible to for any single sector to tackle the prevention of NCDs alone. Here, coordinated action is required.

When it comes to leadership from government it is paramount, but we must not forget to include non-governmental organisations (NGOs). Some of the most important stakeholders are NGOs, as they can leverage and implement initiatives including at the last mile. Community engagement is critical for cultural relevance and effectiveness-when designing. implementing, or evaluating any engagement programs. We should, moreover, strive to be collaborative among NGOs-ensuring that education-based NGOs are working along with health-based NGOs to enhance reading and literacy and health outcomes, respectively.

The government of India has taken significant steps in the fight against NCDs including a focus on health and wellness centres, screening for hypertension, diabetes and covering hospitalisations costs for the poorest people. All of these are concrete steps to help strengthen India's the health care system and are much required.

India has established its unique capacity to lead largescale health movements, such as the pulse polio campaign, and the recent speed and scale at which COVID-19 vaccinations were rolled out. We are confronted with growing risks of NCDs in young populations, and an equally compelling response is needed. It means taking adolescent health into account in our national health strategy. It also means having dedicated funding, and working alongside stakeholders from health, education, urban and local development to achieve ownership, and it means bringing in public-private partnerships that enable innovative and scaled services.

In a country with over 250 million people aged 19 and below, there is no room for complacency; this formative stage is the foundation for health across our lifespan. Each unleveraged opportunity for intervention signals subsequent risk for chronic illness and loss of potential.

A call to action

The window to act is now. If we are to bend the NCD curve in India, we must prioritize the health of children and adolescents - not just as a moral imperative, but as a strategic one. As Arogya World reminds us, when children learn to eat right, stay active, and manage stress early in life, we not only prevent future diseases — we build healthier, stronger generations. India's future depends on the health of its youth. Let us ensure that every child grows up with the knowledge, tools, and support to lead a healthy, disease-free





HEALTHCARE IT

Can Al give doctors their time back?

Shankar Venkatagiri, Chairperson-Information Systems, IIM Bangalore, explores how AI can ease doctors' workloads, the urgent need to digitise patient records in India, and the roadmap for developing smart Al solutions tailored to healthcare

rtificial intelligence (AI) has been powering tasks for multiple occupations. Over the last decade, drivers have begun to enjoy increasing amounts of autonomy. Waymo taxis operate in many US cities without the need for a driver. Mahindra has incorporated automatic lane assist and parking into its vehicles. Can AI assist doctors likewise and reduce the drudgery of their tasks, as they navigate the complex landscape of medicine in crowded hospitals? We examine the healthcare setup in India and highlight the need to digitise patient records. We then describe the uses of AI assistants. The article concludes with directions to develop smart AI solutions for our specific con-

Indian healthcare is a tale of contrasts - rural versus urban. public versus private, younger versus older, insured versus uninsured, and so on, 80 crore citizens living in rural areas rely on government run PHCs and hospitals. Care quality varies widely, depending on training levels of staff, upkeep of equipment, availability of medicines, and so on. Starting with the 1990s, large hospitals were established in cities, aided by foreign investments and capital markets. 60 crore Indians living in towns and cities access both private and public centres. Successive governments have switched from building hospitals to offering insurance schemes with modest premiums that cover a range of procedures.

The longevity of the Indian male has climbed steadily from a dismal 32 years in 1947 to 71 today; women live a few years more. With improving health indicators, 15 crore Indians are over 60. Diseases of age such as cancer, respiratory disorders, and dementia warrant frequent visits to health centres. For a nation of 140 crores, there are only 4 lakh specialists, who are all overwhelmed. Their daily routine



Medical professionals are better off attending to patients by saving time on retrieving information. Doctors could enquire an Al assistant about their schedule for the day, a patient's vital signs, the dosage level for a drug, symptoms of a condition, adverse interactions of a drug with existing prescriptions, and so on

can include 70-100 OPD consultations, a few surgeries, and ward rounds. Every patient encounter must be documented in detail. At most public hospitals, clinical notes are made on paper and inserted into a file.

Patients in India do not always carry their health records, leaving doctors to piece the puzzle together during a visit. Any errors of omission can be deadly and are blamed on the physician. Electronic health records (EHR) are the way forward, but this requires financing. In the US context, a third of the citizens constituting children, elderly, and unemployed are covered by public health schemes such as Medicare and Medicaid; beneficiaries may seek treatment at private centres. Through the 2009 HITECH Act, the US government incentivised healthcare providers to implement EHR systems; noncompliance would lead to delays reimbursements. Subsequently, EHR solutions from Epic, Cerner (Oracle), and Meditech have cornered nearly 70 per cent of the market share.

Hospitals in India have taken to engaging IT consultants to manage patient appointments, digitise their records, settle insurance claims, and so on. Smaller clinics use desktop solutions with limited functions. Free and open-source software like OpenEMR is an option for medium-sized practices. Cloud providers such as ekaCare and Practo have made it easy for providers to embrace EHRs. Given the complexities of protocols with in-patient care, these systems may not be comprehensive. The National Cancer Grid initiative aims to develop EHRs focused on oncology for interoperable use by a network of over 360 cancer centres.

There is a flip side to this digitisation. The burden of documenting every interaction on an EHR system has driven many American clinicians to burnout. Patients are annoved to see their doctors staring at screens and typing into boxes. AI assistants from outfits such as Suki, Abridge, and Nuance in the US, and Augnito in India, are helping doctors interact with EHR systems via voice commands. Moreover, these assistants can ambiently listen in on a conversation, allowing the doctor to look at their patients. A large language model (LLM) encoded with medical knowledge structures this encounter into a clinical note; this can in turn be uploaded to the EHR system after a

Medical professionals are better off attending to patients by saving time on retrieving information. Doctors could enquire an AI assistant about their schedule for the day, a patient's vital signs, the dosage level for a drug, symptoms of a condition, adverse interactions of a drug with existing prescriptions, and so on. Open AI's GPT-4 LLMs can interpret radiological images. Google's AMIE LLMs can guide a physician through a differential diagnosis. Information submitted to an LLM may be used for training, so care must be taken to preserve patient privacy. LLMs are not perfect: they suffer from hallucinations. Therefore, it is critical for the doctor to scrutinise all responses from AI assistants.

There remain several challenges in the Indian setting. There are hundreds of EHR systems, thanks to be poke implementations undertaken by each provider; integrating an AI assistant with these systems is not straightforward. Patients engage doctors in a variety of languages, so speech transcription and translation can be tricky. Software developers could build Indic language support into the assistants. For a doctor who has moved into a region that speaks a different tongue, this is a heavensent feature. On a basic level, Internet connectivity remains a problem, so it is pragmatic to store transcripts locally on the devices and upload periodically.

The Ayushman Bharat Digital Mission (ABDM) offers 50 crore citizens insurance cover for treatment at government centres and empanelled private providers. This mission could become a crucible for the development of application programming interfaces (APIs) that can enable secure, authorised access to the repository of EHR records and insurance claims. An AI assistant that connects with ABDM servers can help doctors and researchers resolve questions about disease prevalence, treatment outcomes, survival rates, and so on. Serious issues would arise if the records were not anonymised, so they must be stripped of all personally identifiable information.

Indians have shown the world what they can accomplish with UPI and seamless financial transactions. They can repeat this success with a much more complex set of transactions in the realm of healthcare.

INDIA'S SILVER SURGE

India's demographic dividend is giving way to a demographic transition, with the elderly set to outnumber children by 2046. As the "silver economy" emerges, gaps in medical training, caregiving, and insurance threaten to overshadow opportunities. The challenge now is building a sustainable, inclusive eldercare ecosystem

Viveka Roychowdhury

ill India's demographic dividend be overtaken by its demographic transition? Are we ready for the silver sliver growing each decade by 41 per cent, reaching one fifth of India's population by 2050? In fact, the 2023 India Ageing Report from United Nations Population Fund, India (UNFPA) cautioned that by 2046, the elderly population will outnumber children (aged 0 to 15 vears) in the country. Put another way, India has 149 million seniors today, projected to grow to 193 million by 2031 and 300 million by 2050.

Ageing populations is a global trend and many western economies are already grappling with this issue. In fact, this transition has given rise to a booming 'silver economy'. As per a NITI Aayog position paper titled, "Senior Care Reforms in India -Reimagining the Senior Care Paradigm', released in February 2024, the size of the senior care industry in India is estimated at USD 7 billion.

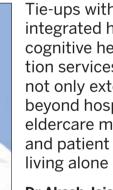
But this could be a conservative estimate, if we add in other segments like senior living real estate, lifestyle brands, etc. IMARC's India Geriatric Healthcare Market Overview estimates that the India geriatric healthcare market size reached USD 42.2 billion in 2024. Looking forward, IMARC Group expects the market to reach USD 97.3 billion by 2033, exhibiting a growth rate (CAGR) of 9.02 per cent during 2025-2033. Market drivers include a growing aging population, rising investments in healthcare. new technologies, and an up-



The availability of trained geriatricians is extremely low, with only a handful of institutes offering structured courses. This mismatch creates a significant gap in addressing the complex healthcare needs of the elderly, who often require specialised, multidisciplinary care

Dr Rajesh Kumar Singh Senior consultant, Critical Care Medicine.

Bhagwan Mahavir Manipal Hospital,



Tie-ups with digital startups offering integrated home care, tele-geriatrics, cognitive health support, and rehabilitation services will be essential. This will not only extend the continuum of care beyond hospital walls but also make eldercare more accessible, affordable, and patient friendly especially for those living alone or in nuclear families

Dr Akash Jaiswal

Attending consultant, Geriatric Medicine, Fortis Gurugram

surge in the demand for highend medical care, highlighting ease of access, affordability, and quality care for older persons in different healthcare facilities, as per the IMARC re-

But before we can tap this market, we have to put the building blocks in place. And therein lies the challenge, the opportunity and early birds who have already caught this

Lack of specialised medical personnel

The first challenge is the lack of medical staff trained to take care of senior citizens/patients. Dr Akash Jaiswal, Attending consultant, Geriatric Medicine, Fortis Gurugram rues the fact that current estimates suggest there are only around 270-300 qualified geriatricians in the entire country, a fraction of what is required to address the complex needs of older adults.

'Training capacity remains limited. The overall reach is uneven, and system readiness lags the rapid pace of population ageing. This stark mismatch between demand and supply underscores the urgent need to expand training, integrate geriatric principles into general medical practice, and build capacity at all levels of the healthcare system," says Dr Jaiswal.

The problem starts from our medical education system. As Dr Rajesh Kumar Singh, senior consultant, Critical Care Medicine, Bhagwan Mahavir Manipal Hospital, Ranchi explains, India's lack of geriatric medicine specialists is because "geriatric medicine is still considered a super-specialisation in India, and the number of seats available for formal training in this field is very limited."

Ishaan Khanna, CEO, Antara Assisted Care Services "Benchmarks, like those by the American Geriatrics Society, recommend a 1:700 patient-to-geriatrician ratio. By this measure, India would need approximately 214,000 geriatricians for its current elderly population. However, estimates show the number of geriatricians in India to be in the hundreds; only about 20-30 are trained annually."

Patients of all ages, and especially the elderly, need much more than medical care. India's demographic transition is accompanied by deeper shifts in the fabric of our society. As Gaurav Dubey, CEO, Livlong 365 analyses, "The shift toward nuclear families leaves many elderly individuals without adequate support, heightening their dependence on structured healthcare and insurance solutions. Bridging this widening gap requires immediate, collaborative action to design services and models tailored specifically to geriatric care."

The NITI Aayog position paper in fact lists various schemes, initiatives, and programmes for senior citizens. Some of these schemes by the Ministry of Social Justice and Empowerment includes Atal Vayo Abhyudaya Yojana (AVYAY), Scheme of Integrated Program for Senior Citizens (IPSrC), State Action Plan for Senior Citizens (SAPSrC), Seniorcare Ageing Growth Engine (SAGE) -Promoting Silver Economy, Rashtriya Vayoshri Yojana (RVY), Scheme for Awareness Generation and Capacity Building for the Welfare of Senior Citizens, and others.

The physiology of ageing

Dr Singh explains that with aging, the body undergoes physiological changes such as reduced muscle mass, altered fat distribution, and decreased organ function, all of which influence the way medicines are absorbed, metabolised, and excreted. This makes dose adjustment and careful monitoring essential for safe treatment in the geriatric segment.

Another major challenge is polypharmacy, the simultaneous use of multiple medicines. He points out that elderly patients often suffer from multiple chronic conditions such as diabetes, hypertension, arthritis, or cardiac disease, which leads them to consult different specialists and consume 10-20 medications at a time. This increases the risk of drug interactions and side effects besides complicating treatment.

Nearly two-thirds of elderly Indians suffer from at least one chronic disease, and about 23 per cent live with multimorbidities. These factors highlight the need for integrated geriatric care, personalised drug therapy, and the involvement of trained therapists or geriatricians who can rationalize medication and reduce unnecessary prescriptions.

Dr Jaiswal puts numbers to these trends, indicating the complexity of the situation. India's elderly population carries a heavy burden of chronic diseases such as hypertension (affecting -33 per cent), diabetes (~14-15 per cent), heart disease (~5-6 per cent), arthritis (~20 per cent), chronic lung conditions (~8-9 per cent), and cancer. Unlike younger patients, older adults often suffer from multiple illnesses simultaneously (multimorbidity, affecting ~32 per cent), which makes treatment more complex and requires a holistic approach rather than organ-specific care.

In addition, Dr Jaiswal cautions that age-related conditions such as frailty, dementia, depression, falls, sensory loss, incontinence, and polypharmacy are becoming increasingly visible in clinics, vet they remain under-recognised in routine healthcare settings.



The future lies in building hybrid models where technology amplifies human care, making senior care ecosystems more inclusive and accessible across India

Ishaan Khanna CEO, Antara Assisted Care Services

The shift toward nuclear families leaves many elderly individuals without adequate support, heightening their dependence on structured healthcare and insurance solutions. Bridging this widening gap requires immediate, collaborative action to design services and models tailored specifically to geriatric care

Gauray Dubey CEO, Livlong 365



Post operative care challenges

Senior patients need more help with their routine lives, and take longer to return to normal activities after hospitalisation. As Dr Jaiswal explains, "Beyond disease management, there is a growing need for rehabilitation and long-term care services. Stroke survivors, patients recovering from fractures or joint replacements, and those with chronic disabilities often require structured rehabilitation programs, which are scarce outside major cities. Similarly, palliative and endof-life care essential for patients with advanced illnesses is still in its infancy in India. leaving many seniors without access to adequate pain relief or dignified end-of-life sup-

Bringing up the urban-rural divide, Dr Jaiswal comments that these gaps are further compounded accessibility and affordability challenges, as most seniors rely on out-of-pocket expenses with limited insurance coverage, and rural areas often lack specialised services.

Many hospitals have gone beyond their gates to address these issues. For instance, Dr Singh agrees that the continuum of care after hospital discharge is a critical need for senior citizens, as many of them require long-term monitoring, medication adherence, and emotional support. To deal with this, he points out that several hospitals have adopted systems such as SMS or WhatsApp reminders for medications, regular followups, and teleconsultations to ensure patients do not miss critical care instructions. For example, his facility, Manipal Hospital Ranchi, ensures continuity of care by sending reminders about follow-up appointments. Additionally, the patient experience team also personally visits some recovered patients, not only to check on their well-being but also to build trust and reassure them that the hospital remains a partner in their health journey even after discharge.

A significant proportion,

almost 40 per cent at present, of Dr Singh's patients in Ranchi and surrounding districts fall under the eldercare category with a higher prevalence of chronic illnesses such as diabetes, hypertension, cardiac diseases, cancer, osteoarthritis and neurodegenerative disorders. underlines the need to focus on geriatric-friendly facilities.

As a geriatrician, more than 80 per cent of Dr Jaiswal's patient population are above the age of 60, reflecting. As awareness of geriatric medicine increases, he points to the rising demand for specialised healthcare for seniors, as more families seek specialised care rather than depending solely on general physicians.

Burden on caregivers

Unfortunately, as Dr Jaiswal points out, "Most hospitals in India are still largely designed around acute, inpatient care, and structured post-discharge pathways are limited. Only a handful of large urban hospitals have begun to offer home healthcare tie-ups, transitional care units, or follow-up programs, but these are exceptions rather than the norm."

While families try to step up to fill the gap, the results are not optimum. Dr Jaiswal notes that for most senior citizens, continuity of care often falls on families, who may struggle to manage medical needs at home without professional guidance.

The consequences of this lack of optimum care continuum could be counterproductive. Dr Jaiswal has observed that a lack of organised followup leads to frequent readmissions, poor medication adherand avoidable complications. He predicts that with the aging population growing rapidly, hospitals will increasingly need to integrate home care, tele-follow-ups, and community-based support services into their care models to ensure that recovery and well-being extend beyond the hospital walls.

Beyond geriatricians

Beyond doctors, Khanna points out that nursing presents another bottleneck. "There's significant attrition. uneven distribution across states, and there's a lack of specialised geriatric nurses training programmes. The recommended nursing ratio for seniors is higher than normal because of specialised needs. There are 1.7 nurses per 1000 population in India lower than the internationally recommended 2.5 per 1000 population, and far behind the ratios exhibited by developing countries like Brazil (5.5 nurses per 1000 population) and even Philippines (8.5 per 1000 population)." Khanna reiterates that India's nursing shortage means we must work extra hard to promote seniorspecific curricula in nursing.

The lack of nurses forces many families into out-ofpocket arrangements, underscoring why insurance solutions and policy support are vital, points out Khanna.

In the same vein, he brings up the lack of trained caregivers for seniors who are in very short supply. Senior care requires distinct knowledge of ageing physiology, frailty, and support techniques.

Health insurance no silver bullet

While the silver economy, spanning not just clinical care but senior living housing and lifestyle services has increased, the big question is: how affordable are such solutions and services for a middle-class family with two elderly patients to care for? Sadly, health insurance does not seem to be the solution.

Unfortunately, increased awareness has not always resulted in increased health insurance coverage, thanks to the high premiums. As Dr Singh mentions, "Post COVID-19 awareness about (health) insurance has certainly played a vital role in eldercare, even in tier II cities like Ranchi. Many families now understand the importance of health insurance for senior citizens, and this has helped reduce the immediate financial burden of hospital care. However, there are still major gaps. A significant section of the elderly population remains either uninsured or underinsured, largely due to high premium costs, pre-existing conditions, and limited coverage options. As a result, many patients end up paying out of pocket, which often delays treatment or restricts access to advanced therapies."

Dr Jaiswal also highlights this unfortunate reality, saying "In India, insurance coverage for elder care remains quite limited, and this has a direct impact on patients and their families. However, premiums still rise steeply for seniors, and even when insurance is available, it generally covers acute hospitalisations but not the broader needs of the elderly such as long-term medications, rehabilitation, home healthcare, nursing support, or palliative care."

Dr Jaiswal mentions that the government has expanded the Ayushman Bharat PM-JAY scheme to cover all citizens aged 70 and above, providing up to Rs 5 lakh in coverage per family, regardless of income. Despite these While the silver economy, spanning not just clinical care but senior living housing and lifestyle services has increased, the big question is: how affordable are such solutions and services for a middle-class family with two elderly patients to care for? Sadly, health insurance does not seem to be the solution

advancements, he observes that gaps mean that a large share of eldercare expenses are borne out-of-pocket, creating financial stress and sometimes forcing families to delay or compromise on care.

Unfortunately, "the lack of comprehensive coverage also influences health-seeking behavior. Many seniors avoid preventive check-ups or necessary follow-ups, only seeking care once complications arise, which increases the overall disease burden."

Dr Jaiswal has a strong message for insurers, "As India's aging population grows, there is an urgent need for insurance products that go bevond hospitalisation chronic disease management, home care, and geriatric-specific services. Expanding such coverage could reduce financial hardship, improve adherence to treatment, and promote healthier ageing."

There are already signs that insurers are addressing these gaps. Khanna of Antara says that they are identifying need gaps, partnering with insurers to innovate and pioneer products that support assisted living needs. But he admits that coverage largely remains limited to transition carepost-operative and rehabilitation service.

As he points out, "We need tools that can respond to long term assisted living needs which will grow as the percentage of 80+ population grows in the decades to come. Public schemes like Ayushman Vay Vandana giving annual health cover of Rs 5 lakh per senior, brought in to meet the needs of a population that's living longer, is a

great example of scale and inclusivity."

Solutions exist, but price remains a barrier

Even as the senior living communities segment is expanding rapidly, with the market projected to expand to \$7.7 billion by 2030 from \$1.8 billion in 2024, access and affordability remain a challenge.

Khanna of Antara admits that affordability remains one of the most critical challenges for middle-class families managing the care of two elderly members. Putting a number to the cost, he estimates that the cost of aging at home with professional assistance—general caregiver, nursing staff for wound dressing or administering injections, doctor visit, cost of drugs and diagnostics, assistive therapies—often amounts to several lakhs annually. And this excludes the added burden of monitoring service delivery. All of this is magnified when care is required for both spouses.

While assisted living and care home facilities present an alternative with integrated medical oversight, social engagement, and community support, this comes at about 30 per cent higher cost, as per Khanna's estimates.

This price differential is why Khanna feels that better insurance penetration and long-term care financing mechanisms are essential. As he rationalises, just as health insurance enables access to quality private hospitals, similar products designed for senior living, assisted care, and long-term support could significantly improve access for senior care at home or assisted living facilities. Sharing his experience with Antara, he makes the point that when transition care and assisted living are supported by insurance, "it reduces not only outof-pocket expenditure but also the emotional and logistical load on families."

However, Khanna cautions that "making these solutions widely affordable will require a dual push: the private sector must scale for efficiencies to kick in and innovate with insurers, while government support—in the form of subsidies, tax incentives, and targeted social insurance schemeswill be critical to ensuring equitable access."

Can age-tech solve the metro-non metro divide?

While many organisations are tapping into this segment, most efforts remain confined to major metros. Can digital solutions widen the reach of such ecosystems, from an economic, social and geographic perspective?

As a geriatrician, Dr Jaiswal has a front seat as he witnesses the elder care segment in India "undergoing significant transformation." He points out that home healthcare and telemedicine have grown rapidly, especially after the COVID-19 pandemic, providing seniors with greater continuity of care and reducing the need for frequent hospital visits. Technology is also beginning to play a role, with wearables, fall-detection devices, and digital medication reminders slowly entering the

Dr Jaiswal feels digital health startups are beginning to recognise the huge potential

in eldercare, and their services ranging from teleconsultations, medication reminders, remote monitoring, physiotherapy-on-demand, to home nursing support can fill some of the biggest gaps seniors face after hospital visits. He cites some examples like Emoha Eldercare, Kites Senior Care, Epoch Elder Care, and Geri Care, which are focusing on home-based care. assisted living, and tech-enabled monitoring.

Similarly, Dr Jaiswal has observed that institutional care models are emerging in urban centers, with assisted living facilities, retirement communities, and nursing homes integrating medical support into their services. Another encouraging trend is the shift towards preventive and wellness-focused aging, where seniors and families are engaging more with lifestyle interventions such as fitness. nutrition, and mental health support to maintain independence and quality of life.

Dr Singh too agrees that technology is playing a crucial role in strengthening eldercare, For instance, he narrates how Manipal Hospital Ranchi has incorporated ISANSYS PSE, a digital health innovation equipped with a chip that can be fitted to a geriatric patient's body. This device continuously captures vital parameters such as heart rate, oxygen levels, and other health indicators. What makes it remarkable is that even if the patient is 100 kilometers away, their vitals can still be monitored in real time through a phone or hospital system. In case a patient is unwell, doctors will immediately receive an alert on their mobile where they can intervene.

Khanna agrees that while many organisations are indeed tapping into the senior care segment, most initiatives continue to remain concentrated in major metros; some 30-40 organisations are solving the age-tech issue in a geography agnostic way.

But he cautions that while digital solutions can play a significant role in widening the reach of such ecosystems, we recognise

PUBLIC HEALTH

limitations and possibilities clearly. "While core healthcare delivery often requires physical presence, aspects such as remote monitoring, teleconphysiotherapy sultations. guidance, mental well-being support, and community engagement can be enabled digitally, reducing barriers of distance and access. Economically, this allows families in smaller towns to access quality care at lower costs, while socially, it helps seniors feel less isolated through virtual communities."

However, he feels that "true scale and economies will only come when digital solutions are complemented by investment in trained staff, developing a network of regional hubs for on-ground care delivery. destigmatisation of senior care services, and supportive government policies—through insurance, subsidies, and incentives to expand into underserved geographies."

Dubey of Livlong 365 also underlines the affordability and accessibility challenges in spite of the presence of private healthcare facilities. "Regular monitoring, preventive care, and timely emergency response are critical for this demographic, yet the sector still lacks integrated programmes that address these needs comprehensively."

To ease the financial and logistical burden of outpatient care, Dubey mentions that Liv $long\,365 \hbox{\rm 's Regard Elderly Care}$ Program provides OPD benefits, enabling seamless access to doctor consultations, diagnostics, medicines, home care, and emergency ambulance services. By leveraging digital platforms alongside ground support, he says the company is creating a more inclusive, accessible, and sustainable ecosystem for elderly healthcare across the country.

Gaps to business opportunity

Private enterprises have seen the opportunity and stepped up to fill these gaps. Dr Jaiswal explains that institutional care models are emerging in urban centers, with assisted living facilities, retirement communities, and

Hospitals, insurers and allied services like senior living communities are well positioned to address the senior care market, sometimes pegged as India's next trillion dollar opportunity. But government agencies will need to provide the right policy push and incentives to keep the ecosystem accessible and affordable

nursing homes integrating medical support into their services. Another encouraging trend is the shift towards preventive and wellness-focused aging, where seniors and families are engaging more with lifestyle interventions such as fitness, nutrition, and mental health support to maintain independence and quality of life.

Some assisted living and transition care centres have focussed on bridging certain gaps like nursing shortfall by creating ecosystems of shared, specialised care. For example, Khanna mentions that Antara has launched the Samarth geriatric training programme and simulationbased skill-building across their care centres to upskill caregivers.

He stresses the need for broader, government- and industry-led skilling initiatives, like the Health Sector Skill Council (HSSC) and statelevel apex agencies which are beginning to design certifications for geriatric care, but stresses that these are few and in nascent stages.

He cautions that till such a time when India scales geriatric training for both healthcare and non-healthcare staff, supported by insurance and policy frameworks such as those being developed under Dr. V K Paul's guidance at NITI Aayog, India will continue to fall short of meeting the evolving clinical and psychological needs of our seniors.

Collaborating to fix the

Recognising the complexity of the issues, we are seeing collaborations between some groups of providers to provide a more seamless continuum of

care especially to senior citi-

As Khanna points out. "Many large hospital chains have introduced at-home care services, which extend clinical oversight and recovery support beyond discharge. Diagnostic companies, too, are stepping up with senior-specific health packages where the focus is on markers relevant for aging individuals."

He also draws attention to private and nonprofit initiatives addressing loneliness among seniors and creating communities of care. Bodies such as Dementia India Alliance (DIA) have come up to solve for targeted needs of seniors facing neurocognitive

In the insurance front, Khanna feels that, "Insurance players are also evolving: government-backed schemes have expanded coverage for seniors, and we are now seeing private insurers launch targeted products that cover not just hospitalisation but also elements of long-term and preventive care. Together, these shifts point towards an ecosystem that is gradually becoming more integrated, reducing gaps in care transitions and making preventive health a stronger focus for seniors."

Dubey's Livlong 365 is also partnering with corporates. SMEs, and housing societies to design tailored care packages that address the specific needs of their elderly employees, clients, and residents, making preventive and ongoing care both seamless and effective.

Eldercare's continuing evolution

Looking ahead, Dr Singh

reminds us that for the elderly, preventive measures are as important as they are for children. This includes encouraging a balanced diet, regular exercise, yoga, and other immunity-boosting practices.

He also makes a case for vaccination for senior citizens, as pneumonia, influenza, and herpes zoster vaccines are strongly recommended after the age of 50. In individuals with comorbidities, these vaccines can even be taken earlier, between the ages of 19-50. to ensure added protection. "By conducting awareness programs in RWAs, routine check-ups, and vaccination drives, hospitals can help elderly patients stay healthier, independent, and improve their overall quality of life," concludes Dr Singh.

Looking ahead, Dr Jaiswal believes tie-ups with digital startups offering integrated home care, tele-geriatrics, cognitive health support, and rehabilitation services will be essential. This will not only extend the continuum of care beyond hospital walls but also make eldercare more accessible, affordable, and patient friendly especially for those living alone or in nuclear families.

Dr Jaiswal believes that hospitals have a critical role to play in promoting healthy ageing, not just treating illness. "By shifting the focus from disease management to proactive, preventive, and participatory care, hospitals can empower seniors to maintain independence, improve quality of life, and reduce the long-term burden on families and the healthcare system," is his mantra.

While traditionally focused

on acute care, he says hospitals can become hubs for preventive and wellness-oriented services tailored to seniors, like regular health screenings for chronic conditions, vaccination drives (such as influenza and pneumonia), and early detection of cognitive decline, osteoporosis, and frailty. Hospitals can also run awareness campaigns, community outreach programmes, and patient education sessions to help families understand the importance of nutrition, exercise, fall prevention, and mental well-being in later life.

In addition, Dr Jaiswal says hospitals can integrate multidisciplinary geriatric clinics where physicians, physiotherapists, nutritionists, and mental health experts work together to provide holistic care. Partnerships with digital health platforms and community centres can extend this impact by delivering follow-up care and health education closer to patients' homes.

While allied groups and ecosystems are evolving at pace, and insurance is making progress, Khanna harks back to the fundamental challenge: making the healthcare workforce ready to meet the needs for this rapidly changing demographic with unique needs. He highlights that coordinated investment and innovation across these domains is critical if we are to be truly ready for India's silver generation. In his view, "the future lies in building hybrid models where technology amplifies human care, making senior care ecosystems more inclusive and accessible across India."

Hospitals, insurers and allied services like senior living communities are well positioned to address the senior care market, sometimes pegged as India's next trilliondollar opportunity. But government agencies will need to provide the right policy push and incentives to keep the ecosystem accessible and affordable.

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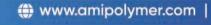




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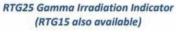
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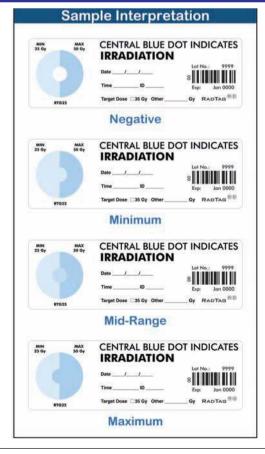
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HEALTHCARE TRACKER

Driving innovation and trust in healthcare: My vision for the future

Aditya Kohli, Director, Allied Medical Ltd shares that in our field, quality is not just a benchmark it is a lifeline. A ventilator, an anaesthesia workstation, or a defibrillator is often the difference between life and death. That is why, at Allied Medical, I ensure that every product undergoes stringent design and testing processes to meet global standards

ealthcare is undergoing a remarkable transformation, shaped by advances in technology, changing patient needs, and a renewed focus on accessibility. As a Director at Allied Medical Ltd., I have always believed that our responsibility goes beyond manufacturing equipment—we are here to provide solutions that make a real difference in critical care and anaesthesia. Every decision we take as an organisation is rooted in a simple principle: the safety, trust, and well-being of patients and the healthcare professionals who serve them.

In our field, quality is not just a benchmark—it is a lifeline. A ventilator, an anaesthesia workstation, or a defibrillator is often the difference between life and death. That is why, at Allied Medical, I ensure that every product undergoes stringent design and testing processes to meet global standards.

For me, quality goes beyond regulatory compliance. It is about building trust with the doctors, nurses, and technicians who rely on our devices in the most critical situations. When a clinician chooses Allied Medical, I want them to feel absolute confidence in the device at their side. That sense of reliability is at the heart of our four-decade-long journey.

Over the last few years, global disruptions have highlighted the importance of strengthening local capabilities. I take pride in the fact that Allied Medical has invested deeply in indigenous manufacturing and product development. This allows us not only to serve the needs of the Indian market but also to stand as a



From adopting eco-conscious manufacturing practices to supporting healthcare access in underserved regions, I want our journey to have a positive impact on society as a whole

global competitor in the medical device industry.

For me, innovation does not always mean complexity or high cost. The most meaningful innovations are often those that make technology simpler, more user-friendly, and more affordable. Whether it is a rugged patient monitor designed for extreme environments or a ventilator that adapts seamlessly to different clinical conditions, my goal is to ensure that our devices are practical, reliable, and accessi-

One of the things I value most in our journey is the longterm trust we share with our customers. For me, the relationship does not end with the delivery of a machine. It continues through service, training, upgrades, and long-term support.

I believe in reducing the cost of ownership for hospitals and healthcare providers by offering extended warranties, comprehensive service support, and ongoing training for users. These initiatives are not just about after-sales servicethey are about honoring our responsibility to stand by those who place their trust in us.

The healthcare industry evolves rapidly with new treatment protocols, technologies like artificial intelligence, and shifting regulatory requirements. I have always believed that no single organisation can thrive in isolation. That is why collaboration plays such an important role in our strategy at Allied Medical.

We work with global technology leaders, research institutions, and healthcare providers to bring the latest advancements to our customers. Through such partnerships, we have introduced intelligent features, advanced monitoring capabilities, and innovative ventilator modes. For me, collaboration is not just about expanding our portfolio-it is about creating solutions that truly improve patient outcomes.

I strongly believe that behind every successful product is a committed team. Our employees are the backbone of Allied Medical, and I take pride in the culture we have built one that encourages inclusivity, learning, and ownership.

By investing in our people's growth and empowering them to take initiative, I see them create ripple effects of excellence that reach our customers and, ultimately, patients. To me, leadership is not about directing—it is about enabling our people to realise their full potential.

As I look to the future, I see Allied Medical not just as a manufacturer of medical devices, but as a partner in healthcare transformation. We are committed to responsible growth—one that balances technology with accessibility, and progress with sustainabil-

From adopting eco-conscious manufacturing practices to supporting healthcare access in underserved regions, I want our journey to have a positive impact on society as a whole. My vision is to make advanced medical technology accessible in every settingwhether it is a large metropolitan hospital or a remote rural healthcare center.

For me, the journey of Allied Medical Ltd. is about more than business. It is about creating lifelines, supporting healthcare workers, and making technology truly meaningful for patients. As a Director, my focus will always be on combining innovation with trust, and progress with purpose. If we can continue to bridge the gap between advanced technology and accessibility, I believe we will leave behind a legacy that goes far beyond machines—it will be a legacy of care.

Truevis Technologies: Building the future of Indian MedTech

Milind Deshpande, Joint Managing Director, Truevis Technologies explains how a homegrown venture is leveraging strategic partnerships, deep manufacturing, and a visionary facility to achieve the promise of Aatmanirbhar Bharat in healthcare

n the landscape of Indian MedTech, a new powerhouse is emerging, not from the established industrial corridors of the west or north, but from the visionary ecosystem of the Andhra Pradesh MedTech Zone (AMTZ) in Vizag. Truevis Technologies, founded with the ambition to build India's next-generation medical equipment manufacturing hub, is moving decisively to address the nation's most urgent gaps in diagnostic imaging and therapy.

For decades, India's healthcare system has relied heavily on imported high-end medical equipment. This dependence created a critical disparity: while metropolitan hospitals boasted the latest technology. Tier-2 and Tier-3 cities often struggled with outdated, overburdened machines, making advanced diagnostics a luxury. Truevis identified this inequity not just as a challenge, but as its core mission—to make cutting-edge medical technology affordable, accessible, and built for the unique needs of the Indian healthcare landscape.

Beyond assembly: The genesis of a manufacturing powerhouse

Truevis is challenging the notion that "Made in India" means merely assembled in India. The company is building an integrated manufacturing ecosystem from the ground up. At its state-of-the-art production lines in AMTZ, Vizag, the company is poised to manufacture CT and PET-CT systems, with ambitious plans to expand into MRI and radiation therapy LINAC units.

This is a full-stack approach. It's not just about production lines; it's about creat-



To accelerate its mission, Truevis has entered into an exclusive and strategic partnership with Neusoft Medical Systems, a global leader with decades of expertise as an OEM and innovator. This collaboration is a cornerstone of Truevis's strategy, but it is a means to an end: the complete indigenization of highend medical technology

ing a holistic support structure. This includes a national spare

parts hub and a 24/7 service command centre to ensure minimal downtime—a critical factor in a country where equipment maintenance can be a logistical nightmare. Furthermore, the company has established an experience centre where doctors and hospital administrators can interact with the technology firsthand before making investment decisions, ensuring they understand its full potential.

Strategic synergy: The **Neusoft partnership** advantage

To accelerate its mission, Truevis has entered into an exclusive and strategic partnership with Neusoft Medical Systems. a global leader with decades of expertise as an OEM and innovator. This collaboration is a cornerstone of Truevis's strategy, but it is a means to an end: the complete indigenization of high-end medical technology.

The partnership facilitates a comprehensive technology transfer, encompassing hardware and software know-how, training programs for Indian engineers, and the joint development of India-specific products. This allows Truevis to lo-Neusoft's globally calise proven, high-end designs, making them affordable without compromising on quality. The result is technology that is both world-class and contextually relevant—able to withstand the demands of high-volume use in diverse Indian environments. from major metropolitan hospitals to rural diagnostic centres.

Andhra Pradesh MedTech zone facility: A testament to Aatmanirbhar Bharat

The upcoming facility in Vizag is the physical manifestation of Truevis's ambition. Designed to meet global quality

standards, it is the engine room where this vision becomes reality. This facility will be the launchpad for Truevis's "Manufacturing-as-a-Service" (MaaS) model, enabling scalability, faster serviceability, and the integration of digital tools like AIdriven analytics, remote diagand predictive nostics. maintenance.

The impact of this localised production model is tangible. By manufacturing in India. Truevis significantly reduces costs compared to imported systems. A digital PET-CT scanner, for instance, offers sharper images and faster scans than outdated analogue systems but will now be a viable option for smaller hospitals, revolutionising cancer diagnosis access across the country.

The road ahead: A future built in India, for the world

Truevis Technologies represents more than a company it's a testament to India's potential in high-tech manufacturing. By merging global expertise with local innovation and execution, Truevis is ensuring that advanced healthcare isn't confined to elite institutions but reaches every corner of the nation.

The future roadmap is clear: AI-driven imaging analytics, cloud-connected devices. and a vision to eventually export its Made-in-India systems to other emerging markets. Truevis is not just building machines; it is building capacity, capability, and confidence in India's healthcare infrastructure. The future of Indian MedTech is being built, one breakthrough at a time, in the labs and factories of AMTZ. And Truevis is leading the charge.

Elevating diagnostics in underserved and public health ecosystems with a world-class LIMS

S. Parthasarathy, Co-Founder, Caredata Infomatics, explains the role of the Laboratory Information Management System (LIMS) — from rural clinics to government-operated public health laboratories

global-standard Laboratory Information Management System (LIMS) is redefining lab excellence, from rural clinics to government-operated public health laboratories. This thoughtful deployment strategy encompasses implementation insights, emerging trends, and real-world outcomes, demonstrating how LIMS can drive equity, efficiency, and trust across healthcare.

Real-life impact of LIMS in healthcare

Imagine a patient who needs a critical test report to begin treatment. A manual system may take 2-3 days, but a lab using LIMS can deliver the same report in just hours. This difference can be life-changing.

Hospitals with high patient flow also see immediate benefits, doctors can track lab work in real time, schedule tests seamlessly, and manage patient movement efficiently. Even in rural healthcare centers, LIMS is introducing organised lab systems where none existed before, creating a ripple effect of reliability and better outcomes.

LIMS in public health programs

Beyond individual hospitals, LIMS is playing a central role in major public health initiatives. Government laboratories handling TB, HIV, and COVID-19 tests rely on LIMS to manage vast amounts of data and share results with national health systems. This enables accurate disease surveillance, faster reporting, and data-driven planning to curb outbreaks.

How LIMS builds trust

When a lab consistently delivers fast, accurate reports while safeguarding patient data, it becomes the preferred choice for doctors and patients alike. This trust strengthens the overall healthcare ecosystem, linking technology and human care in a mutually reinforcing cycle.

Simple example of LIMS in action

A hospital processes 100 samples daily.

Without LIMS:

◆ Samples risk being mixed

- ◆ Reports face delays
- ◆ Staff experience high stress

With LIMS:

- ◆ Every sample is tracked from start to finish
- ◆ Reports are generated promptly
- ◆ Staff workload is balanced
- ◆ Patients receive faster, more reliable care

Strategic implementation: A vendor-neutral **blueprint for success**

Adopting a LIMS requires deliberate planning and inclusive stakeholder engagement. It starts with a clear User Requirements Specification (URS) developed in close consultation with laboratory staff to ensure technology fits seamlessly into existing work-

Integration is key, systems should support instrument interconnectivity, standard protocols (e.g., HL7, FHIR), and compliance with ISO 17025 or CLIA. Cloud-based deployments lower infrastructure barriers, enabling scalability and remote access, especially vital for off-site or rural facilities. Robust change control, validation, and adherence to GMP or ISO standards ensure a smooth, compliant transi-

Emerging trends transforming LIMS capabilities

AI & machine learning: Automating routine tasks like data entry, anomaly detection, and predictive maintenance to enhance accuracy and effi-

Cloud-based and modular designs: Offering mobile access, affordability, and flexible scaling, now standard in over half of new deployments.

Integration and interoperability: Linking instruments, ELN, LES, and hospital systems for a unified digital lab ecosystem.

Enhanced security, sustainability and UX: Driving adoption through user-friendly design, strong compliance measures, and eco-conscious features.

Why this matters across healthcare ecosystems

Rural clinics: Access to enterprise-grade diagnostics without heavy IT investment, boosting speed and accuracy.

Public health labs: Scalable, interoperable systems that enable disease surveillance and rapid response.

National health programs: Streamlined data flows, advanced analytics, and readiness for emerging health threats.

Future of healthcare with LIMS

Modern LIMS platforms, when implemented thoughtfully, can transform healthcare. They speed up test results, reduce human error, and centralize data management. For patients, doctors, and labs. that means less waiting, more trust, and better health outcomes. Upcoming advancements may include AI-based test suggestions, mobile lab management, and greater patient-accessible features.

If you operate a healthcare lab or hospital, adopting a smart solution like CareData LIMS can make a measurable difference. With advanced features, seamless integration, and dedicated support, Care-Data empowers your team to focus on what truly matters: the patient.





Why Hospitals Choose AMI Polymer: Reusable, Sterilizable & Sustainable Medical Silicone Devices

n modern healthcare, sustainability, safety, and performance are non-negotiable.AMI Polymer Pvt. Ltd. (APPL), through its brand IMASAFE®, offers medicalgrade silicone devices that are reusable, sterilizable, ecofriendly, and precision-engineered — winning the trust of hospitals globally.

From menstrual hygiene to respiratory care, post-operative drainage to infant feeding, our products deliver safety, comfort, and compliance in every application.

1. Imasafe® - Menstrual

Description: A soft, flexible. 100% medical-grade liquid silicone rubber cup designed for leak-proof, odor-free, and



rash-free menstrual protection for up to 8 hours. Air holes ensure proper suction and a ridged grip makes insertion/removal easy.

Applications:

- ◆ Menstrual hygiene for women of all ages
- ◆ Eco-friendly alternative to disposable pads/tampons
- ◆ Suitable for sports, travel, and overnight use

Specs:

- Sizes: Small (15 ml), Medium (25 ml), Large (30 ml)
- ◆ Colors: Transparent, Purple, Aqua Green, Pink, Red, Black
- ♦ Shelf Life: 5 years
- ◆ Certifications: ISO 10993. RoHS, FDA 21CFR 177.2600, ISO 13485, BPA & Phthalate

2. ImaCup™ - Silicone Sterilizer Cup

Description: A collapsible, FDA-grade silicone cup designed for quick and portable



sterilization of menstrual cups using hot water or oven heat.

Applications:

- ♦ Hygienic sterilization of menstrual cups at home or during travel
- ◆ Compatible with boiling water & oven sterilization (Silicone Cap variant)

Variants:

- ♦ With Plastic Cap Hot water sterilization
- ♦ With Silicone Cap Hot water + oven sterilization

3. ImaBreath™ - Silicone **Ventilator Circuit Tube**

Description: Reusable, flexible, and kink-resistant breath-



support. **Applications:** ◆ Neonatal, pediatric, and adult respiratory care in hos-

ing circuits made from med-

ical-grade silicone, ensuring

uninterrupted respiratory

◆ Ventilator-assisted breathing in ICUs and operating

4. ImaCath - Silicone **Wound Drain Catheter**

Description: Closed-suction. negative-pressure drainage



system made from non-toxic. odorless, chemically resistant silicone for safe post-operative care.

Applications:

- ♦ Draining fluids after sur-
- ◆ Preventing fluid accumulation & infections
- ◆ Used in general surgery, or-
- thopedics, and plastic surgery ◆ Sizes: 10 Fr., 15 Fr., 19 Fr.,
- ◆ Sterilization: Steam, ETO, Gamma

Sizes & Uses:

Model	Bore Dia.	Connector Options	Application
10 MM	8 MM	With/Without	Neonatal
15 MM	12 MM	With/Without	Pediatrics
22 MM	16 MM	With/Without	Adult

Sterilization: Steam, ETO, Gamma

5. ImaFeed - Silicone **Baby Feeding Cup**

Description: Reusable, soft silicone cup that controls



feeding flow to prevent overfeeding and misalignment of jaw/teeth.

Applications:

- ◆ Feeding colostrum, breast milk, or formula to infants =
- ◆ Supporting newborns with breastfeeding difficulties
- ◆ Used in NICUs and pediatric wards

6. Kegel Balls

Description: Ergonomically designed pelvic exercise device made from 100% medicalgrade silicone with stainless



steel weight balls, featuring a lavender matte finish and retrieval stem.

Applications:

- ◆ Strengthening pelvic floor muscles
- ◆ Postpartum recovery & bladder control improvement
- ◆ Enhancing blood circulation & sexual wellness
- ♦ Shelf Life: 3 years

7. Pessary Ring

Description: Flexible silicone

device inserted into the vagina to support pelvic or-



gans and relieve discomfort caused by prolapse or incontinence.

Applications:

- ◆ Treating pelvic organ prolapse (POP)
- ◆ Managing stress urinary incontinence (SUI)
- ◆ Non-surgical alternative for gynecological, urological, and geriatric care
- ◆ Types: Standard, Ring Pes-

The AMI Polymer **Advantage**

- ◆ Reusable & Eco-friendly -Cuts medical waste, reduces
- ◆ Sterilizable Steam, ETO, Gamma compatible
- ◆ Certified & Compliant -ISO 13485, FDA 21CFR, RoHS, ISO 10993
- ◆ Customizable Tailored designs & silicone formula-
- ♦ Cleanroom Manufacturing - ISO Class 10000

AMI Polymer Pvt. Ltd. — delivering safer, smarter, and greener healthcare solutions, one sterilizable silicone device at a time.

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BPL iCare OT: An OT workflow management and charting software

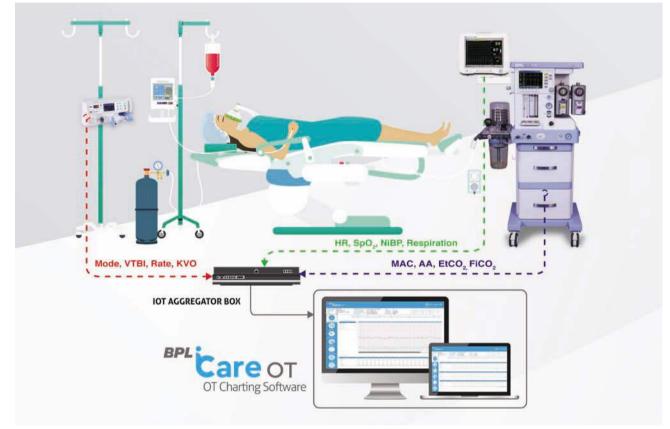
BPL iCare OT is a smart OT charting software application that provides efficient documentation and management of Pre-Op, OT & Post-Op related data

peration theatres (OT) are generally fast-paced, where every second counts, and so does every detail. Yet, tracking critical events inside an OT has largely remained manual and prone to human error or incomplete data. Furthermore, managing multiple OTs can be very challenging, especially for extensive healthcare facilities. BPL Medical Technologies is here to change that.

Introducing BPL iCare OT, a smart OT charting software application that provides efficient documentation and management of Pre-Op, OT & Post-Op related data.

The platform integrates seamlessly with critical medical devices in an OT, such as anaesthesia workstations, patient monitors, and infusion pumps, and automatically records and charts the data in a flowsheet.

iCare OT automates the documentation of key intraoperative events, including medications, fluid intake/output, and critical occurrences, ensuring accurate and real-time recordkeeping with minimal manual intervention. The process is super convenient and essentially reduces errors in data recording. iCare OT also allows users to convert the information into



a detailed report at the click of a button.

Designed with key hospital stakeholders in mind, iCare OT enables an HOD to monitor all OTs centrally via a dashboard. At the same time, anaesthetists are relieved from juggling between time-consuming manual recording and patient care. For hospital administrators, iCare OT introduces standardization and traceability across procedures.

As an increasing number of hospitals adapt to paperless systems and smarter infrastructure, OT charting must evolve accordingly. Digital charting not only protects patients but also supports better decision-making, improves clinical workflows, and fosters trust. By reducing manual errors and simplifying event tracking, iCare OT greatly enhances the quality of care and ensures complete documentation integrity.



The ScintCare 720E digital **PET-CT represents the future** of medical imaging

The ScintCare 720E boasts Time-of-Flight PET technology with 1:1 SiPM coupling, ensuring unparalleled sensitivity and accuracy in detecting minute anatomical details and metabolic activity within the body

ntroducing the latest breakthrough in medical imaging technology, the ScintCare 720E Digital PET-CT, unveiled to the world at RSNA 2023 in USA. This cutting-edge technology system represents a significant advancement in diagnostic capabilities, combining state-ofthe-art features to deliver unprecedented precision and efficiency in medical imaging.

The ScintCare 720E boasts Time-of-Flight PET technology with 1:1 SiPM coupling, ensuring unparalleled sensitivity and accuracy in detecting minute anatomical details and metabolic activity within the body. With its lightning-fast scan capabilities, this system reduces examination times, minimises patient discomfort, and optimises clinical workflow.

But that's not all - the Scint-Care 720E sets new standards for patient care and safety by delivering exceptionally low radiation doses, making it a preferred choice for both physicians and patients. Its precise imaging capabilities allow for early and accurate diagnosis, aiding in the timely treatment of various medical conditions.

Furthermore, the system offers an array of intelligent features, such as Smart Data analytics and Intelligent Scan protocols, enhancing the overall diagnostic process. With an impressive axial field of view (FOV) measuring 20.2 cm, it covers a broad range of applications and ensures comprehensive patient evaluations

The ScintCare 720E Digital PET-CT represents the future of medical imaging, promising to revolutionize healthcare by providing clinicians with the tools they need to make more informed decisions, while prioritising patient comfort and safety.

Sanrad Medical System is a specialist distributor of state-ofthe-art Computed Tomography (CT) systems from leading global OEMs including Scintcare 720E digital PET CT. At Sanrad, we deliver end-to-end solutions tailored to the dynamic needs of healthcare providers



across India. Whether you are setting up a new radiology department or upgrading existing diagnostic infrastructure, we bring the right Expertise, Products, Precision, Reliability and Support Services every step of the way. From importing and in-

stalling to servicing CT scanners, we deliver complete, reliable imaging solutions tailored for Indian healthcare providers. Lease options are also available for our existing customers, established Diagnostic Centres / Clinics / Hospitals.

How Medika Business Solution is Transforming Hospital Procurement

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

Hospitals and clinics face constant challenges such as:

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

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

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

Unpredictable deliveries



MEDIKA BUSINESS SOLUTION

that disrupt smooth hospital operations.

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

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

These hurdles not only af-

fect hospital staff but also impact patient care, making procurement a key area in need of transformation.

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

Why Medikabazaar **Business Solutions?**

- ◆ Cost Savings: Hospitals can save significantly through bulk buying and optimized procurement.
- **♦** Access to Multiple Brands: Wide choice across leading, trusted brands to meet diverse needs.
- ♦ Inventory Planning & Analytics: Tools that help hospitals forecast demand, plan stock, and prevent shortages.
- **♦ Hassle-Free Deliveries:** Reliable, timely supply of essential products so hospitals can focus

on care.

♦ Flexible Payment Options: Tailored solutions to ease financial pressure and improve

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

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



Aplio go
Surprisingly small. Incredibly smart.



Start simple. Go places

Aplio go is small and agile. It can be easily transported and placed anywhere. Its smart performance supports you in a wide variety of tasks with outstanding reliability, balanced workflow and unmatched image quality.

The versatile system architecture allows you to grow with Aplio go if you need more capability into the future.



COMPLETE TURNKEY RADIOLOGY SOLUTION

From Concept to Compliance - A Single Streamline Approach



Fair Pricing & Finance Assistance



Site Planning



Installation and Testing



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