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â??Healthcare infrastructure should never be planned in phases dictated by financial uncertaintyâ?•

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As HOSMAC marks 30 years of shaping healthcare infrastructure across India and global markets, Dr Vivek Desai reflects on a journey that began with a simple but ambitious visionâ??to help healthcare institutions build facilities that deliver better care and lasting impact. Founded in 1996, HOSMAC has since worked on 1,000+ projects across 25+ countries, partnering with leading hospital groups, governments, investors, and academic institutions. In this conversation with BioSpectrum India, Dr Desai discusses the evolution of hospital planning, the rise of technology-enabled and sustainable healthcare facilities, lessons from international markets, and what the next decade holds for healthcare infrastructure in India.

As HOSMAC completes 30 years, what healthcare infrastructure gap did you identify in 1996 that led to the company's founding, and how relevant is that gap today?

When I was working as an intensivist in a charitable hospital in Mumbai in the mid-1990s, I witnessed firsthand how infrastructure directly influenced clinical outcomes. Many hospitals had inadequate room sizes, poorly designed ICUs, narrow corridors and elevators that complicated patient movement, insufficient support services, and suboptimal air-conditioning systems that increased the risk of hospital-acquired infections. While clinicians worked tirelessly to deliver quality care, the physical environment often became a barrier rather than an enabler. I realised that healthcare infrastructure could not be treated like conventional real estate, it needed to be planned around patient care, clinical workflows, infection control, and operational efficiency. That realisation became the foundation of HOSMAC in 1996.

Three decades later, India has undoubtedly made remarkable progress, particularly in metropolitan cities and organised healthcare networks. Accreditation frameworks such as NABH have significantly improved quality standards. However, many of these infrastructure challenges continue to exist across Tier II and Tier III cities, where financial constraints often lead promoters to compromise on planning and quality. As India expands healthcare access, creating clinically efficient, future-ready infrastructure remains as relevant today as it was when we started.

Over the past three decades, how has the business of healthcare infrastructure evolved in India from a real estate-driven approach to a strategic healthcare planning model?

Thirty years ago, hospital development in India was largely viewed as a construction or real estate exercise. The focus was primarily on creating a building, while aspects such as clinical workflows, patient movement, infection control, operational efficiency, and future scalability received limited attention. As a result, many hospitals functioned below their true potential despite significant capital investments.

The landscape has changed considerably over the years. The emergence of organised hospital chains, greater participation from private equity investors, and increasing regulatory expectations have transformed healthcare infrastructure into a strategic discipline. Investors today recognise that well-planned hospitals deliver stronger operational performance, better patient outcomes, and superior financial sustainability. Consequently, large-format hospitals now follow structured planning processes, standardised design principles, and internationally benchmarked operational models.

That said, this evolution has been uneven. While large corporate hospitals have embraced strategic planning, smaller hospitals in Tier II and Tier III cities still have these deficiencies.

Having worked on over 1,000 healthcare projects, what are the most common mistakes healthcare providers make while planning new hospitals or expansion projects?

One of the most common mistakes we continue to observe is the disconnect between aspiration and financial preparedness. Nearly every healthcare promoter begins with a vision of creating a world-class hospital equipped with the latest technologies, superior patient experience, and efficient operations. However, midway through the project, cost pressures often lead to compromises in critical areas such as engineering systems, clinical support spaces, circulation planning, or future expansion capabilities. These compromises may reduce the initial capital expenditure, but they frequently increase operational costs and limit efficiency over the long term.

Healthcare infrastructure should never be planned in phases dictated by financial uncertainty. Instead, promoters must first establish a realistic financial closure, clearly understand their capital commitments, and develop a comprehensive roadmap before construction begins. Hospital planning is not simply about designing a building, it is about creating an ecosystem that will remain clinically relevant and financially sustainable for decades.

The most successful healthcare projects are those where strategic planning, financial discipline, operational design, and clinical objectives are aligned from the very beginning rather than being adjusted midway through execution.

India is witnessing significant investments in healthcare. In your view, which segments—tertiary care, medical education, diagnostics, specialty hospitals, or digital health-enabled facilities—offer the greatest growth opportunities?

India continues to face a significant demand-supply gap across almost every healthcare segment, which means opportunities are abundant rather than concentrated in one area. Tertiary care, specialty hospitals, diagnostics, medical education, and digitally enabled healthcare facilities will all witness sustained growth over the next decade. As healthcare expands into Tier II and Tier III cities, the need for integrated healthcare ecosystems will become even more pronounced. Medical education, in particular, deserves greater investment because infrastructure alone cannot solve the healthcare challenge without adequately trained doctors, nurses, and allied healthcare professionals. The coming decade presents a unique opportunity to build both capacity and capability simultaneously.

HOSMAC has worked with leading hospital groups as well as government institutions. How do the priorities and challenges differ between public and private healthcare infrastructure projects?

Public and private healthcare institutions operate with different objectives, but both play equally important roles in India's healthcare ecosystem. The government has demonstrated remarkable commitment towards creating world-class healthcare infrastructure, with the expansion of AIIMS across the country being a notable example. These institutions are improving access to quality care at scale. The private sector, particularly corporate hospitals, focuses on operational excellence and patient experience, although it accounts for only a small percentage of India's total hospital beds. Equally important are not-for-profit institutions like Tata Memorial, CMC Vellore, and Amrita Hospital, where philanthropic funding supports sustainable healthcare delivery and bridges critical accessibility gaps.

You expanded into the Middle East nearly two decades ago. What lessons from GCC healthcare markets can India adopt to improve healthcare delivery and infrastructure planning?

The GCC healthcare market offers valuable lessons in long-term strategic planning. Traditionally, countries in the region relied heavily on sending patients abroad for specialised treatment. Today, they have reversed that approach by investing significantly in world-class hospitals, medical talent, and centres of excellence. Institutions such as Hamad Medical Corporation, Burjeel Hospital, and Dubai Healthcare City reflect this transformation. India already possesses exceptional clinical talent and cost advantages. The next step is to further strengthen healthcare infrastructure, encourage greater investment in specialised centres, and integrate research, technology, and patient experience to position India as a global destination for advanced healthcare.

With AI, automation, and digital health reshaping healthcare, how should hospitals being built today prepare for the next 15–20 years?

Artificial Intelligence, automation, and digital health will fundamentally reshape healthcare delivery over the coming decades. While countries such as the United States and China have made considerable progress in adopting AI-driven healthcare systems, India is still at an early stage of this journey. Hospitals being planned today must therefore incorporate the flexibility to integrate future technologies, including AI-enabled diagnostics, predictive maintenance, robotics, and digital clinical workflows. At HOSMAC, we believe infrastructure should anticipate technological evolution rather than react to it. We are actively exploring collaborations with AI startups to ensure that the hospitals we design today are equipped to become AI-ready healthcare facilities of tomorrow.

Sustainability is becoming a boardroom priority. How are healthcare organisations balancing environmental goals with operational and financial realities?

Sustainability is no longer viewed as an optional initiative but as a core business priority for healthcare organisations. Hospital promoters increasingly recognise that sustainable infrastructure delivers measurable operational benefits by reducing energy consumption, improving resource efficiency, and lowering long-term maintenance costs. ESG (Environmental, Social, and Governance) considerations have become integral for organised hospital chains, while government institutions are increasingly aligning with GRIHA (Green Rating for Integrated Habitat Assessment) sustainability standards. The principle is

simple money saved through efficient infrastructure is money earned over the life of the facility. As healthcare infrastructure continues to expand across India, sustainability will become a defining factor not only in environmental responsibility but also in financial performance and long-term resilience.

Medical education and healthcare delivery are increasingly converging, as seen in projects like the Gangwal School of Medical Science and Technology at IIT Kanpur. How do you see academic-healthcare collaborations influencing the future ecosystem?

Academic-healthcare collaborations will play a transformative role in shaping India's healthcare future. The Gangwal School of Medical Science and Technology at IIT Kanpur is a pioneering example, bringing together medicine, engineering, and research to create indigenous healthcare innovations. Similar initiatives at IISc Bengaluru are encouraging clinician-scientists who combine medical expertise with advanced research capabilities. The COVID-19 pandemic exposed significant shortages across doctors, nurses, technicians, and allied healthcare professionals, highlighting the urgent need to strengthen medical education. Future collaborations between academic institutions, hospitals, and industry will not only address workforce shortages but also accelerate innovation and support India's vision of developing globally competitive healthcare technologies.

What emerging trends in hospital design, operations, and patient experience do you believe will define the next generation of healthcare facilities in India?

The next generation of hospitals will be defined by three key principles—sustainability, operational efficiency, and patient-centricity. Hospital design is increasingly moving beyond clinical functionality to create environments that enhance the overall patient and caregiver experience. Features such as abundant natural daylight, thoughtfully designed waiting areas, food courts, healing spaces, and hospitality-inspired amenities are becoming integral to modern healthcare infrastructure. Simultaneously, greater emphasis is being placed on energy-efficient engineering systems and sustainable building practices. As healthcare becomes increasingly competitive, hospitals will differentiate themselves not only through clinical excellence but also through superior patient experience, operational efficiency, and long-term environmental responsibility.

Given your close engagement with healthcare promoters and investors, what factors will determine the success of healthcare projects in the coming decade?

Historically, hospitals have relied on increasing tariffs to improve revenues and profitability. However, the coming decade will demand a different approach. As healthcare infrastructure expands and competition intensifies, the gap between demand and supply will gradually narrow. Success will increasingly depend on operational efficiency, cost optimisation, clinical productivity, and effective utilisation of infrastructure. Hospitals that leverage technology, optimise workflows, and deliver consistent patient outcomes while maintaining financial discipline will emerge as long-term leaders. Sustainable growth will no longer be driven solely by pricing but by creating efficient healthcare delivery models that balance affordability with high-quality patient care.

As HOSMAC enters its fourth decade, where do you see the biggest opportunities for healthcare infrastructure development, and what role do you envision HOSMAC playing in shaping that future?

As India continues to expand its healthcare capacity, the greatest opportunities lie in creating technology-enabled, sustainable, and operationally efficient healthcare infrastructure across both metropolitan and emerging markets. At HOSMAC, we intend to build on our three decades of experience by leveraging digital technologies to make hospital planning more intelligent, collaborative, and efficient. We also see significant potential in strengthening our Design & Build capabilities to offer integrated, end-to-end healthcare infrastructure solutions. Our objective remains unchanged—to partner with healthcare providers in developing facilities that are clinically robust, financially sustainable, and future-ready, while continuing to contribute meaningfully to India's evolving healthcare landscape.

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