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## **How AI is reshaping hospital infrastructure and planning**

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**Next phase of healthcare infrastructure will be defined by how well digital systems connect information, understand context, and help people act on it**



Healthcare systems today are becoming increasingly dependent on the flow of information, services, and decisions across the care ecosystem. As these connections grow, so does the idea of health infrastructure. Hospitals are no longer built around the idea of physical capacity alone; their infrastructure also now includes digital platforms, electronic health records, connected devices, and data systems that enable information to move seamlessly across providers.

AI is also adding another layer to this transformation, changing how hospitals plan capacity, allocate resources, and design the infrastructure needed to deliver care.

India is already putting some of these foundations in place. The Strategy for Artificial Intelligence in Healthcare for India, launched in February 2026, notes that AI is being used across diagnostics and clinical decision support, drug discovery, disease surveillance and outbreak response, as well as health-system planning and management. It also points to the growing use of AI within public healthcare delivery. Platforms such as eSanjeevani have integrated AI-assisted differential diagnosis into teleconsultations, with more than 28.2 crore consultations using AI-generated recommendations since its rollout. This suggests that AI is beginning to move beyond individual pilots and find a place within the delivery of healthcare at scale.

### **From Reactive Planning to Anticipating Demand**

Healthcare planning has traditionally relied on existing capacity, historical utilisation and immediate requirements. AI can bring together large volumes of information to identify patterns and support more evidence-based planning. SAHI (Strategy for Artificial Intelligence in Healthcare for India) identifies optimisation of hospital and supply chain operations, along with health system management, among areas where AI can strengthen India's health system. The opportunity is to use intelligence not only to understand what has happened, but to support more timely decisions about what needs to happen next.

The shift becomes more meaningful when intelligence is applied across the healthcare journey rather than within individual processes. Data from claims, hospital interactions and other healthcare transactions can help surface patterns that inform planning and enable organisations to respond earlier to changing requirements. The objective is not simply to process more information, but to turn it into context that can support better decisions across the system.

### **Building Intelligence Into the Digital Backbone**

A hospital does not operate in isolation. Claims, medical records, provider information and patient interactions generate data across different parts of the healthcare ecosystem. Fragmented documentation standards, inconsistent digitisation and limited interoperability can make it difficult to build a complete view of the healthcare journey. Connected data and interoperable systems therefore become important to making AI useful beyond individual applications.

Interoperable data standards and secure information exchange can enable AI to work with a broader context rather than operate on isolated datasets. A connected digital backbone can therefore help move healthcare from fragmented processes towards workflows where information is available to the right stakeholder when it is needed.

### **Beyond Automation: AI as an Orchestration Layer**

The next phase of AI in healthcare will move beyond automating individual tasks. AI can interpret documents, identify patterns, prioritise cases, route workflows and surface information that requires attention. In healthcare administration, these capabilities are already being applied to claims processing, fraud detection and workflow management. The larger opportunity lies in connecting these capabilities so that the system can identify potential bottlenecks earlier and support intervention before they become delays for patients or operational challenges for healthcare providers.

This also changes the role of claim data. Claims have traditionally been viewed as an administrative function, yet they contain information about healthcare utilisation, providers, treatments and costs. When this information is analysed alongside other healthcare data, it can contribute to a broader understanding of how healthcare is being accessed and delivered. Claims can therefore become part of the digital infrastructure that supports a more responsive healthcare ecosystem.

### **The Foundation Still Matters**

AI cannot operate effectively without reliable digital and data foundations. SAHI emphasises data quality, interoperability and standards-based infrastructure, alongside responsible governance, evidence generation and human oversight. The same principle applies to the wider healthcare ecosystem. AI can make processes faster and more consistent, yet speed alone is not the measure of progress. Transparency, privacy, explainability and appropriate human oversight will determine whether organisations can use AI with confidence as it moves into more consequential workflows.

### **Building a More Responsive Healthcare System**

The next phase of healthcare infrastructure will not be defined only by how much technology hospitals deploy. It will be defined by how well digital systems connect information, understand context, and help people act on it. AI can become an intelligence layer across this infrastructure, helping healthcare move from reactive processes towards more anticipatory and coordinated ones.

The larger opportunity for India is to build healthcare systems where digital infrastructure does more than store information; it helps the ecosystem learn from it. If AI is built on reliable data, interoperable systems and responsible governance, it can help healthcare organisations plan better, use resources more effectively and respond earlier to changing needs. The end goal is not a more automated healthcare system. It is a healthcare system that is better prepared to make the right decisions, at the right time, for the people it serves.

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