



Manipal Hospitals: Enhancing patient experience and nursing efficiency with ePharmacy and nurse handoff solutions

Get started for free

GOOGLE CLOUD RESULTS

- ✓ Reduces order-taking time from 15 minutes to less than five minutes
- ✓ Reduces nurse handovers from 90 minutes to around 20 minutes

With the help of Google Cloud, Manipal Hospitals gives the healthcare industry a boost in India with its ePharmacy and Nurse Handoff solutions, helping patients effectively manage their recovery.



As a leading healthcare provider in India, a country with more than 1.4 billion people, [Manipal Hospitals](#) understands the critical need to ensure patients can get the help that they need in a timely manner. A robust and accessible healthcare system goes beyond the diagnosis process, with medication and case management integral to helping patients recover.

The COVID-19 pandemic triggered a dramatic acceleration of digital adoption across India, profoundly impacting the healthcare sector. Facing challenges in the traditional pharmacy model, characterised by significant delays and inadequacies between prescription and patient medication access, Manipal Hospitals recognised an urgent need for innovation. It identified a critical bottleneck in the patient journey: the time lag between prescription and medication receipt. This gap, particularly impactful given India's expanding healthcare-conscious population, high prevalence of chronic diseases, and ageing population, presented a significant opportunity.

Manipal Hospitals is pioneering the use of Gen AI to enhance nurse handoff, the critical process of transferring patient care from one nurse to another, which is laborious with heavy documentation, time-consuming and risk of error and inefficiencies. The nurse handoff solution automatically generates comprehensive handoff reports, summarizing key patient information, medication changes, laboratory results, vital sign fluctuations, patient concerns, and overall response to treatment.

Both systems require solid infrastructures to support them, and recognizing that the organization needed help, the team began canvassing for possible partners to work with. [Google Cloud](#) emerged as the frontrunner for a strong commitment to healthcare innovation and leading the artificial intelligence (AI) field, working closely with [Deloitte](#) as the implementation partner

“Partnering with Google Cloud will enable Manipal Hospitals to embrace innovation in healthcare. We expect to see improvements in patient care through data-driven insights and AI-powered solutions, while also streamlining operations and gaining a significant competitive advantage,” says Karthik Rajagopal, Group Chief Operating Officer at Manipal Hospitals.

“Given the complexity, Manipal Hospitals needed a partner with global expertise and proven capabilities in handling such implementations,” explained Ashwin Ballal, Partner at Deloitte India.

“This partnership enabled the client to scale their business effectively and streamline operations, leveraging the combined strengths of Deloitte's guidance and Google’s powerful infrastructure to drive growth.”

“Partnering with Google Cloud will enable Manipal Hospitals to embrace innovation in healthcare. We expect to see improvements in patient care through data-driven insights and AI-powered solutions, while also streamlining operations and gaining a significant competitive advantage.”

Karthik Rajagopal

Group Chief Operating Officer, Manipal Hospitals



Creating solutions that are accessible to everyone

An app that helps patients collect medication, users can utilize the ePharmacy to instantly view their prescriptions following consultations within the Manipal Hospitals network before ordering the medicine required and arranging for pick-ups or deliveries, all at their convenience. On average, the time taken for orders has been reduced from 15 minutes to less than five minutes.

Powered by Google Cloud, Manipal Hospitals can expand and improve the patient experience at various touchpoints. It uses [Vertex AI](#) and [Gemini 1.5](#) to get accurate and efficient drug information on the platform, smoothening the ordering process.

At the same time, [Cloud Healthcare API](#) and [Apigee API Management](#) allow real-time data flow across the ePharmacy application, helping improve the process with accuracy and speed. With [Looker](#) to track user behavioral and usage data, Manipal Hospitals can improve the user experience by understanding how customers manage their cart and track order statuses or delivery schedules.

[BigQuery](#) is then used to process and analyze data gathered from the ePharmacy app. The organization and its network of doctors can then utilize these insights to improve medication adherence and overall patient care. As the number of users for the ePharmacy app increases, [Google Kubernetes Engine](#) ensures the app can scale reliably and handle the differing demands from thousands of patients in need of help.



“The app is made to be intuitive and used by people of all ages. In the Indian ecosystem, we have a lot of chronic patients on the older side, between 50 to 80, so having a more seamless, easy-to-order experience is key,” says Mr. Rajagopal

As for the Nurse Handoff solution, which is still being refined with the help of partners like Deloitte, with initial findings seeing significant reductions in the time required for handovers from 90 minutes to around 20 minutes per nurse.

“Leveraging its consulting expertise, IT capabilities and industry knowledge, we help organizations smoothly integrate and adopt Google Cloud solutions.”

“We assisted Manipal in building Data Lake and ePharmacy applications to create an integrated ecosystem. These initiatives

aim to significantly improve patient experience, simplify usability, enhance productivity and efficiency across operational workflows. Comprehensive system maintenance and continuous support ensure optimal performance, reliability, and readiness for future digital advancements.”

AI is being deployed during physical field studies at hospitals to better surface the pain points of the systems currently used. This solution is the first of its kind in the region, and it is vital for Manipal Hospitals to make it as effective and productive as possible for the teams on the ground to benefit, and pass on the gains to the patients.



Improving doctor-pharmacist collaboration for better patient care

To date, over 100,000 patients are already on the platform for both short and long-term needs with improved medication adherence and broader reach.

With more than 60,000 data entries and around 6,000 different prescriptions daily, doctors have better insights into what patients need. This allows them to work better with pharmacists for a more seamless workflow. Despite a large number of prescriptions, the support of the Google Cloud infrastructure has boosted productivity gains, with close to 99 percent accuracy.

“Google Cloud has been instrumental in achieving the high levels of scalability, performance, and security that are crucial for our operations. This has significantly reduced the burden of infrastructure management, allowing our teams to dedicate their time and expertise to solving critical business problems,” adds Rajagopal.

**“Google Cloud has been instrumental in
achieving the high levels of scalability,
performance, and security that are crucial for
our operations. This has significantly reduced
the burden of infrastructure management,**

allowing our teams to dedicate their time and expertise to solving critical business problems.”

Karthik Rajagopal

Group Chief Operating Officer, Manipal Hospitals

“Through the engagement, we were supported by our partner, Deloitte—who put together a team of healthcare industry subject matter experts, tech experts, and program managers globally to deliver a complex use case effectively.”

Manipal Hospitals' proactive adoption of digital technologies, exemplified by its ePharmacy and Nurse Handoff solutions, positions it as a leader in the ongoing transformation of Indian healthcare. It will continue to leverage cutting-edge technologies to address systemic inefficiencies, elevate patient experiences, and ultimately shape the future of healthcare delivery in a rapidly evolving market. This strategic approach underscores the potential for digital innovation to enhance both the quality and accessibility of healthcare services in India.

Manipal Hospitals is one of the largest healthcare providers in India serving over seven million patients annually. Its focus is to develop an affordable, high-quality healthcare framework through its multispecialty and tertiary care delivery spectrum and further extend it to out-of-hospital care. Manipal Hospitals network today has a pan-India footprint of 37 hospitals across 19 cities with 10,500+ beds, and a talented pool of 5,600+ doctors and an employee strength of over 18,600.

Industry: Healthcare and Life Sciences

Location: India

Products: [Apigee API Management](#), [BigQuery](#), [Cloud Healthcare API](#), [Gemini 1.5](#), [Google Kubernetes Engine](#), [Looker](#), [Vertex AI](#)

About Google Cloud partner—[Deloitte](#)

[Deloitte](#) is a leading global provider of audit and assurance, consulting, financial advisory, risk advisory, tax, and related services; and is a Premier Google Cloud global Partner

Why Google	Products and	Solutions	Resources	Engage
Choosing Google Cloud	pricing	Infrastructure modernization	Google Cloud Affiliate Program	Contact sales
Trust and security	Google Cloud pricing	Databases	Google Cloud documentation	Find a Partner
Modern Infrastructure Cloud	Google Workspace pricing	Application modernization	Google Cloud quickstarts	Become a Partner
Multicloud	See all products	Smart analytics	Google Cloud Marketplace	Events
Global infrastructure		Artificial Intelligence		Podcasts
Customers and case studies		Security	Learn about cloud computing	Developer Center
Analyst reports		Productivity & work transformation	Support	Press Corner
Whitepapers		Industry solutions	Code samples	Google Cloud on YouTube
Blog		DevOps solutions	Cloud Architecture Center	Google Cloud Tech on YouTube
		Small business solutions	Training	Follow on X
		See all solutions	Certifications	Join User Research
			Google for Developers	We're hiring. Join Google Cloud!
			Google Cloud for Startups	Google Cloud Community
			System status	
			Release Notes	

