DELLTechnologies

Unlocking the power of healthcare with the cloud

Ramkhamhaeng Hospital improves the efficiency of patient services while paving the way for telehealth.

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Dr. Pitchaya Somburanasin
Executive Director,
Ramkhamhaeng Hospital Group

Business needs

Ramkhamhaeng Hospital (RAM) wanted to embrace virtual care, which is transforming hospitals' capabilities to improve patient outcomes. To achieve this, RAM needed a highly secure cloud solution to protect patient information, optimize hospital-based services and scale to power telehealth.

Business results

- Improves the efficiency of patient services by 43%.
- Increases the average number of patients treated per day from 1,600 to 2,000.
- Ensures nearly 100% uptime.
- Cuts data loss by 60%.
- Enables use of wearable medical devices for remote patient monitoring.
- Supports population health programs through analysis of patient data.

Solutions at a glance

- Dell EMC VxRail Hyperconverged Infrastructure (HCI)
- Dell EMC PowerScale
- VMware Workspace ONE
- Dell Client devices

Virtual care is transforming healthcare delivery. Hospitals are taking advantage of high-speed connectivity and devices that enable audio-visual consultations to improve clinical efficiency and patient care. These solutions are giving providers the chance to rethink their delivery models from the ground up for more widespread coverage and improved global health.

Ramkhamhaeng Hospital (RAM) in Thailand is driving the adoption of virtual care across the country, where ongoing investment in mobile networks and 5G connectivity is making alternative care possible. The process is ongoing, and RAM has gained cloud capabilities to fast-track the rollout through secure access to patient data anytime, anywhere.

Adopting a flexible hybrid cloud for better healthcare

RAM's cloud journey started when the hospital engaged long-standing IT solution provider Dell Technologies. With its experience in healthcare transformation, the Dell Technologies team helped design a flexible hybrid cloud solution that would enable virtual care and improve service delivery across RAM, its seven sister hospitals and 40 medical facilities.

The solution simplifies operations across the hospitals and facilities. It features Dell EMC VxRail Hyperconverged Infrastructure (HCI), which supports RAM's hospital information system and picture archiving and communication system (PACS), and Dell EMC PowerScale to provide huge storage capacity for radiology images and clinically-relevant reports. The cloud solution also relies on VMware Workspace ONE and a range of Dell Client Solutions. This allows clinicians to gain quick access to data via multiple devices to deliver faster, accurate evaluations and better patient care.

Dell Technologies deployed the solution for RAM and is providing ongoing support. Dr. Pitchaya Somburanasin, executive director of RAM Group, isn't exaggerating when he says, "We were able to make our dream come true with Dell Technologies as our partner. It enabled us to get digital transformation and cloud services underway to provide better care to more patients."

Delivering hospital services efficiently

Through a seamless hybrid cloud solution and better access to data, RAM has cut down the time patients spend at its hospitals.

Patient services are approximately 43% more efficient, with patients spending an average of 2 hours instead of 3 ½ at hospital sites. The cloud solution — which is also delivering nearly 100% uptime and has cut data loss by 60% — has enabled an increase in the average number of patients' treatments per day from 1,600 to 2,000. Furthermore, 2,000 clinicians at RAM, its sister hospitals and medical facilities can safely access critical information on their mobile devices wherever and whenever they need to.

Improving patient outcomes through remote patient monitoring

The cloud solution has allowed RAM to introduce wearable medical devices, such as heart monitors, into its telehealth program. With the cloud solution's highly scalable infrastructure, massive quantities of streamed data from the devices can be safely stored and analyzed by clinicians, providing an early warning if a patient's condition worsens. In turn, the accumulated data — once anonymized and merged with data from other hospital systems — can provide insight to feed broader population health programs.

"Using the cloud, the value of our healthcare services can finally go beyond our hospital facilities thanks to Dell Technologies," Dr. Somburanasin says. "We now have the capabilities for analytics and AI automation to improve the patient experience and ultimately healthcare outcomes in Thailand."