



## Hospital improves patient outcomes with digital healthcare platform

Patient services at Ramkhamhaeng Hospital gain strength with Dell Technologies, increasing the quality of healthcare at a critical time.



Ramkhamhaeng Hospital wanted to start providing clinicians with more mobile access to patient data. And when the COVID-19 pandemic struck, the hospital's need for a solution to support remote patient consultations was accelerated. With Dell Technologies, Ramkhamhaeng Hospital was able to meet all of its goals, implementing a digital health platform that gives clinicians flexible access and telehealth capabilities while maximizing uptime.

### Transformations



Gains modernized infrastructure that supports new service delivery models, such as telehealth.



Enables 2,000 clinicians to access patient data remotely using desktop and mobile devices.



Prevents disruption with data replication from the edge to the on-premises core and cloud.

### Outcomes



Reduces time patients spend at hospital during appointments from 3 ½ hours to 2 hours.



Gains nearly 100% uptime.



Ensures critical patient data is protected with automated failover.

Healthcare organizations are striving to improve the quality of care and access. They are putting more emphasis on healthcare promotion, knowing it improves the quality of a person's life while reducing the costs of medical treatment. Whatever the objective, technology plays a key role, helping care providers enhance the effectiveness of their services.

Ramkhamhaeng Hospital (RAM), a leading hospital in Thailand with seven sister hospitals and 40 medical facilities, recognized the need to improve the quality of its services through technology. RAM is in the middle of an ongoing digital transformation journey to improve existing practices and integrate new ones, such as telehealth, which is the delivery of healthcare services through live video conferencing on mobile apps.

## A global crisis accelerates transformation

Telehealth is more important than ever. While it's been a cost-effective way to improve the quality, access and delivery of preventative care from day one, it has also helped hospitals continue to serve communities during the pandemic. Throughout lockdowns and with hospitals at full capacity, telehealth has been a lifeline for patient services.

This increase in the number of patients accelerated RAM's adoption of telehealth. The hospital's management team — including Dr. Pitchaya Somburanasin, executive director of RAM Group — added telehealth to its list of IT objectives to keep up with growing numbers. These objectives included modernizing the entire data center with advanced IT to automate management in a private cloud environment. RAM also started moving away from desktop- and workstation-based data access to more mobile devices so clinicians had the information required at the point of care.

## Finding the right IT course of action

Achieving so much, including the adoption of telehealth, would be a tall order for any organization, and RAM needed support. It turned to long-standing IT solution provider Dell Technologies. Dr. Somburanasin says, "We view Dell Technologies as a partner that can help us grow and evolve. The Dell Technologies team understands healthcare well enough to provide us with the solutions we need."



"We have the partner we need with Dell Technologies to help us along our digital journey well into the future."

### Dr. Pitchaya Somburanasin

Executive Director,  
Ramkhamhaeng Hospital Group



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Increases average number of patients treated per day from 1,600 to 2,000.

## Making data a greater source for good

RAM deployed its digital health platform on Dell Technologies. This update represented a milestone in the hospital’s digital journey, providing a springboard for the delivery of healthcare services in innovative ways. The hospital now had a solid foundation for improvements in care quality and access as well as the data processing and storage capacity to run the kinds of applications that would transform its healthcare services. Additionally, RAM had the software built into the platform to allow secure, remote data access for thousands of devices and highly effective day-to-day administration.

This solution was built around Dell Technologies Unified Workspace technology, a portfolio of solutions that enables data security, simplifying management and the ability to work remotely. Unified Workspace includes PowerEdge servers and VMware technology at its core, with ProSupport Plus services for enhanced IT support. Applied to RAM, the Unified Workstation solution provides clinicians with secure, remote access to patient data across a range of fixed and mobile devices. Additionally, it provides peace of mind because RAM staff knows that data will automatically failover to a secondary site if any outages occur at the primary data center, minimizing the impact on patient services.

## Delivering healthcare despite lockdowns

Two thousand clinicians now have real-time access to securely encrypted patient data across client devices, including mobile, and can deliver virtual care to patients through video conferencing. The lockdown was less of a hindrance because medical staff had access to data so they could make immediate clinical evaluations and propose the best course of treatment for patients.

## Accelerates patient journeys

The benefit of the platform on hospital operations was clear. Dr. Somburanasin and his colleagues analyzed the results on some core services and were impressed by the findings. They showed the average patient journey from registration to seeing a clinician and collecting medicine from the pharmacy was down from an average of 3 ½ hours to just 2 hours during busy periods. They also saw an increase in staff efficiency with the average daily number of patients treated rising from 1,600 to 2,000, thanks to real-time access to patient information.

Dr. Somburanasin says, “Gone are the days when we’d write prescriptions by hand. Now the pharmacy is digitized, giving patients a much faster service.”

## Prevents disruptions to services

With processes now digitized, there is a critical need for systems to remain up and running at all times. Thankfully, the Dell Technologies solution is ensuring almost 100% uptime and has cut data loss by 60%. It’s also ensuring replication protects data from the network edge to the core and private cloud while automating failovers for constant, secure access to patient data. Dr. Somburanasin explains, “We have to be careful about the infrastructure we deploy and the providers we work with because the hospital is often dealing with life-or-death situations. We have a lot of trust in Dell Technologies, who is enabling us to deliver critical services with zero downtime.”

## Raising healthcare standards

RAM is now leading the way in the adoption of telehealth across Thailand, where investment in mobile networks and 5G upgrades will enable virtual care to extend healthcare provision to underserved communities. The hospital has the IT performance, capacity, simplicity and security to upscale its telehealth while strengthening the potential to deliver preventative care through technology, such as wearable medical devices to measure heart rates and warn patients of heart attacks. Plus, RAM can onboard healthcare analytics to predict trends and plan proactive healthcare strategies to reduce the total cost of services. “None of this can be achieved without a strong IT infrastructure and strong IT partner to deliver our goals,” says Dr. Somburanasin. “We have the partner we need with Dell Technologies to help us along our digital journey well into the future.”



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