

Sydney Adventist Hospital secures virtualised systems with Imprivata

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- Barbara MacKenzie, IS Operations & Infrastructure Manager, Sydney Adventist Hospital

Key facts

Location: **Sydney, Australia**

Beds: **525**

Registered clinicians: **1,100**

Challenges

- Ensuring fast access to EMR and VDI sessions
- Enabling cloud-based applications and workflows
- Allowing clinicians access to mobile devices for use in care decisions

Results

- Fast, secure access to the EMR and VDI sessions
- Management efficiencies, enabling a successful, lean IT team
- Improved clinical workflows

The Sydney Adventist Hospital (SAN) in Sydney's North is an iconic hospital with a long reputation for community spirit. In operation since 1903, it is a 525-bed teaching hospital and is presently one of the most digitally integrated hospitals operating anywhere in Australia.

The SAN's digital journey began more than twenty years ago when the hospital began developing proprietary software called SanCare that today encompasses patient electronic medical records (EMR) and clinical workflows. The hospital focused on improving the convenience and efficiency of a clinician's workflow during their time in the hospital, with the overriding goal of improving patient outcomes.

The challenge

The in-house solutions evolved over time, and became a platform that allowed staff the freedom of the 'follow-me desktop,' using workstations on wheels, laptops, and iPads – whatever device a clinician chose for their own convenience. However, technology was not yet available to properly integrate mobile devices and administrators found that clinical information was not universally well-formatted for certain devices that clinicians tended to use throughout the day.

The second iteration of this advanced workflow practice saw the SAN develop a virtual desktop infrastructure (VDI), known as SanView, and cloud-based applications, with information available at fixed terminals. This shift in solutions allowed clinical staff to move freely around the hospital, enabling them to log in to any available terminal to access their current workflow rather than carrying devices with them. This provided the full benefit of the core in-house EMR, with the rich information and advanced functionality that 20 years of experience and constant enhancement provided, with the attendant benefits of a mobile, cloud-based workflow that was available to load within seconds on any connected device within the hospital grounds or from authenticated remote devices.

“Due to the overwhelming response, we very quickly had to go back and implement Imprivata across all clinical areas: staff were vocal about not putting up with old systems once they saw what was now available to them.”

- Barbara MacKenzie, IS Operations & Infrastructure Manager at Sydney Adventist Hospital

The Imprivata solution

Imprivata OneSign® Single-Sign-On was introduced to the SAN in 2014, after the VDI came online. The new solution allowed for even faster access to terminals and other hardware, providing staff with a single secure proximity-activated ID card which they carry at all times throughout the hospital. The single sign-on (SSO) solution allows staff to access their current workflow securely, without repeated manual input of a password.

Brad Gwyther, Professional Services Consultant & Customer Success Manager at Imprivata, states: “Imprivata enables secure healthcare by establishing trust between people, technology, and information. At the SAN, we are the link between the clinicians and their critical information, and our solution enables that information to be transacted quickly, efficiently, and safely.”

Streamlining systems and processes is a vitally important part of hospital modernisation, and every step that the SAN made towards becoming a mature digital hospital was based on improving patient outcomes. Reducing barriers between clinicians and a patient’s medical history and workflow improves the time taken to perform tasks and make informed decisions, as well as increasing the immediacy of a task, thereby improving concentration and thought processes. Stopping at a terminal then logging in with a password, waiting for a PC to boot up, and accessing files stored on a hard drive all place barriers between a clinician making critical decisions and the content they require.

“Where we differ from other digital hospitals in Australia is that we have software development capabilities in-house, so have been able to extend our vision of an integrated digital hospital right across the spectrum, including the development of a full native mobile version of our EMR, ‘SanCare mobile.’ As such, we believe that our EMR has more mobile functionality than any other EMR in Australia,” said Barbara MacKenzie, IS Operations & Infrastructure Manager at the SAN Hospital.

The hospital decided to place a KPI on their SanView VDI solution, whereby a full workflow must be presented to staff members within five seconds of logging on to a terminal. Imprivata plays a key part in meeting that KPI, reducing the time taken to log on to the system.

Arash Oskooi, ICU Clinical Informatics Specialist at the SAN, agrees with MacKenzie: “We need timely access to clinical data because this is a critical care environment. As such, we need to make decisions rapidly, patients often present to us in a deteriorating condition or have just faced major surgery, and we need to be able to respond to their conditions rapidly.”

Following an internal audit of how Imprivata was being used over a typical 24-hour period, the SAN deduced that 809 people had accessed 639 unique virtual machines (desktops) via 566 physical devices (zero-client terminals). The highest number of connections by a single user was 38. Within that timeframe there were 4,953 desktop connections requiring authentication or re-authentication.

“Following our move to VDI workstations, deploying Imprivata was really the cherry on top of an already great solution,” said MacKenzie. “There are benefits from a medico-legal position, but over and above those we wanted to remove every psychological barrier between a clinician and the systems, reduce the actual time it took to access those systems, and make the process as quick and easy as possible.”



The SAN's Imprivata tag is very simple, with access provided by an RFID sticker adhered to existing cards (with no proximity technology) which are carried by staff as they move around the hospital. Therefore, using the existing hardware to interface with systems is simple and fast.

"The 'single view of a patient' is really the holy grail for a digital hospital. Since we developed our own software, it enabled us to use Imprivata to deliver that single view – and subsequently to differentiate ourselves from other hospitals, making the SAN an attractive place to work," adds MacKenzie.

About Imprivata

Imprivata, the healthcare IT security company, enables healthcare securely by establishing trust between people, technology, and information to address critical compliance and security challenges while improving productivity and the patient experience.

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The return on investment

Once Imprivata OneSign was deployed in a controlled pilot at the SAN, IT staff found the feedback from clinicians to be overwhelmingly positive.

"The response from staff was phenomenal. They could now tap in every time they needed to access the SanView VDI solution. Due to the overwhelming response, we very quickly had to go back and implement Imprivata across all clinical areas: staff were vocal about not putting up with old systems once they saw what was now available to them," states MacKenzie.

As a key part of the virtual ecosystem employed by the SAN, Imprivata has also played a role in reducing costs. With a hyper-converged back end, the cost to deliver services is reduced, along with lower energy consumption from thin and zero clients. The hospital has also recognised management efficiencies, with a single virtualisation engineer essentially able to run storage, compute, and desktop, which is no comparison to providing for a fleet of PCs.

"Imprivata is the gateway to our staff accessing their workflow quickly, easily, and securely. If a technology works well, you should not have to think about it – and Imprivata fulfils that for us," said MacKenzie. In the course of their decade-long journey to digital maturity, the SAN has made lots of decisions, evaluating and testing different endpoint solutions. Gwyther adds: "We partner with our customers to truly understand their workflows and requirements, so we can deliver a signature experience to not only clinicians, but all staff within an organisation. Providing this value through positive outcomes ensures we create customer success and customers for life."

"Imprivata have been along side us as we have made those decisions. Like us, as an organisation they are always delivering new solutions, enhancing their offering, and they remain essential to successful delivery of end user computing services for us," concludes MacKenzie.