imprivata®

Best of breed authentication management for a best-practice hospital

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- John Hoang, Solutions Architect, Sydney Adventist Hospital

Key facts

Industry: **Healthcare**
Location: **Sydney, New South Wales, Australia**
Founded: **1903**
Customers: **Serves the whole of New South Wales and delivers specialist services nationwide**
Beds: **530**

Challenges

- Remaining a recognised digital leader in healthcare and differentiating from competitors on that basis
- Supporting Medical Officers and students, both cohorts who move between hospitals
- Securing complex environments – like a homegrown EHR and cutting-edge zero-client estate

Results

- Fast, secure No Click Access® to clinical applications enables providers to remain focused on patient care
- Embedded in a new clinical services building with highly accessible technology supporting a fully distributed nursing model at every bedside
- Optimal support for non-permanent clinicians: students and AMOs

Sydney Adventist Hospital: A century of service

Sydney Adventist Hospital (SAH) in New South Wales, Australia, is no ordinary hospital. Evoking the very heart of the Adventist philosophy, it has provided healthcare, wellbeing, and support to a broad and dispersed community for over a century.

But that doesn't mean it's backward. 'The San', as it is still often affectionately known, remains in organisational terms a private, not-for-profit hospital. And judicious management means it has recently completed the AU$200m development of a brand new clinical services building, with more to follow. It has:

- 3500 employees, medical officers, and students
- 530 beds kept in use by Accredited Medical Officers (consultants choosing to bring their patients to SAH)
- An emergency room – a rarity in the private sector but supported by the Adventist value base
- A thriving teaching partnership with the University of Sydney Medical School

SAH is the largest private hospital in the state of New South Wales and both a clinical and commercial success.

At the leading edge of healthcare technology

In the past 15 years, SAH has matched its clinical credentials by achieving a leading position in EHR strategy, including developing its own in-house data services to stay ahead of the technological curve. Barbara MacKenzie, Operations and Infrastructure Group Manager, says, "Because we're predominantly a single campus, not a public health service with multiple sites and agencies involved, we're masters of our own destiny. We have the luxury of being able to choose the most suitable technology and deliver it. If it doesn't work, there's no one to blame but ourselves – at the same time we're large enough that we have to do it properly, so we're always thinking strategically."

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> Sydney Adventist Hospital

Solutions Architect John Hoang says, "In the Australian market we're a leader in terms of becoming a digital hospital; and we view that strategy as a differentiator. We have a self-developed EMR, aligned against the HIMMS EMR adoption model. It was the addition of clinical protocols and the associated move to electronic care pathways in 2009 which then led us towards single sign-on."

The move to single sign-on (SSO) was prompted by several convergent issues. The community of roaming Medical Officers and students, requiring regular but not permanent access, needed a workable authentication regime. The continued drive towards leading-edge digital care across the hospital meant that more day-to-day management and clinical systems were coming online. These led to a formalised push towards strong passwords. "The other issue was that we had just begun our journey into virtual desktop infrastructure (VDI)", says Hoang. "At that stage, all the other products in the market were either very expensive, overly complex, or had no VDI integration. When we came across Imprivata with tight integration to zero-client terminals and VMWare View, it was a no-brainer."

Imprivata was the only authentication regime which could keep up with SAH's forward-looking strategy. MacKenzie recalls, "When we did the first VDI rollout, we imported zero-client terminals. At that time, no other Australian hospitals were implementing VDI and all the US hospitals we were aware of who were deploying VDI were doing so onto rich clients. In the back end, the storage-and-compute environment we had built predated the always-on desktop that VMWare mandated. So we leapt into new century technology, trialled it, and made it work. What was interesting to us was the integration of the Imprivata product all the way through to the zero-client: we looked at the partnerships VMWare, whom we trusted, had developed and took the lead on integrating their partners' technology to extend the VDI functionality where we could".

L.W. Clock Tower, Sydney Adventist Hospital

Usability at the heart of deployment
Taking the lead included procurement not just on price but a pragmatic mix of strategy, usability, and technical flexibility. "I think everyone faces security and efficiency challenges, but you have to meet those requirements while remaining agile enough to meet the needs of the users so that IT becomes a toolset they want to use rather than a hindrance to workflow", says Hoang.

"Quite often we've found that when dealing with large companies, they have so many processes that to procure anything you're either constrained to the norm, or customisation just takes too long. For our access cards, we started with usability: we knew that staff or locums would lose them now and then, so they needed to be consumables – simple, cheap, replaceable media. And they needed to be a useful form factor." (In fact MacKenzie says that one form factor they provide is a sticker than can be fixed inside a clinician's phone case). "So we specified multiple RFID access media options with an excellent RFID vendor we had worked with before. With Imprivata, this was no problem: they had ratified the underlying system for RFID use and they worked with us to get a truly usable system out the door."

Best-practice ICT from the brownfield ground up

Today, SAH has 2000 SSO and VDA licenses, with 1800 enrolled users – the remaining 200 being allocated rapidly in the coming months – particularly driven by a standards-based, commoditised physical environment designed around modern digital health delivery from the ground up. MacKenzie says, "The new facility design is a distributed nursing model. Each ward has two wings of 20 beds, broken into pods of 10 with staff stations in the middle. The staff stations are not fortresses you enter, but rather islands with computers accessible from different directions. There is space to accommodate the groups of roving students and get them out onto the floor. We have had the privilege of being embedded in the design process from buildings through to systems and applications from the outset and we've achieved a really good result. Imprivata was the cherry on top: everything else was in place, yet for years we still made our clinicians enter their credentials the slow way – this was a barrier to accessing clinical information. Imprivata has enabled that easy physical and systematic access and removed the barriers to data."

Hoang adds, "The deployment of zero-client terminals in the new clinical areas is aggressive. We have 3-4 terminals at every nursing station and terminals at patient room entrances. On a 40-bed ward, there are 46 fixed computers, 95% of which are zero-client terminals. On top of that, every clinician is very welcome to bring their own devices – doctors and nursing unit managers do bring their iPads and notebooks; diet-aides currently use iPad Minis; clinical pharmacists and physiotherapists use notebooks; so access is possible everywhere from any device via VDI client but the follow-me desktop and RFID card is the "new normal".

We're not using any workstations on wheels (WoWs) in the new areas; and, in response to intense user demand, we are replacing WoWs in existing wards with retrofitted slim-line wall mounted RFID enabled zeroclient terminals. Mobile devices are supplemental to fixed terminals because staff don't want to carry anything as they travel through their day: they just want access points wherever they turn."
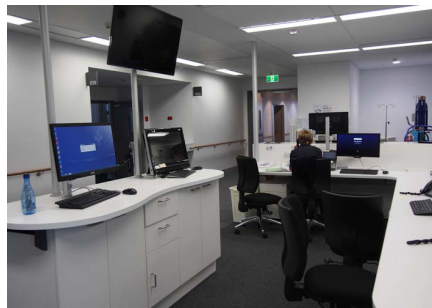
Feedback for the end-to-end best-of-breed deployment of technology has been overwhelmingly positive. In Hoang's words, "For someone who is called upon to support staff in complex situations, we've gone from trying to force clinical staff to consume technology to their demanding more technology. So it's a complete change. This high level of demand for more and more technology from the clinical user has been a key indicator not only of success but acceptance of the solution."

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- Barabara MacKenzie,
Operations and Infrastructure
Group Manager,
Sydney Adventist Hospital

About Imprivata

Imprivata, the healthcare IT security company, enables healthcare globally to access, communicate, and transact patient information, securely and conveniently. The Imprivata platform addresses critical compliance and security challenges while improving productivity and the patient experience.

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Imprivata unlocking digital health outreach

Powering the on-tap use of healthcare technology with Imprivata is unlocking the next raft of developments for Sydney Adventist Hospital. MacKenzie says, "We're working hard on the next step. Because we develop our own software, we've developed a native-mobile version of our clinical system for doctors. Particularly with a model where doctors don't spend a lot of time on site, that extension of information to them wherever they are in an accessible format can significantly improve their clinical efficiency."

"For example, for obstetricians and gynaecologists, we extend not only the patient record to them on mobile or at home; but also full clinical monitoring. A midwife with concerns is able to make a call to the consultant, who is able to look at the foetal waveforms in real-time and offer advice, faster, without coming on-site, and all automatically captured to the medical record." Hoang adds, "Imprivata authentication management ties in with this major push; allowing us to put the most current and useful information in front of clinical professionals, wherever and whenever they need it."

Don't be fooled by SAH's seemingly easy success in riding for over a decade at the crest of a wave of innovation, though: SAH is not magically immune from financial pressures; and MacKenzie and Hoang fight for their budgets like every department in every hospital. "While our services have expanded significantly, like everyone, the staff and operational budget allocations don't reflect the same degree of growth", says MacKenzie. "So we must ruthlessly become more efficient, identifying architectures and toolsets that can assist us with automating, managing, and meeting the expectations of our organisation. The future is all about what we can capture into the patient record: communications, images, and biomedical data; so that we can become ever more integrated." That means ever more interactions with terminals for SAH's highly mobile workforce, none of which would be possible without Imprivata OneSign® Single Sign-On and Imprivata OneSign Authentication Management: indeed "the cherry on top."

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