Telehealth enables patient-centred care

Video-conferencing technology is enabling hundreds of clinical services across NSW Health to ‘see’ their patients remotely, reducing barriers to access and enhancing patient experience.

Clinicians across the state are connecting with their patients using eHealth NSW’s video-conferencing infrastructure, which its Conferencing Services team designed and supports. This technology has proven to be effective across a wide variety of locations that patients find themselves in, including nursing homes, GP practices, in their own home or when they are out and about.

“The telehealth technology notifies clinicians by email and/or text when their patient enters a virtual waiting room, and connects them with patients on smartphones, tablets or PCs,” said Neil Winter, Team Manager, Conferencing Services, eHealth NSW.

At Nepean Blue Mountains LHD, the technology is allowing its Tuberculosis (TB) Clinic to provide a patient-centred model of care for TB sufferers, who are required to see a healthcare worker every day in order to take their medication and be monitored for side effects.

“Telehealth has been an invaluable resource for our service, and video-calls with patients are now heavily integrated into our daily clinic activity,” said Clinical Nurse Consultant Kate Smith.

“Video-calls give TB patients better access to the specialist care they require, as for many sufferers the burden of an intense treatment regime hinders their daily commitments.”

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Chief Executive’s message

Putting patients, carers and families at the centre of a digitally enabled healthcare system is a key tenet of our eHealth Strategy for NSW Health.

No fewer than three of our digital health projects have recently gone live or are preparing to; all of them strongly focused on enhancing the safety and continuity of care for NSW Health’s patients – all the while supporting the clinicians who provide that care.

One project – the Clinical Health Information Exchange (CHIE) – recently went live at Northern Beaches Hospital (NBH) and Northern Sydney Local Health District, and in doing so became the first implementation of such a platform in an Australian healthcare context.

We are proud to have worked in close collaboration with NBH, Northern Sydney LHD, Health Infrastructure, Cerner Corporation and Telstra Health on implementing CHIE, which aims to enhance quality and continuity of care by ensuring a seamless flow of patient information between disparate clinical information systems.

The second project is ims+, our new and improved system for managing incidents, hazards and near-misses, which has begun its state-wide roll-out at Western Sydney LHD. Early feedback from staff is positive, which is well deserved for the eHealth NSW, Clinical Excellence Commission and LHD teams who have put in such a huge effort to design, refine and performance-test the new system over the past year.

Capturing in a single, state-wide database all notifications of clinical, work health and safety, and corporate incidents as well as consumer feedback, ims+ is a key learning tool for continuous safety improvements across our public health system.

The third project, known as Health Outcomes and Patient Experience (HOPE), is delivering an IT system for Patient Reported Measures, or PRMs, and is a collaboration between the Ministry of Health, the Agency for Clinical Innovation and eHealth NSW.

The system was launched at the end of September for initial use by system administrators and PRMs Program Leads, and will be staged across districts over the next six months. It is all about placing patients at the centre of care, giving them a voice and starting to understand and measure the value of healthcare in terms defined by patients.

Last but by no means least, I’d like to highlight the work of our EMR Connect team and LHD partners, who in September alone introduced electronic medication management at a further 16 facilities, bringing to 165 the number of hospitals now live with eMeds. This is phenomenal progress and, in my opinion, the most stellar implementation of electronic medication management ever seen in Australia.

I’d like to acknowledge the work of the teams who have designed, are implementing and will support all of these fantastic, patient-centric systems. I’d also like to thank our NSW Health partners who are working alongside us in the broader digital transformation of our public health system.

Dr Zoran Bolevich
Chief Executive, eHealth NSW
Chief Information Officer, NSW Health

Cyber S.A.F.E. online training state-wide

Following a major refresh, the Cyber S.A.F.E. (Security Awareness For Everyone) online training course has been deployed across NSW Health in a bid to further safeguard the sensitive information our clinical and corporate systems contain.

Two new learning modules on information privacy have been added to the eHealth NSW-developed Cyber S.A.F.E. course to help NSW Health staff understand what constitutes private data – and how to act proactively to protect it.

The course takes around 2.5 hours to complete but can be paused and finished at your convenience.

Go to your My Health Learning account to complete the Cyber S.A.F.E. training.
Supporting end-of-life care

Clinicians will be better supported to provide end-of-life care to patients, as well as their carers and families, as part of a new project being spearheaded by eHealth NSW.

Whether it’s helping people with life-limiting conditions to maximise their quality of life or ensuring comfort for those enduring a terminal illness, palliative care is an essential component of modern health care services and a key priority of NSW Health.

To support this, eHealth NSW is driving an End of Life Care (EOLC) project to design and implement electronic medical record (EMR) capabilities which ensure a high-quality of coordinated and multi-disciplinary care in the final phase of a person’s life.

Pilot engagement with LHD partners will begin in November 2019 to implement a solution that will allow medical, nursing and allied health staff to outline and implement recommendations and plans of care in collaboration with palliative patients and their families or carers.

“This EMR enhancement will support clinicians to meet the care needs of patients who are approaching the end of their lives, as well as their families,” said Richard Pannett, Design, Build and Transition Workstream Manager for eHealth NSW’s EMR Connect Program.

“It will build into our EMR greater visibility of palliative patients, which will support ease and effectiveness of patient monitoring across inpatient and community services, as well as streamlining the specialist palliative care referral and consultation process.”

The EOLC project has released expressions of interest to local health districts and speciality health networks. Metropolitan and rural/regional LHD representation is being sought for a pilot set to evaluate the EMR solution’s safety, quality and clinical efficacy.

The need for a state wide approach to palliative care in the EMR was identified during planning for the Community Health and Outpatient Care (CHOC) Program.

The Ministry of Health has released the End of Life and Palliative Care Framework 2019-2024, which articulates NSW Health’s vision of an integrated approach to palliative and end-of-life care planning and services within the NSW public health system.
Patient care goes digital at 20th NSW Health ICU

Patients in the Intensive Care Unit (ICU) of St Vincent’s Hospital Sydney (SVHS) are the latest to benefit from eHealth NSW’s Electronic Record for Intensive Care (eRIC), which is assisting clinicians to make better-quality decisions for the critically ill.

Following deployment at the 20-bed SVHS ICU in late August, eRIC is now live in 20 NSW Health Intensive Care Units.

More than 32,000 patients have been treated using the state-of-the-art clinical information system, which replaces paper charts and forms by electronically capturing patient data every minute from multiple systems and devices.

“eRIC gives us the ability to view and complete parts of the ward round away from the bedside, enabling medical teams to focus completely on patient examination and communication at the bedside, rather than focusing on flowcharts or monitors,” said Dr Priya Nair, ICU Director at SVHS in inner-city Darlinghurst.

eRIC provides easier access to information for coding, audit and investigation of critical incidents, Dr Nair said, reducing errors overall and providing a more comprehensive discharge summary when ICU patients are transferred to an inpatient ward.

Supporting the digital transformation of NSW Health, the state-wide roll-out of eRIC continues, with the next deployment scheduled for Westmead Hospital’s ICU in March 2020.

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Telehealth enables patient-centred care

Without video-calls, patients need to physically attend a health care service such as a hospital clinic, emergency department, GP surgery, pharmacy or have a nurse visit them at home.

Using the technology, patients can now be more flexible in choosing their time and space to have their consultation, which also increases privacy.

Video-calls give a larger number of patients more equal access to the specialised TB service, as well as helping the clinic to operate more efficiently by better utilising its clinicians’ time.

“Reducing the time spent off-site visiting patients in their homes, and maximizing the use of limited clinic resources, is particularly important for a service run by one nurse,” said Ms Smith.

The Aged Care Rapid Response Team at Royal North Shore is also using the service, provision of which is being led by eHealth NSW’s Edris Andreas and supported by Mr Winter and his team.

“Video allows us to see instantly whether a patient looks unwell, and we can gather a lot of valuable information from talking to them face-to-face on-screen and we hope to better determine which patients need to be seen more urgently,” said Dr James Hardy, Geriatrician, Royal North Shore Hospital.

The Conferencing Services team works closely with Telehealth Managers to support clinicians using telehealth services. Clinicians are encouraged to speak with their local Telehealth contact to establish a new service.

Looking ahead, a new virtual waiting room with even greater functionality and an easy-to-use web interface called MyVirtualCare is in development.

It is a collaboration between eHealth NSW’s Conference, Collaboration and Wireless (CCW) and Conferencing Services teams in conjunction with the Agency for Clinical Innovation (ACI) and Telehealth Managers.
Improving transitions of care

Care of patients as they transition between intensive care units (ICUs) and inpatient wards will improve thanks to a new eHealth NSW-driven project designed to link the digital systems recording their care.

Across NSW Health, 165 facilities use electronic medication management (eMeds). Twenty of these facilities with adult ICUs are also using the Electronic Record for Intensive Care (eRIC).

In 2018, eHealth NSW spearheaded a Transitions of Care (ToC) proof of concept, which in May 2019 proved the technical viability of integrating medication management information workflows between eRIC and EMR during the transitions of care.

Based on this success, eHealth NSW has begun the integrated Transitions of Care (iTOC) project to design and deliver a quality, safe solution that supports the effective and safe transfer of medication management information, allergies and adverse drug reactions.

“This will markedly enhance the interoperability of the clinical workflows between eRIC and EMR, reducing the risk and time associated with manually transcribing medication management information between digital systems,” said eHealth NSW eRIC Program Director, Chris Edwards.

“As part of iTOC’s first phase, we will be inviting an ICU to participate in a pilot to support and confirm the robustness of the solution in readiness for state-wide implementation.”

CXIOs to deliver digital-health ‘X factor’

A group of clinician-informatician leaders from across NSW Health is banding together to advocate for the digital-health needs of clinicians, patients, consumers and carers across the state.

Led by eHealth NSW, the Clinical Information Officer Executive Leadership Group (CXIO ELG) unites senior clinical leaders from NSW Health organisations across the state to influence the ongoing digital transformation of our public health system.

Reporting to the eHealth Executive Council, the group is responsible for providing strategic clinical advice and appropriate decision-making in support of the eHealth Strategy for NSW Health: 2016-2026.

“This is a team of highly skilled health informaticians and leaders in medicine, nursing, midwifery, pharmacy and allied health,” said Dr Mark Simpson, Chief Clinical Information Officer, eHealth NSW.

“As well as advocating for digital health needs and requirements of clinicians, patients, consumers and carers at a state level, they will also have clinical ownership of and accountability for providing advice and recommendations on the design of solutions focusing on clinical need.

“Most importantly, the CXIOs’ work will help to ensure that our digital solutions are not only adopted and used, but also fit for purpose, robust, intuitive, stable and safe.”

The inaugural meeting of the CXIO ELG will take place in October, and planning is underway for the first annual joint symposium between CXIOs and Chief Information Officers in early 2020.
Smoother rotations for junior doctors

Every year, NSW Health employs around 5,500 junior medical officers (JMOs) to provide direct patient care under the supervision of senior doctors. As part of their internships and residencies, around 1,000 of them rotate through a range of NSW Health hospitals and facilities, exposing them to experience in a range of care settings.

Having so many apprentices on the books has meant mastering the art of rostering them across a number of different hospitals is no easy feat.

And so, to help facilitate JMOs’ rotations through different hospitals, eHealth NSW has developed a Roster Unit Module (RUM) which is now making life easier for the managers responsible while also ensuring JMOs are paid on time and correctly.

“At the busy teaching hospital where I work, the process of reflecting rotation details in the system, and ensuring junior doctors are paid on time, was extremely time-consuming and a major headache for all JMO Managers like me,” says Judy Muller, JMO Manager, Northern Sydney Local Health District.

“The new Roster Unit Module (RUM) allows us to rotate JMOs between NSW Health hospitals and I greatly appreciated how eHealth NSW engaged users in the process to develop a system which understands our unique challenges and helps to address them.”

Roster Unit Module was inspired by feedback received during the roll-out of HealthRoster, said Ryan Jehn, Director, Corporate Applications, eHealth NSW.

“Before RUM, there was no easy way to recognise a JMO recruited to one hospital needs be rostered at a different hospital with a different legal employer, pay cycle and cost centre structure,” said Mr Jehn. “There is now, and we are getting fantastic feedback on it from all our stakeholders.”

Together, eHealth NSW’s HealthRoster Program and Oracle Applications teams, with HealthShare NSW’s Employee Services, collaborated with JMO Managers to develop and implement RUM state-wide.

“Employee Services previously manually updated records for JMO rotations, which was incredibly labour intensive,” said Michael Tjiputra, Associate Director Employee Services, HealthShare NSW.

“RUM has streamlined this process, reducing the turnaround time between rotation submission and the ability to roster JMOs from up to 10 days to just one day.”
In the greater south of our state, two NSW Health organisations have transitioned to the state-wide platform for Skype for Business, a tool that is helping to transform the way in which modern healthcare is delivered.

Southern NSW and Murrumbidgee Local Health Districts were early adopters of Skype for Business, having implemented their own successful platform around five years ago.

Face-to-face meetings might be the norm for city-based health organisations but it’s not an option when you have 80 facilities spread over 125,561 square kilometres serving a population of more than 240,700.

Home to four large Aboriginal nations – the Gundungurra, Ngunnawal, Ngarigo and Yuin – the combined area is so vast that it takes eight hours to traverse by car. So, Skype for Business makes good business sense.

It took a lot of confidence from health organisations of this size to hand over control of their primary communication and collaboration tool and one they had custom-built to suit their unique needs.

According to Andrew Elliott, Chief Information Officer of Southern NSW and Murrumbidgee LHDs, it made sense to move to the state-wide platform.

“eHealth NSW offers very competitive pricing for state-wide Skype for Business,” Mr Elliott said. “We now operate the platform at a lower cost and the dual-system infrastructure was something we simply couldn’t afford to build ourselves.

“Plus, the ongoing availability of new features and tools such as enterprise voice and access to the state-wide conferencing platform was appealing, as these are features that our workforce will be quick to adopt.

“The reporting tools give us real business insights into usage, who’s using what features and where. That provides us with the ability to get the best out of Skype for Business through proactive engagement with our people and continuous improvement.”

On any given day, staff across NSW Health are using Skype for Business in a myriad of ways, said Jason Matthews, Program Director, Unified Conference, Collaboration and Wireless for eHealth NSW.

“For example, Skype for Business is invaluable in clinical use cases such as Telestroke, where specialists in city-based hospitals collaborate to diagnose stroke patients,” said Mr Matthews.

“It enables microbiologists to return test results in hours instead of days, where it’s standard practice to courier samples to large state laboratories. It allows nurses visiting patients in their homes to hold consultations with clinicians in hospitals.

“Skype for Business is helping to transform the way healthcare is being delivered across NSW Health. It’s fast becoming the go-to platform for communication and collaboration, with around 50,000 conversations, and over 3,000 unique conferences with more than 16,000 attendees across NSW Health every week.”

Skype for Business connects NSW Health staff with colleagues across LHDs and across the state via instant messaging, voice, or video calls.

It enables staff to see when contacts are available online, in a meeting, or presenting. Other features include its ability to broadcast online to a large audience, share screens during meetings or give control to others.
Patients with life-threatening sepsis will be identified faster and treated more effectively thanks to several projects which harness the power of digital healthcare tools.

Friday 13 September was World Sepsis Day, bringing focus to a medical emergency in which the body responds so severely to an infection that it attacks and injures its own tissues and organs.

Moves are underway to deploy state-wide in 2020 a ‘sepsis alert’ into the electronic medical record (EMR), to assist clinicians to identify those at risk of the illness beyond the ED waiting room.

Building on the CEC’s SEPSIS KILLS program, eHealth NSW will link an electronic sepsis alert to clinical decision support in the EMR, to ensure patients with sepsis are recognised early and treated urgently with intravenous antibiotics.

Clinical Lead and Emergency physician Dr Amith Shetty said: “The numerous risk factors and often undifferentiated presentations of serious infections mean that novel digital platforms are great tools for collecting and synthesising this information better.”

Trialled in Western Sydney Local Health District, this project is a collaboration between eHealth NSW and the Clinical Excellence Commission (CEC).

Thanks to the SEPSIS KILLS program, NSW Health staff have almost halved the time it takes for sepsis patients to start life-saving antibiotic treatment. Since its introduction, the median time to start antibiotics has dropped to 59 minutes in 2018 from 104 minutes in 2011.

This has helped many patients, including those particularly vulnerable to sepsis – the very young, the very old, those with chronic illnesses and those who have a weakened or impaired immune system.

At-risk patients awaiting treatment in emergency departments (EDs) will also be pinpointed more quickly and effectively via PathWay, an Internet of Things (IoT)-based tool which allows real-time connectivity of medical devices with clinical information systems.

A collaboration between eHealth NSW and NSW Health Pathology, this 18-month proof of concept project aims to avoid unnecessary delays in identifying sepsis, as slower time to treatment increases a patient’s risk of death, serious morbidity and other long-term disabilities.

“The PathWay project will use the factors that clinical experts identify as indicative of sepsis – then take things to the next level,” said Lachlan Rudd, Director of Data and Analytics at eHealth NSW.

“An artificial intelligence (AI) algorithm will combine this knowledge with data in the EMR to understand the nuance of what sepsis looks like for NSW Health patients.

“Building a tool around this algorithm will allow our ED clinicians to better catch and treat sepsis for patients in the waiting room, where due to the hectic nature of emergency departments, clinicians are unable to physically observe all patients at all times.”