InterSystems®
Creative data technology

Data-Driven, Interoperable Care
The Healthcare CXO Imperative

6 DEGREES MEDIA
WHERE LEADERS CONNECT

Dr Louise Schaper, Australasian Institute of Digital Health

Rod Sprenger, Women's and Children's Hospital

Grahame Grieve, Health Intersections

Andrew Aho, InterSystems

The global pandemic has shone a spotlight on the need for digitisation in healthcare. But while great strides have been taken in the deployment of telehealth and other digital services, significant work remains in building the foundations of data interoperability that will enable the effective flow of healthcare data. This was the key theme explored at a virtual roundtable sponsored by InterSystems and hosted by 6 Degrees Media. Led by the CEO of the Australasian Institute of Digital Health, **Dr Louise Schaper**, guest speakers included the Director of Digital Health at SA Health's New Women's and Children's Hospital, **Rod Sprenger**; data interoperability champion and Principal at Health Intersections, **Grahame Grieve**; and the Regional Director for Data Platforms ANZ & SEA at InterSystems, **Andrew Aho**.

T he complexity of the healthcare sector is well known to anyone who works within it, and from an external perspective, health is an industry that seems well positioned to benefit from the introduction of digital and data-driven systems.

But the complexity of the health sector, and particularly of its entrenched processes, also acts to retard the process of change. This has meant that in many instances the ability to improve health outcomes using digital and data-driven systems has experienced slow progress.

One person who has made breakthroughs in healthcare digitalisation is Rod Sprenger, who was the designer of Australia's first hospital to be accredited with the HIMSS Stage 7 certification – St Stephen's Hospital in Queensland and is now the Director for Digital Health at the New Women's and Children's Hospital Project for SA Health.

Sprenger told that group that for any digital health initiative to succeed, it was vital from the outset that those people backing defined the full benefits they expected to achieve, and then communicated those benefits to other stakeholders in an ongoing fashion.

"It's more than just an IT benefit," Sprenger said. "What we're doing is giving patients better outcomes. We're improving the way that staff do their jobs inside the hospital. And we're also making them more energy efficient. To define what a successful digital hospital is, we've absolutely got to define those benefits."

He cautioned however that it would be unwise to set the expectation that a digital hospital would be cheaper. Rather, proponents should focus on the compelling non-financial benefits.

"We're seeing around the world reductions in medication errors, reduced length-of-stay, reduced numbers of readmissions – all of those things point to absolutely being able to treat people more effectively and more efficiently," Sprenger said.

"So rather than say 'it's going to cost us a whole lot more', let's say 'we're going to be able to treat a lot more people in a much more effective way'.

Grahame Grieve, Health Intersections

"You really need passion, and you need to trust that the investment that's being made is a worthwhile investment to be making. That's a very hard thing to build and curate and maintain."

"Therefore, we're going to get more bang for our buck per bed and per patient, because it's surrounded by a lot more digital infrastructure that's going to support better outcomes."

The Transformative Power of FHIR

One of the key capabilities that underpins digital healthcare is the ability to readily exchange data between different parts of the system – a problem that has proven challenging due to sheer number of organisations involved.

Grahame Grieve has made it his life's work to solve the problem of healthcare data interoperability, and today is regarded as the 'father' of the HL7 FHIR (Fast Healthcare Interoperability Resources) standard. Grieve described how after many years of hard work he was pleased to witness an accelerated adoption of FHIR around the world, and its subsequent impact on healthcare outcomes.

"I was looking at a project in Scotland where they're using virtual consultations with AI mediated consultations and clinicians, and everything was backed on FHIR," Grieve said. "And they've both reduced the cost of care significantly, as well as improving the patients' outcomes and satisfaction."

Grieve said there were now projects around the world that were showing the benefits of FHIR, for processes such as payments, authorisations, decision support, and care guidance. He said these trials were also proving successful at connecting patients to their data, which was giving them more independence in their decision-making.

"And the WHO is now starting a big project around releasing its care guidelines across the world," Grieve said.

More work remained however to ensure that all parts of the healthcare system were able to properly support such initiatives and Grieve said Australia had more work to do to ensure that regulators, funders, and care providers were better engaged in discussions and planning, as well as the vendors that ultimately brought these solutions to life through their products.

"You really need passion, and you need to trust that the investment that's being made is a worthwhile investment to be making," Grieve said. "That's a very hard thing to build and curate and maintain."

Interoperable Care

One healthcare technology provider that has embraced FHIR is InterSystems, which is a leading provider of database management, rapid application development and integration, and healthcare information systems.

"A lot of our investment is going into analytics in healthcare and AI at a massive scale," said InterSystems' Regional Director for Data Platforms ANZ & SEA, Andrew Aho. "We've been around 43 years, and right from the outset we realised that for healthcare technology it's not really about having separate and distinct components for applications and interoperability and analytics. We always saw that as one world."

That benefits of this approach were now being seen by clients including WA Health, which was using InterSystems' IRIS cloud-first data management software platform to achieve data interoperability to create new applications and services.
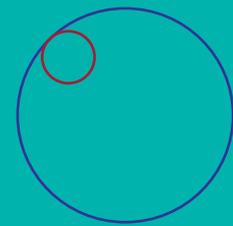
Andrew Aho, InterSystems

"The most important challenge that we work with our clients on is around leadership, people and culture. This stuff is hard, and unless you've got people who feel supported and well trained, and a culture that really embraces the possibilities, then this can be very, very challenging."

Aho said the value of interoperability was especially visible in the early days of the pandemic, where it proved invaluable for supporting telehealth initiatives. South Australia Health is one such example. Over the course of a few weeks, they were able to connect an API driven system to power increased demand for telehealth during the second wave.

Grieve agreed that the pandemic showed how digital healthcare meant more than just hospitals, due to the way it accelerated telehealth projects around the world. "The really exciting one for me is the Beth Israel Deaconess Medical Center, which increased throughout by putting in place a process to send patients home early, but fully wired up to the hospital system," Grieve said. "They're physically at home, but they're still connected up with their devices, and an AI system watches them and dispatches teams to visit them at home.

"That meant they could increase their patient throughput, and it was a much better experience for the patient, because they're at home while they're in hospital."

Digital DNA

But while the technology to create digital healthcare scenarios exists, speakers warned that numerous barriers to their introduction remained. According to Aho, these included issues of budgets, clinical engagement models, governance, change management, and many other challenges.

"It's a combination of factors," Aho said. "The most important challenge that we work with our clients on is around leadership, people and culture. This stuff is hard, and unless you've got people who feel supported and well trained, and a culture that really embraces the possibilities, then this can be very, very challenging."

One of prominent healthcare executive in attendance raised the question of how staff could be given the appropriate expertise to ensure digital health projects could endure for the long term.

"You've got to keep on updating and bringing in new equipment, and then it becomes more complex again because of cyber security and this whole area of interoperability, because you're got multiple vendors across your network supporting a whole range of third-party activities."

Sprenger said the ongoing nature of technological development meant it was vital to create focus around the idea of continuous improvements and benefits realisation.

"It doesn't stop at the end of the hospital build," Sprenger said. "You've actually got a fantastic new foundation which you can build on, and hopefully into the future you're going to become an incredibly efficient utility."

The CIO at one health department also suggested it was vital to continuously highlight how these initiatives delivered value, so that people in control of budgets could see what the money was being used for.

"You have to be delivering value year on year, as a continuous flow of digital activity. That builds confidence in your capacity to execute, and then people are able to trust you to give you money next year, because they've seen what you've delivered in the past."

Data Literacy

Another critical factor in successful digital health outcomes was having staff and stakeholders who were literate in the technology itself, and who could translate its potential into healthcare scenarios.

Sprenger said this was important for being able to overcome inertia and translate the benefits of digital health and data interoperability to the non-experts. "There are a lot of specialists out there that can do that," Sprenger said. "It's just a matter of tapping into those people to help us along the journey."

Aho described a recent project at MercyAscot in New Zealand where the introduction of data-driven healthcare was preceded by an investigation of the data literacy of the organisation.

"They spent a lot of time thinking about the culture and the readiness of their people," Aho said. "They identified people within the business who could fly the flag and really change the culture as well. Having some of those elements really led them to having a very successful phase one of their program, which then sets them up for future interoperability and analytics and other initiatives."

Looking Towards the Future of Digital Healthcare

As healthcare professionals looked to the future of digital healthcare, they could take heart from the various examples of successful outcomes that have surfaced in recent years.

Sprenger described how many of the systems and processes we take for granted now were not in common use when he was designing Australia's first digital hospital in Queensland during the 2010s but were now in the mainstream, and this meant the possibilities were constantly expanding.

"We're no longer thinking about the four walls of a hospital, we're now thinking in an expanded geographical space, and it's become mainstream for us to be able to do telehealth and with this wonderful technology virtual consults have become commonplace," Sprenger said. "And I think it's only going to get bigger. We've got 5G which is being rolled out, and we've also got things like electronic medical record, so we can get into things like population health and detecting trends."

While the path to a true data-driven healthcare sector might be challenging, attendees agreed it was also inevitable, as it was the only solution to the increasing demands of society. According to Aho, digital technology and data interoperability were essential for delivering the kind of agility that healthcare providers today needed.

"Those that do operate with agility have opportunities that others simply don't," Aho said. "And whether that's saving money, or delivering better outcomes to patients, or improving clinical workflows, agility is really key."

But while the technology existed, the ability to achieve success still depended on the motivations and skills of the people involved. Grieve said this had always been the case with data interoperability and was a challenge that remained to be overcome in some parts of the healthcare sector. "Interoperability is not a technical problem," Grieve said. "It's a problem of getting people to talk to each other and trust each other and commit to working together. The biggest part of the solution is to create the conditions under which that'll happen."


Rod Sprenger, Women's and Children's Hospital

"We're no longer thinking about the four walls of a hospital, we're now thinking in an expanded geographical space, and it's become mainstream for us to be able to do telehealth and with this wonderful technology virtual consults have become commonplace."
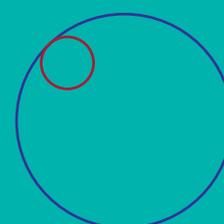
About InterSystems

Established in 1978, InterSystems provides innovative data solutions for organisations with critical information needs in the healthcare, finance and logistics sectors, and beyond. Our cloud-first data platforms solve interoperability, speed and scalability problems for organisations around the globe. InterSystems also develops and supports data management in hospitals through the world's most proven electronic medical record, as well as unified care records for health systems and governments through a powerful suite of healthcare data integration solutions. The company is committed to excellence through its award-winning, 24×7 support for customers and partners in more than 80 countries. Privately held and headquartered in Cambridge, Massachusetts, InterSystems has 25 offices worldwide. For more information, please visit InterSystems.com/au

About 6 Degrees Media

6 Degrees Media was established by Angela Horvat, former Editor and Publisher of award-winning publications including *Computerworld, Information Age, My Business, The Who's Who of Financial Services* and Founder of FST Media; and Emma Charter, one of Australia's most connected and respected media and events strategists with more than 15 years' experience in delivering C-Level engagement strategies for clients in Australia and the UK. Together, they lead a team of Australia's most talented and driven conference producers, technology and business journalists and event managers to create content-driven experiences across C-level roundtables, custom events and large-scale conferences. For more information, please visit 6DegreesMedia.com.au