Driving the Possibilities of Digital in Healthcare

Thought leadership on clinical engagement and digital health

Introduction and objective

As the pandemic puts Australian healthcare services under the spotlight, it’s opportune for those leading and working in the health sector to reflect on our collective strategies and priorities in healthcare service delivery. Whether we are addressing the evolving clinical requirements for advancements in treatment and care, or meeting the ever-changing needs and expectations of consumers, can we be certain we are considering all the factors to best deliver care?

Our experiences since early 2020 have highlighted the benefits of greater options to access health services and care, the critical need for availability of real-time and current data, and the fundamental requirement to deliver on the promise to better connect care and healthcare services. It is important we are enabling and supporting our health workforce with managing the demands, as well as identifying the various opportunities to look at different delivery of care models and flexible working options.

Abstract

In partnership, the Australasian Institute of Digital Health (AIDH) and Oracle Cerner hosted a clinical engagement and digital health thought leadership series of strategic discussion events. These events reflected on the evolving impacts of the pandemic and Australia’s future collective strategies and priorities in healthcare delivery.

Topics explored included clinical data exchange, value-based healthcare and enhancing consumer engagement. The AIDH and Oracle Cerner would like to thank all senior clinicians and senior executives for their participation, knowledge and perspectives shared in the series.
This Clinical Engagement and Digital Health Thought Leadership Series brought together leaders of clinical practice, hospital administrators, researchers, health administrators, primary care system leaders, technologists and other senior stakeholders. The objective was to look at facilitating a discussion on driving outcomes and addressing the challenges of systemic barriers that we all face and what is important in considering digital in healthcare.

Digital health clearly has an increasing role to play in enabling future healthcare services, models of care, patient engagement and delivery of customer service.

With key discussion topics building over a three-week period, we were able to elicit practical insights and actionable learnings on leading work and change in our digital health landscape. What is important right now? How do we address the challenges? How should we be thinking about change? What are the things we are doing right? And how do we incorporate the consumer more? These questions were explored over focused topic discussions over the series. Topic discussions included:

- **Practical insights into clinical data exchange:** The exchange of information in connecting and following the patient, better enabling interactions between public and private, primary to acute, acute to aged care services.

- **Revisiting value-based healthcare:** Are we getting the best from our limited and finite resources, are we measuring what matters, and how do we systemise, influence and adjust to change?

- **Enhancing patient engagement and consumer experiences:** Have we improved on patient and consumer engagement, what are the practical learnings, where can we do better, what are the risks if we do not improve?

The discussions were led and facilitated by Simon Terry, an experienced board and executive leader working across digital transformation, health innovation and collaboration.

The series was proudly hosted in partnership by Oracle Cerner and the Australasian Institute of Digital Health (AIDH). The AIDH is the peak digital health and health informatics body in Australia, with an active and growing membership community. Oracle Cerner are a long-term member, participant and contributor to the AIDH and to the broader Australian healthcare and digital health sectors and community.

**Practical insights into clinical data exchange**

The series commenced with a focus on clinical data exchange and shared perspectives on how we can better connect healthcare and healthcare providers. Three invited guests were asked to discuss their work and perspectives on the topic to support the discussion. We thank Michael Dickinson from Sydney Children's Health Network (hospital and health service), Prof Matt Bellgard and Prof Nik Zeps from QUT (leading research university), and Cynthia Stanton from Sydney North Health Network (primary/integrated care) for their contributions.

The benefits of digital technology usage in healthcare are evident in our ability to share clinical information and data across services to support the continuum of care. With the industry focused on significant and ongoing work around data standards, common platforms and collaborative service models in the form of health information exchanges, many health service organisations, collaborative alliances and targeted programmes are developing and delivering a range of integrated care priorities and initiatives.

From a hospital and health service perspective, the capability of the health information exchange (HIE) to extend data and information sharing from hospital services to other providers to connect care was a key discussion point. Whilst the capabilities and application of HIEs continue to mature in Australia, they are proving to have particular success when applied to specific disease groups and patient cohorts across sub-specialty service areas (e.g. disease group patients in children's health services). The HIE enables pathways for better care management and interactions.
across high-risk areas, such as transitions of care and for those patients that are regularly referred to hospital because of their condition. This supports hospital services’ approaches to building relationships with those regular patients, promoting data sharing and exchange across defined care pathways and building a lifetime record for those patients and carers across primary and specialist care. These capabilities are now being supported by health service apps to share hospital-held information directly with the patients. From practical experience, there are still a range of limitations in the model of data exchange and opportunities for tighter integration with the My Health Record (MyHR) and other systems. Nevertheless, these approaches are demonstrating increasing value in building direct connections with regular patients.

Leading research was commissioned in Australia to look at **real-time clinical data exchange** as it related to COVID-19. However, the focus of that project changed due to the emergence of challenges and systemic issues around governance and data sharing boundaries. Challenges that were highlighted in the discussion included:

- There is fragmentation of rare and chronic disease data
- There is variability in the use of open data standards between states and health providers
- Lack of standardised systems and data exchange models
- In many instances, data can only be shared one-way from a clinical setting to a registry but cannot be shared back
- Sharing across jurisdictions and borders can be problematic

There is a lack of consistency in data capture, collection and sharing, as well as the differing governance and rules in place across the region. All of these challenges can impede the real-time exchange of clinical data. Despite the criticality of the COVID-19 pandemic scenario and the immediacy of the requirement for data sharing, the process for research and ethics approval for the project was protracted.

The pandemic has highlighted these challenges in a crisis, and the need to start with the outcome and endpoint in mind as we continue to approach applying digital tools to healthcare. As a healthcare community, we need to co-design and understand our shared goals and outcomes.

Representatives from primary and integrated care reinforced this perspective, highlighting key unresolved data gaps, such as GPs not having notification of their patients having COVID, despite these results being captured elsewhere. Variability also exists across the system regarding feature initiatives like virtual hospitals, which are offered in some areas but not others. Additionally, there are a range of evolving and maturing programmes supporting integrated care. These include **collaborative commissioning**, government initiatives providing insights into patient journeys – such as Lumos in New South Wales – and other localised initiatives. A longer-term approach is required, where we can influence primary care reform, move away from fee-for-service models, encourage patient outcome models, and collect and share the information as appropriate around those models.
For example, GPs want to know information from the time of hospital admission – not just at the point of discharge, as is currently the case. As we move into national priority areas, such as aged and home care, we need to start with the end in mind, bringing appropriate stakeholders into the discussion and the design of a new model – not just an add-on to the current.

We now have more data and more opportunity than ever before to leverage our collective insights, and to drive a steep change in the performance of our system. Stakeholder consultation frameworks such as those used in bringing consumers and health practitioners into the conversation around changes to clinical workflow, governance and funding models are not new. What is new is the light that the pandemic has shone on these ongoing failings to progress and change. How can we resolve these challenges and barriers? Similar frameworks are required to facilitate consultation around clinical data exchange.

Revisiting value-based healthcare

The second event in the series focused on revisiting value-based healthcare. The three invited guests were: Clinical Associate Prof Paul Middleton, director, Southwestern Emergency Research Institute (clinical); Shane Solomon, chair, IPHA (system pricing); and Samantha Reid, Strategy and System Priorities, NSW Ministry of Health (health system).

“Value-based healthcare is the equitable, sustainable and transparent use of the available resources to achieve better outcomes and experiences for every person.” Over the last number of years, we in the health system have been presented with the opportunities of digital health and advanced data use in healthcare as critical enablers to drive towards value-based healthcare. Irrespective of the challenges involved in implementation, we need to reflect on the current situation and ask, are we there yet? The current pandemic highlights certain areas where there are stress points and where improvements could be made.

Strong opening statements from this session suggested that from a clinical health practitioner perspective, we do not have a health system, but rather a system of silos that patients and consumers have to navigate. Value-based healthcare is intended to drive system and process changes to deliver a more connected system; however, until we create a joined-up system, value-based healthcare cannot be enacted. At best, technical efficiencies can be achieved.

There is good work happening at various levels across the system, including research in piloting new models of care, linking data, recognising patterns, and adjusting services and care to be more targeted. We do, however, need to do more to make the system more patient-centred, ensuring that we measure the things that are of value to them. Critical roles, such as that of the emergency department, were highlighted throughout the discussion, noting that if the value-based care approach is to be incorporated into this area, appropriate consultation is required in the design phase to ensure that every intervention made provides value to the patient outcome.

Value-based healthcare must also be considered from a system and pricing point of view. Observations and experiences from other countries highlight that there is the potential to over-medicalise the system by just looking through a pricing and funding model lens. For example, just because a particular test or treatment is available, it does not mean that it is valuable to the patient or assists the provision of care. We need to go back to first principles and bear in mind that not all healthcare is

valuable and not all healthcare is worth what we pay for it, and that not everything a health professional could do should be done. How and who defines value? We need flexibility in this and we need to provide value to the consumer and practitioner. Value is not price. Price is informed by social and consumer acceptance of the value of what is being offered.

What is of most value from some perspectives is an understanding of the care pathway. Patients and consumers may ask what their pathway back to wellness looks like when they are sick and what needs to occur along that journey. To date, we have been relying on retrospective data to inform these pathways and decisions. Now however, we have opportunities to introduce and better use predictive data that allows for earlier intervention of disease and behavioural change in managing health issues. In the context of preventative care, and primary healthcare policy and strategies, the influence and application of these digital approaches and tools – to bring the data together, link data sets, identify and answer the question of value in the context of informing the consumer and practitioner – needs to happen earlier. Critical to these approaches are the data and nationally consistent approaches to data, to help simplify the evidence around value-based healthcare and make it more authoritative.

NSW Health described their active programme of focused initiatives to pilot and implement value-based healthcare approaches to new programmes and models of care. They aspire to the measures outlined under the Quadruple Aim and look to systematise those changes as part of the pilot programmes. They have a policy where they want to embed value into everything they do and provide health services with the approaches and tools to guide and assist with value-based implementation and feedback loops. Importantly, it is seen as a critical enabler for patient and community engagement. While these programmes are progressing well as pilots, they as a health system are still shifting from volume to value as a model for healthcare delivery.

In summary, when defining value, it is essential to consult appropriately with individual patients, clinicians and communities to ensure the integration of their perspectives into such a definition. As an industry, we need to consider whether we truly understand our shared vision and goals when working within the value-based healthcare model, as well as examine whether we have the language and value measures right. Additionally, having access to an end-to-end view of the patient’s healthcare journey is vital. In order to achieve this, it is crucial that value-focused system approaches to change management and the introduction of new models of care (such as virtual care and home care) are efficaciously implemented and maintained. Data and digital technology play a significant role in enhancing these approaches and building in a continuous feedback loop of measurement and evaluation of value, what it means, and to whom.

**Enhancing consumer engagement**

The final session for the series focused on enhancing consumer engagement. Consumer engagement and value has been a constant theme through all of the facilitated discussions. The invited speakers for this session – Prof Andrew Way AM, CEO, Alfred Health (hospital and health service); Gillian Mason, health consumer and AIDH board member (consumer); and Amanda Cattermole, CEO, Australian Digital Health Agency (ADHA, national) – brought a diverse set of perspectives to the discussion.
Enhancing consumer engagement and the patient experience continues to be an important area of health system reform. Improving digital channels for citizens to access health and care services is becoming an increasing strategic industry priority, as highlighted by several government strategies and initiatives, as well as global trends. In reflecting upon whether this area of consumer engagement has seen improvement of late, consideration must be given to the suitability of current priorities, given the practical learnings gained from strategies and initiatives to date. Furthermore, the significant risks associated with failing to improve consumer engagement must be assessed.

From a hospital and health service perspective, the ‘patients come first’ policy for health service delivery supports consumer engagement strategies, particularly for specialist chronic disease patients who are generally long-term and have a life-long relationship and interaction with the hospital service. This approach looks to provide support and value to the patients, as well as family, relatives and friends of the patient, and is measured against patient-reported outcomes. This process is supported by technology like the patient portal, which allows regular patients to access to their health records within and beyond the walls of the hospital. This helps address and reduce the demands of freedom of information requests on the hospital, which are the second highest in number in the state of Victoria behind Victoria Police.

The patient portal is targeted and shows the different personas that the hospital interacts with. The next step is for this system to link to and incorporate primary care data. The hospital needs to continually improve and evolve its relationships with consumers and patients, inviting them to participate in their care where it makes sense and seeking to understand their different points of view. With the awareness that different points of view are not essentially wrong, the health service needs to be reasonable in its explanation about what it can and cannot provide in responding to consumers and addressing concerns.

From a consumer perspective, the key message was to be inclusive of consumers, not to be tokenistic and to acknowledge consumer contributions equitably and fairly. People have the capacity to contribute, be involved and participate. We need to understand that contribution and acknowledge and reward as appropriate. An example of such contributions is that of a consumer who volunteered over 1,350 hours of their time in the preparation and hosting of a kitchen tea to support hospital outpatient services. Health services need to understand their priorities in getting consumers engaged and involved, and need to consider whether their strategies and initiatives are centred around the clinician’s priorities.
or patient outcomes. A consumer will know if it is not about them. Essentially, the best approach is to drive a cultural change across the healthcare system, where consumers and patients are valued through regular health service and care delivery interactions. We also need to ask within health services and the new projects being rolled out, are we prepared to include consumers? Do we pay lip service? If we do include consumers, are the healthcare staff appropriately trained to engage with them?

As important stakeholders in the uptake and use of digital health in Australia, consumers and health practitioners are key to the ADHA’s National Digital Health Strategy consultation. The need for engagement and dialogue between government agencies, consumers and clinicians is clear as is the creation of ongoing channels for engagement and feedback. The need to continually improve and update what consumers want to see is understood and the requirement for flexibility must also be acknowledged – it is not an either-or discussion. There are trends that MyHR is starting to be accessed and used more often by consumers (200-300%), yet there is still room for improved clarity around the value of the system.

As we have discussed in this series, there continues to be connectivity and integration issues between systems and data. In the consultation to date, it was highlighted that there is unchanged feedback on the need to see continuity of the national programme moving forward, ensuring access and equity to services, and making sure we get privacy and security right as there is an underlying nervousness in regard to cybersecurity attacks. As we move forward, we expect that there will be the requirement for increased choice for consumers in accessing healthcare – augmenting and complementing options for face-to-face and virtual care, as well as digital access to services.

In summary, enhancing consumer engagement continues to be an ever-increasing priority as health service demands and delivery models evolve. Any health service building a digital pathway should make provision for a patient portal or equivalent in their project considerations – it is now an essential element of delivering safe, high-quality care. When thinking about consumers and consumer involvement, there needs to be an endpoint in mind. Goals and principles must be used to guide the process and support the culture of change. The focus should be on the end-to-end joining up of services incorporating feedback loops. This process requires reasonable and realistic attitudes around what kind of change is actually possible, as well as the continued dialogue between key stakeholder groups. Consumer engagement and contributions need to be recognised and acknowledged appropriately, commensurate with their time and effort, and the value of diversity needs to be recognised. The understanding that one size does not fit all is important, as is the flexibility to create and adopt different solutions for different contexts.

Key insights from the series
This series has highlighted a number of opportunities and challenges in healthcare at the moment. On the one hand, we have the constant challenges and barriers that the health system presents as a fragmented service and the difficulties of connecting care. On the other, we have so much more data and so much more digital capability to leverage and to share what works, allowing us to learn from others who are actively moving the agenda forward. The health crisis of the pandemic has highlighted the importance of digital technology in healthcare. There are immediate ways we can move forward, with a greater consumer and health practitioner focus, to advocate and progress system change. Key insights include:

Timing is everything – never waste a crisis
The COVID-19 pandemic has highlighted the need for change to many across the healthcare ecosystem, both because of the constraints it has placed on the delivery of care and traditional models of paper records, but also because of the unique demands on healthcare workers, institutions and consumers. Across all three events, we were highly encouraged by the breadth of the changes, experiments, research and interventions underway to
better leverage digital health to support these changes. Participants across the system are diving in and using longstanding technology capability in new and innovative ways to help the healthcare system adapt. From telehealth for chronic care, to leveraging consumer apps, to new models of clinical data exchange across hospitals and into the MyHR, there is new energy and traction for change.

Share what works
Our healthcare system is full of silos. Some are driven by our national federation whilst others are the result of institutions, clinical care modalities, technology and data silos – or even individual clinician practices. In a broader systemic context, some silos are the outcome of the separation of healthcare from its social context and approaches to socio-economic issues, disability and elder care. Great work is underway, so the continuing challenge is to share what works widely and to promote the adoption of the changes, tools and practices that are driving new value. We can all benefit from looking at the lessons learned beyond our own silos.

Goals and principles matter
In each of the sessions, it became clear that jargon is not a great guide to action. The topics themselves are loose and can be widely applied. Having clarity around the goals of each project and key principles that shape the work is a way to narrow the jargon to meaningful action and to unite a diverse range of stakeholders in work that matters. Patient engagement that is merely a check-box exercise destroy value, as do data dumps without integrity or the right context. Value-based healthcare can be meaningless or counterproductive unless value is made clear to all involved.

Consider the consumer, their goals and experiences
The healthcare system is working hard across the landscape to better understand the consumer, their goals and their experiences. In this work, the industry is discovering that consumer perceptions of value and consumer expectations are shaped by digital experiences and standards well beyond the healthcare landscape. Consumers are considering how the health ecosystem supports their ability to communicate effectively, and make sound and informed choices, as well as enjoy transparency and speed of response. Not all of these demands fit with the healthcare system today, but they highlight the need for dialogue between healthcare providers, the broader system and consumers to better understand value, outcomes and what is reasonable. Importantly, the consumer experience begins long before a healthcare intervention and continues long after. Taking this perspective can help us unravel new and better interventions across the system and to see across narrower silos for better measures of value.
One size does not fit all
Unsurprisingly, people differ in their needs and their preferences. We cannot expect to impose one technology solution on every persona, scenario or moment. The challenge is to offer choices and options that balance the need for breadth and depth as well as support consumers’ varying routines and the clinician’s need for integration into workflow. Smart interoperability can help, but we must also recognise that just as there is a profusion of apps of similar purposes beyond healthcare, the same may be required in this system to meet the breadth of needs.

Plan for hygiene factors
In all the work we do in systemic change in healthcare – and especially in digital health – a range of common hygiene factors repeat through discussions. Consultation with participants in the system from consumers to administrators and practitioners must be real and broad enough to ensure that the right problems are tackled with the right measures of success. We must support privacy, choice and control for consumers. Importantly, we must also make sure our digital technology solutions are supported by quality data and integration to workflow. We need to work with practitioners to manage change and gather evidence that can help propagate the effective changes further.

Priorities matter
We cannot do everything at once. Each participant, each institution and the managers of the healthcare system as a whole need to set priorities and roadmaps. Transparency of this work can help others to learn, as well as provide their inputs in what matters next. The system will be driven by a vast array of increasingly agile iterations, but we can do much to guide this work and select our investments with priorities and roadmaps.

Technology is already available
Although there is a perception in the health IT community that certain tools and systems are not yet available, much of the required technology is in fact already developed and ready for use. Tools such as FHIR, health information sharing platforms, population health management solutions and big data analytics are readily available in the market today – however, they are currently underutilised. We need to develop an accurate industry understanding of what is available and ready for use, and ensure that we take best advantage of such resources.

There is much to do in realising the potential of digital technology in healthcare to the benefit of the wider system transformation. These conversations highlighted the breadth of powerful work underway, and we only hinted at the broader questions of choice and control in healthcare, disability and aged care. The conversations were inspiring as they focused on the potential of what exists and what has already been achieved. The next phase is bringing these successes to everyone and then iterating further on the key priorities.

About the series
The Clinical Engagement and Digital Health Thought Leadership Series was a collaboration and partnership event series between Oracle Cerner and AIDH. The series brought together a group of senior clinicians and health executives across Australia to reflect on healthcare as we think about how we have dealt with the pandemic so far, and to share practical insights we can all use to drive outcomes and address the challenges in the system as we consider how digital technology is transforming healthcare.

About AIDH
The Australasian Institute of Digital Health is the peak professional body for digital health, e-health and health informatics in Australia. We are Australia’s community of individuals and organisations that share a common passion, expertise and leadership in digital healthcare.

About Oracle Cerner
We are continuously building on our foundation of intelligent solutions for the healthcare industry. Our technologies connect people and systems, and our wide range of services support the clinical, financial and operational needs of organisations of every size.

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