CARE is CARE

Care is Care:
Optimising virtual and digital healthcare

Industry Collaborative White Paper

2023

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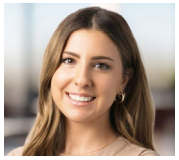

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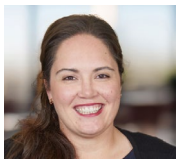

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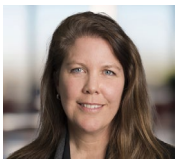

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Who we are

The **Care is Care Industry Collaborative** is a group of representatives from organisations that are proponents of the opportunities that virtual and digital healthcare can deliver. We believe virtual and digital healthcare can provide more equitable and sustainable access to care and deliver impact for health consumers, communities and health organisations.

Acknowledgements

The authors deeply appreciate and thank the national and international health and digital leaders and clinicians, innovators, researchers and industry collaborators who shared their knowledge and experience with the Care is Care study team. Their input informs our collective findings from this explorative study. We are humbled by the generosity and hospitality of all we met, whether virtually or face-to-face. The openly shared knowledge and lessons learned helped the Care is Care team identify opportunities to improve consumer health outcomes and experiences of care.

Thank you.

Globally, the health sector is facing a capacity crisis from the combination of growing demand and workforce decline, which has accelerated post the COVID-19 pandemic. Additionally, Australia and New Zealand face challenges with providing equitable access to healthcare coupled with community demand for greater choice, convenience and an improved standard of care.

Virtual and digital healthcare can be a transformative force to meet these challenges and demands. Our collaborative study group consulted international virtual care leaders – from North America to Europe and the UK – to help us understand how we can harness and scale innovative technologies and care models.

In this paper, we explore opportunities for Australia and New Zealand's health sectors to move toward a sustainable future. This is a future where a more resilient workforce, with a lighter physical footprint, can serve growing demand, and where patients can equitably access high-quality and timely care. By applying these changes, we can create a future where care is care, whether delivered face-to-face, virtually or a hybrid of both.

Introduction

In Australia and New Zealand, the COVID-19 pandemic accelerated a shift in healthcare delivery that has been slowly underway for several years – the transition to the inclusion of virtual models of care. This includes the assessment, diagnosis and treatment of a patient via telecommunication technology, typically outside of the hospital environment.

Simultaneously, we are witnessing an explosion in digital and technological advancements, including artificial intelligence (AI), in what is often referred to as the fourth industrial revolution. In healthcare, these advances, including adoption of the electronic medical record and digital infrastructure at scale, are enabling this rapid uptake of virtual care.

Care is care, whether virtual or face-to-face. Our study team believes this simple statement voices the paradigm shift needed to address the challenges facing the health sector.

Historically, virtual care has been considered supplementary to care delivery. It has largely been seen as a model that can address geographical constraints and workforce limitations, particularly in Australia and New Zealand. This has led to many virtual care pilots and projects in this part of the world, with pockets of excellence at a local level. Coming out of the COVID-19 pandemic, we now have the opportunity to shift virtual care from being the exception to being an integrated and 'every day' part of our way of working and providing care across the healthcare continuum. In doing so, we can harness this excellence, and shift virtual care from being the exception, so we can realise the full benefits of integrated care modalities.

We believe we can learn from early international and national adopters who have been able to scale virtual care delivery.

These health services are realising the benefits of taking a holistic view, where virtual care is a modality that can deliver sustainable and equitable healthcare and also address workforce challenges. These organisations are advancing virtual healthcare on a larger scale. They are actively exploring and scaling innovative delivery and care models to improve access and equity to care, health outcomes and experiences of care, and address workforce challenges. This study gave us the opportunity to understand the themes that can assist in scaling virtual care to apply it as a connected system, building on the work already in progress in Australia and New Zealand.

A paradigm shift is underway, and harnessing it can address many of the problems Australia and New Zealand's health sectors face: care is care, regardless of whether it is delivered virtually or face-to-face. **In the future we believe that the distinction between these care modalities will blur and become part of a holistic suite of care pathways. Healthcare will be seamless: patients will be able to access comprehensive care irrespective of the delivery mode.**

A collaborative international study to bring home global learnings

This collaborative industry study investigated international models of integrated care enabled by virtual and digital healthcare technologies. The purpose was to identify how health consumers and the health industry can scale the advances achieved during COVID-19 to benefit more patients and communities, in more settings.

Together, we studied and learned from some of the industry's best. We wanted to understand how the paradigm shift could help Australia and New Zealand optimise virtual healthcare to address some of the most confounding challenges facing the healthcare sector. These include:

- Providing equity of access to health and care.
- Meeting the growing demand on healthcare services due to an ageing population and rise in chronic disease, with increasing workforce supply challenges and shortages.
- Optimising patient and staff experiences.

This paper outlines the findings of the 'Care is Care' industry collaborative study. It overviews 5 considerations that can help consumers, health organisations and industry collaborators support the transformation of healthcare systems to holistically integrate virtual care. It shows how embracing the notion that 'care is care, whether virtual or face-to-face' can positively impact health and care for more patients and communities.

Approach

Applying a cross-industry collaborative approach

Harnessing the paradigm shift to digital and virtual healthcare requires a new approach. We knew that success would come from a whole-of-system approach that broke down the silos between different disciplines, specialists and industry players in the health sector.

To address this, we brought together a diverse group of cross-industry collaborators. The team included experts from health agencies, architecture, health research, digital analytics, a health consumer representative group, specialist health advisory firms and a social economist. Bringing together such a broad sweep of disciplines and expertise helped us analyse the challenges from multifaceted perspectives and spark new ideas. We derived great benefit from collaborating and learning together.

Desktop review and gap analysis of virtual health care strategies

The Care is Care study began with a desktop review of national and international virtual and digital health care strategies and models of care. The goal was to identify existing knowledge and experience in Australian and New Zealand healthcare contexts compared to international approaches. This rapid scoping review uncovered potential gaps which served as the foundation for the study's focus areas:

i. Models of Care (MoC)

ii. Change and adoption

iii. Digital tools and technologies

iv. Infrastructure and design

Next, we developed and refined the study questions. These questions aimed to gain a deeper understanding of each focus area outlined above and were designed to gather rich insights from the study sites.

Study tours – from North America to Europe and the UK

The next phase of the Care is Care study involved a national and international virtual and onsite study tour of healthcare organisations who lead the delivery of virtual care. These visits helped us understand how these organisations have created successful step changes. We looked at their application of virtual care pre-COVID-19, during COVID-19, and their preparation for the future of health care: fully integrating and taking virtual care to scale in the emerging post-COVID-19 era.

Study tour sites were selected based on their experience as established digital healthcare leaders, or as emerging leaders through their innovation cultures. Onsite locations included sites and programs in the United Kingdom (UK), Denmark, Sweden and France. Virtual study tour locations included Australia, Denmark, Canada and the United States of America (USA).

These visits gave us valuable insights into how various healthcare and digital organisations, such as app developers and providers, worldwide, have integrated virtual care as a care modality. They also showcased different approaches for the scaling of virtual care for the future.

Our findings:

5 key actions to transform health care and optimise virtual delivery

Each study site was rich with information and experience-based data. While the overarching challenges were similar, the approaches were broad and gave the study team a wide range of options to consider for the Australian and New Zealand context.

The challenges we face in Australia and New Zealand are experienced around the globe. All study sites noted the tension between meeting the care needs of an ageing population and increasing chronic disease, in the context of growing workforce shortages. All sites had a broadly similar goal and were progressing care models and pushing the boundaries on where care is delivered - to provide more care in the patient's home, or as close to their home as possible, rather than defaulting to ambulatory or inpatient care within a hospital facility.

The countries and programs we explored all benefited from foundational structures that enabled the success of their virtual care strategies. These include:

- *National approach to the digitalisation of healthcare.*
- *Shared electronic health record accessible to all care providers and the patient.*
- *Robust and reliable networked technology system.*
- *Supportive funding and regulatory frameworks.*

These enabling structures underpin our findings.

Summary

While the funding and regulatory structures differed across countries and even sites, 5 key themes emerged. We saw these actions consistently applied across the study sites to optimise health and care delivery, with integrated, digitally enabled person-centred models of care. These can all be adapted to the Australian and New Zealand healthcare context.

They are:

1 **Innovation starts with just starting:** One of the most powerful lessons we took from this study was about the mindset of the innovators we met. For them innovation starts with 'just starting', underpinned by a strong connection with clinical research processes. Rather than trying to perfect a new idea from the outset, they started small by applying an innovation process to prototype and assess new care approaches while simultaneously building the evidence base for the new practice. This was supported by decentralised procurement frameworks, and funding and regulatory environments that support innovation.

2 **Next-level participatory design delivers next-level outcomes:** Embedding participatory design into core health strategies will likely lead to patients steering the design of their care toward options that respond best to their health needs and avoid spending unnecessary time in a hospital wherever possible. This will provide a more targeted approach to workforce and infrastructure resource planning and application, optimising the available workforce to focus on specialist care delivery. At the same time it will likely lead to better completion of co-designed care pathways and improved experiences of care for both the patient and care provider.

3 **Moving to data-informed, personalised, hybrid models of care:** We discovered that the delivery of virtual care or face-to-face care does not have to be mutually exclusive. It's blended: a hybrid of both. Key elements that support an optimal hybrid care model include personalising the blend for the patient's needs and preferences, and delivering virtual and face-to-face care from the same physical space. AI is also being used to help optimise patient flows and assess the best care modalities at different points in the care journey.

4 **An eye on prevention - integrating whole-of-person care:** Many healthcare models are moving away from episodic interactions and towards chronic, consumer-directed care, with data-driven preventative approaches. The move to digital tools enables better integrated health prevention and health care delivery, by engaging patients in prevention and wellbeing activities when they receive episodic care.

5 **The health workforce of the future - a reimagined multidisciplinary healthcare team:** In a reimagined healthcare workforce, data analytics experts and digital developers will work alongside registered nurses, allied health practitioners and medical specialists who front patient care delivery. This helps solve problems faster using a collaborative, iterative approach.

We explore these themes in more detail in the following pages, including examples from our study sites.

1 Innovation starts with just starting

During the study, we saw that those organisations leading the way in integrating virtual care rarely used the word innovation, nor did they refer to themselves as innovators. What looked to us very much like innovation-in-action was considered routine business-as-usual – identifying challenges, devising solutions, and prototyping them. The crux was a commitment to taking action. Success hinged on proactive small-scale efforts, embracing research, prototyping, and collaboration across academia, industry, patients and healthcare teams. This approach was described at one program site as 'big ideas start small'.

Bringing research and prototyping out of the lab and into frontline health practice

Consistently, across the organisations optimising virtual healthcare, there was a distinct and supported process and robust pathway that enabled teams to translate big ideas into developing new care models. This was achieved through research, partnerships and collaboratives that brought together:

- Academics and researchers.
- Industry and private sector innovators.
- Patients and communities with lived experience.
- Multidisciplinary teams of health practitioners.

This created a connected innovation ecosystem that combined research rigour, mixed-method research methodologies, robust clinical safety protocols and participatory design. It enabled rapid invention and iteration of solutions, and a readiness to move from concept to scale quickly, with a constant focus on safety and adding value for the patient. In addition, countries such as Denmark, Sweden, France and the UK benefit from the availability of a national digital health platform and interoperable electronic health record that enables providers across different sectors of the healthcare system to share information.

By combining research and prototyping with health practice, the lab became the real world. This eliminated the inertia often caused by the pursuit of perfection, which can otherwise prevent prototypes from deploying to the real world in a timely manner. Importantly, this approach was always governed by robust clinical safety protocols. Each solution, whether as a change in care practice, or a new application of digital technology, underwent rigorous and randomised testing to ensure care outcomes were at least equivalent to those achieved under the original model. Solutions would then move to prototyping and iterative refinement.

Once small-scale pilot studies were complete, the teams would assess the requirement for a randomised control trial[1], and if required, prepare for the trial. Many of the host sites in Denmark noted that, for low cost and lower acuity care, the pilot and prototype study cohort is sufficient to build the evidence base.

1 *Randomised control trials are the gold standard for evaluating the efficacy of interventions.*

EXAMPLE

Influenz-er program

The Nordsjaelland Hospital is the largest specialist and acute-care hospital in Denmark's Capital Region.

The Influenz-er program at Nordsjaelland Hospital (North Zealand University Hospital) uses a mobile app and digital case management system to monitor and treat patients at home.

This cross-disciplinary hospital project involved identifying and developing an innovative new care model to promote patient safety and relieve pressure on hospitals during emergency situations such as the COVID-19 pandemic. Prior to the pandemic, home-based hospitalisation solutions for epidemic patients had not been available or scientifically tested and evaluated in Denmark.

The approach included identifying and defining a problem worth solving (as described above). The cross-disciplinary study team, together with a patient study cohort, identified 2 technical solutions to support continued care at home – a mobile app for patients and a digital case management system for clinical staff. The mobile app enables home-admitted patients to report self-monitoring data and connect with their healthcare provider/s through the app. The clinical team access the digital case management tool to monitor patients in the home and perform virtual clinical assessments and consultations. All the data gathered through these patient and clinician-initiated interactions is filtered into a personalised early warning score algorithm that assigns each patient a red, amber or green category. The scores generated through the early warning score system prompt well-defined and targeted actions by staff.

These technical solutions underwent a cycle of rapid testing and review commencing with a **functionality test/s** to validate user needs and the proposed solution design. This was followed by a **feasibility study** to identify if the intervention/designed solution is working as intended. Once this was established the team moved to an **effectiveness trial** phase where an assessment determined if the intervention/solution was yielding the desired effect through an observational study group.

This model has been shown to allow hospitals to safely attend to more patients in their own homes, decreasing pressure on the health system. Patients have reported their preference to be at home and the benefits of being in familiar surroundings to support healing and recovery. One study participant noted that being at home meant they could go for a walk in their own garden rather than 'looking out of a hospital window and looking at some other roofs'.

In addition, the model has been shown to provide the hospital and system with a simple, flexible and scalable solution that can be widely used during a pandemic response to prevent the system from being overwhelmed. It has also been identified as sustainable and future focused – enabling the provision of **more** care at home. The study team are now exploring the direct and indirect impacts of the home-based Influenz-er program on health care and society more broadly.

The selection of outcome measures was also highlighted as an important consideration within the end-to-end innovation process. One host urged us to be comprehensive in the selection of outcomes when innovating and testing new opportunities. In health, cost-saving measures may too frequently be considered as the key evaluation measure, with less weighting on other measures that may offer a more well-rounded assessment of 'value'.

For example, a scoping review of the model of assessment for telemedicine by the Odense University Hospital, Denmark identified a set of **multidisciplinary assessment** domains that provide a comprehensive selection of outcome measures. These include:

- Defining the patient health 'problem'.
- Safety.
- Clinical effectiveness.
- Patient perspectives.
- Economic aspects.
- Organisational aspects.
- Socio-cultural, ethical and legal aspects.

Centralised frameworks and procurement, with decentralised deployment

The way procurement and deployment frameworks are set up can create a supportive innovation environment rather than constraining new ideas. The right frameworks help those working in the healthcare setting to take the 'big ideas start small' approach outlined above.

In the European and UK sites we visited, the government health agencies themselves were not directly involved in the development of health apps or other digital solutions. Nor did they take an approach that digital or technology solutions must be standardised across all jurisdictional sites. Instead, these agencies provided the framework and specifications for digital health solutions to health providers, while ensuring local adaptability and interoperability with electronic medical records.

This process was facilitated by centrally managed procurement through a panel of digital and technology partners. Health providers, together with patients and communities, are able to access these providers from the approved panel.

During our visit to the start-up SynApp Messaging, we learned more about the approach to digital health and innovation in France. This further illustrated how, at a national level, an established governance framework for innovation is essential while still providing opportunities and flexibility for localised solutions.

In France, the government health agency sets the strategy and direction, with local Digital Health Units articulating requirements and recommendations that align with this. The local Digital Health Unit is responsible for ensuring that any new, localised digital tools or apps are compliant with, and contribute data to, the electronic medical record.

Supporting this process is an Incubator Coordinator responsible for all digital innovation and start-ups. App developers and start-ups must first gain approval through the Incubator Coordinator prior to progressing through the local Digital Health Unit.

This cuts through red tape to enable a rapid cycle of understanding the problem to be solved, followed by prototyping, testing and evaluating a solution. All the processes we observed were iterative, quick and compliant with digital system integration. It ensures localised digital solutions are interoperable, connected with national digital health platforms and ensures the security of health data and information.

Helping clinical teams adapt and innovate

The innovation processes we observed were not just centred on developing and testing new approaches to care delivery. We also heard about a novel approach at Nordsjaellands Hospital to test new ways to manage change and the implementation of new care models to ensure emerging best practice and innovative solutions are adopted by clinicians.

Clinical researchers applied gamification and nudge theory[2] approaches. These approaches are typically applied to support health and social behaviour change in the community. In this scenario, gamification and nudge theory approaches were applied within the clinical team to promote the required behaviour change to adapt to virtual care delivery.

Due to the demand to provide more care virtually throughout the COVID-19 pandemic, inpatient teams unfamiliar with delivering care this way or, for some, uncomfortable with learning new technology, were required to rapidly adopt to new ways of working. This often involved frequently moving between face-to-face care and virtual care in the inpatient ward context. The clinical change team used digital games to build the digital literacy and competency of new users. It made the process of learning fun and created a positive and psychologically-safe culture to support both learning and the application of new skills in the care unit. For example, the clinical change champions used digitised games like “Who Wants to Be a Millionaire” and “Jeopardy!” to help clinicians learn to rapidly respond to digital alarms. A sense of competition through gamification was identified as the most significant motivator to adopting the change.

This approach - applying known methodologies in new ways - further illustrates how the culture of innovation was supported at organisations leading the way in developing, integrating and successfully implementing virtually enabled care models.

The change and adoption process was also supported by connecting innovation and clinical research. The data that was continuously being generated was used to create a compelling change narrative so clinicians could see the benefits of working in new ways to support safe patient care.

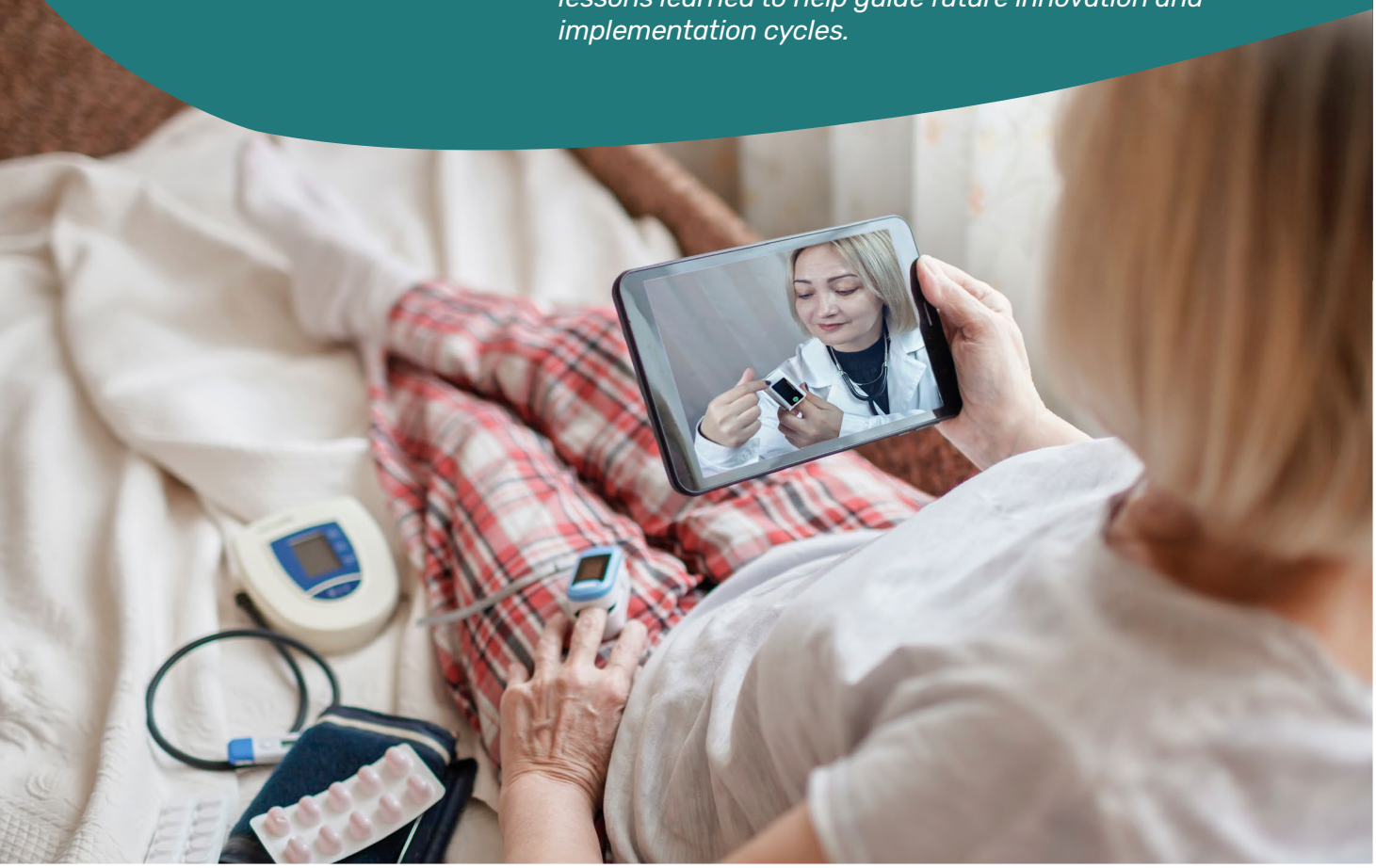
2 *Nudge Theory is based on the idea that by shaping the environment one can influence the likelihood that individuals choose one option over another. Gamification is defined as applying typical elements of game playing (e.g. point scoring, competition and others) to other areas of activity, such as learning a new skill. This encourages engagement with a product (e.g. digital monitor) or service model. When combined and applied to training and development and change management programs, learners engage in activities that ‘nudge’ them in the right direction and remind the learner of things they may have forgotten to do when learning a new way of working or skill. This can include game-based elements to learning activities to improve training and development ‘nudges’.*

Key takeaways

One of the most powerful lessons we took from this study is about the mindset of the innovators we met. For them, innovation starts with 'just starting', underpinned by a strong connection with clinical research processes. This approach has the greatest scope to transform our health sector and move us toward a future where a smaller, digitally literate workforce has the capacity to serve growing demand, and where patients receive personalised and equitable care.

Key to this lesson is to:

- *Reframe how we approach innovation. Rather than trying to perfect a new idea from the outset, start small by applying an innovation process to prototype and assess new care approaches while simultaneously building the evidence base for the new practice.*
- *Create a decentralised deployment framework to support innovation, so it comes from those who are directly experiencing the problem or limitation.*
- *Create the right environment to support safety in innovation by applying a rapid-cycle clinical research methodology with feedback loops, including lessons learned to help guide future innovation and implementation cycles.*



2 Next-level participatory design to deliver next-level outcomes

Our study identified that taking participatory design[3] to the next level can not only transform healthcare, but also those who access it. The approaches that delivered results were broadening participatory design beyond problem solving to redefining patients as care 'owners'. Patients as care 'owners' moves from a traditionally passive role where care is directed 'at' someone, to encouraging active participation and ownership of how care may be delivered. This has resulted in patients enthusiastically taking up opportunities to receive virtual care at home and become more actively involved in the management of their chronic conditions.

Outcomes like this in Australia and New Zealand could significantly reduce the requirement for built assets and ancillary infrastructure, and target care and provider resources where they are required most. More patients would be able to self-manage and direct their care by independently reporting on their outcome measures directly to their care provider.

Care 'owners', rather than 'receivers'

There is a post-COVID return to participatory design and all the sites we visited are expanding their approach by working with patients and communities to co-design their own personalised health care journeys.

In Australia and New Zealand, we regularly see co-design used to develop models of care and clinical improvement activities and encourage patient involvement in care planning. What is notable about the sites we visited is how they have scaled co-design to the next level. They are moving beyond the traditional approach that confines co-design to service and infrastructure planning. They are using it to identify system-wide problems and solutions. Key to identifying this is redefining patients as care 'owners', rather than 'receivers'. This radically shifts the traditional relationship between the patient and care provider, supporting patients to be active and informed partners or 'co-designers' in their own care planning and delivery.

3 *'Participatory design' means actively involving patients and care providers as co-designers of healthcare solutions. This includes the identification of a problem and testing of new ideas. While participatory design has long been recognised as valuable, it is difficult to achieve at a systematic scale.*

The COVID-19 pandemic led to rapid development and deployment of alternative care delivery models. But the urgency of the response made it difficult to meaningfully engage clinicians, or to have any real engagement with health consumers in the design and deployment process. This was a widely acknowledged reality noted by many we visited.

We observed this shifting relationship across a number of sites, including the ICURA[4] sensor-based digital rehabilitation program at Fredericia Sunhedscenter Hospital, Denmark. The program enables the patient, as a care owner, to apply a digitally prescribed and guided exercise program to self-manage and actively participate in their rehabilitation. This includes access to their performance data and the development of their own reported outcome measures through a patient-facing app and webtool.

The program has led to a 50% reduction in the requirement for physical attendance at the hospital and a reduction in the time and cost for transportation of both patients and staff. It also led to improved compliance and completion of the course of rehabilitation. This exemplifies the benefits of redefining the patient as a care 'owner' rather than a care 'receiver'.

4 *ICURA is a privately operated Danish company.*

Digital portals can transform self-managed care and empower the care 'owner'

Digital portals support the patient as the 'owner' of their care. Where we saw them deployed, they were a direct result of a forward-thinking approach to participatory design that recognises patients as owning their care. For instance, our hosts at Healthcare Denmark outlined the Danish Digital Health Strategy to the team, highlighting how the strategy places the patient at the centre of care. The patient has direct access to their own health data so they can be an active owner of their care delivery journey and manage communication with care providers. It focuses on providing user-friendly knowledge, in a timely way, with trustworthy and secure data. This strategy, and its focus on empowering patients as owners of their care, has a natural place in patient-facing care portals such as the ICURA sensor-based digital rehabilitation program.

Other examples stemming from this strategy include the Heart Portal developed in Denmark for patients living with atrial fibrillation (AF). This portal was developed using participatory design with AF patients and their partners or spouses, to support self-managed and directed care in the home. Access to the Heart Portal was supported by educational modules together with connection to a specialist multidisciplinary team through remote monitoring[5].

5 *Dinesen B, Dam Gade J, Skov Schacksen C, Spindler H, Eie Albertsen A, Dittmann L, Jochumsen M, Svenstrup Moller D The Danish Future Patient Telerehabilitation Program for Patients with Atrial Fibrillation: Design and Pilot Study in Collaboration With Patients and Their Spouses. JMIR Cardio 2021; 5(2): e27321*

The pilot study, which tested the feasibility of 2 program approaches, was evaluated through patient and spouse focus groups and interviews. The study found that with access to the Heart Portal as part of a telerehabilitation program, patients reported feeling more secure in living with AF, including a greater sense of mastery in managing their symptoms. They also felt more connected to a community of others living with AF. Spouses reported that the Heart Portal helped in gaining greater knowledge about AF and how to support their spouse living with AF in day-to-day life. The next step for this transformative program is a comprehensive randomised control trial to test the full benefits of the patient portal as part of a comprehensive program of care.

NSW Health has made significant progress in this space though the rollout of statewide remote patient monitoring capability, where patients are directly responsible for entering observation data into an app. Patient informed results are then monitored on a dashboard by a clinician located at a central facility. Using a care owner approach to designing their portals, our study sites added some additional key features that enhanced the patient experience of care. They:

- Integrated patient with health data and information into one app. This includes access to peer support communities.
- Provided the patient full access to the data they entered, within the app. This made the app a recorder, transmitter and repository of their health data, which they can access at any time.
- Provided two-way communication between patient and clinicians.

The portals we saw on the study tour provide the patient with targeted health advice and support at their fingertips, when they need it most. They include essential information, advice and support with personalised care plans, to enable patients to self-manage their condition through the use of videos, digital information fliers and peer support chat rooms and messaging services. In addition, support systems were in place to ensure easy access to the co-designed portals and apps, with in-home technology assistance and supported patient training to measure, enter, and manage their health data to improve confidence in owning their journey while ensuring quality in health data.

EXAMPLE

Virtual neonatal care – empowering parents

The Hans Christian Andersen Children's Hospital at Odense University Hospital, Denmark, has developed a neonatal virtual homecare program to support premature babies and their families to safely return home earlier from hospital.

For most preterm infants, the last weeks of hospital admission revolve around tube feeding and the establishment of breastfeeding. From Day 1 arrival in the Neonatal Intensive Care Unit at the Hans Christian Andersen Children's Hospital, parents are advised of the care pathway to return to home sooner once safe to do so and receive training to help them:

- Identify early signs of clinical deterioration in their baby.
- Perform Cardiopulmonary Resuscitation (CPR).
- Accurately undertake standard growth measures such as weight and head circumference.
- Use the co-designed app called Homecare for Preterm Infants. The app details the care plan for the infant and includes information about prenatal care and instructional videos.

When the family goes home, they are given equipment to support the care at home including a:

- High-quality device to access the app and have virtual consults with their care team
- Customised scale
- Measuring tape.

This program engages and empowers the family to confidently return home earlier in an activated and supported way. The clinical team is always at hand with twice-weekly nurse-led virtual visits and consultation combined with fortnightly medical specialist consultation. The family can use the app at any time, day or night, to send messages and health data including pictures of the baby to the clinical team to receive advice or to address any questions as they arise.

Parents have reported that being able to return to home earlier and receive ongoing acute care at home has helped establish family life and routines sooner, rather than remaining in hospital for the full length of the preterm care journey.

The Preterm Care program has been formally evaluated as demonstrating real value to families and the hospital. It is now being rolled out to more Danish regions.

EXAMPLE

PreCare Clinic

The PreCare Clinic program is Denmark's first operational digital clinic. The program has been described as empowering patients to take an active role in the management of their treatment for heart failure (HF) or chronic obstructive pulmonary disease (COPD) through digital information and connection.

Patients enrolled in the program are provided with an electronic tablet, with access to a digital app, emergency medication such as antibiotics or steroids, data-measuring equipment, and education on how to use it. The program team meets the patient where they are at in their health care journey and supports early intervention informed by patient-generated health data. This helps avoid acute exacerbations, which can lead to home visits or inpatient hospitalisation. The goal is to support these patients to be active and an independent owner of their health and chronic disease management journey.

The PreCare Clinic and digital app aims to bring together all healthcare data in one place. Ideally, this would include patient-provided health data, pharmacy, General Practice and acute care data. The program creators and leads noted that this requirement is the number one demand of their users they are working toward.

More than just technology, the program recognises and supports the critical role of the trusted relationship between the patient and chronic care program nurse. This relationship enables the nurse team to support the patient in their health and digital literacy journey through information and technical support to empower the patient as a partner and owner of their care. During clinic appointments - and digitally supported communication in-between - the patient is able to monitor and set their care goals. They also work with the nurse to support their independent agency in managing their health.

Formal program evaluation has demonstrated a reduction in episodes of acute exacerbation and hospitalisation, and a slowing of the disease trajectory.

There are many opportunities to apply this type of digital enablement, underpinned by a 'care owner' approach. Hosts at the Nordsjaelland Hospital Influenz-er Program and the UK National Health Service (NHS) @ Home program noted that when co-created under a 'care owner' model, these portals received higher uptake and patients expressed greater confidence in owning their care and experienced better care too.

Portals created under a 'care owner' model received higher uptake. Patients expressed greater confidence in owning their care and had a better care experience.

Taking participatory design to the next level and embracing co-design as a standard, leads to innovation, improved adoption of the treatment program, and great outcomes. It creates a health care landscape where patient needs, preferences, and values are at the core of every decision, fostering a truly patient-centred health care experience.

Key takeaways

Embedding participatory design into core health strategies will likely lead to patients steering the design of their care toward options that avoid spending unnecessary time in hospital. This will provide a more targeted approach to workforce and infrastructure resource planning and application, optimising the available workforce to focus on specialist care delivery whether virtually or face-to-face. At the same time, it will likely lead to better completion of co-designed care pathways and improved experiences of care for both the patient and care provider.

The key elements of this approach are:

- *Health strategy should recognise and promote patients as active owners of their care. This helps ingrain participatory design at all levels from health planning to care delivery.*
- *When given full agency, most patients will choose to design a care program that sees them spend as little time as possible in a hospital or care facility.*
- *The natural outcomes of this is likely to be in the form of greater use and uptake of virtual and digital health care, through the use of patient facing health portals we saw applied across the UK and Denmark.*

Were Australia and New Zealand to embrace a 'care owner' approach, it would be transformative and enable our healthcare systems to optimise health resources.

3 Moving to data-informed, personalised, hybrid models of care

As we look to shift the paradigm to meet future demand, we discovered that the delivery of virtual care or face-to-face care does not have to be mutually exclusive. It's blended: a hybrid of both. Key elements that support an optimal hybrid care model include personalising the blend for the patient's needs and preferences, and delivering virtual and face-to-face care from the same physical space.

The COVID-19 pandemic prompted a rapid adoption of virtual care and digital health technologies. Out of necessity, care was delivered exclusively by virtual means in many circumstances. However, with growing experience, more sites are now adopting a hybrid care model rather than either exclusively virtual or face-to-face care modalities.

Delivering care through hybrid modalities combines the advantages of virtual and in-person care. It offers health care that caters to individual patient needs and preferences, within an integrated framework. This approach blurs the boundaries between these two modalities. We observed the acceptance of virtual care alongside face-to-face care as 'business as usual' and integrated into current models of clinical and support delivery. Most programs we observed utilised face-to-face consultations or clinics to confirm acceptance and conformance with the care program. This gave patients greater confidence in their self-monitoring and management of their care.

Our study tour showed this approach may be especially beneficial for priority populations.[6]

6 *Priority populations are those population groups that are at risk of socially produced health inequities, for example groups who may experience a disproportionately higher rate of chronic disease and overall poorer health. In the Australian and New Zealand context priority population groups include:*

- *Aboriginal, Torres Strait Islanders and Māori people.*
- *Culturally and linguistically diverse people.*
- *People with disability or mental health concerns.*
- *People who are homeless or at risk of homelessness.*

Hybrid care – optimising the balance with AI and data-informed insights

Individualising the blend of digital and face-to-face modalities is key. A number of the sites we visited in Denmark routinely gathered patient-reported measures gathered from apps and patient-facing portals, together with clinician and diagnostic data. This was used to develop data-informed and personalised care pathway algorithms to determine which care modality best suited the patient, at any point in their journey. For example, the algorithm determines if a patient should attend an in-person review, virtual appointment, receive an email or other communication, or a check-in via a patient portal. This means other modalities are accessed to provide care, reducing the demand for in-person care clinics. This approach is greatly enhanced by the national electronic health record, as well as the digitisation of patient-reported measures through health portals and apps that integrate with the electronic health record.

Within this care model, the patient can maintain consistent communication with their care provider. They can inform and agree the care modality required at any point in time.

A hybrid care model requires patients and communities to be well-informed about available virtual care and the types of care needs that can be met virtually. This enables patients to advocate for and discuss their care modality preferences with their clinical team. Many sites reported positive experiences with patients and clinicians seamlessly transitioning between different care modalities, facilitated by open communication and information sharing via the interface of apps and patient-facing portals.

In addition, we saw data analytics and AI applied to great effect to efficiently plan and manage services and patient flow across care teams using a centralised command centre applying a GE[7] solution model. We saw a virtual demonstration of the solution at Bradford Teaching Hospitals in the UK. In the first stage of design, the model was identified as a solution to address non-elective surgery flows, enable visibility of capacity in the system and provide early warning of bottlenecks that blocked non-elective patient flow.

The approach aimed to apply constant optimisation and continuous improvement of patient care processes through AI and data-informed insights. This information delivered real-time insights to enable proactive problem solving. Since the implementation of the Command Centre, Bradford Teaching Hospitals have benefited from improved use of data to:

- Drive decisions.
- Manage patient flow, including early detection of patient delays and the capability to mobilise faster interventions for bottlenecks.
- Reduce siloed working, which optimised available resources.
- Yield an improvement in the recruitment and retention of the workforce.

7 *GE is a global medical technology and digital solutions company. The GE solution model includes the use of artificial intelligence in Real Time to support the optimal delivery of patient care, hubs to monitor performance, and learn and launch improvement programs.*

EXAMPLE

Intelligent Care Navigation

Kaiser Permanente a not-for-profit integrated managed care consortium, located in the USA, have developed a hybrid care model referred to as Intelligent Care Navigation.

This approach applies AI to patient data and symptom measures across the patient care continuum to recommend care options provided through the Get Care Now program. Get Care Now is a 24-hour / 7 day a week virtual program that enables a fast and flexible way for patients to talk to a Kaiser Permanente clinician through a web portal or mobile app. The AI-assisted symptom assessment solution guides the patient (called a 'member' in this context) to input symptom data and proposes care options to meet their needs. The suite of options includes care that is available virtually and in their local area based on their needs.

Kaiser Permanente describe this approach as 'putting the member in the driver's seat'. These care interactions, whether virtual or face-to-face, are tracked in the electronic health record. This makes it easy for clinicians to continue to make informed care decisions to support the patient's care journey.

Benefits to priority populations – closing the gap

It is important to ensure that virtual and digital health care models do not create or contribute to inequity. Australia and New Zealand each have significant priority populations. In Australia, the Closing the Gap report on Indigenous health is a yearly reminder of the inequities in our health population. The study team was keen to learn from others on how they ensured equity in this important priority health strategy area. They found hybrid models could make a significant difference to access and outcomes.

Fraser Health Authority, one of 5 publicly funded health authorities in the province of British Columbia, Canada, is a region which has a proportionally high First Nations population. In our discussions, they shared that they have found blended care modalities particularly beneficial for vulnerable and marginalised cultural groups, where initial contact is preferred in-person rather than virtually. For example, consultation with First Nations Elders within this region showed a preference for initial contact with a health care provider to occur face-to-face to enable engagement in cultural ceremonies. This in-person interaction helped build trust between the community and care provider, facilitating collaborative discussions on the most appropriate care modality for the various stages of the care-delivery journey. The Fraser Health Indigenous health team are now partnering with First Nations communities to develop a framework for virtual care delivery.

Fraser Health Authority operates in the Fraser Health region in British Columbia, Canada, which has a proportionally high First Nations population.

Another example where Fraser Health addresses priority population groups is an outreach service for homeless and displaced persons. The service combines health-outreach teams with the deployment of donated or redundant hospital technology equipment. The equipment - including mobile phones – is provided by not-for-profit groups to shelters and other trusted locations. The outreach teams help the priority population use the mobile phone equipment to connect with care providers virtually or face-to-face. Importantly, they recognise that 'one size does not fit all', adjusting the modalities to suit individuals. This approach also supports health equity by providing ongoing capability development and digital literacy for care owners. This is a key supporting enabler of improving access to health care for priority population groups, whether that care be face-to-face, virtual or hybrid.

Integrating physical and digital design

Our study tour showed that hybrid care works best when the same care providers are delivering that care - either face-to-face or virtually – and doing so from the same physical space. This means hybrid care requires seamless integration of physical and digital design from the early stages of redevelopment or development planning. In particular, the incorporation of new virtual health technology in the clinical setting should not only focus on the technology itself, but rather take a more holistic approach towards innovative ways of working.

For example, rather than constructing separate virtual care centres, embedding a hybrid of digital and virtual healthcare technologies directly into hospital wards and clinics was found to be a highly effective solution in sites we visited. The same nurses can care for patients both in-person and virtually. This establishes a strong and seamless patient-nurse relationship that extends from the hospital to the patient's home, while ensuring accountability, clinical governance and continuity of care. Staff at these sites also reported their preference for the existing collegiate atmosphere of a health facility or clinic base.

We noted this approach also through the redevelopment planning at Bispebjerg Hospital and the new North Zealand Hospital where careful consideration was being applied to the design of new physical infrastructure to support digitally enabled care models. The planning at Bispebjerg Hospital redevelopment was exploring locations for virtual care delivery within the clinical care setting and staff work spaces rather than developing a centralised virtual care unit.

Another example comes from Kaiser Permanente, where evidence-based standardised design is applied to all of their hospital developments. These now include zones for virtual care delivery within clinics, wards, and patients' bedrooms.

Closer to home, an innovative collaborative research study based at the Florey Institute of Neuroscience and Mental Health in Melbourne – NOVELL Redesign – explores the intersection between the physical and virtual built environment.

The study brings together service design, architecture and first-person experience to explore opportunities to enhance the stroke rehabilitation patient journey. This approach has identified opportunities to blur the boundaries between home and hospital care through virtual care and digital technologies. This includes the integration of digital approaches into the physical design of rehabilitation care units through 'smart spaces'. These smart spaces include the application of augmented reality, personalised digital surface technologies and the integration of patient wearables. The level of integration and blurring between digital and physical infrastructure this study is testing may help clinicians to move more seamlessly between care modalities and boundaries.

These approaches can all contribute to enhancing successful clinician uptake and adoption of care delivery across modalities. We heard from site participants that integrating virtual and digital care enablers in the same place where face-to-face care is delivered minimises impact on current staff responsibilities and activities, accelerating the change management process and adoption by the healthcare teams. Staff can effortlessly transition between face-to-face and virtual care; reinforcing our belief that care is care, regardless of the medium.

EXAMPLE

Preterm Care program

The Preterm Care program observed at the Hans Christen Andersen Children's Hospital at Odense University Hospital is delivered and embedded right in the heart of acute hospital care delivery. The program is delivered using the existing neonatal care unit as an integrated example of a hybrid model of care. Staff seamlessly move between face-to-face care delivery in the unit to virtual check-ins and consults with families at home.

In this example, the nurses rostered to virtual management and care for families at home deliver this care modality in an existing clinic room with access to a personal computer (PC) with a webcam. The nurses move seamlessly between scheduled face-to-face appointments, ultrasound bookings, virtual consultations, and unplanned real-time communication to address questions or concerns from parents.

After-hours, a nurse is rostered within the unit to virtually support any questions or communication arising from home-care parents whilst providing face-to-face patient and family care. The nursing team assess patient data and communication using the PCs or other devices in the unit care setting to support home care patients and families. The program creator noted that after-hours contact was infrequent as most questions or concerns were addressed throughout the day shift. The majority of parents felt supported and confident to manage their baby's care overnight.

Key takeaways

Virtual care may be best delivered as part of a hybrid model, not an either / or approach.

- *Virtual and physical care must be balanced to meet the needs of priority populations. There may be opportunities to reduce inequality in access and outcomes for these populations through this approach.*
- *Data insights and AI can help define which care mode best suits each patient at different points in their health care journey. However, individualisation and enabling patients to advocate for their preference is important.*
- *Hybrid care reportedly works best when the same care providers deliver care across the patient journey - either face-to-face or virtually - from the same physical space. This means hybrid care requires seamless integration of physical and digital design from the early stages of redevelopment or development planning.*
- *Hybrid care can extend specialist provider reach with care access enabled 24 hours a day / 7 days per week, regardless of location. This is especially true for patients within rural or remote communities.*

4 An eye on prevention - integrating health and wellbeing through digital tools

It is notable that the models of care we observed internationally embraced digital technology and tools to deliver whole-of-person care, including a focus on wellness and prevention. Many healthcare models are moving away from episodic interactions and towards chronic, consumer-directed care, with data-driven preventative approaches and the use of wearables and direct-to-patient health support lines. Kaiser Permanente described this approach as ***health* care not sick care**. This paradigm shift from sick care to health care requires a coordinated focus to keep 'well' people out of hospitals, decreasing the demand for services by slowing the trajectory of rising chronic disease. We saw this succeed when digital tools bridged the gap between acute healthcare and wellbeing models of care by integrating both into one.

Lifestyle data is important. Until recently, routine check-ins with health clients and patients in relation to their health and wellbeing goals have been piecemeal or sporadic. Clinicians within the system of acute care have long recognised and acknowledged the benefits of focusing on prevention. This includes the assessment of mental health and wellbeing measures as part of providing whole-of-person clinical consultation and care. However, translating this into practice has not always been easy, as scheduled clinic and consultation times become shorter to address clinic wait lists and growing demand.

The move to digital tools enables better integrated health prevention and health care delivery, by engaging patients in prevention and wellbeing activities when they receive episodic care. Digital tools and apps can capture longitudinal data, providing a health history that both the clinician and patient can review prior to, or during, a consultation. Patients can then co-design their wellbeing plan as part of their physical health care plan, supporting them to pursue a lifelong journey of mental health and wellbeing maintenance, which can positively impact physical health.

We also witnessed how digital tools can be applied by healthcare organisations to promote and improve wellness, and enhance patient experience when accessing healthcare. We saw an example of this in an innovative research study partnership between NHS North East London Intergrated Care Board and Calvium (a digital agency that brings together research, experience design and the development of mobile and web platforms and apps).

This study in North East London explored how digital placemaking – the use of location-specific digital tools within physical places – can be applied to enhance physical and mental health, as well as overall wellbeing. The study was commissioned as part of the master planning of a new healthcare facility and residential development.

Through participatory design, the study identified that residents in the area regularly use a range of digital technologies to support their health and wellbeing, and expect that community-based NHS services will incorporate location-specific digital tools as part of their service delivery. In line with these public expectations, the study team identified solutions to connect acute care provision with public health and wellbeing approaches through digital tools.

Fundamental to the process of slowing the trajectory of chronic ill health (and reducing demand) will be educating and supporting both our future generations and the ageing population about how to digitally access health, wellbeing and mental health care to support their physical care.

EXAMPLE

Urology Care Pathway - integrating physical care and wellbeing in a virtual pathway

We saw an example of integrating physical health care with mental health and wellbeing measures at Guy's and St Thomas' NHS Foundation Trust with their urology care pathway. The care pathway was developed with consumers and clinical staff together with Nexus for Healthcare (Nexus). Nexus is an organisation that aims to make it easy for individuals and health care providers to empower patients to achieve a lifelong journey of health and wellbeing.

The care pathway is supported through a patient-facing app. The app is designed to provide a digital front door for patients experiencing an acute health event and includes the capture of health and wellbeing data. This enables acute care clinicians to apply patient-generated health and wellbeing data and information to better inform clinical reviews, virtual appointments and provide whole-of-person care that focuses on both the acute care pathway and the broader patient-led and managed mental health and wellbeing journey.

The patient app includes an education hub and connection with other patient and community members experiencing a similar clinical journey. The connection to a community of others on a similar journey enables peer-to-peer support, which has been shown to improve clinical and wellbeing outcomes. In addition, patients engaged in the care pathway can access 24-hour mental health support, again recognising the important connection between physical and mental health care in overall health.

Co-designed with patients, the app provides information via a 'health passport' that outlines what to expect at each stage of their care journey. This includes information on self-care when patients go home following a hospital stay.

The portal captures important health-outcome measures, overlaid with lifestyle, wellbeing and patient reported measures. This important data and information enables the acute care team to plan with the patient their whole-of-person, follow-up care plan.

The patient-facing portal and app has positively impacted patients. Feedback showed the approach enables patients to better follow their treatment plan because they can recall, record, and review all their health data in one location. The feedback showed it also helped patients understand where to find help when they needed it, whether for physical or mental health care. On the clinician side, clinicians felt better informed of their patient's overall health and wellbeing. This allowed them to better plan and support follow up clinical care, whether provided in a virtual or face-to-face setting.

Key takeaways

- *Ensure digital tools and apps are part of a broader system of support that can address urgent mental health needs, not just acute care needs. This whole-of-person system of care can de-escalate a potential mental health crisis early which, if left unchecked, will impact the physical care journey too.*
- *Prescribe interoperable patient-facing mental health and wellbeing apps and integrate the patient-managed digital mental health and wellbeing data into practice by reviewing the data prior to consultations. This also focuses and optimises the care time for the patient and health team.*

5 The health workforce of the future – a reimagined multidisciplinary healthcare team

Technology is at the centre of the paradigm shift this paper proposes. Our host sites showed how the adoption of virtual care is changing the composition of the healthcare workforce, including how multidisciplinary teams (MDTs) work together to deliver exceptional care. In a reimagined healthcare workforce, data analytics experts and digital developers will work alongside the registered nurses, medical specialists and physiotherapists who front patient care delivery. We also heard of examples moving beyond this, with transformation extending beyond clinical realms, to the complex supply chains that underpin modern healthcare systems.

Integrating new skillsets into MDTs

On our study tour we saw that international healthcare organisations are rapidly exploring and implementing a range of new roles within MDTs at the clinical frontline. These include the disciplines of cyber security, data analytics, digital development and project management. These new roles support the delivery of virtual care models and implementation of digital tools, and keep health practitioners focused on what they do best – delivering care.

In France we saw these new non-clinical roles, including communications and marketing, working in close collaboration with patients, clinicians and academic researchers. These technology and data-focused roles drew on the patients' lived experience and reported outcome measures, as well as professional perspectives, to identify problems, and test and implement innovative solutions. The direct integration of new skillsets into health care delivery teams allowed complex challenges to be rapidly solved both in professional frameworks and ways of working.

In the UK, the Nuffield Trust highlighted to the team how the NHS Digital Health and Care Plan 2022 outlines and recognises the establishment of a digital and project management workforce as a critical component to the successful discovery, uptake and adoption of digital health strategies at the point of frontline care delivery.

We encountered a similar message in Sweden during our visit to Skane University Hospital in Malmo. We heard how the hospital redevelopment project team are incorporating this approach into their planning throughout the redevelopment process. Our hosts emphasised how the paradigm shift to digital health transformation requires new organisational capabilities and competencies. They further noted the importance of initiating early planning for these new capabilities within the framework of infrastructure development programs.

All of these approaches present the opportunity and potential to optimise the available health workforce and ensure their specialist skills are applied in an optimal way, enabling more meaningful time with patients, whether virtually or face-to-face.

Single point of access to an MDT

In addition to these emerging new roles and extended care teams, we also learned that increasingly, inter and multidisciplinary practitioners are working in new ways across traditionally siloed work programs and jurisdictions. This includes first responders, General Practitioners (GPs), and community and acute care. This de-siloing is helping flow patients to the right providers, rather than defaulting to emergency or in-hospital acute care.

EXAMPLE

Single Point of Access Care Hubs - integrated multidisciplinary teams breaking down siloes

NHS England have implemented Single Point of Access care hubs to enable early multidisciplinary clinical conversations to coordinate patient care more efficiently. The aim of the program is to facilitate a whole of system response to patient care by directing and supporting patient access to the right service and care provider.

The service is accessible to GPs and community and aged care providers. It aims to minimise inappropriate ambulance dispatch, emergency department attendances and hospital admissions.

The care hub brings together, in a single physical or hybrid virtual space, a senior decision-making team of multidisciplinary care providers with shared access to, and line of sight of, patient portals and waiting lists. This includes access to the ambulance dispatch management system, shared care records, and direct referral and booking capability to identify and activate the most appropriate service for the patient. In this example, the team includes ambulance dispatch members together with GPs, community providers, and mental health, medical and nurse practitioners. Together they share responsibility to deliver coordinated and collaborative care. Since the implementation of care hubs, many ambulance call outs have been diverted and ambulance dispatch avoided. Instead, a service was booked for patient assessment or follow up on the same day or the following day. Evaluation of the program has demonstrated that this approach can also lead to fewer follow up appointments with GPs or other health care providers. Forty per cent of patients did not require any further follow up once connected with the right care provider.

This has freed up GPs' time, improving access to primary care for more patients. The program leads noted that to be successful, programs like this require at-scale implementation with a minimum of 12 hours of operation per day.

Creative partnerships to optimise care delivery

The traditional care team is not only changing (with new professional roles and skillsets as a key component of a future-focused health workforce) but we also learned how the extension and blending of new roles and partners beyond the immediate hospital care environment can address key problems.

Creative partnerships, or finding new ways of working with existing care providers, business partners or vendors, can help keep the specialist health workforce's time focused on direct care delivery while improving the care journey for patients. It's a recognition that a paradigm shift in traditional health thinking is needed to address health care challenges.

When done well, as outlined in the examples on the next page, unconventional partnership approaches to address an immediate challenge can provide real benefits to patients.

EXAMPLE

Virtual Rural Generalist Service (VRGS) – a comprehensive virtual service

The Western NSW Local Health District (WNSWLHD) has developed the Virtual Rural Generalist Service (VRGS) to support local medical and nursing staff to deliver safe and high-quality care to rural and remote communities.

Evolving from a telephone-based advice service, this program provides both virtual and face-to-face consults with patients and staff in rural and remote facilities to meet projected demand in emergency departments and wards, as well as additional in-person placements. Alongside on-site clinicians, VRGS provides:

- Video consultations to emergency department patients
- Medical management of acute inpatients
- Virtual ward rounds for inpatients
- Clinical support for residential aged care residents in rural multipurpose services (MPS) where the local GP is not available.

VRGS consult requests are ordered via the Electronic Medical Record (eMR) or a central 1800 number to escalate urgent or overnight referrals. VRGS doctors use eMR to order and review all clinically relevant information, document patient consultations including ward rounds, send out prescriptions and note patient health plans. During consultations, family or carers are encouraged to participate if present.

This program provides rural generalist medical coverage for hospitals and MPS, and fatigue management when a local visiting medical officer (VMO) is not available or needs a break including overnight and on weekends. This supports improved attraction and retention in the rural medical workforce.

VRGS doctors have reported that they are able to build relationships with local communities, local staff and have a thorough understanding of WNSWLHD systems and processes. Rural nurses are enabled to work to full scope of practice through an enhanced education program targeted at rural generalist nursing assessment skills and are supported to manage the challenges of working without a doctor physically present.

This patient-centred service provides care close to home and timely access to expert rural generalist doctors 24 hours a day 7 days per week to provide high-quality and safe care.

Formal program evaluation has demonstrated sustainable benefits for doctor wellbeing, patient care and patient safety. It has also been identified to reduce length of stay and patient transfers, the service is more likely to treat people in community, and has shown to provide high levels of patient satisfaction and engagement. It also supports local doctors in the community through fatigue management and work-life balance.

EXAMPLE

TeleCare Nord Program - working with existing partners in new ways

The TeleCare Nord Program in North Jutland, Denmark supports the care delivery for patients with chronic heart or lung disease, using remote patient monitoring software and hardware, along with operational support.

Faced with a challenge to rapidly deploy replacement home-monitoring 'telekits' at scale, the program team identified that warehouse management and the rapid distribution and scale required a different approach. The team engaged the technology vendor to directly deliver the updated 'telekits' to the patient's home. This reduced double handling of equipment and potential delays.

The most interesting part of this example is that they engaged the vendor to provide technical setup support and education. As the vendor was already expert in the use of the 'telekit', and was already going to the patient's home, this was seen as an efficient solution to reduce the time and cost of engaging the health professional team in delivery and set-up of the new digital products in the home. The health team had a virtual check-in with the patient post-delivery, to ensure virtual access was established and to address any clinically based questions or concerns, while providing ongoing care for other patients.

Prior to this process, hospital clinicians facilitated knowledge development sessions to train delivery personnel on what to expect when meeting patients with chronic heart of lung disease. Examples include allowing adequate time for the person to address the doorbell and awareness on what physical signs may be apparent such as shortness of breath. Delivery personnel were trained on what to do when delivering and supporting set up of the kits. The training included roleplay to mimic the interaction with the patient together with written instructions and prompts.

A pilot run of the delivery of updated 'telekits' was conducted to ensure patient safety and iterative updates were made to optimise the delivery visit, based on the pilot data and lessons learned.

Key takeaways

- *Bring together non-healthcare specialists with clinicians and patients at the frontline to problem solve in real time and support the implementation of ideas. These new roles can enable health specialists to spend more time providing direct patient care and accelerate problem solving.*
- *Apply a whole-of-system care team approach to break down the siloes between primary, acute, community and social care to deliver connected and collaborative care. This ensures the patient receives the right care in the right location, including care at home or closer to home, and with the right care provider or team.*
- *Consider new ways of working with existing supply partners and vendors, with a focus on maximising their core service offering, to optimise and keep specialist health workforce skills directly focused on patient care delivery.*

Conclusion

Care is Care – the future of health care delivery

The COVID-19 pandemic accelerated the opportunity to embrace new care models, including new ways of working and providing care. Communities, together with healthcare providers, found new ways of connecting to maintain health during this time.

However, the necessarily rapid pivot to delivering care through virtual and digital technologies has meant that patients and communities were unable to co-design the future of care. In many instances, solutions were piecemeal and are now proving increasingly difficult to sustain. This is seen both in system readiness and provider and community adoption, as well as readiness to continue on the virtual care pathway.

During this explorative study, our team saw and heard overwhelming optimism and willingness to experiment and test new ideas. Together with patients and communities, there is an eagerness to explore virtual and digital healthcare delivery to optimise health and wellbeing, and support care delivery, whether provided virtually or face-to-face as part of a blended hybrid care model. Through this process we have strengthened our conviction that the work to continue to progress virtual care in Australia and New Zealand is well founded.

Our study revealed what has worked best in those jurisdictions leading virtual care. These findings can help Australia and New Zealand scale and shift virtual care from being the exception, delivered on a relatively small scale, to being an integrated and every day part of our healthcare delivery. In doing so we can harness its full benefits, going beyond addressing geographic and workforce constraints, to deliver more equitable care and better experiences for patients, carers and health care practitioners.

When we enable patients to own their health journey and use a coordinated, whole-of-patient approach, we demonstrate definitively that 'care is care'.

Study tour sites

MAY 2023

Study Sites and Programs visited virtually:

- NSW Health Virtual Care Strategy, NSW, Australia
- Fraser Health Virtual Care Program, British Columbia, Canada
- NOVELL Redesign, Australia
- TelecareNord, North Jutland, Denmark

Study Sites and Programs visited onsite:

Denmark:

- Healthcare Denmark, Odense
- Preterm Care, Odense University Hospital
- ICURA Rehabilitation app, Fredericia Municipality Rehabilitation Centre
- Hospital Clinical Research Department, Nordsjaelland:
  - Influenz-er Program, Nordsjaelland Hospital
  - Telerehabilitation of Patients with Atrial Fibrillation, Aalborg University
  - Telepalliation, South West Jutland Hospital and Aalborg University
  - Assessing the value of home patent monitoring, Odense University Hospital, University of Southern Denmark
- New North Zealand Hospital Development site tour

JUNE 2023

Study Sites and Programs visited virtually:

- Kaiser Permanente, California, USA

Study Sites and Programs visited onsite:

Sweden:

- Skane University Hospital Redevelopment, Malmo

Denmark:

- Bispebjerg Hospital Redevelopment, Copenhagen
- PreCare Clinic Program, Copenhagen Business School

France:

- Station F tour – technology start up and incubator precinct, Paris
- SynApp Messaging, Paris

UK:

- Nuffield Trust, London
- NHS@home program (NHS England)
- NHS Health Hub (NHS England)
- NHS Virtual Ward program (NHS England)
- Calvium – digital placemaking for health and wellbeing
- Bradford Hospitals Command Centre – GE demonstration
- Nexus with Guy's and St Thomas' Trust and Primary Care Model

CARE is CARE