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australian information
industry association

BEYOND TELEHEALTH

TOWARDS VIRTUAL CARE

Building safe, secure, interoperable, fully leveraged
quality virtual care in a post-COVID world

FOREWORD

In September 2020, the AIIA's Health Policy and Advisory Network (PAN) formed a working group to discuss telehealth issues in light of the COVID-19 pandemic in Australia, with interoperability, security and technology barriers a focus of discussion.

In February 2021, the working group brought together 22 stakeholders and experts from around the country for an in-depth roundtable on these issues chaired by Dr. Tim Smyth.

This communique explores the barriers and opportunities raised in that forum and outlines a number of recommendations for the digital health IT sector and governments.

The AIIA thanks the speakers and participants of its Telehealth Roundtable for their productive collaboration and fruitful analysis of the next journey for virtual care in Australia in a post-COVID world.

PARTICIPANTS

- **Flinders University**
- **Victorian Department of Health**
- **eHealth NSW**
- **Queensland Health**
- **Nueva Solutions**
- **Telstra Health**
- **IBM**
- **NetApp**
- **Salesforce**
- **NBNCo**
- **Deloitte**
- **The Checkley Group**
- **SAS**

EXECUTIVE SUMMARY

Having witnessed a rapid acceleration in telehealth and virtual care, armed with digital technology, Australia must now power the next wave of virtual care.

To ensure virtual care is sufficiently interoperable and collaborative, governments must facilitate the greater adoption of digital tools and multi-party co-working platforms, enabled by an expansive procurement panel and a long-term strategy of procurement and integration.

Digital literacy and digital inclusion are essential to healthy takeup of virtual care. Governments must invest in relevant campaigns in the health care context for consumers, carers and clinicians.

Virtual care, viewed through a public health and allocative efficiency lens, must involve the investment in capable, in-home care, reducing inappropriate or unnecessary hospital or clinic attendance through the integration of diagnostic and monitoring tools.

Funding is a critical part of the virtual care equation. Governments must invest in funding infrastructure at both state and federal levels to meaningfully progress telehealth into virtual care. This will include procurement review and reform ensuring that acquisition habits are agile, frequently refreshed and expansive.

Security must be part and parcel of telehealth and virtual care, with practices and hospitals engaging in coordinated risk assessments and mitigation strategies around virtual care processes, with security oversight of each component in the virtual care solution.

Finally, to support this journey, governments must prioritise the application of appropriate technical standards for telehealth and ICT-enabled consultations in Australia.

THE JOURNEY SO FAR

Virtual care and telehealth is not a new concept – it is 150 years in the making. COVID-19 has leapfrogged it into a mainstream discussion for consumers, clinicians, health services, the digital health IT sector and governments.

1870s

The origins of using technology to support care in the home may be traced back to the nineteenth century. A medical journal in 1879, the Lancet, wrote about use of telephony to reduce unnecessary clinical visits.

1920s

The Science and Invention magazine in 1925 featured a report of a doctor who diagnosed patients via radio. It had the prescience to imagine a device that, in some far-flung future, would allow for remote video examination of patients.

1960s

With the dawn of the space age, NASA performed physiological monitoring of its astronauts from quite some distance. This technology was later translated to use with America's indigenous peoples in rural settings.¹

1990s

With an initial focus on improving access for patients in regional and rural areas, and subsequently avoiding the need for admission or lengthy hospital stays, adoption of telehealth came in the 1990s and has evolved into telemental health, specialist assessment and treatment support for remote and regional centres, hospital in the home services and a range of other applications and models of care.

2020s

The COVID-19 pandemic precipitated a rapid acceleration of virtual care (albeit largely telephone consultations) at a time when health services were already exploring how they could better support patients at home.

1

<https://www.ncbi.nlm.nih.gov/books/NBK207141/>

A SECOND LEAPFROG

Crisis is a proven accelerator of technology and its uptake and adoption into workflows. Adoption of telehealth by GPs and health services was essential to maintaining access to care for patients.

With the outbreak of the COVID-19 pandemic, Australia saw an initial burst of uptake in telehealth, necessitating moves from government such as the introduction of new Medicare Benefits Schedule (MBS) item numbers for telehealth.

Australia also saw an uptake in virtual models of care across a range of patient groups including within cancer care facilities, hospital geriatric teams and aged care facilities.

Despite the availability of end-to-end electronic prescribing and dispensing at the onset of the pandemic, prescription processes were a challenge in making the transition to virtual care for many individuals, with scripts being faxed to pharmacies ahead of the accelerated rollout of e-prescribing using cloud technologies.

While health services have seen a six to eight-fold increase in the use of video consultations since the outbreak of the pandemic, the majority of telehealth consultations remain by telephone.

Virtual care became a way for governments and health services to both look after people affected by a highly infectious disease remotely, and provide continuity of clinical services for all patients without requiring physical presentation into primary care pathways.

THE NEXT STAGE – BEYOND TELEHEALTH

With COVID vaccines now available, the world can see a light at the end of the COVID-19 tunnel. However, the momentum of telehealth needs to be continue and mature.

The next wave and level of sophistication will be a move to greater use of video consultations, the use of devices via remote monitoring and increasing interoperability and integration of virtual care into practice, hospital and health service clinical management software and systems.

Trusted digital health technology providers and the range of software, apps, tools and technologies is growing. Lack of technology is not a barrier.

The AIA stands ready to assist in facilitating its growth and maturity through industry collaboration.

CASE STUDY: VIRTUAL CARE ACCELERATOR

Groups such as the NSW Health Virtual Care Accelerator, which is a new multiagency and clinically-focused unit established to ensure patients have full access to the best that telehealth-enabled models of care and remote monitoring have to offer, create governance mechanisms for sharing learning and leveraging the virtual care initiatives achieved by individual regions.

[Read more here](#)

Terminology matters. COVID-19 precipitated the vast acceleration of telehealth, which is a relatively narrow concept. Our society and medical institutions now need to perform a second leapfrog into the full integration and utilisation of virtual care.

Government, society and industry must now develop a long-term strategy to build the concepts of virtual care into mainstream healthcare delivery in a post-COVID world.

Our vision must be for virtual care not as an exception or backup to in-person care, but as a core component of care that is part and parcel of how patients, clinicians and clinical teams interact.

Clinicians and consumers must be engaged as co-designers in the development of models of digital health care.

We need to combat the notion that virtual care constitutes second-rate or second-class care. Virtual care should not be viewed as simply substitution but as a substantive and valuable augmentation to traditional models of care.

RECOMMENDATION 1

That hospitals, practice managers, and government agencies demonstrate greater adoption of digital health tools and multi-party coworking platforms.

RECOMMENDATION 2

That governments adopt an expansive procurement panel and enact long-term strategies of procurement and integration for virtual care and digital health tools.

SECURE, INTEGRATED & ACCESSIBLE CARE

ACCESSIBILITY

There is a significant variation in the quality, sophistication and integration of technology platforms. Switching between platforms and operating on the basis of an ad-hoc hybridisation of platforms such as phone, email and video consultation risks the coherence and security of patient-clinician engagements.

Some patients turn off their video to save on data costs, while clinicians often default to the telephone when connection or microphone issues come into play. Some rural and remote health services would like to benefit from better telehealth but struggle with bandwidth or network access issues.

There is a role for government and telecommunications industry to play in incentivising the full use of video platforms, reducing socioeconomic and regional divides.

CASE STUDY: TELESTROKE MODEL OF CARE

Clinician-to-clinician coworking stands to gain from models of care and collaboration such as Telestroke, which saw 400 patients treated in the first 6 months of its operation. Telestroke provides high-quality clinical advice into rural and regional parts of NSW, delivering lifesaving diagnostic decisions with speed and reliability.

[Read more here](#)

IT professionals inhouse should encourage patients and clinicians to persist with the full-scale solutions they have at their disposal rather than defaulting to telephony. IT Industry and health leaders must articulate the value of engaging with one another beyond the telephone to gain a holistic, integrative picture of health.

Virtual care and online chat-based care has yielded accessibility dividends amongst younger populations engaging with clinicians about mental health issues.

Data and applications do not provide care; people do. Thus, we must focus on better connecting people with systems and with each other to optimise care.

CASE STUDY: RPA VIRTUAL

RPA Virtual in the Sydney Local Health District (LHD), which was begun before COVID-19, is an example of a vehicle that was taken to the next level during the pandemic. It is used remotely in medihotels, residential settings, video consults and nursing follow-ups. RPA Virtual is augmented with simple biometric devices such as pulse oximeters.

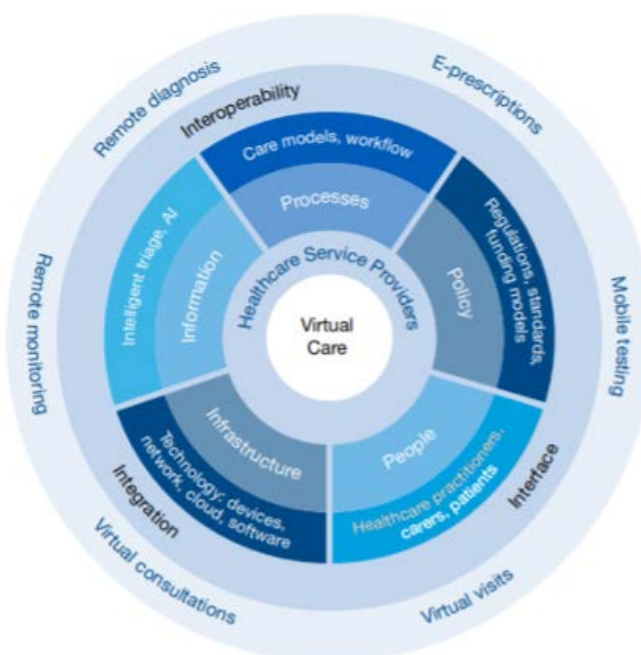
[Read more here](#)

LACK OF INTEGRATION

The integration of hardware, software, people, processes, information and information technology systems must be encompassed in strategies to break down technology barriers.

Incorporating information such as electronic health records, mobile testing, and communications data will ensure we meaningfully move beyond the concept of telehealth into virtual care.

VIRTUAL CARE SOLUTION COMPONENTS



Virtual Care is provided by Healthcare Service Providers:

Virtual care services are:

- 1 **Composed of the Interface between People**
 - i. People refers to anyone who is involved in the healthcare ecosystem, from *Patients* to *carers*, and any type of *Healthcare practitioner, provider or professional*.
- 2 **Facilitated through Interoperability**
 - i. Interoperability is the **Integration of Information** systems, **Processes**, and **Infrastructure** to enable the secure exchange and use of healthcare information.
 - ii. Information is any data recorded or transmitted in the process of delivering healthcare, and its processing may include *Intelligent triage and AI*; and
 - iii. Infrastructure is the technology components required to deliver the healthcare services. This includes *hardware, software, devices, network resources, cloud architectures* and so on.
 - iv. Processes are the procedures related to delivering healthcare and include *Care models, Workflow, and care pathways*.
- 3 **Supported by Policy**
 - i. Policy includes *Governance, Standards, and Funding models*.

Examples of virtual care components include *Remote Monitoring, Remote Diagnosis, E-Prescriptions, Mobile Testing, Virtual Visits, and Virtual Consultations*.

SOURCE: pp. 14, 15, Reimagining a Better Healthcare System through Virtual Care – Cisco White Paper: https://www.cisco.com/c/dam/en_us/solutions/industries/resources/healthcare/reimagining-better-healthcare-system-through-virtual-care.pdf

SECURITY

To engender takeup of digital health technology by consumers, clinicians and patients, they must be assured of the privacy and security of virtual care enabling platforms.

Patient information, videos and still images must be stored securely and the nature and location of their secure storage must be effectively communicated to users.

Video interface platforms must be dependable and secure.

Health data is valuable when it falls into the wrong hands, including on the dark web, where the black market value of a health record (up to \$1000AUD) exceeds that of even financial data. The health sector has increasingly been targeted by cyberattacks such as ransomware attacks, with patient data stolen and healthcare delivery services crippled.

Health is in the top three industries affected by security breaches.

There is an inherent vulnerability in connectivity and the security implications of sensitive patient-clinician data interactions must be considered.

Clinician and patient endpoints are the most challenging to secure, particularly if they are in the control of the patient and the patients' systems, which will vary, or if there is a hybrid of email and video communications taking place.

With patients becoming a participant in the security process themselves, we have opened up a new frontier in the securitisation of clinical systems, requiring deeper community engagement about cyberawareness and safety.

There must be a greater allocation of funding and resources for IT security for all agencies, hospitals and practices.

We must move from the initial reaction to longer-term solutions, to create reliable, available, relevant, complete, secure platforms.

CASE STUDY: HEALTHTRACK

HealthTrack, a recipient of the 2009 AIA iAwards, is an advanced clinical reporting software platform that augments virtual care through the use of user-friendly widgets. Prior to the pandemic it facilitated approximately 2000 consultations in Victoria but from March to September 2020 it facilitated approximately 80,000. 90 new services as part of the Victorian health ecosystem signed on to the platform, including community health organisations and drug and alcohol services.

[Read more here](#)

RECOMMENDATION 3

That governments invest in digital inclusion and digital literacy campaigns in the health care context for consumers, carers and clinicians to enhance takeup of virtual care tools.

RECOMMENDATION 4

That governments approach virtual care through a public health and allocative efficiency lens, funding capable in-home virtual care to reduce inappropriate or unnecessary hospital or clinic attendance

RECOMMENDATION 5

That practices and hospitals engage in coordinated risk assessments and mitigation strategies for virtual care processes, with security oversight of each component in the virtual care solution.

FUNDING & STANDARDS

FUNDING MODELS AND PRACTICES

We need strong funding models and state and federal leadership to invest in infrastructure to progress telehealth to meaningful virtual care and value-based care.

Procurement reform could be relevant to the virtual care equation, as much government-purchased IT is bought for an initial lifecycle and defaults to run for much longer.

There are barriers in OpEx funding models. With governments such as New South Wales, technology is moving to subscription-based public cloud services rather than big box data centres. Armed with a common framework, the health technology industry can take advantage of this shift and encourage coordinated developments in virtual care.

CASE STUDY: BETTER AT HOME INITIATIVE (VIC)

Better at Home invests in best-practice management of conditions including heart attacks or coronary syndromes, all the way from the ambulance through to secondary prevention and exercise programs. Better at Home ensures more care is performed closer to the patient and in-situ, improving the patient experience at the source and affording hospitals a higher allocative efficiency.

[Read more here](#)

STANDARDS DEVELOPMENT

In line with the NSW Cyber Security Harmonisation Taskforce report in January 2021, health is a priority sector for the development and coordination of standards.

A Taskforce recommendation was a publicly-available directory of security standards to facilitate the engagement of procurers, providers and suppliers with health management systems and telehealth platforms.

The Australian Digital Health Agency is undertaking an expert Telehealth Standards consultation project, which concludes in April.

RECOMMENDATION 6

That governments invest in funding infrastructure at the state and federal levels to progress telehealth towards meaningful, fully-leveraged virtual care.

RECOMMENDATION 7

That governments investigate procurement reform for telehealth ensuring procurement habits are agile, frequently refreshed and expansive.

RECOMMENDATION 8

That all governments, Commonwealth, State and Territory continue to prioritise the application of appropriate technical standards for telehealth and ICT-enabled consultations in Australia, including through the ongoing ADHA telehealth standards consultation project.

RECOMMENDATION 9

That Government to accept the recommendations of the Aged Care Royal Commission on Telehealth particularly those that refer to common data sets, shared care records and reimbursement of telehealth enabled preventative health measures.

FINAL WORD

The AIIA's vision is to shape, support and strengthen secure, interoperable and easy-to-use quality virtual care across Australia.

Government agencies, hospital systems, the IT industry, medical practices, clinicians, patients must move to a second leapfrog into a broader and maturing perspective of virtual care.

We need to prioritise the security, seamlessness and interoperability of virtual care systems for providers and consumers.

Funding and policy frameworks need to align together with patients, clinicians, IT and security professionals placed at the heart of the co-design process to secure a workable, fully utilised virtual care model for the public good.

CASE STUDY: HOSPITAL IN THE HOME (VIC)

At the height of the COVID-19 second wave in Victoria, Hospital in the Home was necessary for 30% of COVID-19 cases, whose condition was more severe than those being managed by GP telehealth and less severe than those requiring admission to hospital in-person. Integration of medical reporting such as pulse oximetry monitoring into virtual care systems was vital.

[Read more here](#)

About the AIIA

The Australian Information Industry Association (AIIA) is Australia's peak representative body and advocacy group for organisations in the digital ecosystem. Since 1978 AIIA has pursued activities to stimulate and grow the digital ecosystem, to create a favourable business environment for members and to contribute to Australia's economic prosperity.

We do this by delivering outstanding member value, by providing a strong voice of influence; building a sense of community through events and education; enabling a network for collaboration and inspiration; and developing compelling content and relevant and interesting information.

Our members are diverse and truly represent the diversity of the Australian tech ecosystem and include Australian SMEs and larger technology, telecommunications and infrastructure and cloud companies as well as hyper-scale cloud and multi-national software and SAS providers.

Our structure is inclusive, with State Councils in five states and the ACT, including a Western Australia Council that provides direction and support for businesses, large and small.

This submission is informed by a policy platform that is both national in its outlook and ambition for the Australian industry and focussed on its approach to outcomes specific to the WA landscape. We welcome to opportunity to work with all parties on a forward-thinking agenda.

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Australian Information Industry Association

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