# HEALTH EXPERT WORKING GROUP

January 2022

Australian Broadband
Advisory Council

![Australian Broadband Advisory Council logo]

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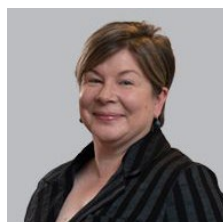
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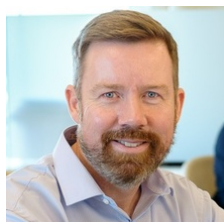
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**Australian Broadband Advisory Council**

# INTRODUCTION

The Australian Broadband Advisory Council (ABAC) established the Health Expert Working Group (HEWG) to examine the digital health ecosystem, including identifying barriers to greater take up of digital technologies in the health sector and how to make best use of the opportunities presented by the rapid acceleration of telehealth[1] and other digital health initiatives during the COVID-19 pandemic.

The purpose of the paper is to assist ABAC in forming its advice to the Hon Paul Fletcher MP, Minister for Communications, Urban Infrastructure, Cities and the Arts, on ways to maximise the benefits of high-speed broadband for all Australians.[2] The recommendations mainly focus on leveraging the underlying infrastructure and the importance of access to reliable and affordable internet, additional enablers are equally critical in the uptake of telehealth. These enabler are also relevant to other government agencies such as the Department of Health (DoH), the Australian Digital Health Agency (ADHA) and NBN Co.

The paper acknowledges the significant work currently being undertaken by the states and territories, and the Australian Government, including the Department of Health and other government agencies such as the ADHA and the Australian Quality and Safety Commission, and seeks to align with this work as much as possible.

The paper recognises the Aboriginal Community Controlled Health Service (ACCHS) sector as a major provider of health care, particularly across regional, rural and remote Australia, and the Indigenous and non-Indigenous health service providers who work in the sector. It also recognises the importance of the Closing the Gap targets as they relate to health outcomes for Aboriginal and Torres Strait Islander peoples.

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[1] For clarity, the Department of Health and the International Organisation for Standardisation defines telehealth as the 'use of telecommunication techniques for the purpose of providing telemedicine, medical education, and health education over a distance'. This also includes traditional telephone-based consultations and video conferencing.

[2] Terms of Reference, https://www.communications.gov.au/documents/health-expert-working-group-hewg-terms-reference

# SCOPE

The paper focuses on increasing the uptake of telehealth[3] and digital health[4] to make sure that their benefits can be realised by health practitioners and consumers across Australia. These benefits include:
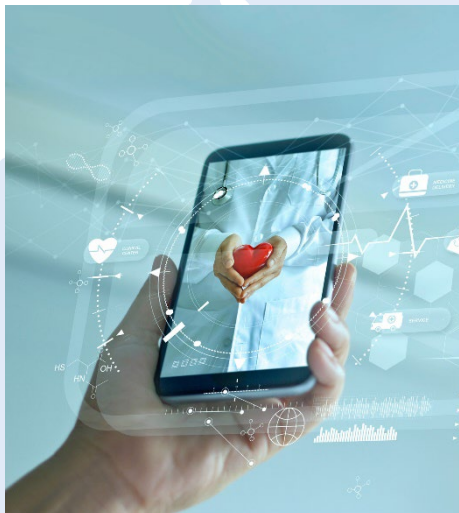
**increased availability and enhanced access to quality health care for all Australians**

**greater consumer engagement with GPs and other primary care providers through the appropriate use of digitally enabled self-care apps and virtual monitoring technology**

**extending the reach of primary care services, particularly in regional, rural and remote areas and for Aboriginal and Torres Strait Islander communities**

**driving the integration of face to face and virtual care as the standard modes of care.**

The paper identifies three major lines of enquiry highlighting opportunities and strategies for initial consideration. These are connectivity and co-investment, innovation in health care delivery, and a digital ready workforce. Priority actions are provided under each line of enquiry. More generally, the paper also highlights the importance of digital inclusion and the benefits of a sustained national rollout of telehealth.

In particular, the paper examines how current and future investments in connectivity can be leveraged to best support digital health, current innovations within the digital health sector and ways to support a digitally capable health workforce.

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[3] Telehealth, as a subset of virtual health more generally, is a method of delivering health care that involves the use of information and communications technology (ICT) to transmit audio, images and/or data between a patient and a healthcare provider. Telehealth can be used to provide diagnosis, treatment, preventive and curative aspects of healthcare services.

[4] For the purposes of this paper digital health is defined as encompassing non-face-to-face clinical care, professionally enabled through digital mechanisms such as telemedicine and telehealth, remote monitoring, integration of consumer data and digital tools and use of apps and devices. These mechanisms connect clinicians, patients, care teams and other health professionals to provide health services, support patient self-management, share health information and coordinate patient care across the health continuum.
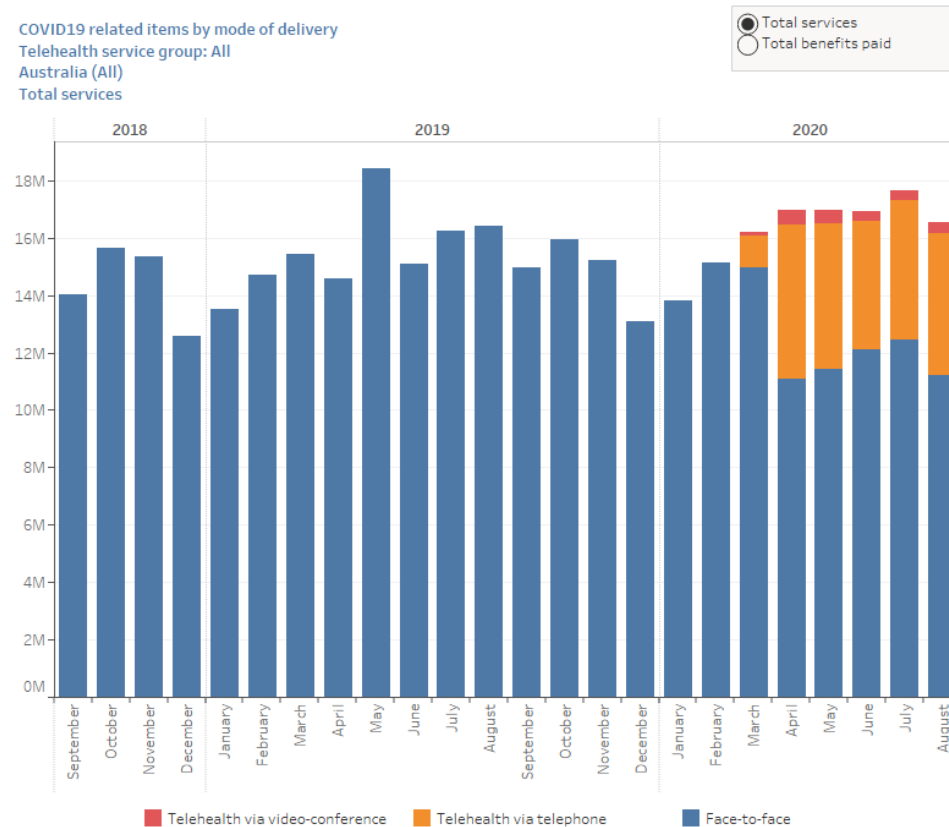
## COVID-19 related items by mode of delivery

Telehealth services group:
All

Select State/Territory:
Australia

Capital city / Rest of state (GSSCA):
All

COVID19 related items by mode of delivery
Telehealth service group: All
Australia (All)
Total services

- Total services
- Total benefits paid



Telehealth via video-conference    Telehealth via telephone    Face-to-face

Source: AIHW analysis of MBS data maintained by the Australian Government Department of Health.
http://www.aihw.gov.au

Measures introduced by the Australian Government in response to the COVID-19 pandemic significantly improved access to telehealth, including access to general practitioner (GPs), specialist, allied health, and nurse practitioner health services. The measures saw unprecedented rapid take-up of telehealth across Australia, with more than 4.3 million health and medical services delivered to more than three million patients.[5]

The level of take-up suggests that many consumers – having had an opportunity to use telehealth facilities – are now more aware, ready and receptive to using it in the future. Our consultations with leading consumer health organisations have also indicated that access to digital health care should be considered an essential component of future health care delivery alongside and integrated with face-to-face care.

Telehealth has reduced geographic barriers to important medical services and improved access for vulnerable patients. With regard to telehealth, the Department of Health has advised that videoconferencing is the preferred method, however the Royal Australian College of General Practitioners (RACGP) Telehealth Video Consultation Survey for July 2020 showed that 97 per cent of respondents were undertaking telehealth consultations via phone.[6]

Telehealth adoption has differed across health practitioner services, ranging from an estimated 11 per cent of obstetrics consultations (the lowest), to just under a third (30 per cent) for GP consultations.[7]

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[5] Australians embrace telehealth to save lives during COVID-19 (2020) https://www.health.gov.au/ministers/the-hon-greg-hunt-mp/media/australians-embrace-telehealth-to-save-lives-during-covid-19

[6] RACGP Telehealth Video Consultation Survey (2020) https://www.racgp.org.au/FSDEDEV/media/documents/RACGP-Telehealth-video-consultations-survey-Summary-of-results-July-2020.PDF

[7] Impacts of COVID-19 on MBS and PBS service use (2020) https://www.aihw.gov.au/reports/health-care-quality-performance/covid-impacts-on-mbs-and-pbs/contents/impact-on-mbs-service-use

To support the ongoing use of Telehealth, the Medicare Benefits Schedule (MBS) Review Taskforce developed a set of principles as part of its final report in December 2020. The principles included that telehealth should be:

- patient-focused, and based on patient need, rather than geographical location

- support and facilitate safe and quality services that demonstrate clinical efficacy for patients

- prefer video over phone, as video offers richer information transfer, and

- require ongoing data collection, research and evaluation into outcomes and utility

Investing in digital health is critical in supporting improved health outcomes for Indigenous Australians, particularly those living in regional, rural and remote areas where access to health services and health care is impacted by workforce shortages and distance to providers. For example, research has shown that telehealth is used to address poor accessibility to health services and targeted screening programs for at risk Aboriginal and Torres Strait Islander peoples.[8]

Five key requirements have been identified to deliver a sustained roll out of telehealth, including developing a skilled workforce, empowering consumers, reforming funding, integrating telehealth into routine care, and making the associated system changes.[9] These requirements, as they intersect with the HEWG's lines of enquiry are discussed further below.





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[8] Telehealth a game changer: closing the gap in remote Aboriginal Communities (2019) https://www.mja.com.au/journal/2019/210/6/telehealth-game-changer-closing-gap-remote-aboriginal-communities
[9] Building on the momentum: Sustaining telehealth beyond Covid-19 (2020), https://journals.sagepub.com/doi/full/10.1177/1357633X20960638

# Lines of Enquiry
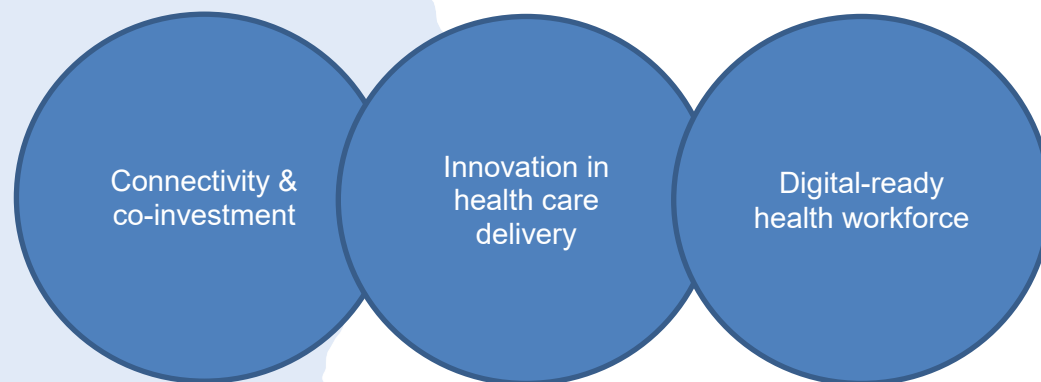
# DRIVERS OF DIGITAL HEALTH

The integration of digital technology in the delivery of health care will help address rising health care costs across the sector, which are largely driven by the impact of an aging and growing populations, market expansion, clinical advances and increased workforce demand.

The sector is currently at a turning point in delivery of digital health – while the ongoing investment in telecommunications infrastructure provides a strong platform for digital health, there remain opportunities to accelerate the adoption of digital technologies by health practitioners.

Accelerating the implementation of value based[10] digital health care would deliver system and consumer benefits, such as, expedite the realisation of increased access to health care, improved affordability, greater sustainability, higher efficiency and effectiveness and more consumer choice.

To harness these economic and community benefits improved digital access to consumers, and a positive regulatory and payment framework is needed.

The lines of enquiry outlined below are informed by consultations with Commonwealth Government bodies, consumer organisations, Aboriginal Community Controlled Health Care Organisations, key stakeholders, and input and advice from the HEWG and the Secretariat.



Connectivity & co-investment

Innovation in health care delivery

Digital-ready health workforce

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[10] Value based health care is a way of organising health care to maximise the outcomes that matter to patients, relative to the end-to-end costs of their care. It does this by taking a long view – considering value not based on a single healthcare encounter, but in terms of the outcomes of a full pathway of care and the resources involved along the way (https://www.bettersafercare.vic.gov.au/news-and-media/local-and-international-perspectives-on-value-based-health-care)

# PRIORITY INITIATIVE 1
## Connectivity & Co-Investment

## Connectivity

Connectivity is defined as the ability of consumers and providers to connect to a reliable, accessible, affordable and compatible telecommunications infrastructure with a capability which meets user performance expectations. It encompasses:

- patient connectivity with the provider and vice versa

- provider connectivity to the broader health system, including data and image transfer

- system interoperability of different and disparate digital systems and tools

- user ability and skills to fully utilise the services provided.

Connectivity was a key issue raised by stakeholders during the course of the Health Expert Working Group. Connectivity gaps were reported by consumers and providers across a range of settings including regional, rural and remote. More generally, consumer surveys have indicated that 54 per cent of respondents citing 'unreliable internet access' as the largest perceived barrier.[11] In some locations, the lack of reliable and affordable, high speed broadband infrastructure was identified as a barrier to further take-up of digital health (particularly in rural and remote areas).[12] Digital connectivity is particularly important in regional areas in terms of the attraction, recruitment and retention of health professionals.

Even in communities where the physical infrastructure is available, consumers and providers do not always feel empowered or enabled to make full use of it. These gaps may become more acute as software developers move to cloud services and new digital platforms (which are more reliant on quality connectivity and digital skills) become available to drive innovative models of care.





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[11] Australia's Health Panel March/April 2020 https://chf.org.au/ahptelehealth

[12] Telehealth – the right tool for rural and remote Australia https://valionhealth.com.au/business/blog/telehealth_remote_and_rural_australia/

For example, a survey of Sky Muster users undertaken by the Better Internet for Rural, Regional and Remote Australia (BIRRR) in 2021 found that 40.1 per cent of survey respondents felt they experienced poor speeds, 38 per cent had no back up service and 29.5 per cent of Sky Muster customers rating their reliability of their internet connection as average or poor.[13] Around one third of respondents indicated that Sky Muster was not meeting their current needs.

The BIRRR survey also highlighted that that there was confusion with plans types, issues in getting problems resolved and understanding who was responsible for each issue within the network. Sky Muster Plus, introduced by NBN Co in 2019 and caters for many users in regional and remote Australia in satellite areas, provides broadband plans that allow up to 300GB of data download (half of which is during peak periods), as well as unmetered access for some applications. The initial unmetered applications, which included web browsing, email and PC and smart phone operating system updates, could incorporate health applications to increase access to digital health services in identified communities.

It is also worth noting that the Digital Health Centre for Research Excellence has recommended minimal bandwidth speeds of 15 Mbps download and 5 Mbps upload for video consultations.[14] NBN Co's Sky Muster Plus wholesale speeds is 25/5 Mbps which meets these basic requirements[15]. For larger businesses, enterprise and government users in regional and remote Australia, business-grade satellite network services are available across through NBN Co's Business Satellite Services.

As noted in ABAC's first report: *Riding the Digital Wave* an improved place based lens is needed to correctly diagnose service and performance issues; to support regions to improve use of emerging technologies; to better target government infrastructure investment and to track the effectiveness of existing programs.[16]

In this context, there is an opportunity to further explore the challenges of connectivity – by mapping current infrastructure gaps with areas where digital health can deliver the greatest benefits, namely areas with high proportion of chronic disease; areas where access to health care is relatively low; areas where telehealth utilisation rates are relatively low. This holistic approach will help ensure that investments in digital connectivity and digital literacy can deliver the greatest benefits – for example, familiarity with video conferencing tools can be used for video consultation in health, but also transferred for virtual learning in education or vice versa. At another level, alignment of connectivity investments in health with other regional connectivity priorities, would maximise the benefits to the community as a whole.



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[13] BIRRR Consumer Survey in 2021: Review of NBN Sky muster Retail Service Providers: https://birrraus.files.wordpress.com/2021/03/birrr-sky-muster-review-survey-results-final.pdf. This aligns with results from surveys in other sectors such as agriculture, where around 40 per cent of producers have reported they are dissatisfied with their home internet connectivity, and 43 per cent reported have little or no coverage when it came to connectivity across their entire farm. (Agricultural Innovation — A National Approach to Grow Australia's Future https://www.agriculture.gov.au/sites/default/files/sitecollectiondocuments/agriculture-food/innovation/full-report-agricultural-innovation.PDF)

[14] Digital Health CRC, Telehealth: Hints and Tips for Health Consumers https://digitalhealthcrc.com/telehealth/consumers/

[15] NBN Sky Muster Explained https://www.nbnco.com.au/learn/network-technology/sky-muster-explained

[16] Riding the Digital Wave: Report on Covid-19 Trends and Forward Work Program (2020) https://www.communications.gov.au/documents/riding-digital-wave-report-covid-19-trends-and-forward-work-program

**Strategy 1 – Enhance connectivity and align connectivity investments with areas of high need.**

**1** The Australian Government should create and maintain a map of connectivity overlaid with public health indicators



**2** The Australian Government should foster a framework for expanded unmetered access to mobile and fixed infrastructure data for health applications for priority populations

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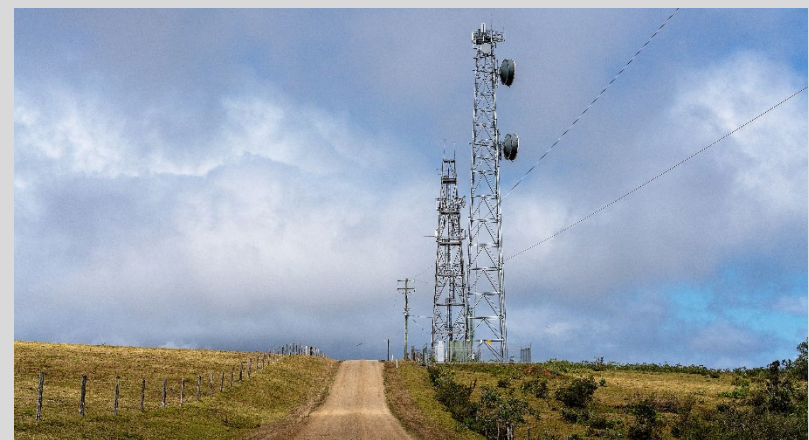
# Priority Initiative 2
# Innovation in digital enabled health services

During the COVID-19 pandemic, patients were largely unable to access care in the traditional way (i.e., face-to-face interactions with their health providers). As a result, the health system rapidly transitioned to provision of health services virtually, with telehealth use increasing from less than two per cent of healthcare services to more than 30 per cent in the year from February 2020. With the Australian Government announcing its ongoing commitment to supporting telehealth, it is not expected that the system will revert to levels of pre-pandemic face-to-face service models. However, the challenge will be to drive this transition further and, in particular, to encourage the use of video in telehealth consultations (the majority of which are still done by phone).

A reliable and accessible telecommunications infrastructure is the foundation for the ability of consumers and provider to connect to virtual health. As the use of digitally enabled models accelerate it will be critical that new connectivity avoid creating a digital divide.

Investment in connectivity can be leveraged to develop and implement new sustainable virtual models of safe, high-quality health care, underpinned by health system design principles and appropriate change management strategies. These new models of care should be informed by research, including available evidence in the published literature, or supported by a clear research strategy which addresses feasibility, clinical and cost-effectiveness, clinical need, user experience and overall return on investment (ROI). Importantly, the transparency of results will help with replication of successful telehealth-enabled service models and prioritisation of government funding.

New care models are already being enabled and augmented by work led by the ADHA to roll out a national business system processes including e-prescribing scheme for dispensing medicines. This new system has already seen more than 4 million e-prescriptions dispensed to Australians.

Further ADHA-led digital initiatives are underway to support and enable better connected, safer healthcare delivery. They include an e-referrals system that will give patients, requesting practitioners and other service providers access to timely, accurate diagnostics and reduces duplicate and unnecessary imaging tests for patients. They also include a program to support older Australians in residential aged care when transitioning in and out of acute facilities – dramatically uplifting digital connectivity in the residential aged care sector and supporting more efficient transitions of care that provide vastly better customer experience and access to critical clinical information and better-quality end of life care.

These initiatives are scaffolded by growing use and uptake of and enhancements to the My Health Record system to provide clinicians with vital information at the point of care, and the growing use of interoperable secure messaging networks to support real time information exchange.

With the ADHA's recent rapid rollout of a digital mobile platform that ensures key vaccination data can be captured and shared at the point of vaccination even where clinical systems are not yet fully conformant, the ADHA is supporting clinicians to ensure that vaccine administration flows into the Australian Immunisation Register and into My Health Records.

Australian consumers can also more fully realise the benefits of their My Health Record with the ready display of COVID-19 tests and vaccination status, alert messages when their COVID-19 vaccination is due and second/booster dose notifications.

The figure below illustrates how health care models are evolving to deliver health across a range of settings, increasing the reliance on digital and data as important enablers. The figure also highlights the important role that virtual care has alongside other care settings.



Future-state health care delivery models

Source: Deloitte analysis.

# PRIORITY INITIATIVE 2 – Innovation in digital enabled health services

Key stakeholders identified the need to drive interoperability through authorisation and standard setting to ensure efficacy in health care and to increase access to quality, safe and secure care. In particular, the development and implementation of digitally enabled models of care would deliver affordable consistent high-quality patient care, improve patient flow and business efficiency through more efficient health care delivery models.

The approach to models of care development would be underpinned by co-design principles, taking place in dedicated centres of activity at the local health district level, in partnerships involving governments, universities, primary health-care networks, health-care providers and consumers. Clinician involvement would enhance willingness to practice. Consumer involvement would take into consideration their preferences to deliver the right care experience at the right time and increase their role in health care decision-making.

Over time the digitally enabled models of care would effectively link community and clinical services, enhance collaboration within the health sector and, in the longer term, improve health outcomes and guide the delivery of right care, right place, for the right cost.

Associated investment in systems supporting clinical integration and fit for purpose health policy and funding settings would foster strategically moving from volume to value in health care delivery and patient services.

## Strategy 2 – Accelerate health system integration

**3** **Accelerate interoperability of digital health systems to enhance health decision making across providers and enhance system efficiency**



**4** **Encourage and work with primary care providers, especially in rural communities, to take up telehealth, including video consultations**

# PRIORITY INITIATIVE 2 – Innovation in digital enabled health services

## Strategy 2 – Accelerate health system integration



**5** Undertake place-based planning, integration and funding of digital services (as part of health services more generally) to empower consumers and deliver coordinated primary and acute care



**6** Empower consumers through use of prescribed and curated mobile and web-based technology to promote healthy behaviours and reduce health risk factors.

It is envisaged that all such initiatives would be informed by evidence-based planning and evaluation and undertaken with the active involvement of clinicians, consumers, local health services and primary care networks and industry and academic partners.

# Priority Initiative 3
## Digital Ready consumers and health workforce

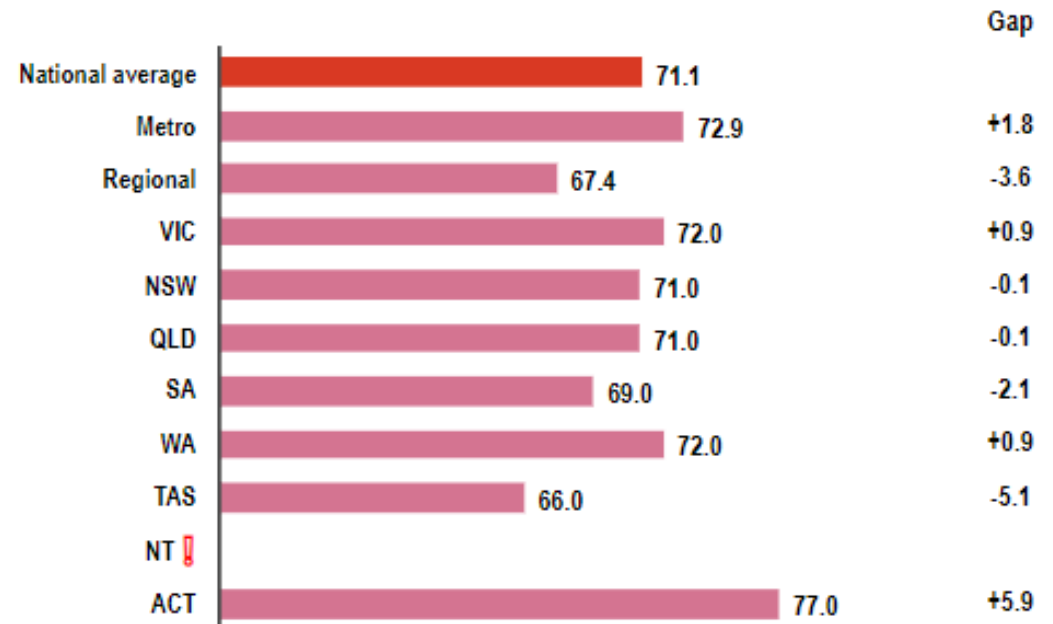## Addressing the digital divide in the Community

There are inherent structural challenges with the delivery of health in rural and remote care that have resulted in inequities in health access and outcomes. For example, according to the 2021 Australian Digital Inclusion Index (ADII), rural communities continue to be worse off than people living in capital cities in terms of:

- access – 3.7 points less
- affordability – 0.2 per cent less
- digital ability – 4.7 points less

**Chart 1 – Digital Inclusion Index (2020)** [17]



### ADII score comparison

| | Score | Gap |
|---|---|---|
| National average | 71.1 | |
| Metro | 72.9 | +1.8 |
| Regional | 67.4 | -3.6 |
| VIC | 72.0 | +0.9 |
| NSW | 71.0 | -0.1 |
| QLD | 71.0 | -0.1 |
| SA | 69.0 | -2.1 |
| WA | 72.0 | +0.9 |
| TAS | 66.0 | -5.1 |
| NT | | |
| ACT | 77.0 | +5.9 |



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[17] Australian Digital Inclusion Index (2021) https://www.digitalinclusionindex.org.au/dashboard/National.aspx

Digital inclusion remains a key challenge in making sure that all consumers, particularly those in regional, rural and remote areas, have access to digital technologies and services. According to the 2020 ADII, while the NBN has made a significant impact on access for regional Australians, there continues to be a gap in digital inclusion scores for Australians living in regional areas compared to those in urban areas.[18]

This gap is even wider for Aboriginal and Torres Strait Islander peoples, especially those living in remote communities, with the ADII noting that Indigenous Australians had a disproportionately higher use of mobile-only and prepaid connectivity compared to fixed line. If these gaps are not explicitly considered as part of digital health policy measures, there is the potential for the health inequities experienced by people in rural and remote Australia to increase further.

In order to mitigate against this risk, measures to support the take-up of digital health need to consider individual patient situations such as access to reliable internet, digital ability and confidence in using videoconferencing, as well as how these factors can operate at the community level. At a system level the initial unmetered applications in Sky Muster Plus, referred to above, could incorporate health applications to increase equitable access to digital health services in identified communities.

The sustained roll out of digital technologies in the health sector, especially telehealth, can play an increasingly important role in helping to ensure the effective delivery of health care in regional, rural and remote Australia. In order to do so, it will be important to consider how the Australian Government's investment in technology and infrastructure can be better leveraged to ensure that the health workforce – both current and emerging – has the skills and knowledge required to engage in the delivery of virtual care, for example, through the establishment of a national digital skills program.

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[18] Australian Digital Inclusion Index (2020) https://h3e6r2c4.rocketcdn.me/wp-content/uploads/2021/06/TLS_ADII_Report-2020_WebU.pdf

In this context it will be important to be mindful of how roles and responsibilities of health professionals will change over time, including in the use of data and smart technologies.

Research has shown that digital maturity in health and social care is lower compared to other sectors (as illustrated in Chart 2) and that this may partly explain the slower adoption of digital technologies in the health sector prior to the COVID-19 pandemic.

This low digital maturity is recognised as a factor which slows innovation and uptake in digital health models and therefore needs to be addressed as a matter of priority. Consultations have identified support for specified digital health enabling roles in virtual care navigation and digital health champions to address skills and connectivity barriers.
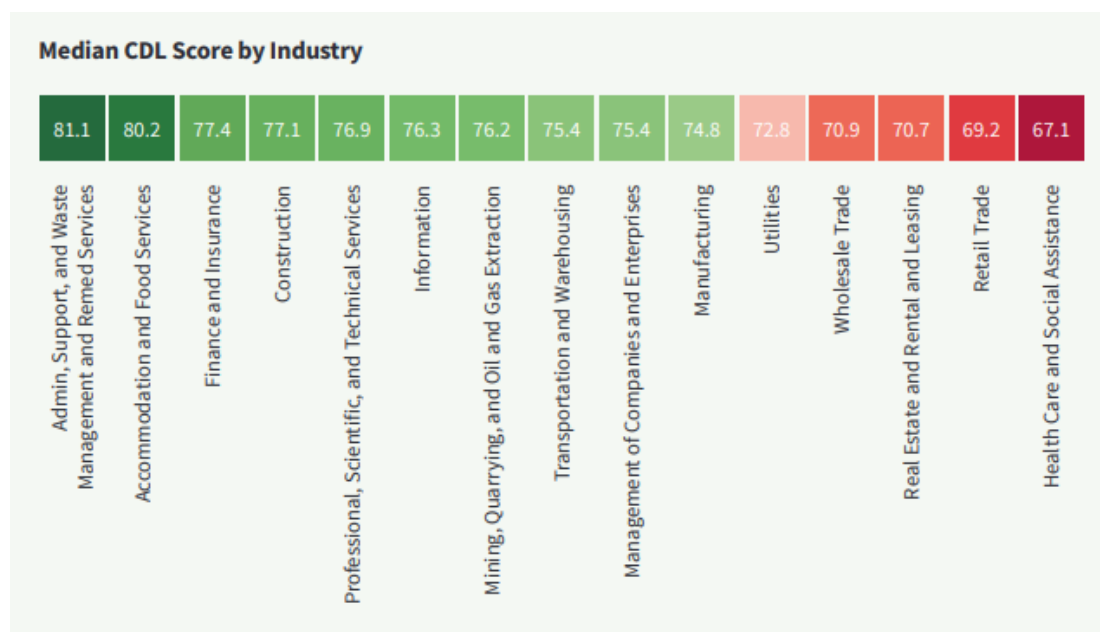
In considering options to support improved digital skills across the health workforce, the release of the National Digital Health Workforce and Education Roadmap (Roadmap) by the Australian Digital Health Agency in September 2020 is an important development for the sector.[19] The Roadmap's purpose is to assist the health workforce use digital technologies to deliver better health care by setting a pathway for building digital health capability and leadership.

Underpinning the sectoral focus of the Roadmap, however, will need to be targeted action to support digital upskilling in regional, rural and remote areas, including Indigenous communities.

The Aboriginal Community Controlled Health Sector has recognised the immense value of digital health and offered its strong support to build a digitally qualified Aboriginal and Torres Strait Islander health

workforce. The most useful targeted actions will be those which aim at addressing the specific digital skills required for general practice and community care and Aboriginal and Torres Strait Islander health-care providers, who have a central role in the coordination and delivery of primary health care.

## Chart 2 – Digital Maturity by Sector[20]



Median CDL Score by Industry

| Industry | Score |
|---|---|
| Admin, Support, and Waste Management and Remed Services | 81.1 |
| Accommodation and Food Services | 80.2 |
| Finance and Insurance | 77.4 |
| Construction | 77.1 |
| Professional, Scientific, and Technical Services | 76.9 |
| Information | 76.3 |
| Mining, Quarrying, and Oil and Gas Extraction | 76.2 |
| Transportation and Warehousing | 75.4 |
| Management of Companies and Enterprises | 75.4 |
| Manufacturing | 74.8 |
| Utilities | 72.8 |
| Wholesale Trade | 70.9 |
| Real Estate and Rental and Leasing | 70.7 |
| Retail Trade | 69.2 |
| Health Care and Social Assistance | 67.1 |

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[19] National Digital Health Workforce and Education Roadmap (2020) https://www.digitalhealth.gov.au/sites/default/files/2020-11/Workforce_and_Education-Roadmap.pdf

[20] Data Literacy Index (2018) https://thedataliteracyproject.org/files/documents/Qlik%20-%20The_Data_Literacy_Index_October_2018.pdf

## Clinical education, professional connectivity and supervision models

Consultation has identified acute health workforce shortages in rural and remote areas exacerbated by challenges with the delivery of clinical education and training pathways that rely heavily on physical supervision and face-to-face care.

Overcoming these structural challenges continues to be a priority for government with virtual education, collaboration and supervision models presenting an opportunity to establish rural health workforce pathways with the appropriate clinical governance and supervision.

There is also the opportunity to establish a digital network of care that connects primary care practices to share coverage, and support clinical education, supervision and research.

Utilisation of new evidence-based, and clinically tested technologies would serve to maintain effective professional peer-to-peer relations and collaborative partnerships, creating a cohesive and connected medical community locally and across Australia.

# PRIORITY INITIATIVE 3 – Digital Ready consumers and health workforce

**Strategy 3 – Develop the digital skills of health consumers and the health workforce to engage with, and deliver services in the digitally enabled health system of the future**

**7** Develop a digital skills uplift program for health professionals prioritising primary care providers and Aboriginal and Torres Strait Islander healthcare workers.

**8** Provide incentives for primary care practices in rural and remote areas to deliver care- in- place for consumers and to strengthen and support the health workforce in local communities.

# Recommendations

# RECOMMENDATIONS

| | | |
|---|---|---|
| **Foundational** | | Recommendation 1: The Australian Government should create and maintain a map of connectivity overlaid with public health indicators [Medium Term] |
| | | Recommendation 2: The Australian Government should foster a framework for expanded unmetered access to mobile and fixed infrastructure data for health applications for priority populations [Short Term] |
| **Core** | | Recommendation 3: Accelerate interoperability of digital health systems to enhance health decision making across providers and enhance system efficiency [Medium to Long Term] |
| | | Recommendation 4: Encourage and work with primary care providers, especially in rural communities, to take up telehealth, including video consultations [Short Term] |
| | | Recommendation 5: Undertake place-based planning, integration and funding of digital services (as part of health services more generally) to empower consumers and deliver coordinated primary and acute care. [Short Term] |
| **Optimisation** | | Recommendation 6: Empower consumers through use of prescribed and curated mobile and web-based technology to promote healthy behaviours and reduce health risk factors [Short Term] |
| | | Recommendation 7: Develop a digital skills uplift program for health professionals prioritising primary care providers and Aboriginal and Torres Strait Islander healthcare workers [Short Term]. |
| | | Recommendation 8: Provide incentives for primary care practices in rural and remote areas to deliver care- in- place for consumers and to strengthen and support the health workforce in local communities. [Medium Term] |

# RECOMMENDATIONS

The recommendations provided in this report aim to assist the Australian Broadband Advisory Council (the Council) in providing advice to the Australian Government on maximising the benefits of ubiquitous digital connectivity for all Australians. Although the recommendations mainly focus on leveraging the underlying infrastructure and the importance of access to reliable and affordable internet, additional enablers are equally critical in the uptake of telehealth. These enabler are also relevant to other government agencies such as the Department of Health (DoH), the Australian Digital Health Agency (ADHA) and NBN Co.

These enablers include improving remuneration for telehealth services, training/support for clinicians and health workers, ubiquitous information systems, interoperability of all communication and administration systems, creating an evidence-base for telehealth, planning new models of care, implementing processes which remove barriers known to prohibit access to telehealth services, ensuring patients are active participants in the design of digital health models, and addressing the digital divide in health care.

The recommendations should not be viewed in isolation but as an integrated suite of solutions and opportunities to leverage Australia's broadband infrastructure for the health sector in order to provide:

- increased availability and enhanced access to quality health care for all Australians, facilitated by digital health care investments
- greater consumer engagement with the health system including with general practitioners and primary care providers, through the appropriate use of digitally enabled self care apps and virtual monitoring technology
- extended reach of health services, particularly in regional rural and remote areas and for Aboriginal and Torres strait Islander communities by improving patient connectivity
- greater health system integration using a mix of virtual and face to face care models, enabled through digitally ready consumers and digitally skilled workforce.

# RECOMMENDATIONS

Recommendations 1 and 2 can be viewed as foundational recommendations and relate to identifying and ensuring that the appropriate connectivity infrastructure is in place. Identifying areas with good connectivity ensures digital health initiatives are well supported by the underlying infrastructure, similarly areas where the population has poor connectivity such as communities with a high proportion of mobile-only users provide opportunity for further investments and government support.

Recommendations 3, 4 and 5 can be viewed as core recommendations in order to implement or expand existing digital health initiatives. These recommendations focus on areas where the Primary Health Network (PHN) has network access, the applications in place, and patient data is freely shared amongst various services and software.

Finally, recommendations 6, 7 and 8 relate to optimisation of the health system and patient experience to ensure the health workforce is digitally capable both now and in the future, patients are supported through their digital health journey and there is no digital divide both for the patients and the overall health sector.

Time frames also provide a general sense on how long it would take to implement each recommendation (Short term: 1-2 years, Medium term: 2-3 years and Long Term: 4-5 years).

It is important to re-emphasis that digital health covers a range of modes of care from those that are technologically sophisticated, requiring a well-trained digitally enabled workforce and digitally confident patients supported by fast underlying connectivity, to simple monitoring devices that require low latency and minimal digital literacy to operate but all of which enhance patient care. This means that there are many opportunities for digital health and that digital health should not be viewed as a separate system only accessible to specific communities/health networks but part of the overall health system.

The recommendations are designed to encourage information sharing between all levels of Government; place-based, tailored approaches to integrating digital health within local health systems; and building digital literacy and confidence for both health professionals and patients. Digital health is not only about using technology to support patients and health professionals, it also includes matching the right type of digital services and tools, with the right type of connectivity, with the right type of community and health professionals.

## Recommendation 1: The Australian Government should create and maintain a map of connectivity overlaid with public health indicators [Medium Term]

- Connectivity provides a major foundation for the uptake of telehealth. Although nearly all Australians can access the internet, it is important to understand how Australians are connecting (mobile, Sky Muster or fibre) and the speeds and latency of their internet connections. Slow, unstable and high latency internet connections can significantly impede patient uptake of telehealth, particularly for video consultations.

- There is an opportunity to further explore the challenges of connectivity – by mapping current infrastructure gaps with areas where virtual health can deliver the greatest benefits, namely areas with high proportion of chronic disease; areas where access to health care is relatively low; areas where telehealth utilisation rates are relatively low.

- The Australian Government announced $13.7 million for a Regional Data Hub in the 2020-21 Budget. The Regional Data Hub aims to be a central source of data for regional Australia and help improve outcomes for communities by strengthening the evidence base for future decisions.

- While connectivity is one of the fundamental requirements for the delivery of online health services, it is important to note that increasing connectivity does not necessarily increase the delivery of telehealth. Other barriers exist, such as affordability and ability, so guidelines around supporting underserved population groups is important.

### Objective

**The Australian Government work with states and territories to develop a national map of connectivity infrastructure/access mapped to areas of public health need so that investment can be better targeted. As a starting point, this could involve, for example, ensuring that the Regional Data Hub incorporates health and connectivity data.**

### Activities

1. The Council will engage with the Bureau of Communications, Arts and Regional Research (BCARR) on the Regional Data Hub and the extent to which it will reflect contextual health data, including ABS data ,and with data held by PHNs, and incorporate the views of users of this data (i.e. state and territory capacity planners and PHNs, as well as health providers and consumers).

2. A first step could be to select a Phase 1 trial location/s, potentially aligned with ADHA's Communities of Excellence sites and develop a feedback loop to determine access gaps and opportunities for collaboration. Phase 2 would be an expansion of Phase 1 based on its success and lessons learned.

**Recommendation 2: The Australian Government should foster a framework for expanded unmetered access to mobile and fixed infrastructure data for health applications, with clear guidelines to target eligibility to priority populations [Short Term]**

- It is important that the connectivity quality is sufficient to meet the health needs of the community, from home-based medical devices that provide offsite monitoring to video consultations and medical data transfers.

- As noted in the Australian Digital Inclusion Index, mobile, pre-paid internet connection may be the only financially feasible connectivity option for low-income individuals and families.

- Unfortunately, mobile connectivity is generally a high cost connectivity option and therefore impacting low-income earners ability to undertake high data activities.

- Removing data constraints for telehealth will provide a significant benefit for the most vulnerable and disadvantaged members of the community, particularly when limited data needs to be shared between family and for other essentials such home schooling and work.

## Objective

**Retailers should be encouraged to explore technical options for providing unmetered access to health services and prescribed apps for targeted cohorts, and to provide advice to government on how they will address data constraints for those cohorts.**

## Activities

1. The Council will consult with NBN Co, retailers and mobile network operators to identify which websites and services are currently unmetered, whether this is a practical option and whether free wi-fi access points can be extended as a targeted measure.

2. The Council will also consult with Communications Alliance and Australian Communications Consumer Action Network to better understand the needs of the unconnected and how they can be addressed, including the extent to which access to devices is an issue.

3. The Council will liaise with the Department of Health on reviewing and showcasing innovative strategies which enable better access to telehealth services, such as through dedicated consultation rooms which are accessible to the general public, primary care, and school based services.

**Recommendation 3: Accelerate interoperability of digital health systems to enhance health decision making across providers and enhance system efficiency [Medium to Long Term]**

- Leveraging Australia's broadband infrastructure with virtual healthcare, requires a connected healthcare system that seamlessly shares high-quality patient data with the right people at the right time. Although the underlying connectivity infrastructure may be present, the health data system itself is often siloed, due to non-standardised terminology being used between information systems combined with medical software that aren't interoperable.

- An example of poor systems interoperability include GPs being unable to integrate video-consultation software with their booking systems creating unnecessary administrative burden. Aboriginal Community Controlled Health Organisations have also noted their patients having to revert to paper-based medical records when visiting specialists who are unable to access the data.

- The role of individual state and territory Health Departments is critical, and discussions between governments have already commenced through the National Health Reform Agreement

- Additional work is being undertaken through the Health Chief Executives Forum (HCEF), formerly the Australian Health Ministers' Advisory Council, which aims to deliver health services more efficiently through a coordinated or joint approach on matters of mutual interest.

- The Australian Government has committed $32.3 million in funding for the 2018–2022 Intergovernmental Agreement on National Digital Health, ensuring interoperability within national digital health infrastructure.

## Objective

**As per current work being undertaken by the Australian Digital Health Agency (ADHA), interoperability standards for the health sector should be introduced at the national level, requiring consistency of data, tools, terminology and privacy requirements.**

**This should be supported by incentives/funding to enable health services and professionals to transition to those new standards as quickly as possible, on the basis that funding processes should reflect any new requirements on practitioners.**

## Activities

1. The Council notes the work of the ADHA on interoperability and will engage with the ADHA on how it can support this work, including providing feedback on the ADHA's National Healthcare Interoperability Plan.

**Recommendation 4: Encourage and work with primary care providers, especially in rural communities, to take up telehealth, including video consultations [Short Term]**

- COVID-19 has vastly accelerated the uptake of telehealth consultations (particularly video consultations) which could lead to improved health outcomes for rural communities.

- It should be re-emphasised that telehealth should not be seen as a replacement for face-to-face consultation but instead leverages ubiquitous connectivity, to enable all Australians, regardless of location, are able to achieve high quality care.

- A key way of encouraging uptake may be to focus on customised support, conduct needs analysis, develop guidelines about the most appropriate services, prioritising services, facilitate change management strategies, provide practical clinical telehealth training, enable access to the evidence (an evidence library or repository), and make available direct operational support.

- Patient-end telehealth services using videoconferencing has been shown to be really useful, but it is not broadly supported by MBS items. The possibilities around patient-end telehealth, and the funding levers which could make it a more accessible option is worthy of further exploration.

- In areas with good connectivity, there is a need to identify the barriers on video consultations. The Australian Medical Association's Technical Committee has noted the technology is there but that interoperability remains a significant barrier.

## Objective

Promote the availability and use of telehealth by empowering local communities, including primary care providers, to identify local health priorities and how to utilise connectivity to support those priorities.

Additional support to enable these priorities in specific communities, within the context of regional health planning, should be considered. Funding priority should be given to communities where access to telehealth is low and where increased connectivity could result in improvements in health outcomes.

## Activities/Next steps

1. The Council will engage with the Department of Health and NBN Co on the development of an evidence library (website) to showcase the use of telehealth in different settings, such as successful trials undertaken by Aboriginal Community Controlled Health Organisations.

2. The Council will engage with Consumer Health Forum (CHF) and National Aboriginal Community Controlled Health Organisations (NACCHO) to undertake a review of consumer-friendly initiatives which have supported take up of video-based consultations.

## Recommendation 5: Undertake place-based planning, integration and funding of digital services (as part of health services more generally) to empower consumers and deliver coordinated primary and acute care. [Short Term]

- The funding model needs to be co-designed and tied to the digitally enabled, care coordination and clinical pathway. Co-design needs to ensure that consumers are part of the process to familiarise consumers with telehealth and how to access it.

- A Digital Health Specialist, based on the Digital Navigator Model, can be a new role that sits within organisations such as Primary Health Care Networks. This role would be additional to current arrangements.[21]

- It is important that patients and the health sector have access to a Digital Health Specialist who understand both the IT side and the specific needs of the health sector. While most communities may have access to dedicated IT technicians who can assist with basic connections, these technicians may not have a full understanding of specific health sector and patient requirements.

- A component of the Digital Health Specialist must include training for providers and consumers in use of and access to digital health innovations. As digital health evolves this must also include training of health providers and practices in balancing the capacity to continue to deliver health care that is centred around clinical quality and safety in a digital health model of care.

- The Australian Government has committed $1.8 million to expand the trial of collaborative primary care models that has been running in five rural communities in western and southern NSW into other states and territories.

### Objective

**To work with states and regional/rural health services to design and implement the provision of digitally enabled health services across the continuum of health care**

### Activities/Next steps

1. The Council will work with the Department of Health on the feasibility of a co-designed digitally enabled and expandable trial of place-based health care, supported by fit for purpose funding mechanism, in line with a Phase 1 trial locations as noted in Recommendation 1.

2. The Council will recommend Department of Health to work with consumer representative organisations to develop strategies which are designed to inform the general public about telehealth services, and assist with the co-design of digitally-enabled health services (patient-centric health services).

3. The Council will recommend the development of a communications and marketing plan to promote the use of telehealth / digital healthcare. Increasing awareness and knowledge of telehealth may result in a surge in interest.

4. The Council will recommend a trial of Digital Health Specialists within the workforce as part of Phase 1 trial. Ideally a Digital Health Specialist should be focused on at risk communities such as older Australians, Aboriginal and Torres Strait Islander people, people with disability, cultural and linguistically diverse populations and people in socioeconomically disadvantaged circumstances.

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[21] The Digital Navigator Model https://www.digitalinclusion.org/digital-navigator-model/

**Recommendation 6: Empower consumers through use of prescribed and curated mobile and web-based technology to promote healthy behaviours and reduce health risk factors [Short Term]**

- The widespread use of connected smart devices and apps, combined with the Australian Government's investment in My Health Record, provides an opportunity to empower consumers in accessing their own health data and being able to share it with all medical professionals throughout their health journey.

- At the moment it is not possible for patients to view on their phone their My Health Record information. This results in patients not being able to engage with their own data. However, the ADHA has recently announced that it will partner with a private company to develop a digital health consumer mobile channel starting with My Health Record integration.

- There is also the lack of data being entered by health providers. Without this data being entered and shared, there is little use in empowering consumers, at least in the context of My Health Record. This issue needs to be addressed - encouraging the sharing of patient data, will also enhance interoperability and prevent the siloing of records as noted in Recommendation 3.

- A portal for a native web app that sits on top on the My Health Record would enable consumers to access, share and control their own data.

- Empowering consumers also needs to link in with digital health literacy. Higher levels of digital health literacy are required to empower consumers to advantage of digital services such as telehealth.

## Objective

**Consumers should be supported to engage with their own health data, including their My Health Record. This requires funding to enable smart device integration of the My Health Record ie. being able to access and control My Health Record through a simple to use and secure app**

## Activities

1. The Council will engage with the ADHA on the roadmap to enable health user navigation of My Health Record and HCP generated information on smartphones and devices.

2. The Council will recommend the ABAC Secretariat will engage with the Department of Health on scope to leverage funding committed in 2021-22 Budget to consumer-friendly enhancements to My Health Record.

3. The Council will recommend the Government support a scoping or systematic report which explains which systems (initiatives) have proven to help increase digital health uptake amongst groups which experience inequity – such as cultural/language barriers, age, geographical location, socio-economics, etc.

**Recommendation 7: Develop a digital skills uplift program for health professionals prioritising primary care providers and Aboriginal and Torres Strait Islander healthcare workers [Short Term].**

- A digitally skilled and confident health workforce is critical in leveraging Australia's ubiquitous broadband coverage and connecting some of Australia's most isolated and vulnerable communities.

- This goes beyond patient care and includes using connectivity to allow regional primary care providers to learn and engage with metropolitan specialists and medical training institutions.

- The Aboriginal Community Controlled Health Sector has recognised the immense value of digital health and offered its strong support to build a digitally qualified Aboriginal and Torres Strait Islander health workforce.

- The Australian Government also announced, in the 2021-22 Budget, $9.6 million to add 90 workplace training packages through the Allied Health Rural Generalist Pathway. This includes 30 places allocated to Aboriginal Community Controlled Heath Organisations, and the introduction of 30 new Allied Health Assistant packages.

- It us recommended that digital skills are incorporated into training to ensure Aboriginal and Torres Strait Islander healthcare workers continue to lead the way in digital health and the utilisation of digital health tools.

## Objective

**Collaboration across government, universities and the health sector is required to support improved digital skills across the health workforce. Training providers, including in higher education and professional development courses, should include a focus on digital skills, and government should consider funding frameworks to ensure capacity to do so.**

## Activities

1. The Council will sponsor a case study on the success of NACCHO's digital health training and uptake and how it can be further applied across the health ecosystem.

2. The Council will recommend the Government support a scoping review to determine what telehealth training courses exist around Australia – and relevance for different audiences. This information can then be used to determine potential opportunities to deliver a national training program or recommendations for course curricula.

   Note: this review will need to differentiate between education and training for undergraduate students; education and training for existing health professionals; and education and awareness for consumers.

**Recommendation 8: Provide incentives for primary care practices in rural and remote areas to deliver care- in-place for consumers and to strengthen and support the health workforce in local communities. [Medium Term]**

- Co-ordinated care delivery between local and specialist care is not supported by the current payment systems. For example there is no incentive for GPs to consult a specialist as part of a GP consultation, with GPs simply referring patients to specialists which may be too far/difficult for the patient to access.

- Applying the conventional fee for service model is limiting choice of service and consultation method. New innovative payment mechanisms will better serve greater clinician uptake of virtual health and co-ordinated patient care.

## Objective

**To remove barriers and drive support for patient management between GPS, allied health and specialists and deliver clinical education in place for health care providers in rural and remote areas**

## Activities

1. The Council to recommend a trial of a new payment model to support consultation between general practitioners and specialists to provide continuity of patient care in rural and remote areas.

2. The Council to recommend a local digital network of care pilot, which connects primary care providers in care delivery and supports clinical education and training for providers, especially those in rural and remote areas/regions (linking with Recommendation 7).

3. The Council will further explore options for education and training opportunities to be made available (with accreditation offered by the main professional bodies,) as well the feasibility of providing online training modules for some areas of practice.

# Appendix

The Health Expert Working Group would like to thank the following contributors for their assistance in drafting this report.

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