

Better access to high speed broadband for rural and remote health care - 2016

1. Introduction

Approximately 30 per cent of Australia's population lives outside the major metropolitan areas¹. Regional, rural and remote Australians often struggle to access health services that urban Australians would see as a basic right. These inequalities mean that they have lower life expectancy, worse outcomes on leading indicators of health, and poorer access to care compared to people in major cities.

In 2016 the AMA conducted a Rural Health Issues Survey, which sought input from rural doctors across Australia to identify key solutions to improving regional, rural and remote health care. The survey identified access to high-speed broadband for medical practices as a key priority.

This result reflects not only the increasing reliance by medical practices on the internet for their day to day operations, but also the increasing opportunities for the provision of healthcare services to rural and remote communities via eHealth and telemedicine. For the full potential of these opportunities to be realised, good quality, affordable, and reliable high-speed internet access is essential.

The AMA recognises that technology-based patient consultations and other telehealth initiatives can improve access to care and can enhance efficiency in medical practice, but the need for better access to high speed broadband goes beyond supporting rural and remote health. In today's world, it is a critical factor to support communities in their daily activities, education, and business, and has the potential to drive innovation and boost the rural economy.

This position statement outlines the importance of better access to high speed broadband for medical practices, other healthcare providers and institutions, and patients, to improve regional, rural and remote health care in Australia, and highlights key solutions for achieving this.

2. Internet access in regional rural and remote Australia

Despite its tremendous growth, internet access is not distributed equally within Australia, and internet use by country people has yet to reach the level of use in capital cities, for a wide range of reasons.

In many country areas the internet connection is still very poor.² In 2015, 80 percent of non-urban Australians had an internet connection at home compared with 89 percent of those in capital cities³. Internet use via mobile phone was much lower in non-urban areas, at 37 percent, compared to 60 percent for capital cities⁴. This reflects the patchy, unreliable or absent mobile coverage in many rural and remote areas. While mobile broadband use was highest in non-urban areas, at 29 percent, compared to 25 percent in capital cities, mobile broadband is currently not a good solution for business or eHealth, due to the relatively small amounts of data on the relatively costly plans available.

Internet services, particularly in more isolated areas, only make available relatively small

download allowances and these come at a much higher cost and slower speed than those services available in metropolitan areas.

3. Supporting regional rural and remote health

3.1 The need for better access for health services

The health sector needs telecommunications connectivity for health service delivery and management, doing business with Government and complying with Government requirements, continuing professional development, online education, mentoring, and clinical decision and other support.

Health was identified in the Regional Telecommunications Review report⁵ as one of the particular segments of the community requiring special consideration. To effectively leverage telecommunications technology to deliver better health outcomes at lower cost in regional, rural and remote areas and to implement new models of health care, both mobile and broadband technology must be reliable, affordable, and supply adequate capacity.

However, the utilisation of telehealth and telemedicine in rural and remote Australia remains patchy and is not used to full potential, because of no, or inadequate internet access. As noted in the Regional Telecommunications Review report⁶, the ability of hospitals and clinics to support remotely located clinicians and patients via video conferencing and remote monitoring could be severely limited in areas serviced by satellite, which may not be able to consistently and reliably deliver the necessary capacity and technical capability.

The AMA Rural Health Issues Survey received many comments from rural doctors on the problems encountered with poor internet access. For example:

High-speed broadband [is the] single most critical issue to run practices now, many areas not getting the best from NBN.

Internet services by satellite are slow and time consuming. Reliable internet services at reasonable speed and reliability is critical.

Internet services are a critical area [of concern]. The NBN has been deficient in providing a comprehensive coverage even in areas that are under 25km from a major regional centre i.e. Orange and Dubbo.

As mainstream healthcare provision becomes increasingly technology based and requires more and faster broadband services to operate, there is a real risk that regional, rural and remote areas of Australia will be left further and further behind in their ability to provide quality health services.

3.2. The benefits of high speed broadband for rural and remote health care

High-speed affordable broadband connectivity to the Internet has become essential to modern society, and offers widely recognised economic and social benefits, with numerous studies showing a strong link between broadband growth and rapid economic development⁷. Affordable and reliable broadband access can support the development of new content, applications and services that allow people to work in new ways, changing business processes in ways that stimulate productivity and potentially increase labour-force participation⁸.

3.2.1 Economic benefits

It has been estimated that in New Zealand, the benefits from broadband-enabled health care could reach around \$6 billion over a 20-year period⁹. These benefits come from reduced hospital, travel and drug costs and improvements in care. A case study by Deloitte Access Economics shows savings to a single older Australian of \$7,400 per year, with savings to the Government, through reduced health and service provision costs, of over \$14,500¹⁰.

3.2.2 Driving greater efficiency and reducing costs

Telehealth practice will be one of the most important online services in the broadband future, enabling significant changes to work practices to drive greater efficiency and reduce costs¹¹.

If sufficiently supported, telehealth services, such as video-conferencing, could become more effective in complementing local health services. They could be used to expand specialty care to patients in areas with shortages of health care providers as well as extend primary care to remote areas, reducing the need to travel, and increasing the frequency of patient and primary care provider interactions. By providing timely access to services and specialists, telehealth could improve the ability to identify developing conditions, and thereby reduce the need for more costly treatments and hospitalisations in the future. Telehealth could also help to educate, train and support remote healthcare workers on location and support people with chronic conditions to manage their health.¹²

A CSIRO report on home monitoring of chronic disease¹³, for example, shows that a modest investment in home monitoring technology, allied to risk stratification tools and remote monitoring, could save the healthcare system up to \$3 billion a year in avoidable admissions to hospital, reduced length of stay and fewer demands on primary care.

3.2.3 Supporting eHealth solutions now and into the future

eHealth encompasses patient access to doctors via online consultation, remote patient monitoring, online tools and resources for patients and doctors, clinical communications between healthcare providers, and professional's access to information databases and electronic health record systems. If sufficiently supported with affordable, high-speed broadband services, eHealth has potential to improve health outcomes at all levels, from preventative health, specialist and acute care and self-management of chronic conditions, through to home monitoring for people living with disabilities¹⁴.

Advances in information technology will act as a catalyst for the development of a range of potential eHealth solutions to some of the challenges faced by rural and remote communities. If available and accessible, improved connectivity will facilitate new and emerging best practice models of health care, such as those which incorporate high definition video conferences, data exchange and high resolution image transfer¹⁵.

Technological advancements in health care that could become the way of the future, if affordable and sufficient access to broadband services becomes available, include better point of care diagnostics, resulting in faster, cohesive patient care; biosensors and trackers to allow real time monitoring; 3D printed medical technology products; virtual reality environments that could accelerate behavioural change in patients; and social media platforms to improve patient experience and track population trends¹⁶.

3.2.4 Supporting education and training

The internet also plays a big part in the lives of doctors and their families, assisting with education and social cohesion. It enables rural doctors to learn from the most current resources, explore treatment options, watch demonstrations of procedures and attend live discussions with experts.

Access to high speed broadband has the potential to change the way medical education, training and supervision is delivered in rural and remote areas¹⁷. As pressure on access to prevocational and vocational training places increases, harnessing this technology to support training is a viable strategy to create additional training places in rural and remote locations and ultimately improve access to specialist services for rural and remote patients.

The use of telehealth and telesupervision as an adjunct to face-to-face teaching will allow doctors in training to remain in rural and remote settings to complete their training, and enhance the likelihood that they will choose to work long term in a rural areas. Improved information and communications technology will enhance the learning experiences for trainees at rural sites and during rural rotations, provide exposure to innovative models of care, and improve supervisor capacity by allowing supervisors to transfer knowledge, supervise and mentor trainees remotely.

Improved telehealth and communication technology infrastructure to support teaching and training at rural sites will also enhance professional collaboration between rural and remote medical generalist practitioners and other specialists in the provision of shared care, skills transfer and education.

The requirement for doctors to maintain their skills is a fundamental component of medical registration. It is important that processes mandated by the Medical Board of Australia, including in revalidation proposals, do not discriminate against medical practitioners working in rural and remote Australia. Access to high speed broadband is an essential support for rural and remote practitioners who must comply with these requirements.

4. What can be done to improve broadband access for country Australians?

The AMA is of the view that high-speed broadband should be available to the same standard and at the same cost to all communities, businesses and services across the whole of Australia. The platforms used must be able to accommodate future developments in information and communications technologies and provide connectivity through suitable combinations of fibre, mobile phone, wireless, and satellite technologies. For rural practices, in order to be incorporated routinely in everyday practice (clinical, educational and administrative), network connectivity must be sufficient, reliable, ubiquitous and dependable.

The Government must ensure that broadband services are affordable in regional, rural and remote Australia. Lack of affordability is regarded as one of the most important barriers to good internet access for country people whose incomes, on average, are 15 per cent lower than those of city people¹⁸.

Government policies play a tremendous role in bringing internet access to underserved groups and regions. Unless issues around equitable and affordable access to telecommunications in regional, rural and remote Australia are addressed, the potential benefits of the digital economy for non-urban Australians will go unrealised.

The AMA urges the Government to consider the following actions:

- Fully consider the recommendations of the 2015 Regional Telecommunications Review, and, in particular, adopt Recommendations 8, 9, and 12, to:
 - Develop a new Consumer Communication Standard for voice and data which would provide technology neutral standards in terms of availability, accessibility, affordability, performance and reliability.
 - Establish a new funding mechanism, the Consumer Communication Fund to replace the existing telecommunications industry levy and underwrite over the longer term, necessary loss-making infrastructure and services in regional Australia.
 - Collect benchmark data on availability and affordability of broadband data and voice services (including mobile services), to be reported annually, in order to improve the understanding of the changing circumstances of regional telecommunications.
- Extend the boundaries of the NBN's fibre cable and fixed wireless footprints and mobile coverage wherever possible.
- Begin an incremental process of terrestrial network expansion over the longer term to address increase in usage over time.
- Develop measures to prioritise or optimise the broadband capacity available by satellite for hospitals and medical practices, such as exempting or allocating higher data allowance quotas, or providing a separate data allowance (as is the case with distance education¹⁹).
- Create universal unmetered online access to government, hospital and health services for people and businesses in rural and remote areas.²⁰
- Establish an innovation budget for development of local infrastructure solutions for rural and remote areas.²¹
- Engage with state and local government and related stakeholders who wish to co-invest or coordinate planning to achieve the optimum overall infrastructure outcome for their area. This could involve public-private partnerships or the leveraging of philanthropic infrastructure funding through, for example, tax concessions.

References

- ¹ Australian Institute of Health and Welfare (AIHW) (2015), *Australia's Welfare 2015*
- ² Curtin J (2012), [A digital divide in regional and rural Australia](#).
- ³ Australian Communications and Media Authority (2016), [Regional Australians Online](#)
- ⁴ Ibid
- ⁵ Australian Government Regional Telecommunications Review (2015)
- ⁶ Ibid.
- ⁷ Alcatel-Lucent (2012), *Building the Benefits of Broadband. How New Zealand can increase the social & economic impacts of high-speed broadband*
- ⁸ Centre for Energy-efficient Telecommunications (CEET)(2015), *Economic Benefit of the National Broadband Network*
- ⁹ Alcatel-Lucent (2012), op.cit.
- ¹⁰ Deloitte Access Economics (2013), *Benefits of High-Speed Broadband for Australian Households*. Commissioned by the Australian Department of Broadband, Communications and the Digital Economy
- ¹¹ CEET (2015), op.cit.
- ¹² National Rural Health Alliance (2013), [eHealth and telehealth in rural and remote Australia](#). Accessed October 2016
- ¹³ Prof. Branko Celler et al (2016), *Home Monitoring of Chronic Disease for Aged Care*, CSIRO Australian e-Health Research Centre.
- ¹⁴ National Rural Health Alliance (2013) op. cit.
- ¹⁵ National Rural Health Alliance (2016), website accessed October 2016
- ¹⁶ Deloitte (2016), *Design, service and infrastructure plan for Victoria's rural and regional health system* discussion paper, commissioned by the Victorian Department of Health and Human Services.
- ¹⁷ Wearne S M (2013), [Using telehealth infrastructure for remote supervision could create medical training places where they are needed](#). Medical Journal of Australia, 198 (11): 633-634. 17 June 2013.
- ¹⁸ AIHW (2016), [Are things different outside the major cities?](#) Accessed October 2016.
- ¹⁹ Australian Government (2016), *Australian Government Response to the Regional Telecommunications Independent Review Committee Report: Regional Telecommunications Review 2015*.
- ²⁰ Broadband for the Bush Alliance (2016), *Broadband for the Bush Forum V: Digital Journeys Communiqué*
- ²¹ Broadband for the Bush Alliance (2014), *Broadband for the Bush Forum III: Building a Better Digital Future Communiqué*