Innovation in aged care

2019

1. Overarching principles

1.1.   Australia must actively seek evidence-based innovative ways to sustainably provide high quality care in the face of an ageing population with complex care needs.

1.2.   Older people have a right to live in age-friendly physical and social environments in their home, residential aged care facility (RACF), community, city, and region, that supports independence, prevents social isolation, and includes timely access to services, transport, and infrastructure that enables and supports healthy ageing[1].

1.3.   Digital Health, clinical informatics and assistive technologies have the potential to significantly improve the aged care system through increased efficiency and coordination of care providers and by supporting healthy ageing.

   (a)   Digital Health is synonymous to eHealth and "represents the use of information and communication technologies (ICT) for health"[2]. "The broad scope of digital health includes categories such as mobile health (mHealth), health information technology (IT), wearable devices, telehealth and telemedicine, and personalised medicine"[3].

   (b)   Clinical informatics is defined as "interdisciplinary study of data, information and computing technology (ICT) and communication with respect to human health conditions"[4].

   (c)   Assistive technologies allow older people to remain independent while monitoring and managing their health condition or disability. Assistive technologies range from walking aids to robots that vary in their function.

1.4.   Any current and future planning of aged care approaches will require innovative solutions, to reduce the cost burden and improve efficiency in care delivery. Future solutions must improve care for older people and either improve or fit the practitioner's workflow so that they do not add a burden of increased workload.

1.5.   Increased use of technology requires interoperability between relevant software programs and systems, provided all privacy and security measures are met.

1.6.   Further research into incorporating technology in the aged care sector is essential.

2. Resourcing

2.1.   Development and implementation of innovative technologies in aged care requires appropriate resourcing of both people and funds.

2.2.   Funding models should align to support the health practitioners' uptake of evidence-based innovative technologies that benefit older people.

2.3.   Investment is required to ensure that the aged care sector is kept up to date with broader technological developments. Investment in innovation is needed to ensure that mainstream

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[1] "The process of developing and maintaining the functional ability that enables wellbeing in older age" – World Health Organization (WHO) (2015) *World report on ageing and health*, page 28
[2] WHO (2018) *eHealth at WHO*
[3] US Food and Drug Administration (2019), *Digital Health*
[4] Cambridge University (2015), *Cambridge Clinical Informatics*

developments are accessible to all those accessing aged care services, not just those who can afford them.

2.4.   Older people must be adequately supported to develop and maintain their technology literacy. Technologies must be accessible and easy to use. This is integral for a successful technology-based aged care system.

2.5.   Australia needs better access to high-speed broadband (especially in regional, rural, and remote areas) for technological solutions to work in aged care and related health care settings.

2.6.   Implementation of technology in aged care cannot and should not replace human care and human engagement. Adequate staffing numbers and appropriate mix of care staff skills is a continuous resourcing requirement in aged care.

2.7.   Investment in aged care innovation should aim for improved effectiveness in the provision of health and aged care services and maximising health benefits for older people. It should enable: improved data collection, secure and appropriate distribution, storage and retrieval; better understanding of older people's needs; improved monitoring of care and quality of care; better communication between all stakeholders and enhanced information management.

2.8.   In aged care, investing in digital health and clinical informatics can support staff at all levels to excel in the delivery of care for older people, providing them with more time to conduct substantive parts of their jobs.

3. Electronic records

3.1.   Older people often move between aged care, primary care and acute care settings. Maintenance and exchange of information between those settings for health and wellbeing of older people is crucial.

3.2.   Electronic records enable greater efficiencies in recording, storing, and sharing vital health information of older people by improving communication and information sharing between different care providers.

3.3.   Interoperability between My Health Record, My Aged Care, and clinical software systems would enable electronic health record sharing between the health and aged care systems, including sharing details of aged care assessments, care plans, advanced care directives, immunisation records, and past medical treatments for each older person.

3.4.   Medical practitioners visiting their patients in aged care settings must have appropriate and secure access to their patient's medical records in aged care provider systems.

4. Medication Management

4.1.   Medications can improve the quality of life of older people through symptom control and maintenance of function.

4.2.   In an aged care setting, medication management entails selection, order and supply of medication, how the use of medicines is recorded and reviewed, how medicines are stored and disposed of safely and how their use is monitored and evaluated.

4.3.   Medication management in aged care should be implemented by health practitioners, in both residential and home care settings.

4.4.   Doctors must maintain clinical independence, no matter the care model, in order to make the best treatment recommendations for patients, based on current evidence.[5]

4.5.   Digital health and clinical informatics provide significant opportunities to develop systems to maintain accurate and up to date medicine records for older people, at the same time enabling evidence-based research into quality use of medicines.

4.6.   Digital health and clinical informatics application to medication management can bring improvements to how medication is prescribed, dispensed and information shared between health care, aged care, and pharmacies, reduce mismanagement of medication and avoid polypharmacy in aged care.

4.7.   Digital health application should enable full replacement of handwritten scripts by electronic medication charts.

5.   Assistive technologies

5.1.   Advancement of monitoring technologies has enabled performing functional monitoring of patients in innovative ways. Combining multiple monitoring technologies such as wearable sensors, ambient sensors, smartphone technologies and virtual reality testing enables monitoring of functional performance of older people and changes in their health and mobility.

5.2.   RACFs have the responsibility to continuously strive to improve care, including improving care provision through technological innovation and implementation of assistive technologies. Government funding models should enable implementation of assistive technologies in aged care.

5.3.   Monitoring technologies provide opportunities for longer independent living of older people, a better focused and personalised care in both home care and residential aged care settings, at the same time providing abundance of health information about older people that bears research potential.

5.4.   Sensor technologies have a role to play in aged care, particularly in fall detection and management. Sensor technologies can be:

(a)   ambient sensor-based monitoring technologies,
(b)   wearable sensor-based technologies and
(c)   implantable technologies.

5.5.   Broad adoption of assistive monitoring technologies will require a holistic approach that considers operational care, business models and the legal implications of data use. The technology must be safe, regulated and evidence based, and maintain a high standard of data privacy, as has been achieved with initiatives such as the My Health Record.

5.6.   Initial investment in these technologies by the Government and aged care providers, including facilitated provision for in-home care, may be high, but in the long run will be justified where it serves to delay the need for residential care. It can also reduce unplanned doctor visits, laboratory tests and hospital stays.

5.7.   There must be clear guidelines around the use of assistive technologies in aged care. This includes who is responsible for:
(a)   Educating and supporting the older person, their family members and carers in their technology use
(b)   Maintaining and updating the technology

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[5] As per AMA Code of Ethics 2004. Editorially Revised 2006. Revised 2016

(c)   Responding to information that the technology conveys, particularly in emergency situations.

6.   Communication technologies

6.1.   Telehealth

(a)   Telehealth involves the use of telecommunications and virtual technology to deliver health care outside of traditional healthcare facilities.

(b)   Telehealth considerably enhances access to GP services for specific patient groups and deliver productivity gains in general practice but should not be used purely for reasons of cost savings or convenience so that the quality and safety of patient care is compromised.

(c)   Telehealth complements but does not replace face-to-face patient consultations and should not be used in a way that fragments the ongoing care and management of the patient.

(d)   Telehealth can improve health care access and outcomes for patients, particularly for those living with chronic conditions and for vulnerable groups. It can reduce pressure on busy RACFs and at the same time create cost savings, contributing to the financial viability of the health sector.

(e)   Video consultations for aged care residents, older people with a disability, and older people living in rural and remote areas would considerably improve access to medical care for these groups.

(f)   There should be MBS items incorporating telehealth (as with referred specialist consultations), secure messaging and other remote forms of communication for GP consultations to significantly enhance access to GPs and improve the efficiency in the delivery of medical care.

(g)   Consideration needs to be given to resourcing both ends of the telehealth consultation, particularly because older Australians may need assistance accessing and using the required technology.

6.2.   Shared Care Planning and Coordination

(a)   In aged care settings, multiple people are involved in a person's care. Care planning and coordination becomes crucial for an older person's health and wellbeing. The use of technology can help facilitate the sharing of information among multiple carers.

(b)   Care planning and coordination technologies can educate patients and help them manage chronic diseases, support and stabilise post-acute patients, ease shared care and care transitions, and coordinate support services for older adults.

(c)   Care coordination planning technologies have the potential to improve health and reduce hospitalisations, length of hospital stays, emergency department visits, and laboratory tests.

(d)   Digital health and clinical informatics hold great potential for shared care planning and coordination. For example, inclusion of patient nominated advanced care planning documents in the My Health Records increase the likelihood that emergency treatments will align with patient preference if they have lost the ability to speak for themselves or have lost decision-making capacity.

(e) GPs should be at the centre of any care planning and coordination for older people. They should be provided with technological instruments, means and facilities to manage the care planning and coordination. This should also be adequately reflected by Medicare Benefits provided to GPs.

6.3. My Aged Care

(a) My Aged Care needs to be an efficient and effective way to gain access to aged care services. It should not create a barrier to accessing aged care services, particularly for special needs groups.[6]

(b) My Aged Care must recognise that doctors have a responsibility to ensure their patients are receiving the services they have been referred to. This is integral to patient health and safety.

(c) My Aged Care must become interoperable with clinical software systems to reduce the administrative burden on referring doctors. This includes:

   i. Embedding the referral form into clinical practice software and aligning the form with the AMA's *10 Minimum Standards for Medical Forms*[7].

   ii. The ability to auto-populate patient and doctor information into the referral form.

   iii. A feedback loop that provides the GP with real-time updates on their patients' status in the queue for receiving aged care services.

(d) My Aged Care must provide clear, accurate, and easily comparable provider information to promote informed choice in aged care.

6.4. Social Connectedness and Engagement Technology

(a) Social isolation and loneliness can increase the risk of physical and mental conditions including cardiovascular disease, poor nutrition, weight gain, anxiety and depression. They can lead to cognitive decline, Alzheimer's disease and even death.

(b) Social connectedness and engagement technologies can help maintain an older person's relationships with friends and family. These technologies include social networks, social media, video chats, audio chats, photo sharing, activity/event sharing, email, text chat, and picture chats.

(c) Engagement technologies should continue to be available as older people transition to aged care to improve their mental and physical wellbeing. RACFs should enable the use of engagement technologies for residents by providing access to internet at the RACFs, as well as access to digital devices such as computers and smart phones.

7. Data collection, research, privacy and security

7.1. Research can inform how the health needs of Australia's ageing population can best be addressed and how the burden of chronic disease can be reduced, across the spectrum of prevention, population health, primary and acute care, and more effective care strategies including better coordinated care and transitions between types of healthcare.

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[6] As defined by the *Aged Care Act 1997*
[7] Australian Medical Association (2015) *10 Minimum Standards for Medical Forms.*

7.2.   Innovative technologies used in aged care should to be co-designed with end users (older people, health care and aged care providers). Impact evaluations of the application of innovation technologies will also be important to avoid any potential detrimental effect to users.

7.3.   Many technologies collect and share personal information and data about a patient. Technologies have the potential to create an efficient method of data collection and research.

7.4.   There are ethical implications to implement technology, data collection and research in aged care which need to be considered. Timely policies need to be developed to protect data privacy and security related to older people accessing aged care services.

7.5.   All collection of a patient's personal information and data must meet the Australian Privacy Principles[8] and the National Health and Medical Research Council's *Principles for accessing and using publicly funded data for health research*[9]. A patient's personal information (either identified or de-identified) must remain confidential and their information disclosed only with the patient's express up-to-date consent (or as authorised by law).

7.6.   Difficulty of obtaining consent from patient groups such as people with dementia needs to be considered, including the impact on the ability to undertake necessary research.

See also:

AMA Position Statement on Health and care of older people
AMA Position Statement on Resourcing aged care
AMA Position Statement: on Technology-based patient consultations
AMA Position Statement on Shared electronic medical records
AMA Position Statement on Better access to High Speed Broadband for Rural and Remote Health Care

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[8] Office of the Australian Information Commissioner (2019) *Australian Privacy Principles*
[9] National Health and Medical Research Council (2016) *Principles for accessing and using publicly funded data for health research.*