

Assistive Technology for All Alliance

Submission to the Royal Commission into Aged Care Quality and Safety

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To:

Royal Commission into Aged Care Quality and Safety

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This submission has been endorsed by the following organisations:

Council on the Ageing Australia, Australian Association of Gerontology, Every Australian Counts, National Disability and Carer Alliance, The Australian Federation of Disability Organisations, People with Disability Australia, Australian Rehabilitation and Assistive Technology Association, Occupational Therapy Australia, Assistive Technology Suppliers Australia, TAD Australia, Blind Citizens Australia, Leukodystrophy Australia, LifeTec, Council on the Ageing Victoria, Limbs 4 Life Australia, MS Australia, Polio Australia, Spinal Cord Injuries Australia, Vision Australia, Bayside Polio Group, Huntington's NSW ACT, Independent Living Centre WA, MND Victoria, Parkinson's Victoria, Post Polio Victoria



Table of Contents

1. About <i>Assistive Technology for All</i>	4
2. Introduction.....	4
3. Summary of Recommendations	5
4. The Case for Increasing Access to Assistive Technology	6
5. Australia's Obligations to Older People with Disability	7
6. Background and Policy Context.....	8
7. Overview of Primary Funding Streams Outside the Aged Care System	10
7.1. The Commonwealth Continuity of Support Program (CCOSP).....	10
7.2. The National Injury Insurance Scheme (NIIS)	11
7.3. State-based aids and equipment programs	14
8. Barriers to accessing assistive technology under the aged care system.....	16
8.1. The Commonwealth Home Support Programme cannot fund high cost aids and equipment that may be required by people with disability.....	16
8.2. There is a lack of support available to help older people with disability navigate the current service system	17
8.3. There is a lack of specialist disability expertise within the aged care system.....	18
8.4. Older people cannot access assistive technology in a timely manner	19
8.5. Funding packages do not currently meet the needs of many people with disability	21
8.6. People living in residential care cannot access appropriate funding for assistive technology	24
9. The ultimate solution: A National Aids and Equipment Program for older people with disability.....	25
10. Concluding statement	26
Appendix 1: Assistive Technology Definitions.....	28
Appendix 2: Assistive Technology for Older Australians Research Report (NACA).....	29
Appendix 3: Improving the interface between the aged care and disability sectors, discussion paper (NACA) ..	126
Appendix 4: Assistive Technology Funding Map (ARATA)	177
References	179

1. *About Assistive Technology for All*

Assistive technology (AT) plays a critical role in the lives of people with disability by facilitating independence and participation in everyday activities. Screen reading software, mobility aids, electronic communication devices and prosthetic aids are all examples of AT. Please note, detailed definitions of AT can be found in Appendix 1.

Assistive Technology for All is a national alliance of peak bodies and consumer representatives spanning the Ageing and Disability Sectors. Together, we are advocating for equitable access to AT for people with disability who are not eligible for the National Disability Insurance Scheme (NDIS).

2. *Introduction*

The *Assistive Technology for All* Alliance is pleased to provide this submission to the Royal Commission into Aged Care Quality and Safety.

The comments provided in this submission focus on key areas that impact on access to assistive technology for older people with disability, many of whom are now forced to access the support they need under the aged care system.

The issues raised throughout this submission address each of the Royal Commission's Terms of Reference (ToR), including:

- ToR a) as it relates to the extent to which aged care services meet the needs of people accessing them;
- ToR b) as it relates to how best to deliver aged care services;
- ToR c) as it relates to the future challenges and opportunities for delivering accessible, affordable and high-quality aged care services to people living at home and in remote, rural and regional Australia;
- ToR d) as it relates to what the Australian Government can do to strengthen the system of aged care services;
- ToR e) as it relates to ensuring that aged care services are person-centred; and
- ToR f) as it relates to how best to deliver aged care services in a sustainable way, including through innovative models of care, increased use of technology, and investment in the aged care workforce and capital infrastructure.

While the case studies provided throughout this submission are based on the needs and circumstances of real individuals, we have altered some identifying details in order to protect the anonymity of those concerned.

3. Summary of Recommendations

Recommendation 1:

That the Commonwealth Government either:

- Implement the medical and general accident streams of the National Injury Insurance Scheme (NIIS) to provide support to people of all ages who acquire disability through catastrophic injury.
- Or-
- Provide access to the NDIS for people of all ages who acquire disability through catastrophic injury.

Recommendation 2:

That the Commonwealth Department of Health co-fund the Information, Linkages and Capacity Building (ILC) stream of the NDIS so that older people with disability have timely access to disability-specific information and support and can access capacity building, early intervention and local area coordination services on an equitable basis with participants of the NDIS.

Recommendation 3:

That the Department of Health publicly articulate how the aged care system will support older Australians with disability and review the appropriateness of the National Screening and Assessment Form to identify disability-related needs.

Recommendation 4:

That the Department of Health invest in strategies to build the capacity of aged care assessors to understand and respond to the unique needs of people with disability. This should include consideration of joint purchasing arrangements between the Commonwealth Department of Health and the National Disability Insurance Agency (NDIA).

Recommendation 5:

That the Department of Health ensure older people who acquire a disability have access to timely and appropriate assessment and planning by improving formal collaborative arrangements between the aged care system and the NDIS.

Recommendation 6:

That the Council of Australian Governments, through its role in updating the National Disability Agreement and National Disability Strategy, ensures there is a nationally consistent mechanism in place to provide people with disability outside the NDIS with assistance to understand and locate relevant assistive technology.

Recommendation 7:

That the Commonwealth implement measures to ensure people with disability living in residential aged care can access funding for assistive technology to facilitate mobility, communication and participation in everyday activities.

Recommendation 8:

That an intergovernmental agreement is established to develop a funded national aids, equipment and assistive technology program, including agreement on the process and timeframes for implementing a national program. As an interim solution for the urgent needs of older people with disability (who are therefore ineligible for the NDIS), the Commonwealth Government should specifically fund aids and equipment for this group.

4. The Case for Increasing Access to Assistive Technology

1. Assistive technology helps facilitate social inclusion, economic participation and autonomy. The NDIS Assistive Technology Strategy states:

“AT (assistive technology) enables people with disability to live a better, more independent and more inclusive life. It enables people with disability to maximise their abilities at home, in the community and in the workplace, ensuring greater economic and social participation.”¹

2. In 2018, the National Aged Care Alliance (NACA) commissioned a review of the social and economic impacts of assistive devices. The review found that significant savings could be made in health and aged care by increasing investment in assistive technology. This is because providing people with disability with timely access to affordable assistive technology can:
 - Reduce the need for GP visits
 - Reduce demand for home care services
 - Reduce hospital admissions.
 - Delay entry to residential care. ²

The economic modelling that was undertaken as part of the review demonstrated that substantial cost offsets and downstream costs will be avoided if AT is introduced at the point of need. A copy of NACA’s ‘Assistive Technology for Older Australians Research Report’ is attached as Appendix 2.

3. Without access to assistive technology, many people with disability are forced to rely on others for support. This is concerning when considering that:

- Dependency on others is one of the key factors that has been shown to increase peoples' risk of being subjected to violence, abuse, neglect and/or exploitation.
 - Research demonstrates that people with disability are less likely to report abuse or take steps to leave an abusive relationship in instances where they are heavily reliant on their abuser for support.
 - Without access to the appropriate mobility and communication aids, people may not have the functional capacity to report any instances of abuse that do occur.^{3 4}
4. When people with disability are forced to rely on family and carers, the impact extends well beyond the person with disability themselves. It can impact on the physical and mental health and wellbeing of carers and reduce their capacity to be social and economic participants. In the context of older people with disability, they will often receive informal support from an ageing family member whose capacity to assist with the necessary tasks may be somewhat limited. One gentleman who had already been waiting 830 days for an appropriate home care package, wrote:

"my wife has had surgery and requires further procedures including fitting of back brace for a serious back injury and is unable to give me the level of care I require."

5. Australia's Obligations to Older People with Disability

1. Australia has ratified seven international human rights treaties.⁵ In doing so, it has made a commitment to uphold the rights that are set out under each treaty.
2. The rights of people with disability are set out under the Convention on the Rights of Persons with Disabilities (the Convention), which entered into force in Australia in 2008.⁶
3. Article 19 of the Convention says people with disability have the right to live independently and be included in the community. It requires that:

*"b) Persons with disabilities have access to a range of in-home, residential and other community support services, including personal assistance necessary to support living and inclusion in the community, and to prevent isolation or segregation from the community."*⁷

4. Article 20 of the Convention relates specifically to personal mobility, noting that governments have a role to play in:

"a) Facilitating the personal mobility of persons with disabilities in the manner and at the time of their choice, and at affordable cost;

b) Facilitating access by persons with disabilities to quality mobility aids, devices, assistive technologies and forms of live assistance and intermediaries, including by making them available at affordable cost;

c) Providing training in mobility skills to persons with disabilities and to specialist staff working with persons with disabilities;”⁸

5. The steps to be taken to implement the Convention in Australia have been outlined in the National Disability Strategy 2010-2020. The strategy applies to all people with disability in Australia – not just those who are under 65. As such, it includes the following outcomes:
 - “A disability support system which is responsive to the particular needs and circumstances of people with complex and high needs for support.
 - Universal personal and community support services are available to meet the needs of people with disability, their families and carers.”
6. In order for Australia to be meeting its international human rights obligations, it is an imperative that the principles of equity and access are upheld. This involves working towards the following outcomes:
 - Australians with disability must have equitable access to care and support regardless of their age, the funding source, programs or systems.
 - No person with disability should be worse off under the aged care system than the disability system.
 - The disability and aged care systems should be flexible, streamlined and aligned to ensure that older people with disability, people with younger onset dementia or people with disability whose needs change as they age receive the services they need from the most appropriate system, regardless of who is responsible for funding or delivering them.⁹

These principles were first published in the National Aged Care Alliance Discussion paper entitled, ‘Improving the interface between the aged care and disability sectors’ (2016). A copy of this paper is attached as Appendix 3.

6. Background and Policy Context

It is important for the Royal Commission to understand how older people with disability came to be filtered into the aged care system, and what gaps still exist in meeting their needs. We have provided some brief points below to help clarify the current arrangements:

1. The National Disability Insurance Scheme (NDIS) is designed to provide lifetime care and support to people with permanent disability. It commenced trial in 2013, with national rollout commencing in 2016.¹⁰
2. The design and implementation of the NDIS was informed by the Productivity Commission's 2011 Inquiry into Disability Care and Support. The terms of reference for this inquiry indicated that the scheme was: *"intended to cover people with disability not acquired as part of the natural process of ageing."*¹¹
3. The implementation of the NDIS is governed by the NDIS Act. Section 22 of the Act states that a person must be under 65 at the time of making an access request to be eligible for the scheme.¹² As such, older people with disability now make up the largest cohort of people who fall outside the NDIS. This includes:
 - People who were born with or acquired disability early in life but had already turned 65 when the NDIS was rolled out in their area.
 - People over 65 who acquire disability as part of the ageing process.
 - People over 65 who acquire disability through catastrophic injury.
 - People over 65 who acquire disability due to the progression of a pre-existing condition.
4. The NDIS has the capacity to fully fund the assistive technology that is needed by younger people with disability, irrespective of how or where their disability was acquired. Funding pathways that are available to people outside the NDIS, however, do not provide an equitable level of access. This is demonstrated in greater detail throughout sections 8 and 9 of this submission.
5. Federal and state governments continue to place a strong emphasis on the NDIS as the sole solution to the provision of services and supports to people with disability. In doing so, they have not put appropriate measures in place to meet the needs of the 90% of people with disability who are not eligible for the NDIS.¹³
6. The current situation has been perpetuated by outdated agreements between State and Commonwealth Governments. Funding responsibilities relating to specialist disability supports, for example, were previously set out under the National Disability Agreement. This agreement has not been updated since 2009; despite the fact that the funding landscape has shifted dramatically since the implementation of the NDIS. The agreement was reviewed by the Productivity Commission in 2018/19. This process resulted in the development of an extensive report that outlined a number of recommendations for government. These recommendations have still not been implemented.¹⁴
7. Interactions between the NDIS and mainstream services are guided by the 'Principles to Determine the Responsibilities of the NDIS and Other Service Systems'.¹⁵ A working group representing a number of disability organisations, in its 2019 report on Australia's progress under the Convention on the Rights of Persons with Disabilities, observed:

*"...the Principles are subject to interpretation and lack clarity. This is resulting in boundary issues and funding disputes, which can lead to reduced or no access to services for people with disability not eligible for the NDIS."*¹⁶

8. The need for resolution of the ongoing boundary issues between Commonwealth and State and Territory Governments was also identified in the Legislated Review of Aged Care; which recognized that current arrangements prevent the optimal provision of assistive technology to people with disability who are over the age of 65.¹⁷

7. Overview of Primary Funding Streams Outside the Aged Care System

Funding for assistive technology for older Australians is currently spread across multiple departments and not-for-profits at both the state and commonwealth level. As such, the most appropriate pathway for accessing assistive technology remains very unclear to the consumer.

In 2018, the Australian Rehabilitation and Assistive Technology Association developed a map of existing funding streams for assistive technology in Australia. A copy of this Funding Map is attached as Appendix 4.

This section of our submission sets out the dominant funding pathways that were promised to provide support to people with disability outside the NDIS and highlights how these systems are falling short of people's needs. This will help clarify why older people with disability are now forced to access the assistive technology they need under the aged care system.

7.1. The Commonwealth Continuity of Support Program (CCOSP)

1. People who do not meet the age eligibility requirements for the NDIS but were already receiving state-funded disability services prior to the roll out of the scheme, were promised they would continue to access services under the Commonwealth Continuity of Support Programme.¹⁸
2. There are many older people with disability whose needs are still not being met under this program, including:
 - People who had not been accessing state-administered specialist disability support prior to transition to the NDIS.
 - People who were still on waiting lists for state-administered specialist disability services during transition to the NDIS¹⁹
 - Program participants who transition into residential aged care.

3. For those who are eligible for and are able to access support under the Commonwealth Continuity of Support Programme, the situation is still very unclear. The 2019 Shadow Report to the United Nations Committee on the Rights of Persons with Disabilities states:

“While the Commonwealth and State/Territory Governments have agreed to provide continuity of support through disability services outside the NDIS, in practice there is confusion and uncertainty about what services will continue to be provided and/or funded. Some disability supports are not being provided because of unclear boundaries about the responsibilities of the different levels of government.”²⁰

4. Irrespective of the current confusion surrounding the implementation of the program, it seems that it is still not likely to create a funding pathway for assistive technology. The 2019 edition of the CCOSP manual, for example, states:

“...in the first instance, aids and equipment (including vehicle modifications) should be accessed through available State programmes.”²¹

The shortfalls of existing state-based aids and equipment programs will be explored further in section 7.4 of this submission.

Case Study: Ruth

Ruth is a 68-year-old woman with Multiple Sclerosis. Until recently, she had been receiving support in her own home under the Commonwealth Continuity of Support Programme. A recent change in circumstances has led Ruth to move into residential care and as such, she is no longer eligible to receive support under the Commonwealth Continuity of Support Programme.

Ruth’s powered wheelchair is very old and is no longer meeting her needs. She has been looking for avenues to access funding for the purchase of a new wheelchair, but she has been told that there is nothing available. This situation is negatively impacting upon Ruth’s comfort, mobility, independence and participation in everyday activities. If Ruth was under 65, she would have been eligible to access support under the NDIS and her new wheelchair would have been fully funded.

7.2. The National Injury Insurance Scheme (NIIS)

1. The National Injury Insurance Scheme (NIIS) was intended to be rolled out alongside the NDIS to provide lifetime care and support to people who acquired disability through catastrophic injury.²²
2. Presently the NIIS is only available in Queensland, with no determination made at present as to whether this scheme will be rolled out nationally.
3. The NIIS, if properly implemented, would have provided an avenue to accommodate the specialist needs of any older people who acquire disability through catastrophic injury into the

future. At the time of writing this submission, however, only the medical and general accident streams of the NIS had still not been implemented.

4. In the absence of a National Injury Insurance Scheme, older people who acquire disability through catastrophic injury are forced to access support under the aged care system. However, as demonstrated throughout section 8 of this submission, this system does not provide equitable support and lacks specialist disability expertise.
5. One individual who has been affected by this issue is Chris English, who has recently appeared in the media to air his frustrations at the lack of support that is available to him. Chris acquired his disability through catastrophic injury at age 69. The newspaper article describing Chris' situation has been included below:

NDIS cut-off at 65 leaves older people with acquired disabilities in world of pain

ABC Illawarra, By Nick Rheinberger

Posted: 2 August 2019

Link: www.abc.net.au/news/2019-08-02/quadriplegic-fights-discrimination-over-ndis-cut-off-at-65/11374748

Chris English used to drive racing cars, but the only thing that drives now is his electric wheelchair using his chin.

Mr English became a quadriplegic after he fainted and fell down some stairs last years.

"It happened on my 69th birthday," he said.

"I passed out for some reason, then woke up a few days later in an intensive care unit."

Mr English has had to give up his intricate work as a jeweller and his beloved garden, as well as his tireless work for the Kiama Lions Club.

But that is not the biggest problem.

Mr English and his wife, Bobbie, who is his full-time carer, said the real tragedy was that this accident happened at the age of 69.

If he was under 65, Mr English would have been eligible for an NDIS package worth more than \$100,000 a year, providing significant care and — most importantly — a sense of dignity.

But since he was over that age, he had to make do with an aged care supplement worth less than half that amount.

The couple said this was clearly a case of discrimination against older people with a disability.

"If Chris was 64 when this happened, he would have been eligible for the NDIS," Ms English said.

"And then it actually would have continued after he turned 65. But now we're capped at the maximum aged care subsidy, which might get us a carer for 60–90 minutes per day.

"I do everything else, with some help from the family. And there's no budget for respite care if I get sick."

Mr English said it did not make sense.

"Most accidents like this do happen to older people," he said.

Family and fundraising fills the gaps

Mr English remains stoic about his condition, and his beloved Lions Club is keen to elect him as their president in the future.

But it is a struggle for his wife every day.

She is not only had to move from their home town of Kiama, they have had to turn to a fundraising website to get a suitable car to transport Mr English and his wheelchair.

If her husband's care becomes too much, the only option is to put him into a nursing home — and that is the last place Mr English wants to be.

"Before the accident, I didn't feel old," Mr English said.

"I've got nothing against aged care, but I want to be here at home."

This sense of unfairness has led Ms English to create a petition to "eliminate discrimination of older people with a disability".

Though she has had a sympathetic reception from her state member, Gareth Ward, who also happens to be the Minister for Disabilities, this is a federal issue, and Ms English hoped to travel to Canberra to present her argument to Stuart Robert, the Federal Minister for the NDIS.

NDIS cuts off at 65

Mr Robert was unavailable for an interview with the ABC, and referred us to the Department of Social Services.

A spokesperson confirmed that "a person needs to have acquired their disability before the age of 65 and meet other eligibility criteria in order to be an NDIS participant".

"NDIS eligibility does however continue beyond age 64 for those who became NDIS participants before age 65," the spokesperson said.

"For those 65 and over, there is a range of supports available within the aged care system that can be accessed through My Aged Care, which may be suitable for older people with a disability."

While they wait for an audience with the minister, it falls to Ms English and family to take care of Chris.

They have now had to cut back on carers to five short mornings per week, and rely even more on family help.

That is taking a physical and mental toll.

"He's always been so sharp, with such an active mind," Ms English said.

"If they had their way, the Lions Club would take him to the local Driver Reviver van in the holidays so he could have a chat and keep telling them what to do."

Recommendation 1:

That the Commonwealth Government either:

- **Implement the medical and general accident streams of the National Injury Insurance Scheme (NIIS) to provide support to people of all ages who acquire disability through catastrophic injury.**
- Or-
- **Provide access to the NDIS for people of all ages who acquire disability through catastrophic injury.**

7.3. State-based aids and equipment programs

1. Despite there being an assumption that an individual's assistive technology requirements can still be dealt with at the state level, existing state-based aids and equipment programs currently fall well short of people's needs.
2. Key policy and program issues can be summarised as follows:
 - Most state-based programs remain grossly underfunded and there has been no commitment to growth to keep up with the increasing costs of assistive technology.
 - Older people accessing state-based programs are expected to make a significant and often prohibitive financial contribution towards the cost of their assistive technology.
 - Older people accessing state-based programs continue to be plagued by long waiting lists. This prevents them from accessing support when they need it most; with a person's assistive technology needs often having changed significantly between the date of prescription and receipt of the technology that has been recommended.
 - The extent to which governments intend to continue funding state-based aids and equipment programs beyond full roll out of the NDIS remains unclear.
 - People living in residential aged care are unable to access assistive technology under existing state-based aids and equipment programs. There is no other pathway available to provide people living in care with the specific equipment they need. This can have a very negative impact on the mobility, participation and overall health and wellbeing of the individual.
 - Some state-based programs have traditionally prevented people from accessing funding if they are already in receipt of a level 3 or 4 home care package. In some states these exclusions now appear to have been broadened even further. In some states, for example, program guidelines prevent older Australians from accessing funding for assistive technology if they are already on a waiting list for another government-funded service, such as a level 1 or 2 home care package. There is concern that further

restrictions may be imposed through the potential integration of the Commonwealth Home Support Programme and the Home Care Packages Programme.²³

Case Study: David

David has post-polio syndrome. The NDIS commenced roll out in his area 3 months after his 65th birthday and as such, he did not meet the age eligibility requirements for the scheme.

David required the immediate use of a wheelchair, a lift chair and a shower chair as prescribed by an Occupational Therapist. He has applied for a home care package but has been told the waiting list is currently sitting at around 18 months. He has also attempted to access the equipment he needs through the Victorian aids and equipment program. He was told his needs were 'low priority', which meant he would be facing a similar waiting time under this program. David and his wife have had to sacrifice their savings to purchase the specified equipment in the meantime as it was needed urgently.

Case Study: Two people living with an above knee amputation – state-based Artificial Limb Scheme Funding and the NDIS support differences

Robert and Steve have left above knee amputations. Both underwent an amputation due to an aggressive infection. Robert is 67 years old and underwent an above knee amputation in 2010. Steve is 56 years old and underwent an above knee amputation in 2011. As Robert is only eligible for his state-based Artificial Limb Scheme he does not have appropriate access to supports, assistive technology or home modifications. By contrast Steve has an NDIS Plan with access to an array of reasonable and necessary funded supports.

Robert uses a mechanical knee unit which provides no safety and consequently he experiences regular falls. In addition, he has a very basic prosthetic foot which does not provide energy return and leads to fatigue. Robert has no choice over the type of prosthesis he receives. After a fall or due to feeling fatigued because of the type of prosthesis he has been fitted with, Robert uses an old wheelchair which is weighty and quite difficult for him to push around. Up until last year Robert worked full-time however the impact of the regular falls on his body has led to him reducing his working hours to part-time.

Robert has minimal home modifications because he would need to self-fund these, and he is not in the financial position to do so. Consequently, he only uses a board across his bath for personal washing and does not have grip bars in the wet areas (bathroom, toilet) - which increases his level of fall risk.

Steve was funded for a Microprocessor Knee Unit (MPK) and multi-axis prosthetic foot in his first NDIS Plan two years ago. Being fitted with an MPK prosthesis has enabled Steve to return to full-time work and he has never experienced a fall due to the technology and safety that this knee unit provides him with. In addition, all bathroom modifications made in his home have been funded through his NDIS Plan, including a ramp at the rear of his home. Steve is able to lead an active lifestyle with his wife and two children, and on a daily basis he walks his dog on the beach for exercise.

Steve's NDIS plan enabled him to trial a variety of prosthetic devices to determine which one best meets his needs. He has been able to exercise choice and control over both the assistive devices he uses and the service providers (allied health) he selects.

8. Barriers to accessing assistive technology under the aged care system

- From 1 July 2019, all older people with disability who do not meet the age eligibility requirements for the NDIS or the Commonwealth Continuity of Support Programme will need to access services from the aged care system, under either the Commonwealth Home Support System (CHSP) or a home care package.
- Since the Commonwealth has taken over responsibility for funding the aged care system, assistive technology has been continuously underutilized and underfunded.²⁴
- Current issues relating to the supply of assistive technology will be highlighted throughout the following subsections of our submission.

8.1. The Commonwealth Home Support Programme cannot fund high cost aids and equipment that may be required by people with disability

1. The Commonwealth Home Support Program (CHSP) can provide up to \$500 of funding per person per calendar year for aids and equipment. This cap can be increased to \$1,000 with appropriate supporting evidence from an Occupational Therapist.²⁵ Anecdotally, however, we know that information about the cap increase is not always communicated to consumers.
2. Funding for assistive technology is provided under a service category entitled 'Goods, Equipment and Assistive Technology'. Under this service category, the sub-category of assistive technology includes communication aids, support and mobility aids, self-care aids, medical care aids, reading aids, car modifications and other goods and equipment. Not all aged care planning regions, however, are funded for this service type under the CHSP. Even in regions where funding is available, it still may not be available for all types of assistive technology that are required by people with disability.²⁶
3. There is still a great deal of confusion between the role of State and Commonwealth Governments in this area. As an example, the Commonwealth Home Support Programme Manual states:

“The CHSP is not designed to replace existing state managed schemes which provide medical aids and equipment (e.g. Medical Aids Subsidy Scheme). CHSP service providers are encouraged to access these state and territory aids and equipment programs where appropriate.”²⁷

While this implies that consumers can access support from state-based assistive technology programmes instead of using the limited funds available under the Commonwealth Home Support Programme, there is no national consistency in how this applies and the extent to which it is happening remains unknown. Due to the fact that the Commonwealth Home Support Programme only provides minimal funding for assistive technology, most people with permanent and profound disability will need to access funding under a home care package. Issues in relation to accessing assistive technology under a home care package is detailed in sections 8.4 to 8.5.

8.2. There is a lack of support available to help older people with disability navigate the current service system

1. The aged care system is complex and confusing for many older people to navigate, as identified in the first background paper that was published by the Royal Commission into Aged Care Quality and Safety.
2. The needs of people with permanent and profound disability differ greatly from those of the average older person. Despite this fact, there is still no tailored information available to help older people with disability navigate their options and access the support that best meets their needs.
3. Federal and state governments continue to inject significant amounts of money into projects that are designed to help younger people with disability understand how to navigate the NDIS. Regrettably, however, there has been no information provided to older people with disability to inform them about My Aged Care as it relates to the specialist support needs of people with disability.
4. ILC (Information, Linkages and Capacity-building) is a component of the NDIS that sits outside of the arrangement for individually funded packages of supports. Its role is to provide information, linkages and referrals to all people with disability to connect them to appropriate disability, community and mainstream supports. In reference to older people with disability, the ILC Policy Framework states:

“People with disability who are over the age of 65 years will access information and referral or benefit from community capacity building, however, they will likely gain most of their supports from the aged care system. The NDIS and aged care interface arrangements should be complementary and ILC should support people to access the most appropriate services and supports.”²⁸

5. Local Area Coordination is the centrepiece of the ILC system. Local Area Coordinators work directly with people with disability at the community level to provide them with information and referral services that are tailored to their needs. The ILC policy framework states:

“LAC will not be confined to those only with an IFP (Individually Funded Package). LAC will also be available to people with disability who need support but who do not have or are not eligible for an IFP, and to their families and carers.”²⁹

6. It was originally assumed that Local Area Coordinators would play a key role in connecting older people with disability with specialist supports that are appropriate to their needs. At present, however, Local Area Coordination agencies are only providing services to NDIS participants; as they are being inundated by NDIS-related tasks such as planning and support coordination.

Recommendation 2:

That the Commonwealth Department of Health co-fund the Information, Linkages and Capacity Building (ILC) stream of the NDIS so that older people with disability have timely access to disability-specific information and support and can access capacity building, early intervention and local area coordination services on an equitable basis with participants of the NDIS.

8.3. There is a lack of specialist disability expertise within the aged care system

1. The age eligibility requirements that exist under the NDIS Act have resulted in many people with permanent, life-long disability being filtered into the aged care system. The Parliamentary Joint Committee on Human Rights had expressed concern with this arrangement from as far back as 2013. In its report on the NDIS Bill 2012, the Committee noted:

“This assumes that the aged care system does or will deliver all the forms of assistance support required and is organised in accordance with the principles and operates in compliance with the obligations set out in the CRPD (Convention on the Rights of Persons with Disabilities) and the NDIS. While the incidence of disability may increase with age, the assumption that a person who has lived with disability for many years can transition without difficulty to a different system that may be organised around different principles deserves further examination.”³⁰

2. People who acquire a disability after the age of 65 will also require input from professionals who properly understand their needs. Anecdotally, however, we know that current aged care assessment processes fail to adequately capture an individual’s disability-related needs for support. Assessment of an individual’s need for assistive technology, for example, is not currently mandated.
3. This problem is further exacerbated by the confusion surrounding the funding responsibilities of state and territory governments. Independent Living Centres have historically played a key role in enabling people with disability to access individual therapist support and advice, equipment trials and demonstrations. They house a range of different equipment solutions and are staffed by therapists who can provide valued information and advice in an unbiased and non-pressured environment. NDIS participants may be able to access similar services

through their individually funded support package. It is critical that older people with disability who are not eligible for the NDIS have an equitable level of access to these services. Unfortunately, however, state and territory governments have started to retract funding for Independent Living Centres since the implementation of the NDIS. Many of these Centres have subsequently closed or are in the process of closing.³¹

Recommendation 3:

That the Department of Health publicly articulate how the aged care system will support older Australians with disability and review the appropriateness of the National Screening and Assessment Form to identify disability-related needs.

Recommendation 4:

That the Department of Health invest in strategies to build the capacity of aged care assessors to understand and respond to the unique needs of people with disability. This should include consideration of joint purchasing arrangements between the Commonwealth Department of Health and the National Disability Insurance Agency (NDIA).

Recommendation 5:

That the Department of Health ensure older people who acquire a disability have access to timely and appropriate assessment and planning by improving formal collaborative arrangements between the aged care system and the NDIS.

Recommendation 6:

That the Council of Australian Governments, through its role in updating the National Disability Agreement and National Disability Strategy, ensures there is a nationally consistent mechanism in place to provide people with disability outside the NDIS with assistance to understand and locate relevant assistive technology.

8.4. Older people cannot access assistive technology in a timely manner

1. As at 30 June 2019, there were 119 524 people still waiting for a home care package. This included:

- more than 3000 people who were not receiving any assistance at all, despite having been deemed eligible for a package.
 - 47 462 people who had been offered a lower level package until they were able to be provided with a package at their assessed level.
 - 68 900 people who were being provided with support under the Commonwealth Home Support Programme while waiting for a home care package to become available.³²
2. Whilst the Federal Government has announced an additional 34,000 Level 3 and 4 packages over four years,³³ people with disability who are over 65 are further disadvantaged in accessing the assistive technology they need due to this blowout in waiting times. Careful consideration must be given to the provision of assistive technology as an early intervention measure; particularly when older people are still on a waiting list to receive support.
 3. This situation can negatively impact upon families and carers as well as consumers with disability. In reference to this issue, one gentleman told us the following:

“Today marks 916 days since I was assessed Level 4 Age Care Package, during that time I have missed out on necessary services to enable me and my wife who also has significant disability to live meaningful and productive lives. There is absolutely no argument that Aged people with profound disabilities have been seriously disadvantaged by the present system. If the Aged Care Ministry does not get its act together we are going to end up with more people in homes at a greater cost to the Government, or maybe they are waiting for us to die.”
 4. The Australian Government has now promised to develop an NDIS Participant Service Guarantee. The Guarantee will:

“set new standards for the time it takes for key steps in the NDIS process. This means there will be shorter, agreed timeframes for people to receive a decision on whether they will be covered by the NDIS, for them to get an NDIS plan and to have their plan reviewed.”³⁴

The government has stated that the guarantee will have a particular focus on people with disability who require access to assistive technology. This service guarantee should be replicated for people with disability accessing the aged care system to provide an equitable level of support.

Case Study: Lyn

62-year-old Lyn has a 70-year-old husband Bob who has been living with MS for the past 30 years. Because of the rules in place with NDIS, Bob can only access My Aged Care, which doesn't give the same amount of assistance as the NDIS. Presently Bob has been waiting 15 months for any

action/assistance on his approved aged care level 4 application. In that 15 months they have spent in excess of \$10,000 directly attributable to Bob's needs.

In this case if Lyn was the one with MS, she would get an NDIS package and their life and wallet would be a whole lot better off!

Case Study: Margaret

67-year-old Margaret, diagnosed with Parkinson's 11 years ago, lives at home with her husband Kevin. Her need for assistance has increased significantly in the past 2 years. It's now 18 months that she's been waiting for a level 4 package. The current level 2 package does not meet her complex and increasing needs, resulting in added emotional and financial stress for all the family.

Her immediate urgent need is a powered adjustable bed, which would assist her to safely get in and out of bed, reduce carer strain and stress, help with swallowing of saliva/less coughing, reduce the risk of aspiration-related pneumonia (a leading cause of death in Parkinson's), and improve much needed sleep for both Margaret and Kevin. They have been on a waitlist for a suitable powered bed for 12 months. Margaret has also been waiting for 16 months for a powered lift chair that would assist her to stand up from a sitting position, placing less physical strain and dependence on Kevin.

Margaret has chosen to live in her own home with Kevin but requires the appropriate supports and services to make this possible, safe and sustainable. They're unable to self-fund the bed and chair as they have already paid for other essential equipment and services that the aged care system has not been able to provide. They both retired earlier than planned, due to Margaret's increasing disability and dependence on Kevin's assistance.

8.5 Funding packages do not currently meet the needs of many people with disability

1. Funding packages that are provided under the Home Care Packages Programme are set at pre-determined levels and are not built around the individual needs of each consumer.
2. This model does not address the complex support needs that many people with permanent and profound disability may present with. The limited funds available mean that many people with disability are forced to trade off one vital service to be able to afford another. Their funding package simply isn't designed to be able to accommodate all of their individual needs for support.
3. Many older people with disability accessing support under the aged care system are still struggling to cover the purchase of the aids and equipment they need. In many instances, however, the individual will also require specialized training to enable them to use the

specified equipment safely and independently. In some instances this training will also need to be extended to informal carers, such as family members.

4. Prior to the roll out of the NDIS, agencies who specialized in assistive technology training received block funding from government. This enabled them to provide training to clients on a needs basis, usually at no cost to the individual. Under the NDIS, however, this block funding model has been replaced by a market-driven approach. Organisations have set hourly rates for services, such as assistive technology training, based on the prices outlined in the NDIS price guide. Many service providers are now quoting the same prices for non-NDIS participants, irrespective of the fact that they may not have enough funding available under their Home Care Package to cover the costs.

Case Study: Lyn

A polio survivor, Lyn, is waiting on a Level 4 Home Care Package, valued at \$50,250 per year.

Lyn requires a range of assistive technology, and also daily assistance in her home. While she currently has equipment, it will need replacing in future as well as regular maintenance and repair.

The equipment she currently requires includes:

Wheelchair	\$18,000
Shower chair	\$1,680
Ceiling hoist	\$8,861
Corset	\$800

TOTAL COST	\$29,341
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If the above equipment were to be purchased under her Level 4 package, this would leave \$20,909 remaining (equal to just over \$57 per day). This amount is required for daily care in her home (including operation of the hoist in/out of bed and showering), maintenance/repair of the equipment and all other expenses she may have. With administration fees for a Level 4 package likely to be around \$11,000, there is very little available funding remaining.

Lyn was offered a Level 2 Home Care Package in the meantime, valued at \$15,000 per year. This would have been inadequate for her care needs, only covering assistance with operation of the hoist in/out of bed and showering for 3 days a week (leaving her in bed for the other 4 days) and would offer absolutely no allowance for assistive technology.

Had Lyn been eligible for the NDIS, the aids and equipment she urgently required would have been discussed in her planning meeting. The package of funds allocated for the next 12 months would be calculated around these needs so that she would have access to an appropriate level of support.

Case Study: Laura

Laura has retinitis pigmentosa, a condition which causes progressive vision loss. Up until recently, Laura had quite good usable vision. Over the past 12 months, however, her remaining vision has deteriorated to the point where she can no longer read print.

Laura wants to be able to use her computer independently again. As she can no longer read print, she will need to learn how to navigate the computer using specialised text-to-speech software. Not only will she have to learn how to use the software itself, but she will also need to learn how to navigate the computer using only her keyboard as she is no longer able to track the mouse pointer on the screen.

A blindness service provider has quoted Laura \$180 per hour to provide the training she needs, which aligns with the NDIS price guide. Laura wants to be able to send and receive emails, use the internet, manage her personal documents and order her groceries online.

Because she is completely new to the use of screen reading technology, it may take quite a few hours of training to enable her to meet these goals. As a recipient of a level 2 home care package, she is unable to afford this training as this would force her to go without other vital forms of support.

Case Study: Two people living with MND – differences between support through the Aged Care system and the NDIS

Mr A and Mr B are friends, have lived in same regional community since childhood and have played football together in same premierships teams many years ago, and have maintained close friendship over the years. They still mix in the same social circles. Both Mr A and Mr B have rapidly progressive MND.

Mr A is 66 years old and was diagnosed with MND in late 2018 and accesses his supports through My Aged Care (MAC). Mr B is 64 years old and diagnosed with MND in late 2017. Mr B accesses his funds for supports through the National Disability Insurance Scheme (NDIS).

Mr A does not have appropriate access to supports, services, assistive technology or home modifications. By contrast Mr B has an active NDIS plan with ongoing and quick access to supports as funded in his NDIS Plan.

Mr A has chosen to self-fund a ramp access to his home and bathroom modifications. Without these things he could not remain at home. By contrast, Mr B has an active NDIS Plan with ongoing and quick access to funded supports.

Mr A's assistive technology is provided from MND association through limited state funding and funds raised through donations and fundraising events. Mr B, on the other hand, has access to fully funded assistive technology as assessed by allied health professional and bathroom modification and ramp installation to his home.

Mr A has been assessed through MAC for home care package (HCP) level 4 and has been advised of long wait times for this of 12 – 18 months. Mr A feels he will be dead prior to HCP level 4 being available. Mr A has been advised that a level 2 HCP wait time less, between 9 – 12 months. However, he is not sure if offered a level 2 HCP, while awaiting a level 4 HCP, he would take it as he fears he would be worse off financially. All services including home nursing, community allied health and disability supports such as home cleaning, personal care and in-home respite would be at full fee if he takes a package, rather than the current subsidised rate. This makes him feel he would be worse off to accept a level 2 HCP.

Mr B's situation differs significantly due him being in receipt of an NDIS Plan. Through his Plan, Mr B has a choice of service providers such as in-home disability support, community access support, and allied health support. Mr B also has the opportunity for his NDIS plan reviewed at least annually or as his needs change. Mr B is now on his second NDIS plan.

8.6 People living in residential care cannot access appropriate funding for assistive technology

1. Older people living in government-funded residential aged care facilities are unable to access support through state-based aids and equipment programmes.
2. It is generally expected that any aids or equipment will be provided by the residential aged care facility. This arrangement continues to leave many older people with disability without the support they so critically need.

Case Study: Geoff

Geoff, a polio survivor, lives in residential aged care. His motorized wheelchair requires significant modification due to progressive loss of function from the late effects of polio. As there is no funding in

Victoria for assistive technology for people living in residential aged care, there is an expectation that the aged care facility will fund and meet all his care needs. The standard item they would be required to provide, to replace his wheelchair when it cannot be further modified, is a manual wheelchair for mobility. This will not meet his requirements for seating, and will not enable him to move independently around the facility or participate in social activities in the wider community outside his residential facility.

It should be noted that many people managing the late effects of polio, like many others with physical disability, enter residential aged care at a younger age than the wider community. Unless significant home modifications are put in place, many are unable to meet basic care needs such as showering, dressing and mobility within the home. The economic reality of this leaves people with little choice but to move to residential care where sadly their intellectual and social needs are often left unmet as they are in a much younger age bracket than the majority of their co-residents.

Recommendation 7:

That the Commonwealth implement measures to ensure people with disability living in residential aged care can access funding for assistive technology to facilitate mobility, communication and participation in everyday activities.

9. The ultimate solution: A National Aids and Equipment Program for older people with disability

Assistive Technology for All ultimately believes that the issues identified throughout this submission would best be resolved through the establishment of a harmonised and nationally consistent assistive technology program to support people with disability who are not eligible for the NDIS. This approach would simplify the current funding arrangements while providing older people with the technology they need to lead better quality lives and maintain their connection in the community. It also has the potential to reduce demand in other areas such as acute health and community care, which in turn would minimize downstream government costs.

The programme would:

- Seek to harmonise existing state-based AT programs and those operated by not-for-profit organisations. This would streamline access and drive nationally consistent outcomes for consumers while reducing administrative burden on governments. At present, access and out of pocket expenses for the provision of AT differ depending on your age, level of disability, geographic location and which service system you access.

- Be aligned with the NDIS Assistive Technology Strategy to address the inequity between the support that is provided under the NDIS and other service systems.
- Be driven by key performance indicators relating to the timely provision of equipment, in line with the aspirations of the NDIS Participant Service Guarantee.

The program would need to be adequately funded to cover:

- Skilled assessment and referral; particularly in complex cases where an individual's capacity can quickly diminish.
- The provision of high and low-cost aids and equipment.
- Training to enable participants to use AT safely and effectively.
- Maintenance and repair of AT.

To be eligible for the programme, participants would need to:

- Have a disability or long-term health condition that affects activities of daily living.
- Have a disability or long-term health condition that is non-compensable.
- Not be eligible for the NDIS.

Eligibility for the programme would not be impacted by:

- The age of the applicant.
- The applicant being on a waiting list or in receipt of (non-NDIS) services, such as those provided under the aged care system.

Recommendation 8:

That an intergovernmental agreement is established to develop a funded national aids, equipment and assistive technology program, including agreement on the process and timeframes for implementing a national program. As an interim solution for the urgent needs of older people with disability (who are therefore ineligible for the NDIS), the Commonwealth Government should specifically fund aids and equipment for this group.

10. Concluding statement

Thank you for providing *Assistive Technology for All* Alliance with an opportunity to submit evidence to inform the Royal Commission's investigations. It is essential that older people with disability have access to the support they need to lead full and active lives.

It is our hope that the Royal Commission process will help shine a light on the inequity that exists between people with disability who are under 65 years and those who are over the age of 65 and seek to remedy this situation through its recommendations to Government.

If you require further information in relation to any of the points that have been raised throughout this submission, please contact *Assistive Technology for All* Alliance Coordinator, Lauren Henley. Lauren works in the role of Policy Officer at Council on the Ageing Victoria. She can be contacted by phone on (03) 9655 2140, or by email at LHenley@cota.vic.org.au

Appendix 1: Assistive Technology Definitions

1. Assistive technology comprises products and services used to provide assistive solutions that, combined with opportunities for use in desired occupations, across multiple environments, and enable individuals' functioning and participation.³⁵
2. Assistive products include any product especially produced or generally available, used by or for *persons with disability for participation*, to protect, support, train, measure or substitute for *body functions /structures and activities*, or to prevent *impairments, activity limitations or participation restrictions (AS/ISO 9999 page 3)*. Examples of AT include wheelchairs, prostheses, walking sticks, hearing aids, visual aids, and specialized computer software and hardware that increase mobility, hearing, vision, or communication capacities.^{36 37}
3. Assistive technology services include any service that directly assists an individual in the selection, acquisition, or use of an assistive solution. Sometimes known as 'soft technologies', these include providing information and assessment, identifying and trialling assistive solutions, purchasing and customising the solution and ensuring ongoing and effective use, maintenance and review.³⁸

Appendix 2: Assistive Technology for Older Australians Research Report (NACA)

NATIONAL AGED CARE ALLIANCE

POSITION PAPER

Assistive Technology for Older Australians

About the National Aged Care Alliance

The National Aged Care Alliance (the Alliance) comprises 50 peak national organisations in aged care, representing consumer groups, providers, unions and health professionals, working together to determine a more positive future for aged care in Australia. As a leading voice for improvements to aged care for the past decade, the Alliance strives to implement its vision for ageing in Australia, that:

Every older Australian is able to live well, with dignity and independence, as part of their community and in a place of their choosing, with a choice of appropriate and affordable support and care services when they need them.¹

Further information about the Alliance is available at <http://www.naca.asn.au/>.

¹ National Aged Care Alliance (2015) Enhancing the quality of life of older people through better support and care, NACA Blueprint Series June 2015, available from: www.naca.asn.au/Publications/NACA_Blueprint_2015_Final.pdf

Table of Contents

About the National Aged Care Alliance.....	1
Introduction	3
Potential directions for AT in aged care identified in the research report	4
Background	6
What is assistive technology?	6
How does it help?.....	6
Policy context	8
Funding and policy fails to meet need in aged care.....	8
Lack of alignment and consistency across programs or between sectors and jurisdictions	9
Risk of a two-tier System.....	10
What can be done?	11
Call for a national scheme	11
Cross-sector work and other opportunities	11
Conclusion	12
Recommended actions.....	13
Attachment 1: How AT for older Australians is funded	16
Attachment 2: Research Report.....	17

Introduction

Assistive Technology is an intervention that has potential to address Australia's changing demographics and deliver positive health and wellbeing outcomes to older Australians. This Position Paper on Assistive Technology (AT) by the National Aged Care Alliance (the Alliance) is built on previous work undertaken by the Alliance including:

- A research report (commissioned by the Alliance). The Assistive Technology for Older Australians report (February 2018)², found firm evidence that AT delivers independence, autonomy, safety and participation for consumers. Yet, as highlighted in the report, AT provision in Australia is currently inequitable, inefficient and, most importantly, fails to maximise government expenditure by taking advantage of the savings potential of assistive technology.
- A discussion paper by the Alliance on 'Improving the Interface between the Aged Care and Disability Sectors Discussion Paper (August 2016)'³ exploring the current challenges faced by older Australians with a disability.
- The Alliance's Position Statement for the 2016 Federal Election (April 2016)⁴ which called for a COAG agreement to develop a funded national aids, equipment and assistive technology program, along with a recommendation that the Productivity Commission identify the beneficial use of Assistive Technology.
- The Alliance's Blueprint 2 (June 2015)⁵ which identified 'Securing access to affordable assistive technologies, aids and equipment' as one of 14 key areas of action needed in aged care.

In addition to building on our previous statements, this position paper explains our rationale for recommending action on assistive technologies before the finalisation of the NDIS rollout. A map of AT programs and departmental funding responsibilities for AT for older Australians across the Federal, state and non-government sources is presented in Attachment 1.

² The Assistive Technology (AT) for older Australians research project was conducted between September and December 2017. The project was undertaken by COTA Australia on behalf of the National Aged Care Alliance and overseen by a steering group of both Alliance members and AT industry specialists. Various bodies, organisations and individuals working in the AT field were also consulted as part of the project. The project led to the Assistive Technology for Older Australians: Rapid Evidence Review and Economic Pathway Analysis report produced for the Alliance.

³ National Aged Care Alliance (2016) Improving the interface between the Aged Care and Disability sectors: A discussion paper, available from:
<http://www.naca.asn.au/Publications/Improving%20the%20Interface%20Between%20the%20Aged%20Care%20and%20Disability%20Sectors.pdf>

⁴ National Aged Care Alliance (2016) Position Statement for the 2016 Federal Election Enhancing the quality of life of older people through better support and care, NACA Blueprint Series April 2016, available from:
http://www.naca.asn.au/Publications/NACA_Blueprint_Election_Campaign_2016.pdf

⁵ National Aged Care Alliance (2015) Enhancing the quality of life of older people through better support and care, NACA Blueprint Series June 2015, available from:
http://www.naca.asn.au/Publications/NACA_Blueprint_2015_Final.pdf

Potential directions for AT in aged care identified in the research report

The Assistive Technology for Older Australians research report attached to this report (Attachment 2) conducted a 'Rapid Evidence Review' of AT literature as it relates to older people, along with an 'Economic Pathway Analysis' assessing the economic benefits of AT products and AT services delivered in an 'AT bundle'. The Economic Pathway Analysis was applied to seven profiles representative of the range of functional impairments experienced by the older population. The economic pathway then assessed the cost of the required AT bundle, against the economic benefits of 'cost offsets (substitution)', downstream cost offsets (e.g. reduced hospitalisation) and the overall social benefits.

The research paper identified a range of possible policy directions for aged care which are outlined below:

1. Funding of AT information and awareness services

Consumers, and the practitioners and others who support them, want an independent source of trusted information. Enabling consumers to understand and locate relevant AT products and services is an essential first step to realising the potential benefit of AT. Australia has an effective system of information advisory service through the Independent Living Centre (ILC) network for many types of assistive technologies. This type of service meets the needs of most consumers and allied health professionals across all tiers of AT complexity, and functions as a 'safety net' of information across and between funding sources. Some types of AT however require alternative and more personalised information, such as for low vision/blindness information support services and nutrition support products and services.

2. Use of AT to complement service delivery costs

AT can provide solutions for individuals on all levels of packages. Importantly, AT can provide solutions to enable consumers on lower level support packages to meet their individual needs economically, preventing or reducing the need for more intensive levels of support.

3. Maximising the effectiveness of AT service provision and providers

AT services are essential elements of AT provision – government should ensure AT services are funded in concert with AT products. Funding to assess, trial, prescribe, implement and review AT is a critical component of any model of universal AT access. Opportunities exist to realise consumer choice and control by scaling existing capacity-building strategies for consumers interested in self-evaluation and skill building. Importantly, a collaborative approach between all allied health professionals should be supported. Maximising effective roles for allied health professionals includes supporting their currency and knowledge base via ILC-type services, and enabling the development of coaching type roles through funding streams.

4. Developing better business models for prescribing and utilising AT

Given the evidence base suggesting AT products and AT services must be provided in an AT 'bundle' the current demarcations between clinical assessment, products sales (and possibly servicing), and installation / training / support and review, do not deliver a complete solution to older Australians requiring AT.

5. Leveraging good practice from AT provision in NDIS into the aged care reforms

Government should consider adopting AT approaches used in the NDIS where these draw on good practice and evidence – specifically, a broad definition of AT including mainstream products; funding of AT services and AT products together; support throughout the AT supply, maintenance and review cycle.

6. Building better data systems to inform policy

Government should consider utilising existing data sets on older AT users to better determine policy development on AT for older people. These data sets include DSS data on 65 and over disability support pension recipients and their service needs, as well as AT outcomes data in NDIS. In addition to the existing data sets, improvement is warranted across the aged care sector in the collection, analysis and publication of data.

7. Considering utilisation of an economic impact model in funding AT and negotiating State/Commonwealth agreements to support funding appropriately at a Commonwealth Government level

Providing an AT bundle at or prior to the point of clinical need is demonstrably effective in minimising costly adverse events. Urgent consideration must be given to the early intervention and reablement needs of older Australians whose AT requirements will almost always exceed the current proposed AT (Goods and Equipment) spend under the Commonwealth Home Support Programme. This includes considering access to AT funding while on wait lists.

With these potential directions from the research paper in mind, the Alliance has developed numerous proposed actions for the Federal Government to consider. A summary is provided below and greater detail for each of these actions is provided at page 13:

1. Establish a national AT program.
2. Greater investment for AT in aged care.
3. Clearer funding and program responsibilities for AT in aged care across jurisdictions.
4. Better access to data.
5. Increasing consumer awareness and literacy around AT products and services.
6. Ensuring second-hand AT purchases are appropriate and meet Australian standards.
7. Better alignment of the aged care and disability service systems for provision of AT.
8. Appropriate identification of the disability-related needs of older people via the National Screening and Assessment Form (NSAF).
9. Availability of specialised AT advice and building capacity around AT in the aged care workforce.
10. Replicating successful AT models.

Background

What is assistive technology?

Assistive technology is a term used to describe the products and services which enable individuals' functioning and participation. Also known as 'aids and equipment', 'medical appliances' or 'medical devices', the term AT products refers to devices, equipment, instruments and software used by or for persons with disability⁶. Health technologies are a subset of AT products, including emerging smart home and information-communication-based technologies such as telecare, telehealth and monitoring systems. While many jurisdiction-based funders in Australia still use the term 'aids and equipment', the National Disability Insurance Scheme (NDIS) uses the term 'assistive technology' and the ANZ / ISO classification system. 'Assistive technology' is the term used throughout this paper and the AT research report.

How does it help?

Globally, AT products and health technologies are noted to be '*indispensable to helping older people remain healthy, active and independent as long as possible*'⁷. A report prepared for Australia's Department of Health found AT to have '*enormous potential to improve the quality of life, mobility and independence of many Australians, enabling them to continue living at home and to remain connected to their communities for longer*'⁸.

AT promotes independence in addition to being cost-effective by offsetting health-related expenditure, for example, by minimising falls and secondary complications, thus decreasing the need for health interventions such as GP visits, emergency presentations, or hospital admissions.

AT is important particularly in early intervention stages of disability/disease. It should also be emphasised that AT often requires a multidisciplinary approach, for example allied health professionals play an important part in working on mobility, gait, strength etc in conjunction with provision of AT devices.

The social benefits, while harder to cost, are also extensive. Satisfaction, decreased difficulty and anxiety, increased confidence, participation, autonomy and decreased carer burden or injury are substantial contributors to overall health and wellbeing, and demonstrably save costs across the health sector. The Rapid Evidence Review demonstrates overall improved health and wellbeing for AT users including benefits in psychosocial factors such as increased confidence, participation, confidence, satisfaction and autonomy; maintenance of valued roles; better quality of life; as well as reduced difficulty and anxiety. These psychosocial benefits have been demonstrated to provide a direct correlation to mobility, independence and mental health and

⁶ ISO (2016) Assistive products for persons with disability — Classification and terminology, Canberra, retrieved from: <https://www.iso.org/standard/60547.html>

⁷ WHO (2015) World report on ageing and health, Geneva, retrieved from: http://apps.who.int/iris/bitstream/10665/186463/1/9789240694811_eng.pdf?ua=1

⁸ Connell, J., Grealy, C., Olver, K., & Power, J. (2008) Comprehensive scoping study on the use of assistive technology by frail older people living in the community, pp8

that people with increased social event attendance and higher self-satisfaction scores had lower hospital admissions, GP visits and number of medications.

Carer benefits include increased productivity, reduced personal injury and stress. AT considerably lightens the care load for family and friend carers by increasing the independence of the person being care for and enhancing the capacity of informal carers to sustain the provision of care in the home⁹. The person being cared for relies less on carers for mobility, including reducing the need for lifting and, in some instances, transport. Monitoring devices relieve carers from having to maintain constant vigilance of the safety and well-being of the person being cared for, freeing up time for them to pursue their own needs and interests.

Better access to AT also delivers wellness and reablement outcomes through its capacity to complement or supplement formal and informal supports such as the need for home care services. AT can prevent or reduce the need for more intensive supports and the research paper found that spending on AT has beneficial downstream impacts such as slowing the rate of admission to residential aged care services.

Older Australians usually require multiple AT products and related supports such as reablement strategies^{10 11 12}. AT products are most effective when delivered as a bundle with AT services. AT services include any service that directly assists an individual in the selection, acquisition, or use of an assistive solution. Sometimes known as ‘soft technologies’ these service steps include evaluation, demonstration, education and trial, adaptation and review. AT services also include information and awareness-raising, informing potential AT users of the range of options which may suit their individual situation, and any indications or contraindications of use. AT services are essential to ensure the technology fits the person and their environment, and are effective in achieving the intended outcome¹³. AT products and services should be considered part of a suite of supports for older people to remain independent and in the home.

The Economic Pathway Analysis method used in the Alliance’s AT research project¹⁴ combined clinically-indicated AT products and AT services into an AT bundle and costed this against benefits identified in the evidence base. The Pathway Analysis demonstrated the cost impacts of AT bundles for a comprehensive set of AT User Profiles constructed against a diversity of functional impairment and severity types. The analysis calculated cost offsets (savings due to money saved in other parts of the health or aged care sectors) and downstream costs (future expenditure avoided through early provision).

⁹ Future Care - Care and technology in the 21st century, Carers UK, The voice of Carers, available from: <https://www.carersuk.org/for-professionals/policy/policy-library/future-care-care-and-technology-in-the-21st-century>

¹⁰ DeCrean, Westendorp, Willems, Buskens, & Gussekloo (2006) Assistive devices and community-based services among 85 year old community-dwelling elderly in the Netherlands: ownership, use, and need for intervention, *Disability and Rehabilitation: Assistive Technology*, 1(3), pp199-203

¹¹ Gramstad, A., Storli, S. L., & Hamran, T. (2013) ‘Do I need it? Do I really need it?’ Elderly people’s experiences of unmet assistive technology device needs, *Disability and Rehabilitation: Assistive Technology*, 8(4), pp287-293

¹² Layton, N., Wilson, E., & Andrews, A (2014) Pathways to Non Complex Assistive Technology for HACC Clients in WA. Retrieved from Perth: <http://ilc.com.au/wp-content/uploads/2009/08/Full-Report-Pathways-to-Non-Complex-Assistive-Technology-for-HACC-Clients1.pdf>

¹³ Cook, A., & Polgar, J. (2015) *Assistive Technologies*, in (4th Edition ed.), St. Louis: Mosby

¹⁴ Assistive Technology for Older Australians: Rapid Evidence Review and Economic Pathway Analysis (2017), pp24

When savings over time were calculated, the AT report demonstrated value for money (more dollars saved than spent) across all scenarios. However, very few of the User Profiles used in the modelling would be able to establish an AT bundle up front with the limited amount of funding earmarked for AT within aged care. Furthermore, the economic modelling demonstrated that substantial cost offsets and downstream costs will be lost if AT is not introduced at the point of need as an 'early intervention'. Appropriate funding and service delivery contexts are therefore critical to ensure AT is provided in an effective way.

Policy context

Currently, eligibility, access and out of pocket costs for AT provision in Australia differ depending on your age, level of disability, where you live, and importantly which service system you access. This is despite the Productivity Commission envisaging that such services would not differ regardless of the system a person was within and identifying a role for aged care systems to provide equivalent services to those in disability or compensable schemes¹⁵. See Attachment 1 for a map of AT programs and departmental funding responsibilities for AT for older Australians across the Federal, state and non-government sources.

Funding and policy fails to meet need in aged care

Funding sources for AT in aged care range from Commonwealth and State and Territory governments to non-government sources, with poor alignment and consistency between schemes. No statewide or national funding scheme provides full access to AT despite assessed need being identified¹⁶. Access to AT will often depend on the funding program you are able to access and a consumer's ability to advocate for an AT solution. For example, the Rapid Evidence Review identified in Residential Aged Care some basic care equipment may be provided, but little, if any, holistic quality of life enabling AT is usually considered.

Since the Commonwealth took over responsibility for the funding of the aged care system, AT continues to remain under-utilised and under-funded. In July 2015 the launch of the Commonwealth Home Support Programme (CHSP) limited its reference to AT to a small discretionary annual spend of \$500 in total support per financial year under the 'Goods, Equipment and Assistive Technology' service type. Under this service type, the sub-type of AT includes communication aids, support and mobility aids, self-care aids, medical care aids, Reading aids, Car Modification and Other goods and equipment. Unfortunately, it would seem that not all aged care planning regions, or indeed all states are funded for this service type under CHSP. Where funding is available, it may not be available for all sub-types of AT needed by older Australians.

Similarly, limited references are made to AT within the Commonwealth Home Care Packages Program information¹⁷. Indeed, the Department of Health has at times reminded providers that

¹⁵ Productivity Commission (2011) Disability Care and Support Final Report, Canberra, retrieved from: <http://www.pc.gov.au/projects/inquiry/disability-support/report>

¹⁶ Jenny Pearson & Associates. (2013) Research for the National Disability Agreement: Aids and Equipment Reform, Final Report

¹⁷ See Schedule 3, Care and Services of the Aged Care Act Quality of Care Principles, available from: <https://www.legislation.gov.au/Details/F2014L00830>

Home Care Packages are not designed to be used as an AT program where larger AT items are being sought and providers have noted that funding for AT within Home Care Packages often fails to meet the extent of the needs of ageing Australians with disabilities. Unfortunately, there are many service providers that are not encouraging the take up of AT because they are simply not aware of it and do not have processes in place to assist consumers to access it within their package (for example, policy and procedures around the purchase of second hand equipment). Best practice examples should be promoted by the Department and within the sector to encourage the increased adoption of AT within the HCP program.

Despite this, there are examples where service providers encourage the innovative use of ATs in Home Care packages. For example:

- vision impaired clients have been supported to buy or hire DAISY machines from Vision Australia (computerised text and audio books etc) and purchase talking scales so they can monitor their weight and self-manage complex medical conditions and medications.
- a client with a speech impairment and limited access to the community was supported to purchase an iPhone and iPad to help with her communication and socialisation.

The Commonwealth assumed responsibility for aged care in most States in 2015 (Victoria and Western Australia commencing later). State and Territory aids and equipment and AT schemes have traditionally ruled consumers ineligible for support if they are receiving high levels of support such as aged care Home Care Packages Levels 3 and 4 or residential care. More recently, State and Territory programs appear to have broadened their exclusions further, in some cases deeming ageing Australians ineligible if they are 'eligible for' any other Government funded programs (including Level 1 and 2 Home Care Packages)¹⁸. In addition, people fail to be referred for specialised assessments to help determine the correct level of Home Care Package as the National Screening and Assessment Form does not appropriately identify disability-related needs.

Lack of alignment and consistency across programs or between sectors and jurisdictions

Funding models that align to ensure consistent models of care and systems that enable allied health professionals to work collaboratively will support equal access to healthcare for every Australian. Currently, consumers may access State and Territory AT schemes rather than using the funds available through CHSP. However, there is no national consistency in how this applies and the extent to which it is happening is unknown. Exclusion to AT programs can even occur simply by being deemed 'eligible' for aged care services, often long before such services commence.

Similarly, AT schemes across States and Territories have different budgets, scope, eligibility requirements and levels of subsidy. Some schemes require no consumer co-payments but limit eligibility and scope, while others have broader eligibility and scope but require user co-payments.

¹⁸ National Aged Care Alliance (2016), op cit

Anomalies are also common across aged care programs. For example, one Alliance member reported a client was advised by a residential aged care facility that they are not required to provide a recliner chair, yet they do have to provide things such as walkers and wheelchairs. The client was advised he would have been able to receive one if he had been returning home. In contrast, other members have reported recliner chairs are commonly available in residential aged care.

After 2020, Australians requiring AT will be in a new policy landscape with the potential integration of care at home services for aged care and there is concern that further restrictions on eligibility of these State and Territory schemes will occur. Furthermore, State and Territory funded AT programs run the risk of reduced viability due to the incorporation of state funding into the NDIS.

Risk of a two-tier system

In 2009 the Disability Investment Group set out a case for provision of aids and equipment as a fiscally responsible investment, to be realised by the NDIS and the National Injury Insurance Scheme (NIIS)¹⁹. The NDIS has developed a comprehensive AT Strategy and estimates that the NDIS spending on AT will reach \$1.06 billion per annum when the scheme is fully rolled out in 2019-20²⁰. In addition, as part of its Participant Pathway reforms, NDIS participants will be able to access suitable funding up to \$1,500 to purchase low cost AT consumables²¹.

By 2019 the NDIS will take full responsibility from the States and Territories for disability-related assistive technologies for people who enter the NDIS before the age of 65 years. States and Territories will retain responsibility for aids and equipment for people not eligible for the NDIS²², whether health or disability-related. Older Australians are usually advised to access aged care services (via My Aged Care) for their ageing and disability-related needs and this is thought unlikely to change.

The Alliance considers equity and consistency of access an important principle and has concerns that, in an environment of on-going but differing reform across the ageing and disability sectors, a two-tier system could evolve. People who start the NDIS before age 65 can choose to keep receiving services under this scheme as they age²³. However, people who acquire a disability over the age of 65 years and are consequently ineligible for NDIS will fail to have access to the same levels of AT provision as their NDIS counter-parts.

¹⁹ Disability Investment Group. (2009) The Way Forward: A New Disability Policy Framework for Australia, Canberra, retrieved from: <http://www.fahcsia.gov.au/sa/disability/progserv/people/Pages/DisabilityInvestmentGroup.aspx>

²⁰ National Disability Insurance Agency October 2015 Assistive Technology Strategy, available at: http://www.ndis.gov.au/sites/default/files/AT-Paper_0.pdf. Figure quoted excludes special assessment setup and worn-hearing devices in the hearing equipment category. Figures based on NDIA actuarial team data on participants and plans, as at 30 April 2015

²¹ Assistive Technology and Home Modifications Redesign Project Report (draft) (2016) NDIS, Canberra

²² See section 3 of Schedule C to Bilateral Agreements for Transitioning to the NDIS. These are available at <https://www.coag.gov.au/node/525> (Commonwealth and NSW); <https://www.coag.gov.au/node/526> (Commonwealth and Victoria); <http://www.coag.gov.au/node/532> (Commonwealth and Queensland); <https://www.coag.gov.au/node/530> (Commonwealth and South Australia); <https://www.coag.gov.au/node/531> (Commonwealth and Tasmania)

²³ People with disabilities; My Aged Care website, accessed 5/4/2019: <https://www.myagedcare.gov.au/eligibility-diverse-needs/older-people-disabilities>

What can be done?

Call for a national scheme

The Alliance took steps to address concerns about policy shortcomings in Australia in relation to AT provision in aged care through its 2016 Election Position. This position states the need for a COAG agreement to establish *‘a funded national aids, equipment and assistive technology program which includes a statement on the process and timeframes for developing the national program’*. The Alliance’s discussion paper, *Improving the Interface between the Aged Care and Disability sectors*²⁴ supported this position. Better coordinated AT provision also formed part of the Alliance’s submission to the 2018-19 Federal Budget. The Legislated Review of Aged Care also identified the need for *‘resolution of the ongoing coordination and policy issues between the Australian and state/territory governments that is preventing optimal provision of aids and equipment to people over 65 with disabilities’*²⁵.

Cross-sector work and other opportunities

The deployment of AT within the NDIS may provide the aged care sector with models of efficiency and effective delivery of personalised AT services once maturity of the NDIS scheme is reached. A national AT scheme with the NDIS may allow greater economies of scale for procurement and development of innovation. This is particularly so in the case of technological solutions that may be higher in capital cost but have a longer life, provide better consumer outcomes and/or reduce future costs in other care settings, such as acute hospital services or residential aged care. NDIS data on AT may also provide good evidence to inform practice and aged care decisions and, in some cases, offer opportunities to deliver specialised services not commonly found within the ‘aged care’ system.

There is a growing trend within Government funded/subsidised programs to explore how second-hand items can be reutilised, many of which come through consumer-to-consumer sale channels such as ebay.com.au and gumtree.com.au. The provision of guidance materials in this area may increase the uptake of formal OT assessments for such products which can have significant benefits for consumers who require AT products but have limited funds in their Home Care Package budget. Work would be needed to ensure such products are covered by our consumer law and meet Australian Standards.

Better information about AT can improve confidence in the use of AT among consumers. Older Australians and their supporters are active seekers of information about AT. Australia’s National Equipment Database (NED)²⁶ has over 1.2 million hits per year with 30% of visitors seeking product advice for themselves (86% of whom were over 50). A snapshot of 570 enquirers demonstrated AT products were sought to address daily living problems across over twenty domains including mobility and transfers, driving, self-care, self-management and monitoring,

²⁴ National Aged Care Alliance (2016), op cit

²⁵ Tune, D. (2017). Legislated Review of Aged Care, Canberra, retrieved from: <https://agedcare.health.gov.au/legislated-review-of-aged-care-2017-report>

²⁶ For more information, see: www.askned.com.au

house-work and cooking, communicating, seeing and hearing, monitoring, lifting and carrying items²⁷.

The National Aged Care Alliance would also welcome an opportunity to present to the Aged and Community Care Officials (ACCO) or any other group involved to address the issue of gaps, poor alignment and fragmentation of AT across the aged care service system. For example, the lack of clarity regarding consumer eligibility across State and Territory programs needs to be resolved as a priority and consumers should also be informed when registration with My Aged Care affects eligibility for access to other AT programs. In addition, to minimise ongoing costs and ensure current lengthy wait times for services do not impinge reablement principles, AT should be delivered as an early intervention to achieve optimal outcomes.

The National Assistive Technology Alliance (NATA) provides another opportunity for government to consult with all AT stakeholders (both within aged care and other sectors) in one setting around AT policy and planning. Established in 2017, NATA is a community of practice across a wide range of assistive technology (AT) stakeholders including peak bodies that represent AT service providers, AT suppliers, AT practitioners AT consumers, AT research and education and related allied health professionals.

Conclusion

Australia's Survey of Disability, Ageing and Carers (SDAC) reports that 1,619,400 older Australians experience some limitation of activity,²⁸ representing around 43% of the total population over 65 years. 73.5% of these people with some limitation of activity need assistance with one or more activity²⁹ (around 1,190,400 people). The AT research report points to firm evidence that AT delivers independence, autonomy, safety and participation for consumers.

Yet older Australians are missing out on access to AT and its associated support services and are increasingly becoming confused about where they should go for information and assistance. This is partly caused by the poor alignment across sectors and between jurisdictions. Similarly, a lack of targeted funding for AT in aged care and lack of awareness of the benefits of AT amongst consumers, means people currently miss out on AT products and services that could help them stay at home longer.

Government currently does not maximise potential opportunities to leverage efficiencies and economies of scale with the NDIS. Therefore, in an environment of on-going reform across the ageing and disability sectors, the government is unable to capitalise on a service initiative that could prevent or reduce dependence on more intensive aged care services.

²⁷ GrowthAdvisors (2017) ILC National Equipment Database: Consumer Survey - Executive Summary (unpublished)

²⁸ Australian Bureau of Statistics Survey of Disability, Ageing and Carers Summary of Findings (2015) Severe or profound core activity limitation (654,900); moderate core activity limitation (713,700); mild core activity limitation (250,800) Table 3.1, , available from: www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4430.0.55.0092012?OpenDocument

²⁹ Australian Bureau of Statistics Survey of Disability, Ageing and Carers Summary of Findings (2015) Self-care, mobility, communication, cognitive or emotional tasks, health care, reading or writing tasks, transport, household chores, property maintenance, meal preparation, available from: <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4430.0Glossary12015>

It will also be vital for governments and services to keep pace with changing expectations as younger cohorts, whose use of technology is more sophisticated than current users of aged care services, move into the aged care system. Technology infrastructure, including adequate internet access, will be an important component.

In contrast, the AT research report has identified that AT interventions are cost-effective and can decrease the need for health interventions such as GP visits, emergency presentations, or hospital admissions. Other benefits include increased confidence, satisfaction, autonomy, maintenance of valued roles, quality of life, and overall improved health and wellbeing in consumers. Carer benefits include increased productivity, reduced personal injury and stress. AT also considerably lightens the care load for family and friend carers by increasing the independence of the person being cared for and enhancing the capacity of informal carers to sustain the provision of care in the home.

Recommended actions

Delivering national consistency and equity of access to AT programs and supports, leveraging good practice of AT provision in NDIS in aged care, enabling consumers to better understand and locate relevant AT products and services, and improved data were put forward by the AT research report as potential future directions for AT in aged care and are included at the beginning of this paper.

With these in mind and using the evidence outlined in this position paper, the Alliance proposes the following actions be considered before the finalisation of the NDIS rollout:

1. Establish a national AT program

COAG, through the Australian Health Ministers Advisory Council, makes the establishment of a national AT program a priority to address the gap for older people between the aged care and disability programs and to leverage cross-sector opportunities between disability and aged care. It is noted that in 2009 all levels of government in Australia agreed to nationally consistent aids and equipment schemes through the National Disability Agreement³⁰.

2. Greater investment in AT in aged care

The Commonwealth Government invests additional funding into AT for older people to support the development and delivery of innovative AT solutions in home care and residential care for the aged care sector. Increased investment for AT in these areas will support positive, cost-effective outcomes for aged care consumers and carers, as well as for aged care workers. Any increased funding made available for AT should be based on evidence of clinical utility and cost effectiveness.

As an interim measure, funding available to consumers for AT should be incorporated into the CHSP, Home Care Packages and residential care service types at a threshold of \$1,000 as a minimum. For more specialised AT equipment at a higher cost, a pathway to review and approve applications for over-threshold funding in a timely manner needs to be considered

³⁰ Jenny Pearson & Associates (2013), op cit.

as part of the model. This will ensure greater consistency with the new AT pathway proposed by NDIS as part of its Participant Pathway reforms.

Funding for AT must be assigned for not only the purchase/hire/loan of the equipment but also the specialised assessment and training (where required) to deliver a complete solution for older Australians requiring AT. Funding should also cover servicing, reassessment, any ongoing training and support to ensure strong adoption of the AT equipment.

3. Clearer funding and program responsibilities across jurisdictions

Clearer funding and program responsibilities across State and Territory and Commonwealth jurisdictions should be created as a priority to improve consumer understanding regarding eligibility. The Alliance stands ready to work with the Aged and Community Care Officials to address interjurisdictional alignment differences around AT funding and program responsibility and assist in improving communication processes to consumers about where they should go for AT support.

4. Better access to data

Government considers developing goal-oriented outcome measures to better demonstrate AT outcomes and improve utilisation of existing data sets for older AT users. These include DSS data on 65 and over disability support pension recipients and their service needs, as well as AT outcomes data in NDIS, to drive policy development of AT for older people.

5. Increasing consumer awareness and literacy

Increase consumer awareness and literacy of the availability and breadth of AT through development and delivery of specific programs. Improving community awareness of and funding to enhance Australia's National Equipment Database (NED) would be one solution to improving knowledge of AT. The NED has over 400,000 hits per quarter.

6. Ensuring second-hand AT purchases are appropriate and meet Australian standards

Consideration is given to the development of minimum principles where government funds are used to purchase second-hand AT goods, particularly those purchased online or via consumer-to-consumer mechanisms where Australian Consumer Law may not apply as they do for 'new' purchases. Regulation in this area should consider the clinical appropriateness of funded second-hand AT products, that appropriate sanitation has occurred and a requirement that the product is in 'good working order'.

7. Better alignment of the aged care and disability service systems for provision of AT

Government ensures the Continuity of Support (CoS) program for older people with a disability clearly articulates what alternative support there is for people who acquire a disability over 65 and who is ineligible for CoS.

8. Appropriate identification of disability-related needs via the National Screening and Assessment Form (NSAF)

The Department of Health reviews the appropriateness of the NSAF to ensure the disability-related needs for AT in older people are identified and that the aged care system will support older Australians with a disability.

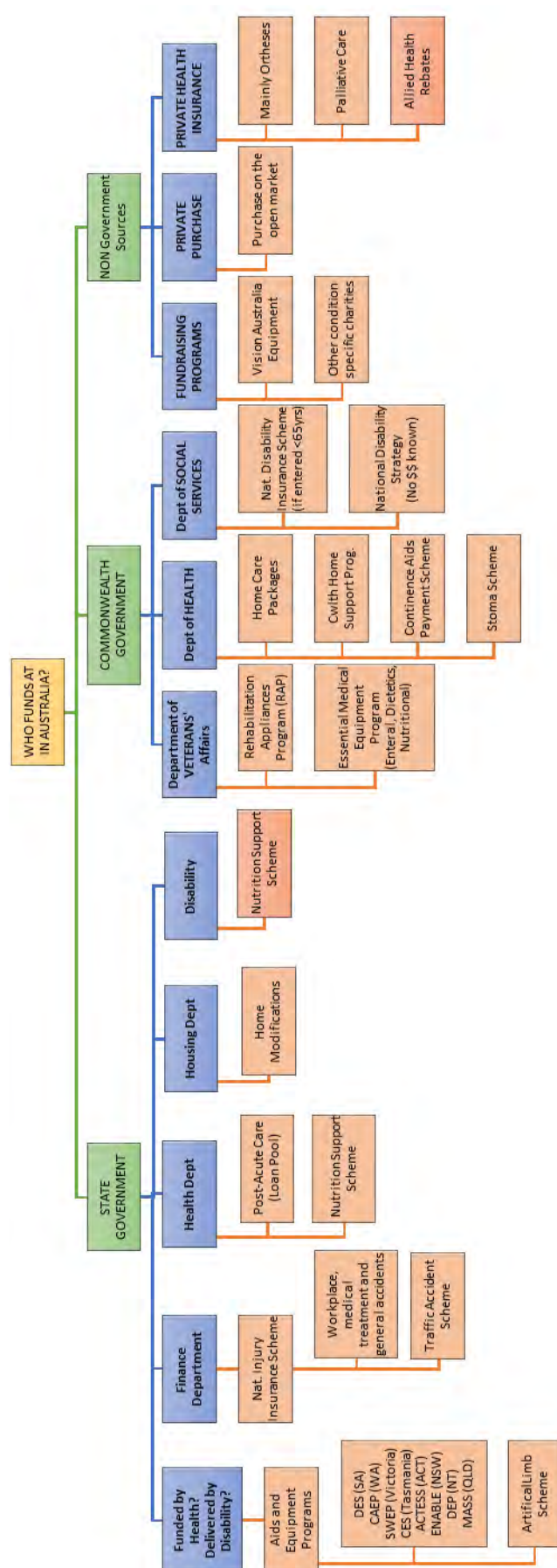
9. Availability of specialised advice and building capacity in the aged care workforce

Support is needed for aged care assessors and workers to develop and build capacity to better respond to the specialised advice needs of people with a disability.

10. Replicating successful AT models

Explore successful provider AT projects and models with a view to replicating these initiatives.

Attachment 1: How AT for older Australians is funded



Attachment 2

ASSISTIVE TECHNOLOGY FOR OLDER AUSTRALIANS: RAPID EVIDENCE REVIEW AND ECONOMIC PATHWAY ANALYSIS

**A RESEARCH REPORT FOR THE
NATIONAL AGED CARE ALLIANCE**

*Project conducted by COTA Australia
on behalf of the National Aged Care Alliance.*

**Report prepared by Dr Natasha Layton, Research and Policy Analyst, &
Corey Irlam, Director, Advocacy & Government Relations, COTA Australia**

Table of Contents

Steering Group	20
National Aged Care Alliance Contributing members	20
Other Contributors.....	20
Executive Summary	21
Results.....	21
Policy Directives	22
DELIVERABLE 1: RAPID EVIDENCE REVIEW:	244
1.1 Purpose	24
1.2 Background	244
1.3 Method	30
1.4 Results.....	333
1.5 Discussion.....	39
1.6 Conclusion.....	41
DELIVERABLE 2 ECONOMIC MODELLING via PATHWAY ANALYSIS	42
2.1 Background	422
2.2 Method	48
2.3 Results.....	58
2.4 Discussion.....	74
2.5 Assumptions and limitations.....	75
2.5 Extensions to this work	76
2.6 Conclusion	77
Appendix 1: AT Policy Design Principles in Australia and Internationally	78
Appendix 2: AT funding map for aged care	81
Appendix 3: Grid mapping of functional impairment groupings to assistive technology chapters, identified against likely funding sources.....	82
Appendix 4: Stakeholder feedback and revisions to AT profiles	84
Appendix 5: AT Bundle Pricing: lowest to highest	86
References	90

Disclaimer

This report has been prepared for, but is not formally endorsed by the National Aged Care Alliance members. Members will consider the implications of this paper and accompanying policy paper in early 2018 through its usual consensus endorsement processes.

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The Assistive Technology for older Australians project was conducted by COTA Australia on behalf of the National Aged Care Alliance (the Alliance) between September – December 2017. The project was led by Dr Natasha Layton, Research and Policy Analyst and Corey Irlam, Director Advocacy and Government Relations. The project was overseen by a steering group of both Alliance members and AT industry specialists, and consulted on with various bodies, organisations and individuals working in the AT field.

The project team would like to thank the leaders, academics and individuals interested in improving Assistive Technology for older Australians for their contributions to the development of this paper. In particular we wish to acknowledge the extensive support provided to the project team by members of COTA Australia, Steering Group, National Aged Care Alliance, the National Assistive Technology Alliance, Allied Health Professions Australia, Independent Living Centres and Victoria's Access to affordable AT for 65+ Campaign Coalition who have contributed to the contents of this paper, and reviewed its various iterations.

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Executive Summary

Evidence demonstrates that Assistive Technology (AT) provision in Australia is inequitable, inefficient and fails to maximise government expenditure by taking advantage of the cost potential of AT in substituting for other supports. Yet AT is an intervention with massive potential to address Australia's demographic changes, and deliver health and wellbeing outcomes to older Australians. The UK Audit Commission suggest '*If a drug was discovered with a similar cost-profile, it would be hailed as the wonder-drug of the age*' (2000:64). Australia's Department of Health and Ageing found AT to have '*enormous potential to improve the quality of life, mobility and independence of many Australians, enabling them to continue living at home and to remain connected to their communities for longer*' (2008:8). And globally, products and health technologies are noted to be '*indispensable to helping older people remain healthy, active and independent as long as possible*' World Health Organisation (2015).

In Australia, to address current policy shortcomings, the Alliance's 2016 Election Position states "*That a COAG agreement is established to develop a funded national aids, equipment and assistive technology program and which includes a statement on the process and timeframes for developing the national program*". This position has been referenced by the Legislated Review of Aged Care, which identifies the need for '*resolution of the ongoing coordination and policy issues between the Australian and state/territory governments that is preventing optimal provision of aids and equipment to people over 65 with disabilities*' (Tune, 2017, p. 11)

To inform and provide evidence for the Alliance position, the 'AT for Older Australians' research was commissioned. Mixed methods were used including a rapid evidence review of the black and grey literature, comprehensive consultation with sector experts, and economic modelling using a pathway analysis of AT costs and outcomes for a representative range of AT user profiles. Policy considerations utilising the evidence will be developed through the first quarter 2018.

The AT Project deliverables include 1) Rapid Evidence Review and 2) Economic Pathway Analysis

Results

The Rapid Evidence Review found firm evidence that AT delivers independence, autonomy, safety and participation. AT is demonstrated to substitute or supplement formal and informal support work such as the need for home support hours. AT offsets health-related expenditure for example minimising falls and secondary complications, thus decreasing the need for health interventions such as GP visits, emergency presentations, or admissions. Research demonstrates that spending on AT has downstream impacts such as slowing the rate of admission to residential aged care services. Finally, social benefits, while difficult to cost, are extensive and include psychosocial factors such as confidence, satisfaction, autonomy, maintenance of valued roles, quality of life, and overall improved health and wellbeing for AT users and their circle of support. AT products are most effective when delivered in an AT 'bundle' with AT services. Appropriate funding and service delivery contexts are therefore critical to ensure AT is provided in an effective way.

The Economic Pathway Analysis method combined clinically indicated AT products and AT services into an AT bundle, and costed this against benefits identified in the evidence base. The Pathway

Analysis demonstrated the cost impacts of AT bundles for a diverse set of AT user profiles constructed against a diversity of functional impairment and severity types and is able to be extrapolated to the Australian populations they represent. In all cases, costs and benefit were identified from the base (first) year, growing exponentially over a projected 5 year time horizon. Very few of the profiles would be able to establish the required AT bundle up front with the current earmarked amount for AT within the aged care reforms. The economic modelling demonstrated that substantial cost offsets and downstream costs will be lost if AT cannot be introduced at point of need as an ‘early intervention’. A range of further sensitivity analyses and extensions of this method are possible to enable forecasting and policy formation to meet the needs of the full range of older Australians who require AT to live full lives.

Policy Directives

The evidence base identified in the Rapid Evidence Review, and the Economic Pathway Analysis, support a clear range of policy directions:

1. Funding of AT information and awareness services

Consumers, and the practitioners and others who support them, want an independent source of trusted information. Enabling consumers to understand and locate relevant AT products and services is an essential first step to realising the potential benefit of AT. Australia has an effective system of information advisory service through the Independent Living Centre (ILC) network for many types of assistive technologies. This type of service meets the needs of most consumers and allied health professionals across all tiers of AT complexity, and functions as a ‘safety net’ of information across and between funding sources. Some types of AT however require alternative and more personalised information, such as for low vision/blindness information support services and nutrition support products and services.

2. Use of AT to complement service delivery costs

AT can provide solutions for individuals on all levels of packages. Importantly, AT can provide solutions to enable consumers on lower level support packages to meet their individual needs economically, preventing or reducing the need for more intensive levels of support.

3. Maximising the effectiveness of AT service provision and providers

AT services are essential elements of AT provision – government should ensure AT services are funded in concert with AT products. Funding to assess, trial, prescribe, implement and review AT is a critical component of any model of universal AT access. Opportunities exist to realise consumer choice and control by scaling existing capacity-building strategies for consumers interested in self-evaluation and skill building. Importantly, a collaborative approach between all allied health professionals should be supported. Maximising effective roles for allied health professionals includes supporting their currency and knowledge base via ILC-type services, and enabling the development of coaching type roles through funding streams.

4. Developing better business models for prescribing and utilising AT

Given the evidence base suggesting AT products and AT services must be provided in an AT 'bundle' the current demarcations between clinical assessment, products sales (and possibly servicing), and installation / training / support and review, do not deliver a complete solution to older Australians requiring AT.

5. Leveraging good practice from AT provision in NDIS into the aged care reforms

Government should consider adopting AT approaches used in the NDIS where these draw on good practice and evidence – specifically, a broad definition of AT including mainstream products; funding of AT services and AT products together; support throughout the AT supply, maintenance and review cycle.

6. Building better data systems to inform policy

Government should consider utilising existing data sets on older AT users to better determine policy development on AT for older people. These data sets include DSS data on 65 and over disability support pension recipients and their service needs, as well as AT outcomes data in NDIS. In addition to the existing data sets, improvement is warranted across the aged care sector in the collection, analysis and publication of data.

7. Considering utilisation of an economic impact model in funding AT and negotiating State/Commonwealth agreements to support funding appropriately at a Commonwealth Government level

Providing an AT bundle at or prior to the point of clinical need is demonstrably effective in minimising costly adverse events. Urgent consideration must be given to the early intervention and reablement needs of older Australians whose AT requirements will almost always exceed the current proposed AT (Goods and Equipment) spend under the Commonwealth Home Support Programme. This includes considering access to AT funding while on wait lists.

DELIVERABLE 1: RAPID EVIDENCE REVIEW:

1.1 PURPOSE

Assistive technology (AT) is a key strategy to enable health and wellbeing by minimising the effects of functional impairment and facilitating activities and participation. The Alliance's 2016 Election Position provides two positions:

12.1 That a COAG agreement is established to develop a funded national aids, equipment and assistive technology program and which includes a statement on the process and timeframes for developing the national program.

12.2. That the Productivity Commission be commissioned to investigate and increase the evidence base for better health, social and economic benefits that are achievable through increased use of aids, equipment and smart technologies (including those installed in the home) which reduce unnecessary dependency on alternative interventions.

This research project considers how the Alliance position may be achieved. Methods comprise a rapid evidence review of the black (peer reviewed) and grey (reports and other non-academically sourced) literature, economic modelling of AT costs and outcomes for a representative range of AT user profiles, and data-gathering consultations with key stakeholders. The project:

- Provides an overview of the economic effectiveness of AT for elders.
- Identifies the AT needs of older Australians.
- Maps the types of AT required by older Australians.
- Evaluates current AT provision policies and models against need.
- Considers future AT policy for older Australians.

1.2 BACKGROUND

What is assistive technology?

Assistive technology refers to products and services which, combined with opportunities for use in desired occupations, across multiple environments, and without prejudice, enable individuals' functioning and participation (ARATA, 2016). Previously known as 'aids and equipment', 'medical appliances' or 'devices', assistive products (AT products) refers to any product (including devices, equipment, instruments and software), especially produced or generally available, used by or for persons with disability) (ISO, 2016). While many jurisdiction-based funders in Australia still use the term aids and equipment, the National Disability Insurance Scheme uses the current term assistive technology and also utilises the ISO classification system.

AT services include any service that directly assists an individual in the selection, acquisition, or use of an assistive solution. Sometimes known as 'soft technologies' these service steps are essential to ensure the technology fits the person and their environment, and is effective in achieving the intended outcome (Cook & Polgar, 2015). Internationally agreed service deliver steps include:

- Providing information: informing potential AT users of the range of options which may suit their individual situation, and any indications / contraindications of use.
- Evaluation / assessment: this can include self-evaluation for straightforward AT.
- Identifying and trialling assistive solution: an essential step to ensure AT fits within environments of use and with other AT products.
- Purchasing and customising the AT bundle.
- Maintenance and review to ensure ongoing and effective use, and to re-evaluate as needs or circumstances change (AAATE, October, 2012) (NDIA, 2015) (see Appendix 1).

Assistive technology in context

There are essentially six ways to influence human functioning (Smith, 2002). Acute health services reduce the impairment through medical interventions such as surgery or pharmacology. Rehabilitation strategies aim to both reduce and to compensate for the impairment. Redesigning the activity is deployed in rehabilitation and in reablement. Two further approaches: redesign of the environment and the use of AT products are strategies used across the health continuum from acute to home based rehabilitation, reablement, and palliation. Figure 1.1 illustrates these approaches for someone cooking with arthritic joints.

The literature consistently reports that supports are most effective when provided as a bundle, for example the Cochrane Review of Reablement services concludes *‘the content of the intervention may encompass graduated practice in completing tasks, environmental adjustments and adaptive equipment, or enabling an older person to build up a social network’* (Cochrane et al., 2016, p. 7).

<ol style="list-style-type: none"> 1. Reduce the impairment: Surgery or medication for arthritic joints 2. Compensate for the impairment: Buy pre-chopped foods, meal home delivery 3. Redesign the activity: Use joint protection techniques and energy conservation strategies; cook foods requiring less handling 4. Introduce AT products: Cook with adapted utensils to provide mechanical advantage 5. Redesign the environment: Alter manual handling demands: minimise reach range and path of travel 6. Use personal assistance: support worker to cook 	
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Figure 1.1 Six ways to influence human functioning: cooking with arthritis example

Arguably all technology is ‘assistive’ as it enables humans to function in and manage their environments. International and Australian Standards offer a classification system to identify assistive technologies (whether mainstream products or especially made for people with disability or the

effects of ageing) (ISO, 2016). The ISO 9999 *Assistive Products for Persons with Disability - Classification and Terminology* has historically been adopted by Standards Australia³¹ and is currently used by NDIS and national equipment databases³² in Australia.

Assistive technology, ageing, and disability

Assistive technologies are effective supports across the lifespan. While ‘disability’ and ‘aged care’ are often discussed and administered separately, demographic changes are altering the profile of AT users, as people with disability have greater longevity and are ageing, and older people may also age *into* disability. Figure 1.2 presents AT users as a subset of the combined total of ageing INTO, ageing WITH and frail AGED persons.

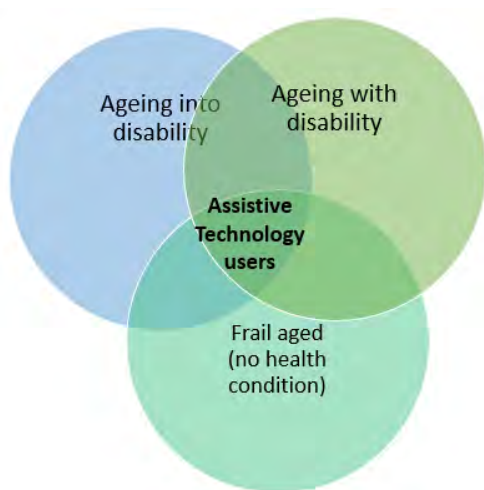


Figure 1.2 Diversity of AT users

Moving beyond perceptions of disability, illness or age, the World Health Organisation’s (WHO) new model of healthy ageing focusses on maximising functional ability as the ultimate goal of healthy ageing (WHO, 2015). The WHO states that even if an individual’s intrinsic capacity is diminished, the person may still be able to do the things that matter to them if they live in a supportive, enabling environment. Environment includes technologies, built environments, social contexts and service systems (World Health Organization, 2001).

Older adults use and value AT and demonstrate a range of improved outcomes. These include increased participation (objective and subjective), satisfaction, quality of life, well-being and inclusion. These are key primary outcome dimensions valued by AT users and resulting from tailored AT provision. Secondary outcomes include cost effectiveness (including minimising social costs and cost offsets), decreased support costs, lowered admission and readmission rates (Lofqvist, Nygren, Szeman, & Iwarsson, 2005; W. Mann, Llanes, Justiss, & Tomita, 2004)³³.

Older adults utilise AT for a range of outcomes including independence, autonomy, safety and participation. Older Australians usually require multiple AT products and related supports such as reablement strategies and home modifications (DeCrean, Westendorp, Willems, Buskens, & Gussekloo, 2006; Gramstad, Storli, & Hamran, 2013; Layton, Wilson, & Andrews, 2014). Decades of

³¹ AS/NZS & ISO 9999: 2018 Assistive Products for Persons with Disability - Classification and Terminology <https://infostore.saiglobal.com>

³² See more available from www.askned.com.au

³³ Lofqvist, C., Nygren, C., Szeman, Z., & Iwarsson, S. (2005). Assistive devices among very old people in five European countries. *Scandinavian Journal of Occupational Therapy*, 12(181-192).

Home and Community Care (HACC) funded services have provided allied health services (mainly provided by community health services or rural health services). These deliver assessment for AT and home modifications in order to increase and maintain functional independence, slow decline, decrease falls risks and delay admissions (Municipal Association of Victoria, 2014).

International conventions and reports (United Nations, 2006) (WHO, 2011, 2015, 2016) identify that people living with disability, of whatever age, have a right to the supports which enable a range of life outcomes³⁴. The number of people aged 65 or older is projected to grow from an estimated 524 million in 2010 to nearly 1.5 billion in 2050: living longer will mean an increased incidence of impairments including cognitive decline, chronic age-related diseases, and limitations in physical activity, vision, and hearing (International Federation on Ageing, 2016). The number of people with disability in Australia is growing significantly at both ends of the life cycle, as the rate of informal carers decreases (Australian Senate, 2011). Around 3.7 million Australians (15% of the population) were aged 65 and over in 2016³⁵.

Australia's Survey of Disability, Ageing and Carers (SDAC) reports that 1,619,400 Australians experience some limitation of activity over the age of 65³⁶. Of these, 1,190,400 need assistance with one or more activity³⁷ (ABS, 2015). Australian AT policy for older Australians needs to take into account that for Australians over 65:

- 1,619,400 experience some limitation of activity;
- 1,190,400 need assistance with one or more activity;
- 461,000 use self-care aids;
- 487,000 use mobility aids;
- 657,600 use communication aids;
- 46,800 use meal preparation equipment;
- 479,900 manage health conditions using medical aids³⁸.

³⁴ Persons with disabilities must be able to live independently, to be included in the community, to choose where and with whom to live and to have access to in-home, residential and community support services (Article 19). Personal mobility and independence are to be fostered by facilitating affordable personal mobility, training in mobility skills and access to mobility aids, devices, assistive technologies and live assistance (Article 20). To enable persons with disabilities to attain maximum independence and ability, countries are to provide comprehensive rehabilitation and rehabilitation services in the areas of health, employment and education (Article 26).

³⁵ For more information, see: <https://www.aihw.gov.au/reports/older-people/older-australia-at-a-glance/contents/health-and-functioning>

³⁶ Severe or profound core activity limitation (654,900); moderate core activity limitation (713,700); mild core activity limitation (250,800) SOURCE Australian Bureau of Statistics Survey of Disability, Ageing and Carers Summary of Findings (2015), available from: www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4430.0.55.0092012?OpenDocument Table 3.1

³⁷ Self-care, mobility, communication, cognitive or emotional tasks, health care, reading or writing tasks, transport, household chores, property maintenance, meal preparation, Australian Bureau of Statistics Survey of Disability, Ageing and Carers Summary of Findings (2015), available from: www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4430.0.55.0092012?OpenDocument

³⁸ ABS Personal Communication: Madeleine Markey (Disability, Ageing, Carers and Mental Health Section) restriction of Table 13 of the Survey of Disability, Ageing and Carers Summary of Findings publication to just those 65 years and over. Obtained 21.11.2017

These SDAC data cubes for disability and for older people were a primary source of demographic information used in this Research Report. The project has used the chronological age of 65 and over in line with the NDIS cut off and the main eligibility point for accessing aged care services. We note that indigenous people may access aged care at 50, but can continue to access NDIS until age 65. Additionally, we acknowledge perspectives from the disability literature which suggest ageing is experienced by those as young as 50 years due to vulnerability to risk factors resulting from physical impairment (Cooper & Bigby, 2014). While both these limitations indicate the uptake and need for AT could be higher than SDAC data predicts, it is unclear if this would be the responsibility of the Commonwealth and aged care areas.

Costs and outcomes of assistive technology

The face validity of assistive technology is unmistakable. Particularly when viewed on an individual basis, AT is a powerful enabler of valued outcomes, and as a clear and obvious investment to prevent related and future (downstream) costs. The empirical evidence base for assistive technologies is growing, and the enormously wide application of assistive products across daily living areas has been identified. The impact of AT has been evidenced as effective and necessary to meet each one of the United Nations Sustainable Development Goals (Tebbutt et al., 2016). Based on such evidence, the World Report on Ageing and Health states '*Medical products, essential medicines and health technologies are indispensable to helping older people remain healthy, active and independent as long as possible*' (WHO, 2015, p. 110).

In Australia, the Department of Health and Ageing identify strong evidence for improved safety, independence, mobility, physical function, wellbeing and quality of life as well as reduced falls and hospitalisations:

Assistive technology is one area with enormous potential to improve the quality of life, mobility and independence of many Australians, enabling them to continue living at home and to remain connected to their communities for longer. (Connell, Grealy, Olver, & Power, 2008, p. 6)

Current AT Policy

Current systems for AT provision in Australia differ based on age, disability, and location or jurisdiction, thus failing to meet equity criteria. The Disability Investment Group found the lack of essential equipment leads to increased disability, increased dependence and increased long-term costs, and yet noted that currently many Australians 'simply go without aids and equipment' (Disability Investment Group, 2009, p. 17). The Disability Investment Group set out a case for provision of aids and equipment as a fiscal responsibly investment, to be realised by the National Disability Insurance Scheme (NDIS) and the National Injury Insurance Scheme (NIIS). It is hoped that the deployment of AT within these schemes will provide the aged care sector with models of efficiency and effective delivery of personalised AT services. The NDIS is scheduled to be fully rolled out by 1 July 2019. As of 1 July 2016, the National Injury Insurance Scheme (NIIS) has been operational in each Australian State and Territory for motor vehicle accidents; but is yet to reach national coverage on workplace accidents, medical treatment or general accidents. AT policy within the NDIS to date provides an AT Strategy³⁹ which describes AT service provision steps, as well as a new way of classifying AT products across four

³⁹ For more information, see: <https://www.ndis.gov.au/providers/assistive-technology-strategy>

levels of complexity, linking this to the competencies needed to support their provision (see AT complexity hierarchy⁴⁰).

In designing the new disability system, the Productivity Commission envisaged that services would not differ regardless of the system a person was within, and identified a role for aged care systems to provide equivalent services as those in disability or compensable schemes,

People who acquired a disability after the age pension age would enter the aged care system, with the exception of the relatively few people experiencing catastrophic injury. The latter would be covered by the National Injury Insurance Scheme (NIIS) for their full lives, and so would generally lie outside both the aged care system and the NDIS, though potentially using some services common to both (Productivity Commission, 2011, p. 10).

The realisation of the Productivity Commission vision for an aged care system is in progress with My Aged Care, however early indications suggest the role of AT is under realised. The Commonwealth Home Support Programme (CHSP) launched on 1 July 2015, includes service type 'Goods, Equipment and Assistive Technology', but limit its reference to a small discretionary annual spend,

In general it is expected that clients who are unable to purchase the item/s independently will be able to access up to \$500 in total support per financial year under this service type. This cap applies in total per client, regardless of how many items are loaned or purchased. It is not a cap applied per item. For example, a client may lease a walking frame and shower chair in the same financial year for a total combined cost of \$450. These items include those which pose a low risk to the client or worker. Where a provider assesses it to be necessary, however, the provider has the discretion to increase the cap to \$1,000 per client per financial year (page 50)⁴¹

Limited references are made to AT⁴² within the Commonwealth Home Care Packages Program information. Indeed, the Department has at times reminded providers that Home Care Packages are not designed to be used as an AT program. In Residential Aged Care some basic care equipment may be provided. However, little if any holistic quality of life enabling AT is considered⁴³. In practice, the small amount able to be spent on AT within Home Care Packages in no way meets the extent of the needs of many ageing Australians with disabilities, or the potent impact of early AT intervention on current and future cost savings for Australians ageing into disability. In addition, it would seem that the 'Goods, Equipment and Assistive Technology' service type funded under the CHSP appears to be only available in South Australia, and possibly in the ACT for Culturally and Linguistically Diverse (CALD) and Indigenous groups following the 2016 CHSP Growth Funding Round.⁴⁴ This CHSP service type is primarily used in this document as a comparator to demonstrate the hypothetical cost savings if the

⁴⁰ For more information, see: <https://www.ndis.gov.au/providers/assistive-technology-faqs.html>

⁴¹ For more information, see: <https://agedcare.health.gov.au/news-and-resources/publications/fact-sheets/commonwealth-home-support-programme-programme-manual-2017>

⁴² See Schedule 3, Care and Services of the Aged Care Act Quality of Care Principles available from <https://www.legislation.gov.au/Details/F2014L00830>

⁴³ See Schedule 1, Part 2, Care and Services of the Aged Care Act Quality of Care Principles available from <https://www.legislation.gov.au/Details/F2014L00830>

⁴⁴ For more information, see: https://agedcare.health.gov.au/sites/g/files/net1426/f/documents/10_2016/appendix_a_chsp_growth_round_2016.pdf: p 50

proposed AT bundles were established. However, we acknowledge that as this service type appears to be only funded in two states this is insufficient.

No state or national funding scheme provides full access to assistive technologies despite legitimate (assessed) need. Subsidy rates are not generally aligned to actual costs or to CPI, wait times usually apply, and processes are not fully person-centred (Jenny Pearson & Associates, 2013). Levels of funding are a key concern for individuals with disabilities, their carers, therapists, NGOs and peak bodies (Queensland Competition Authority, 2014). Appendix 2 lists current AT Funding Schemes for older Australians according to their funding source. Funding sources range from Commonwealth, State to Non-Government sources. Multiple departments are evident with four sources per state equalling 32 state jurisdictions as well as four commonwealth schemes, as well as a diversity of private health insurance options, and private purchase. It is as yet unclear who is responsible for non-aged care and non-NDIS-eligible AT users: potentially the National Disability Strategy (led by the Department of Social Services) bears responsibility here, or state health/disability services under the Health and Hospitals Agreement. It is noted however that a substantive gap exists in other scenarios for those requiring AT, for example blindness-related AT is excluded from South Australia's AT funding programs. After July 2019, Australians requiring AT will be in a new policy landscape, and now is the time to address these concerns. The 2017 Legislated Review of Aged Care identifies a clear role for AT within wellness and reablement, proposing (Recommendation 29) with choice and support for independent living to be enabled through:

increasing access to short-term reablement supports and/or episodic care, rather than the provision of ongoing care, including an increased focus on the use of assistive technology enabling better integration with other available support systems such as the health care system and community-based support (Recommendation 29) (Tune, 2017).

To enable equitable access to AT, Recommendation 34 states:

That the Australian, state and territory governments work together to resolve current issues with the provision of aids and equipment for older people (Tune, 2017)

The availability and update of technology within the aged care sector is currently highly fragmented (Barnett, Reynolds, Gordon, Maeder, & Hobbs, 2017). Current evidence suggests less than one quarter of older Australians received funding to purchase needed AT⁴⁵. Approaches which integrate the parallel strategies of activity analysis, task redesign and adaptation alongside the introduction of AT, result in ongoing cost savings for health and community services (AIPC, 2008). Based on this premise, the Project critically appraises the way in which AT is framed within the current Aged Care Reforms. Starting with evidence of the impact of AT in terms of costs and benefits, we identify features of Australian AT policy which will deliver on the needs and rights of older Australians, and represent good practice in terms of AT policy structure and government expenditure.

1.3 METHOD

The Project was conducted by the lead researcher in liaison with COTA senior policy personnel. A Steering Group comprising representatives of the aged care and AT sectors critically appraised

⁴⁵ An Evaluation of Assistive Technology Outcomes for Home and Community Care (HACC) Clients of the Independent Living Centre (ILC) Assistive Technology Service Final Report January 2014 <http://ilc.com.au/about/research-and-projects/>

method, preliminary findings, and deliverables, between September - December 2017. The following methods were employed:

Literature

A rapid evidence review drew on the literature across a range of data sources. These included peer reviewed publications as well as the grey literature (international and national government and NGO reports; ageing peak bodies; key conference proceedings). A Search Strategy run in early October searched La Trobe University library, EBSCO (Ageline, CINAHL, ECONLit) and Google for titles or abstracts in the English-speaking literature with the keywords and synonyms (Equipment OR Technology) AND (Age OR Disability) AND (Economic OR Cost)⁴⁶. The contents pages of key health economics and ageing journals were also scanned, and key authors contacted for any current work. Study selection drew on the subset of literature which was national in its approach or application and in the English language. The yield was triangulated with publications and studies suggested by the concurrent survey of key stakeholders.

Quality of evidence was considered⁴⁷. Quality criteria ought to be applied to research to determine the validity of its claims. For the purposes of this Project, the application of any quality criteria to quantitative, qualitative or review studies was itself a benchmark of some rigor.

From a pragmatic perspective, it is recognised that AT is an under researched area, that as a multifaceted intervention it does not lend itself to high level studies such as randomised control trials, and at a basic level the causal link is often so clear (for example, use of a wheelchair compared with no wheelchair) that empirical studies are not indicated. The absence of foundational research however does mean there is often no baseline for funding arguments, and that policymakers have little to guide policy.

Lack of evidence does not mean AT is an unimportant field, but is more likely to reflect a low research priority put upon independent living technologies and community living compared with medical research (Dijkers, 2009), and also reflects on the workloads and scope of practitioners, the level of academic research interest, and the maturity of the AT sector in forging connections between practice, research and policy. Arguably, the Project at hand is evidence of that maturity, as well as the pressing need to inform policy with a cogent research base.

⁴⁶ Age (Impairment; older persons; elders; disability); Assistive technology (aids and equipment; independent living products; medical devices / medical appliances excluding implants); Outcomes (economic impact; independence; community living/ avoid residential care or hospital admission; function including slowed rate of decline or maintained function; health-related quality of life; wellbeing / autonomy).

⁴⁷

NHMRC levels of evidence (NHMRC, 2009)	Hierarchy of qualitative health research (Daly et al., 2007)
Systematic reviews (level 1)	Generalisable (level 1)
RCT (level 2)	Conceptual (level 2)
Comparative studies with controls (level 3)	Descriptive (level 3)
Case series (level 4)	Single case studies (level 4)

Sector Expertise

Concurrently with the literature review, focussed data gathering was conducted with key stakeholders including members of the National Aged Care Alliance (a body of 50 peak organisations in Australia representing the breadth of the aged care sector, including providers, consumers, unions and health professionals). This primary stakeholder set was supplemented with 15 national non-profit bodies working in the AT in Australia (via the National AT Alliance) and the Victorian-based Assistive Technology for 65+ Alliance. Face to face consultation at each phase was held twice with this group, taking a qualitative deep dive approach to test out and ascertain Project directions and findings. These representative groups were surveyed at the commencement of the Project (12 September) and asked for nationally-applicable evidence regarding:

- Current demographic and population sources regarding older Australians and morbidities.
- Evidence of the functioning / daily living problems that older Australians have.
- Evidence regarding the AT that older Australians use, and its effectiveness
- Other key issues related to AT and older Australians which people wish to raise.

A further stage of data gathering occurred (12 October) to gather feedback on the AT Tables and AT User Profiles (see Appendix 4 for feedback and revisions). Sector experts also contributed their perspectives on the role of AT for their specific participants (for example low vision aid users) or cohorts (for example progressive neurological).

Some important consensus statements emerged from these stakeholder groups:

- 'It's not just one device': there are often hundreds of AT products which can support an individual to achieve their specific outcomes.
- The solutions people need may be low through to high tech.
- Frailty and health measurement is not sufficient to sum up life for those ageing with a disability. A wholistic understanding of the person is needed and this must be understood by decisionmakers.
- Well-tailored AT bundles address and facilitate lots of outcomes including independence, safety, activity, and connectedness
- Policy and decisionmakers need to understand that a mix of rehabilitative, habilitative (wellness and reablement) and compensatory approaches may be required to maximise outcomes for one individual, over the ageing process.

Economic Modelling

Economic methods were sought to establish policy-relevant approaches to framing AT costs and cost offsets. The advice of economic methodologists was canvassed in late September and a costing method devised for the Project. These will be reported in full under Deliverable 2, but the method of choice is a pathway analysis from the perspective of third party payers (personal communication: Deakin Health Economics).

Figure 1.3 illustrates a pathway analysis for AT. A pathway analysis compares inputs or costs (AT bundle, comprising AT products and AT services) with the resulting outcomes. Outcomes can be measured as:

- i) direct cost savings (for example saved downstream costs, or expenditure which is offset, avoided or minimised through AT provision), or
- ii) indirect costs savings (improved functioning, psychosocial and participation outcomes are recognised determinants of health and wellbeing).

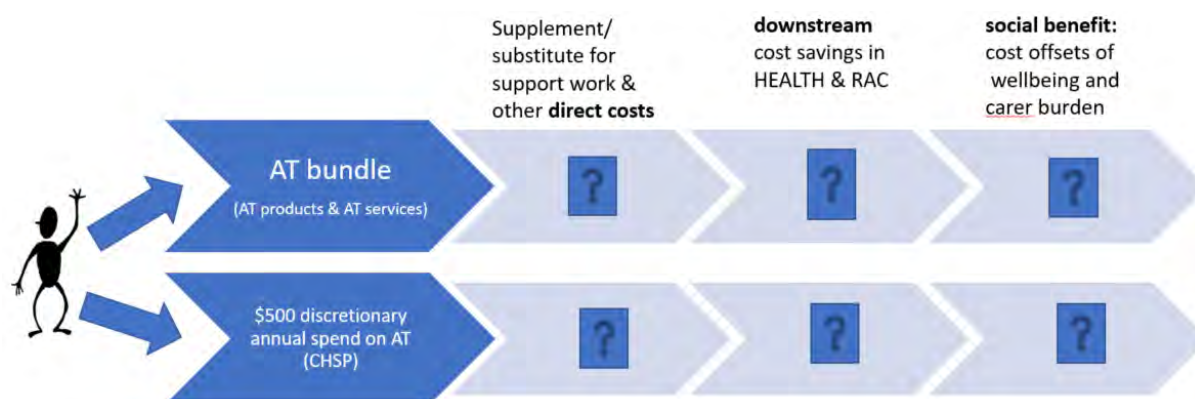


Figure 1.3 Pathway Analysis

1.4 RESULTS

Literature review and data (reports, references and links) from the sector informants demonstrate a diverse body of evidence, much of which remains current over a thirty year time span. While products on the market may be new, product categories are relatively stable (ISO, 2016). For some categories of AT, the literature in the last decade is now outdated, for example Information / Communication Technologies and Smart Home technologies. The diverse bodies of research (ageing, health, technology, rehabilitation technologies, information/communication technologies, disability) utilise different terminologies and outcome measures which makes it difficult to compare studies.

One of the highest levels of evidence available are Cochrane Reviews⁴⁸: systematic reviews of primary research in human health care and health policy, internationally recognized as the highest standard in evidence-based health care resources. There have been two Cochrane Reviews related to AT. Both conclude there is little or no high-quality evidence for them to evaluate the effectiveness of, respectively, smart home technologies (Martin, Kelly, Kernohan, McCreight, & Nugent, 2008) and reablement for older adults, including technology (Cochrane et al., 2016). AT is identified as promising but not yet fully evidenced. Federici and Scherer propose rigorous pre- and post- single case studies as suitable to evidence AT interventions, given the heterogeneity of AT users and their individualised solutions (Federici & Scherer, 2017) and n of 1 studies are well-regarded in the evidence hierarchy. All evidence couples the AT product with a provision or 'prescription' process (Waldron & Layton, 2008). Although details about the skill or time input of allied health practitioners into this process are usually lacking from studies, reviews of AT abandonment and non-use rates make a direct correlation to the calibre provision (Federici & Scherer, 2017; Scherer, 2002; Wessels, Djicks, Soede, Gelderblom, &

⁴⁸ For more information, see: <http://www.cochrane.org/>

Witte, 2003). All studies of AT effectiveness include some combination of therapeutic ‘services’ such as assessment, set-up and adjustment, training, customising, conditioning, trial in real environments, and practical or psychosocial support.

Moving down the evidence hierarchy, other evidence of cost effectiveness is as follows.

Evidence of the effectiveness of AT (including minor home modifications) on independence and reducing speed of functional decline

The highest level of evidence remains the work by Mann and colleagues which included a randomised control trial of the effectiveness of AT and environmental interventions in maintaining independence and reducing home care costs for 104 frail older adults over 18 months (W. C. Mann, Ottenbacher, Fraas, Tomita, & Granger, 1999). While both the intervention group and the control group declined in function, the control declined significantly more, demonstrating strong evidence that rate of decline can be slowed. Also, institutional and certain in-home personnel costs can be reduced through a systematic approach to provision, as this study demonstrated costs related to hospitalisation and nursing home stays were more than three times higher.

An Australian review of 51 articles concerning home modifications (Harris, Andrews, Logan, & Lee, 2016) conclude the following benefits:

- **Client benefits** - increased health, freedom, accessibility, confidence, independence, safety, privacy, self-rated ability, quality of life, and sense of normalcy. Reduced deterioration in health, fear of falls, depressive symptomatology, and reliance on formal and informal carers.
- **Caregiver benefits** - relief of burden, diminished worry, reduced personal pain / injury, and improved social inclusion and sense of security.
- **Social / economic benefits** - Cost effective compared to residential care; reduced health care costs as a result of fewer falls, faster hospital discharge, a reduction in cost of GP visits and hospital admissions, safer working environments for staff, and reduced demand on formal care and admissions to residential care.

A range of technologies were found to have a positive impact on enhancing senior's lives (Khosravi & Ghapanchi) in the area of health outcomes (body function; health condition); social influence (caregiving benefits; independent living and hospital readmission; and wellbeing (psychosocial effect, QOL). The AT ‘clusters’ which evidenced effectiveness were assistive technologies in clusters, namely, chronic disease management/ telemedicine; sensor technologies for falls prevention; ICT for dementia; use of robotics, general ICT and telemonitoring for wellbeing; sensor technologies for independent living; robotics and ICT for communication and emotional support, and medication management systems, although higher quality evidence is needed to quantify benefits.

Multi-intervention approaches such as restorative homecare or reablement demonstrate strong evidence on a range of outcome measures including functional independence, quality of life and decreased need for services (Lewin & Vandermeulen, 2010)⁴⁹. A review by the Australian Institute of Primary Care (A.I.P.C., 2008) found strong evidence that multi-intervention approaches result in a reduced requirement for ongoing home and community care services in the short to medium term, as well as outcomes related to reduced admissions to hospital or residential care, caregiver burden, commitment and capacity to continue.

A substantive set of literature considers the cost effectiveness of home modifications, for example work of the UK Audit Commission in costing the need for personal support during waiting periods for modifications, and the loss of independence which accompanies this (Heywood, 2004; Frances Heywood & Lynn Turner, 2007)⁵⁰. For the purposes of this Report, we have identified the scope of home modifications. We have costed and included minor modifications which entail AT (including handrails, handshowers, thermostatic mixers and switchcocks). We also include environmental changes which may not involve an AT product as such but are necessary to manage activities and participation within the home, using AT bundles which may include wheelchairs or hoists. Examples include non-structural doorway widening and level access, bench height and circulation space adjustments, and these are identified as adaptation / installation costs. We exclude more extensive home modifications which require removal of walls, extensions, and structural work across multiple rooms, noting these represent a smaller subset of home modifications and clinical judgement suggests are less likely to be deployed for older adults given time horizon considerations (Carnemolla & Bridge, 2011)⁵¹. This enables us to recognise the ‘technology chain’ and the need to consider and provide adjustments to the built environment alongside appropriate AT devices for use in these environments, but note that schemes to support major home modifications will have their own criteria and contexts to be considered.

Evidence of the effectiveness of AT on specific cost offsets

A cornerstone study in 2003 conducted a large multivariate analysis with a cohort of ‘disabled elders’ to establish whether the use of equipment was associated with fewer hours of help. The authors sought to test the hypothesis that *‘common sense indicates that a hydraulic lift might reduce the time required to transfer a paralyzed patient from the bed to a chair; a raised toilet seat and grab bars might eliminate the need for help from another person when using the toilet; and use of a portable oxygen tank might enable independent mobility when otherwise exertional dyspnea might necessitate*

⁴⁹ Standardised outcome measures were used to measure functional dependency, morale, confidence in performing everyday activities without falling and functional mobility. Service outcomes were also examined at 3 months and 1 year. The HIP group showed improvements on all personal outcome measures compared with the control group. These improvements were, except for the morale scale, significantly associated with group assignment even when baseline differences between the groups were adjusted for. As regards service outcomes, the odds of the individuals who received HIP still requiring services was 0.07 (95% CI = 0.03-0.15, $P < 0.001$) times those for the individuals in the control group at 3 months and 0.14 times at 12 months (95% CI = 0.07-0.29, $P < 0.001$). The results of this study supported the hypothesis that older individuals referred for home care who participated in a programme to promote their independence had better individual and service outcomes than individuals who received usual home care.

⁵⁰ Delays lead to more costly options. One person received 4.5 additional home-care hours a week for 32 weeks, at a total cost of £1,440, when a door-widening adaptation costing £300 was delayed for 7 months for lack of funding. One London borough reported annual savings of £30,000 per client for two wheelchair users who were able to leave residential care due to the provision of adaptations in their homes. Another authority reported reductions in care costs of £1.98 million over five years as a result of an investment of £110,000 in 20 level-access showers.

⁵¹ (personal communication: OTA home modifications special interest group, 2015)

assistance from another person' (Hoenig, Taylor, & Sloan, 2003, p. 330). Multivariate modelling showed a strong and consistent relation between equipment use and hours of help, with AT users reporting 3.8 ($P = .008$) fewer hours of help per week than did those who used no technological assistance.

Economic modelling calculated savings⁵² where respiratory AT was provided to elders with severe chronic obstructive pulmonary disease (Coughlin, Peyerl, Munson, Ravindranath, & Lee-Chiong, 2017), demonstrating reduced hospital costs and therefore reduced costs for third party payers.

An extensive body of work demonstrates the cost effectiveness of fall minimisation strategies, including AT. Outcomes include fewer falls, less hospitalisations, and delayed morbidity and mortality. The strongest evidence found a 1:1 return on investment for a comprehensive falls prevention program (Carande-Kulis, Stevens, Beattie, & Arias, 2010; Clemson et al., 2004). An impact assessment of AT systems⁵³ in nursing homes in the UK found falls reduced from 202 falls prior to AT introduction, to 112, with mean health care costs reduced by more than 50%. A full economic evaluation was not possible as the cost of AT installation was not calculated (Al-Oraibi, Fordham, & Lambert, 2012). The NSW Government commissioned an economic evaluation of community and residential aged care falls prevention strategies in 2011 concluding falls hazard assessment and deployment of AT, is effective, and providing figures for costs saved⁵⁴ (*An economic evaluation of community and residential aged care falls prevention strategies in NSW*, 2011).

A range of studies of home monitoring have promising results for example this study of healthcare use and savings concluded 'the participant group used substantially less custodial care, emergency department (ED) services, inpatient stays, and ED costs than the two control groups' (Finch, Griffin, & Pacala, 2017, p. 1301). In some instances, AT has been so cost effective that policies have adjusted and programmes rolled out widely across communities, (A Bowes, Dawson, & Greasley-Adams, 2013; Alison Bowes & McColgan, 2006; Magnusson & Hanson, 2005).

Mobility devices such as canes, crutches, and walkers, have a lengthy history of widespread usage and '*Little or no doubt exists that they benefit many users, notwithstanding uncertainty about the particular types of devices that enhance specific forms of mobility for users with particular impairments*' (Fuhrer, 2007, p. 150). Attempts to fiscally quantify benefit have been methodologically difficult. Hagberg et al concluded that provision of powered mobility to the elderly with disabilities appears cost effective and should be a standard intervention⁵⁵, however noted difficulties with

⁵² The hospital base case (250 patients) revealed cumulative savings of \$402,981 and \$449,101 over 30 and 90 days, respectively, for [optimal respiratory AT] versus comparators. For the payer base case (100,000 patients), 3-year cumulative savings with Advanced NIV were \$326 million versus no [optimal] respiratory AT and \$1.04 billion versus respiratory assist device [less optimal AT]

⁵³ Pull cord; Pendent alarm; Passive Infra-Red movement sensor; Flood detector; Falls detector; Urethra sensor; Pressure pad/mat (bed) Pressure pad/mat (chair); Speech unit; Control/response software on central computer

⁵⁴ Intervention: home hazard assessment (incremental cost per fall-related hospitalization avoided per 10,000 NSW older population over a 10 year period). Incremental cost/10,000 population (\$)3,780,000. Incremental falls avoided*/10,000 population 1,315. Incremental cost per fall avoided (\$)2,875. Incremental hospitalisation avoided/10,000 population 56. Incremental cost per hospitalisation avoided (\$67,500) p.27

⁵⁵ Analyse the cost-effectiveness of prescribing powered mobility devices (PMDs) to elderly users. Methods: Forty-five persons participated in the pre- and post-intervention study with a follow-up at four months. All participants were prescribed a scooter model and were offered individual support to get started using the PMD. In the analysis, the use of the PMD was compared to the situation prior to its use. The cost-utility analysis takes a societal perspective and considers costs, savings and quality of life (QoL) using answers to the EQ-5D questionnaire. Results: Costs for the first year with the PMD were 1395 USD and then 592 USD per subsequent year. There was a significant decrease in transportation costs and

economic analysis methods which were not always appropriate (Hagberg, Hermansson, Fredriksson, & Pettersson, 2017).

The series of studies which are most methodically similar to this Project are The Equipping Inclusion Studies (N Layton & Walker, 2012) and subsequent 'Economic Potential of AT Solutions' report (N Layton & Walker, 2012). The method will be more fully explored in the Economic Modelling section of this Project, but the findings of these studies conclude:

AT solutions are only fully effective when soft technologies (prescription, assessment, adaptation/fitting, training, maintenance, repairs, reviews etc) are provided along with the hard technology (AT device). Poor solutions not only reduce effectiveness but can also generate negative health outcomes and injuries. Investment in optimal AT solutions is demonstrated to offset other costs from a health and community services sector perspective, and to achieve multiple outcomes (N Layton & Walker, 2012, p. 2)

Evidence concerning AT services

AT services research has not delineated service steps in a way that makes it easy to identify their impact or effectiveness. This is complicated also by the very different service and policy settings in each country. Two key pieces of grey literature emerged through the sector reference group and are reported below.

Information Services

Australian seniors are actively searching for information and support on AT. Australia's National Equipment Database (NED)⁵⁶ has over 400,000 hits per quarter. Two thirds of NED visitors sought product advice on behalf of others, most of whom are over 50 years old (75%). Of the one third of visitors seeking products for themselves, 86% were over 50. A snapshot of 570 enquirers demonstrated AT products were sought to address daily living problems across over twenty domains (WHO ICF) including mobility and transfers, driving, self-care, self-management and monitoring, house-work and cooking, communicating, seeing and hearing, monitoring, lifting and carrying items⁵⁷.

The pattern of engagement with NED and in other evaluations of technology sourcing and use (Layton et al., 2014) illustrates that older Australians engage with AT at multiple points and to address a diversity of daily living challenges in their lives. Older Australians and their supporters are active seekers of information, and impartial information is one important element of a pathway of many steps to find out about, locate, trial, fund, integrate and review AT into their lives.

Allied Health Practitioners

Of approximately 23 recognised allied health professions, a subset are involved in AT. The evidence reviewed for this paper suggest that currently occupational therapists have the broadest 'reach' across AT product categories but a range of professions address focal product areas including physiotherapy,

in relatives' time use, but the increase in QoL of 0.041 was not significant. Conclusion: Prescription of PMDs to elderly users might be cost-effective. However, there are shortcomings in measuring QALY gains from the use of a PMD, and it is unclear how time savings among relatives should be valued

⁵⁶ For more information, see: www.askned.com.au

⁵⁷ GrowthAdvisors. (2017). ILC National Equipment Database: Consumer Survey - Executive Summary.

speech pathology, orthotics and prosthetics, podiatry, dietetics, orthoptics, audiology, and related professions such as pedorthics, rehabilitation engineering, and nursing.

A recent survey of the AT provision practices of allied health practitioners generated responses from 24 professionals drawn from occupational therapy, speech pathology and dietetics (personal communication AHPA, 2017⁵⁸). Results indicated a substantial focus currently on the impact of NDIS, with a limited response set regarding older Australians and their AT needs. Other key barriers to delivery of AT were identified as follows:

Service provision / policy barriers

- Respondents were concerned about perceived inequities across jurisdictions and systems and a lack of consistency/coordination across the health/disability/aged care sectors. E.g. AT funding and implementation support for AT within National Disability Insurance Scheme vs Commonwealth Home Support Programme, is inequitable.
- Respondents strongly agreed that a single, national cross sectoral system for funding and supporting provision of AT would lead to improved efficiency and effectiveness, and that age or diagnosis ought not be a barrier to AT provision.
- Professional recommendations may be overridden by funders.

Good Practice barriers

- Practitioners struggled to provide appropriate team-based assessment, trial, prescription, provision and support for AT implementation and review, partly due to lack of funding for the whole assessment-intervention continuum of care.
- Lack of knowledge/understanding by funders of the range and value of AT available.
- Lack of knowledge/understanding by consumers of the range and value of AT available.
- Lack of knowledge/understanding of the importance and value of allied health professionals in supporting provision of AT.

Information services were identified as highly important as a resource to keep professionals current and appraised of current AT, and a valued option for clinical discussion. Allied health respondents described operating in contexts of reduced efficiencies in service provision: loss of block funded services and a move to fee-for-service individualised provision has led to, among other things, a reduction in funding/inadequate funding to enable provision of safe, high quality services. Respondents commented on a lack of understanding the cost and time to do a proper assessment and follow up, and the loss of systems to support trial, loan, maintenance and repair or replacement of AT. Practitioners stated it was not always easy to find out and understand what funding is available to support the provision of AT. Practitioners were not always able to provide sufficient training to the client and family to successfully implement AT.

⁵⁸ Survey of 7 professions, responses from n-24 participants across OT, speech pathology, dietetics.

1.5 DISCUSSION

AT is effective – it can enable people to manage their daily lives and achieve their goals despite the impacts of disability or ageing. It is positively linked with quality of life, autonomy, independence, longevity and wellbeing. The evidence, still emerging in the literature but robust from user, practice and policy perspectives, supports AT as an effective strategy (Connell et al., 2008) despite gaps in research⁵⁹.

The effectiveness of AT is such that it is enshrined in multiple clinical practice guidelines see for example (Australian Wound Management Association, 2011), and protocols^{60 61}.

AT is not always deployed or researched in a fully consumer-focussed way. Many of the studies investigating the use of technology for improving ADL show a lack of rationale for choice of technology, little involvement of older people in technology selection, lack of clarity re the goals of older people and a lack of tailored approaches (Fleming, 2014; Piau et al, 2014). If the end users of AT are not empowered to co-produce and collaborate on the development of AT, a critical opportunity for appropriate co-design is lost. For example, the emerging concerns that surveillance and monitoring technologies may in fact be experienced as a form of restraint, and the need for an ethical framework in their application (Chung, Demiris, & Thompson, 2016).

AT services are necessary to deliver many AT products: regardless of technical complexity, the match of product to person, task, environment can require skill and knowledge: these skills can be learned by expert AT users and supporters also (N Layton, Andrews, & Wilson, 2015; Walker & Layton, August, 2017). Qualitative findings tell us that older Australians will have individualised ideas and responses to the experience of utilising technologies, and of substituting or supplementing personal support work with technology. In the interests of overall social connectedness and interdependence, technology must be deployed with sensitivity. The work of AT services (AT practitioners such as allied health staff and related personnel) in informing, educating, introducing and balancing technology into a persons' life and environment is critical to this conversation in order to maximise effective use and minimise AT abandonment: noting the potential to upskill AT users in self-evaluation and AT competency in the new era of choice and control. In terms of choice, autonomy, self-sufficiency and privacy may be *'worth some residual difficulty in carrying out tasks independently compared to using personal care services'* (Verbrugge & Sevak, 2004, p. 41).

The current situation in Australia is problematic as evidenced by the large and disparate funding map (see Appendix 2). The advent of the NDIS is further illuminating a range of unmet and undermet needs: The real impacts of reform can be found in submissions to the National Disability Strategy Senate

⁵⁹ Lack of Australian specific studies; Research where the older person is the centre of the research and not the technology; Studies investigating the viability of large scale implementation; Large-scale studies; Studies investigating social impacts (intended & unintended); How older people gain access, information and be assessed for assistive technology; Strategies to reduce costs and quantify outcomes; International comparative policy research

⁶⁰ For more information, see: <http://www.who.int/disabilities/publications/technology/wheelchairguidelines/en/>

⁶¹ Centers for Medicare and Medicaid Services. Medicare Coverage Database [Internet]. Decision Memo for Mobility Assistive Equipment (CAG-00274N) www.cms.hhs.gov/mcd/viewdecisionmemo.asp?id%143

Inquiry (Australian Senate, 2011). Over 90 submissions were received, with assistive technology provision noted as a key issue the subject of ten percent of the submissions⁶².

Impartial information services regarding AT products, considerations for their use, and pathways to obtain AT, is a critical first step. Both AT consumers and the allied health professionals who support them rely upon AT information services to canvass and interpret the AT marketplace. Table 1.1 lists good practice steps and asks who might take responsibility for funding these across the range of AT complexity levels. While hypothetical in nature, this query considers the potential effectiveness of funding various steps to achieve good AT outcomes.

AT Service Steps (good practice)	AT Complexity			
	Level 1 Basic	Level 2 Standard	Level 3 Specialised	Level 4 Complex
Information ** identify need/ goal evaluate options	Government should invest to support effective choices	Government should invest to support effective choices	Government should invest to support effective choices	Government should invest to support effective choices
Trial AT alternatives across environments & with other AT products in use**	Self Funded	Some may need Gov't Support	Some may need Gov't Support	May need Gov't Support
Funding**	Self Funded	Some may need Gov't Support	Some may need Gov't Support	May need Gov't Support
Implementation: ** delivery; fitting; training	Self Funded	Some may need Gov't Support	Some may need Gov't Support	May need Gov't Support
Followup:** troubleshooting; maintenance schedule	Self Funded	Some may need Gov't Support	May need Gov't Support	May need Gov't Support
Review of device** Review of person **	Gov't investment for prevention	Gov't investment for prevention	May need Gov't Support	May need Gov't Support
** potential role for AT practitioner/ provider / supporter				

Table 1.1 Mapping steps of AT service provision against government provision

⁶² Macular Disease Foundation of Australia, National Disability Services, ANOUHD / Rights and Inclusion Australia; Self-help for Hard of Hearing People, Motor Neuron Disease Association, MS Australia, Alzheimer's Association, Speech Pathology Australia, ARATA, Deaf Australia, ACCAN, AMA, NDIS.

1.6 CONCLUSION

Funding of AT need to include both AT services and AT products. A foundation step is provision of impartial information and advice to educate potential users about AT in context, and to ensure other strategies (such as task adaptation) are understood and considered. Information services also support allied health professional practice. AT is most effectively deployed when AT services seamlessly offer the AT service provision good practice steps of information provision, evaluation/assessment, support through trials, adjustment and tailoring, coaching and skilling in self-monitoring and troubleshooting. It is likely a significant subset of tasks can be shared with non-allied-health practitioners and consumers themselves, however a risk based approach is required given the contraindications of many AT products.

Outcomes are multiple, and current research evidence understates the impact and outcomes of AT. Despite the speed of innovation, a stable set of product categories can be considered in scope for AT bundles.

AT is a 'multicomponent' interventions and its efficacy requires appropriate measurement. Rehabilitation research has underestimated the effectiveness of AT as it is often 'invisible' within a person's or community's context (Rust & Smith, 2005). AT products are most effective when combined with environmental modifications, service elements and personal support. Good indicative evidence speaks to:

- The potential substitution of AT for personal support, and/or supplementation of paid and unpaid personal support to achieve other goals and outcomes.
- Likely cost offsets where alternate expenditure is saved, or where personal capacity is increased, through appropriate AT bundle provision.
- Demonstrable downstream cost savings, with a significant lack of worked methodologies to fully cost these when we consider social and wellbeing benefits.

The Economic Pathway Analysis (Deliverable 2) more fully considers the evidence across these three parameters.

DELIVERABLE 2: ECONOMIC MODELLING VIA PATHWAY ANALYSIS

The task of this Research Report is to ascertain the impact of AT in terms of costs and benefits, in order to identify features of Australian AT policy which will deliver on the needs and rights of older Australians, and represent good practice in terms of AT policy structure and government expenditure. This research draws on the literature base and grey sources such as reports and submissions to identify relevant economic concepts, to canvass relevant economic methods for use with AT and older Australians, to identify relevant and valid datasets, and to establish a method.

2.1 Background

Resources are scarce and must be utilised in the most effective way possible. Market forces and customer behaviour govern consumer spending, e.g. manage price points through competition, enable choice through advertising etc. However, many health-related interventions including assistive technology have the features of ‘merit goods’, where need rather than choice governs purchase, and the value of the product reaches beyond benefit to the individual purchaser. The AT marketplace also has characteristics of a ‘thin markets’: relatively few transactions means little competition and often a slow R&D cycle. Evidence of these problems include the AT Innovation Hub Scoping and Feasibility Study by NDIS⁶³ and the Queensland Competition Authority Price Disparities for Disability Aids and Equipment⁶⁴.

Society has a range of principles to ensure that scarce resources are well-deployed, and to enact the social contract on behalf of citizens. In the health arena, merit goods such as hospitals are centrally funded as they are beyond any individual’s means, yet improve outcomes for all citizens. Some government support of the AT supply sector includes funding for bespoke items which markets do not provide, such as technical inventions through Technical Aid to the Disabled⁶⁵ and supporting R&D cycles⁶⁶. Governments in Australia have, since the 1970’s, provided subsidy schemes to enable consumers to access AT for, usually, safety, independence at home, and community participation. These schemes differ in scope, subsidy, eligibility and efficiency.

The Aged Care policy context

The aged care roadmap enshrines principles regarding choice and support and the aim of a market based and sustainable aged care system which is consumer driven⁶⁷:

By 2050, over 5 million older Australians will access aged care services. The current complex system contains care types which act independently of each other, as a result of fixed care settings and funding streams. This restrains the ability for a consumer to easily transfer between and choose services they need, and restricts smooth transition throughout the aged care system as their care needs change. Australia needs a single aged care and support system where consumers have choice and control and can access services as they need them, whether this be on a short

⁶³ For more information, see: <https://www.ndis.gov.au/innovation-hub.html>

⁶⁴ For more information, see: <http://www.qca.org.au/getattachment/a98aac78-d791-4718-acbd-756195580892/Final-Report-Medical-and-Disability-Aids-and-Equip.aspx>

⁶⁵ For more information, see: TAD at <http://www.tadaustralia.org.au/>

⁶⁶ For more information, see: <http://www.flinders.edu.au/mdpp/>

⁶⁷ For more information, see: <https://agedcare.health.gov.au/aged-care-reform/aged-care-roadmap>

term, episodic or ongoing basis. Regulating supply through the distribution, location and quantity of services impacts on consumer choice. There is the need to ensure equitable access and flexibility of location and supply of services. A market based aged care system, with no silos based on care settings and funding streams, can more efficiently deliver appropriate care and support to everyone with an assessed need (Tune, 2016, p. 18)

Government has a role as ‘safety net’ where individuals cannot afford the range of goods they require, or there is insufficient market response.

Summary of studies which take an economic approach to AT and outcomes

Foundation data on the costs and outcomes of AT and related interventions such as home modifications comes from the UK. The Audit Commission in three successive reports (Audit Commission, 2000, 2002; Frances Heywood & Lynn Turner, 2007) has identified the effectiveness and value of investment in equipment and adaptation to avoid health costs in four key areas:

1. Saving by reducing or removing completely an existing outlay (save cost of Residential Aged Care; reduce cost of home-care).
2. Saving through prevention of an outlay that would otherwise have been incurred.
3. Savings through prevention of waste.
4. Savings through achieving better outcomes for the same expenditure. (F. Heywood & L Turner, 2007, p. 9).

The Audit Commission acknowledged that more research was required to disaggregate the ‘multi-factorial interventions’ known to be effective but not fully understood. Some AT interventions have such compelling evidence of clinically significant outcomes they have been formulated into practice guidelines by the National Service Framework for Long-term Conditions (Department of Health, 2005), for example telehealth was found to reduce Chronic Obstructive Pulmonary Disease (COPD) admissions by 30%⁶⁸.

A range of methods have been employed to investigate AT outcomes and build the AT business case. Early work in Italy developed a Social Cost Analysis Instrument, capturing social cost impacts of various AT products. For example, for a wheelchair user in a double storey house an in-home lift, whilst presenting significant upfront cost, was demonstrably cheaper over a 10 year time horizon compared with cheaper options such as a stair climber that required assistance to operate (Andrich, 2002; Andrich & Caracciolo, 2007; Andrich, Ferrario, & Moi, 1998). Andrich and colleagues took a wide view of social costs including, for example, the opportunity cost of an informal caregiver being unable to contribute to the economy and to superannuation. Taking forward the idea of social cost analysis for communities several authors have considered allocating the costs of inclusion to communities rather than individual (Fouarge, 2003) (De Jonge & Schraner, 2010). In 2012, noting there was still very little

⁶⁸ In England in 2001/02, COPD accounted for 81,283 admissions for 725,790 bed days. If 30 per cent of cases can be managed at home, then assuming a typical cost of a day in hospital of £250 per day this would release 217,000 bed days or over £50 million. Savings would also come from reducing the average length of stay for COPD (mean 9.1 days; median 6.0 days) (Table 2). Further savings would result from the reduced nursing visits that are otherwise needed when the patient is discharged from hospital (Department of Health, 2005, p. 24)

evidence around the effectiveness of individual interventions, Snell et al utilised a decision tree model which solely considers outcomes associated with a “package” of adaptive technology (Snell, Fernandez, & Forder, 2012). A Microsoft Excel-based decision tree framework mapped three scenario pathways and characteristics of individuals with unmet equipment needs. The probabilities, effects and costs⁶⁹ were incorporated, with sensitivity analyses and alternative scenarios used to test the outcomes achieved. The results suggest that ‘adaptive technologies provide a good return on investment’ (Snell et al., 2012, p. 9).

A similar pathway analysis was recently utilised in a national Discussion Paper on AT for people with disabilities and older people (Disability Federation of Ireland & Enable Ireland, 2016). Based on the investment in, or absence of, AT, two pathways were envisioned for three different AT users. Pathway dimensions included ‘totally dependent OR less dependent on personal assistant support’, and freedom of choice (more / restricted). Substantial savings to the state in hours of support; achieved salary or lowered support pension, were reported⁷⁰.

One study in Australia has taken a similar cost consequence approach for a subset of AT users (Layton, Wilson, Colgan, Moodie, & Carter, 2010). This cost consequence analysis identified usual treatment (state AT funding/ self-funding) and a hypothetical optimal AT bundle (determined by user and panel of experts) for 8 representative AT users, selected from n -100 sample. A range of findings spoke to the effectiveness of AT (broadly defined according to the international standard) for a range of participation outcomes. People require on average 9 assistive technology products within a suite of 13 supports (such as personal support or home modifications). By contrast, all state funding schemes provide AT products in isolation to other supports, and often instead of each other, for example either a mobility device for indoor use, or outdoor use (Layton et al., 2010). More specifically, the economic analysis component of the study found varied but positive evidence of cost effectiveness for the majority of AT users with standard Quality Adjusted Life Years (QALY) methodology. With the application of an equity weight (in recognition of the relative disadvantage of a disabled cohort) the value of AT spend for almost all participants exceeded the cost outlay (Colgan, Moodie, & Carter, 2010).

Based upon this study, a subsequent Report was commissioned by the Australian Rehabilitation and Assistive Technology Association ARATA⁷¹, a peak body for AT in Australia, to further explore economic outcomes of AT to inform development of NDIS AT policy.

⁶⁹ Unit Costs of Health and Social Care (2016) <http://www.pssru.ac.uk/project-pages/unit-costs/unit-costs-2016/>

⁷⁰ A woman, who is a wheelchair user, lives in her own apartment. She uses environmental controls to the value of €18,500. She also has 99 hours of Personal Assistant (PA) supports per week. Without her environmental controls, she would sacrifice significant independence, and would require 168 hours of PA supports weekly (i.e. 24/7 support), at a cost in excess of €59,000 per annum. The total cost of her AT was less than one third of the annual cost of round-the-clock Personal Assistant support. DISABILITY FEDERATION OF IRELAND 2016 p 21

⁷¹ For more information, see: www.arata.org.au

The Report determined actual costs (purchase of AT devices; home and vehicle modifications; paid support; downstream costs of unpaid support) and related these to person-centred outcomes for representative archetypes of AT user (Layton & Walker, 2012)⁷². Conclusions were:

- Significant outcomes are possible in the areas of participation and satisfaction: these are difficult to measure and to cost.
- Timely soft technology [AT services] application is critical to the achievement of outcomes
- Funding must cover the cost of soft technology, maintenance, and running costs, as well as appropriate depreciation of the devices themselves to allow for timely replacement. The critical costs for both soft technology and maintenance are a relatively minor component of the AT budget but have been overlooked in previous formulae and service provision. Cost effective AT provision requires all these costs be incorporated into NDIS;
- Much AT operates across many life domains⁷³. Assessment of success should thus be measured by participation in the higher level domains [that is, political, cultural, spiritual, educational and recreational outcomes ought be counted separately rather than assumed within 'social participation' or 'community access'. (Layton & Walker, 2012, p. 11)

Other Australian studies have taken different economic approaches. A cost of illness approach to the economic costs of dementia in Australia (Brown, Hansnata, & La, 2017) used a bottom up approach to itemise actual or imputed costs incurred by representative sample of patients and estimates for entire population. AT and home modifications were identified as direct costs, while indirect costs include lost productivity e.g. of carer, and Intangible costs were burden of disease, as captured by Disability Adjusted Life Year (DALY) methods.

Quality Adjusted Life Years (QALY) and Disability Adjusted Life Year (DALY) methods are common in health economics, yet evidence suggests a 'double jeopardy' situation exists with use of methods which value the absence of disease or dependence. A range of critiques suggest the personalised experience of living with impairment is not well captured by such methods (Persson et al., 2002) (N Layton & Wilson, 2010b). That said, one QALY study which demonstrated positive effects of 'optimal' AT evaluated the provision of a C-Leg (a microprocessor controlled) prosthetic limb compared with NMC (non microprocessor-controlled) prosthetic limb. All costs, including 2 hours of annual management by an orthotist/prosthetist, and regular maintenance were costed over an 8 year time horizon. Benefits included the ability to walk on dynamic surfaces, and upstairs without handrails, which contributed to an overall conclusion of cost-effectiveness⁷⁴. The C-Leg total cost 25,146 Euro,

⁷² Although many items of AT impact across multiple categories above, each was allocated to the primary category that it affected. All lump sum costs (capital, soft technology initial cost, etc.) are depreciated against the service life of the AT (3% discount rate). Capital costs include: purchase cost, installation cost (both discounted over the service life), plus an annual maintenance cost. Soft technology costs are split into three categories: assessment and prescription (which would include fitting/customisation), training, and ongoing review. Hourly rate was set at \$95/hr. Attendant care cost was based on the rates from an average cost from Federal Carer Award. In 2010 this was \$17.89. The time allocated for professional involvement (soft technology) and care support, and the recommended assistive technology solution was specified by a specialist group of allied health practitioners. The purpose was to provide an optimal solution to achieve the 'best or most favourable' solution for the individual (i.e. no better option in terms of technology is available).

⁷³ Activity and Participation Chapters from WHO ICF International Classification of Functioning, Disability & Health (2001)

⁷⁴ The mean incremental cost (in 2006 Euros) and QALYs for the C-Leg was €7657 and 2.38, respectively, yielding a cost per QALY gained of €3218.

compared with non-microprocessor controlled (NMC) prosthetic limb cost of 17,488 Euro. The C-Leg was beneficial in terms of quality adjusted life years (QALY) with a gain of 7657 Euro overall (Brotkorb, Henriksson, Johanneson, & Thidell, 2008).

The Australian Institute of Health and Welfare (A.I.H.W., 2006) reviewed the literature and utilised archetypal cases to address the question of whether therapy 'makes a difference'. They investigated the nature and extent of met, partially met and unmet need for therapies and equipment, and estimated the effects of provision in terms of functioning, participation, and reduced social costs. AIHW concluded, 'best practice ideals are compromised under the kind of resource constraints that appear to affect many organisations that provide therapy and equipment for people with CP and like disabilities in Australia today' (AIHW, 2006, p. 184).

Similarly, in an economic analysis of motor neurone disease in Australia (Deloitte Access Economics, 2015), four cases were explored: each of whom required 9-15 AT products. Comparisons were made between NDIS and Motor Neurone Disease Australia (MNDA spends on equipment and other supports, and the costs of residential care⁷⁵. Key findings from this study note that:

- 42% of people with MND are over the aged of 65
- Informal care is estimated at 7.5 hours per day and represents \$13.60 per hour based on an opportunity cost approach
- Expenditure of aids, equipment and modifications to the home or vehicle totalled \$ 31,598 per person (overall spend)
- Mean average cost of home modifications was \$13,856, required by 89%
- Mean average cost of mobility aids was \$14,014, required by 92 %
- Mean average cost of medical equipment was \$6,987, required by 92% (Deloitte Access Economics, 2015)

A range of studies consider other costs of life with disability which may impact on the ability to self-fund AT (Anderson, Dumont, Jacobs, & Azzaria, 2007). In the abovementioned MND study, total other financial costs incurred \$39,921 per person with MND (Deloitte Access Economics, 2015). The recent systematic review of the global literature on the direct costs associated with living with a disability at the individual or household level (Mitra, Findley, & Sambamoorthi, 2009). Mitra et al found that that elderly people with disability have a wider range of extra costs compared to other age groups, with significant unmet need and costs relating to equipment. Costs are sizeable and vary according to severity of disability, life cycle and household competition. Future research on disability costs must consider needs as well as the availability and accessibility of needed goods and services, such as assistive devices (Mitra et al., 2009).

⁷⁵ The annual cost of staying at home was found to be more expensive (\$112,088) compared with the annual cost of staying in a residential aged care facility (\$78,631).—noting that these residential aged care costs are likely conservative. The cost of using an MND equipment loan service (\$19,625) is less expensive than the cost of equipment purchase under the NDIS (\$24,030). The annual cost of MND advisor support for a person with MND (\$2,865) is not fully recovered under the NDIS funding model for these services (\$2,257). Annual government costs of MND in the aged care system (\$8.3m.) are higher than government costs of MND in the NDIS (\$2.6 m.). See tables 11.1 & 11.2 Costs of staying in RAC; Costs of staying at home (Aids and equipment 21,002 per person)

A Cochrane Review of home-based care reablement services similarly mentions AT as an ingredient, concluding a small reduction in total aggregated home and healthcare costs over the 24-month follow-up⁷⁶ (Cochrane et al., 2016). A comprehensive scoping study of the use of AT by frail older people living in the community was commissioned by the Department of Health and Ageing (Connell et al., 2008). A range of outcome areas were identified including safety & prevention; sense of safety; prevent falls; prevent hospitalisation; ease of living/ mobility/ independence; increased active and health lifestyle; improved independence and reduced dependence on carers; social outcomes; preserve cognition; wellbeing & QOL; health at home. The scope of AT was broad and included daily living aids; safety aids; mobility aids; communication and sensory; cognitive and connectivity aids; environmental adaptations; remote monitoring devices; telecare; telehealth, integrated systems; and smart homes.

Connell et al conclude,

there is strong evidence that assistive technology can enable: improved safety and reduced falls; reduced hospitalisation; improved independence, mobility and physical function; improved well-being and quality of life, including an enhanced sense of safety and increased opportunities to continue living at home. The evidence suggests that assistive technology is most effective when older people are provided with early intervention, careful assessment, the correct prescription and home-based follow-up training in how to use assistive technologies (Connell et al., 2008, p. 6).

This is a key point - AT provision should not be a silo but provided as part of a full service offering reablement and home modifications. Co-ordinated service provision would be more cost effective than different service doing different pieces of the same puzzle.

Summarising the current measurement of AT costs and outcomes

A diversity of outcomes are reported for AT. Primary outcomes are viewed from the person's perspective and relate to self-determined goals and achievements, usually in the areas of independence or enabled activity and participation, autonomy (directing one's life), independence in valued tasks, maintenance of occupational roles, improved quality of life.

Secondary or system level outcomes might include the cost or other system impacts of primary outcomes, for example preserved independence and decreased functional decline leading to reduced hospital admission rates; prevention of secondary complications; prevention of falls; alleviated carer burden, reduced residential care placement, and overall health and community life outcomes resulting from improved quality of life.

This Project requires methods which utilise publicly available data, are trustworthy, robust, and allow for sensible cost extrapolations. Economic methods were sought in order to establish policy-relevant approaches to framing AT costs and cost offsets. The advice of economic methodologists was canvassed in late September and a costing method devised for the Project. Based upon the above approaches, the following method is proposed.

⁷⁶ Reablement: AUD 19,888; usual care: AUD 22,757; 1 trial with 750 participants

2.2 METHOD

A microeconomic approach focussed upon the individual enables us to explore AT need and useage for typical consumer profiles using WHO ICF archetypal cases method. We have taken a third party payer perspective to examine the costs and cost offset, including costs which occur in other parts of a system, for example a 'spend' in the health arena such as a bed day due to a fall or pressure sore, is considered even though it is an expense which falls outside the aged care spend. While person-focussed outcomes are centrally important, the lens additionally applied in this study is that of economic impact. Outcomes which have demonstrated economic impacts include independence; community living/ avoid residential care or hospital admission; function including slowed rate of decline or maintained function; health-related quality of life; wellbeing / autonomy. The known AT evidence regarding effectiveness of AT, as well as the ABS SDAC data, enables some extrapolations as to the impact of AT, and population projections.

The overall evaluation framework can be summarised as a set of inputs over outcomes:

$$\text{INPUT (COST)} = \text{Bundle of AT products and AT services} \times \text{AUSTRALIAN POPULATION WITH THIS NEED}$$

$$\text{OUTCOME (COST OFFSETS)}$$

Figure 2.1 Evaluation Framework: inputs and outcomes

Informed by the various methods deployed to date (see table above, particularly (Disability Federation of Ireland & Enable Ireland, 2016) a pathway analysis approach to economic evaluation is proposed (Figure 2.1 below).

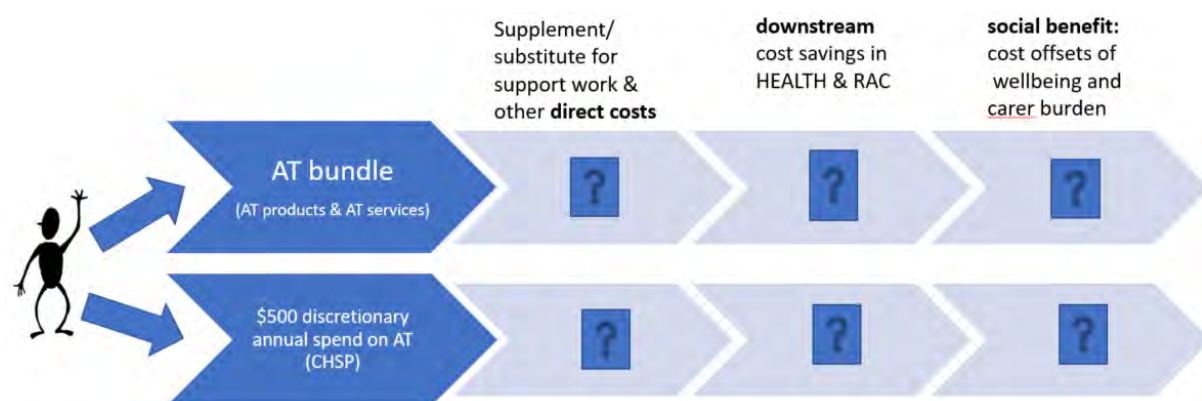


Figure 2.2 AT Pathway analysis

Key assumptions underlying the economic analysis

Study perspective: A third party payer perspective is taken: this may be government, or the consumer if they have the capacity to self-fund the purchase of their AT.

Reference year: 2016/2017 period used for pricing of AT products and AT services. ABS SDAC 2015 provides general population figures, while other specific figures (such as vision loss) are taken from the latest available evidence source.

Target group: Older Australians, understanding that while a cut-off of 65 is used in many data sources, for some populations 50+ represents the likely onset of age-related impairment (indigenous; disability) therefore figures are likely to underestimate overall need.

Study boundaries: Other cost-effectiveness analysis of like interventions⁷⁷ note ‘spill-over effects ripple out from every intervention and the question is how far to follow them’. It is likely a range of difficult-to-capture impacts upon satisfaction, autonomy, degree of difficulty, occupational roles, will result from AT bundles. Substantial qualitative literature and data from consumer sources provides evidence of this. In the absence of a clear costing model however these potential benefits are not measured in this study. Social Return on Investment methodology may provide further options in future for capturing such impacts.

Time horizon: Similar studies in disability have utilised a 10-year time horizon. For an aged population, this study determined the time horizon is run from 1 year through to 5 years.

Defining the intervention: AT products and related AT services represent a broad set of many hundreds of actual AT bundles, each individually tailored to a person and their environment. Assumptions for this study are based on a program logic model. A wide range of disparate studies (see Rapid Evidence Review) provide evidence of the effectiveness of certain ‘ingredients’ of an AT intervention (AT service evaluation, provision of products, installation, set-up, trial, adaptation, training, maintenance and review). The combination of sound theoretical rationale and program logic was used to synthesise available evidence from studies of like products and bundles. This led us to forecast reasonable assumptions regarding the impact of AT bundles. AT services costs are an estimate of an assessment annually to review and update an AT bundle. Setting up initial AT usage, particularly for major AT products would occur at differing points in the primary care system and is indicative costings should be sought from relevant bodies.

Defining the comparator: The current CHSP policy: ‘clients who are unable to purchase the item/s independently will be able to access up to \$500 in total support per financial year’⁷⁸. It is important to note that this comparator was not fully assessed in our study, that is, the detailed implications of spending choices and impact upon outcomes if only \$500 were available. Rather, an indicative statement points out the likely shortfalls for each case profile. This is discussed in limitations and recommendations to complete this step in order to run a full cost-benefit analysis.

⁷⁷ Voss, T., Carter, R., Barendregt, J., Mihalopoulos, C., Vermeen, C., Magnus, A., . . . Wallace, A. (2010). *Assessing Cost-effectiveness in Prevention (ACE-Prevention): Final Report*. Retrieved from <http://www.sph.uq.edu.au/bodce-ace-prevention> (page 18)

⁷⁸ For more information, see: https://agedcare.health.gov.au/sites/g/files/net1426/f/documents/10_2016/appendix_a_chsp_growth_round_2016.pdf: p 50

Identifying costs: Firstly, the costs of AT bundles was established. AT product pricing was sourced from the National Equipment Database on November 13, 2017 by occupational therapists from ILC WA. Costs for AT services (allied health evaluation, and coaching / support from an allied health assistant, peer mentor or other supporter) recognise usually invisible AT service costs. These figures are conservative, based on Australian benchmark pricing ⁷⁹, and hours required draw on clinical judgement.

Secondly, to deliver valid data on outcome-related costs of AT for older Australians – specifically, cost offsets or substitutions, several parameters were established:

Parameter	Method
Types of AT User	Construct and validate AT user profiles (see Table 2.4 & Appendix 4)
Types of AT which each user profile may require	Identify and validate AT clusters (see Table 2.4)
Costs of each AT cluster	Costing using NED / average costs (Supplementary Excel Table)
Costs impacts	Secondary data from outcome studies where possible (see Tables 2.2 & 2.3) Impute fiscal benefits from outcomes where possible (see Supplementary Excel Table)

Three tables of with explanatory notes were emailed to sector representatives (the Alliance, NATA, COTA Victoria) mid-October, with a two-week turnaround for comments:

1. Mapping functional impairment groupings to assistive technology chapters & identifying funders.
2. Suggested AT clusters (using NDIS AT complexity categories).
3. AT user profiles for costing.

Written feedback was received from twelve organisations, representing input from over 20 expert informants, and the Tables were revised (see Appendix 4 for a summary of feedback and revisions).

The finalised Tables comprise:

- Grid mapping of functional impairment groupings to assistive technology chapters, identified against likely funding sources. This table demonstrates we have comprehensively covered the range of impairments and functional limitations, against all the potential AT categories, mapped to the current complexities of Australian public funding (Appendix 3)

⁷⁹ <https://www.ndis.gov.au/providers/pricing-and-payment.html>

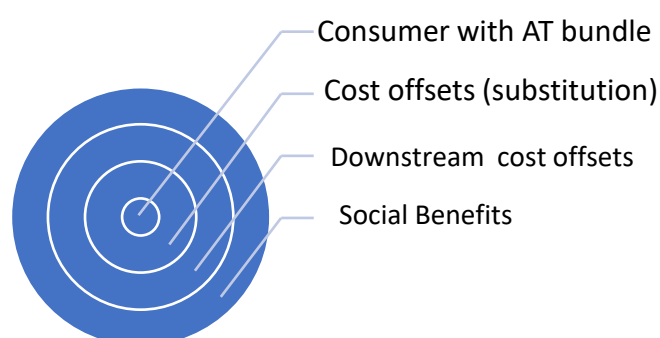
- Suggested AT bundle (using NDIS AT complexity categories) according to AT user types. This table aligns ABS SDAC language for severity and impact on daily life, with simple to complex AT which can impact on outcomes (Appendix 5)
- A series of seven AT user profiles with their AT requirements, for the purposes of costing (Table 2.4)

The range of AT Products identified as relevant for older Australians, as generated across the AT Profiles, was costed for lowest and highest price utilising the National Equipment Database on 13 November 2017 by occupational therapists from ILC WA. Time horizons and a Most Likely cost were calculated, enabling the AT user profiles to be costed. AT Services were also included with NDIS benchmark pricing.

AT PRODUCTS								
TASK	ABS SDAC category	Product	NDIS Complexity Level	Cost			Time Horizon (replacement time)	
				Lowest	Highest	Most Likely	1-2 years	5 years
ADL	Self-care	Eg. Safety tread	1	\$20.00	\$360.00			*
AT SERVICES								
AT SERVICES (allied health professional				\$180 p/h (NDIS rate)			annual	
AT SERVICES (allied health assistant / AT supporter)				\$80 p/h incl on costs			annual	
ADAPTATION / INSTALLATION COSTS				\$50 p/h technician			one-off	
MAINTENANCE / SERVICE COSTS				\$50 p/h technician			annual	

Table 2.1 Categories of Pricing Analysis completed November 2017

The next step then entailed linking evidence of effectiveness from the literature, to inform the cost 'offsets' side of the costing equation. These were envisioned at three points (see Figure 2.2) These included direct cost offsets (substitution of supplementation of paid or unpaid care costs); downstream cost offsets, and social benefit.



Cost Offsets

Available evidence provides the following figures. Hoenig et al (2003) calculate AT use leads to a decrease in total support hours 3.8 hrs per week⁸⁰. The Disability Federation of Ireland propose the total cost of AT less than 1/3 cost of additional support work⁸¹. Formal care costs for people with MND and like conditions range from 9- 68 hours per week (Deloitte Access Economics, 2015)⁸². Table 2.2 below lists the cost offset figures used for the Economic Pathway analysis:

a) Supplement/ substitute for support work	\$50 p/h formal care cost <ul style="list-style-type: none"> • Save 2 hours per week mild severity • Save 3.8 hours of work per week with bundles for moderate severity • Save 7-17 hours per week with bundles for severe/ profound
b) Supplement/ substitute for unpaid care	\$13.60 per hour of informal care <ul style="list-style-type: none"> • Save 13 hours per week mild / mod • Save 7.5 hours per day severe/ profound (14.5 per week)

Table 2.2 Cost offset figures used for the Economic Pathway Analysis

Downstream Cost Impacts

Available evidence provides the following statistics and figures. Downstream healthcare savings relate to decreased secondary complications (e.g. pressure; respiratory; musculoskeletal)⁸³. Al-Oraibi et al (2012) found the rate of falls and healthcare costs were halved with provision of monitoring-related AT⁸⁴. Mann et al (1999) evidence slowed functional decline estimated at 8-18 months, along with one third fewer hospitalisations, and 18 month delays in residential aged care admission, with the AT

⁸⁰ The multivariate models show a strong and consistent relation between equipment use and hours of help—the use of equipment was associated with fewer hours of help, after control for other factors. Disabled people who used any technological assistance, either for some or for all of their basic ADL impairments, reported 3.8 ($P = .008$) fewer hours of help per week than did those who used no technological assistance, net of other factors (HOENIG et al, 2003)

⁸¹ A woman, who is a wheelchair user, lives in her own apartment. She uses environmental controls to the value of €18,500. She also has 99 hours of Personal Assistant (PA) supports per week. Without her environmental controls, she would sacrifice significant independence, and would require 168 hours of PA supports weekly (i.e. 24/7 support), at a cost in excess of €59,000 per annum. The total cost of her AT was less than one third of the annual cost of round-the-clock Personal Assistant support (DISABILITY FEDERATION IRELAND)

⁸² An Individual Support Package recipient with severe limitations receives a maximum of 47 hours care per week. (MILD-MODERATE) each carer provides 673 hours per year or 13 hours per week (personal communication) (SEVERE/ PROFOUND) \$32,728 per person = estimated 7.5 hours of informal care per day represents \$13.60 per hour based on an opportunity cost approach Deloitte Access Economics. (2015). Economic analysis of motor neurone disease in Australia. Retrieved from Melbourne: <https://www2.deloitte.com/au/en/pages/economics/articles/economic-analysis-motor-neurone-disease-australia.html>

⁸³ In England in 2001/02, COPD accounted for 81,283 admissions for 725,790 bed days. If 30 per cent of cases can be managed at home, then assuming a typical cost of a day in hospital of £250 per day this would release 217,000 bed days or over £50 million. Savings would also come from reducing the average length of stay for COPD (mean 9.1 days; median 6.0 days) (Table 2). Further savings would result from the reduced nursing visits that are otherwise needed when the patient is discharged from hospital (Department of Health, 2005, p. 24) The hospital base case (250 patients) revealed cumulative savings of \$402,981 and \$449,101 over 30 and 90 days, respectively, for [optimal respiratory AT] versus comparators. For the payer base case (100,000 patients), 3-year cumulative savings with Advanced NIV were \$326 million versus no [optimal] respiratory AT and \$1.04 billion versus respiratory assist device [less optimal AT]

⁸⁴ An impact assessment of AT systems⁸⁴ in nursing homes in the UK found falls reduced from 202 falls prior to AT introduction, to 112, with mean health care costs reduced by more than 50%. A full economic evaluation was not possible as the cost of AT installation was not calculated (Al-Oraibi et al., 2012).

bundle provided. These ratios were used to extrapolate downstream cost impacts using current Australian pricing ⁸⁵

GP Visitation	\$37 MBS rebate Level B Consultation ⁸⁶
ED presentations	ED presentation: \$580
Acute Admissions	acute admission: episode \$5,000 subacute episode: \$13,000
Residential Aged Care Admission	18 months @ \$100 per day government spend

Table 2.3 Downstream Cost Estimates

Social Costs

The Rapid Evidence Review demonstrates significant gains in terms of psychosocial outcomes. Satisfaction, decreased difficulty and anxiety, increased participation and decreased carer burden or injury are substantial contributors to overall health and wellbeing, and demonstrably save costs across the health sector (Cummins et al., 2007)⁸⁷. Complexities arise in costing however, and for this initial study, we have not predicted these social benefits, but have indicated they do exist and ought to be taken into account.

Population impact

A final step made population predictions for each of the representative AT profiles against population data. Table 2.4 links the representative profiles of AT users (and the populations they represent) with clusters of AT, and estimate the spend)⁸⁸

SDAC CATEGORY	PROFILE	AT (NDIS COMPLEXITY CATEGORIES)	POPULATION
Mild core activity limitation / with long-term health condition)	SIMONE Frailty: Mild functional impairment, focus is prevention). May have subclinical chronic disease co-morbidities.	Level 1 & 2 AT Services: AHP AT Services: AHA/ supporter Handrails - shower Handrails - toilet Handrails - front steps Handrails - back steps Longhandled / lightweight cleaning equipment long handled reacher jar opener laundry trolley	MILD = 250,800 65+ ⁸⁹

⁸⁵ Independent Hospital Pricing Authority. (2014). Australian Public Hospitals Cost Report 2013-2014 Round 18. <https://www.ihoa.gov.au/publications/national-hospital-cost-data-collection-public-hospitals-cost-report-round-19-financial>

⁸⁶ For more information, see: <http://www9.health.gov.au/mbs/>

⁸⁷ Cummins, R., Hughes, J., Tomy, A., Gibson, A., Woerner, J., & Lai, L. (2007). The Wellbeing of Australians - Carer Health and Wellbeing.

⁸⁹ SDAC Table 3.1: 44300DO020_2015 Disability, Ageing and Carers, Australia: Summary of Findings, 2015

		hiking poles / single point stick Emergency call (personal alarm) Adaptation/Installation Costs (one off) Maintenance/Service Costs	
Moderate core activity limitation	KIM (post-cancer; tracheostomy; multiple medical problems/ chronic disease; respiratory (COAD) incontinence, mental health / depression / anxiety)	Level 1-4 ADD AT Services: AHP ADD AT Services: AHA/ supporter gait aids scooter powered rise/recline chair bed supports communication device kitchen trolley laundry trolley kitchen propping school wig adapted gardening equipment pressure garments nutrition support (consumables, feeding tubes, feeding pumps, formula) Emergency response systems (personal alarm) ICT supports continence shower stool Handrails shower Adaptation/Installation Costs (one off) Maintenance/Service Costs	Total with one or more long term health condition 309,400⁹⁰
	ORLANDO (stroke with hemiplegia and aphasia/ dysphagia)	Level 1-3 ADD AT Services ADD AT Services: AHA/ supporter one arm drive manual wheelchair & powerpack powerpack gait aid dressing equipment adapted footwear ankle foot orthosis shower stool	Stroke = 43,900⁹¹

⁹⁰ SDAC **Table 27.1** Total with one or more long term health condition

⁹¹ SDAC Table 27.1 Persons aged 65 years and over, main long-term health condition, by age and sex–2015, est

		flexible showerhose handrails safety mat temperature valve one handed cooking and eating equipment eating support (dysphagia management includes dysphagia cups, built up utensils and environmental aids (often low tech) that might prompt or support safe swallowing) ICT supports (iPad ; connectivity) bed supports dining chair medication management nutrition support (thickener) kitchen trolley chair raiser for lounge chair AAC e.g. communication devices (tablet and apps) Emergency response system (personal alarm) Adaptation/Installation Costs (one off) Maintenance/Service Costs	
Profound or severe core activity limitation	MELEI (Multiple Sclerosis OR Post-Polio Syndrome OR Spinal Cord Injury OR neurological progressive – Parkinsons, MND	ADD AT Services ADD AT Services: AHA/ supporter power wheelchair (power elevation; postural supports) pressure cushion (Jay) hoist plus sling (short track to loo) adjustable bed pressure mattress orthotics adapted footwear wheeled shower commode stepless entry handshower Handrails - shower Handrails - toilet long handled sponge and reacher	Diseases of the nervous system = 87,600 ⁹² NOTE this figure represents substantively more than the subset of progressive neurological conditions for which data was sought.

⁹² Table 27.1 (44300DO030_2015 Disability, Ageing and Carers, Australia: Summary of Findings, 2015

		access under bathroom and kitchen sink (allocated to INSTALLATION) wide doorways adapted kitchen workbench side opening oven dressing equipment medication management ICT supports (adapted data entry to large screen computer with mounting and software) simple smart home AT mainstream e.g. wireless doorbell complex continence e.g. single-use catheters Emergency response system (personal alarm) Adaptation/Installation Costs (one off) Maintenance/Service Costs	
	TED (amputee; diabetes)	Level 1-4 ADD AT Services ADD AT Services: AHA/ supporter prosthesis related consumables powerchair pressure cushion modified bathroom modified entrances adjustable bed prosthesis gait aid (pick up frame) ICT supports, ECU medication management customised footwear raised toilet frame Car adaptations Modified kitchen areas Emergency response system (personal alarm) Adaptation/Installation Costs (one off) Maintenance/Service Costs	AMPUTEE ⁹³ 2/3 of the 35,306 LL amputations in 5 years from 2007 – 2012 occurred over 65's = 23,301 (half had diabetes) (23,301 amputations / 5 years/ 65+)

⁹³ <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0170705>

Cognitive (moderate functional impairment)	MARIA (dementia; arthritis, incontinence) Moderate core activity limitation	Level 1-3 ADD AT Services ADD AT Services: AHA Safety stove shutoff Smoke detector temperature control valves prompts / alerts kitchen/laundry eg flood detection ICT monitoring support (support (inactivity sensor find me watch) adapted environment: lighting adapted environment: cueing/wayfinding shower stool flexible showerhose handrails safety mat continence products chair raiser medication management good grip products for kitchen prompts and reminder systems: time management Emergency response system (personal alarm) Adaptation/Installation Costs (one off) Maintenance/Service Costs	Dementia and Alzheimers ⁹⁴ = 100.7 (000)
Sensory (moderate functional impairment)	FATIMA (vision and hearing loss; osteoarthritis; cardiovascular disease; past orthopaedics (total hip replacement)	Level 1 & 2 ADD AT Services ADD AT Services: AHA Glasses; low vision equipment; safety kitchen adaptations; gait aids, ICT supports (sensors; voice activated systems, wearables); adapted / lightweight cleaning equipment, AT to support transfers from low surfaces (Bed, chairs, toilet). Rails access. Contrast strips; sensor lighting; emergency	100,000 ⁹⁵

⁹⁴ Table 27.1 (44300DO030_2015 Disability, Ageing and Carers, Australia: Summary of Findings, 2015

⁹⁵ **VISION** In Australia in 2016, low vision and blindness impacts a conservative estimate of 100,000 people aged over 50. The older population are disproportionately affected, with the primary causes of vision loss being age-related macular degeneration, diabetic eye disease and glaucoma. (Macular Disease Foundation Australia, 2017)

		monitoring (personal alarm) (NB has hearing aids but funding not part of this study Adaptation/Installation Costs (one off) Maintenance/Service Costs	
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Table 2.4 Population projections for 7 AT User Profiles

2.3 RESULTS

The results for each AT user profile sum the cost of the AT bundle, make some evidenced extrapolations about potential cost impacts (hopefully savings) of the outcomes of these bundles, and include an extension to the impact on the Australian population. Results are reported as follows.

Firstly, the AT user profile is introduced by name. The profile is described in terms of severity of presentation, as well as how many Australians might have the main condition or functional impairment. We then describe the AT bundle, and identify the assumptions we have used to explain life for this AT user in terms of the costs and benefits of the AT bundle. A cost-benefit analysis calculation table lists costs in the base year, and extrapolates over a further 4 years, noting some expenses last for 5 years, and others require annual or other replacement or review. The final figure demonstrates a return on investment likely with the AT bundle versus CHSP funding. A full evaluation of the impact of this smaller sum could be run, considering likely choices and tradeoffs, in future evaluations.

EXPLANATORY NOTE REGARDING TABLE LAYOUT

The results are listed with the AT bundle items in the left column, and a 5-year time horizon of expenditure over the next 5 columns. The base year is first year or initial costs. The years are cumulative: so, if the bundle is used for 5 years, the figures in the final column represent the total cost (for 5 years).

Some AT needs replacement annually or a couple of times within the 5 years we are looking at. If the item needed replacing / paying for annually, such as maintenance or alarm services, then the initial cost is 'resent' each year, and at the end of 5 years we can see what it all costs.

E.g. a laundry trolley has an initial cost of \$120 and at the end of 5 years, the spending on laundry trolley is still \$120. Whereas, a monitored personal alarm with an initial cost of \$250 per annum, at the end of 5 years, has a total spend of \$1250.

Profile 1 Frailty SIMONE (mild functional impairment)

Severity: Mild functional impairment, focus is prevention. May have subclinical chronic disease co-morbidities. There are 250,800 older Australians with mild functional impairment.

AT Bundle: Complexity levels 1 & 2.

AT bundle includes twelve AT products (Handrails: shower, toilet, front and back steps; bathmat; long-handled / lightweight cleaning equipment; long handled reacher; jar opener; laundry trolley; hiking poles or single point stick.

AT services includes one hour of allied health practitioner and two hours of AT supporter/ coach and service costs annually, and one-off installation costs plus annual maintenance/ service costs⁹⁶.

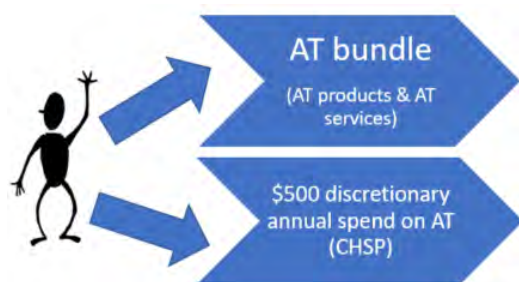
Assumptions of Cost and Benefit: With the AT bundle, we conservatively estimate Simone will save (substitute) 1 hours per week of paid support work (home care and instrumental ADL support). A further 1 hour may be supplemented by her increased independence: that is, she chooses to use an hour of paid support per week for community access or more substantial household chores. Seven hours of unpaid support work are released as Simone feels safe and autonomous at home, with unpaid supporters able to spend time with Simone on social and leisure pursuits rather than monitoring and daily living tasks. We avoid one GP visit per quarter due to less anxiety and fewer environmental barriers. Over a 5 year time horizon, we save one emergency department presentation and one acute admission through decreased falls risk and increased safety, particularly as the AT bundle is reviewed annually. Residential aged care admission is delayed by 6 months.

SIMONE		Time Horizon (i.e. how long will bundle be used for)				
		Base Year	+1	+2	+3	+4
	<i>AT Products</i>	\$589.00	\$1,038.00	\$1,487.00	\$1,936.00	\$2,385.00
	<i>AT Services: allied health / coach</i>	\$340.00	\$680.00	\$1,020.00	\$1,360.00	\$1,700.00
TOTAL COSTS: AT BUNDLE	<i>AT Services: adaptation/ Installation</i>	\$150.00	\$150.00	\$150.00	\$150.00	\$150.00
	<i>AT Services: maintenance / service</i>	\$50.00	\$100.00	\$150.00	\$200.00	\$250.00
	TOTAL COSTS	\$1,129.00	\$1,968.00	\$2,807.00	\$3,646.00	\$4,485.00
	<i>Supplement Paid Support Work</i>	\$2,600.00	\$5,200.00	\$7,800.00	\$10,400.00	\$13,000.00
	<i>Supplement Unpaid Support Work</i>	\$4,950.40	\$9,900.80	\$14,851.20	\$19,801.60	\$24,752.00
TOTAL BENEFIT	<i>GP Visitation</i>	\$148.00	\$296.00	\$444.00	\$592.00	\$740.00
	<i>ED presentations</i>	\$116.80	\$233.60	\$350.40	\$467.20	\$584.00
	<i>Acute Admissions</i>	\$993.20	\$1,986.40	\$2,979.60	\$3,972.80	\$4,966.00
	<i>Res Aged Care Admission</i>	\$3,600.00	\$7,200.00	\$10,800.00	\$14,400.00	\$18,000.00
	<i>Social Benefit</i>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	TOTAL BENEFIT	\$12,408.40	\$24,816.80	\$37,225.20	\$49,633.60	\$62,042.00
	<i>Net Benefit</i>	\$11,279.40	\$22,848.80	\$34,418.20	\$45,987.60	\$57,557.00

Table 2.5: Simone

⁹⁶ AT SERVICES allied health practitioner or other AT service initially to inform, recommend, support provision ('getting' the bundle); trial and adaptation at home and in environments of use, adjusting, training and maintenance, review and re-entry to tailor the bundle over time.

The cost benefit of an AT bundle versus CHSP funding for mild functional impairment:



NOTE discounting is not applied to either costs or benefits in this scenario

WITH AT Bundle: after one year, government saves \$10 for every \$1 spent. This rises to \$12.83 over 5 years, given GP visits and admissions likely to be avoided. **This is without costing in the likely substantial social benefits to independence and autonomy at home.**

With \$500 annual CHSP spend only, the initial expenditure of \$1129.00 to get the AT bundle up and running, cannot be funded. Recipients must therefore select a smaller portion of the AT bundle to purchase, and will not realise full potential benefit of AT. The potential benefits of cost offset (savings) of nearly \$60,000 may be forgone if an early intervention investment approach is not taken.

Profile 2 Multiple medical conditions KIM (moderate functional impairment)

Severity: Moderate functional impairment. Complex medical problems: post-cancer; tracheostomy; respiratory issues; mental health (anxiety / depression). There are 309,400 older Australians living with one or more long-term health condition.

AT Bundle: Complexity levels 1 -4.

Fifteen AT products (walking aids; scooter; powered rise/recline chair; bed supports; communication device; kitchen trolley; laundry trolley; kitchen propping stool; wig; adapted gardening equipment; pressure garments; emergency monitoring (personal alarm); nutrition support (*consumables, feeding tubes, feeding pumps, formula*); ICT supports; continence).

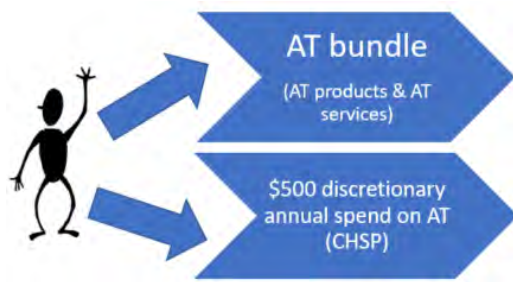
AT services includes one hour of allied health practitioner and two hours of AT supporter/ coach and service costs annually, plus one-off installation and annual maintenance/ service costs.

Assumptions of Cost and Benefit: With the AT bundle, Kim is able to manage and monitor her body functions (nutrition, continence and oedema with pressure support garments). She manages her fatigue and endurance with trolleys and propping stools for household tasks and a scooter for community mobility. She has bathroom adjustments for safety and energy conservation, and a personal alarm and ICT supports for safety and participation. We conservatively estimate that Kim will save (substitute) 3.8 hours per week of paid support work (home care and instrumental ADL support). Thirteen and a half hours of unpaid support work are released as Kim feels safe and autonomous at home, with unpaid supporters able to spend time with Kim on social and leisure pursuits rather than monitoring and daily living tasks. We avoid one GP visit per quarter due to less anxiety and fewer environmental barriers. Over a 5 year time horizon, we save one emergency department presentation and one acute admission through decreased falls risk and increased safety, particularly as the AT bundle is reviewed annually. Residential aged care admission is delayed by 6 months.

KIM		Time Horizon (i.e. how long will bundle be used for)				
		Base Year	+1	+2	+3	+4
	<i>AT Products</i>	\$11,607.00	\$15,904.00	\$20,201.00	\$24,498.00	\$28,795.00
	<i>AT Services: allied health / coach</i>	\$152.00	\$304.00	\$456.00	\$608.00	\$760.00
TOTAL COSTS: AT BUNDLE	<i>AT Services: adaptation/ Installation</i>	\$150.00	\$150.00	\$150.00	\$150.00	\$150.00
	<i>AT Services: maintenance / service</i>	\$50.00	\$100.00	\$150.00	\$200.00	\$250.00
	TOTAL COSTS	\$11,959.00	\$16,458.00	\$20,957.00	\$25,456.00	\$29,955.00
	<i>Supplement Paid Support Work</i>	\$9,880.00	\$19,760.00	\$29,640.00	\$39,520.00	\$49,400.00
	<i>Supplement Unpaid Support Work</i>	\$9,617.92	\$19,235.84	\$28,853.76	\$38,471.68	\$48,089.60
TOTAL BENEFIT	<i>GP Visitation</i>	\$148.00	\$296.00	\$444.00	\$592.00	\$740.00
	<i>ED presentations</i>	\$116.80	\$233.60	\$350.40	\$467.20	\$584.00
	<i>Acute Admissions</i>	\$993.20	\$1,986.40	\$2,979.60	\$3,972.80	\$4,966.00
	<i>Res Aged Care Admission</i>	\$3,600.00	\$7,200.00	\$10,800.00	\$14,400.00	\$18,000.00
	<i>Social Benefit</i>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	TOTAL BENEFIT	\$24,355.92	\$48,711.84	\$73,067.76	\$97,423.68	\$121,779.60
	<i>Net Benefit</i>	\$12,396.92	\$32,253.84	\$52,110.76	\$71,967.68	\$91,824.60

Table 2.6 - Kim

The cost benefit of an AT bundle versus CHSP funding for moderate functional impairment (multiple co-morbidities):



NOTE discounting is not applied to either costs or benefits in this scenario

WITH AT Bundle: after one year, government saves \$1.04 for every \$1 spent. This rises to \$3.07 over 5 years, given GP visits and admissions likely to be avoided. **This is without costing in the likely substantial social benefits to independence and autonomy at home.**

With \$500 annual CHSP spend only, the initial expenditure of \$11,959 to get the AT bundle up and running, cannot be funded. Recipients must therefore select a smaller portion of the AT bundle to purchase and will not realise full potential benefit of AT. The potential benefits of cost offset (savings) of up to \$91,000 may be forgone if an early intervention investment approach is not.

Profile 3 Stroke ORLANDO (Moderate functional impairment)

Severity: Moderate functional impairment. Stroke with hemiplegia and aphasia/ dysphagia.

AT Bundle: Level 1-3.

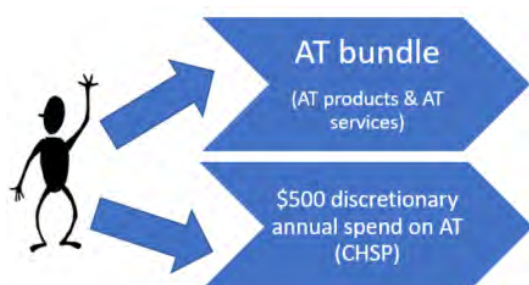
Twenty three AT products (one arm drive manual wheelchair with powerpack; gait aid; dressing equipment; adapted footwear; ankle foot orthosis; shower stool, flexible showerhose; handrails; safety mat; temperature valve; one handed cooking equipment, dysphagia eating support equipment: dysphagia cups, & environmental aids to prompt or support safe swallowing; ICT supports; bed supports; dining chair; adapted footwear; medication management; emergency monitoring (personal alarm); nutrition support: thickener; kitchen trolley; chair raiser for lounge chair; communication devices (high or low tech), plus AT services (annual support plus one-off installation costs). AT services includes two hour of allied health practitioner and four hours of AT supporter/ coach and service costs annually, plus one-off installation and annual maintenance / service costs.

Assumptions of Cost and Benefit: With the AT bundle, Orlando is able to manage and monitor his body functions (nutrition, and hemiplegic arm and leg) with thickened fluids, eating supports, orthoses, and a medication reminder/ dispenser. He manages personal and domestic tasks with one-handed equipment and a trolley. Orlando has a walking aid for indoor use as well as a manual one-arm drive wheelchair with powerpack for longer distances and community mobility. Orlando has bathroom adjustments for safety access. Transfers at home are supported by bed mobility equipment and raised seating. A personal alarm and ICT supports (tablet computer and Wi-Fi mean Orlando feels secure alone at home, and is able to engage with the online stroke support community as well as manage billpaying and other executive tasks online. We conservatively estimate that Orlando will save (substitute) 3.8 hours per week of paid support work (home care and instrumental ADL support), noting this is likely a very low estimate. Thirteen and a half hours of unpaid support work are released as Orlando feels safe and autonomous at home, with unpaid supporters able to spend time with Orlando on social and leisure pursuits rather than monitoring and daily living tasks. We avoid one GP visit per quarter due to less anxiety and fewer environmental barriers. Over a 5 year time horizon, we save one emergency department presentation and two acute admissions through decreased falls risk and increased safety, particularly as the AT bundle is reviewed annually. Residential aged care admission is delayed by 18 months.

ORLANDO		Time Horizon (i.e. how long will bundle be used for)				
		Base Year	+1	+2	+3	+4
	AT Products	\$12,204.45	\$18,138.90	\$24,073.35	\$30,007.80	\$35,942.25
	AT Services: allied health / coach	\$680.00	\$1,360.00	\$2,040.00	\$2,720.00	\$3,400.00
TOTAL COSTS: AT BUNDLE	AT Services: adaptation/ Installation	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00
	AT Services: maintenance / service	\$50.00	\$100.00	\$150.00	\$200.00	\$250.00
	TOTAL COSTS	\$13,234.45	\$19,898.90	\$26,563.35	\$33,227.80	\$39,892.25
	Supplement Paid Support Work	\$9,880.00	\$19,760.00	\$29,640.00	\$39,520.00	\$49,400.00
	Supplement Unpaid Support Work	\$9,617.92	\$19,235.84	\$28,853.76	\$38,471.68	\$48,089.60
TOTAL BENEFIT	GP Visitation	\$148.00	\$296.00	\$444.00	\$592.00	\$740.00
	ED presentations	\$116.80	\$233.60	\$350.40	\$467.20	\$584.00
	Acute Admissions	\$1,986.40	\$3,972.80	\$5,959.20	\$7,945.60	\$9,932.00
	Res Aged Care Admission	\$10,800.00	\$21,600.00	\$32,400.00	\$43,200.00	\$54,000.00
	Social Benefit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	TOTAL BENEFIT	\$32,549.12	\$65,098.24	\$97,647.36	\$130,196.48	\$162,745.60
	Net Benefit	\$19,314.67	\$45,199.34	\$71,084.01	\$96,968.68	\$122,853.35

Table 2.7 - Orlando

The cost benefit of an AT bundle versus CHSP funding for moderate functional impairment (stroke/swallowing):



NOTE discounting is not applied to either costs or benefits in this scenario

WITH AT Bundle: after one year, government saves \$1.46 for every \$1 spent. This rises to \$3.08 over 5 years, given GP visits and admissions likely to be avoided. **This is without costing in the likely substantial social benefits to independence and autonomy at home.**

With \$500 annual CHSP spend only, the initial expenditure of \$13,234 to get the AT bundle up and running, cannot be funded. Recipients must therefore select a smaller portion of the AT bundle to purchase, and will not realise full potential benefit of AT. The potential benefits of cost offset (savings) of up to \$122,853 over 5 years if an early intervention investment approach is not taken.

Profile 4 Progressive neurological MELEI (Severe/ profound functional impairment)

Severity: Severe/profound functional impairment due to progressive neurological impairment.

AT Bundle: Complexity levels 1-4.

Twenty four AT products (power wheelchair; pressure cushion; hoist; adjustable bed; pressure mattress; orthoses; adapted footwear; wheeled shower commode; stepless entry; handshower & handrails; long handled sponge and reacher; access under bathroom and kitchen sink; toilet rails; wide doorways; adapted kitchen workbench; side opening oven; dressing equipment; medication management; ICT supports, simple smart home AT that you can get from Bunnings/JB Hi Fi; emergency monitoring (personal alarm); complex continence, e.g. single-use catheters).

AT services includes two hours of allied health practitioner and four hours of AT supporter/ coach and service costs annually, plus adaptation/ installation costs and annual maintenance / service costs.

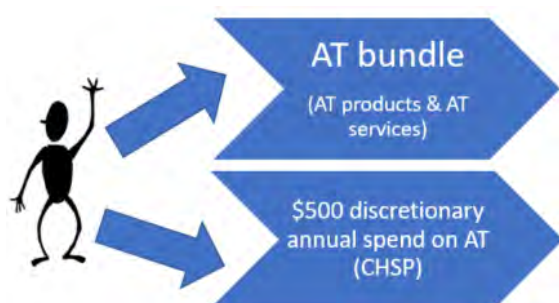
Assumptions of Cost and Benefit: Melei has significant and progressive neurological impairment: her AT bundle enables her to be at home with on-call support in lieu of overnight support, and to be autonomous at home for up to 10 hours per day⁹⁷, leading to an estimated saving of 17 of the 47 formal support hours required per week. Twenty hours of unpaid support work are released as Melei and her circle of support know she can manage household environment and communications, as well as readily call for assistance when home. Therefore, unpaid supporters are able to spend time with Melei on social and leisure pursuits rather than monitoring and daily living tasks. Melei controls her doorbell, phone, heating and access via ICT-based environmental control accessed through her power wheelchair joystick and/or mounted tablet device and switches positioned within reach when in her adjustable bed. Pressure cushion and mattress, as well as padded wheeled shower commode preserve her posture and skin integrity. Home adaptations to key working surfaces and access points in the home enable Melei to maximise her functioning in personal and domestic tasks. We avoid one GP visit per quarter due to prevention of secondary complications (pressure care, knocks, adverse events). Over a 5 year time horizon, we save one emergency department presentation and 2.5 acute admissions through decreased falls risk and increased safety, particularly as the AT bundle is reviewed annually. Residential aged care admission is delayed by 18 months.

⁹⁷ Formal care costs for people with MND and like conditions range from 9- 68 hours per week (Deloitte Access Economics, 2015). An Individual Support Package recipient with severe limitations receives a maximum of 47 hours care per week. This figure was used for Melei.

MELEI		Time Horizon (i.e. how long will bundle be used for)				
		Base Year	+1	+2	+3	+4
TOTAL COSTS: AT BUNDLE	AT Products	\$45,165.00	\$47,102.00	\$49,039.00	\$50,976.00	\$52,913.00
	AT Services: allied health / coach	\$680.00	\$1,360.00	\$2,040.00	\$2,720.00	\$3,400.00
	AT Services: adaptation/ Installation	\$25,000.00	\$25,000.00	\$25,000.00	\$25,000.00	\$25,000.00
	AT Services: maintenance / service	\$50.00	\$100.00	\$150.00	\$200.00	\$250.00
	TOTAL COSTS	\$70,895.00	\$73,562.00	\$76,229.00	\$78,896.00	\$81,563.00
TOTAL BENEFIT	Supplement Paid Support Work	\$44,200.00	\$88,400.00	\$132,600.00	\$176,800.00	\$221,000.00
	Supplement Unpaid Support Work	\$14,144.00	\$28,288.00	\$42,432.00	\$56,576.00	\$70,720.00
	GP Visitation	\$148.00	\$296.00	\$444.00	\$592.00	\$740.00
	ED presentations	\$116.80	\$233.60	\$350.40	\$467.20	\$584.00
	Acute Admissions	\$2,483.00	\$4,966.00	\$7,449.00	\$9,932.00	\$12,415.00
	Res Aged Care Admission	\$10,800.00	\$21,600.00	\$32,400.00	\$43,200.00	\$54,000.00
	Social Benefit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	TOTAL BENEFIT	\$71,891.80	\$143,783.60	\$215,675.40	\$287,567.20	\$359,459.00
	Net Benefit	\$996.80	\$70,221.60	\$139,446.40	\$208,671.20	\$277,896.00

Table 2.8 - Melei

The cost benefit of an AT bundle versus CHSP funding for severe/profound functional impairment (progressive neurological):



NOTE discounting is not applied to either costs or benefits in this scenario

WITH AT Bundle: after one year, government saves \$0.01 for every \$1 spent. This rises to \$3.41 over 5 years, given GP visits and admissions likely to be avoided. **This is without costing in the likely substantial social benefits to independence and autonomy at home.**

With \$500 annual CHSP spend only, the initial expenditure of \$70,895 to get the AT bundle up and running, cannot be funded. Recipients must therefore select a smaller portion of the AT bundle to purchase, and will not realise full potential benefit of AT. The potential benefits of cost offset (savings) of up to \$277,896 over 5 years if an early intervention investment approach is not taken.

Profile 5 Amputee TED (severe/ profound functional impairment)

Severity: Trans-tibial (below knee) amputation; diabetes.

AT Bundle: Complexity levels 1-4.

Seventeen AT products (powerchair; pressure cushion; modified bathroom; modified entrances; adjustable bed; prosthesis; kitchen trolley; ICT supports, ECU; medication management, pressure mattress, raised toilet frame; car adaptations; modified kitchen areas, emergency monitoring (personal alarm) *NOTE diabetes management technology not included.*

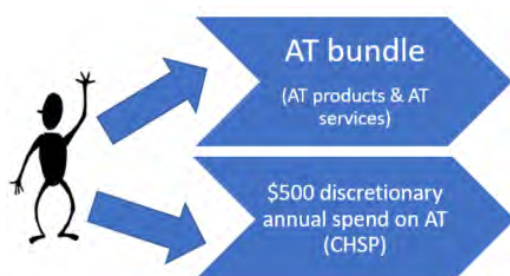
AT services includes one hour of allied health practitioner and five hours of AT supporter/ coach and service costs annually, plus adaptation/ installation costs and annual maintenance / service costs. It is important to note that the extensive AT service from prosthetists to establish prosthetic use would likely occur through Artificial Limb Schemes. The costing here reflects necessary associated technologies and maintenance support to enable the prosthetic user to live life in the community with support from the aged care system.

Assumptions of Cost and Benefit: With the AT bundle, we conservatively estimate Ted is able to manage and monitor his body functions (stump and related issues) with his prosthetic limb and related consumables such as prosthetic liners. Customised footwear (annual) enhances his gait and manages diabetes-related skin integrity in the non-affected limb. Ted can walk short distances but uses a power wheelchair with pressure cushion around the house and in the community, with vehicle adaptations for his car. Ted has bathroom and kitchen adaptations to enable him to participate in daily tasks from his wheelchair. An adjustable bed enables independent transfers. A personal alarm and environmental controls for managing his home enable him to control his security when he is not using his prosthetic or up and about in his wheelchair, enhancing autonomy and safety. We conservatively estimate that Ted will save (substitute) 22 hours per week of paid support work (home care and instrumental ADL support). Thirteen and a half hours of unpaid support work are released as Ted feels safe and autonomous at home, with unpaid supporters able to spend time with Ted on social and leisure pursuits rather than monitoring and daily living tasks. We avoid one GP visit per quarter due to less anxiety and fewer environmental barriers. Over a 5 year time horizon, we save one emergency department presentation and two acute admissions, particularly as the AT bundle is reviewed annually. Residential aged care admission is delayed by 18 months.

TED		Time Horizon (i.e. how long will bundle be used for)				
		Base Year	+1	+2	+3	+4
TOTAL COSTS: AT BUNDLE	AT Products	\$56,300.00	\$57,500.00	\$58,700.00	\$59,900.00	\$61,100.00
	AT Services: allied health / coach	\$580.00	\$1,160.00	\$1,740.00	\$2,320.00	\$2,900.00
	AT Services: adaptation/ Installation	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00
	AT Services: maintenance / service	\$300.00	\$600.00	\$900.00	\$1,200.00	\$1,500.00
	TOTAL COSTS	\$72,180.00	\$74,260.00	\$76,340.00	\$78,420.00	\$80,500.00
TOTAL BENEFIT	Supplement Paid Support Work	\$57,200.00	\$114,400.00	\$171,600.00	\$228,800.00	\$286,000.00
	Supplement Unpaid Support Work	\$9,617.92	\$19,235.84	\$28,853.76	\$38,471.68	\$48,089.60
	GP Visitation	\$148.00	\$296.00	\$444.00	\$592.00	\$740.00
	ED presentations	\$116.80	\$233.60	\$350.40	\$467.20	\$584.00
	Acute Admissions	\$1,986.40	\$3,972.80	\$5,959.20	\$7,945.60	\$9,932.00
	Res Aged Care Admission	\$10,800.00	\$21,600.00	\$32,400.00	\$43,200.00	\$54,000.00
	Social Benefit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	TOTAL BENEFIT	\$79,869.12	\$159,738.24	\$239,607.36	\$319,476.48	\$399,345.60
	Net Benefit	\$7,689.12	\$85,478.24	\$163,267.36	\$241,056.48	\$318,845.60

Table 2.9 - Ted

The cost benefit of an AT bundle versus CHSP funding for severe/profound functional impairment (amputation; diabetes):



NOTE discounting is not applied to either costs or benefits in this scenario

WITH AT Bundle: after one year, government saves \$0.11 for every \$1 spent. This rises to \$3.96 over 5 years, given GP visits and admissions likely to be avoided. **This is without costing in the likely substantial social benefits to independence and autonomy at home.**

With \$500 annual CHSP spend only, the initial expenditure of \$71,920 to get the AT bundle up and running, cannot be funded. Recipients must therefore select a smaller portion of the AT bundle to purchase, and will not realise full potential benefit of AT. The potential benefits of cost offset (savings) of up to \$320,425 over 5 years if an early intervention investment approach is not taken.

Profile 6 Dementia MARIA (moderate functional impairment)

Severity: Dementia; arthritis, incontinence.

AT Bundle: Complexity levels 1-3.

Seventeen AT products (Safety stove shutoff; temperature control valves; alerts for kitchen/laundry: flood detectors; ICT monitoring support: inactivity sensor; find me watch; adapted environment: lighting; adapted environment: cueing/ wayfinding; shower stool; flexible showerhose; handrails; safety mat; continence products, chair raiser; medication management; good grip products for kitchen; prompts and reminder systems: time management; emergency monitoring (personal alarm).

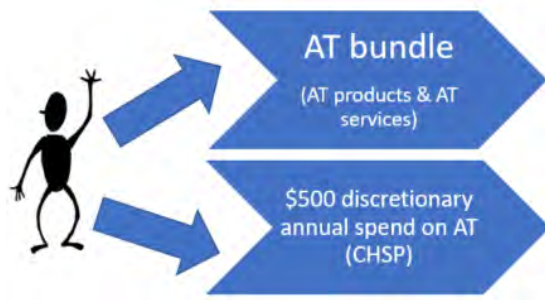
AT services includes one hour of allied health practitioner and two hours of AT supporter/ coach and service costs annually, plus one-off installation costs and annual maintenance / service costs.

Assumptions of Cost and Benefit: With the AT bundle, Maria can spend periods of her day without others in her home. Technologies to support her physical function include bathmat, handrails and stool for showering, chair raiser and adapted products for kitchen tasks. Environmental enhancements including lighting, wayfinding cues, prompts and reminder systems assist with daily orientation. 'Light touch' surveillance and monitoring technologies are linked with safety products (stove shutoff; temperature control valves, smoke detector, personal alarm system) as agreed by Maria to raise alerts should atypical data be noted. We conservatively estimate that Maria will save (substitute) 3.8 hours per week of paid support work (home care and instrumental ADL support). Thirteen and a half hours of unpaid support work are released as Maria feels safe and autonomous at home, with unpaid supporters able to spend time with Maria on social and leisure pursuits rather than monitoring and daily living tasks. We avoid one GP visit per quarter due to less anxiety and fewer environmental barriers. Over a 5 year time horizon, we save one emergency department presentation and one acute admission through decreased falls risk and increased safety, particularly as the AT bundle is reviewed annually. Residential aged care admission is delayed by 12 months.

MARIA		Time Horizon (i.e. how long will bundle be used for)				
		Base Year	+1	+2	+3	+4
TOTAL COSTS: AT BUNDLE	<i>AT Products</i>	\$4,635.00	\$5,490.00	\$6,345.00	\$7,200.00	\$8,055.00
	<i>AT Services: allied health / coach</i>	\$340.00	\$680.00	\$1,020.00	\$1,360.00	\$1,700.00
	<i>AT Services: adaptation/ Installation</i>	\$150.00	\$150.00	\$150.00	\$150.00	\$150.00
	<i>AT Services: maintenance / service</i>	\$50.00	\$100.00	\$150.00	\$200.00	\$250.00
	TOTAL COSTS	\$5,175.00	\$6,420.00	\$7,665.00	\$8,910.00	\$10,155.00
TOTAL BENEFIT	<i>Supplement Paid Support Work</i>	\$9,880.00	\$19,760.00	\$29,640.00	\$39,520.00	\$49,400.00
	<i>Supplement Unpaid Support Work</i>	\$9,617.92	\$19,235.84	\$28,853.76	\$38,471.68	\$48,089.60
	<i>GP Visitation</i>	\$148.00	\$296.00	\$444.00	\$592.00	\$740.00
	<i>ED presentations</i>	\$116.80	\$233.60	\$350.40	\$467.20	\$584.00
	<i>Acute Admissions</i>	\$993.20	\$1,986.40	\$2,979.60	\$3,972.80	\$4,966.00
	<i>Res Aged Care Admission</i>	\$7,200.00	\$14,400.00	\$21,600.00	\$28,800.00	\$36,000.00
	<i>Social Benefit</i>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	TOTAL BENEFIT	\$27,955.92	\$55,911.84	\$83,867.76	\$111,823.68	\$139,779.60
	<i>Net Benefit</i>	\$22,780.92	\$49,491.84	\$76,202.76	\$102,913.68	\$129,624.60

Table 2.10 – Maria

The cost benefit of an AT bundle versus CHSP funding for moderate functional impairment (dementia):



NOTE discounting is not applied to either costs or benefits in this scenario

WITH AT Bundle: after one year, government saves \$4.40 for every \$1 spent. This rises to \$12.76 over 5 years, given GP visits and admissions likely to be avoided. **This is without costing in the likely substantial social benefits to independence and autonomy at home.**

With \$500 annual CHSP spend only, the initial expenditure of \$5,175 to get the AT bundle up and running, cannot be funded. Recipients must therefore select a smaller portion of the AT bundle to purchase, and will not realise full potential benefit of AT. Government risks wasting expenses of up to \$129,624 over 5 years if an early intervention investment approach is not taken.

Profile 7 Sensory loss Fatima (moderate functional impairment)

Severity: Vision and hearing loss; osteoarthritis; cardiovascular disease; past orthopaedics (total hip replacement).

AT Bundle: Complexity levels 1-4.

Approximately 18 AT products (low vision equipment^{98*}; safety kitchen adaptations; gait aids, ICT supports (sensors; voice activated systems, wearables); adapted / lightweight cleaning equipment, AT to support transfers from low surfaces (Bed, chairs, toilet); handrails at entrance; contrast strips; sensor lighting; emergency monitoring (personal alarm) (NB has hearing aids and glasses but funding not part of this study).

AT services includes one hour of allied health practitioner and five hours of AT supporter/ coach and service costs annually, requiring no installation costs but annual maintenance / service costs.

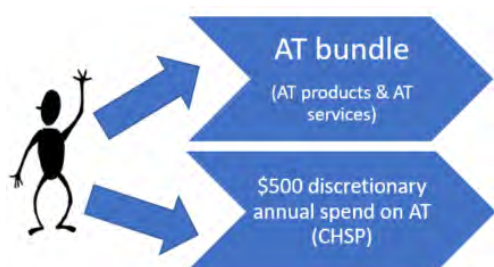
Assumptions of Cost and Benefit: With the AT bundle, Fatima has the supports she requires to be oriented to her home: she can cook and eat using liquid level indicators, Hi Mark tactile pens and audible cooking alerts, with contrast strips and lighting to maximise any residual sight. Using lightweight household cleaning equipment she participated in household management. She can move safely around due AT service orientation and mobility support, and has collaborated to decide which risky areas require safety tread and handrails. Mobility support for her arthritis-related functional difficulties include raised seats and a walking aid. Tailored ICT supports in the low vision equipment bundle mean Fatima can read and pay household bills, read books and documents, and find out the colour of items when making shopping choices: these technologies enable Fatima to continue her lifelong interests in fashion and current affairs, and to participate in her online book group, and to Skype family. We conservatively estimate Fatima will save (substitute) 3.8 hours per week of paid support work (home care and instrumental ADL support). Just over thirteen and a half hours of unpaid support work are released as Fatima feels safe and autonomous at home, with unpaid supporters able to spend time together on social and leisure pursuits rather than monitoring and daily living tasks. We avoid one GP visit per quarter due to less anxiety and fewer environmental barriers. Over a 5 year time horizon, we save one emergency department presentation and one acute admission through decreased falls risk and increased safety, particularly as the AT bundle is reviewed annually. Residential aged care admission is delayed by 18 months.

⁹⁸ *LOW VISION EQUIPMENT (\$5,000 bundle): lighting, optical and electronic magnifiers, computer software, iPad, electronic magnifier, CCTV, talking books, OrCam, MDFA 2017.

FATIMA		Time Horizon (i.e. how long will bundle be used for)				
		Base Year	+1	+2	+3	+4
TOTAL COSTS: AT BUNDLE	AT Products	\$7,402.00	\$7,934.00	\$8,466.00	\$8,998.00	\$9,530.00
	AT Services: allied health / coach	\$580.00	\$1,160.00	\$1,740.00	\$2,320.00	\$2,900.00
	AT Services: adaptation/ Installation					
	AT Services: maintenance / service	\$50.00	\$100.00	\$150.00	\$200.00	\$250.00
	TOTAL COSTS	\$8,032.00	\$9,194.00	\$10,356.00	\$11,518.00	\$12,680.00
TOTAL BENEFIT	Supplement Paid Support Work	\$9,880.00	\$19,760.00	\$29,640.00	\$39,520.00	\$49,400.00
	Supplement Unpaid Support Work	\$9,617.92	\$19,235.84	\$28,853.76	\$38,471.68	\$48,089.60
	GP Visitation	\$148.00	\$296.00	\$444.00	\$592.00	\$740.00
	ED presentations	\$116.80	\$233.60	\$350.40	\$467.20	\$584.00
	Acute Admissions	\$993.20	\$1,986.40	\$2,979.60	\$3,972.80	\$4,966.00
	Res Aged Care Admission	\$10,800.00	\$21,600.00	\$32,400.00	\$43,200.00	\$54,000.00
	Social Benefit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	TOTAL BENEFIT	\$31,555.92	\$63,111.84	\$94,667.76	\$126,223.68	\$157,779.60
	Net Benefit	\$23,523.92	\$53,917.84	\$84,311.76	\$114,705.68	\$145,099.60

Table 2.11 - Fatima

The cost benefit of an AT bundle versus CHSP funding for moderate functional impairment (vision loss; joint conditions):



NOTE discounting is not applied to either costs or benefits in this scenario

WITH AT Bundle: after one year, government saves \$2.93 for every \$1 spent. This rises to \$11.44 over 5 years, given GP visits and admissions likely to be avoided. **This is without costing in the likely substantial social benefits to independence and autonomy at home.**

With \$500 annual CHSP spend only, the initial expenditure of \$8,032 to get the AT bundle up and running, cannot be funded. Recipients must therefore select a smaller portion of the AT bundle to purchase, and will not realise full potential benefit of AT. The potential benefits of cost offset (savings) of up to \$145,099 over 5 years if an early intervention investment approach is not taken.

Summary of return on investment for 7 AT user profiles

Profile	\$'s save per \$1 spent and Time Horizon (i.e. how long will bundle be used for)				
	Base Year	+1	+2	+3	+4
Simone	\$9.99	\$11.61	\$12.26	\$12.61	\$12.83
Kim	\$1.04	\$1.96	\$2.49	\$2.83	\$3.07
Orlando	\$1.46	\$2.27	\$2.68	\$2.92	\$3.08
Melei	\$0.01	\$0.95	\$1.83	\$2.64	\$3.41
Ted	\$0.11	\$1.15	\$2.14	\$3.07	\$3.96
Maria	\$4.40	\$7.71	\$9.94	\$11.55	\$12.76
Fatima	\$2.93	\$5.86	\$8.14	\$9.96	\$11.44

Table 2.12

2.4 DISCUSSION

Pathway analysis was demonstrated to be a successful method to articulate the impact of AT bundles within an expenditure context, providing data able to inform Australian policy. One consideration in cost benefit analyses is whether a saving can actually be realised. It cannot always be assumed that decreased costs directly leads to lower budgets e.g. where an empty nursing home bed doesn't 'cease to exist' but has institutional limitations/ rigidities in that infrastructure remains. We suggest in a policy context where individual bundles of support are provided, that it IS likely that decreasing care costs will not run into institutional hurdles so will be an actual cost saving.

The intent of constructing the seven AT user profiles was to broadly canvass virtually all scenarios⁹⁹ for older people living at home in Australia. The costed profiles provide information on life for Australians across all functional impairment types – from subclinical frailty to impairments of the skin, bone and joint, neurological, neuromusculoskeletal, sensory, cognitive and internal systems. These profiles canvassed life for people with mild, moderate, or severe to profound functional limitations.

The AT bundles were costed in full (including AT services such as allied health or AT support for evaluation, coaching, skill development and monitoring / review), AT installation, and servicing/ maintenance cycles. This is the first time this has been done in the Australian context, as usually these costs are spread over many stakeholders and not provided in one co-ordinated service. The AT benefits were not able to be fully costed, for example data on the social return on investment was difficult to locate and therefore social benefits are an indicative area not yet completed. Costing the tangible savings was a deliberate choice which strengthened the data and provided convincing evidence of potential return on investment.

Return on investment is positive where:

- a) the costs are exceeded by the cost offsets alone, or
- b) costs match more or less the cost offsets + social benefit occurs, weighting the benefits towards a dominant result

In each AT profile, the return on investment was positive. These results demonstrate that a spend on AT bundle of products and services can deliver cost effective outcomes and is a good government investment. Importantly in the severe/profound AT profiles, the expenditure to set up the AT bundle in the first year was 'dominated', that is, potential would not be covered by the initial expenditure. In all instances, however the return on investment was realised within 2-5 years.

In no instance would the CHSP \$500 annual allocation available for AT cover the cost of set up in the base year. That is, there is no potential for early intervention or to benefit from early investment in AT, in the current aged care service context.

This data is indicative of substantive potential savings, particularly in relation to Australian population figures.

⁹⁹ Excluded were, eye glasses, hearing aids, stoma care, respiratory support

2.5 ASSUMPTIONS AND LIMITATIONS

It is necessary in economic evaluations to list the assumptions which have been made. The above economic calculations based upon the following:

- The AT user profiles are based in a series of studies and on a defensible methodology. They are however archetypes and intended to canvass the broadest range of AT products which can be utilised. Assumptions around the extent of relevance to the Australian population can be refined.
- Inclusion of AT services (allied health evaluation, and coaching / support from an allied health assistant, peer mentor or other supporter) is an important recognition of usually invisible AT service costs. These figures are conservative, based on Australian benchmark pricing, and drawn from tacit clinical judgement as to the time taken for a home assessment.
- The time horizon runs from a base year out to 5 years: these are broad calculations which may be refined in future studies, for example if evidence is found that older Australians are best researched in a shorter or longer horizon.
- Scarcity of available evidence of costs of AT products, particularly when bundled with relevant AT services and other related devices. The tacit knowledge of allied health professionals as well as data from reports on focal disability groups or groups of products, has been drawn upon to fill these gaps. Further testing, refinement and piloting of these AT bundle assumptions is recommended.
- Many AT products have a wide diversity of low through to high pricing. Clinical judgement is required to match the product to the person and context, and many allied health professions hold concerns that 'benchmark pricing' will lead policymakers to assume lowest price will suffice to deliver outcomes.
- Pricing for an item will differ depending on whether it is sold for a contract price to a state AT funder through bulk supply arrangements, through a distributor with or without handling charges, or through for example a local rural pharmacy, where mark-ups can be as much as 63% (personal communication, DAA, April 2017)¹⁰⁰.
- Allied health practitioners emphasise that it is not accurate to use prices listed by many state AT funders as these in no way reflects actual market prices (see for example a 2010 study identifying a 30-60% shortfall in subsidy rates compared with market costs for the Victorian program (N Layton et al., 2010).
- Nutrition support pricing is contested, with limited available evidence (Independent Hospital Pricing Authority, 2014) standing in contrast to current practice experience and costs.
- Orthotic pricing is contested, with off-the shelf orthoses unlikely to be comparable to customised or custom-fitted orthoses, and complexities in costing AT service costs within this.

¹⁰⁰ EXAMPLE Nestle Resource Thicken Up Clear - \$90 for 750 grams at local rural pharmacy in NSW. Internet prices on the same product \$15.00 for 127 g pack in suburban Melbourne i.e. about \$90 per 750g. or \$73.24 per 750g through a well known distributor (without handling charges.) Consistency varies from 15 – 20 scoops/day up to 45 – 60 scoops/day. Cost therefore varies from \$14.65/day to \$48.80/day (personal communication DAA 1 Dec 2017)

- In the example of prostheses, prices differ significantly based upon the type of prosthesis / orthosis (Brotkorb et al., 2008). AT services in the form of prosthetic assessment, fitting, trial, training, user-skilling, maintenance and review are integral to the function and outcomes of the AT and are currently sit within the disability sector, once a person is discharged from hospital.
- A 'most likely cost' method used allied health judgement to determine costs for the range of mild, moderate, severe / profound AT user profiles. Products likely to meet these profile needs, at the nominated levels of severity, were identified and costs identified which fall between the lowest and highest costs for that product category. This method again relies on allied health expertise (primary researcher with expert input from AHPA and ILCA), and focussed expert input for specific product categories (respiratory, continence, orthotics, nutrition support)
- National hospital data was used to estimate cost of admissions, however it is acknowledged this aggregated data covers long and short stay occasions of service. A finer set of data to represent hospital admissions likely to be experienced by the specific cohort (e.g. stroke) would provide a more accurate estimate, such as diagnostic-groupings¹⁰¹.
- GP costs could rise or fall by a 'weighted average, however the current level B consult reimbursement rate of \$37 is likely to cover standard GP visits.
- Several specialised areas of AT are not costed: hearing aids; glasses for vision; major or complex home modifications; and the full bundle of prosthetic supports (ie stump socks and replacement parts)
- It is feasible to re-run the formula using lowest cost – a common cost effectiveness strategy to increase the confidence interval.
- Diverse data on the outcomes of AT, particularly from an economic perspective. Studies were selected based on their methodological strength (where possible), and variables such as currency / country, age of study, and inclusions / exclusions were taken into account. The decision path to identifying costs was made explicit through footnotes. Nevertheless, the identification of a 'bottom line' for costing outcomes has involved extrapolation of available data. The formula may be able to be improved by replacing indicative costs with more robust costs when this becomes available.

Finally, we note once again that we have not run a full cost-benefit analysis, as the comparator was not fully explored.

2.6 EXTENSIONS TO THIS WORK

- Run a full cost-benefit analysis by fully assessing the comparator situation for each Case Profile
- Conduct a sensitivity analysis: It is feasible to re-run the formula using lowest cost – a common cost effectiveness strategy to increase the confidence interval.

¹⁰¹ For more information, see: <https://www.ihipa.gov.au/publications/national-hospital-cost-data-collection-public-hospitals-cost-report-round-19-financial>

- Extend the modelling at a population level to forecast AT bundle impacts and potential savings.
- Clinical consensus stage to validate the specific AT bundles emerging.
- Further develop focal AT bundles. This Research Report illuminated several specific instances where a set of products are highly likely to be required despite individual differences in user and environment, for example hearing; amputation; cognition, and profound physical. A worked example is provided for vision in the footnote¹⁰².

2.7 CONCLUSION

Investment in AT is a cost effective early intervention. AT is most effective delivered in a bundle, as consumers utilise between 8-12 AT products on average. Risk of AT abandonment or non-use is mitigated through provision of AT services: these include impartial and flexible information services to scope and envision potential AT solutions; and service systems which enable AT to be viewed, trialled in real environments, adjusted and fitted, and for users to be trained and upskilled in their use and application. Maintenance and review are also significant factors in the effectiveness of AT.

A return on investment approach enables valued outcomes from all stakeholders to be factored in. The published literature and reports dealing with the costs and outcomes of AT do not fully canvass potential outcomes, particularly social outcomes. This report models the actual cost offsets and downstream costs feasible with a comprehensive AT bundle. It demonstrates the high likelihood of under-realised potential for cost savings (offsets and downstream costs) across a range of government expenditure areas, and suggests a fuller investigation of these is warranted as part of providing a consistent AT provision service for older Australians.

¹⁰² Communication and Participation – equipment to facilitate social interaction and complete tasks independently. Augmented vision devices for reading/ writing. Large print or contrast products. Handheld magnification. Computer or smart device with adapted input/output eg refreshable Braille, voice to text, contrasting or split keyboard. Independent Travel – navigation solutions with voice and large print options. White cane training. Dog guide. Self Care and Daily Living Tasks - Auditory and visual prompts and alerts in kitchen/laundry. Talking Microwaves, Clocks, Timers. Talking kitchen equipment and training to safely do tasks without looking; the cutting up of food etc. Smart devices to identify colours. Data labellers to identify pantry products. Online banking/ shopping assistive technology software, optical and electronic magnifiers and CCTVs. Large button phones. Lighting, optical and electronic magnifiers, computer software, iPad, CCTV with voice, Or Cams. Book, newspaper and magazine alternatives (DAISY players). Portable notetakers (Macular Disease Foundation Australia, 2017)

Appendix 1: AT Policy Design Principles in Australia and Internationally

Source	Findings
AUSTRALIA 2016	Position papers: Statement on AT Good Practice calls for:
ARATA Position Statements ¹⁰³	<ul style="list-style-type: none"> • Clear definitions for AT • Provide the essential steps of AT Provision (information and assessment, identifying and trialling assistive solutions, purchasing and customising the solution and ensuring ongoing and effective use, maintenance and review) • Getting the right people involved in assistive technology provision
AUSTRALIA (2014) Study of 100 Victorian AT users including cost consequence analysis and policy case study (Natasha Layton & Wilson, 2014)	<p>POLICY SOLUTIONS:</p> <p>Policy solution 1: universalising policy</p> <p>Policy solution 2: aligning policy goals with valued outcomes</p> <p>Policy solution 3: Flexible service delivery: the AT solution</p> <p>Policy solution 4: increasing the number and extending the roles of duty holders</p> <p>Policy solution 5: providing entitlement and equity</p>
(from Queensland Competition Authority. (2014). Price Disparities for Disability Aids and Equipment)	<p>DESIGN OF FUTURE PROGRAMS xi</p> <p>While one 'right' program design is unlikely, there are some key features that governments should consider:</p> <ul style="list-style-type: none"> • Clearly define rationale and objectives. Programs should have clearly defined objectives that focus on outcomes and not means, and provide a basis for the community to judge program success. • Leverage buying power. Governments should ensure that they do not impose unnecessary barriers to non-government entities pursuing bulk purchasing. Where it can be determined that governments are best placed to undertake procurement, they should consolidate their buying power rather than operate large numbers of programs. • Choice. Choice is important, even recognising the limits faced by consumers from information asymmetries. Consumer-orientated programs tend to produce better outcomes for people with disability, and can increase competition and achieve lower prices. • Accessibility. Programs should be as simple and accessible as possible. • Competition. Programs should avoid unintentional adverse impacts on competition.
AUSTRALIA 2015	What consumers want from AT funding and service provision:
Journal article reporting on Delphi study of AT users regarding AT funding and service provision (De Jonge et al., 2015)	<ol style="list-style-type: none"> 1. The best combination of equipment, personal care and environmental design to meet needs in every area of life; 2. Access to sufficient funding to pay for good quality and long lasting equipment; 3. Having needs looked at holistically, so that each piece of equipment works well and does not interfere with other equipment or supports; 4. Having equipment needs considered across the lifespan, as needs change; 5. Access to support through the whole process of getting equipment, including equipment trial, training and maintenance;

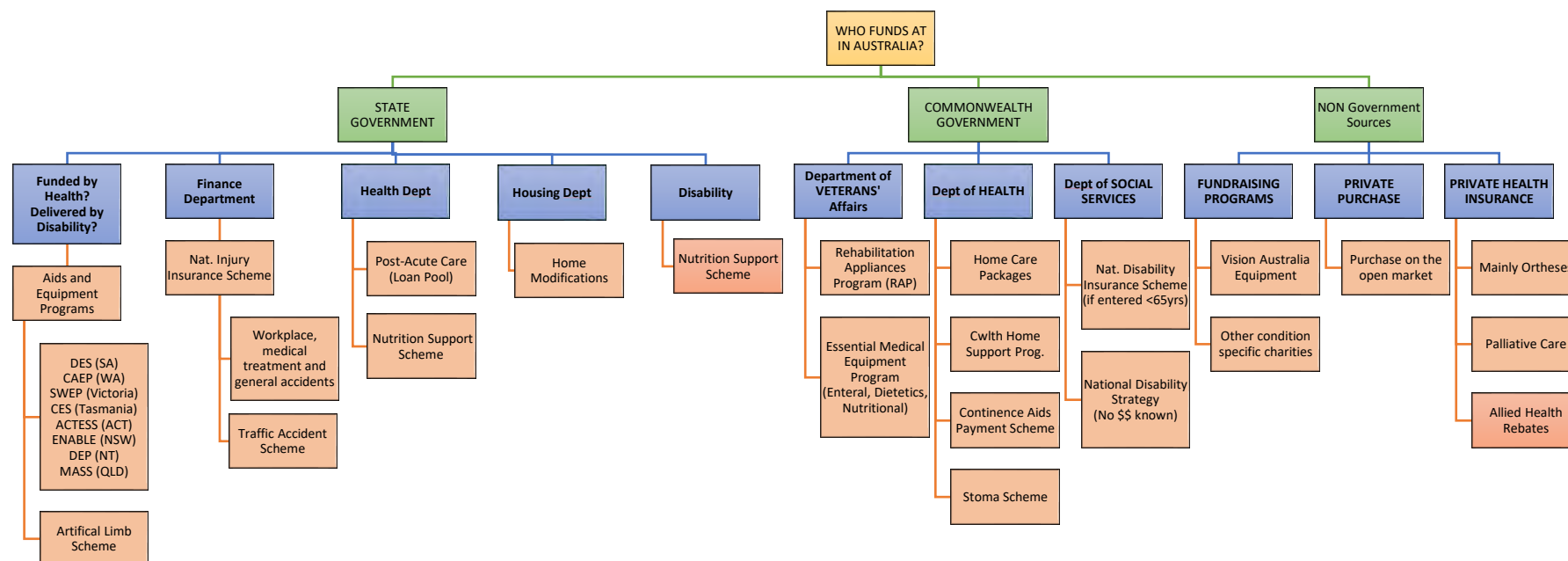
¹⁰³ <http://www.arata.org.au/access-&-funding/principles-standards-and-regulations/>

	6. Access to resources when needed; 7. Being actively involved in deciding on the best option; 8. Having personal preferences and identity considered when identifying equipment to suit lifestyle and participation; 9. Gaining knowledge of AT and the processes involved in accessing it; 10. Having access to skilled AT practitioners who can work across life domains.
IRELAND 2016 Discussion paper calling for government reform, based on the experiences of two major Disabled Person's Organisations, focussed on disability and on older people (Disability Federation of Ireland & Enable Ireland, 2016)	Recommend whole of government approach to AT in Ireland based on principles of: 1) Accessibility: a) Access must be granted regardless of health condition or age; b) Access must be consistent regardless of geographical location. c) Access must be consistent regardless of education, work or living circumstances; d) Funding eligibility must be fair and equitable. e) Information and advice on options must be freely available; 2) Consumer-focused: a) AT users who can self-assess must be supported to do so, and have their assessment validated and processed; b) AT users must be supported to make active choices around solutions that suit their needs; c) Expert AT users must be trained and resourced to peer mentor other users and/or become a resource to industry; d) Consumers must also be offered the option to choose higher spec equipment and contribute to its purchase from their own resources, as well as input into the aesthetic elements of the equipment; e) The model must give autonomy to the user, or support services to instigate reviews at key life transition points, or as a result of changing health needs. 3) Progressiveness: a) Investment is required to keep up to date with technological advances and ensuring assessors, staff, and AT users keep pace with latest developments; b) Investment in innovation is also a requirement to ensure that mainstream developments are accessible. 4) Efficiency a) It must demonstrate value for money across the lifespan of the person using the technology, in a way that accounts for opportunity costs as well as financial costs; b) It must provide a timely response, particularly during key transition points; c) It must have the flexibility to support new AT users, learners and expert users across mainstream solutions and highly complex AT systems; d) It must deliver a service as close as possible to where people live or work; e) It must provide funding according to need, and take account of capacity to pay or contribute for low cost, readily available items;

	<p>f) Funding resources must also be pooled together to provide better value for money and better outcomes for people with disabilities;</p> <p>5) Effectiveness:</p> <p>a) The best use of existing resources, mainstream supports and services within current systems must be utilised, with specialist supports coming into play on a needs basis only;</p> <p>b) Central procurement of equipment can ensure value for money for commonly used items;</p> <p>c) The ecosystem and model of delivery should be monitored for effectiveness, efficacy and efficiency over time</p>
<p>NORWAY 2017</p> <p>Sund, T. (2017) The Norwegian Model of Assistive Technology Provision. (Sund, 2017)</p>	<p>Norwegian Assistive Technology model, established in 1995. Its primary objectives included</p> <ol style="list-style-type: none"> 1) establishing a unified, national system for assistive technology; 2) addressing users` practical/functional daily problems regarding the AT they used; 3) giving the users right in law to necessary and appropriate assistive products, free of charge,; 4) providing users with the same level of services regardless of where they live; 5) establishing a common ICT system for registration of purchases, distribution, repairs, regular servicing, and refurbishment of assistive product, and 6) user involvement in the system and a focus on the individual strongly emphasized.
<p>EUROPE 2013</p> <p>Association for the Advancement of Assistive Technology in Europe: (AAATE, October, 2012)¹⁰⁴</p>	<p>Service Delivery Systems for Assistive Technology in Europe: Position Paper. Good practice steps for AT provision include:</p> <ul style="list-style-type: none"> • information and assessment, • identifying and trialling assistive solutions within environments of use • purchasing • customising the solution to ensure ongoing and effective use • maintenance and review

¹⁰⁴ <http://www.atis4all.eu/news/detail.aspx?id=406&tipo=1>

Appendix 2: AT funding map for aged care



Appendix 3: Grid mapping of functional impairment groupings to assistive technology chapters, identified against likely funding sources

Mapping functional impairment groupings to assistive technology chapters & identifying current funder <i>Current Funding Responsibility: aged care; health; state disability; National Injury Insurance Scheme (NIIS); Hearing Services Program, or self funding/mix aged/health/private insurance</i> NB DVA fund most AT if eligible											
PEOPLE: WHO ICF (described in terms of body function and structures) PRODUCTS: ISO 9999	04 Assistive products for measuring, supporting, training or replacing body functions	05 Assistive products for education and for training in skills	06 Orthoses / prostheses	09 Assistive products for self-care activities and participation in self-care	12 Assistive products for activities and participation relating to personal mobility & transportation	15 Assistive products for domestic activities and participation in domestic life	18 Furnishings, fixtures	22 Assistive products for communication and information management	24 Assistive products for controlling, carrying, moving and handling objects and devices	27 Assistive products for controlling, adapting or measuring elements of physical environments	28 Assistive products for work activities and participation in employment ¹⁰⁵
Neuromusculo-skeletal	MS/ Post Polio/ Spinal Cord Injury Arthritis Osteoporosis		MS / Post Polio/ Spinal Cord Injury	MS / Post Polio/ Spinal Cord Injury	MS / Post Polio/ Spinal Cord Injury	MS / Post Polio/ Spinal Cord Injury	Multiple Sclerosis/ Post Polio/ Spinal Cord Injury	MS / Post Polio/ Spinal Cord Injury	MS / Post Polio/ Spinal Cord Injury		
Genito-urinary Metabolic				Co-morbid chronic disease frailty	Co-morbid chronic disease frailty	Co-morbid chronic disease frailty	Co-morbid chronic disease frailty	Co-morbid chronic disease frailty	Co-morbid chronic disease frailty		
Cardiorespiratory Immunological	Co-morbid chronic disease frailty										

¹⁰⁵ JobAccess or National Workplace Modifications Scheme for working aged

Sensory (including vision) Voice/speech	Vision loss/ hearing loss	Vision loss		Vision loss/ hearing loss	Vision loss/ hearing loss	Vision loss/ hearing loss	Vision loss/ hearing loss	Vision loss/ hearing loss		Hearing loss	
Nervous system/Mental functions	Dementia Stroke	Dementia		Dementia Stroke	Stroke	Dementia Stroke	Dementia Stroke	Dementia	Stroke		
Skin &related structures			Amputee	Amputee	Amputee	Amputee	Amputee				

Appendix 4: Stakeholder feedback and revisions to AT profiles

Feedback from Stakeholders (n-7)	Revisions made
A key tension with this type of method concerns the categorisation 'lens'. International directions in ageing may consider wellness, and focus on participation, however currently policies do not align with this language or measure these outcomes. The available population data is diagnostic in nature (e.g. SDAC) making it difficult to 'find' the older person who does not fall into these categories, yet for whom AT enables significant participation outcomes. A particular issue is the delineation between 'older people with disabilities' and 'frailty'. Expert respondents noted that a large cohort of older Australians who need aged care services either have a range of underlying chronic health conditions (REF AIHW) but no specific diagnoses. According to current evidence, frailty is not considered a normal part of ageing, rather a clinical condition with certain features, including loss of muscle strength and slowed or impaired gait.	<i>REVISIONS: a MILD profile will be added to capture non-diagnostic based people, based on the chronic disease dataset (AIHW).</i>
Expert informants also identified a range of other 'potential' diagnostic groups with which they were familiar. It is however necessary to adhere to recognisable profile groupings (for example, neuromuscular) rather than generate exhaustive lists.	<i>REVISIONS: clearly indicate the groupings and what they may cover, aligned to ABS SDAC in order to obtain population data</i>
Defining activity and participation domains: initially these were divided across personal, domestic, community and instrumental activities of daily living.	<i>REVISION: A more contemporary approach just uses two dimensions of ADL and IADL, and cluster the relevant ABS SDAC categories against these.</i>

Feedback from Stakeholders (n-7)	Revisions made
<p>AT funding does not resemble the broad sweep of available technologies (especially smart home and monitoring technologies) which may therefore be underutilised. While the aged care reform agenda speaks to participation outcomes, the focus on activity-level outcomes (self-care, mobility) again fails to fully demonstrate the potential of AT. The proposed list of assistive products raised questions of scope for many expert informants, who suggested adding AT to maintain lifestyle and preferences, as well as a range of current developments in mainstream technologies applied to health (such as information and communication technologies); ambient environmental controls (smart home technologies), monitoring and surveillance technologies (including body worn devices for tracking in the community); therapeutic (therapy and exercise robots, robotic companion animals and cognitive training software) and leisure technologies (videogames, electronic social networking). Additionally, some feedback noted that a range of supportive AT and environments could be present in the community, beyond the home. Some saw this research as an opportunity to build in the relevance of AT to support areas such as self-management, falls prevention and reablement. We note these have, to date, been largely out of scope of equipment funding schemes. We note however the focus here is on AT which is within scope for government funding, addressing individuals (rather than belonging in communities or the built environs).</p>	<p><i>REVISION: addition AT proposed by expert informants to be added where relevant to contemporary or currently researched assistive products for individuals. Note that hearing aids and alternative listening products are out of scope as currently managed nationally by the Hearing Services Program, however daily living supports related to hearing (vibrating alarms etc) are in scope</i></p>

Appendix 5: AT Bundle Pricing: lowest to highest

	BLACK: NED PRICING BLUE INTERNET PRICING RED SOUGHT FROM SPECIALISTS		Single unit OR annual cost	Cost
ABS category	SDAC	Product Costs	NDIS Complexity Level	Lowest Highest
Self-care		Safety tread	1	\$20.00 \$360.00
		Safety bathmat	1	\$25.00 \$50.00
		Tapturners	1	\$7.90 \$89.10
		Dressing equipment (sock donners, dressing hooks)	1	\$5.90 \$81.71
		Lightweight cleaning and cooking equipment	1	\$8.00 \$120.00
		Laundry trolley	1	\$19.99 \$180.00
		Nonslip products	1	\$5.00 \$250.00
		Long handled reacher	1	\$6.00 \$58.00
		Adapted clothing	1	\$10.00 \$200.00
		Colour contrast strips/ Hi Mark tactile pens	1	\$5.00 \$100.00
		Continence	1	\$10.00 \$80.00
		Shower stool/ bathseat	2	\$70.00 \$1,999.00
		Handshower	2	\$71.00 \$223.74
		Bed supports - grip ladder, monkey bar	2	\$35.00 \$205.00
		Chair raisers;	2	\$11.94 \$119.00
		Raised toilet frame	2	\$51.00 \$450.00
		Dysphagia cups or aids	2	\$18.00 \$126.00
		Upright lounge chair	2	\$280.00 \$2,300.00
		Flexible showerhose and switchcock	1	\$60.00 \$250.00
		Thermostatic mixer	2	\$70.00 \$2,000.00
		Bed raisers	2	\$11.94 \$119.00
		Bed supports - self help pole, turning supports	3	\$25.00 \$760.00
		Adjustable bed	3	\$1,209.00 \$9,239.00
		hoist and slings (mobile or overhead + tracking)	3	\$300.00 \$4,000.00
		Bidet	3	\$22.00 \$339.00
		Adapted footwear	3	\$10.00 \$250.00
		Orthoses	3	\$20.00 \$300.00
		Wall bumpers	3	\$35.00 \$360.00
		powered rise recline loungechair	3	\$599.00 \$3,600.00
		Over toilet mobile shower commode	4	\$55.00 \$2,500.00
		Wheeled shower commode/shower trolley	4	\$55.00 \$8,900.00
		Nutrition support - thickeners etc (180/month)	4	\$14.65 \$48.80
		Nutrition support - tube feed HEN	4	\$2,160.00 \$18,600.00

	pressure mattress - static to alternating	4	\$100.00	\$6,330.00
	Pressure cushion - static to alternating	4	\$20.00	\$2,000.00
	Wide doorways	4	\$1,000.00	\$2,000.00
	Level access adaptations	3	\$1,000.00	\$4,000.00
	Partial room adaptations	4	\$4,000.00	\$15,000.00
	Gantry hoists	4	\$4,500.00	
Health-care	Medication management	1	\$5.00	\$300.00
	self-monitoring devices (blood pressure, reminder systems)	2	\$30.00	
	oxygen	3	\$1,795.00	\$5,000.00
	Prosthesis-related consumables	3	\$50.00	\$500.00
	Orthoses	3	\$20.00	\$300.00
	Prostheses (NB stump socks etc not costed)	4	\$12,500.00	\$120,000.00
	Wig			
	Pressure garments		\$75.00	\$250.00
	Respirators / ventilators	4		
	Continence products (liners, pads, reusable products)	2	\$0.50	\$3.80
Communication	Online banking/ shopping = computer or smart device	1	\$50.00	\$2,900.00
	GPS	1	\$39.00	\$2,300.00
	Adapted ICT access for communication e.g. bundle of adapted keyboard, mouse, large screen, internet access	2	\$200.00	\$3,250.00
	Audible or vibrating doorbell / phone/ smoke / cooking alerts	2	\$10.00	\$600.00
	Environmental control units eg(Google Home)	2	\$45.00	\$3,600.00
	AAC AT- specific communication device set up for participant	2	\$40.00	\$23,900.00
	Voice amplifier	2	\$22.00	\$599.00
	Surveillance supports: Wearable devises, tracking systems	3	\$7.00	\$820.00
	Memory support products	3	\$5.00	\$300.00
	personal alarm call system	3	\$16.00	\$850.00
Meal preparation	Adapted kitchen equipment	1	\$7.00	\$230.00
	Side opening oven	1	\$400.00	\$2,000.00
	Microwave stealth shelf	1	\$160.00	
	Adapted cutlery and crockery	1	\$15.00	\$98.00
	Dysphagia cup	1	\$68.00	\$262.00
	Adapted kitchen chair	2	\$280.00	\$650.00
	Propping stool	2	\$100.00	\$400.00
	Kitchen adaptations: clearance beneath sink & cooker;	2	\$1,500.00	\$2,000.00
	Monitoring systems	2	\$20.00	\$650.00
	Prompts and reminder systems	2	\$10.00	\$350.00

	Kitchen trolley	2	\$20.00	\$200.00
	Jar opener	1	\$20.00	\$120.00
	one-handed products with contra-indications (splades, spike boards)	3	\$20.00	\$230.00
Household chores	Tapturners	1	\$7.90	\$89.10
	Food preparation equipment	1	\$7.00	\$230.00
	Robot vacuums	1	\$20.00	\$2,000.00
	long handled/ lightweight cleaning equipment	1	\$1.70	\$150.00
	shopping trolley	2	\$12.00	\$380.00
	Laundry trolley	2	\$19.99	\$180.00
	Stove shutoff devices	2	\$254.00	\$305.00
	Auditory and visual prompts and alerts in kitchen/laundry	2	\$5.00	\$600.00
	TVs / FM transmitter / receivers	2	\$10.00	\$6,000.00
	Temperature control taps	2	\$1,000.00	\$1,500.00
	Adapted ICT access to services e.g. online banking/ shopping	3	\$10.00	\$3,000.00
	Computer or smart device with adapted input/output e.g. refreshable Braille, voice to text, split keyboard	3	\$100.00	\$24,000.00
Reading or writing tasks	Online banking/ shopping = computer or smart device	2	\$50.00	\$2,900.00
	Augmented vision devices: VISION BUNDLE lighting, optical and electronic magnifiers, computer software,iPad,CCTV, talking books, OrCam	3	\$500.00	\$5,000.00
	Large print or contrast	3	\$5.00	\$100.00
	Low or high tech AAC AT	3	\$1.00	\$24,000.00
Property maintenance	Adapted / lightweight gardening equipment	1	\$40.00	\$100.00
	wheelie bin trolley		\$40.00	\$1,600.00
	remote controls for external doors	2	\$5,000.00	\$8,000.00
	simple smart AT from mainstream stores	1	\$30.00	\$1,000.00
Mobility	single point sticks	1	\$20.00	\$200.00
	hiking poles	1	\$10.00	\$350.00
	Wheeled walker with seat	2	\$80.00	\$900.00
	Manual wheelchair standard	3	\$100.00	\$1,600.00
	GPS location finder/ smart wayfinding supports /white cane	3	\$15.00	\$2,300.00
	Mobility scooter	3	\$1,000.00	\$11,900.00
	Postural supports	3	\$10.00	\$1,500.00
	Powerpack	3	\$1,000.00	\$2,000.00
	One arm drive manual wheelchair	3	\$1,500.00	\$3,000.00
	Powered wheelchair	3	\$2,000.00	\$30,000.00
	Pressure cushion	3	\$20.00	\$2,400.00

	Ramps	3	\$48.00	\$4,300.00
	Hand Rails	2	\$25.00	\$300.00
	powered walking frame	4	\$580.00	\$2,500.00
	slideboard	3	\$60.00	\$300.00
Transport	Walking aids (incl Wheelie frame with seat)	2	\$20.00	\$2,600.00
	transfer handle for car	2	\$17.95	\$89.97
	Vehicle adaptations	3	\$200.00	\$20,000.00
	Vehicle hoist or trailer	3	\$200.00	\$750.00
	spinner knob for steering wheel	3	\$8.00	\$150.00
	Vehicle adaptations - major	4	\$14,000.00	\$30,000.00
AHP evaluation: \$ 180 per hour			\$180.00	
Support training session: \$80 one hour (AHA + on costs)			\$80.00	

REFERENCES

- A.I.H.W. (2006). Therapy and equipment needs of people with cerebral palsy and like disabilities in Australia. Retrieved from Canberra: <http://cpaustralia.com.au/learning-center/therapy-and-equipment-needs-of-people-with-cerebral-palsy-and-like-disabilities-in-australia/>
- A.I.P.C. (2008). The Active Service Model: A conceptual and empirical review of recent Australian and International literature (1996-2007).
- AAATE. (October, 2012). Service Delivery Systems for Assistive Technology in Europe: Position Paper. Retrieved from <http://www.atiss4all.eu/news/detail.aspx?id=406&tipo=1>
- ABS. (2015, <http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4430.0Main%20Features202015>). 4430.0 Disability, Ageing and Carers, Australia: Summary of Findings Retrieved from www.abs.gov.au/ausstats/abs@.nsf/0/c258c88a7aa5a87eca2568a9001393e8?OpenDocument
- Al-Oraibi, S., Fordham, R., & Lambert, R. (2012). Impact and economic assessment of assistive technology in care homes in Norfolk, UK. *Journal of Assistive Technologies*, 6(3), 192 - 201.
- Anderson, D., Dumont, S., Jacobs, P., & Azzaria, L. (2007). The Personal Costs of Caring for a Child with a Disability: A Review of the Literature. *Public Health Reports*, 122(1), 3-16.
- Andrich, R. (2002). The SCAI instrument: measuring costs of individual assistive technology programmes. *Technology and Disability*, 14, 95-99.
- Andrich, R., & Caracciolo, A. (2007). Analysing the cost of individual assistive technology programmes. *Disability and Rehabilitation: Assistive Technology*, online, 1-28. doi:<http://dx.doi.org/10.1080/17483100701325035>
- Andrich, R., Ferrario, M., & Moi, M. (1998). A model of cost-outcome analysis for assistive technology. *Disability and Rehabilitation*, 20(1), 1-24.
- ARATA. (2016). AATC 2016 Statements: Statement of Good Practice in Assistive Technology Provision in Australia and Issues Statement regarding Assistive Technology Provision in Australia. Paper presented at the Australian Assistive Technology Conference, Gold Coast.
- Audit Commission. (2000). Fully Equipped: The Provision of Equipment to Older or Disabled People by the NHS and Social Services in England and Wales. Retrieved from UK: <http://www.audit-commission.gov.uk/reports/NATIONAL-REPORT.asp?CategoryID=&ProdID=BD34429B-F1B2-4E50-8A82-7A60A7A45302>
- Audit Commission. (2002). Fully Equipped: Assisting Independence. Audit Commission Retrieved from <http://www.audit-commission.gov.uk/reports/>
- Australian Senate. (2011). Inquiry into Outcomes under the National Disability Strategy 2010-2020. Retrieved from http://www.fahcsia.gov.au/sa/disability/progserv/govtint/nds_2010_2020/Documents/National_Disability_Strategy_2010_2020.pdf.
- Australian Wound Management Association. (2011). Pan Pacific Clinical Practice Guideline for the Prevention and Management of Pressure Injury.
- Barnett, K., Reynolds, K., Gordon, S., Maeder, A., & Hobbs, D. (2017). A Technology Roadmap for the Australian Aged Care Sector.
- Bowes, A., Dawson, A., & Greasley-Adams, C. (2013). Literature review: the cost effectiveness of assistive technology in supporting people with dementia.

- Bowes, A., & McColgan, G. (2006). Smart technology and community care for older people: innovation in West Lothian, Scotland. Retrieved from Stirling: http://www.patientconnect.com.au/ws-content/uploads/August_2006_Patient_Connect_-_Telehealthcare_-_Pilot_Study_-_University_of_Stirling_Telehealthcare_Study.pdf
- Brotkorb, T.-H., Hernriksson, M., Johanneson, K., & Thidell, F. (2008). Cost-effectiveness of C-Leg compared with Non-Micro-Processor-Controlled Knees: A modeling approach. *Archives of Physical Medicine and Rehabilitation*, 89(24-30).
- Brown, L., Hansnata, E., & La, H. A. (2017). Economic Cost of Dementia in Australia 2016-2056. Retrieved from <https://www.fightdementia.org.au/files/NATIONAL/documents/The-economic-cost-of-dementia-in-Australia-2016-to-2056.pdf>
- Carande-Kulis, V., Stevens, J., Beattie, B., & Arias, I. (2010). The business case for interventions to prevent fall injuries in older adults. *Injury Prevention*, 16, A249-A249.
- Carnemolla, P., & Bridge, C. (2011). Home Modifications and their impact on waged care substitution. Retrieved from Sydney: www.homemods.info
- Chung, J., Demir, G., & Thompson, H. J. (2016). Ethical considerations regarding the use of smart home technologies for older adults: An integrative review. *Annual Review of Nursing Research*, 34(155-X1). doi:doi:<http://dx.doi.org/10.1891/0739-6686.34.155>
- Clemson, L., Cumming, R., Kendig, H., Swann, M., Heard, R., & Taylor, K. (2004). The Effectiveness of a Community-Based Program for Reducing the Incidence of Falls in the Elderly: A Randomized Trial. *Journal of the American Geriatrics Society*, 52(9), 1487–1494.
- Cochrane, A., Furlong, M., McGilloway, S., Molloy, D. W., Stevenson, M., & Donnelly, M. (2016). Time-limited home-care reablement services for maintaining and improving the functional independence of older adults. *Cochrane Database Syst Rev*, 10, Cd010825. doi:10.1002/14651858.CD010825.pub2
- Colgan, S., Moodie, M., & Carter, R. (2010). *The Economic Study*: Melbourne. Available from: <http://dro.deakin.edu.au/view/DU:30030938>
- Connell, J., Grealy, C., Olver, K., & Power, J. (2008). Comprehensive scoping study on the use of assistive technology by frail older people living in the community.
- Cook, A., & Polgar, J. (2015). *Assistive Technologies*. In (4th Edition). St. Louis: Mosby.
- Cooper, M., & Bigby, C. (2014). Cycles of Adaptive Strategies Over the Life Course. *Journal of Gerontological Social Work*, 57(5), 421-437.
- Coughlin, S., Peyerl, F. W., Munson, S. H., Ravindranath, A. J., & Lee-Chiong, T. L. (2017). Cost Savings from Reduced Hospitalizations with Use of Home Noninvasive Ventilation for COPD. *Value in Health*, 20(3), 379-387. doi:10.1016/j.jval.2016.09.2401
- Cummins, R., Hughes, J., Tormyn, A., Gibson, A., Woerner, J., & Lai, L. (2007). *The Wellbeing of Australians - Carer Health and Wellbeing*.
- Daly, J., Willis, K., Small, R., Green, J., Welch, N., Kealy, M., & Hughes, E. (2007). A hierarchy of evidence for assessing qualitative health research. *Journal of Clinical Epidemiology*, 60, 43-49.
- De Jonge, D., Layton, N., Vicary, F., & Steel, E. (2015). Motivations and incentives: exploring assistive technology service delivery from the perspectives of multiple stakeholders. Paper presented at the RESNA 2015: New Frontiers in Assistive Technology, Arlington, VA.
- De Jonge, D., & Schraner, I. (2010). Economics of Inclusiveness: Can We as a Society Afford Not to Provide Assistive Technology or Use Universal Design? In J. Maisel (Ed.), *The State of the Science in*

Universal Design: Emerging Research and Developments (pp. 132-143). Buffalo: Bentham Science Publishers.

DeCrean, A., Westendorp, R., Willems, C., Buskens, I., & Gussekloo, J. (2006). Assistive devices and community-based services among 85 year old community-dwelling elderly in the Netherlands: ownership, use, and need for intervention. *Disability and Rehabilitation: Assistive Technology*, 1(3), 199-203.

Deloitte Access Economics. (2015). Economic analysis of motor neurone disease in Australia. Retrieved from Melbourne: [http://www.mndaust.asn.au/Influencing-policy/Economic-analysis-of-MND-\(1\)/Economic-analysis-of-MND-in-Australia.aspx](http://www.mndaust.asn.au/Influencing-policy/Economic-analysis-of-MND-(1)/Economic-analysis-of-MND-in-Australia.aspx)

Department of Health. (2005). The National Service Framework for Longterm Conditions. Retrieved from Leeds, UK: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/198114/National_Service_Framework_for_Long_Term_Conditions.pdf

Dijkers, M. (2009). When the best is the enemy of the good: The nature of research evidence used in systematic reviews and guidelines. Retrieved from Austin, Texas: http://www.ktdrr.org/ktlibrary/articles_pubs/ncddrwork/tfsr_best/tfsr_best.pdf

Disability Federation of Ireland, & Enable Ireland. (2016). Assistive Technology for People with Disabilities and Older People: A Discussion Paper. Retrieved from Ireland: <http://www.enableireland.ie/sites/default/files/publication/AT%20Paper%20final%20version.pdf>

Disability Investment Group. (2009). The Way Forward: A New Disability Policy Framework for Australia. Retrieved from Canberra: <http://www.fahcsia.gov.au/sa/disability/progserv/people/Pages/DisabilityInvestmentGroup.aspx>

An economic evaluation of community and residential aged care falls prevention strategies in NSW. (2011). Retrieved from Sydney: <http://www.health.nsw.gov.au/falls/Publications/economic-evaluation-falls-prevention.pdf>

Federici, S., & Scherer, M., J (Eds.). (2017). *Assistive Technology Assessment Handbook*. Boca Raton, FL: CRC Press.

Finch, M., Griffin, K., & Pacala, J. T. (2017). Reduced Healthcare Use and Apparent Savings with Passive Home Monitoring Technology: A Pilot Study. *Journal of the American Geriatrics Society*, 65(6), 1301-1305. doi:10.1111/jgs.14892

Fleming, R. (2014). Empirical studies on the effectiveness of assistive technology in the care of people with dementia: a systematic review.

Fouarge, D. (2003). Costs of non-social policy: towards an economic framework of quality social policies - and the costs of not having them. European Commission

Fuhrer, M. (2007). Assessing the efficacy, effectiveness, and cost-effectiveness of assistive technology interventions for enhancing mobility. *Disability and Rehabilitation: Assistive Technology*, 23(3), 149-158.

Gramstad, A., Storli, S. L., & Hamran, T. (2013). "Do I need it? Do I really need it?" Elderly peoples experiences of unmet assistive technology device needs. *Disability and Rehabilitation: Assistive Technology*, 8(4), 287-293.

Hagberg, L., Hermansson, L., Fredriksson, C., & Pettersson, I. (2017). Cost-effectiveness of powered mobility devices for elderly people with disability. *Disability and Rehabilitation: Assistive Technology*, 12(2), 115-120. doi:10.3109/17483107.2014.1002540

- Harris, C., Andrews, A., Logan, E., & Lee, E. (2016). A Scoping Review on Best Practice for Home Modifications Service Delivery. Retrieved from <http://ilc.com.au/wa-hacc-home-modifications-assistive-technology-project/>
- Heywood, F. (2004). The health outcomes of housing adaptations. *Disability and Society*, 19(2), 129-143.
- Heywood, F., & Turner, L. (2007). Better outcomes, lower costs. Retrieved from Leeds, UK: <http://www.officefordisability.gov.uk/research/research-reports.php>
- Heywood, F., & Turner, L. (2007). Better outcomes, lower costs: Implications for health and social care budgets of investment in housing adaptations, improvements and equipment: a review of the evidence. Retrieved from Bristol: www.officefordisability.gov.uk
- Hoenig, H., Taylor, D., & Sloan, F. (2003). Does Assistive Technology Substitute for Personal Assistance Among the Disabled Elderly? *American Journal of Public Health*, 93(2), 330-337.
- Independent Hospital Pricing Authority. (2014). Costing Studies to Support the Development of the National Efficient Price 2015-2016. Retrieved from Canberra: <https://www.ihpa.gov.au/publications/home-enteral-nutrition-home-total-parenteral-nutrition-and-home-ventilation-services>
- International Federation on Ageing. (2016). Expert Papers: Reablement and Older People. Paper presented at the Copenhagen Summit, Copenhagen. <https://www.ifa-fiv.org/publication/health/copenhagen-summit-report-reablement-older-people/>
- ISO. (2016). Assistive products for persons with disability — Classification and terminology. Retrieved from: <https://www.iso.org/standard/60547.html>
- Jenny Pearson & Associates. (2013). Research for the National Disability Agreement: Aids and Equipment Reform, Final Report.
- Khosravi, P., & Ghapanchi, A. H. Investigating the effectiveness of technologies applied to assist seniors: A systematic literature review. *Int J Med Inform*, 85(1), 17-26. doi:10.1016/j.ijmedinf.2015.05.014
- Layton, N., Andrews, A., & Wilson, E. (2015). Rocket Science or Commonsense? How elders access non-complex assistive technologies and the implications for occupational therapy. *Australian Occupational Therapy Journal*, 62 (Supplement 1), 114. doi:10.1111/1440-1630.12212_1
- Layton, N., & Walker, L. (2012). The economic potential of Assistive Technology solutions – an introduction. Retrieved from Caloundra:
- Layton, N., & Wilson, E. (2010b). The Equipment Study. Retrieved from Melbourne: <http://dro.deakin.edu.au/view/DU:30030938>
- Layton, N., & Wilson, E. (2014). Practicing inclusion in policy design for people with disabilities. In A. Taket, B. Crisp, S. Goldingay, M. Graham, L. Hanna, & L. Wilson (Eds.), *Practising Social Inclusion* (pp. 54-64). Oxon, New York: Routledge.
- Layton, N., Wilson, E., & Andrews, A. (2014). Pathways to Non Complex Assistive Technology for HACC Clients in WA. Retrieved from Perth: <http://ilc.com.au/wp-content/uploads/2009/08/Full-Report-Pathways-to-Non-Complex-Assistive-Technology-for-HACC-Clients1.pdf>
- Layton, N., Wilson, E., Colgan, S., Moodie, M., & Carter, R. (2010). The Equipping Inclusion Studies: Assistive Technology Use and Outcomes in Victoria. Retrieved from Melbourne: <http://dro.deakin.edu.au/view/DU:30030938>
- Lewin, G., & Vandermeulen, S. (2010). A non-randomised controlled trial of the Home Independence Program (HIP) - an Australian restorative programme for older home care clients. *Health and Social*

Care in the Community Journal, 18(1), 91-99. doi:doi: 10.1111/j.1365-2524.2009.00878.x. Epub 2009 Aug 6.

Lofqvist, C., Nygren, C., Szeman, Z., & Iwarsson, S. (2005). Assistive devices among very old people in five European countries. *Scandinavian Journal of Occupational Therapy*, 12(181-192).

Macular Disease Foundation Australia. (2017). Low vision, quality of life and independence - A review of the evidence on aids and technologies.

Magnusson, L., & Hanson, E. (2005). Supporting frail older people and their family carers at home using information and communication technology: cost analysis. *Journal of Advanced Nursing*, 51(6), 645-657. doi:10.1111/j.1365-2648.2005.03541.x

Mann, W., Llanes, C., Justiss, M., & Tomita, M. (2004). Frail older adults self-report of their most important assistive devices. *Occupational Therapy Journal of Research: Occupation, Participation and Health*, 24(1), 4-12.

Mann, W. C., Ottenbacher, K. J., Fraas, L., Tomita, M., & Granger, C. V. (1999). Effectiveness of Assistive Technology and Environmental Interventions in Maintaining Independence and Reducing Home Care Costs for the Frail Elderly: A Randomised Controlled Trial. *Archives of Family Medicine*, May/June 8(3), 210-214.

Martin, S., Kelly, G., Kernohan, W., McCreight, B., & Nugent, C. (2008). Smart home technologies for health and social care support. *Cochrane Database of Systematic Reviews*, CD006412(4). doi:doi: 10.1002/14651858.CD006412.pub2

Mitra, S., Findley, P., & Sambamoorthi, U. (2009). Health Care Expenditures of Living With a Disability: Total Expenditures, Out-of-Pocket Expenses, and Burden, 1996 to 2004. *Archives of Physical Medicine and Rehabilitation*, 90(9), 1532-1540.

Municipal Association of Victoria. (2014). HACC Easy Living Equipment Guide: A guide for Home and Community Care services in Victoria. Retrieved from MAV:
<http://www.mav.asn.au/search/results.aspx?k=assistive%20technology>

NDIA. (2015). Assistive Technology Strategy. Retrieved from <https://www.ndis.gov.au/about-us/information-publications-and-reports/assistive-technology-strategy/3-strategy.html>.

NHMRC. (2009). NHMRC levels of evidence and grades for recommendations for developers of guidelines. National Health and Medical Research Council.

Persson, J., Andrich, R., CanBeekum, T., Brodin, H., Lorentsen, O., Wessels, R., & DeWitte, L. (2002). Preference based assessment of the quality of life of disabled persons. *Technology and Disability*, 14, 119-124.

Piau et al. (2014). Aging society and gerontechnology: a solution for an independent living? *Journal of Nutrition Health and Ageing*, 18(1), 97-112.

Productivity Commission. (2011). Disability Care and Support Final Report. Canberra Retrieved from <http://www.pc.gov.au/projects/inquiry/disability-support/report>.

Queensland Competition Authority. (2014). Price Disparities for Disability Aids and Equipment. Retrieved from <http://www.qca.org.au/getattachment/a98aac78-d791-4718-acbd-756195580892/Final-Report-Medical-and-Disability-Aids-and-Equip.aspx>.

Rust, K., & Smith, R. (2005). Assistive technology in the measurement of rehabilitation and health outcomes: a review and analysis of instruments. *American Journal of Physical Medicine and Rehabilitation*, 84(10), 780-793.

Scherer, M. (2002). The change in emphasis from people to person: introduction to the special issue on Assistive Technology. *Disability and Rehabilitation*, 24(1/2/3), 1/4.

- Smith, R. O. (2002). IMPACT 2 MODEL. Retrieved from: <http://www.r2d2.uwm.edu/archive/impact2model.html>
- Snell, T., Fernandez, J., & Forder, J. (2012). Building a business case for investing in adaptive technologies in England. Retrieved from www.pssru.ac.uk/pub/dp2831.pdf
- Sund, T. (2017). Norwegian Model of Assistive Technology Provision. Paper presented at the Global Research, Innovation and Education on Assistive Technology (GREAT) Summit, Geneva.
- Tebbutt, E., Brodmann, R., Borg, J., MacLachlan, M., Khasnabis, C., & Horvath, R. (2016). Assistive products and the Sustainable Development Goals (SDGs). *Globalization and Health*, 12, 1-6.
- Tune, D. (2016). Aged Care Roadmap. Retrieved from Canberra: https://agedcare.health.gov.au/sites/g/files/net1426/f/documents/04_2016/strategic_roadmap_for_aged_care_web.pdf
- Tune, D. (2017). Legislated Review of Aged Care. Retrieved from Canberra: <https://agedcare.health.gov.au/legislated-review-of-aged-care-2017-report>
- United Nations. (2006). Convention on the rights of persons with disabilities and optional protocol. Retrieved from Geneva: <http://www.un.org/disabilities/convention/conventionfull.shtml>
- Verbrugge, L. M., & Sevak, P. (2004). Disability symptoms and the price of self-sufficiency. *Journal of Aging and Health*, 16(5), 688-722.
- Waldron, D., & Layton, N. (2008). Hard and Soft Assistive Technology: defining roles for clinicians. *Australian Occupational Therapy Journal*, 55(1), 61-64.
- Walker, L., & Layton, N. (August, 2017). Assistive Technology Capability Framework. Paper presented at the GREAT Summit, Geneva, available at: http://www.who.int/phi/implementation/assistive_technology/great_summit/en/
- Wessels, R., Djicks, B., Soede, M., Gelderblom, G. J., & Witte, L. D. (2003). Non-use of provided assistive technology devices, a literature overview. *Technology and Disability*, 15.
- WHO. (2011). World Report on Disability. Retrieved from Malta: http://www.who.int/disabilities/world_report/2011/en/
- WHO. (2015). World report on ageing and health. Retrieved from Geneva: http://apps.who.int/iris/bitstream/10665/186463/1/9789240694811_eng.pdf?ua=1
- WHO. (2016). Global Strategy and Action Plan on Ageing and Health (2016-2020). Retrieved from: <http://www.who.int/ageing/global-strategy>
- World Health Organization. (2001). International classification of functioning, disability and health: ICF. Geneva: World Health Organization.

NACA

The National Aged Care Alliance is the representative body of peak national organisations in aged care including consumer groups, providers, unions and professionals.



Appendix 3: Improving the interface between the aged care and disability sectors, discussion paper (NACA)

IMPROVING THE INTERFACE BETWEEN THE AGED CARE AND DISABILITY SECTORS

DISCUSSION PAPER

About the National Aged Care Alliance

The National Aged Care Alliance (the Alliance) comprises 48 peak body organisations representing consumers and their families, informal carers, special needs groups, nursing, allied health and personal carers involved in the aged care sector, and private and not-for-profit aged care providers.

As a leading voice for improvements to aged care for the past decade, the Alliance strives to implement its vision for ageing in Australia, that is:

Every older Australian is able to live well, with dignity and independence, as part of their community and in a place of their choosing, with a choice of appropriate and affordable support and care services when they need them.

Acronyms and Abbreviations

Alliance (or NACA)	National Aged Care Alliance
ACAT	Aged Care Assessment Team
AT	Assistive Technology
CALD	Culturally and Linguistically Diverse
CHSP	Commonwealth Home Support Programme
CDC	Consumer Directed Care
COAG	Council of Australian Governments
CoS Programme	Commonwealth Continuity of Support Programme, a sub-programme of the Commonwealth Home Support Programme (CHSP)
HACC	Home and Community Care, superseded by Commonwealth Home Support Programme (CHSP)
HCP	Home Care Package
ILC	Information, Linkages and Capacity Building, a component of the NDIS, formerly referred to as Tier 2.
LAC	Local Area Coordination, a service under the ILC component of the NDIS
NDA	National Disability Agreement
NDIA	National Disability Insurance Agency
NDIS	National Disability Insurance Scheme
NDIS Act	National Disability Insurance Scheme Act 2013
NIIS	National Injury Insurance Scheme
NSAF	National Screening and Assessment Form (within the aged care system)
RAC	Residential Aged Care
RACF	Residential Aged Care Facility
RAS	Regional Assessment Service for the CHSP
SDA	Specialist Disability Accommodation

Table of Contents

About the National Aged Care Alliance	1
Acronyms and Abbreviations	2
Introduction	4
Summary and recommendations	5
Recommendations	6
1. Context	8
Aged Care	9
Aged Care Reform	10
Disability Support	10
Reform of Disability Support	10
2. Equity across disability and aged care systems	14
Age requirements	15
Equity and Access for all	16
Transition to ageing for people with disability	17
3. Information and support to navigate services and early intervention	19
Local Area Coordination	21
4. Access to specialist disability assessments and services by older people	23
National Screening and Assessment Form	23
Funding levels	24
5. Aids and equipment and assistive technology	26
State and Territory schemes	26
Commonwealth Home Support Programme	27
Home Care Packages	27
National Disability Insurance Scheme	27
Issues	28
6. Catastrophic injury	30
7. People with disability or younger onset dementia living in, or at risk of entering, residential aged care	32
Young people in residential aged care	32
Older people with disability in residential aged care services	34
8. Conclusion	35
APPENDIX 1: State and Territory Government aids, equipment and assistive technology programs	36
APPENDIX 2: Differences in State/Territory aids and equipment programs for specific categories of equipment	45

Introduction

The National Aged Care Alliance (the Alliance) has long been concerned that the needs of older people with disability will not be met by the aged care system.

In its April 2015 submission to the Department of Social Services (the Department¹) Discussion Paper *'Key directions for the Commonwealth Home Support Programme - Basic support for older people living at home'* the Alliance called on the Department to articulate how people over the age of 65 (over 50 years for Indigenous Australians) with a disability will have their support needs met. At that time, it was felt that the National Health and Hospitals Reform Agreement, along with the design of the National Disability Insurance Scheme (NDIS) and the Commonwealth Home Support Programme (CHSP) may result in older people with disability not being served appropriately by any program.

Over 2015-16, the Alliance has examined the ageing and disability interface. With the imminent implementation of aged care reforms and the full NDIS, the Alliance remains concerned that there will not be adequate support for older people with disability within the suite of aged care programs as they are designed today. The Alliance is also concerned that the interface between the disability and aged care sectors is not yet clearly articulated or understood by either sector.

Policy and service delivery in ageing and disability also requires consideration of diversity, overcoming barriers to access and achieving equity of outcomes.

This discussion paper notes the vision of the Productivity Commission in its 2011 reports on reforming disability support and aged care, where the critical concern was that people should be able to use the support system that best meets their needs, without artificial barriers and regardless of the funding source. The paper makes recommendations on how the aged care system and the NDIS could be better aligned to eliminate service gaps, minimise the need for separate systems and processes, reduce red tape and develop a stronger market.

A crucial recommendation concerns the development of a national aids and equipment scheme for older people, aligned with the NDIS Assistive Technology Strategy, to redress the current inequitable access to aids and equipment and assistive technology. The paper also calls for the implementation of the National Injury Insurance Scheme medical and general accident streams to redress the current inadequate support for older people who suffer a non-compensable catastrophic injury.

The Alliance urges the Government to consider the needs of older Australians with disability and ensure equitable support across the NDIS and the aged care system for people with disability regardless of age.

¹ Since September 2015 responsibility for aged care has transferred to the Department of Health.

Summary and recommendations

Australians with disability must have equitable access to care and support regardless of their age, the funding source, programs or systems. No person with disability should be worse off under the aged care system than the disability system.

The disability and aged care systems should be flexible, streamlined and aligned to ensure that older people with disability, people with younger onset dementia or people with disability whose needs change as they age receive the services they need from the most appropriate system, regardless of who is responsible for funding or delivering them.

The decision in Australia to assign funding and operational responsibility for disability and aged care services between governments and service systems on the basis of age is inequitable and unacceptable when it creates barriers to people accessing the services that best meet their needs.

The introduction of the National Disability Insurance Scheme (NDIS) with its principle of entitlement to services based on need means that specialist disability services may be more freely available to younger people than to older Australians (those aged 65 or older) with the same disability and needs.

Older Australians who acquire a disability have similar support needs to younger people with disability, and may still be in the workforce. They require support at diagnosis and in the early stages of their disease or disability and then access to higher intensity and specialised supports, either episodically or on a regular basis.

The model of care and expertise available within the aged care system may not meet those needs. The aged care system is rationed, based on a ratio for people aged 70 years and over. Services are designed for the “frail aged”, focusing on the needs of the older cohort of older Australian (75 plus years). The aged care system therefore is not particularly attuned to the needs of the younger cohort of older Australians, let alone those with disability.

Older people with disability should have access to the same specialist disability services available to younger people through the NDIS, including support from the Information, Linkages and Capacity Building (ILC) stream of the NDIS and the episodic, intensive supports required by people with disability, including psychosocial disability.

Service gaps and perverse incentives within both systems need to be addressed, especially the current inequitable access to aids and equipment and assistive technology.

People who face additional barriers, such as people from linguistic or culturally diverse backgrounds, must receive additional support to ensure equitable access and outcomes.

Older people who experience a catastrophic injury not covered by existing compensation schemes are particularly disadvantaged by the delay in implementing the medical and general accident streams of the National Injury Insurance Scheme, and face significant financial and social costs compared to younger people who can, or will be able to, access the NDIS if they suffer a non-compensable catastrophic injury. Some young people with disability or younger onset dementia supported by the NDIS have no alternative living arrangements other than residential aged care, which may be inappropriate.

People with younger onset dementia may not have their needs met from within the disability sector, and will need seamless access to the right services.

Older people who entered the NDIS before the age of 65 years have a financial disincentive to transfer to the aged care system and, while their support within the NDIS will be funded from the Aged Care portfolio, will need support to access specialised, aged care services, without pressure to move out of the NDIS.

Finally, in order to achieve a seamless system and reduce red tape, there should be consistency of regulatory arrangements between the disability and aged care systems.

Recommendations

1. That Australian Governments **ensure equitable service provision in the disability and aged care systems**, through co-designed, clear and comprehensive policy that aligns markets, services and funding to ensure that older people with disability, and people with younger onset dementia, receive the support they need from the most appropriate system.
2. That the legislated review of the aged care reforms in 2016/17 include **a review of the age requirements for the NDIS** to determine if NDIS eligibility should be **linked to the Age Pension age**, as envisaged by the Productivity Commission. Such a review should include consideration of the planned increase to 67 years and any future increase of age pension age to 70 years.
3. That **clear information** be published by the NDIA and the Commonwealth Government on the **interaction between the NDIS and the aged care system** with particular guidance on how people with younger onset dementia and people with disability whose needs change as they age will be supported.
4. That people with disability who are participants of the NDIS be able to receive support for their **post-employment and aged care needs through the NDIS**, in collaboration with aged care and community service sectors where appropriate.
5. That **the Commonwealth Department of Health (Ageing and Aged Care Branch) co-fund** the Information, Linkages and Capacity building (ILC) **stream of the NDIS** so that older people who acquire a disability have timely and easily accessible disability-specific information and support to navigate the service system, and can access the same capacity building, early intervention and local area coordination that younger people can access.
6. That **the Commonwealth Department of Health articulate** how the aged care system will support older Australians with disability and **review the appropriateness of the National Screening and Assessment Form** to identify disability-related needs.
7. That specialist advice and capacity-building for aged care assessors and workers on the needs of people with disability be developed, including consideration of joint **purchasing arrangements between the Commonwealth Department of Health and the National Disability Insurance Agency (NDIA)**.
8. That older people who acquire a disability have access to timely and appropriate **assessment and planning** through improved formal collaborative arrangements between the aged care system and the NDIS.
9. That services for older people with disability include equitable **access to the range of supports available within the NDIS**, to enable people to live independently in the community for as long as possible.

10. That **maximum funding levels** available within aged care programs **be flexible** so that older people with disability with very high support needs are able to have these needs met by the aged care system.
11. That a COAG agreement is established to develop a funded **national aids, equipment and assistive technology program**, including agreement on the process and timeframes for developing a national program. As an interim solution for the urgent needs of older people with disability (who are therefore ineligible for the NDIS), the Commonwealth Government should specifically fund aids and equipment for this group.
12. That the Productivity Commission be commissioned to **investigate and increase the evidence base for better health, social and economic benefits that are achievable through increased use of aids, equipment and smart technologies** (including those installed in the home) which reduce unnecessary dependence on alternative interventions.
13. That the **medical and general accident streams** of the National Injury Insurance Scheme (**NIIS**) be implemented and made available to people of all ages, or alternatively, that access is provided to the NDIS for people of all ages with catastrophic injury arising from medical and general accidents.
14. That the **NDIS Supported Disability Accommodation Framework** incorporate specific **provision for the integrated support and accommodation needs of young people living in residential aged care** or at risk of entering residential aged care due to their high support needs.

1. Context

Australia has ratified the United Nations Convention on the Rights of Persons with Disabilities and has articulated its obligations to improve the lives of its citizens with disability through the National Disability Strategy 2010-2020². The support needs of people with disability span the life cycle and are impacted by disease and health conditions leading to impairment, and also by social and environmental factors³. Supports for people with disability are designed to address specific impairment-related needs, and social and environmental barriers which prevent equal access to everyday opportunities and experiences.

In Australia, government-funded support for people with disability and for older people who are frail or live with disability is provided under two distinct systems – the disability support system and the aged care system. Both systems are complemented by other services (for example, health services) and income support measures. Both systems are undergoing reform.

Responsibility for the aged care and disability support systems has in the past been shared, to a lesser or greater degree, between the Australian and State and Territory Governments. More recently, the Australian Government and State and Territory Governments (except for Western Australia) agreed to an age-based split of funding, policy and operational responsibility for disability and aged care services⁴.

The Australian Government is fully responsible for community care services, residential aged care services, and home care packages for people aged 65 years or over (50 years and over for Indigenous Australians) and has funding responsibility for specialist disability services for older people, until the jointly funded and governed National Disability Insurance Scheme (NDIS) is fully implemented, when the Australian Government will become fully responsible for specialist disability services for older people (except for aids and equipment).

The disability support needs of Australians under the age of 65 years are the responsibility of State and Territory funded and delivered disability systems (except for employment support which is an Australian Government responsibility) until the jointly funded and governed NDIS is fully implemented.

In agreeing to an age-based split of funding responsibility, Australian Governments (except Victoria and Western Australia) aspired to:

“improve client services in community aged care and disability services by enabling the creation of integrated and coordinated care systems that are easier for clients to access and navigate, and respond more flexibly to clients’ changing care needs.”⁵

2 Commonwealth of Australia 2011, 2010-2020 National Disability Strategy, available <https://www.dss.gov.au/our-responsibilities/disability-and-carers/publications-articles/policy-research/national-disability-strategy-2010-2020>

3 See <http://www.who.int/classifications/icf/icfbeginnersguide.pdf>. The World Health Organisation’s International Classification of Functioning, Disability and Health (ICF) when determining a person’s disability, and fully assessing their requirements, guides us to consider Body functions, Body structure, Activity and participation and Environmental factors as “dimensions” which result in disability.

4 See www.coag.gov.au/health_and_ageing for Bilateral Agreement for Transitioning Responsibilities for Aged Care and Disability Services in Victoria and National Partnership Agreements for other states (except Western Australia)

5 National Partnership Agreement on Transitioning Responsibilities for Aged Care and Disability Services available at http://www.federalfinancialrelations.gov.au/content/npa/health_reform/transitioning_responsibilities/national_partnership.pdf

When the Commonwealth and Victoria Governments subsequently agreed to these goals they made an additional commitment to providing aged care services that focus on wellness and reablement⁶.

The following pages provide a snapshot of the aged care and disability support systems⁷, and highlight the similarities and differences between the two.

Aged Care

Government expenditure on aged care services for older people who are frail or live with disability was over \$15 billion in 2014-15. Services comprise:

- Information and assessment services (\$133.7 million of government expenditure in 2014-15);
- Home care and support services, which provide care and assistance to help older people, including those with disability, remain, or return to, living independently in their home as long as possible, or which provide support to carers. Lower-level services are provided through the Commonwealth Home Support Programme (CHSP) (formerly Home and Community Care - HACC) while higher level services are provided through Home Care Packages (four levels). At June 2015, there were 73,550 operational places (including flexible places) in Home Care and 812,384 older clients of CHSP/HACC supported by government funding of almost \$4 billion.
- Residential care services, which provide supported accommodation and care for older people who are unable to continue living independently in their own homes. At June 2015, there were 195,953 operational places (including flexible places) in residential care services supported by \$10.8 billion of government funding in 2014-15; and
- Flexible care services, such as support for older people leaving hospital to help them improve their functional capacity.

Older people generally contribute to the cost of government funded care through fees and payments and some aged care providers may generate revenue from charitable sources and donations.

The government funded aged care system is capped, with entry to aged care services dependent on formal assessment of need and availability of funding. Funding for Home Care Packages and residential services is based on a planning ratio of funded places per 1000 people over 70 years. In 2014-15, more than 40 per cent of people waited more than three months between assessment team approval and taking up a home care service or residential place^{8,9}.

⁶ See www.coag.gov.au/health_and_ageing Bilateral Agreement for Transitioning Responsibilities for Aged Care and Disability Services in Victoria Clause 3.b.

⁷ Information on the aged care and disability support systems is taken from the Productivity Commission Report on Government Services 2016, Chapters 13 and 14 available at <http://www.pc.gov.au/research/ongoing/report-on-government-services/2016/community-services/rogs-2016-volume-f-community-services.pdf>

⁸ Productivity Commission Report on Government Services 2016 Table 13A.35.

⁹ The Alliance recognises that these figures include people who choose to defer a service offer which may distort the waiting time period, however no other data is publicly available to measure these figures. The Alliance looks forward to the publication of more accurate data from My Aged Care on how long consumers wait to receive information.

Aged Care Reform

The Productivity Commission's report *Caring for Older Australians* (2011) informed aged care reforms that are being implemented progressively since July 2012. Reforms to date include:

- Establishment of a national contact centre and the My Aged Care website to improve and standardise information about services;
- Rolling up of several basic home support services into the single Commonwealth Home Support Programme (CHSP);
- Establishment of Regional Assessment Services (RAS) to enable a consistent approach to assessment services for people seeking support through the CHSP;
- Increasing the number of Home Care Packages and delivery of all packages through Consumer Directed Care (CDC) to provide older people more choice and control over their care and support; and
- Changes to the funding and regulation of residential aged care to increase choice for consumers and incentives for the market to better meet demand.

Disability Support

Currently, assistance provided by governments to people with disability and their carers is being transitioned from specialist disability supports provided mainly by States and Territories under the National Disability Agreement (NDA) to the National Disability Insurance Scheme (NDIS), with the aim of carers being supported through the Australian Government's Integrated Plan for Carer Support Services.

Total government expenditure on supports provided under the NDA was about \$7.4 billion in 2012-13 (in 2014-15 \$), which is the latest year where expenditure was not affected by the introduction of the NDIS.

In 2012-13 there were almost 300,000 people accessing state and territory administered disability services (covering accommodation support, community access and support and respite services), and Commonwealth Government-funded supported employment services, which represented about 54 per cent of the potential population eligible for services.

Reform of Disability Support

In 2011, the Productivity Commission in its report *Disability Care and Support* proposed a fundamental reform to the funding and delivery of disability supports by recommending the establishment of the NDIS and the National Injury Insurance Scheme (NIIS). It found that the costs of lifetime care can be so substantial that the risks and costs need to be pooled, with sufficient funding to fund long-term high quality care and support (but not income replacement) for people with significant disabilities. It recommended that people have much more choice and control over their supports, with individually-funded, self-managed or self-directed packages tailored to their individual needs.

The Australian Government and most State and Territory Governments supported the development and introduction of the NDIS, which was established under the *National Disability Insurance Scheme Act 2013* (the NDIS Act).

The NDIS Act gives effect, in part, to Australia's obligations under the United Nations Convention on the Rights of People with Disability. The general principles underpinning the legislation promote the rights of people with disability to exercise choice and control over the planning and delivery of their supports and to participate in the social, economic and cultural life of the community.

The NDIS is the shared responsibility of all Australian Governments. A Standing Council of the Council of Australian Governments (COAG) has primary responsibility for the scheme, including advising the Commonwealth Minister and COAG on policy matters. The National Disability Insurance Agency (NDIA) is the administering agency for the scheme.

The NDIS is an insurance rather than a welfare scheme. It provides coverage of the whole population, with support available to eligible people when they need it. To be eligible for an individual funding package (formerly Tier 3), people must meet age requirements and either the disability or early intervention requirements. Disability requirements include people with significant and permanent disability and who need assistance with everyday activities. This includes people whose disability is attributed to intellectual, cognitive, neurological, sensory, or physical impairment, or a psychiatric condition. Early intervention requirements include people who have a permanent impairment or are aged under six years with a developmental delay. To meet the age requirements, people must be under the age of 65 years when they make an access request to the NDIA.

Trials of the NDIS commenced in 2013 and all Governments (except Western Australia¹⁰) have agreed to the staged roll-out of the NDIS from July 2016 to June 2019. With the gradual roll-out of the NDIS across Australia, it is expected that most existing NDA service users will transition to the NDIS and that by 2019-20, all eligible Australians will be covered by the NDIS (except for Western Australian residents). It is estimated that nationally 460,000 people will be eligible for individually funded support from the NDIS, and a wider population of people with disability will benefit from block-funded Information, Linkages and Capacity Building (ILC) services provided through the NDIS.

It is estimated that the NDIS will cost \$22 billion each year when fully implemented. The Australian Government share will be \$11.3 billion a year and the States and Territories will contribute \$11.1 billion. Funding will be raised from general taxation revenue and an increase to the Medicare levy.

¹⁰ The Commonwealth and Western Australia Governments agreed in April 2016 that the phased state-wide roll out of the NDIS will commence in Western Australia on 1 July 2017, subject to the State and Commonwealth Governments reaching agreement on the funding and implementation of the state-wide roll out by October 2016. See www.coag.gov.au/sites/default/files/files/NDIS/sched-h-wa-bilateral-agreement-signed.pdf

Aged Care - applies to people gaining disability aged 65+			
Access	Funded Supports	Funding ¹¹	Quality & Safeguards
<p>Government-controlled assessments by My Aged Care:</p> <ul style="list-style-type: none"> Regional Assessment Service (RAS) for Commonwealth Home Support Programme Aged Care Assessment Team (ACAT) for Home Care Packages and Residential Care National Screening and Assessment Form (NSAF) <p>Average age of people accessing each of the three types of care in 2013-14:</p> <ul style="list-style-type: none"> 80.3 years for HACC (now CHSP) recipients 82.3 years for home care recipients 84.5 years for residential care recipients. <p>Median times between assessment and entry to services 2014-15¹²:</p> <ul style="list-style-type: none"> 67 days for home care 68 days for residential care 	<p>Commonwealth Home Support Programme (CHSP):</p> <ul style="list-style-type: none"> Social Support Transport Domestic assistance Personal care Home maintenance – minor Home modification – minor Nursing care Food services Allied Health Aids and equipment - minor <p>Home Care Packages (HCP) Levels 1-4</p> <ul style="list-style-type: none"> As for CHSP, plus care coordination and case management. <p>Residential Care</p> <ul style="list-style-type: none"> A range of supported accommodation services for older people who are unable to continue living independently in their own homes. 	<ul style="list-style-type: none"> Commonwealth Home Support Programme Providers block funded Ave. funding per client: \$2,200 pa Ave. client contribution: \$115 pa <p>Home Care Packages</p> <ul style="list-style-type: none"> Individual capped budgets, handled by provider. Flexible use of funds for any item not specifically excluded Gov't funding ranges from \$7,939 (level 1) to \$48,184 (level 4) plus supplements Ave. Gov't funding per package: \$18,000 pa Ave. client contribution \$1,300 pa Guidelines state that program is not designed to be an AT program <p><u>Residential Care</u></p> <p>Ave. Gov't subsidy 2014-15: \$56,084</p> <p>Substantial co-contribution required with use of home asset for residential care – Refundable Accommodation Payment: (Average \$330,000 in 2014-15) or Daily Accommodation Payment – Non-refundable (Average \$58 per day in 2014-15).</p>	<p>Government monitoring of quality through approved provider qualification and aged care standards.</p> <p>Single Quality Framework under development.</p>

¹¹ Calculated from financial information provided in Aged Care Financing Authority *Funding and Financing of the Aged Care Sector* Third report on the Funding and Financing of the Aged Care Sector, July 2015 DSS1438.9.15 July 2015, and from the Productivity Commission Report on Government Services 2016 Table 13A.16.

¹² Note, these are the most recent figures available (from the Productivity Commission Report on Government Services 2016 Table 13A.35) but precede the introduction of My Aged Care.

National Disability Insurance Scheme - applies to people gaining disability and making an access request to the NDIS before the age of 65 years			
Access	Funded Supports	Funding	Quality & Safeguards
Assessments undertaken by the National Disability Insurance Agency (NDIA)	The NDIS funds reasonable and necessary supports that help participants reach their goals, objectives and aspirations and to undertake activities to enable their social and economic participation. Supports are categorised as:	Individual budgets, uncapped. Self-managed or managed by NDIA.	Government monitoring quality through registered providers and disability service standards
Support Needs Assessment Tool - uses a strength based approach to identify support needs necessary to make progress on goals and aspirations, across domains or core areas of functional capacity.	Core: A support that enables a participant to complete activities of daily living and enables them to work towards their goals and meet their objectives.	Average annualised support package: \$36,000 at 31 March 2016 ¹³ .	Quality and Safeguards Framework under development.
A specialist needs assessment for very complex needs may also be obtained.	Capacity building: A support that enables a participant to build their independence and maximise skills so as to progress towards their goals.	No participant contributions ¹⁴ .	
Timeframes for considering access requests and preparing participant plans are legislated.	Capital: An investment, such as assistive technologies, equipment and home or vehicle modifications.	Annualised support package distributions:	
	Information, Linkages & Capacity Building (ILC) - block funding to providers	<ul style="list-style-type: none"> \$0-\$5,000: 6% \$5,001-\$10,000: 14% \$10,001-\$30,000: 50% \$30,001-\$50,000: 12% \$50,001-\$100,000: 8% \$100,001-\$150,000: 3% \$150,001-\$200,000: 2% \$200,001-\$250,000: 3% \$250,001+: 2% 	

¹³ 11th Quarterly Report to COAG Disability Reform Council 31 March 2016 Average package cost excludes costs of large institutions and is not necessarily representative of full-scheme given age and geographic limitations of trial sites.

¹⁴ Except for living expenses in supported disability accommodation.

2. Equity across disability and aged care systems

The Productivity Commission in its report *Disability Care and Support* (2011), accepted the then Australian Government position on defining roles and responsibilities of service systems based on age, in order to achieve a unified and consistent aged care system. It recommended that disability services be delivered through the NDIS for younger people, and for people who chose to remain in the NDIS as they aged. For older people who acquired a disability after the cut-off age for the NDIS, the Productivity Commission proposed:

“People who acquired a disability *after the Age Pension age* would enter the aged care system, with the exception of the relatively few people experiencing catastrophic injury. The latter would be covered by the *National Injury Insurance Scheme (NIIS) for their full lives*, and so would generally lie outside both the aged care system and the NDIS, though potentially using some services common to both¹⁵” [emphasis added].

The Productivity Commission envisaged that the services available to people who acquired a disability after the Age Pension age would not differ from those available within the NDIS, but would be funded in accordance with the aged care system, with means-tested co-contributions and payments, reflecting the general capacity of older people to have acquired assets and savings over their working lives.

“There should be no artificial barriers to people accessing eligible services, even if those services are notionally identified as primarily serving the demands of the aged care or disability system. Rather, the critical concern is to ensure that people would be able to use the support system that best met their needs, regardless of the funding source¹⁶” .

Subsequent inter-governmental agreements for the implementation of the NDIS provide for:

- People who age within the NDIS to have a choice to remain in the NDIS or transfer to aged care after they turn 65 years of age;
- Continuity of support for people aged 65 years and over, where they were receiving specialist disability services prior to the introduction of the NDIS in their area. The Commonwealth Continuity of Support (CoS) Programme has been established to meet the COAG commitment that older people with disability who are currently receiving state-administered specialist disability services, but who are ineligible for the NDIS, will be supported to achieve similar outcomes to those they were achieving prior to transitioning to the new arrangements. There will be no new entrants to the CoS Programme once the NDIS is implemented in a region.
- The Commonwealth to fund support for people who acquire a disability aged 65 years or over (or 50 years if Indigenous Australian) and ultimately, the Commonwealth to be responsible for non-NDIS services for people in these age groups.

Contrary to the Productivity Commission’s expectation that people would access services across service systems when appropriate, it is unclear whether older people with disability will receive services *funded by or funded and administered by* the aged care system.

¹⁵ Productivity Commission Inquiry Report on Disability Care and Support (2011), p. C.10

¹⁶ Productivity Commission Inquiry Report on Disability Care and Support (2011), p. C.7

In 2013, when the Australian Government gained exemption from the Age Discrimination Act 2004 for the operation of the NDIS, the Joint Parliamentary Committee on Human Rights expressed its concern that there may be substantial differences between the supports provided to individuals in the aged care system compared to those on the NDIS, which could result in the inequitable treatment of people over 65 years old who acquire a disability. It considered that only equivalence in the forms of assistance and support available between the NDIS and the aged care system would address its significant concerns with regard to the rights to equality and non-discrimination.

Similarly, the National Aged Care Alliance (the Alliance) is extremely concerned about access to specialist disability services by older people. The Alliance is of the view that older people who acquire a disability unrelated to their age will not be well served by the current Commonwealth Home Support Programme (CHSP), with its focus on the frail aged. The current CHSP services provide inconsistent amounts of services across the country and only limited funding towards assistive technology, care coordination, disability-specific information, specialist disability assessment and specialist disability services. Essentially put, it is currently not equipped to handle the specialised disability needs of older Australians.

For people with younger onset dementia, disability services may not have the expertise or understanding to support their needs, and aged care services could be out of reach or similarly ill-equipped to meet their needs.

While it may not be viable to expand eligibility to the NDIS to people of all ages, the Alliance supports the Productivity Commission position¹⁷ that there should be no distinction in the type and level of services available to a person with disability, regardless of their age, even though responsibility for funding those services may lie with either the disability or aged care service systems.

The next sections propose how the principle of no distinction on the basis of age could be implemented through cross-sector collaboration, co-funding and removal of artificial barriers.

Age requirements

The progressive increase in the pension age to 67 years, and possibly even older in the future, will impact negatively on older people with disability if access to the NDIS remains limited to those who are aged less than 65 years. The age cut-off for NDIS eligibility could be adjusted in line with the Age Pension age, as envisaged by the Productivity Commission¹⁸, to prevent a misalignment of systems where a person who acquires a disability between the age of 65 and 67 years cannot access the NDIS and, in practice, may have limited access to supports within the aged care system to support remaining in or returning to the workforce. Given the political discussion on increasing the Age Pension age to 70 years at some point in the future, a potential five-year gap would further exacerbate this issue.

¹⁷ See footnote 4 above

¹⁸ See Productivity Commission Inquiry Report on Disability Care and Support (2011), Vol 1, ch 3, p180-1.

The Commonwealth Government has a legislated review of the aged care reforms to date which is due to report by August 2017. The identified gap between the NDIS eligibility cut off of 65 years, and the soon to be retirement age of 67 years could increase the burden on the aged care system, which is not designed to support an older person with disability to return to work. If the age pension age was moved to 70 years in the future, this would represent a five year disruption to workforce participation before Age Pension age (and disruption to informal carers' workforce participation). This may severely impact on individuals' ability to co-contribute towards aged care costs, given the higher contribution to retirement funds made in the final decade of working life. Consideration of these scenarios, and their impact on the aged care system to support people with a disability generally, should be considered for inclusion within the terms of reference for the aged care reform review, or through a separate assessment process within the next 12 months.

Equity and Access for all

Policy and service delivery in ageing and disability require consideration of diversity, overcoming barriers to access and achieving equity of outcomes. The Alliance recognises that older people with disability who face additional barriers must receive additional support to ensure equitable access and outcomes.

Groups and individuals who may require additional support include, but are not limited to:

- People living with cognitive impairment and dementia;
- People of Aboriginal and Torres Strait Islander communities;
- People from culturally and linguistically diverse backgrounds,
- People in rural or remote areas,
- People experiencing financial or social disadvantage,
- Veterans,
- People who are homeless or at risk of becoming homeless,
- Care Leavers,
- Parents separated from their children by forced adoption or removal, and
- People of diverse sexual orientation, gender identity or intersex characteristics (LGBTI).

Those needing additional support also encompass individuals who have specific cultural, spiritual, ethical and privacy requirements that need to be recognised and supported to ensure quality care provision.

Where there are language barriers to equitable access and support, the Alliance notes that people may not receive the same support to overcome those barriers within the aged care system as they can within the NDIS. Section 7 of the NDIS Act stipulates that any notice, approved form or information given under this Act is to be provided in the language [emphasis added], mode of communication and terms which that person is most likely to understand and that such information is provided both orally and in writing if reasonably practicable. In the aged care system, there is funded support for interpreter services for oral interactions between a provider and a consumer around Home Care Package arrangements but the consumer has to pay to have their Home Care Agreement translated into their first language if required and for other language services outside of 'operational requirements'¹⁹. This creates a precarious situation where consumers may enter into agreements without fully comprehending the contents of the contract.

Transition to ageing for people with disability

The *NDIS Act 2013* provides that a person ceases to be a participant of the NDIS if the person enters a residential care service on a permanent basis, or starts being provided with home care on a permanent basis, and this first occurs only after the person turns 65 years of age (residential care services and home care having the same meanings as in the *Aged Care Act 1997*). Effectively this means that an older person cannot access both the NDIS and aged care services.

An NDIS participant can choose to remain in the NDIS on turning 65 years however, and due to the different level and cost of services available in aged care it is likely that many older people will indeed choose to do so, despite their need for some aged care services. These may include dementia-specific needs or age-appropriate daytime activities once people retire from supported employment or disability day programs. In addition, as noted by the Productivity Commission, many people with a disability want the capacity to stay in their own home (including a group home) and to stay with the support workers and service providers they like as they grow older²⁰.

While it is understood that NDIA assessors and planners and disability support workers can access advice on ageing related needs and provide facilitated access to community-based support without compromising a person's eligibility for the NDIS, there is an urgent need for Ministers to approve policy and/or rules on how the NDIS will interact with the aged care system. This will be necessary before people can make informed choices and be reassured on the extent of the care and support that will be provided by the NDIS as they age.

Similarly, protocols for referral from the NDIS to the aged care system should be developed so that older people and their families can be assured of an open and transparent process that puts the needs and interests of the older person first. The experience of NDIS participants as they turn 65 or transition from the NDIS into aged care should be monitored.

Recommendation 1: *That Australian Governments ensure equitable service provision in the disability and aged care systems, through co-designed, clear and comprehensive policy that aligns markets, services and funding to ensure that older people with disability, and people with younger onset dementia, receive the support they need from the most appropriate system.*

¹⁹ Translation and Interpreting Services for Home Care Packages Factsheet, <https://agedcare.health.gov.au/aged-care-reform/home-care/translating-and-interpreting-services-for-home-care-packages>

²⁰ Productivity Commission Report on Disability Care and Support 2011, Vol 1, Ch. p.179

Recommendation 2: *That the legislated review of the aged care reforms in 2016-17 include a review of the age requirements for NDIS to determine if NDIS eligibility should be linked to the Age Pension age as envisaged by the Productivity Commission. Such a review should include consideration of any future increase of age pension age to 70 years.*

Recommendation 3: *That clear information be published by the NDIA and the Commonwealth Government on the interaction between the NDIS and the aged care system with particular guidance on how people with younger onset dementia and people with disability whose needs change as they age will be supported.*

Recommendation 4: *That people with disability who are participants of the NDIS be able to receive support for their post-employment and aged care needs through the NDIS, in collaboration with aged care and community service sectors where appropriate.*

3. Information and support to navigate services and early intervention

People recently diagnosed with a life-changing disease or disability, their families and carers, need good quality information and support from people who understand the condition. They are likely to be confused and frightened and want information and emotional and practical support as a precursor to navigating and securing the individual supports they need. Depending on the nature of the disability, they may need tailored cognitive or communication supports or case coordination to assist with service navigation and to facilitate choice and control. In addition, people from migrant backgrounds may be unfamiliar with Australian support services and structures or encounter language barriers in seeking information.

For older people with disability, information on disability services is not available from My Aged Care and while information on disability services and providers is available on the NDIS website and from the NDIS call centre, this information, in its current form, does not help older Australians to identify the disability-specific services for which they are eligible. As a first step, consistent information on disability services available to older Australians should be available through My Aged Care and the NDIS website and call centre.

Within the NDIS, the need for timely access to disability-specific information and support, before people formally approach the NDIS for individual support, and short-term assistance for people not eligible for individually funded packages has been recognised by the creation of a separate category of funded services called Information, Linkages and Capacity building (ILC), (formerly Tier 2 services).

The NDIS ILC has been subject to national consultation and development, and was strongly supported by people with disability and the disability sector, as a cost effective investment that will provide timely information and referrals, and promote community inclusion of people with disability.

The National Disability Insurance Agency (NDIA) will fund activities that fit into one of the five ILC streams²¹:

- Information, linkages and referrals;
- Capacity building for mainstream services;
- Community awareness and capacity building;
- Individual capacity building; and
- Local area co-ordination (LAC).

There are no specific eligibility requirements for ILC which is intended to assist people with disability regardless of whether they also have an NDIS plan or individually-funded packages (formerly Tier 3), with the aim of deferring, reducing or replacing the need for individually-funded packages in some cases.

There are two main groups of people with disability who are excluded from individually funded packages in the NDIS:

²¹ For more information, see NDIS ILC Policy Framework available at <http://www.ndis.gov.au/community/ilc-home/ilc-policy-framework>

- People who acquire disability at the age of 65 years old or over
- People who are under 65 years old , but whose functional capacity is not sufficiently impaired to meet the disability requirements for an individually funded package (For example, with regard to vision impairment, only permanent blindness and certain diagnoses are listed in the NDIS operational guidelines as generally meeting disability requirements without further evidence of functional impairment. People with other conditions resulting in low vision would need to be further assessed to establish if their functional capacity is substantially reduced and that they meet the other requirements for an individual funded package)²².

The ILC policy framework (August 2015) states that “People with disability who are over the age of 65 years will access information and referral or benefit from community capacity building, however, they will likely gain most of their supports from the aged care system”²³. The Alliance is pleased to see a recognition of the role the NDIS ILC will play in providing information to older Australians with a disability and acknowledgement that some services for older Australians will be necessary through the NDIS.

However, information and referral services are but one part of the ILC and other aspects, such as individual capacity building, condition-specific carer capacity building and local area coordination services that provide short-term assistance to people with disability are not available for older people with disability within the Commonwealth Home Support Programme (CHSP) or aged care generally.

The ILC Commissioning Framework signals further work between the Australian Government and the NDIA to ensure the NDIS ILC, the aged care system and the Australian Government’s Integrated Plan for Carer Support Services work together²⁴. The Alliance is strongly of the view that this work should be undertaken as a matter of urgency, in consultation with the aged care, disability and carers sectors, and should include consideration of co-funding organisations and services, to avoid fragmentation, potential service gaps (or duplication) and a referral ‘merry-go-round.’ Co-funding will be particularly important for organisations that provide support for people with disability from special needs groups, such as a CALD background.

As the ILC Commissioning Framework points out, some organisations currently providing ILC-type activities work with people with disability of all ages, with State and Territory disability funding. These organisations may provide both ILC-type services and episodic, specialist disability services. After the NDIS is rolled out (and State and Territory funding is withdrawn) they may continue supporting older Australians with disability under the Commonwealth continuity of support arrangements being developed within the Commonwealth Home Support Programme. However, it is understood that this will only deliver services to 8,500 grandfathered existing clients outside Victoria and Western Australia (on the day of NDIS full commencement in their area) and will not fund services for people who acquire a disability after this cut-off date or older people currently receiving unfunded supports and services delivered by the not-for-profit sector in the absence of any Government support.

²² NDIS Operational Guidelines on Disability Requirements at http://www.ndis.gov.au/sites/default/files/documents/access_disability_requirements_ok.pdf

²³ NDIS ILC Policy Framework, p8, available at <http://www.ndis.gov.au/community/ilc-home/ilc-policy-framework>

²⁴ NDIA ILC Commissioning Framework - Consultation Draft, December 2015, p.15 and p.17 available at <http://www.ndis.gov.au/community/ilc-home/ilc-commissioning-framework-consultation/ILC-comm-fw-draft>

In Victoria, there has been separate agreement with the Commonwealth that some specified, episodic specialist disability services currently available to older people will continue to be available to older Victorians beyond the implementation of the NDIS. This funding and program responsibility transition to Commonwealth management is in line with Victoria's Home and Community Care (HACC) services for older people also transitioning to the Commonwealth. Specific sensory and neurological organisations, and Carers Victoria, are negotiating a split of their current disability and aged care funding under the agreement. The State disability funding attributed to services for existing clients aged 65 years and older, estimated at \$10.178 million annually, will be provided to the Commonwealth for inclusion in the Commonwealth Home Support Programme from 2016-17. Victoria is the only State or Territory that has undertaken this exercise. To what extent these types of specialist disability services have been factored by other jurisdictions for inclusion in national aged care funding and how the specialist disability services will be provided consistently across the nation remain unclear.

It is also unclear if funding for the NDIS ILC, estimated to be about \$132 million annually across Australia for non-LAC services once the NDIS is fully rolled out, will sustain a vibrant market that provides both condition-specific and generic disability support. Current providers of ILC-type supports may need to reorient their services to providing supports within individually funded packages in order to maintain financial viability. Without additional funding, and as 'continuity of support' funding reduces over time, the needs of older Australians may not be able to be met by ILC providers.

Local Area Coordination

The investment focus of the ILC is on Local Area Coordination (LAC), which the Productivity Commission estimated would cost \$550 million annually in the full NDIS²⁵. Local Area Coordinators will:

"provide place-based delivery of:

- direct, innovative and flexible assistance for participants with less complex needs to help them connect to their local community and put their individually funded packages into action
- short-term assistance for people with disability who are not eligible for the NDIS to identify and help them to find community-based activities or resources relevant to their needs
- strengths-based community development and mainstream service partnership activities that benefit all people with a disability"²⁶.

Whether Local Area Coordinators will provide any short-term assistance to older people with disability is unclear but unlikely given the statement in the policy framework referred to above. It should be noted that the NDIA language of "not eligible for the NDIS" is particularly unhelpful as it does not make it clear if this term refers to only those ineligible under the age of 65 or if it refers to all Australians who are ineligible. Nevertheless, the assessment and planning that will be undertaken by Local Area Coordinators in order to provide flexible assistance to people with disability is a model that aged care could well consider and leverage for older people with disability.

²⁵ Productivity Commission Report on Disability Care and Support, 2011, p776.

²⁶ NDIA ILC Commissioning Framework- Consultation Draft, December 2015, p.19 available at <http://www.ndis.gov.au/community/ilc-home/ilc-commissioning-framework-consultation/ILC-comm-fw-draft>

Disability-specific information, capacity building and episodic support should be available to people with disability and their carers regardless of their age. This could be facilitated by directly funding services through the Commonwealth Home Support Programme or by the Commonwealth Department of Health and the NDIA jointly funding services, with providers having only to manage one contract, although the Alliance understands that this may pose a risk to the NDIA.

Additionally, by having one contract and in the absence of consistent standards between disability and aged care, there would not be a requirement for the provider to comply with aged care standards for what is likely to be only a small number of occasions of service. If this dual accreditation barrier is not removed, the Alliance is concerned how effectively the market will respond to any separate disability system within the aged care accreditation framework.

Under joint funding arrangements, local area coordinators could undertake short-form assessment for low-level, episodic supports and make referrals for assessment and planning of higher intensity services to the NDIA (for disability related services) or to My Aged Care (for aged care services). This will require adequate funding and system articulation with both the NDIS and the aged care system to be effective.

Recommendation 5: *That the Commonwealth Department of Health (Ageing and Aged Care Branch) co-fund the Information, Linkages and Capacity building (ILC) stream of the NDIS so that older people who acquire a disability have timely and easily accessible disability-specific information and support to navigate the service system, and can access the same capacity building, early intervention and local area coordination that younger people can access.*

4. Access to specialist disability assessments and services by older people

It is not yet clear how the full roll out of the NDIS will affect the number of older people with disability who will need to be supported by the aged care system, given that people who enter the NDIS before the age of 65 years may choose to remain in the NDIS for the rest of their lives (albeit funded entirely by the Commonwealth Government after they reach 65 years).

The aged care market may well be able to respond to the needs of older people with disability where their needs coincide with the general aged care population, for example those with visual or hearing impairment. It is unlikely however that the future aged care system will have the critical mass of older people with other disabilities to warrant separate development and delivery of specialist disability supports, particularly as the aged care system is not currently tailored to meet the complex and diverse support needs of older people with disability.

It is proposed that as the single funder of services delivered to older Australians, the Commonwealth Government investigate formal collaborative arrangements with the NDIS to ensure equitable access to specialist disability services for older people, where it is not cost effective or efficient to separately provide those services within the aged care system, due to the complexity of the support required.

Collaboration is particularly important with regard to assessment. The My Aged Care Gateway is the centralised entry point into the aged care system, and everyone who wishes to receive services from the aged care system (or individually funded by the aged care system) will have to first register with My Aged Care. In addition, all potential clients (except in cases of emergency) will have to be assessed by Regional Assessment Services (RAS) or Aged Care Assessment Teams (ACATs) before being referred to service providers. This process potentially creates additional steps and delays as to when people can receive support. Some callers to My Aged Care may have communication difficulties or functional disabilities that need to be supported, for example vision impairment, and any further delays could increase their risk of falls and injury.

National Screening and Assessment Form

As their purpose is to assess frail ageing needs, RAS/ACATs do not have specific expertise in determining the level and types of support for a person with a disability, and may not consider whether a person would benefit from a specialist disability service, such as orientation and mobility training²⁷, communication support, specialised equipment assessment and prescription or support to return to work.

The National Screening and Assessment Form (NSAF), used as the tool to determine eligibility level and to inform the development of support plans, is limited in its utility to identify and respond to disability. Disability is identified as a health condition that may prompt referral to an allied health professional or for aids and equipment, rather than specialised support services. For example, in relation to vision, the NSAF instructs assessors to refer the person to an optometrist if the person has had changes to their vision in the last three months, and does not seek any information on underlying vision impairment or consider the need for specialised vision services. Specialised disability services are often provided by the NGO sector and relate to the disability, such as sensory impairment or loss, neurological disease or brain injury. These NGOs also provide support and advice to clients and their carers.

27 National Disability Services Bridging the ageing-disability interface - Options for Reform July 2013, available at www.nds.org.au

In the absence of removal of the age cap on eligibility for the NDIS, an obvious solution is for collaboration between the aged care system and the disability sector on assessment and services for older people with a disability. This could range from RAS teams and ACATs receiving appropriate advice and capacity building from the disability sector, as well as improving screening and prioritisation processes, to the Department purchasing a suite of specialist disability assessments and services through the NDIA.

Cross-sector collaboration between the NDIS and the Department will be particularly important for special needs groups, such as those living in rural and remote areas and people from culturally and linguistically diverse backgrounds, where co-located and/or co-funded services would make sense. There are particular challenges for NDIS and Departmental collaboration and joint purchasing arrangements however. The NDIA is limited in the extent to which it can provide support to people who are not NDIS participants, its operating model comprises a mix of internally and externally provided assessment and planning services, and it does not contract directly with providers of individually funded supports.

Within the aged care system, the move to integrate the CHSP with Home Care Packages may complicate collaboration with the NDIS on delivery of specialist disability services. Further, a small cohort of people with disability are still being supported by aged care services under block funding arrangements and a single aged care home support program may make ongoing support difficult. These issues need to be considered in the implementation of the reforms scheduled for 2018.

In a market based system, a necessary component of the market is enough people seeking a particular service in order to sustain competition. Such markets are likely to be generated for impairment traditionally associated with ageing, such as services supporting people with hearing or visual impairments. However, for other specialist disability services, there may not be sufficient demand from people over the age of 65 to sustain a market within the regulatory framework of aged care services. However, when combined with the demand from the disability sector, competition may be generated within a particular geographical location. Accordingly, it may be prudent, until compliance measures such as standards are harmonised across the two sectors, to explore purchasing arrangements by the aged care system from the disability system.

The Alliance calls on the Commonwealth Department of Health to work with the Department of Social Services and the NDIA to identify solutions for cross-sector collaboration and purchasing arrangements, to ensure that older people with disability have equitable access to specialised services that go beyond those available with the aged care system.

Funding levels

As the single funder of services for older people, the Commonwealth Government provides 'reasonable and necessary' funding for older people within the NDIS, with no pre-determined limits, but the same cohort within the aged care system is subject to capped funding, which is clearly inequitable. In NDIS trial sites, 10% of participants have an annualised package cost over \$100,000, while 71% have an annualised package cost below \$30,000²⁸. We anticipate in the older cohort of NDIS participants this will be continued in later years. Annualised package costs may include amortised equipment costs and other one-off supports. A similarly flexible funding model is required for mainstream aged care services to meet the needs of older people with disability.

28 National Disability Insurance Agency Quarterly Report to COAG Disability Reform Council 31 March 2016 available at <http://www.ndis.gov.au/sites/default/files/documents/Quarterly-Reports/11-report-coag.pdf>

Without this funding flexibility, there will be a further disincentive for NDIS participants to consider moving to aged care services as they age.

The Alliance notes that as part of the evaluation of the NDIS trials being conducted by the National Institute of Labour Studies, a study will be undertaken of the supports received by older people with disability who are NDIS participants compared to those received by similar people who are not NDIS participants. The Commonwealth Department of Health should utilise the results of this study and/or undertake further work on the type and value of supports used by older people with disability within the NDIS, with a view to determining appropriate and equitable funding and service options for older people with disability within the aged care system.

Recommendation 6: *That the Commonwealth Department of Health articulate how the aged care system will support older Australians with disability and review the appropriateness of the National Screening and Assessment Form to identify disability-related needs.*

Recommendation 7: *That specialist advice and capacity-building for aged care assessors and workers on the needs of people with disability be developed, including consideration of joint purchasing arrangements between the Commonwealth Department of Health and the National Disability Insurance Agency (NDIA).*

Recommendation 8: *That older people who acquire a disability have access to timely and appropriate assessment and planning through improved formal collaborative arrangements between the aged care system and the NDIS.*

Recommendation 9: *That services for older people with disability include equitable access to the range of supports available within the NDIS, to enable people to live independently in the community for as long as possible.*

Recommendation 10: *That maximum funding levels available within aged care programs be flexible so that older people with disability with very high support needs are able to have these needs met by the aged care system.*

5. Aids and equipment and assistive technology

Currently, funding and program responsibility for aids and equipment and assistive technology is divided between the Commonwealth and States and Territories, primarily along program lines.

- The States and Territories are responsible for aids and equipment for health-related needs for people of all ages, for example oxygen, prosthetics, and temporary use items such as crutches and wheelchairs while recuperating from an illness or injury.
- The Commonwealth is responsible for ageing-related aids and equipment within the Aged Care program, but these services are limited to the support provided via a Home Care Package (where an eligible consumer may choose how to fund such measures) or via the rationed, up to \$1000 limit in the Commonwealth Home Support Programme (CHSP) (however, there are very few CHSP aids and equipment providers and they do not cover all geographical areas).
- The Commonwealth also funds the Australian Government Hearing Services Program which currently provides services for certain concession or Veterans' card holders and their dependents, members of the Australian Defence Force and clients of Disability Employment Services.
- The States and Territories have been responsible for disability-related aids and equipment but this will become the responsibility of the NDIS for people who enter the NDIS before the age of 65 years.
- The States and Territories will retain responsibility for aids and equipment for people not eligible for the NDIS²⁹, whether health or disability-related. (The Alliance notes this seems inconsistent with the Commonwealth being responsible for the needs of people aged 65 years or older).

State and Territory schemes

State and Territory aids and equipment and assistive technology schemes have different budgets, scope, eligibility requirements and levels of subsidy (see Appendix 1). Due to capped budgets, people may face considerable waiting periods for all but life-saving equipment, such as oxygen tanks. Some schemes require no consumer co-payments but limit eligibility and scope, while others have broader eligibility and scope but require user co-payments. The provision of low-vision aids is excluded from schemes in Victoria, Tasmania, South Australia and Western Australia, but may be provided through other state-funded agencies at a different level of subsidy or at cost to the consumer. Some funded agencies may provide equipment loans or refurbished items.

All State and Territory schemes rule people ineligible for support if they are receiving Australian Government aged care Home Care Packages Levels 3 and 4 or residential care, and some programs deem ineligible any recipient of other Government funded programs which includes Level 1 and 2 Home Care Packages. There is concern that with the merging of Home Care and CHSP programmes in 2018, further restrictions on eligibility of these State and Territory schemes will occur. A key issue for older people who have been assessed as eligible for a package but who, for whatever reason, are not yet receiving services is that they are deemed ineligible for State and Territory-based aids and equipment programs. As a result, older people may remain in hospital longer than they should.

29 See section 3 of Schedule C to Bilateral Agreements for Transitioning to the NDIS. These are available at <https://www.coag.gov.au/node/525> (Commonwealth and NSW); <https://www.coag.gov.au/node/526> (Commonwealth and Victoria); <http://www.coag.gov.au/node/532> (Commonwealth and Queensland); <https://www.coag.gov.au/node/530> (Commonwealth and South Australia); <https://www.coag.gov.au/node/531> (Commonwealth and Tasmania).

Commonwealth Home Support Programme

The scope of goods, equipment and assistive technology provided through the CHSP is quite broad and items can be provided through loan or purchase³⁰. Medical care aids are in scope but the CHSP Manual also provides that the CHSP is not designed to replace existing State and Territory managed schemes which provide medical aids and equipment. CHSP grant recipients are encouraged to access these programs where appropriate. In general, it is expected that clients should be able to purchase the items without financial assistance, but if they are unable to do so, will be able to access up to \$500 in total support per financial year. This cap applies in total per client, regardless of how many items are loaned or purchased. Where a provider assesses it to be necessary, however, the provider has the discretion to increase the cap to \$1000 per client per financial year.

The extent to which providers utilise the CHSP funding, rather than refer to State and Territory schemes, is unknown. It is known however that there is a lack of geographically consistent availability for these aids and equipment, making it hard to find the specific support needed through CHSP, particularly where it relates to a disability such as motor neurone disease where customised equipment may be required. Alliance members also report that support for needs relating to low vision or blindness are not sufficiently supported via CHSP across the country. It is also unclear how the CHSP will interact with the Australian Government Hearing Services Program.

Home Care Packages

Some aids and equipment including custom made aids may be provided to Home Care Package recipients where identified in their care plan and where able to be provided within the limits of the overall package. This may mean that people can substitute more expensive aids and equipment for other forms of support in their package, but would have to accrue the funds required before being able to purchase the equipment. However, it is stipulated that the Home Care Programme is not an aids and equipment scheme³¹. The key issue is that people with a Home Care Package who require costly aids and equipment often also need a range of other supports that they cannot forgo in order to 'save' for the equipment.

National Disability Insurance Scheme

NDIS participants have access to fully funded 'reasonable and necessary' aids and equipment including home and vehicle modifications if they are eligible for an individually funded package. It is unclear if the NDIS ILC will provide low-level aids and equipment to people with disability not eligible for an individually funded package (for example, low vision aids) or whether the need for aids and equipment or assistive technology of any sort will be sufficient to meet the eligibility criteria for an individually funded package.

People who acquire a disability over the age of 65 years will not be eligible for NDIS individually funded packages and it is unlikely that they would be able to access aids and equipment through the NDIS ILC stream as the expectation is that they would receive that support from the aged care system.

³⁰ See CHSP Manual at www.dss.gov.au/sites/default/files/documents/06_2015/chsp_programme_manual.pdf, p.55

³¹ The Home Care Programme Operational Manual 2015, p33.

The NDIS estimates its spending on Assistive Technology (AT) will reach \$1.06 billion per annum when the scheme is fully rolled out in 2019-20³². It predicts:

“Spending of this size will develop the AT market in Australia, encouraging investment, and the development of emerging technology solutions. As knowledge of this spend filters through the Australian and global technology community, the expectation is that Australia could become a hub of AT innovation”.

During the transition to the full scheme, NDIS AT procurement includes accessing State and Territory aids and equipment programs through purchasing or ‘in-kind’ arrangements. However, the NDIS AT strategy signals changes to sourcing, including a range of procurement methods such as tender panels, which it may set up in conjunction with other agencies.

The NDIS is seeking to make efficiency gains both directly due to its purchasing power and from the potential for new and emerging technologies to substitute for other supports and services³³, and to increase participants’ social and economic participation.

Issues

The different roles and responsibility for medical, ageing and disability related aids and equipment continues to confuse consumers, whose eligibility, access and out-of-pocket costs will differ depending on where they live, their age and which service system they are able to access.

The potential for people to be referred from service system to service system is also great, given the determination of Commonwealth and State and Territory programs to avoid taking on each other’s responsibilities. In an environment of on-going reform across the ageing and disability sectors there is an increasing risk that people who acquire a disability over the age of 65 years will fail to access aids, equipment and assistive technology. Waiting lists associated with assessments by occupational therapists for aids and equipment are also of a concern to Alliance members.

There is an urgent need to standardise the eligibility, access and co-payment requirements of State and Territory schemes, and for State and Territory and Commonwealth aged care schemes to be better aligned. Governments had agreed to nationally consistent aids and equipment schemes through the National Disability Agreement³⁴ but this would have required significant investment to bring all jurisdictions up to benchmark levels and implementation of the NDIS seems to have taken precedence.

The best opportunity for improvement in access and affordability of aids and equipment for all Australians is the establishment of a new, federally funded national aids and equipment/assistive technology scheme with harmonised eligibility, access and co-payment requirements for across all jurisdictions. This new national aids and equipment scheme could enter into agreements with the NDIS Assistive Technology Scheme, which would allow greater economies of scale for procurement and development of innovation, particularly in technological solutions that may be higher in capital cost, but which may have a longer life, provide better consumer outcomes and/or reduce future costs in other care settings, such as acute hospital services or residential aged care.

³² National Disability Insurance Agency October 2015 Assistive Technology Strategy available at http://www.ndis.gov.au/sites/default/files/AT-Paper_0.pdf. Figure quoted excludes special assessment setup and worn-hearing devices in the hearing equipment category. Figures based on NDIA actuarial team data on participants and plans, as at April 30 2015

³³ NDIS AT Strategy cites Harper I, Anderson P, McCluskey S, O’Byrne M, Competition Policy Review, final report, March 2015

³⁴ Jenny Pearson & Associates 2013, ‘Research for National Disability Agreement Aids and Equipment Reform’

Ultimately there is a need for nationally consistent eligibility, financial support and access to aids, equipment and assistive technologies. Given Commonwealth Government responsibility for services to older people with disability, it seems inconsistent that outside of a health setting the funding responsibility for aids and equipment should remain with the States and Territories. The Alliance is of the view that a far better approach would be that the Commonwealth accept funding responsibility, and determine the best way of delivering those services in a particular area. In some cases, this may be through the bulk purchasing of the NDIA, in other cases it may be through funding the States and Territories to continue delivering their aids and equipment program, and in other cases it may be through direct funding via CHSP providers. Regardless of the vehicle of service delivery, eligibility, financial support and access must become nationally consistent.

The Alliance recognises a nationally consistent scheme may take some time to implement. As an interim solution for the urgent needs of older people with disability who are ineligible for the NDIS, the Commonwealth Government should specifically fund aids and equipment for this group.

Further, nationally consistent aids and equipment schemes should articulate that people assessed as eligible for a Home Care Package should continue to be eligible to access these schemes until their Home Care services commence.

Recommendation 11: *That a COAG agreement is established to develop a funded national aids, equipment and assistive technology program, including agreement on the process and timeframes for developing a national program. As an interim solution for the urgent needs of older people with disability who are ineligible for the NDIS, the Commonwealth Government should specifically fund aids and equipment for this group.*

Recommendation 12: *That the Productivity Commission be commissioned to investigate and increase the evidence base for better health, social and economic benefits that are achievable through increased use of aids, equipment and smart technologies (including those installed in the home) which reduce unnecessary dependence on alternative interventions.*

6. Catastrophic injury

In its 2011 report *Disability Care and Support*, the Productivity Commission recommended the establishment of two schemes: the NDIS and the National Injury Insurance Scheme (NIIS). The Productivity Commission recommended that the NIIS be separate from the NDIS, to reduce the cost of the NDIS through a fully funded insurance accident scheme that made use of existing expertise and infrastructure of accident compensation schemes. It argued that the NIIS could use incentives to deter risky behaviour and reduce local risks and would cover a broader range of health costs associated with catastrophic injuries, such as acute care and rehabilitation services.

The Productivity Commission recommended that the NIIS be developed by 2015 for people with catastrophic injuries caused by four types of accidents: motor vehicle accidents, workplace accidents, medical accidents and general accidents (occurring in the home or community)³⁵. For people over the pension age who have catastrophic injury, the Productivity Commission was of the view that the NIIS would fully fund people's support needs attributable to the injury³⁶.

While the recommended timeline has not been met for all types of accidents, the Australian Government has been working with the States and Territories to implement the NIIS progressively as a federated model of separate, state-based no-fault schemes that provide lifetime care and support for people who have sustained a catastrophic injury from an accident³⁷.

Minimum benchmarks (or national standards) have been agreed for motor vehicle accident compensation schemes by the seven jurisdictions that have committed to the rollout of the National Disability Insurance Scheme: New South Wales, Victoria, South Australia, Tasmania, the Australian Capital Territory, the Northern Territory and Queensland. Draft minimum benchmarks for the workplace accidents stream have been subject to a Consultation Regulatory Impact Statement process but are yet to be agreed by Governments. Neither set of benchmarks impose an age limit to eligibility for the schemes.

Commonwealth and State and Territory Treasury officials have released a discussion paper on medical treatment accidents, which canvasses potential funding sources (notably through a premium on medical practitioners' and hospitals' medical indemnity insurance), and potential eligibility for this part of the NIIS. The discussion paper suggests that as people aged 65 years and over at the time they acquire a disability are ineligible for the NDIS, this "could be mirrored by not requiring the NIIS to cover individuals who are catastrophically injured as a result of medical treatment when they are 65 years and over (or alternatively an age linked to the retirement age)"³⁸.

The paper goes on to propose that older people injured while undergoing medical treatment who do not have recourse to the common law could be supported by their family, supplemented by aged care services (to the extent that the individual is eligible and the services are available). It is noted however, that, where no appropriate care services are available, an injured person may have to remain in hospital for a considerable period of time.

³⁵ Productivity Commission Inquiry Report on Disability Care and Support (2011), Vol 2, ch. 18 pp.913-15

³⁶ Productivity Commission Inquiry Report on Disability Care and Support (2011), Vol 2, ch. 18 p.917

³⁷ See <http://www.treasury.gov.au/Policy-Topics/PeopleAndSociety/National-Injury-Insurance-Scheme>

³⁸ Medical treatment injury discussion paper – draft without prejudice – prepared for discussion by Treasury Officials, undated, section 5c), available at <http://www.treasury.gov.au/Policy-Topics/PeopleAndSociety/National-Injury-Insurance-Scheme>

The contrary argument is also put:

“However, there are strong reasons to include individuals aged 65 years and over in the medical treatment stream of the NIIS. For example, it could create better patient outcomes by covering the health costs associated with the injury as well as acute care and rehabilitation services. Further, although those aged over 65 can be excluded from the NDIS on the grounds that there is a blurred line between disability and the effects of ageing, it is difficult to extend this argument to the NIIS because a catastrophic medical treatment injury is a more distinct incident. Including all individuals in the medical treatment stream regardless of their age would be consistent with arrangements for motor vehicle and workplace accidents and would support the intention of the NIIS to provide lifetime care and support to all catastrophically injured individuals, regardless of the cause of the injury”³⁹.

The Alliance is very concerned that older people who sustain a catastrophic injury from a medical or general accident could be excluded from the NIIS, as the aged care system would not be able to cover the potentially significant costs. It is also concerned about the time it is taking to implement these streams of the NIIS. As the discussion paper points out, a catastrophic injury is a distinct event with severe financial and social costs, putting the injured person at risk of long-term hospitalisation. It is unreasonable to expect that families provide the long-term care required by an older person who suffers an injury and becomes, for example, quadriplegic. In many cases, ‘the family’ may comprise a spouse also over 65 years who has significantly reduced capacity to provide appropriate support.

Further, there is no interim solution available, in the absence of the NIIS, for older catastrophically injured people, whereas an interim solution is available to younger catastrophically injured people who can receive support from the NDIS once available in their area.

As an incentive for States and Territories to fully implement the NIIS, people of all ages who are catastrophically injured through medical or general accidents should be able to access the NDIS, with the relevant State or Territory responsible for payment.

It is unacceptable that age discrimination be applied to people with catastrophic injury, as there is no justification for the substantial differences between the supports that would be provided through the NIIS and aged care systems.

Recommendation 13: *That the medical and general accident streams of the National Injury Insurance Scheme (NIIS) be implemented and made available to people of all ages, or alternatively, access is provided to the NDIS for people of all ages with catastrophic injury arising from medical or general accidents.*

39 Medical treatment injury discussion paper – draft without prejudice – prepared for discussion by Treasury Officials, undated, section 5c) available at <http://www.treasury.gov.au/Policy-Topics/PeopleAndSociety/National-Injury-Insurance-Scheme>

7. People with disability or younger onset dementia living in, or at risk of entering, residential aged care

The NDIS will fund supports for people with significant and permanent disability, including people with younger onset dementia, if they meet the age and disability requirements of the NDIS legislation. An objective of the NDIS is to fund supports that enable people with disability to participate in the social, economic and cultural life of the community.

The expectation is that NDIS funded supports that enable people to continue living in the community will reduce and possibly eliminate the need for young people with disability or younger onset dementia to live in residential aged care. However, residential aged care will continue to be the only solution for some young people until there is sufficient supply of appropriate community options that integrate their support and accommodation needs. Older people with disability not eligible for the NDIS will continue to rely on residential aged care due to their care needs and/or lack of affordable housing options.

Therefore, it remains important that residential aged care is responsive to the needs of people with disability.

Young people in residential aged care

The Productivity Commission estimates there were 6,252 people under 65 years of age living in residential aged care at 30 June 2015, including 555 people under the age of 50 years⁴⁰. This represents 3 per cent of the 195,953 operational places (including flexible places) in residential care services at June 2015⁴¹.

An inquiry by the Senate Standing Committee on Community Affairs on ‘Adequacy of existing residential care arrangements available for young people with severe physical, mental or intellectual disabilities in Australia’ reported in June 2015⁴². It found that the undersupply of specialist disability accommodation (SDA) is the primary reason that young people cannot be diverted or exited from residential aged care facilities

The Committee also found

“the role of the NDIS, the Commonwealth and the states in the provision of funding for SDA is unclear with the committee receiving contradictory evidence from the Commonwealth on this matter. This confusion and uncertainty extends to individuals, their families and service providers. There have been a range of innovative housing solutions presented to the committee; however, without clarity around the funding mechanisms, it is uncertain how or if they will ever be built”.

Young people with disability living in residential aged care are eligible to receive assistance from the NDIS⁴³, including specialised equipment, therapy, and supports to explore alternative age-appropriate living arrangements and to access age-appropriate social and community activities.

⁴⁰ Productivity Commission Report on Government Services 2016, Table 14A.57

⁴¹ Productivity Commission Report on Government Services 2016, Table 13A.18

⁴² Available at http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Community_Affairs/Young_people_in_aged_care/Report

⁴³ NDIS October 2013 ‘Supports the NDIS will fund for younger participants in residential aged care’ available at <http://www.ndis.gov.au/document/supports-ndis-will-fund-younger>

The NDIS does not cover daily living expenses or accommodation charges, as these costs are partly borne by the person. The States and Territories are liable for the cost to government through cross-billing arrangements with the Commonwealth Government⁴⁴. Despite the NDIS specifying the supports it will provide to young people in residential aged care, a project funded to provide information and connection support to this group in the Victorian and NSW NDIS trial sites claimed that young people in residential aged care are caught between multiple systems – disability, health and aged care – and information regarding which system is responsible is unclear⁴⁵.

This is particularly the case for people with younger onset dementia who for decades have fallen through the gaps between the disability and aged care sectors. For people with younger onset dementia the lack of appropriate social engagement and care within the residential aged care environment can lead to an exacerbation of behavioural and psychological symptoms of dementia. As a result, people with younger onset dementia are often medicated to manage their response to an inappropriate environment.

The Senate Standing Committee made a number of recommendations on cross-sector connectivity, including the formulation of a national plan to deliver rehabilitation programs, including slow stream rehabilitation, the lack of which is also seen to be a contributory factor for young people entering residential aged care. The provision of slow stream rehabilitation varies between States and Territories and it has been jointly funded by the health and disability portfolios in some states prior to the introduction of the NDIS.

It also recommended that accreditation standards for residential aged care are amended to include standards relating to the clinical outcomes and lifestyle needs of young people and that

“the Australian Government:

- provide a supplementary payment to residential aged care facilities to ensure that these accreditation standards can be met; and
- invest in disability specific training for all staff involved in the care of young people living in aged care. This training should focus on building improved awareness of the needs of young people and those living with disability in order to provide better support. It should also lead to improved connectivity between the aged care sector and other service sectors including allied health and disability services⁴⁶.”

The Alliance is of the view that standards should be representative enough that they cover all residents’ needs, irrespective of age, severity of medical condition or other circumstances, otherwise a 2-tiered system may emerge, which is inequitable. Standards should reflect that care is tailored to a resident’s needs and circumstances. Nevertheless, monitoring outcomes of Quality Indicators research in younger cohorts of residents will be important. Disability-specific training for staff should be funded by the NDIS for NDIS participants.

⁴⁴ See Schedule C to NDIS Bilateral Agreements

⁴⁵ Summer Foundation September 2015 ‘Australia’s National Disability Insurance Scheme for Young People in Residential Aged care – Findings from Year One of an Information and Connections Project’

⁴⁶ See http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Community_Affairs/Young_people_in_aged_care/Report

In November 2015 Disability Ministers approved the *NDIS Specialist Disability Accommodation Pricing and Payments Framework*⁴⁷ which sets out an initial pricing and payments framework for SDA, and broad criteria for determining which NDIS participants will be able to access SDA. The framework provides details on how benchmark prices for capital will be established but does not project the number of participants anticipated to be assessed as needing SDA; however, a position paper on draft pricing and payments released in April 2016 does provide some projected demand data⁴⁸. The framework states that young people in residential aged care and participants deemed eligible from existing waiting lists would be given priority for funding.

The NDIS SDA Decision Paper on Pricing and Payments released on 1 June 2016 further refines initial pricing and payment arrangements and advises that demand data for SDA will be provided to the market as it becomes available. In instances where very specialised design is required and adequate supply does not eventuate, the paper advises the NDIA will consider the best approach to addressing this lack of supply.

The lack of affordable housing options for people who do not have high support needs but experience social disadvantage or psychosocial disability can also result in inappropriate admissions to residential aged care.

Conversely, there should be no barrier to entry into residential aged care for those who do need it, regardless of their age, provided age-appropriate services are there to support them.

Older people with disability in residential aged care services

Older people with disability in residential aged care should also be able to access appropriate disability-specific assessment and funded supports. The support needs of older people with disability can be diverse and substantially different to those of frail, aged people.

At present, the Quality of Care Principles 2014 inadequately describe the funded disability services able to be provided to a resident of a residential aged care facility. This impacts the experience of residents with disability, as supports and services related to meeting the functional impact of the disability are not proscribed, and operators are not obliged or supported to source them. For example, in relation to communication support, the examples of services that must be provided to facilitate communication assume that communication is largely supported by hearing aids and spectacles rather than more specialised sensory equipment or services⁵⁰.

The Alliance is of the view that residents of aged care facilities with disability and are not eligible for NDIS funded supports should not have to contribute toward the cost of receiving specialist disability services. These services should be funded by the Commonwealth. At present, disability services to residents of aged care facilities are provided on an ad hoc basis, and are underwritten by philanthropic support. The Alliance calls for an adequately funded and resourced residential care sector to meet the needs of older people with disability who live in residential care.

Recommendation 14: *That the NDIS Supported Disability Accommodation Framework incorporate specific provision for the integrated support and accommodation needs of young people living in or at risk of entering residential aged care.*

⁴⁷ Available at <http://www.ndis.gov.au/news/release-sda-policy-framework>

⁴⁸ Available at <http://www.ndis.gov.au/sites/default/files/040416-NDIS-SDA-Position-Paper-on-Draft-Pricing-and-Payments.pdf>

⁴⁹ Available at <http://www.ndis.gov.au/sites/default/files/files/SDA/SDA-Decision-Paper.docx>

⁵⁰ Quality of Care Principles, 2014, Schedule 1, Part 2, 2f.

8. Conclusion

As the single funder of government-provided aged care services and disability supports for older Australians, the Commonwealth Government has a responsibility and the opportunity to ensure equitable access, support and outcomes for older people with disability, whether they access their support from the NDIS or the aged care system.

While the aged care system provides a number of supports consistent with those that are delivered through the NDIS, the objectives, model of care, funding model and expertise of the aged care system mean that older people with disability will have quite different outcomes than their counterparts in the NDIS, if no further action is taken.

The Alliance looks forward to discussing the issues and recommendations of this paper with the Commonwealth Government and Departments of Health and Social Services to identify opportunities for cross-sector collaboration, coordination and purchasing arrangements, to ensure that older people with disability have equitable access to the specialised support they need and that support is provided consistently, efficiently and cost-effectively.

APPENDIX 1 State and Territory Government aids, equipment and assistive technology programs

(Note: This document only covers the main aspects of the respective governments' primary assistive technology programs, with additional information omitted for the sake of brevity. Further research is required to develop a comprehensive document that covers all aspects of all assistive technology programs across the country.)

Jurisdiction	Program	Eligibility criteria	Types of service delivery	Data on consumer fees and program budgets
NSW	EnableNSW - Aids and Equipment Program ⁵¹	<p>1. No income entry threshold. Co-payment decided by income testing.</p> <p>2. The person is eligible if he/she⁵²:</p> <ul style="list-style-type: none"> a. has permanent or long-term disability (i.e. likely to last more than 12 months; b. has long-term assistive technology needs that have stabilised and allow them to remain in a community setting; c. is not eligible to receive assistive technology under any other government-funded program. <p>3. CHSP, NDIS, DVA clients may be eligible⁵³.</p> <p>4. The person is ineligible if he/she:</p> <ul style="list-style-type: none"> a. Is living in a residential aged care facility or who qualify for an Extended Aged Care at Home (EACH) or Extended Aged Care at Home – Dementia (EACH-D) package, equivalent to Home Care Levels 3 and 4 packages. 	<p>1. EnableNSW is a division of Health Support Services, NSW Health.</p> <p>2. Prescribers required for assessment⁵⁴:</p> <ul style="list-style-type: none"> a. Different prescribers for different equipment, with additional working experience requirement. b. Examples of prescribers: <ul style="list-style-type: none"> i. Occupational Therapist ii. Registered Nurse iii. Physiotherapist iv. Dietitian v. Speech Pathologist vi. Audiologist vii. Orthoptist viii. Medical Specialist 3. Categories of equipment provided: <ul style="list-style-type: none"> a. Communication b. Mobility c. Respiratory function d. Self-care 	<p>1. Consumer co-payment fees:</p> <ul style="list-style-type: none"> a. Income Band 1 - Fee of \$100 for each year accessing the program. For consumers on full pension and children under 16. b. Income Band 2 - Fee of \$100 for each year accessing the program. For consumers with income up to \$42k for singles or \$70k for couples. Each dependent increases the maximum threshold by \$2.1k. c. Income Band 3 - Fee is 20% of device issued. For consumers with income above \$42k for singles or \$70k for couples. Each dependent increases the minimum threshold by \$2.1k. <p>2. Eligibility (minimum cost of device):</p> <ul style="list-style-type: none"> a. Band 1 and 2 consumers - not eligible for devices under \$100. b. Band 3 consumers - not eligible for devices under \$800. <p>3. The prescriber determines the issued device based on cost-effectiveness and</p>

51 <http://www.enable.health.nsw.gov.au/home/services/aep>

52 http://www0.health.nsw.gov.au/policies/pdf/2011/pdf/PD2011_027.pdf

53 http://www.enable.health.nsw.gov.au/_data/assets/pdf_file/0019/276130/enablensw-application-form.pdf

54 http://www.enable.health.nsw.gov.au/_data/assets/pdf_file/0018/262242/professional_criteria_for_prescribers_website_july1_2011_docx.pdf

Jurisdiction	Program	Eligibility criteria	Types of service delivery	Data on consumer fees and program budgets
				<p>clinically appropriateness, meeting the basic needs of the consumer⁵⁵.</p> <p>4. Other related EnableNSW programs:</p> <ul style="list-style-type: none"> a. Continence Assistance b. Home Respiratory Program c. Prosthetic Limb Service d. Specialised Equipment Essential for Discharge (SEED) e. Speech Generating Devices Trial Loan Pool <p>5. The 2012/13 recurrent program budget for the Aids and Equipment Program was \$40m⁵⁶.</p> <p>6. The 2010/11 annual budget for EnableNSW was \$54,110,000⁵⁷.</p>
VIC	State-wide Equipment Program (SWEP) - Aids & Equipment Program (A&EP) ⁵⁸	<p>1. No income entry threshold. Co-payment is gap between maximum subsidy and cost of equipment.</p> <p>2. The person is eligible if he/she:⁵⁹</p> <ul style="list-style-type: none"> a. Has a permanent or long term disability and/or is frail aged. 	<p>1. SWEP is a sub-division of Ballarat Health Services. However it is a state wide program and covers all Victorian residents.</p> <p>2. Specialist Prescribers and Assessors⁶⁰:</p>	<p>1. Consumer are required to co-pay the cost of the equipment if it is above the maximum subsidy.</p> <p>Examples of maximum subsidies⁶¹:</p> <ul style="list-style-type: none"> a. Walking Frames - \$300 b. Powered Wheelchairs - \$6k

⁵⁵ http://www0.health.nsw.gov.au/policies/pd/2011/pdf/PD2011_027.pdf

⁵⁶ <https://www.parliament.nsw.gov.au/prod/lc/qalc.nsf/6b9957d2cbad5bd8ca25700b00232203/8d209abfe4ad736fca257b9700226f7b?OpenDocument>

⁵⁷ Pearson J. Research for the National Disability Agreement Aids and Equipment Reform, pg 45.

⁵⁸ <https://swep.bhs.org.au/aids-and-equipment.php>

⁵⁹ https://swep.bhs.org.au/files/1/AEP_Guidelines.pdf

⁶⁰ https://swep.bhs.org.au/files/1/AEP_Guidelines.pdf

⁶¹ https://swep.bhs.org.au/files/1/AEP_Guidelines.pdf

Jurisdiction	Program	Eligibility criteria	Types of service delivery	Data on consumer fees and program budgets
		<p>b. Requires aids and equipment on a permanent or long term basis.</p> <p>c. Is on a CACP (Home Care Levels 1 and 2) package.</p> <p>3. The person is ineligible if he/she:</p> <p>a. Is a DVA Gold Card holder (except scooters and powered wheelchairs for those without a DVA 'approved disability').</p> <p>b. Is a resident of government funded Residential Aged Care Facility (Person is still eligible for Victorian A&EP Electronic Communication Device Scheme).</p> <p>4. Persons on EACH And EACH D (Home Care Levels 3 and 4) packages are only able to apply to A&EP for powered wheelchairs, scooters and home modifications.</p>	<p>a. Medical Practitioners (Specialist Prescribers) have to provide the initial certification and diagnosis of disability.</p> <p>b. A variety of assessors can provide ongoing assessment for equipment, examples:</p> <p>i. Occupational Therapist</p> <p>ii. Speech Pathologist</p> <p>3. Categories of equipment provided:</p> <p>a. Mobility aids and equipment</p> <p>b. Personal aids and equipment</p> <p>c. Communication aids and equipment</p> <p>d. Home modifications</p> <p>e. Vehicle modifications</p>	<p>2. Other related SWEP programs:</p> <p>a. Continuous Positive Airways Programs (CPAP)</p> <p>b. Open Place (OP)</p> <p>c. My Future My Choice (MFMC)</p> <p>d. Continence Aids (CA)</p> <p>e. Domiciliary Oxygen Program (DOP)</p> <p>f. Specialist Equipment Library (SEL)</p> <p>g. Supported Accommodation Equipment Assistance Scheme (SAEAS)</p> <p>h. Top-up Fund for Children (TFC)</p> <p>i. Vehicle Modification Scheme (VMSS)</p> <p>3. The 2010/11 annual budget for A&EP was \$34,200,000⁶².</p>
QLD	Medical Aids Subsidy Scheme (MASS)	<p>1. Applicant must be a pensioner. Co-payment is gap between maximum subsidy and cost of equipment.</p> <p>2. The person is eligible if he/she⁶³:</p> <p>a. Holds on or the following cards:</p> <p>i. Centrelink Pensioner Concession Card;</p> <p>ii. Centrelink Health Care Card;</p> <p>iii. Centrelink Confirmation Concession Card Entitlement Form (conditions apply)</p>	<p>1. MASS is run by Queensland Health.</p> <p>2. Designated Prescribers for assessment, examples:</p> <p>a. Registered Nurse</p> <p>b. Physiotherapist</p> <p>c. Occupational Therapist</p> <p>d. Speech Pathologist</p> <p>e. GPs and Medical Specialists</p> <p>g. Rehabilitation Engineer</p>	<p>1. Consumers are required to co-pay the cost of the equipment if it is above the maximum subsidy.</p> <p>Examples of maximum subsidies⁶⁴:</p> <p>a. Wheeled walking aid - \$450</p> <p>b. Powered Wheelchairs - \$6.65k</p> <p>2. Links to the subsidy rates for different aids and equipment can be found here: https://www.health.qld.gov.au/mass/subsidy-schemes/mass.asp</p>

62 Pearson J. Research for the National Disability Agreement Aids and Equipment Reform, pg 45.

63 <https://www.health.qld.gov.au/mass/documents/mass-general-guidelines.pdf>

64 <http://www.qld.gov.au/health/support/equipment/types/living/index.html>

Jurisdiction	Program	Eligibility criteria	Types of service delivery	Data on consumer fees and program budgets
		<p>iv. DVA pensioner Concession Card (conditions apply);</p> <p>v. Queensland Government Seniors Card.</p> <p>b. The applicant has a permanent and stabilised condition or disability which restricts activities in the home environment.</p> <p>3. The person is ineligible if he/she:</p> <p>a. is in receipt of assistance or funding for medical aids and equipment under one or more State or Commonwealth government funded programs;</p> <p>i. DVA (if eligible);</p> <p>ii. Commonwealth residential care facility recipients for other aids and equipment - have a classification of a high rating in any domain category or a medium rating in two or more domain categories per the Aged Care Funding Instrument (ACFI) assessment as noted in the Quality of Care Principles 2014 Subsection 7 (6).</p> <p>iii. Home Care Packages Levels 3 and 4</p> <p>4. Aids and equipment provided through MASS must be used within the home. (MASS funding is not available where the sole purpose is to access the community).</p>	<p>3. Categories of equipment provided:</p> <p>a. Communication aids</p> <p>b. Continence aids</p> <p>c. Daily living and mobility aids</p> <p>d. Home oxygen</p> <p>e. Medical grade footwear</p> <p>f. Orthoses</p> <p>g. Spectacles</p>	<p>3. Other related Queensland Subsidy Schemes:</p> <p>a. Community Aids Equipment and Assistive Technology Initiative (CAEATI)</p> <p>b. Vehicle Options Subsidy Scheme (VOSS)</p> <p>c. Specialist hospital-based scheme (Cystic Fibrosis Program)</p> <p>d. Spectacle Subsidy Scheme (SSS)</p> <p>e. Queensland Artificial Limb Service (QALS)</p> <p>4. The 2010/11 annual budget for MASS was \$34,689,000⁶⁵.</p>
WA	Community Aids and Equipment Program (CAEP) ⁶⁶	1. Applicant must be a pensioner or demonstrate financial hardship.	1. CAEP is a joint Disability Services Commission and Department of Health	1. There are no consumer co-payments ⁶⁹ .

65 Pearson J. Research for the National Disability Agreement Aids and Equipment Reform, pg 45.

66 <http://www.disability.wa.gov.au/services-support-and-eligibility/services-support-and-eligibility/new-services/services-provided-by-the-commission/equipment-and-technology/community-aids-and-equipment-program-caep/>

69 <http://www.disability.wa.gov.au/Global/Publications/Services%20support%20and%20eligibility/CAEP/Community-Aids-and-Equipment-Program-Referrers-Information-Kit-2013.pdf>

Jurisdiction	Program	Eligibility criteria	Types of service delivery	Data on consumer fees and program budgets
		<p>No co-payment.</p> <p>2. To be eligible for CAEP you must⁶⁷:</p> <ul style="list-style-type: none"> a. have a permanent disability b. live at home in the community most of the time c. have an Australian: <ul style="list-style-type: none"> i. Pensioner Concession Card, or ii. Health Care Card, or iii. Commonwealth Seniors Health Care Card, or d. be eligible for a Carer Payment, or e. demonstrate financial hardship. <p>3. CAEP will not fund equipment when it is available through other funding sources or programs such as:</p> <ul style="list-style-type: none"> a. Commonwealth aged care packages (Home Care and Residential Care) b. Other government funding programs through the DVA. <p>4. The equipment is essential for independent functioning and functional care at home.</p>	<p>program funded by State Government and administered by the Disability Services Commission.</p> <p>2. Specifiers required for assessment⁶⁸:</p> <ul style="list-style-type: none"> a. Nurse b. Occupational Therapist c. Orthoptist d. Physiotherapist e. Podiatrist f. Rehabilitation Technology Unit (RPH) staff g. Speech Pathologist <p>3. Categories of equipment provided:</p> <ul style="list-style-type: none"> a. Bed equipment b. Communication c. Daily living items d. home modifications e. Orthoses f. Personal care items g. Positioning and seating equipment h. Respiratory appliances i. Transfer aids j. Walking aids k. Wheeled mobility devices 	<p>a. If an item is above the CAEP ceiling limit, the CAEP Clinical subcommittee will have to approve the item.</p> <p>b. The equipment must be the most basic model/type that meets the clinical need.</p> <p>c. The item must cost more than \$50.</p> <p>2. Other related Disability Services Commission programs:</p> <ul style="list-style-type: none"> a. Continence services <p>3. The 2010/11 annual budget for CAEP was \$13,215,987⁷⁰.</p>

⁶⁷ <http://www.disability.wa.gov.au/Global/Publications/Services%20supports%20and%20eligibility/CAEP/Community-Aids-and-Equipment-Program-Referrers-Information-Kit-2013.pdf>

⁶⁸ <http://www.disability.wa.gov.au/Global/Publications/Services%20supports%20and%20eligibility/CAEP/Community-Aids-and-Equipment-Program-Referrers-Information-Kit-2013.pdf>

⁷⁰ Pearson J. Research for the National Disability Agreement Aids and Equipment Reform, pg 45.

Jurisdiction	Program	Eligibility criteria	Types of service delivery	Data on consumer fees and program budgets
SA	Department for Communities and Social Inclusion (DCSI) state-wide Equipment Program ⁷¹	<p>1. No co-payment.</p> <p>2. DCSI Equipment Program services are accessible to all eligible people living permanently in South Australia, irrespective of geographical location, age, or type of disability or condition⁷².</p> <p>3. The person is ineligible if he/she⁷³:</p> <p>a. Is receiving any Australian Government Aged Care Home Care Package or Residential Care.</p> <p>b. Is an NDIS participant.</p> <p>c. Is entitled to an equivalent service from DVA.</p>	<p>1. Clinical assessment and prescription will be conducted according to best practice guidelines by an approved health professional⁷⁴.</p> <p>2. People will be prescribed the most appropriate and cost effective equipment for their functional needs from the types of equipment listed⁷⁵.</p> <p>3. Categories of equipment provided:</p> <p>a. Allied health/Rehabilitation</p> <p>b. Bathing/Toileting</p> <p>c. Bed mobility/Accessories</p> <p>d. Beds</p> <p>e. Chairs/Seating</p> <p>f. Communication/Tech devices</p> <p>g. Continence</p> <p>h. Hoists & Stand aids</p> <p>i. Home Access</p> <p>j. Manual wheelchairs</p>	<p>1. Provided the item is within scope of the program, meets an essential clinical need and is within the available budget, the item is fully funded by the program⁷⁶.</p> <p>2. The 2010/11 annual budget for DCSI EP was \$18,690,000⁷⁷.</p>

⁷¹ <http://www.des.sa.gov.au/funding-programs/dcsi-equipment-program>

⁷² http://www.des.sa.gov.au/__data/assets/word_doc/0003/19722/equipment-services-operational-policy.doc

⁷³ http://www.des.sa.gov.au/__data/assets/word_doc/0003/19722/equipment-services-operational-policy.doc

⁷⁴ http://www.des.sa.gov.au/__data/assets/word_doc/0003/19722/equipment-services-operational-policy.doc

⁷⁵ http://www.des.sa.gov.au/__data/assets/word_doc/0003/19722/equipment-services-operational-policy.doc

⁷⁶ http://www.des.sa.gov.au/__data/assets/word_doc/0003/19722/equipment-services-operational-policy.doc

⁷⁷ Pearson J. Research for the National Disability Agreement Aids and Equipment Reform, pg 45.

Jurisdiction	Program	Eligibility criteria	Types of service delivery	Data on consumer fees and program budgets
TAS	Community Equipment Scheme (CES) ⁷⁸	<p>1. Co-payment of \$50 a year loan fee, plus \$50 per year when maintenance of equipment is required during that year.</p> <p>2. The person is eligible if he/she⁷⁹:</p> <p>a. Is the holder of one of the following benefit cards:</p> <ul style="list-style-type: none"> i. Health Care Card ii. Pensioner Concession Card iii. Health Benefit Card iv. Interim Concession Card <p>b. Is living in the community</p> <p>c. Not eligible for equipment through any other Government funded bodies.</p>	<p>k. Mobility aids & Accessories</p> <p>l. Pres. care/Cushions/Mattress</p> <p>m. Rehabilitation & maintenance</p> <p>n. Small, ADL & Household aids</p> <p>o. Splinting & orthotics</p> <p>p. Transfer aids</p> <p>1. The Tasmanian Department of Health and Human Services operates the CES.</p> <p>2. Assessment by relevant health professional, for example⁸⁰:</p> <ul style="list-style-type: none"> a. Occupational Therapist b. Physiotherapist c. Speech Pathologist <p>3. Examples of equipment provided:</p> <ul style="list-style-type: none"> a. Walking frames b. Wheelie frames c. Traymobiles d. Crutches e. 4 point sticks f. Shower stools g. Bedside commodes h. Toilet surrounds i. Wheelchairs j. Hoists 	<p>1. Eligible clients pay the following costs for equipment:</p> <ul style="list-style-type: none"> a. \$50 per year loan fee b. \$50 per year maintenance fee when maintenance of equipment is required <p>2. Ineligible clients are able to hire items for \$20 a month.</p> <p>3. The 2010/11 annual budget for CES was \$4,260,000⁸¹.</p>

⁷⁸ https://www.dhhs.tas.gov.au/service_information/services_files/RHH/treatments_and_services/community_equipment_scheme

⁷⁹ https://www.dhhs.tas.gov.au/___data/assets/pdf_file/0008/49508/CES_brochure.pdf

⁸⁰ https://www.dhhs.tas.gov.au/___data/assets/pdf_file/0008/49508/CES_brochure.pdf

⁸¹ Pearson J. Research for the National Disability Agreement Aids and Equipment Reform, pg 45.

Jurisdiction	Program	Eligibility criteria	Types of service delivery	Data on consumer fees and program budgets
ACT	Oxygen and Equipment Services - ACT Equipment Scheme (ACTES) ⁸²	<p>1. Applicant must be a pensioner. No co-payment.</p> <p>2. The person is eligible if he/she⁸³:</p> <p>a. Has a long term disability.</p> <p>b. Holds a current Centrelink Pension or Health Care Card.</p> <p>c. Meet the low income criteria.</p> <p>3. The person is ineligible if he/she:</p> <p>a. Receives assistance from other government funded schemes or through EACH (Home Care Level 4) packages.</p>	<p>1. ACTES is run by the ACT Health Directorate.</p> <p>2. Access to the ACT Equipment Scheme is via Health professional (Occupational Therapist, Physiotherapist, etc) referral. A medical practitioner (GP) must also complete a section of the application form.</p> <p>3. Examples of equipment provided:</p> <p>a. Walking aids</p> <p>b. Bathing items</p> <p>c. Toileting items</p> <p>d. Utility/Hilite chairs</p> <p>e. Manual Wheelchairs</p> <p>f. Powered Wheelchairs</p> <p>g. Electrolarynx and Communication Aids</p> <p>h. Wigs</p> <p>i. Continence Aids</p> <p>j. Bariatric Equipment</p> <p>k. Pressure Care Mattresses</p> <p>l. Hospital Beds</p> <p>m. Pressure Care Cushions</p> <p>n. Slings</p> <p>o. Hoists</p> <p>p. Stander</p>	<p>1. There is no consumer co-payment.</p> <p>a. Note: This information was obtained over the phone and is not available online.</p> <p>2. Other related Health Directorate programs:</p> <p>a. ACT Senior Spectacles Scheme</p> <p>b. Spectacles Subsidy Scheme</p> <p>c. Low Vision Aids Scheme</p> <p>d. Artificial Limb Scheme</p> <p>3. The 2010/11 annual budget for ACTES was \$1,244,413⁸⁴.</p>

⁸² http://www.assistance.act.gov.au/adult/health_and_dental/act_equipment_scheme

⁸³ http://www.assistance.act.gov.au/_data/assets/pdf_file/0020/290432/ACT_Equipment_Scheme.pdf

⁸⁴ Pearson J. Research for the National Disability Agreement Aids and Equipment Reform, pg 45.

Jurisdiction	Program	Eligibility criteria	Types of service delivery	Data on consumer fees and program budgets
NT	Disability Equipment Program (DEP) ⁸⁵	<p>1. Applicant must be a pensioner or demonstrate financial hardship. Co-payment is gap between maximum subsidy and cost of equipment.</p> <p>2. To be eligible for the DEP, the applicant must⁸⁶:</p> <ul style="list-style-type: none"> a. Have a disability of permanent or long term duration. b. be living in or returning to the community. c. be a beneficiary of a full Centrelink Disability Support or Aged Pension. Some exceptions apply to the financial eligibility criteria: i. Existing DEP clients as at 8 April 2013 are not required to verify financial eligibility. ii. Persons who are experiencing financial hardship or require assistance with high cost items may apply for Special Consideration. <p>3. Disability equipment is not provided by DEP for:</p> <ul style="list-style-type: none"> a. High Care residents of a Residential Aged Care facility. b. Applicants eligible to receive the equipment under any other government-funded program. 	<p>1. DEP is run by the Northern Territory Office of Disability, which is a part of the Department of Health.</p> <p>2. Approved Prescribers for assessment⁸⁷:</p> <ul style="list-style-type: none"> a. Occupational Therapist b. Physiotherapist c. Speech Therapist <p>3. Categories of equipment provided:</p> <ul style="list-style-type: none"> a. Communication Aids & Devices b. Aids for Daily Living c. Bed Equipment d. Supportive Seating and Alternative Positioning Equipment e. Pressure Management Equipment f. Wheeled Mobility Aids g. Ambulant Mobility Aids and Standing Positioning Equipment h. Personal Emergency Response System (PERS) i. Home Modifications j. Vehicle Transfer Aids 	<p>1. Consumers are required to co-pay the cost of the equipment if it is above the maximum subsidy. Examples of maximum subsidies⁸⁸:</p> <ul style="list-style-type: none"> a. Walker (Adult) - \$300 b. Powered Wheelchairs - \$7.2k <p>2. There is a separate program for those aged 65 and over called the Home and Community Care (HACC) Aged Care Equipment Program⁸⁹. Very limited information is available online. It provides:</p> <ul style="list-style-type: none"> a. showering aids b. toileting aids c. transfer aids d. mobility aids e. home modifications such as grab rails, hand rails and ramps <p>3. The 2010/11 annual budget for DEP was \$2,556,684⁹⁰.</p>

⁸⁵ http://health.nt.gov.au/Aged_and_Disability/Office_of_Disability/Services_for_People_with_Disability/Disability_Equipment_Program_DEP/index.aspx

⁸⁶ http://health.nt.gov.au/library/scripts/objectifyMedia.aspx?file=other/82/58.docx&siteID=1&str_title=A1%20DEP%20Application%20Form.docx

⁸⁷ http://health.nt.gov.au/library/scripts/objectifyMedia.aspx?file=other/82/14.xlsx&siteID=1&str_title=DEP%20Approved%20Equipment%20List.xlsx

⁸⁸ http://health.nt.gov.au/library/scripts/objectifyMedia.aspx?file=other/82/14.xlsx&siteID=1&str_title=DEP%20Approved%20Equipment%20List.xlsx

⁸⁹ http://www.health.nt.gov.au/Aged_and_Disability/Aged_Care/HACC_Aged_Care_Equipment/index.aspx

⁹⁰ Pearson J. Research for the National Disability Agreement Aids and Equipment Reform, pg 45.

APPENDIX 2 Differences in State/Territory aids and equipment programs for specific categories of equipment

	Low vision aids	Home Enteral Nutrition	Communication Aids & Equipment
ACT	<p>1. Low vision aids are provided under a separate program, <i>Low Vision Aids Scheme</i>, and not the main <i>Oxygen and Equipment Services - ACT Equipment Scheme</i> (ACTES)⁹¹.</p> <p>2. Applicant must be a pensioner.</p> <p>3. Maximum subsidy of \$100 every 2 years. Co-payment is gap between maximum subsidy and cost of equipment.</p>	<p>1. Enteral feeding products and equipment are provided through hospitals and community pharmacies, not the main <i>ACT Equipment Scheme</i> (ACTES)</p> <p>2. Co-payment model, access to tender pricing</p>	<p>Communication aids are provided under the <i>ACT Equipment Scheme</i> (ACTES)</p> <p>Eligibility stated to include a permanent disability of at least 2 years' duration, raising concerns for people with rapidly progressive conditions.</p> <p>A sliding scale of contribution / copayment applies.</p> <p>Speech pathologists in the ACT can also access flexequip: (http://www.flexequip.com.au/Home.aspx) for Motor Neurone Disease clients who are not eligible for NDIS funding.</p>
NSW	<p>1. NSW Spectacles Program - Vision Australia - provides spectacles, magnifiers and low vision aids once every two years, to eligible people with low vision through a registered program provider.</p> <p>2. Income threshold- means test and other guidelines. When applying for the program the Client must present a Centrelink Income Statement that is less than three months old</p> <p>3. Co-payment - client pays what the optometrist is seeking to charge beyond basic frame, multifocals, tints, or UV multicoat. Any low vision aid item over \$175, the client will pay difference.</p>	<p>Enteral nutrition equipment and disposable items are provided through the EnableNSW - Aids and Equipment Program.</p> <p>Eligibility restricted to permanent residents of NSW who require HEN for greater than 12 months, and are not eligible to receive HEN disposable products through any other government funded program.</p> <p>Co-payment, for adults on a pension or low income and children up to age 16 years, of \$100 in each year that assistance is provided. For adults on higher incomes the annual allocation of disposable products is reduced by 20%.</p>	<p>Communication aids & equipment funded via EnableNSW - Aids and Equipment Program</p> <p>Co-payments apply</p> <p>\$100 minimum cost of devices apply</p> <p>CHSP, DVA, NDIS clients may be eligible</p> <p>Excluded if Home Care Package in place or living in a residential aged care facility.</p>

⁹¹ http://www.assistance.act.gov.au/adult/health_and_dental/act_equipment_scheme

	Low vision aids	Home Enteral Nutrition	Communication Aids & Equipment
	<p>1. Low vision aids are provided in the <i>EnableNSW - Aids and Equipment Program</i>⁹².</p> <p>2. No income entry threshold.</p> <p>3. Co-payment decided by income testing.</p>		
NT	<p>1. Low vision aids may be provided in the <i>Disability Equipment Program (DEP)</i>⁹³ on a case by case basis.</p> <p>2. Applicant must be a pensioner or demonstrate financial hardship.</p> <p>3. Co-payment is gap between maximum subsidy and cost of equipment.</p>	<p>1. All Home Enteral Nutritional (HEN) Equipment is provided through the Royal Darwin Hospital (RDH) and Alice Springs Hospital (ASH).</p> <p>2. Fully funded scheme, means tested</p>	<p>Communication aids and devices available under the <i>Disability Equipment Program (DEP)</i>.</p> <p>Copayment required if the cost of the equipment is above the maximum subsidy.</p> <p>No local loan pool of communication aids and equipment available – equipment loans come from interstate with significant delays experienced. Can only purchase if evidence of trial.</p>
QLD	<p>1. Low vision aids may be provided in the <i>Medical Aids Subsidy Scheme (MASS)</i>⁹⁴ on a case by case basis.</p> <p>2. Applicant must be a pensioner.</p> <p>3. Co-payment is gap between maximum subsidy and cost of equipment.</p>	<p>1. Eating and enteral nutrition items are excluded from the <i>Medical Aids Subsidy Scheme (MASS)</i> but available through Qld public health system</p> <p>2. Copayment required</p>	<p>Communication aids & equipment funded by the <i>Medical Aids Subsidy Scheme (MASS)</i>.</p> <p>Funds speech generating devices around \$7,000-\$10,000, expected to last 5 years.</p> <p>MASS does not subsidise mobile internet devices (e.g. iPads), laptop computers, desktop computers, or low tech communication aids, or Apps for mobile internet devices. While mainstream, these devices with apps support communication difficulties.</p> <p>Excludes older adults in RACF.</p>

92 <http://www.enable.nsw.gov.au/home/services/aep>

93 http://health.nt.gov.au/Aged_and_Disability/Office_of_Disability/Services_for_People_with_Disability/Disability_Equipment_Program_DEP/index.aspx

94 <https://www.health.qld.gov.au/mass/subsidy-schemes/mass.asp>

	Low vision aids	Home Enteral Nutrition	Communication Aids & Equipment
SA	Low vision aids are not provided in the <i>Department for Communities and Social Inclusion (DCSI) state-wide Equipment Program</i> ⁹⁵ .	Eating and enteral nutrition items are not provided in the <i>Department for Communities and Social Inclusion (DCSI) state-wide Equipment Program</i> No statewide model. Some public hospitals provide products free of charge or charge only for delivery of products, some require co-payment. Patients discharged from private hospitals pay market price	Communication and tech devices are provided in the <i>Department for Communities and Social Inclusion (DCSI) state-wide Equipment Program</i> ⁹⁶ . Provided the item meets an essential clinical need and is within the available budget the item is fully funded.
TAS	Low vision aids are not provided in the <i>Community Equipment Scheme (CES)</i> ⁹⁷ .	Eating and enteral nutrition items are not provided in the <i>Community Equipment Scheme (CES)</i> but are available through public hospitals. Co-payment required, public patients only.	Communication aids and equipment are provided in the <i>Community Equipment Scheme (CES)</i> ⁹⁸ .
VIC	Low vision aids are not provided in the <i>State-wide Equipment Program (SWEP) - Aids & Equipment Program (A&EP)</i> ⁹⁹ . Vision Australia receives funding from the Victorian Government to administer low vision aid subsidies for Victorians who are blind or have low vision. From 2016-17, low vision aids will not be available for people 65 years and older through this subsidy program, as this funding will be transferred to the NDIS.	Eating and enteral nutrition items are not provided in the State-wide Equipment Program (SWEP). Both private and public patients can access equipment and feeds without any charge for the respective facilities.	Communication aids & equipment are provided in the <i>Aids & Equipment Program (A&EP)</i> – Electronic Communication Devices Scheme (ECD). For non-NDIS participants the ECD scheme has a ceiling of \$7000. Residents of Commonwealth Government funded RACFs are eligible for the ECD scheme.

95 <http://www.des.sa.gov.au/funding-programs/dcsi-equipment-program>

96 <http://www.des.sa.gov.au/funding-programs/dcsi-equipment-program>

97 https://www.dhhs.tas.gov.au/service_information/services_files/RHH/treatments_and_services/community_equipment_scheme

98 https://www.dhhs.tas.gov.au/service_information/services_files/RHH/treatments_and_services/community_equipment_scheme

99 <https://swep.bhs.org.au/aids-and-equipment.php>

	Low vision aids	Home Enteral Nutrition	Communication Aids & Equipment
WA	Low vision aids are not provided in the <i>Community Aids and Equipment Program (CAEP)</i> ¹⁰⁰ .	<p><i>Community Aids and Equipment Program (CAEP)</i> - No reference to enteral feeding or equipment on their website</p> <p>No co-payment. Public patients are not charged for cost of feeds or equipment.</p>	<p>Communication aids and equipment are provided in the <i>Community Aids and Equipment Program (CAEP)</i>¹⁰¹.</p> <p>Only funds the essential component of the item, normally up to a ceiling. Items less than \$50 purchased by the client.</p> <p>Clients receiving home care packages or living in residential aged care not eligible.</p> <p>RACF residents in WA may be eligible to access communication aids and equipment via a Disability Equipment Grant (DEG) – funded by Lotteries West.</p>
Comments and key issues	<p>1. Inconsistent provision of support – Not all state/territory programs provide low vision aids and equipment.</p> <p>2. Inconsistent eligibility requirements.</p> <p>3. Different co-payment schemes.</p>	<p>Three broad items are of interest with respect to Home Enteral Nutrition: access to equipment; access to enteral nutrition formula; and access to the professional services of an Accredited Practising Dietitian.</p> <p>There is a lack of equity in access to home enteral nutrition products and services. The situation with respect to eligibility requirements and co-payments is highly variable, within jurisdictions and between jurisdictions.</p> <p>In most cases, individuals who are treated in private hospitals are excluded from outpatient HEN services despite the fact that private health funds do not provide rebates for products and provide only limited rebates for professional services.</p>	<p>1. Inconsistent provision of support. Inconsistency across states in relation to 'trial and loan' schemes and funding for adequate trial, training, and ongoing support. Most schemes however require evidence of successful trial before funding is approved.</p> <p>A with maintenance / repairs is inconsistent across states and when a client is eligible to reapply for a replacement communication aid or device.</p> <p>Inconsistency across the schemes in relation to whether or not mobile internet devices, apps, and low tech communication aids are funded. A national scheme should not preclude access to mainstream equipment, given their range of benefits.</p>

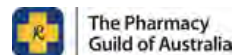
¹⁰⁰ <http://www.disability.wa.gov.au/services-support-and-eligibility/services-supports-and-eligibility-new/services/services-provided-by-the-commission/equipment-and-technology/community-aids-and-equipment-program-caep/>

¹⁰¹ <http://www.disability.wa.gov.au/services-support-and-eligibility/services-supports-and-eligibility-new/services/services-provided-by-the-commission/equipment-and-technology/community-aids-and-equipment-program-caep/>

	Low vision aids	Home Enteral Nutrition	Communication Aids & Equipment
			<p>2. Inconsistent / restrictive eligibility requirements.</p> <p>People over the age of 65 living in residential aged care or in receipt of home care packages are typically excluded from communication aids and equipment schemes. Where funding is available funding for trial, training, and ongoing support is inadequate.</p> <p>In some states, the applicant must be a pensioner and/or demonstrate financial hardship.</p> <p>3. Different co-payment requirements.</p> <p>Different co-payment requirements and caps for communication aids and equipment exist across states. The most appropriate device to maximize independence may be significantly more expensive relative to other aids and equipment (e.g. walking frames).</p> <p>4. Red tape / approval processes.</p> <p>Not all states have clear processes to establish priority.</p>

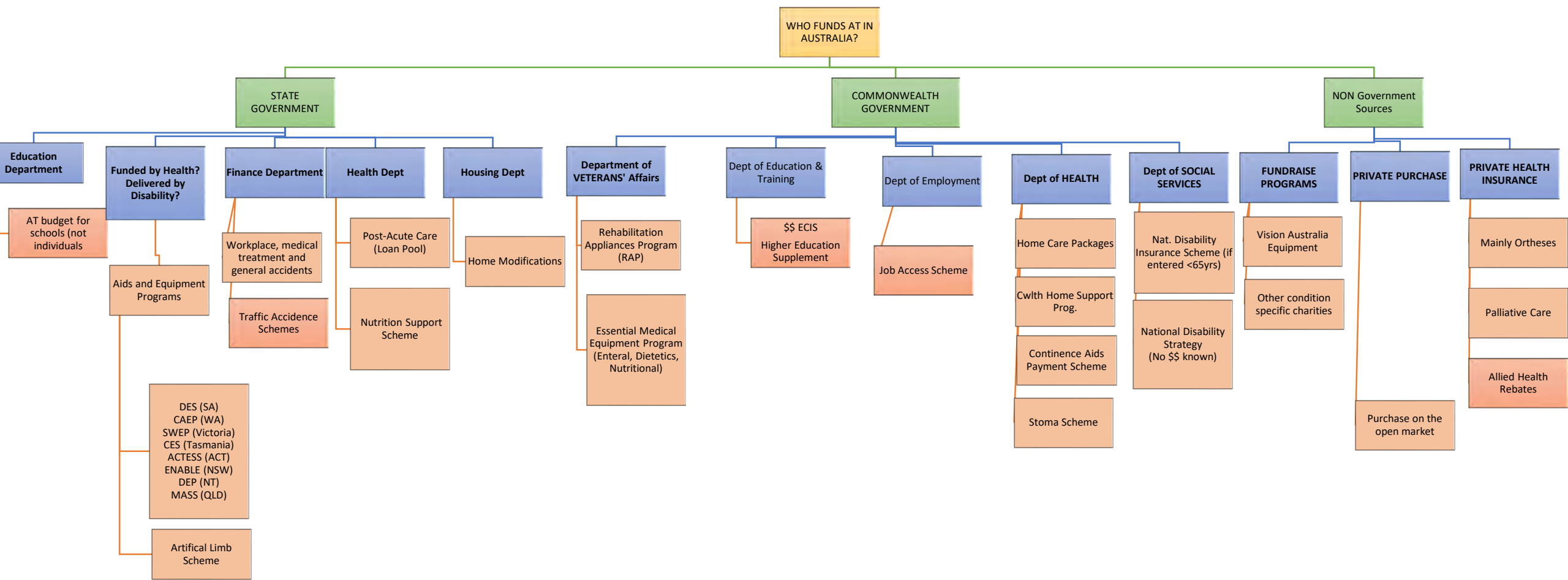
N A C A

The National Aged Care Alliance is the representative body of peak national organisations in aged care including consumer groups, providers, unions and professionals.



Appendix 4: Assistive Technology Funding Map (ARATA)

FULL FUNDING MAP as at JUNE 2018



References

- ¹ National Disability Insurance Agency. (2015). 'Assistive Technology Strategy', '2. Rationale for an AT strategy', P6.
- ² National Aged Care Alliance (2018) 'Assistive Technology for Older Australians Position Paper', accessed 16 September 2019, retrieved from <https://naca.asn.au/wp-content/uploads/2018/11/NACA_Assistive_Technology_for_Older_Australians_Position_Paper-1-June-2018.pdf>.
- ³ State of Victoria. (2018). 'People with a disability who experience violence, abuse or neglect', accessed 27 March 2019, retrieved from <https://www.betterhealth.vic.gov.au/health/servicesandsupport/people-with-a-disability-who-experience-violence-abuse-or-neglect>.
- ⁴ Parliament of Australia. (2014). 'Domestic, family and sexual violence in Australia: an overview of the issue', accessed 27 March 2019, retrieved from <https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1415/ViolenceAust>.
- ⁵ Attorney-General's Department. (2019). 'International Human Rights System', accessed 29 August 2019, retrieved from <<https://www.ag.gov.au/RightsAndProtections/HumanRights/Pages/International-Human-Rights-System.aspx>>.
- ⁶ Australian Law Reform Commission. (2014). 'Equality, Capacity and Disability in Commonwealth Laws', accessed 29 August 2019, retrieved from <<https://www.alrc.gov.au/publications/equality-capacity-and-disability-commonwealth-laws/legislative-and-regulatory-framework>>.
- ⁷ UN Enable. (2006). 'Convention on the Rights of Persons with Disabilities', Article 19: Living independently and being included in the community', accessed 3 September 2019, retrieved from <<https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/article-19-living-independently-and-being-included-in-the-community.html>>.
- ⁸ United Nations Enable. (2006). 'Convention on the Rights of Persons with Disabilities: Article 20 - Personal Mobility', accessed 29 August 2019, retrieved from <<https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/article-20-personal-mobility.html>>.
- ⁹ National Aged Care Alliance. (2016). 'Improving the Interface Between the Aged Care and Disability Sectors', accessed 16 September, retrieved from <<https://naca.asn.au/wp-content/uploads/2018/11/Improving-the-Interface-Between-the-Aged-Care-and-Disability-Sectors.pdf>>.
- ¹⁰ National Disability Insurance Agency. (2019). 'NDIS Operational Guidelines'. Retrieved from <<https://www.ndis.gov.au/about-us/operational-guidelines/access-ndis-operational-guideline/access-ndis-age-requirements>>.
- ¹¹ Productivity Commission. (2011). 'Disability Care and Support Inquiry Report Vol.1', accessed 22 October 2019, retrieved from <<https://www.pc.gov.au/inquiries/completed/disability-support/report/disability-support-volume1.pdf>>.
- ¹² National Disability Insurance Agency. (2019). 'NDIS Operational Guidelines'. Retrieved from <<https://www.ndis.gov.au/about-us/operational-guidelines/access-ndis-operational-guideline/access-ndis-age-requirements>>.
- ¹³ DPO Australia. (2019). 'CRPD Review Factsheet No.8: The National Disability Insurance Scheme (NDIS)'.
- ¹⁴ Productivity Commission. (2019). 'Study report: Review of the National Disability Agreement', accessed 24 September 2019, 'NDIS Operational Guidelines'. Retrieved from <<https://www.pc.gov.au/inquiries/completed/disability-agreement/report>>.
- ¹⁵ Council of Australian Governments. (2013). 'PRINCIPLES TO DETERMINE THE RESPONSIBILITIES OF THE NDIS AND OTHER SERVICE SYSTEMS'.
- ¹⁶ DPO Australia. (2019). 'CRPD Review Factsheet No.8: The National Disability Insurance Scheme (NDIS)'.
- ¹⁷ National Aged Care Alliance. (2018). 'Assistive Technology for Older Australians Position Paper', accessed 16 September 2019, 'NDIS Operational Guidelines'. Retrieved from <https://naca.asn.au/wp-content/uploads/2018/11/NACA_Assistive_Technology_for_Older_Australians_Position_Paper-1-June-2018.pdf>.sh
- ¹⁸ Department of Health. (2019). 'Commonwealth Continuity of Support Programme', accessed 30 August 2019, 'NDIS Operational Guidelines'. Retrieved from <<https://agedcare.health.gov.au/programs-services/commonwealth-continuity-of-support-programme>>.
- ¹⁹ Department of Health. (2019). 'Commonwealth COSPP Programme Manual - 'People who are not eligible', P11.
- ²⁰ 2019 CRPD Civil Society Shadow Report Working Group (2019) 'Disability Rights Now 2019: Shadow Report to the United Nations Committee on the Convention on the Rights of Persons with Disabilities', Purpose and general obligations (arts. 1-4', P12.
- ²¹ Commonwealth Department of Health. (2019). 'Commonwealth Home Support Programme Manual', P33.
- ²² Department of Treasury. (2019). 'National Injury Insurance Scheme', accessed 30 August 2019, retrieved from <<https://treasury.gov.au/programs-initiatives-consumers-community/niis>>.
- ²³ National Aged Care Alliance. (2018). 'Assistive Technology for Older Australians Position Paper', accessed 16 September 2019, retrieved from <https://naca.asn.au/wp-content/uploads/2018/11/NACA_Assistive_Technology_for_Older_Australians_Position_Paper-1-June-2018.pdf>.
- ²⁴ National Aged Care Alliance. (2018). 'Assistive Technology for Older Australians Position Paper', accessed 16 September 2019, retrieved from <https://naca.asn.au/wp-content/uploads/2018/11/NACA_Assistive_Technology_for_Older_Australians_Position_Paper-1-June-2018.pdf>.
- ²⁵ Commonwealth Department of Health. (2018). Commonwealth Home Support Programme Manual, 'Service type: Goods, Equipment and Assistive Technology', P39.

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- ²⁶ National Aged Care Alliance. (2018). 'Assistive Technology for Older Australians Position Paper', accessed 16 September 2019, retrieved from <https://naca.asn.au/wp-content/uploads/2018/11/NACA_Assistive_Technology_for_Older_Australians_Position_Paper-1-June-2018.pdf>.
- ²⁷ Department of Health. (2018). 'Commonwealth Home Support Programme Manual', 'Service type: Goods, Equipment and Assistive Technology', P50.
- ²⁸ National Disability Insurance Agency. (2015). 'A Framework for Information, Linkages and Capacity Building', 'How will access to ILC work?', P8.
- ²⁹ National Disability Insurance Agency. (2015). 'A Framework for Information, Linkages and Capacity Building', 'LAC Working with Individuals', P14.
- ³⁰ Parliamentary Joint Committee on Human Rights. (2013). 'National Disability Insurance Scheme Bill 2012: Committee View', accessed 31 October 2019, retrieved from <https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Human_Rights/Scrutiny_reports/2013/2013/12013/c08>
- ³¹ Parliament of Australia. (2017). 'Delivery of Outcomes under the National Disability Strategy 2010-2020 to Build Inclusive and Accessible Communities', '4. Barriers and solutions' accessed 16 September 2019, retrieved from <https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/%20Community_Affairs/AccessibleCommunities/Report/c04>.
- ³² Community Care Review. (2019). 'Home care queue drops but 120,000 still waiting', accessed 24 November 2019 <<https://www.australianageingagenda.com.au/2019/09/19/home-care-queue-drops-but-120000-still-waiting/>>.
- ³³ Council on the Ageing Australia. (2019). 'Policy-Alert-No-16-COTA-Response-to-Federal Budget 2018-2019', accessed 24 November 2019, retrieved from <<https://static1.squarespace.com/static/598d301fbefafb69f8d0bb5a/t/5b04e71803ce649de6aa9043/1527047977474/Policy-Alert-No-16-COTA-Response-to-Budget-May-2018.pdf>>.
- ³⁴ Department of Social Services. (2019). '2019 review of the NDIS Act and the new NDIS Participant Service Guarantee', accessed 3 September 2019, retrieved from <<https://www.dss.gov.au/disability-and-carers-programs-services-for-people-with-disability-national-disability-insurance-scheme/2019-review-of-the-ndis-act-and-the-new-ndis-participant-service-guarantee>>.
- ³⁵ Australian Rehabilitation and Assistive Technology Association (ARATA). (2016). 'Statement on Good Practice (2016)', accessed 1 November 2019, retrieved from <https://www.arata.org.au/public/33/files/Presentations%20&%20resources/AATC2016_StatementOnGoodPractice.pdf>
- ³⁶ World Health Organisation. (2018). 'Assistive technology: key facts', accessed 1 November 2019, retrieved from <<https://www.who.int/news-room/fact-sheets/detail/assistive-technology>>
- ³⁷ Standards Australia. (2018). 'AS/ISO 9999 Assistive products for persons with disability — Classification and terminology', accessed 1 November 2019, retrieved from <https://infostore.saiglobal.com/en-au/Standards/AS-ISO-9999-2018-1128769_SAIG_AS_AS_2618344/>
- ³⁸ Australian Rehabilitation and Assistive Technology Association (ARATA). (2016). 'ARATA Statement on Good Practice (2016)', accessed 1 November 2019, retrieved from <https://www.arata.org.au/public/33/files/Presentations%20&%20resources/AATC2016_StatementOnGoodPractice.pdf>