

Emily Steel  
Senior Lecturer (Human Services) | School of Health and Wellbeing  
Faculty of Health, Engineering and Sciences  
The University of Southern Queensland | Ipswich Campus



████████████████████  
████████████████████  
14 September 2018

Submission to the Joint Standing Committee on the National Disability Insurance Scheme

**Re: Inquiry into the provision of assistive technology**

**Summary**

- Assistive technology (AT) is generally understood to include both assistive products and AT services. The NDIA could enhance participant choice and outcomes from AT provision by defining assistive products and AT services, and developing policy in relation to AT services.
- For many people with disability, AT is a pre-requisite for choice. The NDIA should ensure timely acquisition and use of AT for participants is accompanied by ongoing advice and support to develop participants' skills in self-management and respond quickly to changes in the context of AT use.
- Workforce capacity development is required in generalist and specialist habilitation and rehabilitation (including AT provision). The NDIS Quality and Safeguards Commission should develop a national accreditation system for AT practitioners.

I write to the Standing Committee as an academic and one of the directors of Rights and Inclusion Australia (RIA). Over the past ten years, my research and teaching has focused on assistive technology policies and practices in Australia and internationally. I am a registered occupational therapist and have represented Standards Australia on the ISO Technical Committee 173 Working Group 10 (cognitive accessibility) and Occupational Therapy Australia on Standards Australia Committee ME-067 (assistive products).

Yours sincerely

Emily Steel PhD, MSc(Hons), BOccThy  
Senior Lecturer (Human Services) | School of Health and Wellbeing  
Faculty of Health, Engineering and Sciences

## **Introduction**

Access to assistive technology (AT) is recognised as critical for the inclusion of people with disability in societies <sup>1</sup>. A detailed analysis of AT policy documents produced by the NDIA revealed a focus on product procurement and cost-containment, while the persistent problems with the AT workforce capacity and systemic issues of service quality remain unaddressed <sup>2</sup>. Research demonstrates that coordination and planning is required to address bureaucratic and service fragmentation barriers to efficiency, yet the role of coordinating and planning is not mentioned in the NDIA's AT policy documents.

## **Defining assistive technology as products and services**

Although not defined in Australian law, AT is generally understood to include both products and services. Section 3(3) of the *Assistive Technology Act 2004* (ATA) in the United States of America (USA) defines AT as "technology designed to be utilised in an assistive technology device or assistive technology service". Assistive products include mainstream and specially-designed products that make activities easier or possible, while AT services identify and match these to the needs and context of individuals <sup>3</sup>.

In Australia, assistive products are often called 'assistive devices' or 'aids and equipment' <sup>4</sup>, despite the terminology of "assistive technology" being adopted by most other countries in the 1990s <sup>5</sup>. In their Operational Guidelines <sup>6</sup>, the NDIA define assistive technology as "a product that allows a participant to perform tasks that they would otherwise be unable to do" <sup>6</sup>, also known as 'aids' or 'equipment'. This definition is inconsistent with international terminology, and reinforces traditional notions of AT as specialised products for people with disability, potentially excluding universally designed products that may be more cost-effective and less socially stigmatizing <sup>7</sup>.

Terminology and categories relating to AT in the NDIA's AT Strategy are inconsistent and undefined <sup>8</sup>. Terms used include: innovative technology, technology solutions, technological solutions, disruptive technologies, new and mainstream technologies, aids and equipment, devices, assistive products, and software. Inconsistent terminology can contribute to difficulties collecting and analysing data related to AT provision <sup>9,10</sup>. The lack of legislated definitions in Australia and inconsistency in terminology by the NDIA risks errors of omission and poor outcomes from AT provision by neglecting AT services.

## **Choice and the process of becoming an AT user**

AT policies and practices are focused on assistive products, overshadowing the process of becoming an AT user and importance of relationships with service providers. People with disability often engage in protracted interactions and negotiations to acquire and sustain working assistive products that enable both basic function (e.g. communication, mobility) and social and economic participation (e.g. employment, recreation) <sup>11</sup>. The learning curve is much steeper for some people with disability because of a history of institutionalisation and other exclusionary practices that limited their opportunities to develop general life skills such as literacy and financial management. Conditions for realising choice could be enabled in policy by re-framing choice as both a means and an end, recognising that AT itself enhances individuals' opportunities make choices on an equal basis to others in society.

### ***AT provision policies and processes***

The failure of policies in Australia to deliver equitable access to, and optimal outcomes from AT was highlighted during consultation on the National Disability Strategy 2010-2020<sup>12</sup>. An assessment of the quality of habilitation and rehabilitation services in the NDIS, including AT provision, requires data not only on participant outcomes, but also on the policies and practices<sup>13</sup>. The separation of AT from overall planning process, and the NDIA's policy emphasis on assistive products limits opportunities for evaluating the quality of AT services and comparing the cost-effectiveness funded supports in participant plans<sup>14</sup>.

High rates of non-use and abandonment of assistive products, reported to range from 29-90%, have been reported in several studies investigating AT outcomes<sup>15,16</sup>. Non-use of assistive products can be attributed to many contextual factors and the quality of AT services, including opportunities to trial and be trained to use assistive products, ongoing maintenance, and social support<sup>17</sup>. Researchers have suggested that greater emphasis on AT services may reduce rates of non-use<sup>18</sup> and promote effective allocation of funding for assistive products and other resources<sup>19,20</sup>. The rollout of the NDIS provides an opportunity for Australia to adopt international frameworks for assuring availability and accessibility of affordable high-quality assistive technology<sup>21</sup>. Data are required to quantify the influence of factors such as practitioner qualifications, assessment and training procedures, opportunities for trialling assistive solutions, and consideration of user goals<sup>19</sup>.

### ***Legacy issues from state-based systems***

People with disability have expressed a desire to access practitioners and resources throughout the processes of AT provision, and to gain knowledge and be actively involved in deciding on AT solutions<sup>22</sup>. This is difficult to realise in Australia's state-based AT provision systems such as MASS and CAEATI that "operate within a Prescriber Model"<sup>23</sup>. The term 'prescription' is a symbol of entrenched and legitimised power in these approaches, positioning professionals as authorising agents and gatekeepers to AT.

The state-based AT systems are inconsistent with the objects and principles of the NDIS Act, 2013, and provide no framework or monitoring capacity for the assessment of needs, coordination and implementation of interventions, follow-up and maintenance, or measurement of outcomes. While some of the delays in AT provision may be unavoidable given Australia's reliance on imported assistive products<sup>24</sup>, it is likely that many are the result of processes that necessitate a greater investment of time in documenting product costs. The reliance on trials of assistive products is due, in part, to a lack of systematic practices in AT selection has led to a predominance of trial-and-error approaches. Formal instruments may be used to guide or document AT assessment<sup>25</sup>, but practice is often unstructured and guided only by practitioners' knowledge and past experiences<sup>26</sup>.

### **Workforce capacity**

The NDIA gives guidance on AT services that may be funded as part of participants' approved plans<sup>6</sup>. These include "expert assessment, assistance with selection, fitting, configuring and training where these services are not otherwise available as part of the purchase price or part of the standard service offering"<sup>6</sup>. The statement that "expert assessment and assistance is to be provided by a person with appropriate qualifications and experience in that particular type of assistive technology" implies that expertise is in relation to products, rather than particular services or general professional skills and ethics. It is unclear how the NDIA operationalises this expectation given the lack of a national qualification or credential to recognise specific AT knowledge, skills or experience in Australia<sup>27</sup>.

Information about assistive products is necessary but insufficient to support NDIS participants to obtain and sustain AT and reach their goals. NDIS participants are expected to use information-rich databases to make rational choices that link together the AT services and assistive products they require and, as a by-product, reduce transaction costs. This is despite research consistently debunking rational choice theory and claims that choice improves equity and efficiency in complex public services<sup>2</sup>.

Adequate AT provision necessitates knowledge and skills to assess individual needs and the interaction of AT with other formal and informal supports in a participant's plan<sup>21</sup>. To implement quality services, significant workforce development is required. This includes both pre-professional education and continuing professional development for health professionals and vocational training and support for technicians and administrators. There are opportunities for Australia to adopt good practices in education and practice (and recognition schemes) from professional bodies in North America<sup>28</sup>.

### **The need for a national credentialing and accreditation system**

The Australian Rehabilitation and Assistive Technology Association (ARATA) and Assistive Technology Suppliers Australia (ATSA) jointly sponsored a project (funded by the Department of Families, Housing, Community Services and Indigenous Affairs through the NDIS Practical Design Fund) to present options for developing a credentialing and accreditation system for assistive technology practitioners and suppliers in Australia. Consultations produced feedback from more than 65 local and international organisations and individuals, providing broad support for the resulting Options Paper<sup>27</sup>.

The Options Paper summarizes the evidence in favour of a regulatory scheme for the provision of assistive technology, including (paraphrased from p.8)

- Decreased abandonment of assistive products;
- Increased availability of skilled practitioners through triage based on risk and complexity;
- Improved knowledge transfer and coordination in the sector; and
- Consensus on competencies necessary for assistive technology provision.

The Options Paper recommended a three-stage process (p.12) to develop and establish a National Assistive Technology Credentialing and Accreditation System by July 2016 to enable an evaluation by June 2018. The recommendations were not actioned.

## References

1. United Nations. *Convention on the Rights of Persons with Disabilities and Optional Protocol*. United Nations;2006.
2. Steel EJ. *The right choice? An interpretive policy analysis of assistive technology in Australian disability services*. St Lucia: TC Beirne School of Law, The University of Queensland; 2017.
3. Cook AM, Polgar JM. Chapter 1 - Principles of Assistive Technology: Introducing the Human Activity Assistive Technology Model. In: Cook AM, Polgar JM, eds. *Assistive Technologies*. 4th ed. St. Louis, MO: Mosby; 2015:1-15.
4. National Aids and Equipment Reform Alliance. *Submission to the Productivity Commission Inquiry into a Long Term Disability Care and Support Scheme*. Sept 10 2010.
5. Heerkens YF, Bougie T, de Kleijn-de Vrankrijker MW. Classification and terminology of assistive products. In: Stone JH, Blouin M, eds. *International Encyclopedia of Rehabilitation*. Buffalo, NY: Center for International Rehabilitation Research Information and Exchange; 2010.
6. National Disability Insurance Agency. *Operational Guideline – Planning and Assessment – Supports in the Plan – Assistive Technology v1.0*. 16 Jan 2014.
7. Bauer S, Elsaesser L-J. Integrating medical, assistive, and universally designed products and technologies: assistive technology device classification (ATDC). *Disabil Rehabil Assist Technol*. 2012;7(5):350-355.
8. National Disability Insurance Agency. *Assistive Technology Strategy*. 26 Oct 2015.
9. Scherer MJ. Technology adoption, acceptance, satisfaction and benefit: integrating various assistive technology outcomes. *Disabil Rehabil Assist Technol*. 2017;12(1):1-2.
10. Smith RO. The Emergence and Emergency of Assistive Technology Outcomes Research Methodology. *Assistive Technology Outcomes and Benefits*. 2016;10(1):19-37.
11. Steel EJ. Understanding assistive technology as a pre-requisite for choice and participation. *Journal of Occupational Science*. 2018:1-12.
12. National People with Disabilities and Carers Council. *Shut Out: the experience of people with disabilities and their families in Australia - National Disability Strategy Consultation Report*. Commonwealth Government;2009.
13. Donabedian A. The quality of care: How can it be assessed? *JAMA: The Journal of the American Medical Association*. 1988;260(12):1743-1748.
14. Steel EJ. Content analysis to locate assistive technology in Queensland's motor injury insurance rehabilitation legislation and guidelines. *Assist Technol*. 2018:1-5.
15. Martin JK, Martin LG, Stumbo NJ, Morrill JH. The impact of consumer involvement on satisfaction with and use of assistive technology. *Disabil Rehabil Assist Technol*. 2011;6(3):225-242.

16. Peterson DB, Murray GC. Ethics and assistive technology service provision. *Disabil Rehabil Assist Technol*. 2006;1(1-2):59-67.
17. Wessels RD, Dijcks B, Soede M, Gelderblom GJ, De Witte LP. Non-use of provided assistive technology devices, a literature overview. *Technol Disabil*. 2003;15(4):231-238.
18. Scherer MJ. Outcomes of assistive technology use on quality of life. *Disabil Rehabil*. 1996;18(9):439-448.
19. Lenker JA, Harris F, Taugher M, Smith RO. Consumer perspectives on assistive technology outcomes. *Disabil Rehabil Assist Technol*. 2013;8(5):373-380.
20. Sund T, Iwarsson S, Andersen MC, Brandt Å. Documentation of and satisfaction with the service delivery process of electric powered scooters among adult users in different national contexts. *Disabil Rehabil Assist Technol*. 2013;8(2):151-160.
21. de Witte L, Steel EJ, Gupta S, Ramos VD, Roentgen U. Assistive technology provision: towards an international framework for assuring availability and accessibility of affordable high-quality assistive technology. *Disabil Rehabil Assist Technol*. 2018;13(5):1-6.
22. de Jonge DM, Layton NA, Vicary F, Steel EJ. Motivations And Incentives: Exploring Assistive Technology Service Delivery From The Perspectives Of Multiple Stakeholders. Paper presented at: New Frontiers in Assistive Technology2015; Denver CO.
23. Queensland Health. *Medical Aids Subsidy Scheme (MASS) Community Aids Equipment and Assistive Technology Initiative (CAEATI) Guidelines*. April 2015.
24. Queensland Competition Authority. *Final Report: Price Disparities for Disability Aids and Equipment*. Queensland Competition Authority; February 2014.
25. Steel EJ, Gelderblom GJ, de Witte LP. Linking Instruments and Documenting Decisions in Service Delivery Guided by an ICF-Based Tool for Assistive Technology Selection. In: *Computers Helping People with Special Needs, Proceedings, Pt 1*. Vol 6179.2010:537-543.
26. Friederich A, Bernd T, De Witte LP. Methods for the selection of assistive technology in neurological rehabilitation practice. *Scandinavian Journal of Occupational Therapy*. 2010;17(4):308-318.
27. Summers MP, Walker L. *National Credentialing and Accreditation for Assistive Technology Practitioners and Suppliers An Options Paper*. 2013.
28. Rehabilitation Engineering and Assistive Technology Society of North America. *Professional Development - Continuing Education*. <http://resna.org/professional-development/professional-development-continuing-education>. Accessed April 28, 2011.