

1 What are Australian Standards about?

A number of Australian standards have been developed to cover technology for the aged and people with disabilities. 'Performance standards' such as AS3695 set a recognized minimum benchmark for the performance of equipment that includes safety, strength and durability. In some cases the test methods in the standards can be used by manufacturers to evaluate their products beyond the minimum requirements to facilitate product comparison.

Australian standards increasingly match (ie harmonise) international standards (ISO/IEC) or standards in other jurisdictions (eg EU Standards). This facilitates trade across borders while still specifying equivalent benchmarks. Australia remains active on the ISO Committee that is focused on development of international standards to ensure that such standards are suitable for an Australian context.

2 Are Australian Standards mandatory for assistive technology?

No. Standards are prepared and published drawing on the expertise of a wide range of contributors. Only when they are included within legislative frameworks (eg an Act or regulation) do they become mandatory. The Standard for Access to Premises (AS1428) was incorporated into the Building Code of Australia and is now mandatory. Currently no assistive technology standard is mandatory, and consumers are only protected through the Consumer Protection Acts that require products to be 'fit for purpose'. Standards can be used by purchasers as a component of their purchasing requirements (eg Medical Aids Subsidy Scheme (MASS) in Queensland, and WA Health).

3 Do all Governments purchase Standards tested equipment?

No. Queensland was a leader and, under its MASS procurement process, requires all suppliers to demonstrate compliance (through independent testing) with the relevant Australian standard. Within the last two years Western Australia has also made standards compliance a requirement for equipment they purchase through their Health Department. Other states and territories are not as rigorous in their requirement for standards compliance, often just indicating a preference for standards tested equipment. Interestingly, all jurisdictions require hospital beds to meet the relevant Australian standard before purchase, but not a power wheelchair.

4 Does compliance with appropriate standards matter or is it cost prohibitive?

Standards have been set by consensus to establish agreed minimum benchmarks. As noted before, a product that passes independent testing to such a standard is more likely to be safe and meet the intended use over a reasonable life cycle.

Since 1990, research has demonstrated that Standard's compliant assistive technology is more cost effective to purchase, maintain and own. Hartridge & Seeger (1990) calculated that average annual running cost of standards compliant power wheelchairs were 3.5% of the purchase price, compared to 32% for non-compliant chairs. The cost difference between the two designs involved was estimated at \$10 per item (assuming 250 chairs sold).

Subsequent studies in the USA have shown very strong links between standards compliance and reduced premature failure and maintenance costs^{2,3}. Some of the most recent studies have found 'large variations in the test results from the electric powered wheelchairs that we tested, raising concern for users' safety and the long-term durability of these devices' (Pearlman et al 2005, p2369).

5 What should be done?

Australian government purchasers have an obligation to ensure that equipment purchased is safe to use and fit for purpose. Current standards exist that can deliver this requirement, not hinder innovation or product development, and ensure end-users can rely on the technology they receive.

With the renegotiation of the CSTDA, an opportunity exists to begin to establish minimum requirements for equipment schemes that assist people with disabilities and the aged to receive the equipment they need. This agreement should require that:

1. All Assistive Technology purchased by government in Australia be procured with input from a professional engineer able to advise on the technical aspects of its safety, strength and durability.
2. Where a relevant Australian standard exists, independently verified compliance with that Standard should form the minimum requirement for assistive technology that is purchased by government sources.
3. Purchase of items that do not meet these minimum requirements should only occur for an individual with a demonstrated clinical need that can not be met by equipment meeting the Standards. In such cases an appropriate risk assessment should be undertaken to protect the interests of the consumer.

Dr Lloyd Walker
DIRECTOR – RESEARCH, TECHNOLOGY & INNOVATION

References

1. Hartridge M & Seeger B (1990) *International Wheehchair Standards: A study of costs and benefits*. Assist Technology 2:117-123
2. Cooper RA, Gonzalez J, Lawrence B, Renschler A, Boninger ML, Van Sickle DP (1997) Performance of selected lightweight wheelchairs on ANSI/RESNA rests. Arch Phys Med Rehabil ;78:1138-44.
3. Cooper RA, Robertson RN, Lawrence B, Heil T, Albright SJ, VanSickle DP (1996). *Life-cycle analysis of depot versus rehabilitation manual wheelchairs*. J Rehabil Res Dev; 33:45-55.
4. Pearlman JL, Cooper RA, Karnawat J, Cooper R & Boninger ML (2005) *Evaluation of the Safety and Durability of Low-Cost Nonprogrammable Electric Powered*

Wheelchairs, Archives of Physical Medicine and Rehabilitation, v86(12) 2361-2370

Worthwhile websites: www.novitatech.org.au/test
www.herlpitt.org/publications.htm