
Improving access to assistive technology

Report by the Director-General

1. In May 2016, the Executive Board at its 139th session noted an earlier version of this report.¹ At that session, the Board agreed to include the item in the “rolling agenda” of the Board. At the 140th session of the Board in 2017, the Officers of the Board agreed to defer consideration of the item to the Board’s session in January 2018.² This updated version takes into account input from Member States following discussions at the Board.

THE NEED FOR ASSISTIVE TECHNOLOGY

2. **Assistive technology**, a subset of health technology, refers to assistive products and related systems and services developed for people to maintain or improve functioning and thereby promote well-being. It enables people with difficulties in functioning to live healthy, productive, independent and dignified lives, participating in education, the labour market and social life. It can reduce the need for formal health and support services, long-term care and the burden on carers. Without assistive technology, people with disabilities and older people and others in need are often excluded, isolated and locked into poverty, and the burden of morbidity and disability increases.

3. **Assistive products** include any external product whose primary purpose is to maintain or improve an individual’s functioning and independence and thereby promote his or her well-being. They include wheelchairs, hearing aids, walking frames, spectacles, pill organizers and prosthetic legs, as well as assistive information and communication technology such as memory aids, specialized computer hardware and software, augmentative and alternative communication, and customized telephones. Assistive products are essential tools: to compensate for an impairment/a loss of intrinsic capacity, to reduce the consequences of gradual functional decline, to reduce the need for carers, for primary and secondary prevention, and to help to rationalize health and welfare costs.

4. WHO estimates that there are more than 1000 million people who would benefit from one or more assistive products. With populations ageing and the prevalence of noncommunicable diseases rising across the world, this number is likely to rise above 2000 million by 2050, with many older people needing two or more products as they age. Those who most need assistive technology include, among others: people with disability, older people, people with noncommunicable diseases, people

¹ Document EB139/4; see also document EB139/2016/REC/1, summary records of the Executive Board at its 139th session, second meeting.

² See document EB140/1 (annotated).

with mental health conditions including dementia and autism, and people with gradual functional decline.

5. As at 6 September 2017, a total of 175 Member States had ratified the United Nations Convention on the Rights of Persons with Disabilities since its adoption in 2006. Ratification means that they are obliged to ensure access to assistive technology at an affordable cost and to foster international cooperation in order to achieve this (Articles 4, 20, 26 and 32).

6. In 2015, United Nations Member States endorsed the Sustainable Development Goals. Universal health coverage is central to Goal 3 (Ensure healthy lives and promote well-being for all at all ages), and equitable and affordable access to assistive products needs to be an integral part of universal health coverage if the Sustainable Development Goals are to be attained.

7. Today only 1 in 10 people in need have access to assistive products, owing to high costs and a lack of financing, availability, awareness and trained personnel.¹ For example, 70 million people need a wheelchair² but only 5–15% have access to one, and hearing aid production meets only 10% of global need and 3% of the need in low-income countries.³ Moreover, 200 million people with low vision do not have access to spectacles or other low-vision devices.

8. Awareness needs to be raised and sustained about the existence of affordable assistive products and that their use can be a cost-effective intervention to reduce disease and disability burden. Member States need to encourage the integration of assistive products into services at the district, subdistrict and primary health care levels as a move towards universal health coverage.

9. At a high-level meeting of the sixty-eighth session of the United Nations General Assembly on disability and development (New York, 23 September 2013), stakeholders requested WHO to develop and coordinate a global initiative to support Member States in realizing their obligations in the Convention on the Rights of Persons with Disabilities towards increasing access to assistive technology. Following a consultative meeting (Geneva, 3 and 4 July 2014), the Secretariat established the Global Cooperation on Assistive Technology in partnership with international organizations, donor agencies, professional organizations, academic institutions and user groups.

10. This Global Cooperation has one goal: to improve access to high-quality, affordable, assistive products globally. It will support the WHO global disability action plan 2014–2021,⁴ which inter alia urges Member States to develop policy, financing mechanisms and standards in order to increase access to assistive technology (objective 2). It also supports the Global strategy and plan of action on ageing and health 2016–2020, which was adopted by the Sixty-ninth World Health Assembly in 2016.⁵ Strategic objective 2.1 in the action plan calls on Member States inter alia to provide

¹ Assistive technology. Fact sheet. Geneva: World Health Organization; 2016 (<http://www.who.int/mediacentre/factsheets/assistive-technology/en/>, accessed 6 October 2017).

² Guidelines on the provision of manual wheelchairs in less-resourced settings. Geneva: World Health Organization; 2008 ([http://www.who.int/disabilities/publications/technology/English%20Wheelchair%20Guidelines%20\(EN%20for%20the%20web\).pdf?ua=1](http://www.who.int/disabilities/publications/technology/English%20Wheelchair%20Guidelines%20(EN%20for%20the%20web).pdf?ua=1), accessed 2 October 2017). The estimate in the guidelines of 65 million has been adjusted in line with the growth in the global population.

³ Deafness and hearing loss. Fact sheet. Geneva: World Health Organization; 2017 (<http://www.who.int/mediacentre/factsheets/fs300/en/>, accessed 2 October 2017).

⁴ See document WHA67/2014/REC/1, resolution WHA67.7 (2014) and Annex 3.

⁵ See document WHA69/2016/REC/1, resolution WHA69.3 (2016) and Annex 1.

appropriate assistive products to “enable older people to retain the maximum level of control over their lives despite significant loss of capacity”. It calls on the Secretariat to provide a list of essential assistive products to support this objective.

11. The goal of the WHO global action plan for the prevention and control of noncommunicable diseases 2013–2020 is to reduce the preventable and avoidable burden of morbidity, mortality and disability due to noncommunicable diseases.¹ Assistive technology plays a key role in the reduction and prevention of morbidity and disability; for example, therapeutic footwear reduces the incidence of foot ulcers, preventing lower-limb amputations and thus lowering the significant burden on health systems that these both incur.

12. Assistive technology also contributes to the implementation of WHO’s comprehensive mental health action plan 2013–2020,² particularly in enabling people to participate fully in society and live in the community.

13. Increasing access to assistive technology will also support the Secretariat’s activities in tackling other major contributors to the global burden of disease, including road traffic injuries, violence and conflicts, birth defects, poliomyelitis, leprosy, Buruli ulcer and Zika virus infection, as seen in the recent rise in the number of cases of microcephaly and Guillain–Barré syndrome.

IMPACT OF ASSISTIVE TECHNOLOGY

14. The impact of assistive technology goes far beyond the benefits of health and well-being to individual users and their families. It also has socioeconomic benefits, by reducing direct health and welfare costs (such as hospital admissions or state benefits), enabling a more productive labour force, and stimulating economic growth. Some examples are shown below.

- Proper use of hearing aids by young children leads to improved language skills, without which a person with hearing loss has severely limited opportunities for education and employment.
- Appropriate wheelchairs increase access to education and employment, and their use reduces health care costs owing to a reduction in the risk of pressure sores and contractures.³
- The risk of falls in older people can be lowered by managing declines in intrinsic capacity, including reduced vision, hearing and mobility.⁴

15. Assistive technology can enable older people to continue to live at home and can delay or prevent the need for long-term care.

¹ See document WHA66/2013/REC/1, resolution WHA66.10 (2013) and Annex 4.

² See document WHA66/2013/REC/1, resolution WHA66.8 (2013) and Annex 3.

³ Guidelines on the provision on manual wheelchairs in less resourced settings. Geneva: World Health Organization; 2008 (<http://www.who.int/disabilities/publications/technology/wheelchairguidelines/en/>, accessed 2 October 2017).

⁴ World report on ageing and health. Geneva: World Health Organization; 2015 (http://apps.who.int/iris/bitstream/10665/186463/1/9789240694811_eng.pdf?ua=1, accessed 2 October 2017).

CHALLENGES IN ACCESS TO ASSISTIVE TECHNOLOGY

16. The *World report on disability*¹ provided the evidence to substantiate empirically the unmet need globally for assistive technology of all varieties. Many people have little or no access to basic assistive products such as hearing aids, even in some high-income countries. Where available, an astonishingly high proportion of assistive products are abandoned by users (estimates run as high as 75%). The challenges are outlined below.

17. **Research and development.** To date, most research and development in the area of assistive technology has focused only on assistive products and is specific to high-income contexts. There is an urgent need for research and development to be driven by the needs of the diverse users and contexts around the globe, and for more focus on the workforce and service provision. There is increasing interest and investment in robots and other high-end assistive products. This should complement and not detract from efforts to ensure that basic, low-technology assistive products are available to everyone, including efforts to develop new products as well as those aimed at increasing the evidence base for the effectiveness of existing basic, low-technology assistive products, including individual and cost-level impacts.

18. **Standards and regulation.** There is also a lack of adequate regulation and oversight and there is a need for countries to adopt regulatory mechanisms to ensure that assistive products on the market meet the relevant standards and are safe and effective. For some assistive products, there are only international standards and they are often more specific to high-income settings. There is a need for quality and safety standards that are appropriate for diverse settings, especially rural environments. There is a similar need for standards for service provision (see paragraph 22).

19. **Manufacturing.** There are challenges regarding the quality, quantity and sustainability of assistive products manufacturing. There is also a lack of context-appropriate product design. Assistive products are often manufactured using parts that are not replaceable locally, for example, hearing aid batteries and wheelchair tyres. This contributes to high abandonment rates. Assistive products need to be manufactured with parts that can be repaired, maintained and replaced locally.

20. **Selection, pricing and reimbursement.** There is a lack of awareness among service providers and users about the range of available products and their benefits. Affordable access to assistive technology needs governmental commitment to adequate and sustained financing. Where this does not exist, it leads to high out-of-pocket payments that are a burden for users and their families. People from the poorer sectors of society are often forced to rely on donations or charitable services: these often comprise distribution of large quantities of low-quality or used products that are inappropriate for the user or the setting and are not maintainable, repairable or replaceable locally.

21. **Procurement and supply.** A comprehensive large-scale or national procurement system for assistive products is lacking in many countries and therefore only a limited range of users benefit from a limited range of such products. There are often challenges in ensuring a reliable supply of assistive products and their replacement parts, including batteries, due to problems related to funding, logistics or customs and excise. There is a need for coordinated and large volume procurement, as well as waivers on import duties, in order to reduce costs. Long-term planning and sustainable systems need to be in place to ensure a reliable supply of assistive products and their replacement parts.

¹ World report on disability. Geneva: World Health Organization; 2011 (http://www.who.int/disabilities/world_report/2011/en/, accessed 2 October 2017).

22. **Service provision.** There is a need for standards that provide guidance on the essential elements of a quality assistive products service. Assistive products are often accessed without assessment and prescription, fitting, user training or mechanisms for follow-up, maintenance and repair. These are essential components of service provision, and should follow the overarching principles of people-centred health services¹ in order for the needs of the user to be fully met. Without these key steps, assistive products are often of no benefit, abandoned or even cause physical harm, all of which result in extra health care costs. There are insufficient personnel at all levels of the health system with the required knowledge and skills to provide assistive products. Where people can get access to assistive products through health or welfare systems, such services are often stand-alone and fragmentary. People are often forced to attend multiple appointments at different locations, a chain of events that is costly and adds to the burden on both carers and health and welfare budgets.

23. **Health emergencies.** There is often a surge in demand for assistive products during and after health emergencies related to natural disasters or conflict: people with pre-existing needs often lose their assistive products during the emergency and many of the people injured require these products for the first time. The situation relating to donations (see paragraph 20) is often exacerbated in health emergencies. Integrating provision of assistive products into emergency response planning and programmes can facilitate earlier hospital discharge and prevent excess morbidity. Products need to be appropriate for the setting and mechanisms for follow-up, maintenance and repairs established or rebuilt. Robust coordination mechanisms are needed to ensure that assistive products are procured and provided appropriately.

IMPROVING ACCESS: THE SECRETARIAT'S RESPONSE

24. The Secretariat has many years of experience in working with countries in making health products affordable and accessible, particularly through the development of norms and standards, work on regulatory strengthening, procurement strategies and policy guidance, including pricing and selection. This experience has shaped the focus of the Global Cooperation on Assistive Technology initiative on four interlinked components (detailed below) within the framework of universal health coverage.

Policy

25. The Secretariat is developing tools and providing technical support to Member States, at their request, in developing national assistive technology and rehabilitation programmes, policies and strategic plans. An assistive technology policy framework is being prepared to support this process, with good-practice examples. The framework will include an assistive technology assessment toolkit and financing models, such as health and welfare insurance programmes, to ensure the sustainability of service provision and universal access. It will also include guidance on implementation of the priority assistive products list, minimum standards, appropriate training and service provision.

Products

26. The priority assistive products list was launched during a side event at the Sixty-ninth World Health Assembly in 2016.² The priority assistive products list is not restrictive, but aims to provide

¹ See document A69/39.

² Priority assistive products list. Geneva: World Health Organization; 2016 (http://who.int/phi/implementation/assistive_technology/EMP_PHI_2016.01/en/, accessed 2 October 2017).

Member States with a model from which to develop a national priority assistive products list according to national need and available resources, modelled along the lines of the WHO Model List of Essential Medicines.

27. The Secretariat is developing an assistive technology procurement manual to provide Member States with guidance on the procurement of assistive products, including technical specifications of assistive products on the priority assistive products list. The Secretariat will provide support to Member States at their request for regulatory strengthening, product selection and procurement, and in exploring possibilities for local and/or regional manufacture.

28. The Secretariat has published standards for emergency medical teams that include guidance on the range of assistive products that they should provide. Further guidance will soon be published on the coordination of assistive products procurement and provision in emergency response.

Personnel

29. The Secretariat will provide support to Member States in building the capacity of their health workforces through an assistive products training package. The aim is to expand the skill set of existing health personnel (including those working in rehabilitation, nurses and community health workers) in order to provide a range of basic assistive products at the primary health care or community level. For assistive products that require specialist training (such as prostheses or spectacles for low vision), the Secretariat will work with Member States at their request to explore possibilities for increasing local and/or regional capacity for specialist training.

Provision

30. The Secretariat will publish guidance on innovative models of service provision, including good-practice examples from across the globe. Fundamental components include the integration of assistive products service provision into the health system, and a network of specialist referral centres connected to the primary health care infrastructure. This would enable most people to access assistive products for all their functional needs from a single point and would support universal access and early intervention. The Secretariat will provide support to Member States at their request for developing an assistive products service provision model that is best suited for their specific needs.

31. To support the provision of assistive products, initiatives to strengthen rehabilitation services – which are integral to the appropriate assessment, fitting and use of certain products – are under way by the Secretariat. These include tools for rehabilitation situation assessment, policy dialogues, strategic planning, and monitoring and evaluation. Deliverables to support the development of rehabilitation workforce and service delivery models are also under development.

ACTION BY THE EXECUTIVE BOARD

32. The Board is invited to note the report and provide further guidance on the future direction and focus of the Secretariat's activities towards improving access to assistive technology.

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