

Priority Assistive Products List Consensus Meeting Summary



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Executive summary

On 21 and 22 March 2016, The World Health Organization hosted a meeting to finalize the 50 products to be included on the **Priority Assistive Products List (APL)**.

The APL is being developed in order to improve access to high-quality, affordable assistive products for everyone, everywhere. Products are featured on the APL based on widespread need and the impact they have on a person's life. Like the WHO Model List of Essential Medicines (EML), the APL is not a restrictive list, but rather aims to give each Member State a model for the development of a national list. The APL will provide guidance for product development, production, service delivery, market shaping, procurement, and reimbursement policies (including insurance coverage).

Development of the APL began with a year-long, four-step process involving extensive consultation with experts, including users of assistive products and their caregivers. The first step was a **scoping review** of evidence from literature, followed by three rounds of a **Delphi exercise**. A three-month **Global Survey** was then carried out in 52 languages, gathering the views of over 10,000 people from 161 countries. 44% of respondents were older people or people with disabilities.

The **consensus meeting** was the fourth and final step of the APL development process. The meeting was held at WHO headquarters in Geneva in March 2016. The goal of the meeting was to finalize the APL, based on the outcome of the Delphi and Global Survey. Seventy participants attended. They represented every WHO region and included people working in service provision and at policy level; researchers; representatives from organizations for people with disabilities and older people; and users of assistive technology.

Following two days of intense discussion, consensus was achieved for the following list of 50 products.

1. Alarm signallers with light/sound/vibration
2. Audioplayers with DAISY capability
3. Braille displays (note takers)
4. Braille writing equipment/braillers
5. Canes/sticks
6. Chairs for shower/bath/toilet
7. Closed captioning displays
8. Club foot braces
9. Communication boards/books/cards
10. Communication software
11. Crutches, axillary/elbow
12. Deafblind communicators
13. Fall detectors
14. Gesture to voice technology
15. Global positioning system (GPS) locators
16. Hand rails/grab bars
17. Hearing aids (digital) and batteries
18. Hearing loops/FM systems
19. Incontinence products, absorbent
20. Keyboard and mouse emulation software
21. Magnifiers, digital hand held
22. Magnifiers, optical
23. Orthoses, lower limb

24. Orthoses, spinal
25. Orthoses, upper limb
26. Personal digital assistant (PDA)
27. Personal emergency alarm systems
28. Pill organizers
29. Pressure relief cushions
30. Pressure relief mattresses
31. Prostheses, lower limb
32. Ramps, portable
33. Recorders
34. Rollators
35. Screen readers
36. Simplified mobile phones
37. Spectacles; low vision, short distance, long distance, filters and protection
38. Standing frames, adjustable
39. Therapeutic footwear; diabetic, neuropathic, orthopaedic
40. Time management products
41. Travel aids, portable
42. Tricycles
43. Video communication devices
44. Walking frames/walkers
45. Watches, talking/touching
46. Wheelchairs, manual for active use
47. Wheelchairs, manual assistant-controlled
48. Wheelchairs, manual with postural support
49. Wheelchairs, electrically powered
50. White canes

The **Priority Assistive Products List** is expected to be launched at a side event of the 69th World Health Assembly in May 2016.

Note to the reader

This meeting was held under Chatham House rules; open comments are not attributed.

This report condenses the themes of each session – including the interventions from the floor – according to the themes addressed, rather than attempting to provide a chronological summary of the dialogue.

Definitions

Assistive technology is the application of organized knowledge and skills related to assistive products, including systems and services. Assistive technology is a subset of health technology.

Assistive products refers to any external product (including devices, equipment, instruments or software), especially produced or generally available, the primary purpose of which is to maintain or improve an individual's functioning and independence, and thereby promote their well-being. Assistive products are also used to prevent impairments and secondary health conditions.

Background

The WHO Model List of Essential Medicines (EML) is widely regarded as having changed the landscape of drug provision worldwide. Introduced in 1977 and since revised 19 times, and now composed of core and complementary lists in discrete sections for adults and children, it guides the development of national and institutional policy on essential medicines. It lists medicines in alphabetical order within each section, without implication of preference for one form over another.

WHO's GATE initiative (Global Cooperation on Assistive Technology) has been working for more than a year to develop a similar list for assistive products: the **Priority Assistive Products List**, or **APL**. The overarching goal of this project is to improve on the current scenario, where only one in ten people who need assistive products have access to them. This initiative is also to assist countries—especially the 162 Member States that have ratified the UN Convention on the Rights of Persons with Disabilities (CRPD)—with procurement and provision of assistive products; and to enable many people with disabilities and older people, and consequently their caregivers, to be productive.

The existence of such a list, when published and endorsed, will have a number of effects. It will increase awareness of need and it will function as a tool to increase availability of assistive products, helping to bridge the equity gap currently affecting huge numbers of people in countries around the world. It will act as a guide to setting minimum standards and procurement norms/priorities ensuring that people in need are better served. It will shape markets by facilitating bulk purchasing, acting as an incentive to further innovation and improvement of what is available, and impacting financing and insurance of necessary assistive products. Finally, it will act as a focal point for new training and capacity-building initiatives for health personnel from the community level upwards.

Development of the APL began with a four-step process involving extensive consultation with experts, including users of assistive products and their caregivers. An initial scoping review was followed by three rounds of a Delphi survey. A global survey in 52 languages was disseminated by WHO offices, partners and collaborating centres, organizations of disabled people, advocacy networks, and non-governmental organizations (NGOs) worldwide. It received over 10,000 responses from 161 countries which were used to rank the assistive products most required by respondents around the world. Finally, this consensus meeting was held in Geneva to finalize the list of 50 most priority assistive products from the results of these surveys.

Key message

Marie-Paul Kiény, Assistant Director General, Health Systems and Innovation, WHO

Ms Kiény recalled the September 2013 meeting at the United Nations at which WHO was requested to develop and coordinate international cooperation on assistive technology. Following that mandate, WHO organized the 2014 consultative meeting in Geneva (3 and 4 July 2014), and at which the GATE initiative was established in partnership with international organizations, donor agencies, professional organizations, academia and user groups. Between that meeting and this, the Millennium Development Goals (MDGs) gave way to the Sustainable Development Goals (SDGs). Goal three of the SDGs, or SDG3—“Ensure healthy lives and promote well-being for all at all ages”—encompasses achievement of universal health coverage, of which access to essential medicines and health technology, including assistive technology, is a cornerstone.

A billion or more people need assistive products of some kind; that number is projected to rise beyond 1.5 billion in 2030, and as high as 2 billion in 2050, with many older people needing two or more such products as they age. Health systems will be required to adjust, and assistive products must be a priority. The 162 nations that have ratified the CRPD are bound to enforce it; but it is unlikely that they will be able to do so until the necessary assistive products are both affordable and available. For this, international cooperation is essential. GATE is progressing with the single purpose of ensuring that cooperation, including with regard to global access, and the APL will be a game-changer in improving access.

Ms Kieny reminded participants that the APL is intended as a minimum list to guide countries. In the coming months, WHO will assist and support implementation of the APL by developing a policy framework, a training package and a service provision model, and coordinating research and innovation. With all of this, the goal is to change the current scenario and increase access to assistive products significantly from the current ratio of 1 in 10.

Ms Kieny concluded by asserting WHO's view of GATE as a concrete step towards realizing SDG3, universal health coverage, in particular. She expressed the hope that in the next 25 years universal health coverage would be the norm, with assistive technology recognized as an important part of integrated people-centred health services; she thanked supporters of this project, including USAID for its financial assistance; and she declared the meeting open.

Message from Lenin Moreno, United Nations Special Envoy on Disability and Accessibility Read by Rosangela Adoum (Spanish) and Alarcos Cieza (English)

Mr Moreno stated that “the future is the reality to create, not the reality to hope for.” The future of people with disability is built on the back of the fulfilment of present needs previously denied.

This year is significant: it marks the tenth anniversary of the CRPD and the year that the APL initiative begins, an initiative that will bring opportunities, accessibility and inclusion for all. As the United Nations Secretary General's Special Envoy on Disability and Accessibility, Mr Moreno supports this initiative and is excited about its achievements. He highlighted the inclusion of many people with disabilities in the 10,000+ who responded to the global survey. While the APL is important, however, it is nonetheless just a first step towards a world where everyone who needs it has fast, easy access to assistive products. The next step is to convince governments to support this at the next World Health Assembly so that the APL is given equivalent importance to the EML.

Mr Moreno suggested adapting the APL to the specifics of different countries, including their geographic characteristics. He also suggested focus on promotion of initiatives from countries that build assistive products in creative, innovative, low cost ways; on this note, and following two scheduled meetings in Asia and Africa, Ecuador has offered to host a third meeting in 2017 to promote incentives to manufacture equipment locally.

The message concluded with further congratulations and thanks to WHO, for their work so far.

Chapal Khasnabis, WHO,

Mr Khasnabis responded that this meeting could be an historic event: the APL has the opportunity to reduce prices and make assistive products available in the same way that the EML has done. There

are a lot of similarities and synergies between the pharmaceuticals field and that of assistive technology; and the assistive technology industry is about 30 years behind the pharmaceutical industry, especially in terms of access and pricing. Mr Khasnabis cited how the EML has helped raise awareness, create competition and develop different mechanisms for procurement and reimbursement to improve access to medicines at an affordable cost. Like the EML, the APL has the potential to make history and improve access to affordable assistive products for everyone everywhere. A finalized consensus APL is needed by the end of the meeting.

Session one

Chair's opening remarks

Mac MacLachlan, Trinity Centre for Global Health

Mr MacLachlan expressed the hope that all present would have equal opportunity to contribute, and consider themselves co-facilitators. GATE, he said, is trying to open a door to inclusion and the achievement of rights through the medium of assistive products. Asking why there was a need for a meeting at all after such a good survey had been carried out, he turned to Einstein: “everything that can be counted does not necessarily count; and everything that counts cannot necessarily be counted.” While the APL should be informed by evidence, numbers alone should not be the final arbiter. The decisions of the meeting must be supported by a clear rationale, but participants would have to be creative thinkers too.

Mr MacLachlan then reviewed and explained the operating principles of the meeting (Appendix B), and pointed out that a consensus meeting does not require everyone to agree. The electronic majority voting system would decide issues where consensus could not be reached; the meeting would try to avoid it, but voting should not be regarded as failure. He reminded those present that voting must be taken seriously, as their decisions would have great consequence for the list.

Each participant briefly introduced themselves.

APL development process

Mr Khasnabis explained the function of the EML— the inspiration for the APL—its philosophy, organization, the mechanisms behind it, and its use at country level. He underlined the fact that the EML is a minimum list, and the APL needs to be the same.

He then provided the core definitions for the meeting:

- **Assistive products:** *any external product whose primary purpose is to maintain or improve an individual's functioning and independence and thereby promote their well-being*
- **Priority assistive products:** *those products, which are highly needed, a must/absolutely necessary to maintain or improve an individual's functioning; they should therefore be available at a price the community/state can afford*
- **Priority assistive products list (APL):** *a minimum list – a guide to develop a national/institutional list.*

Limiting the list to 50 products had been a struggle; some thought it too many, some too few. The

underlying goal of the APL was to change the current ratio of one in ten to one in two by 2030. It is also to assist countries in achieving this goal, with particular focus on the 162 nations that ratified the CRPD; and thereby to enable a further 30 per cent of the population (15 per cent: people with disabilities and/or older people and a further 15 per cent: caregivers) to be productive. The APL, he said, would increase awareness and availability; set minimum standards; shape the market; and catalyze innovation, training, financing, and insurance around assistive products. In most countries, the majority of people are not even aware of what is available or what to select; in most of the world there are no standards or training for assistive products, and there's a lack of national policy or programmes with very poor financing.

He outlined the methodology by which the APL would come about. The scoping review narrowed an initial list of products to 150, gathered disability data, and imposed measures to ensure balanced representation of impairment groups. There then followed three rounds of a Delphi survey; a global survey of over 10,208 respondents from 161 countries, carried out in 52 languages; and this meeting. Chapal reminded those present that the products chosen for the APL should be affordable in every country that has ratified the CRPD. He again cited the guiding example of WHO's EML, which is updated every two years, and which represents a minimum list to which countries can add more, to demonstrate that the APL will not be set in stone; it will be revisited over time, updated, and improved.

Identifying priority assistive products – perspectives from the Eastern Mediterranean Region

Malek Qutteina, WHO-Consultant

Mr Qutteina presented a study that had taken place in the Eastern Mediterranean Regional Office of WHO (EMRO) as part of the global survey, with the aim of ensuring that EMRO countries—usually poorly represented in worldwide surveys—participated fully in the APL process. He outlined the methodology (which sought a balance of responses from service providers and service users in each country office), and language considerations, then outlined the survey's limitations and sample characteristics.

Major observations from the survey were as follows:

- a varying selection rate was lowest with cognitive products (a category that also demonstrated the lowest level of agreement between respondents);
- there was little variation according to organizational affiliation and usage status in most sections; and
- Data suggests that service users put higher emphasis on products for active living rather than care, while service providers give higher importance to medical care products.

Recommendations were as follows: stronger focus on the perspectives of service users; involvement of underrepresented disability groups; consideration of age and gender in the final APL; and ensuring survey participants were updated with the development and outcomes of the APL process. He clarified that gender is strongly related to disability in low- and middle-income countries, and that there is a consequent need to focus on issues important for women, who are often underrepresented in studies.

Global survey dissemination

Albina Shankar, *Mobility India*

Ms Shankar outlined how the global survey was disseminated in India. It was translated into the 11 most spoken Indian languages (also useful for respondents in Sri Lanka and Bangladesh), then shared through community based organizations (CBOs) and disabled persons' organizations (DPOs) trained to update results online. Mobility India staff conducted interviews (a process aided by translations and pictograms in the survey forms), and engaged a wide network of service users, students, colleges, hospitals, NGOs, professional bodies and organizations in remote areas.

Dissemination targeted people with disabilities and older people (the latter an increasing population in India, where access even to glasses and hearing aids is limited in rural areas and many people do not know what assistive products are). For many, the survey was the first time they learnt of what products were available: the survey was also an awareness raising and advocacy tool that greatly increased knowledge of assistive products.

APL survey distribution

Jamie Grant, *International Disability Alliance*

Mr Grant introduced the International Disability Alliance (IDA)—a global alliance of 13 member organizations, two non-voting observers, and a number of partner organizations—and the nature of the network through which it disseminated the survey. Of the 12 IDA members at the time, four were regional organizations and eight were global organizations; partners included wider networks of persons with disabilities.

To ensure users have a decisive voice in developing the APL, IDA disseminated the survey extensively through its network; the primary method of dissemination was email, of which about 1,800 were sent in local languages. Each email included a translated survey and a link to the online version. IDA staff and members of partner organizations were asked to respond, and to distribute the survey further. A Facebook campaign was also used.

Discussion

A short discussion followed, in which a number of points were made. These were mostly to do with perceived weaknesses in the survey that could have made it less representative: people with more severe disability, who often do not move around, as well as those who are deaf, blind or have multiple or intellectual disability, may not have answered. In addition, many people with disability have low literacy and access to information, requiring the use of products to assist them in engaging; and those in low- and middle-income countries may have been excluded by lack of internet access. It was argued that the most marginalized therefore had no voice in the results. The counterpoint was made that while any instrument necessarily excludes some people, work with partners, networks and representative organizations in distribution had been designed to avoid or minimize this effect.

Overview of survey results

Mr Khasnabis presented the results of the Delphi and global surveys. 10,208 people responded to the global survey; the Delphi survey had 157 respondents. Summary data were available to attendees in their conference packs.

Categories for assistive products were chosen following a 50-country disability breakdown, with subsequent adjustment—for example, the breakdown yielded no results in the environment category and adjustments were made to remedy this. Mr Khasnabis finished his précis with thanks to all respondents and volunteers, and observed that in his time at WHO he had never seen a survey, which carried out in 52 languages.

Q&A

A few points were clarified in a short Q&A. The core and complementary lists of the EML model would not be mirrored in the first APL. In the context of the survey's regional imbalances (e.g. 31 per cent of global survey respondents from the EURO region as opposed to only three per cent from the AFRO region), weighting had not been considered, as this would have generated a new set of issues. Instead, everything possible had been done to reach the maximum number of people with the initial survey. It is important to take the global range of disability and disability severity into account, to avoid serving those in developed countries at the expense of those in less well-resourced contexts.

As humans are not classified as *assistive products*, sources of assistance such as sign language interpreters could not be included in the APL. The list will represent the minimum that the 162 ratifying countries should make available. Many respondents commented that the pictograms in the survey had helped people (up to ministerial level) to learn of products they had not known existed. The APL will raise awareness about products available, guiding governments in procurement decisions and making strategic investment.

Products for special consideration

A series of presentations were made advocating the inclusion of additional products, which failed to make entry in the top 50 of the survey but has been mentioned by several groups, especially the users groups for its inclusion in the APL.

Spinal orthosis

Claude Tardiff, ICRC

A spinal orthosis is a brace placed on the outside of the body to hold the spine in a certain position and is used for several conditions, to correct a deformity or improve spinal function. It can be used for management of scoliosis, spinal cord injury, cerebral palsy, fractures and some degenerative and neurological disorders.

Club foot (CTEV) bracing

Wes Pryor, University of Melbourne

Club foot is one of the most disabling musculoskeletal conditions if left untreated; but it is easy to treat, representing potentially massive savings. Bracing is a low cost, sustainable intervention with a number of arguments for inclusion: the high prevalence of club foot and associated issues of inequity; the impact of treatment, which is up to 95 per cent effective; strong evidence for effectiveness (and the implications of non-treatment); avoidance of impairment and lost quality of life; and the low cost of braces and associated follow up—which offsets other costs and, it was argued, effectively presents a negative cost.

Audio book player, DAISY format

Mary Lou Jackson, *University of British Columbia*

This presentation concerned hardware players or software applications to play accessible formatted digital books designed to complement Braille. DAISY stands for *digital accessible information system* and works through the Accessible Books Consortium, wherein multiple stakeholders make books available for visually impaired and blind people. This intervention sought to reduce one barrier: providing the means to play the books. Ms Jackson explained methods for navigating the books, the different DAISY formats, and various options for hardware players and software apps. The specific recommendation for inclusion was the most appropriate or cost-effective products allowing individuals to access DAISY books.

Devices for hearing: direct auditory input systems

Shelly Chadha, *WHO*

Personal digital auditory input (DAI) systems include both FM radio systems and loop systems that deliver sound directly to individuals, mitigating the impact of environmental noise. They can be used in a variety of settings, and are particularly useful in educational and working environments. It was argued that they should be included as tools of great utility to users of hearing aids/cochlear implants and people with mild to moderate hearing loss who do not use assistive products; and because they provide significant benefits in difficult listening situations with significantly improved speech recognition, can be used in a variety of situations (including outdoors), and are not dependent on electricity.

Continence products

Jacqueline Cahill, *The Canadian Continence Foundation*;

Ms Cahill listed risk factors and incontinence types, and gave a conservative estimate of the number of people worldwide suffering from incontinence (which is one of the four main reasons for placement in long term care) of 200 million. As the world population ages, this burden will increase. Incontinence can have a huge impact on quality of life, imprisoning people at home and leading to isolation and depression. Assistive products, which include absorbent products, intermittent catheters and stoma/ostomy supplies, are expensive worldwide; but without them people cannot live productive lives, and sometimes die.

There was discussion as to whether some categories of incontinence products—specifically internal ones such as catheters and stoma/ostomy supplies—were medical rather than assistive products; this debate is ongoing, with ISO classifying them as assistive products, and WHO as medical devices.

Voting

The room then voted on inclusion (Yes/No/Abstain) of all above-mentioned products in later discussion, with the following results.

	Yes	No	Abstain
Spinal Orthosis (59 votes)	92%	5%	3%
Club foot bracing (59 votes)	83%	15%	2%
DAISY audiobook player (59 votes)	71%	20%	8%
Direct auditory input systems (59 votes)	66%	22%	12%
Incontinence products (59 votes)	76%	20%	3%

All of the assistive products discussed would be included in group discussion.

Group work

Participants were split into six groups for discussion and finalization of the list of assistive products as per quota agreed earlier.

1. Mobility-A (15)
2. Mobility-B (15)
3. Vision (9)
4. Hearing and communications (7+5)
5. Cognition (9) and
6. Environment (5)

To guide discussion, participants were asked to consider combining lists and products into families where possible and logical; and then to add one or two products, which are either on the margins or agreed for inclusion earlier.

Group work presentations

Group 1A - Mobility

The group presented the following list:

1. Crutches, elbow & axillary
2. Walkers (rollators & walking frames)
3. Walking sticks & canes
4. Lower limb orthotics
1. Lower limb prosthetics
5. Therapeutic footwear (diabetes/neuropathic & orthopaedic)
6. Spinal orthosis
7. Club foot braces
8. Basic 'active type' wheelchair
9. Tricycle
10. Electric wheelchair
11. Manual 'push type'

12. Upper limb orthosis
13. Adjustable standing frame
14. Pressure relief wheelchair cushion
15. Postural support devices for wheelchair

The group's approach had been to create assistive product family groups in order to generate sufficient space on the list to include all necessary products. Decisions on product groupings were guided partly by consideration of procurement processes and its nature of composition or production. No distinction was made between products for children and for adults. The group included upper limb orthosis, arguing that as well as contributing to mobility, stabilizing upper limbs is critical for living comfortably. While therapeutic footwear was a joint category, the group stressed that diabetic/neuropathic footwear is constructed differently to other products in this category, and that this would need to be made clear in any list.

Group 1B - Mobility

The group presented the following list:

1. Crutches (axillary, elbow)
2. Manual wheelchairs – basic type for active users
3. Walking frames – for all ages
4. Lower limb prostheses
5. Rollators
6. Lower limb prostheses
7. Manual wheelchair – push type
8. Footwear adaptations – orthopaedic/neuropathic
9. Intermediate/advanced wheelchairs
10. Adjustable standing frames
11. Tricycles
12. Club foot bracing
13. Electric wheelchairs
14. Spinal orthosis
15. Pressure relief cushions
16. Upper limb orthosis

This group had also made product family groups to enable the inclusion of more products. 'Crutches (axillary and elbow)' had been created and canes discarded on the basis that almost all users are capable of making their own (though it was pointed out that replacing tripod and quadripod canes, which were also discarded despite ranking tenth on the survey, is challenging). Similarly, push type wheelchairs had been discarded because basic active wheelchairs are suitable for pushing, and push type chairs with small wheels are impossible to use in many environments. Tricycles were considered important because in many countries they are people's sole means of transportation; and electric wheelchairs were included without group consensus. The cost argument against the latter was rejected on the grounds that some prostheses cost more than powered wheelchairs.

'Footwear adaptations' was proposed as a catch-all term that reaches beyond diabetes and assists those with mobility/balance problems, and older people. People who need orthoses should also be considered as having foot problems, and these must therefore also be included.

Mobility products—discussion

Mr Horvath, session chair, summarized the points of difference between the two mobility groups: inclusion or not of walking sticks (including tripods and quadripods); whether to include postural support products as a discrete category or with intermediate wheelchairs; and whether or not to separate walking frames and rollators. He argued that there was consensus on the need for an overall **footwear** category, but that absolute clarity was required on what would be included. The conclusion was that one place on the APL for footwear and three for wheelchairs was disproportionate. Diabetes is a “coming storm,” prevention is of great importance, and the category should be split. Footwear should have two places.

It was argued that there is danger in combining active style **wheelchairs** with push wheelchairs in a product family, in that instead of receiving higher quality active chairs patients could end up with cheaper orthopaedic chairs. Cost factors mean huge differences between the two types, and it was agreed not to merge them.

It was said that **pressure relief cushions**—life saving items and big cost savers—should be kept as a separate item; but postural support products were included within intermediate/advanced wheelchairs.

Upper limb orthotics were initially voted out heavily on the basis that they are impractical to procure. The meeting was also reminded that leaving upper limb orthotics off the APL entirely risked creating situations where some governments might deny people what they need because it is not listed. Mr Khasnabis pointed out that products not on the APL might still be of great importance and need, but that pragmatism was crucial: for example, universal cuffs were not considered for inclusion because they are simple, easy to make and inexpensive when compared to “big ticket” items that are difficult for users to make an out of pocket payment to access.

Discussion about **walking aids** questioned the assertion that sticks can be made easily; older people with diabetes, for example, “are not told to cut themselves a walking stick on the way home.” Sticks and canes of all types are often used with other products and are important for falls prevention (and as such also represent a potential preventative public health gain). Arguments for exclusion centred on the ease with which sticks could be made or bought and the notion that, while their importance is unquestioned, it may not be necessary to ensure that they are paid for. Arguments for inclusion covered the fact that sticks are widely used and represent a quick win for governments; they help more people than standing frames; and they were widely supported in the global survey (**tripod/quadripod canes** were also high on the global survey, and this too needed to be respected). Mr Horvath said that publishing the APL has several purposes: in addition to guiding procurement, it would help to guide the products that should be insured or available at an affordable cost. Hence, there must be provision for people who cannot buy or make sticks.

The discussion then turned to whether **rollators** and **frames** could be merged. It was argued that most products discussed are not for children, and removing a product that is mostly for children (frames) would be disastrous. The DNA of the two products are also different, hence both deserve separate mention in the APL .

The group’s list ultimately contained more products than the allotted quota. Hence, a vote was taken on what to exclude, with the decision initially narrowed to a choice between walking sticks

and electric wheelchairs (with a vote of 28 per cent for walking sticks and 23 per cent for electric wheelchairs, the sticks were removed). However, this approach was challenged on day two and a second vote was taken, this time on which item to keep on the list¹. This vote was then also discussed and considered unsuitable (mainly on the basis that it introduced potential for tactical voting, and because the outcomes disrespected the mandate of the global survey). It was ultimately agreed to have two separate groups for sticks and crutches.

Day two—opening discussion

Day two began with a reminder to consider the strategic as well as the functional purposes of the APL: “the perfect,” it was said, “is the enemy of the good.” It was argued that not everybody in the room was sufficiently experts on final selection of the products representing six different domains. However, the counter argument was that the function of the meeting and the global survey was to share perspectives enabling a holistic view, and everybody present was there in some expert capacity and ought to have sufficient knowledge to select/vote.

Group 2—Vision

The group presented the following list:

1. White canes (folding or non folding)
2. Spectacles as appropriate: short, long distance, filters, protection
3. Optical magnifiers: readers, hand held, telescopes
4. Screen readers: appropriate software to allow magnification and audio with the computer
5. Talking/touching watches
6. Braille writing equipment
7. Hand held digital magnifiers
8. Audiobook players with DAISY
9. Refreshable braille display (note taker)

This group identified that some outdated items could be deleted to accommodate some additional products and likewise; three different types of spectacles could be merged into one family. Low cost optical magnifiers, which though they look different, consist of the same components, formed another. The group felt that products related to braille should be included; hypothesizing that braille may have had a low ranking in the global survey because many braille users might have been left out during the survey process.

Two items not in the initial list were eventually included: the **braille display** and the **DAISY audiobook player**. Braille *printers* were excluded, instead brailers were suggested for inclusion. **Screen readers** were considered important for children and for education. It was pointed out that several items under discussion would be of use to people with multiple disabilities, and in particular those who are deaf and blind. With regard to **spectacles**, the point was made that from the procurement perspective distinction is necessary between ready-made and custom made spectacles.

¹ 1: Intermediate wheelchair inc. all postural support: Yes 55%; No 31%; Abstain 15

2. Electric wheelchair: Yes 48%; No 43%; Abstain 9%

3. Upper limb orthotics: Yes 54%; No 36; Abstain 11%

4. Walking sticks with of all types & canes: Yes 79%; No 18%; Abstain 4

There was a good amount of argument to exclude spectacles for short and long distances but majority agreed for its inclusion. Group consensus on the list was swift.

Group 3—hearing and communication

It was argued the “communication” umbrella affects a broad range of people with varied disability, and that hearing and communication issues are often overlooked and require emphasis.

Hearing

The group presented the following list:

1. Behind-the-ear digital hearing aids (& accessories, ear moulds, batteries as called for)
2. Video communication devices
3. Captioning TV
4. Devices/software for gestures-to-voice technology
5. Deaf blind communicators
6. Fire and smoke alarm signaller
7. Digital auditory input (such as hearing loops/FM systems).

There was more discussion of the role of trained personnel in implementing the APL, given that some products on it need to be fitted to the user. Mr Khasnabis responded that most products require the input of trained personnel—even use of a white cane needs training—but the meeting was to focus on identifying the necessary priority products, not its delivery system.

The request was made to expand the category of **alarm signallers** to include alarms for as broad a range of disasters as possible, and to ensure that they also catered to the deaf by incorporating lights, vibration etc. It was questioned whether, with a variety of universal applications available, **video communications devices** should be included; and it was pointed out that without internet connection the use of these is problematic, and related costs are high. With regard to **captioning TV**, it was clarified that there are different levels of intervention, and while captioning can be done at government level and through TV channels, it can also be accomplished through individual devices synched to televisions.

Communication

The group presented the following list:

1. Communication boards/books/cards
2. Face-to-face communication software
3. Communication software and AAC apps
4. Keyboards and mouse emulation software and accessories (e.g. Head mouse)
5. Head/mouth sticks (environment?)

Head/mouth sticks were considered important—although they have other functions beyond communication—on the basis that they were the only items on the original list that could replace arm/hand/finger function. There was discussion about whether or not they could be defined as a “single access switch” that operates other assistive products, and therefore as an integral part of the other categories rather than a device in their own right. This led to discussion of the role of certain basic products that might be seen as mediators of other products, and the need to consider having a set of requirements alongside the APL for cheap intermediary devices required in order for people to

use the products on the APL itself. The counter suggestion was made that additional text could be added to relevant products on the list, such as “...and appropriate access.”

Voting

A vote was taken to decide whether category #5, **head/mouth sticks**, should be included or excluded. 62 out of 63 voted, with **68 per cent voting to exclude**, 15 per cent voting to retain, and 18 per cent abstention.

Group 4—Cognition

The group presented the following list:

1. Pill organizers
2. GPS locators
3. Personal emergency alarm systems
4. Fall detectors
5. Simplified mobile phones
6. Recorders
7. Portable travel aids
8. Personal digital assistants
9. Daily time management devices.

The group presented a number of overarching considerations: some conditions change, some range greatly in severity from mild effects to severe dementia, and others are more static. Following criteria were considered for selecting the products:

1. needed by people with dementia
 2. children and adults with cognitive impairment or mental health conditions;
- The products would help users and/or caregivers in carrying out daily living activities.

Standalone categories that were excluded included locators, portable GPS trackers, pre-programmed task reminders, portable navigation aids and medical alert IDs. It was proposed that **medical alert IDs** be merged with **personal emergency alarm systems**, and a family group was created for **daily time management** to encompass three product classes: time orientation, visual timers, and time management devices. **Task reminders** were excluded on the basis that products that ensure daily time management would cover their functions.

It was argued that **pill organizers** are so cheap that they should be excluded to make room for medical alert IDs; but the point was made that alert IDs require a large support mechanism to be operational and also raise issues around records in the public domain; while many pill organizers are relatively sophisticated and expensive. It was suggested that medical alert IDs could also be considered medical devices. Consensus on the list was achieved without voting.

Group 5—Environment

The group presented the following list:

1. Pressure relief mattress
2. Grab bars, hand grips, hand rails and support rails
3. Commode chair + shower chair
4. Portable ramps
5. Incontinence absorbent products.

The group agreed to move **pressure relief cushions** to the mobility domain; to merge grab bars, hand and support rails as a family; and to merge commodes and shower chairs into a single product with both functions.

Absorbent incontinence products were also included on the basis that they make a significant difference to quality of life. Discussion on minimum requirements was dropped as it was not part of the agenda. It was reiterated that their inclusion on the APL would be a powerful tool to improve access like any other assistive products.

There was also discussion about including only absorbent incontinence products, would not meet all individual needs. WHO's medical devices unit suggested that it could, in partnership with stakeholders, review the categorization of other continence products such as catheters, or consider inclusion of those within a parallel priority medical devices list.

Universal building design was discussed but not considered an assistive product *per se*, and it was suggested that this should be addressed in any preamble to the APL, and/or in a separate chapter. Consensus was achieved.

Review of the final 50-product list

A draft list was presented on the screen:

1. Absorbent incontinence products
2. Adjustable standing frames
3. Audioplayer with DAISY capability
4. Behind-the-ear digital hearing aids (with accessories, ear moulds and batteries)
5. Braille writing equipment
6. Captioning TV
7. Club foot braces
8. Commode chair & shower chair
9. Communication boards/books/cards
10. Communication software and AAC apps
11. Walking aids (canes & crutches)
12. Daily time management
13. Deafblind communicator
14. Device/software for gesture to voice technology
15. Direct auditory input
16. Electric wheelchair
17. Emergency alarm signaller
18. Face-to-face communication software
19. Fall detectors
20. Grab bars and hand grips + hand rails and support rails
21. GPS locators
22. Hand held digital magnifiers
23. Keyboard and mouse emulation software and accessories (e.g. head mouse)
24. Lower limb orthoses
25. Lower limb prostheses
26. Manual wheelchairs – basic type for active users
27. Manual wheelchairs – push type
28. Optical magnifiers: readers, hand held, telescopes
29. Personal digital assistant (PDA)
30. Personal emergency alarm systems

31. Pill organizers
32. Portable travel aids
33. Portable ramps
34. Pressure relief mattress
35. Postural support/intermediate/advanced type
36. Pressure relief cushions
37. Recorders
38. Refreshable braille display (note taker)
39. Rollators
40. Screen readers: appropriate software to allow magnification and audio with computer
41. Simplified mobile phones
42. Spectacles (low vision, short distance, long distance)
43. Spinal orthoses
44. Talking/touching watches
45. Therapeutic footwear
46. Tricycles
47. Upper limb orthoses
48. Video communication devices
49. Walkers/rollators
50. White canes (folding or non-folding).

Some general points were made. This list represents the start of a process; it needs to be approved by the World Health Assembly; and many more steps will be necessary before it starts to affect policy. Unlike the medicines on the EML, assistive products cannot be considered standalone items, so text outside the list itself would draw attention to the need for assistive products in conjunction with, for example, accessible environments and caregivers/sign language interpreters.

The group discussed the language of product descriptions, which should be as generic as possible and should be listed in alphabetical order. After some discussion, changes were made to items 9, 10, 17, 23, 35 and 42, and the following final list was achieved with a caveat that some more changes might be required, especially items listed under 'family':

1. Absorbent incontinence products
2. Adjustable standing frames
3. Audioplayer with DAISY capability
4. Behind-the-ear digital hearing aids (with accessories, ear moulds and batteries)
5. Braille writing equipment
6. Captioning TV
7. Club foot braces
8. Commode chair & shower chair
9. Communication boards/books/cards (and accessories)
10. Communication board software and AAC apps
11. Walking aids (canes & crutches)
12. Daily time management
13. Deafblind communicator
14. Device/software for gesture to voice technology
15. Direct auditory input
16. Electric wheelchair
17. Emergency alarm signaller with light or vibration (fire, smoke, weather and other dangers)
18. Face-to-face communication software
19. Fall detectors
20. Grab bars and hand grips + handrails and support rails
21. GPS locators
22. Hand held digital magnifiers

23. Keyboard and mouse emulation software and accessories
24. Lower limb orthoses
25. Lower limb prostheses
26. Manual wheelchairs – basic type for active users
27. Manual wheelchairs – push type
28. Optical magnifiers: readers, hand held, telescopes
29. Personal digital assistant (PDA)
30. Personal emergency alarm systems
31. Pill organizers
32. Portable travel aids
33. Portable ramps
34. Pressure relief mattress
35. Wheelchair intermediate type
36. Pressure relief cushions
37. Recorders
38. Refreshable braille display (note taker)
39. Rollators
40. Screen readers: appropriate software to allow magnification and audio with computer
41. Simplified mobile phones
42. Spectacles (low vision, short distance, long distance, with filters and protection as needed)
43. Spinal orthoses
44. Talking/touching watches
45. Therapeutic footwear
46. Tricycles
47. Upper limb orthoses
48. Video communication devices
49. Walkers/rollators
50. White canes (folding or non-folding).

Assistive products training package

Emma Tebbutt, WHO

Ms Tebbutt introduced GATE's four alliterated areas of activity (products, policy, provision and personnel) and the four crucial steps in service provision for assistive products:

1. Assessment and prescription
2. Fitting
3. User training
4. Follow up, maintenance and repairs.

Ms Tebbutt highlighted the importance of training package to ensure users can access the right products as per their need - some closer to the community and some from referrals. In this context, GATE aims to add an assistive products training package for health personnel working in primary or community health centres. The package would be flexible and follow the four steps mentioned above; include mHealth and virtual learning platforms; use existing materials where available; and be modular.

Discussion

The APL is unlikely to achieve anything alone; and most countries have no national assistive products programme or centre, and therefore no supply chains to community level. The aim behind this

training package is to make assistive products available, from single access points near people's homes.

It was argued that many assistive products are not generally provided at the primary health care level. Many products need a professional's intervention but are usually not available at that level. Specific concerns were also raised about certain products being fitted by people without advanced qualifications. The response was that a training package would ensure that personnel were trained to deliver a range of basic products, which may not need compulsory intervention of professionals/specialists.

There was also some discussion around the term "community," in which it was said that we must avoid segregating simple and complicated products. While most products on the APL should be available in communities, there may not always be the means to deliver them; but for some products, while assessment cannot be done at community level, monitoring and follow up can.

It was highlighted that assistive products must also be available in humanitarian contexts. Billions of dollars go into humanitarian work and some people, including children, spend years in camps without access to appropriate assistive products.

The conclusion was reached that while the principle of community-level delivery is sound—in many countries, for instance, nurses do many things that doctors and specialists do elsewhere—more information is required before decisions can be made on the products to include in the training package.

Consensus on final list

Participants voted on the final list of 50. With a turnout of 53, **92 per cent voted in favour of the list**; 4 per cent voted against; and 4 per cent abstained.

Caveats

The chair invited participants to suggest one caveat each. The following points arose:

- When/if catheters and ostomy products are accepted as being assistive products; they should be included on the APL, grouped as a family with other incontinence products. Sheaths should also be considered.
- Clear explanation of all terms in the final document will be crucial.
- The list must include terms and definitions; further work will need to include technical specifications, quality standards for products, the different sizes and fittings needed, and other requirements such as electricity.
- Spectacles are not just refractive glasses or specifically for people with low vision.
- The final APL document must describe the particular needs of women, especially around the tendency for access barriers.
- The document must also discuss the effects of poverty; poverty is disabling.
- Accompanying documentation/any preamble should specify clearly the meaning of "priority," and clarify that assistive products must be embedded in wider programmes at achieving inclusion and participation. Assistive technology is part of a bigger picture that in many settings still needs to be developed.
- The products on the APL will not work without the right physical environment; universal design must be addressed.

- Accessibility, even in low- and middle-income countries, can be simple to achieve. This is not a question of resources but one of thinking, and must be addressed at government level.
- Encouraging manufacturers to develop products incorporating universal design may reduce some of the demand for specialized assistive products, and make more money available to support those that really are required. Universal design cannot do everything, but it can go a long way.
- Providers must be asked to lower costs without affecting quality.
- Responsibility for provision lies not just with ministries of health but with ministries of education, internal affairs and others too: ministerial collaboration is required.
- The final document should take a rights-based approach: people have a human right to assistive products.
- Interconnectivity of delivery systems must be addressed. The APL should be followed by a systems approach for resources allocation. For this, national assistive product policies are required, and assistive products should be written into other national policies where necessary.

Next steps

GATE's intention is to accompany the APL with a publication describing each of the 50 products, the need it meets and the benefits it provides, and how it might be further developed. To this end, writers will be asked to produce 3,000 word chapters addressing these issues for particular assistive products. Participants were asked to nominate writers or teams of writers (and provide rationale for their nominations) to Mary Scholl: Schollm@tcd.ie.

The final APL will be launched at a side event of the 2016 World Health Assembly.

The meeting was closed with thanks to WHO and the USAID for funding and support. The Chair closed with this statement:

You may feel we're at the end of something, but we're really at the start; and what lies ahead is much more difficult. If it wasn't, it would have been done before. But the difficulty is not the measure of it; the measure is the way that people have engaged in the room. We haven't done a perfect thing; but we have done a good thing. And we should be proud of it.

Appendix A – meeting agenda

Consensus meeting for Priority Assistive Products List

21 and 22 March 2015, WHO Headquarters – Salle A
Geneva, Switzerland

Tentative programme

Registration at reception: 07:30 (photo ID is essential)

Chairperson of the meeting: Malcolm MacLachlan

Rapporteur of the meeting: Mark Nunn assisted by Mary Scholl & Emma Tebbutt

Inaugural session: 08:30–09:00

Monday, 21 March 2016

Opening of the meeting

08:30–08:35	Welcome address	Chapal Khasnabis, Programme Manager, Global cooperation on Assistive Technology (GATE), WHO
08:35–08:45	Key message	Marie-Paule Kiény, Assistant Director General, Health Systems and Innovation, WHO
08:45–09:00	Key message from Lenin Moreno, United Nations Special Envoy on Disability and Accessibility	Speech to be read by Rosangela Adoum in Spanish and Alarcos Cieza in English

Session one

09:00–09:10	Message from the Chair	Malcolm MacLachlan, Director, Centre for Global Health, Trinity College Dublin, Ireland
09:10–09:30	Introduction of participants	Name, country and organization
09:30–09:45	APL development process	Chapal Khasnabis, WHO
09:45–10:30	Survey dissemination examples	(10 minutes presentation + 5 minutes discussion) Malek Qutteina, WHO Eastern Mediterranean Region Albina Shankar, Mobility India Jamie Grant, International Disability Alliance

10:30–11:00 **Tea/coffee break**

Session two

11:00–11:15	Overview of survey results	Chapal Khasnabis, WHO
11:15–11:30	Q&A	Facilitated by the Chair, assisted by Chapal Khasnabis and Andrea Pupulin, WHO
11:30–12:20	Products for special consideration	(5 minutes presentation + 5 minutes Q&A) 1. Claude Tardif 2. Wesley Pryor 3. Marie Louise Jackson 4. Shelly Chadha 5. Jacqueline Cahill
12:20–12:30	Consensus/voting	To be included Yes/No

12:30–13:30 Lunch break**Session three**

13:30–15:00	Group work	6 Groups (1A/1B+2+3+4+5)
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15:00–15:30 Tea/Coffee Break**Session four**

15:30–15:45	Group 1A presentation	Mobility
15:45–16:00	Group 1B presentation	Mobility
16:00–17:00	Consensus process: mobility	Facilitated by Rob Horvath

End of day one

19:00 – Contributory dinner (venue to be confirmed)

RSVP

Tuesday, 22 March 2016

Session five

09:00–09:15	Group 2 presentation	Vision
09:15–09:45	Consensus process: vision	Facilitated by Penny Hartin
09:45–10:00	Group 3 presentation	Hearing and communication
10:00–10:30	Consensus process: hearing and communication	Facilitated by Sian Tesni

10:30–11:00 **Tea/Coffee Break**

Session six

11:00–11:15	Group 4 presentation	Cognition
11:15–11:45	Consensus process: cognition	Facilitated by Johan Borg
11:45–12:00	Group 5 presentation	Environment
12:45–12:30	Consensus process: environment	Facilitated by David Constantine

12:30–13:30 **Lunch break**

Session seven

13:30–13:45	Presentation of final 50 priority assistive products	Andrea Pupulin, WHO
13:45–14:30	Consensus/voting	Facilitated by the Chair
14:30–14:45	Next steps	Chapal Khasnabis, WHO
14:45–15:00	Priority assistive products for a community-level training programme	Emma Tebbutt, WHO

15:00–15:30 **Tea/Coffee Break**

Session eight

15:30–16:00	Group work	(6 groups as before)
16:00–16:30	Group presentation	(5 minutes each)
16:30–17:00	Consensus on priority assistive products for community-level training programme	Facilitated by the Chair

17:00–17:30 **Closing**

Appendix B – operating principles

Consensus meeting for the Priority Assistive Products List

21 and 22 March 2015, WHO Headquarters – Salle A

Geneva, Switzerland

10 OPERATING PRINCIPLES

1. We will participate in a personal capacity, as a WHO meeting participant, and not in a representative capacity.
2. We engage in the meeting because of our humanitarian concern to improve the well-being and to realize the rights of people, especially those with disabilities and older people. We recognize our collective responsibility to achieve reasonable consensus through compromise and conciliation.
3. We will all participate actively and work cooperatively to achieve the aim of the meeting.
4. We are all equal: everyone's opinion has the same value; we will all have equal opportunities to express our opinions; and every one of us has an equal share in final decisions.
5. We understand that the meeting is being held under Chatham House Rules: while discussion points and conclusions will be recorded and circulated, they will not be attributed to individuals, but to the discourse of the meeting (<https://www.chathamhouse.org/about/chatham-house-rule>).
6. This is a consensus meeting: such a meeting does not require us to all agree but rather to consent to the integrity of the process and the outcomes that emerge.
7. When consensus cannot be achieved, we understand that anonymous electronic voting will be used and the final decision will be made on the basis of a simple majority.
8. We aim to establish a list of priority assistive products of global relevance. During the meeting, discussions will focus on *what* is on the List; how the List is implemented or updated will be the focus of subsequent research and discussion.
9. If we wish to speak, we will first raise our hand. We will use the microphone, state our name and we will speak slowly/clearly, bearing in mind that many participants speak English as a second language.
10. We will keep our mobile phones and other devices on silent mode and will leave the meeting room if we need to respond to an urgent call.

Appendix C – list of participants

Consensus meeting for Priority Assistive Products List

**21 and 22 March 2016, WHO Headquarters – Salle A
Geneva, Switzerland**

LIST OF PARTICIPANTS

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