PRIORITY ASSISTIVE PRODUCTS LIST

March 2022

FEDERAL MINISTRY OF HEALTH
ABUJA

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Foreword

The Federal Ministry of Health is pleased to present the first edition of the National Priority Assistive Products List (APL) in line with the WHO/AT2030 goal to reach 500 million people globally by 2030 with life-changing assistive technology. Assistive technology is the bridge that facilitates access to the environment, to equal opportunities to education, work, and economic opportunities for persons with disabilities.

The development of this document is, therefore, instrumental to the enactment of the Discrimination Against Persons with Disabilities (Prohibition) Act of 2018, which effectively prohibits any form of discrimination against persons with disabilities, calling for equal rights to access the physical environment, equal rights to education, adequate healthcare, and economic opportunities.

As part of the Federal Ministry of Health's commitment to develop and implement policies that strengthen the national health system for effective, efficient, accessible, and affordable delivery of health services, the APL will serve as a reference and provide guidance for the development of assistive technology service provision and standardized training packages for service providers. This document will act as a framework for the development of the first National Assistive Products Specifications, which is essential to facilitate access to the best quality assistive devices for persons with disabilities.

This document is the outcome of extensive deliberations and consultations by various stakeholders in the assistive technology sector in Nigeria. These stakeholders included assistive technology users, medical rehabilitation professionals, implementing partners, local assistive technology producers and suppliers, and relevant ministries, departments, and agencies (MDAs). The stakeholders were all included to ensure that all relevant perspectives were taken into consideration in the development of this essential document.

This document will set in motion, the catalytic change required in the assistive technology sector to improve access to assistive devices and fulfill the vital needs of the 25 million persons with disabilities who live in Nigeria.

Dr. Ehanire Osagie, MD, FWACS
Honourable Minister of Health

Acknowledgement

The development of the first National Priority Assistive Products List is a significant step towards ensuring the full integration of persons with disabilities as intended in the Discrimination against Persons with Disabilities (Prohibition) Act which was signed into law by President Muhammadu Buhari in 2018

The Federal Ministry of Health, most especially the Department of Hospital Services, is grateful to all the stakeholders and partners who dedicated their time and contributed knowledge from their depth of experience in Assistive Technology to the consultative process of developing this document.

The Assistive products List (APL) was developed by the Federal Ministry of Health with the support of Clinton Health Access Initiative under the AT2030 programme's Country Investment Fund. The AT2030 programme is funded by the UK Aid from the UK government and led by the Global Disability Innovation Hub.

Our immense appreciation goes to:

Abuja Association of the Deaf

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Center for the Deaf

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Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development

Joint National Association of Persons with Disabilities

Medical Rehabilitation Therapists Board of Nigeria

National Association of the Blind

National Commission for Persons with Disabilities

National Institute of Leather and Society Technology

National Orthopedic Association

Neuromuscular Rehabilitation Service

Speech Pathologists and Audiologists Association of Nigeria

The Albino Foundation

The Leprosy Mission of Nigeria

World Health Organization

Dr. Adebimpe Adebiyi, mni
Director, Department of Hospital Services

Abbreviations and Acronyms

AP	Assistive Products
APL	Assistive Products List
AT	Assistive Technology
FMOH	Federal Ministry of Health
GDI Hub	Global Disability innovation Hub
LMIC	Low- and Middle-Income Countries
NCPWD	National Commission for Persons With Disability
PWD	Persons with Disability
TWG	Technical Working Group
WHO	World Health Organization
UNCRPD	United Nations Convention on the Rights of Persons with Disabilities
GATE	Global Cooperation on Assistive Technology
NAFDAC	National Agency for Food and Drug Administration and Control
SON	Standards Organization of Nigeria
ODORBN	Optometrists and Dispensing Opticians Registration Board of Nigeria

Background

Introduction

The World Health Organization defines Disability refers to impairments, activity limitations and participation restrictions, referring to the negative aspects of interaction between an individual (with a health condition) and the individual's contextual factors (environmental and personal factors).[1]

The United Nations Convention on the Rights of Persons with Disabilities highlights that disability is a result of the interaction between persons with disabilities and the environmental barriers that hinder them from equal participation in society.[1] This indicates that disability is not an attribute of a person, as the person's ability to participate in social activities can be improved by removing the barriers that prevent persons with disabilities from participating equally in society.

Persons with disabilities often have restricted access to education, healthcare, and employment opportunities, resulting in higher poverty rates among persons with disabilities.[2] The WHO has indicated that the population of PWDs is on the rise due to the increasing prevalence of chronic health conditions.[4] Today, there are an estimated 1 billion people who experience some form of disability.[5] One-fifth of this number – 110 million to 190 million people live with significant disabilities.[2] The prevalence of disability is higher in developing countries,[3] such as Nigeria, where the WHO estimated as of 2011, that there were 25 million people living with disabilities.[1]

Although the costs of disability are difficult to quantify, they are significant and can present in a wide variety of ways. They include economic and social costs borne by persons with disabilities, their families, friends, and employers, but also costs borne by society. The direct economic costs are those involving additional costs incurred through accessing healthcare services, costlier transportation, personal assistance, and public spending on disability programs. However, indirect economic costs include the cost of loss of productivity due to reduced investment in educating children with disabilities, reduced work due to disability, and loss of taxes due to the loss of productivity. These costs increase when relatives of persons with disabilities leave employment or work fewer hours to care for them.[1]

Assistive technology (AT) improves the ability of persons with disabilities to participate in education, employment and live independent and dignified lives.[4] Assistive technology is an umbrella term covering the systems and services related to the delivery of assistive products and services.[3] People with physical disabilities, mental health conditions (such as autism and dementia) and the elderly require assistive products the most.[4] The costs associated with disability can be significantly reduced if persons with disabilities are provided access to assistive products. Assistive products maintain or improve an individual's functioning and independence and are indeed, life altering for persons with disabilities (PWDs).[3] They enable people with disabilities take part in education, employment, and be part of their communities. They can also reduce the rate at which people need formal health and support services and prevent them from becoming a burden to their family and society, indirectly stimulating economic growth.[5,6]

Despite the immense importance of assistive products, majority of those who need them are unable to access them. Currently, the WHO estimates that more than 1 billion people require

assistive technology. However, only 10% of them have access to the AT that they need, indicating that there is a huge unfilled gap in the need to AT. The WHO estimates that by 2030, more than 2 billion people will require assistive technology, further widening the existing gap.[3] Access to assistive technology is lowest in low- and middle-income countries, which also have the highest prevalence of persons with disabilities.[2,6]

A number of factors have been identified as barriers to adequate access to assistive technology for persons with disabilities. Chief among the factors hindering access to assistive devices in low-income countries, is the lack of affordability of these devices to those who need them.[4] Other factors include little to non-existent national assistive technology policies or programs in many countries. The supply of assistive products is also currently limited, with most of the industry primarily serving high-income countries. There are also huge gaps in the assistive technology workforce.[5]

For example, in Nigeria, government funding for assistive technology is low and disaggregated across various government ministries and agencies. Although Non-governmental organizations across the country support the provision of assistive devices through donations to organizations of persons with disabilities, there are still significant funding gaps in AT provision in the country.[6] As a country where 40% of the population live below the poverty line,[7] majority of persons with disabilities are often left to wait on charitable services, which are typically not personalized and include large quantities of substandard assistive products.[6]

In a bid to improve access to high quality, affordable assistive products across countries, the World Health Organization (WHO) developed the priority assistive products list (APL) in 2016 as a first step towards implementing a global commitment to improve access to assistive products - the Global Cooperation on Assistive Technology (GATE).[5] The WHO APL was developed to act as a model and guide for member states to develop national priority assistive products lists according to their local context and available resources.[5] The development of a National APL will help Nigeria to fulfill her commitment to improve access to assistive products. The APL will aim to serve a similar purpose as the Essential Medicines List, which has been used to create public awareness, mobilize resources, and promote access to the included medicines.[5]

Current status of Assistive Technology in Nigeria

With a population of more than 200 million people,[8] 25 million persons with disabilities account for 12.5% of the total population. This is a significant proportion who, with access to appropriate assistive products and the resultant empowerment to participate in economic activities would have a chance to contribute positively to the economy of the country.

The Federal Government of Nigeria has begun to work towards improved inclusion of persons with disabilities in society. In 2019, the Federal Government enacted the "Discrimination against persons with disabilities (Prohibition) Act" which makes provision for the full integration of persons with disabilities into society and the establishment of the National Commission for Persons with Disabilities. Importantly, the law highlights that physical structures must be accessible through the use of accessibility aids and assistive devices.[6]

For the full implementation of this act, availability of assistive devices would be necessary. In January 2019, the Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development updated the *National Policy on Disability in Nigeria*, which consists of implementation strategies to enable availability of assistive technology including through local producers. This makes legal provision to increase access to assistive devices, and subsequently, increased opportunities for persons with disabilities to live full dignified lives.[6]

However, data on public procurement of assistive devices is still limited and procurement is fragmented across national and state levels, with limited input and oversight from user departments who would otherwise be able to provide valuable information on the devices to be procured. In the private sector, there is significant variability in the price and quality of the products. For example, high-end prostheses are sourced from Europe or North America with prices ranging from US$3,000 to US$4,700. Mid-tier prostheses are supplied from India or China and cost between US$100 to US$695.[6] These prices are beyond the reach of majority of persons living with disabilities in Nigeria.

The locally manufactured prosthesis make up the low end of the market, with locally sourced materials. These cost between US$2 to US$15 and are more accessible to Nigeria and can be provided on-demand to customers.[6] However, there are no existing specifications to guide the production of these devices. In addition, regulation of assistive devices in the country is currently fragmented across NAFDAC, SON, MRTB and ODORBN.[6] These factors result in limited regulation of assistive devices in the countries, with many PWDs, using inappropriate devices which often cause injuries and worsen their health.

Improved access to assistive devices can be attained with increased government commitment through large-scale centralized procurement or creating an enabling environment for increased local manufacturing or assembling of assistive products, while ensuring that the assistive products are of the best possible standards through effective regulation and development of assistive product specifications.[1]

Purpose and scope of the Priority Assistive Product List

The WHO defines ***Priority assistive products*** as "products that are highly needed, an absolute necessity to maintain or improve an individual's functioning and which need to be available at a price the community/state can afford".[5] The APL will provide guidance for production of assistive devices, service delivery, market shaping, procurement, and reimbursement policies.

This is an evolving document which will be reviewed, revised, and updated periodically based on local context and developments in assistive technology.

Objectives

- Improve availability and accessibility to assistive technology in Nigeria.
- Serve as a framework for the development of standards and technical specifications for assistive products.
- Support the development of training manuals health and non-health service providers on AT service provision
- Support advocacy for assistive technology funding.

Improving Access to Assistive Technology

To improve access to assistive products across different countries, the Global Cooperation on Assistive Technology (GATE) initiative is focusing on 5 interlinked areas, called the 5P: people, policy, products, provision, and personnel. It is important that the APL is linked to these 5 factors to significant progress in the improved provision of assistive technology.[9]

People

To successfully improve access to assistive technology, it is essential to involve persons with disabilities in the process of decision-making.[9] This user-centered approach will ensure that the perspectives of persons with disabilities are put into consideration when developing policies that affect them. This also ensures that assistive products and services are culturally appropriate and physically suited for the user's needs. It was therefore important that the APL is developed with input from persons with disabilities and their families, medical rehabilitation professionals, and medical professionals who interface daily with people with disabilities and can identify their needs.

Policy

The APL is one of the tools developed by the WHO and provided to member countries with the purpose of ensuring all persons who need assistive products can access them. The development of this document is also linked to the policy of the Government of Nigeria to protect the rights of persons with disabilities and others who need AT. Importantly, the APL was one of the recommendations of the Nigeria AT Country Capacity Assessment and will facilitate the development of coherent, prioritized national AT policies.[6]

Products

The APL includes a list of products that have been selected based on the needs of persons with disabilities in Nigeria and based on anticipated impact on people's lives. The list will serve as a guide to enhance production and assistive service provision in Nigeria.[5] In addition, the APL will aid in establishing regulatory mechanisms, including the development of the assistive products specifications (APS) that will support the production, procurement, and provision of appropriate and safe AT for persons with disabilities in Nigeria.

Personnel

Assistive products need to be prescribed to its users by qualified and certified rehabilitation professionals. It is imperative that AT users are trained by qualified personnel on the effective and safe use of assistive devices as well as the maintenance of these devices to achieve maximum effectiveness and durability over time.[6] The APL will serve as a basis for the development of training manuals and job aides for medical rehabilitation officials who provide assistive products.

Provision

Currently, there are no national guidelines for the provision of assistive products. Quality of service provision, therefore, varies amongst providers. Service provision is also currently fragmented, poorly connected and poorly coordinated, with no formal mechanisms to refer users from one provider to another.[6] The development of the APL is a crucial step towards establishing guidelines for service provision, and subsequently establishing standards for service provision that will ensure that there is an overall improvement in the quality of assistive service provision across the country.

Development of Assistive Products List for Nigeria

Process

The development of the assistive products list was led by the Federal Ministry of Health and involved extensive consultation with stakeholders, including AT users, medical rehabilitation professionals, medical professionals, AT suppliers and local AT manufacturers. The WHO APL was used as the resource document for identifying assistive devices. The products were divided into four broad domains: Mobility & selfcare, Vision, Hearing and communication, and Cognition.

As part of the development of the APL, the FMoH and CHAI worked on estimating the needs for assistive devices across the functional domains. Although there is limited data available in Nigeria on the needs and unmet needs for assistive products, the 2018 Nigeria Demographic and Health Survey (NDHS) includes a disability module which focuses on six functional domains: seeing, hearing, communication, cognition, walking, and self-care.[10]

The module provides basic information on disability among the survey participants. Vision and mobility impairments were the most prevalent disability among the household populations. This data provided a basis for a first calculation of need. In addition, the Nigeria AT Country Capacity Assessment also collected data on population needs, costs, availability of human resources and infrastructure, serving as a further source of data for the purpose of developing this document.

The FMoH convened relevant stakeholders in a workshop where the collated data on estimated needs, human resource availability, and cost was provided to facilitate the prioritization process. During the workshop, stakeholders also included additional assistive devices to be considered for inclusion on the list. These devices were suggested based on their experience living with disabilities or working with persons with disabilities and the assistive devices they had used or prescribed for use during their years of experience.

The stakeholders worked in groups, to prioritize the devices in each functional domain using a prioritization scorecard and framework that was developed for this purpose. Following this, a cut-off point was calculated to determine the devices to be included on the list. This formed the basis of the development of the draft list of 42 assistive products across the 5 domains of functionality.

This initial list of 42 devices was then reviewed by stakeholders in a second workshop, where 2 more assistive devices were included based on their importance to the functionality of persons with disabilities. The final list of 44 devices was validated by the multi-sectorial stakeholders involved in the process in a separate validation meeting.

The Assistive Products List

Mobility

1	**Walking Sticks** Walking sticks are walking aids that support balance or weightbearing through the legs. They are used by people who can walk but need some support to walk safely and/or walk longer distances. They have a hand-grip and a single height-adjustable with ends fitted with tips (ferules).[11]	
2	**Crutches** Crutches are walking aids with elbow, underarm or forearm support and a single shaft fitted with a tip, intended to support balance or weightbearing through the legs.[11]	
3	**Orthoses Upper Limbs** An orthosis is an externally applied device used to modify the structural and functional characteristics of the neuromuscular and skeletal systems.[13] Upper limb orthoses are categorized into three: • Wrist-hand-finger Orthoses • Shoulder-elbow Orthoses • Elbow-wrist-hand Orthoses	

4	**Walking Frames** Walking frames are walking aids with four shafts or with two shafts and two small wheels (castors), which are lifted or pushed by the user. They are also intended to support balance or weightbearing through the legs.[11]	
5	**Wheelchairs** Wheelchairs provide wheeled mobility with an appropriate seating system and rely on the user or an assistant to move around. Wheelchairs are intended for persons with limited mobility.[11]	
6	**Orthoses Lower Limb** An orthosis is an externally applied device used to modify the structural and functional characteristics of the neuromuscular and skeletal systems[13].These are in 3 categories: • Foot Orthoses • Ankle-foot Orthoses • Knee-ankle-foot Orthoses	

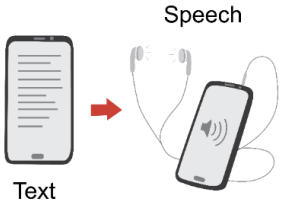
7	**Tricycle** These are three-wheeled cycles for greater mobility. They are mostly used for outdoor purposes.[12]	
8	**Orthoses (spinal)** An orthosis is an externally applied device used to modify the structural and functional characteristics of the neuromuscular and skeletal systems.[13]	
9	**Clubfoot Braces** Clubfoot braces are used as part of the overall management of infants and children born with congenital talipes equinovarus (CTEV, idiopathic clubfoot).[12] The braces position the child's feet to maintain a position after the use of a series of plaster casts (serial casts) to correct the foot.[11]	
10	**Prosthetics Upper limb** An upper limb prosthesis is an externally applied device used to replace wholly or partly, an absent or deficient upper limb segment.[11] Upper limb prosthetics are of 2 types; • Trans-radial • Trans-humeral	

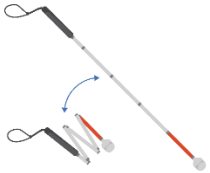
11 **Prosthetics lower limb**

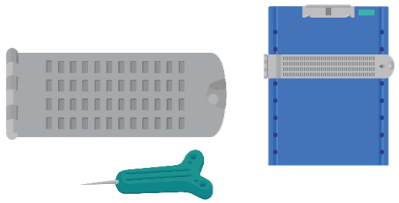
A lower-limb prosthesis is an externally applied device used to replace wholly or partly, an absent or deficient lower-limb segment.[11] There are 2 types of lower limb prosthetics:

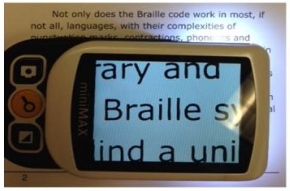
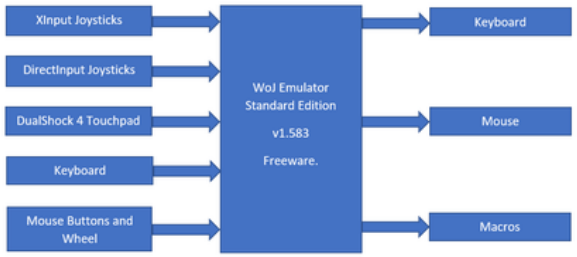
- Trans tibial
- Trans femoral

Vision

12	**Optical (Handheld) Magnifiers** Optical magnifiers produce magnified (enlarged) images of close objects and print. They are intended for use by children and adults with low vision that cannot be fully corrected with spectacles or other treatment such as surgery.[11]	
13	**Screen Readers** Screen readers are software programs that assist people with vision impairment to read text on a computer screen, through a speech synthesizer or braille display.[14]	
14	**Alerting device** Alerting devices draw attention to imminent danger (e.g., smoke, fire, security breach or to everyday events (e.g., doorbell, baby's cry).[12] They are intended for use by persons with hearing impairments but are also useful for persons who are visually impaired.	
15	**Spectacles** These are plus powered lenses that are mounted onto the spectacle frame to focus the image to help individuals with visual impairment due to uncorrected refractive error and /or presbyopia to perform their near tasks (e.g., reading) comfortably.[15]	

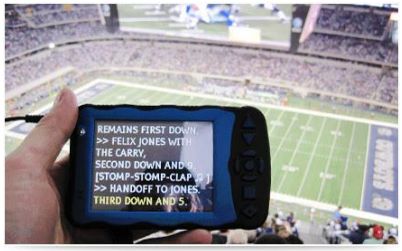
16	**Talking/Touching watches** These are timekeeping devices that tell time verbally or allow users tell the time by touching the watch face. They are battery-operated and rechargeable. They may have additional features such as vibration beeps or other tactile features.[11]	
17	**White Canes** White canes are long rod-like devices intended for use by children and adults with blindness or low vision. They give the user information about the environment they are moving through, such as obstacles in their path, stairs they are coming to, curb edges they are approaching.[11]	
18	**Audio Players/ Recorders with DAISY Capability** Accessible book players with audio capability record, play and display audio and visual information, including sound, text, and pictures. They are commonly known as DAISY (Digital Accessible Information System) players to play audio books. They are intended for use by persons who have visual impairments.[11]	
19	**Travel aids** Electronic Travel Aids (ETAs) are devices that use sensor technology to assist and improve the blind user's safety while navigating the environment. These devices detect obstacles through various image processing techniques and include global positioning system (GPS) software for outdoor navigation.[16]	

20	**Telescopes** The telescope is an optical instrument that improves the resolution of an object by increasing the size of the image projected on the retina. It enables greater participation in daily and social activities such as watching television and reading white boards, street signs, house and building numbers, billboards, and menu boards. They are intended for use by persons with low vision.[17]	
21	**Braille Equipment (BRM, RBI)** A Refreshable Braille Display device translates information appearing on a computer screen to braille by electronically lowering and raising different combinations of pins to produce in braille, what appears on a portion of the computer screen.[18]	
22	**Braille slate** The equipment consists of a manually operated slate with Braille cells and a stylus. The slate is usually metal or plastic, with two plates hinged together on the top or side to hold papers for writing Braille. A stylus consists of a short rod with a blunted point to emboss Braille dots.[11]	
23	**Translator software** A braille translator converts documents into braille files. The braille file can then be sent to a braille printer or read on a braille display or a personal digital assistant.[19]	

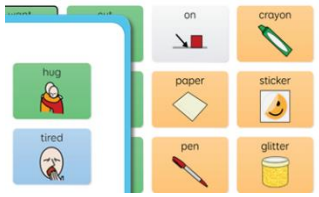
24	**(Braille) Typewriter** Braille typewriter is a mechanical (hand operated) writing device used for writing Braille by pressing related keys on to paper. The device is intended to support communication for persons with visual impairments and Braille transcribers to write in Braille.[11]	
25	**Digital magnifiers** Digital magnifiers assist individuals with low vision with reading by displaying magnified images of a screen, board, or document on a monitor.[20]	
26	**Large keyboard** These are standard keyboard with extra-large print on the keys, making it usable for users with a visual impairment.	
27	**Keyboard and mouse emulation software** These are software components that allow visually impaired computer users to enter characters onto a computer display through other devices, such as touch screens. They typically utilize devices that rely more on gestures (such as tapping or swiping screens), spacing and device manipulation to facilitate interaction with display screens.[21]	

28	**Low vision lamps** Low vision lamps offer increased illumination, to help persons with low vision individuals read or do work without the interference of shadows and glares.[22]	
29	**Talking calculator/ Large print calculator** Talking calculators read out each number that the user enters and results of calculations.[23] Large print calculators have enlarged displays to aid reading and typing.	
30	**Blackboard telescope + computer base** This device has a camera that magnifies the size of the image or text under focus to allow persons with low vision read without straining their eyes.	

Hearing and communication

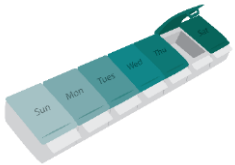
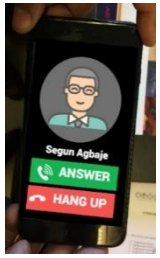
31	**Communication Devices** Video Communication Devices allow individuals to use sign language to communicate with others on the phone.[24] They allow an individual to speak directly with others who know sign language or with individuals who do not know sign langue through a relay interpreter.	
32	**Communication boards/book** Communication board enables a person to communicate using symbols, words, pictures, or objects. The user looks at, points to, or otherwise selects the items on the communication board to augment (add to) or replace spoken communication.[11]	
14*	**Alerting devices** Alerting devices draw the attention of persons with hearing impairments to imminent danger (e.g., smoke, fire, security breach or to everyday events (e.g., doorbell, baby's cry).[11]	
33	**Closed captioning display** Closed captioning consists of transcribed text that runs along the bottom portion of the screen.[15] It can include dialogue and an explanation of sound effects and relevant audio information.	

*This device is also listed under the vision domain.

34	**Communication Software** These are systems that are used to replace or supplement natural speech. They are computer-based systems or Voice Output Communication aids that allow people who cannot use conventional speech to communicate daily with others, both in person and digitally.[25]	
35	**Hearing aid and batteries** Hearing aids are electronic devices attached to the ear that amplify sound and direct that sound into the ear. They assist persons who experience varying degrees of hearing loss in the perception of environmental sounds and to hear and understand oral language.[11]	

*This device is also listed under the vision domain.

Cognition

36	**Pill organizer** Pill or medication organizers help people take their medicines in the correct dosages at the correct time and help to prevent adverse effects such as missed doses or overdoses. They are intended for use by children and adults to store prescribed medications.[11]	
37	**Simplified mobile phones** Mobile phones that have data managers that allow users store phone numbers, addresses, notes, calendars, store notes and record voice notes act as memory and organizational aids for persons with cognitive impairment.[26]	
38	**Recorders** Recorders can be used by students with learning devices to record lessons, write assignments and to take notes.[27]	
39	**Time management products** These are products that support ordering events in chronological sequence and allocating amounts of time to events and activities.[15]	

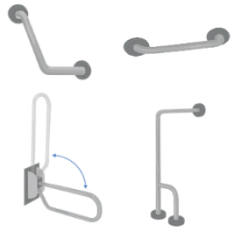
*This device is also listed under the vision domain.

40 **Alarms**

These devices enable rapid notification and intervention for individuals who have experienced a fall.[11]

*This device is also listed under the vision domain.

Selfcare

41	**Grab bars/rails** Handrails or grab-bars are cylindrical rails or bars attached to a wall, floor, or other stable structure that a person, can hold for support. They are intended for use by persons who need support when moving between lying, sitting, or standing, and while standing or moving around in indoor and outdoor environments.[11]	
42	**Pressure relief cushion** These are used on wheelchairs and provide postural support, redistribute pressure to protect skin and soft tissue, improve sitting comfort, and reduce the heat and moisture generated when the user is sitting on the cushion.[12]	
43	**Shower and toilet chairs** Toilet and shower chairs provide solutions for persons with difficulties using a standard shower. Users may need support to transfer on or off the chair and when washing and drying themselves.[11]	
44	**Pressure relief mattress** Pressure Relief Mattresses prevent the formation of pressure ulcers by dispersing pressure from bone protrusions.[15]	

*This device is also listed under the vision domain.

Next Steps

The priority Assistive Products List for Nigeria includes 44 assistive products and has been developed as a tool to facilitate the scale-up of assistive devices in Nigeria. This document was developed with the active contribution of persons with disabilities, medical rehabilitation professionals, AT suppliers, and local manufacturers who have first-hand experience on AT use in Nigeria and are able to provide the necessary perspective to identify the essential assistive devices for the country. While this list is not restrictive, it provides guidance to Government at state and federal level and implementing partners about the devices that are most important to provide, given the Nigeria context.

The development of the APL is one of many interventions recommended in the assistive technology country capacity assessment, to ensure that the appropriate assistive products are procured and provided to the persons who need them. In addition to developing this document, the following steps need to be taken:

- It is important that sufficient technical specifications are developed to guide the local production and supply, including importation of assistive devices. Not only should these specifications be developed, but it will also be vital that they are adequately enforced.
- Regulation of assistive products needs to be strengthened. Currently, there are multiple agencies responsible for regulating assistive products, including NAFDAC, SON, ODORBN, and MRTB. These agencies need to collaborate more effectively for strict enforcement of regulations.
- The Nigerian government needs to develop an established procurement system at both federal and state government levels, to oversee regular procurement of assistive devices and facilitate widespread access to these devices for persons who need them
- It is also critical that assistive products are exempt from tax and duties. Presently, the high costs of importation contribute to the exorbitant costs of assistive devices, making them inaccessible to majority of persons with disabilities, who mostly do not have the financial resources to afford expensive assistive products.
- The Government of Nigeria needs to create an enabling environment for the local production of good-quality assistive devices. In addition to the development of specifications to guide the production of these devices, the Government can invest in local AT manufacturing by building the capacity of the local producers, particularly the Federal Universities of Technology across the country to collaborate and produce assistive devices at an affordable price.

One of the recommendations from the Nigeria Assistive Technology Country Capacity Assessment conducted in 2019 and validated in 2021 by the National Commission for Persons with Disabilities, is to create a strong coordination mechanism among government entities in the assistive technology sector. In addition, coordination among non-government stakeholders also needs to be strengthened under the leadership of the government. This is important to ensure that activities geared towards the scale-up of assistive technology have the necessary government oversight and the support of all the relevant stakeholders. It also ensures that there is no duplication of efforts and plans are implemented at the required pace, ultimately resulting in increased access to assistive devices for persons with disabilities across the country.

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