Final Report: Assistive Technology Country Capacity Assessment in seven African Countries using WHO Assistive Technology Assessment-Capacity Tool

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The Country Capacity Assessments (CCAs) are a joint initiative of the World Health Organization (WHO), Global Disability Innovation Hub (GDI Hub) and CHAI under the AT2030 programme and funded by UK aid. The AT2030 programme is led by GDI Hub. The below summarizes findings from the seven CCAs that were completed in countries that are considered to be part of the WHO AFRO region. Additional CCAs under the AT2030 programme were completed or are underway in Bolivia, Indonesia, Mongolia, and the Dominican Republic.

About AT2030

AT2030 will test ‘what works’ to improve access to AT and will invest £20m to support solutions to scale. With a focus on innovative products, new service models, and global capacity support, the programme will reach 9 million people directly and 6 million more indirectly to enable a lifetime of potential through life-changing Assistive Technology

Summary

Understanding a country’s capacity to finance, procure and provide assistive technology (AT) is critical to help policy makers to identify actions to strengthen service delivery to meet population needs. An assessment led by governments in seven African countries using the WHO Assistive Technology Assessment-Capacity (ATA-C) tool1 identified numerous challenges to ensuring

access to AT in low and middle income countries (LMICs). Specifically, a lack of data, policies, financing, regulations and human resources exist in a fragmented environment that is mostly led by non-governmental organizations.

The CCA has proven instrumental in raising policy makers and wider stakeholders’ awareness of the need for and the importance of AT, as well as the current gaps in AT provision. Moreover, the assessment has solidified government commitments to increase access to AT, including strengthening leadership, coordination, planning and financing. The CCA should be considered as an entry point for governments seeking to develop or strengthen capabilities and foundational structures to realize commitments under the United Nation Convention on the Rights of Persons with Disabilities (UNCRPD)\textsuperscript{2} and the 71st World Health Assembly Resolution (WHA 71.8) to improve access to assistive technology.\textsuperscript{3}

**Background**

The CCAs are a joint initiative of the WHO, GDI Hub and CHAI under the AT2030 programme and funded by UK aid. It is a system-level assessment of a country’s capacity to appropriately provide AT to meet its population needs. Through a rapid landscape analysis and data collection on the country’s capacity to finance, procure, and provide AT, the CCA aims to support stakeholders in understanding and raising awareness around the state of the AT sector, delivery systems and the understanding of AT needs. Insights gathered on the challenges, opportunities, and barriers to increasing access to AT informs the development of prioritized actions in the country.

The CCA was conducted using an iteration of the ATA-C, within the larger WHO Assistive Technology Assessment (ATA) Toolkit that is currently in development. To improve the usability of WHO ATA-C tool, lessons learned were collected from implementers and feedback incorporated into a revision of the tool.


Approach

Between September 2019 and February 2020, government ministries, particularly the Ministry of Health (MoH) in seven African countries - Ethiopia, Liberia, Malawi, Nigeria, Rwanda, Sierra Leone, and Uganda - carried out the CCA on AT with technical assistance from CHAI and WHO. Although there were slight variations between countries, the process typically began with a stakeholder mapping and adaptation of the WHO ATA-C tool to the country context. This was followed by data collection through desk research, key informant interviews and, in some countries, focus group discussions. Data were consolidated into the ATA-C excel-based tool and analyzed to identify gaps and opportunities to increase access to AT. The CCA in each country concluded with a consensus building workshop, which involved government ministries as well as non-government stakeholders such as non-government organizations, faith-based organizations, academia, service providers, professional associations, user groups, disabled people associations and community champions. In this workshop, the results of the assessment were presented and validated and a prioritized sets of actions were discussed and agreed upon. Each country produced a report to highlight key findings and recommended actions moving forward. The full approach to conducting a CCA is outlined in more detail in the WHO ATA-C Instruction Manual.4

CCA PROCESS IN SIERRA LEONE

In Sierra Leone, a technical working group (TWG) was formed at the start of the assessment process. The TWG brings together key stakeholders, including the MoH, the Ministry of Social Affairs, the National Commission on Disabilities, the WHO, and several civil society organizations. The TWG has been instrumental in supporting stakeholder engagement, guiding data collection and validation, and development of recommendations based on the CCA’s findings.

Common findings across seven countries

The CCA findings confirms the global understanding of low- and middle-income countries’ capacity and challenges to provide access to AT for those who need it. The below provides a summary of crosscutting themes that emerged from analyzing the seven country specific reports.

Poor data and information system related to AT – There exists poor availability of accurate, reliable, and up-to-date population-based data that could help to estimate the need for AT within a country. This includes data on the prevalence of health conditions that may lead to an individual requiring AT (e.g., diabetes, stroke, refractive error, dementia) and the prevalence of functional limitations that require AT (e.g., mobility, hearing, vision impairment). Where data exists, stakeholders widely regard it to be a significant underestimation of prevalence of people living with functional limitations in the country. They expect that the impact of major historical events such as civil wars, conflict, and disease outbreaks (e.g. Ebola epidemic), aging population, as well as high rates of road traffic injuries as factors that may contribute to higher levels of people in need of AT. Limited quantitative data attributes to a lack of awareness from policy makers on the need and importance of AT, as well as to the lack of prioritization for policy development and resource allocation.

Countries lack a centralized or integrated information system that tracks data on AT. No or limited routine data collection (e.g., from healthcare facilities, rehabilitation centers, schools, and other government agencies) captures data on AT provision. When it exists, it is usually fragmented, incomplete and rarely shared outside of the organization or reported centrally to inform national data.

Legal frameworks not translated into policy and programs for AT – All seven countries have ratified the UNCRPD providing a legal framework for the right to access AT. In addition to the UNCRPD ratification, all countries have put in place national legal frameworks to protect and promote the rights of people with disabilities (PWD), although effective implementation of such frameworks could be strengthened.

- Ethiopia: The National Plan of Action of Persons with Disabilities (2012) was developed by Ministry of Labor and Social Affairs which, among others, includes the establishment, management and support for the prosthetic centers.
- **Liberia**: Government passed the Act establishing the National Commission on Disability (2015) and the National Action Plan on Disabilities (2018) which covers public accessibility, inclusive education, employment and livelihoods, affordable and accessible healthcare, independent living and self-determination, and access to justice for PWD.

- **Malawi**: The parliament passed the Disability Act 2012 to ensure equalization of opportunities for PWD and protection of their rights and to establish Disability Trust Fund.

- **Nigeria**: In 2019, the Federal Government enacted the Discrimination against PWD (Prohibition) Act which aims to comprehensively address the needs of PWD (e.g., accessible public building and structures, access to accessibility aids and assistive devices, establishment of a National Commission for PWD)

- **Rwanda**: The right to equality and non-discrimination of PWD is guaranteed by the Rwandan Constitution as revised in 2015, Law No. 01/2007 relating to protection of PWD in General and Law No. 02/2007 relating to Protection of Disabled Former War Combatants.

- **Sierra Leone**: The Persons with Disability Act 2011 was enacted to provide regulation, financing and services for PWD.

- **Uganda**: The Persons with Disabilities Act 2019 was enacted to, among other things, provide PWD with assistive devices at no cost or subsidized prices, healthcare facility accessibility and provision of assistive devices to all learners.

Beyond national policy, five out of seven governments (Liberia, Malawi, Sierra Leone, Rwanda and Uganda) have established institutional mechanisms such as the National Council or Commission for Persons with Disabilities to promote and protect the rights of PWD as well as to monitor the implementation of the government’s commitments on disability, including the UNCRPD. Nigeria is in the process of establishing a new mechanism after recent enactment of Discrimination against PWD (Prohibition) Act.

Despite the existence of a legal framework on disability, no country has a national strategy, roadmap or plan in place for increasing access to AT. Furthermore, there is a lack of inclusion of older people and others who are not considered PWD that require AT in policies and legal frameworks. Lack of clarity exist around the roles and responsibilities of government entities that have some mandate on disability or health related to AT needs. Examples include Ministry of
Health, Ministry of Social Welfare, Ministry of Gender/Women, and Ministry of Education. This leads to a lack of direction and poor allocation of the limited available resources, as well as fragmentation, unaddressed gaps and overlap in program implementation. This situation is exacerbated by the inexistence of mechanisms or a platform for coordination.

**Limited financing for AT** — Limited or no financing is available for AT from national budgets. Countries with government managed health insurance schemes either do not provide coverage for AT or provide very limited coverage for AT both in range of products and in amount of reimbursement. For example, Rwanda’s Community Based Health Insurance only covers spectacles, crutches, orthoses and prostheses. Nigeria’s National Health Insurance Scheme provides coverage for spectacles up to USD$ 27, prosthetics and walking sticks. Ethiopia’s Community Based Health Insurance provides no coverage.

Beyond government managed insurance schemes, a few countries have government programs and budgets that provide AT to select populations. Examples include Rwanda’s Fund for Genocide Survivors, Rwanda Demobilization Commission, Nigeria’s Ekiti State free eye check-up and provision of eyeglasses, and Nigeria’s Ministry of Women Affairs and Social Development’s budget for bulk purchase of aids and appliances for PWD and older persons. The mechanism to access AT under these programs is often unclear and program implementation was seen as fragmented and ad-hoc.

As a result of limited government financing, most AT financing is currently filled by non-government partners. This includes programs funded by non-profit or non-government organizations (NGO) and their donors, charities, faith-based organizations, or through fee-for-service in private health and rehabilitation facilities.

**Unregulated products and fragmented procurement systems** – In countries that have a national list of essential/registered medical devices, assistive products are not included. This includes Ethiopia, Malawi and Nigeria. Rwanda developed the National List of Assistive Products in 2017, but it is only used to set prices to be followed by service providers and insurance schemes as oppose to guide procurement of quality products. Liberia, Uganda, Ethiopia and Sierra Leone reported no inclusion of AT in any guiding documents on medical products or devices in the country. As such, there are no regulatory structures, guidelines and standards to inform and regulate the procurement of assistive products. This has led to issues in quality of the products
and their appropriateness for the context and needs of the users. Furthermore, no national procurement system for assistive products exist in these countries. Procurement largely happens in a fragmented and ad-hoc manner with inconsistency in frequency, is not driven by detailed product specifications, and is not based on forecasted demand.

In countries like Liberia, Sierra Leone, and Malawi, government currently does not play a role in the procurement of assistive products. The products that exists in the public sector mainly come from donations from non-government partners and charities. These products rarely go through the public sector supply chain system when brought into the country, and usually are directly distributed through the partner's programs. In all countries, except Nigeria, many of the priority assistive products are granted tax exemption status, which make the products and procurement processes less costly for organizations bringing them into the countries. However, products remain difficult to obtain in a timely manner due to the lengthy custom bureaucracy.

**Limited qualified human resources** – There are shortages and uneven distribution of AT-related workforce in most areas of AT such as prosthetist/orthotists, audiologists, optometrists, etc. In settings where human resources are limited, governments make little investment in additional training for the general health workforce to be upskilled to provide assistive products and rehabilitation services.

This situation is exacerbated by the limited structures and resources to train and build the capacity of an AT workforce at the country level. Moreover, there are inadequate numbers of institutions offering degrees, diplomas or other courses for training the AT workforce, with some countries having more capacity than others:

- **Rwanda**: There is one institution in Rwanda (the University of Rwanda, College of Medicine and Health Sciences) providing academic training for prosthetists and orthotists, occupational therapist, mid-level eye care professionals and physiotherapy.

- **Nigeria**: There are 11 universities in Nigeria offering five-year bachelor degrees in physiotherapy or medical rehabilitation for physiotherapists, one university producing occupational therapists, two schools offering three-year diploma programs for occupational therapy assistants, one school providing a six-year master program in speech therapy/clinical audiology, two schools providing three-year diplomas for
physiotherapy technicians, one school producing prosthetic & orthotic technicians, seven schools producing optometrists, and 15 institutions providing optical training.

- **Uganda**: There exist academic institutions providing bachelor program in optometry, physiotherapy, and speech and language therapy, as well as diploma in occupational therapy, ophthalmology, and physiotherapy.

- **Ethiopia**: Addis Ababa Prosthetics Orthotics Centre provided diploma level courses in the prosthetic and orthotic field. It recently shifted focus to provide short-term trainings for the Ministry of Defense.

- **Malawi**: The Malawi College of Medicine offers a four-year bachelor degree in physiotherapy, Kachere Medical Rehabilitation Center offers a three-year diploma for medical rehabilitation technicians, and Montfort Special Needs Education College offers a three-year diploma in special needs education. Recently, Malawi College of Health Science introduced a three-year diploma course in ear, nose and throat (ENT) and clinical audiology, and African Bible College introduced a five-year bachelor degree in Audiology with the first cohort expected to graduate in 2022.

In countries such as Liberia, Malawi and Sierra Leone, most of the AT workforce was trained outside of the country. Most training for the AT workforce has been, and is currently being, provided by non-government organizations with little integration into existing health training programs and institutions.

**Fragmented provision of assistive products and limited points of service** – Provision of AT in the countries is fragmented, uncoordinated and heavily relies on non-government, non-profit and for-profit organizations. When it exists, AT provision through government facilities is largely centralized in the capital. The lack of national policies and service delivery standards to regulate AT prescription and provision creates inconsistencies and wide variations of service quality from one provider to another. Four out of seven countries reported having specific services delivery guidelines that include at least one AT category. Ethiopia guidelines on physical rehabilitation services includes the provision of prosthetics and orthotics, and the guideline on ENT services includes hearing aid provision. Nigeria’s MoH treatment guidelines for delivery of child eye health include guidelines for prescription of eyeglasses and management of refractive errors. Uganda has a national wheelchair guideline, although it is not widely disseminated and utilized. Rwanda
published guidelines related to school eye health screening in January 2019 and is in the process of developing additional guidelines related to provision of eyeglasses.

No country reported having formal referral mechanisms that allow for individuals with functional limitations to be referred to higher levels or specialized care in order to access assistive products. For those able to access AT, follow-up pathways do not exist. Additionally, countries lack a mapping or directory of AT providers, which also results in a disconnect in the referral process. Peer-to-peer training occurs on an ad-hoc basis. User impact and/or satisfaction is rarely evaluated after the provision of assistive products. Countries do not collect information on the impact of assistive products on health outcomes or general well-being of the users.

**Summary of recommended actions**

Responding to the findings of the CCA, stakeholders agreed that there is lack of foundational structures that are needed to establish a well-functioning AT system capable of providing quality assistive products and services at an affordable price and in sustainable manner. Therefore, establishing these structures are the first and immediate step in the action plan for increasing access to AT. The primary actions that countries identified as focus areas to increase access to AT include:

- Develop a system to provide reliable data to estimate the need for and access to AT;
- Develop a costed national strategy or plan;
- Strengthen leadership and coordination among government entities with clear roles and responsibilities;
- Develop a national assistive product list (APL) or similar, with sufficient quality standards and technical specifications to guide procurement and or reimbursement/benefit package policies;
- Develop comprehensive service delivery guidelines and/or standards to guide the provision of AT.

The above interventions address critical gaps that could – when addressed – be foundational to guide scale-up of AT services.
Key Achievements

The CCA has been instrumental in raising stakeholders’ awareness of the need for and the importance of AT, as well as the current challenges and gaps in AT provision in the country as reflected from stakeholders below:

- “I have seen how AT in other countries significantly improves the lives of those in need, and I believe all these things are possible in Liberia as well to support the disabled community in realizing their independent living. Results of this assessment will inform us to carry forward a multi-sectoral and multi-disciplinary effort to improve the lives of the disabled community” – Liberia Minister of Health, Dr. Wilhelmina Jallah
- “For many years, NGOs have been providing assistive products to Malawians; it’s now the time that we should look for an alternative instead of relying on donations. I am glad that this assessment is conducted and the findings are the true reflection on what is on the ground” – Wheelchair User & Disability Rights Activist from Malawi
- “All government departments and other stakeholders need to work together now that they have all been created and roles and responsibilities are clarified. We need to have a unified effective AT policy for all of Nigeria” – Senior Special Assistant to the President on Disability, Nigeria

The CCA has also solidified government commitments to increase access to AT. Examples are listed below:

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- **Ethiopia**: The MoH established **an AT team within the Clinical Services Directorate** in December 2019 to coordinate the national AT work.
- **Sierra Leone**: The Sierra Leone Ministry of Health and Sanitation will elevate and formalize the TWG established for the CCA into a larger **inter-ministerial advisory body for AT**—expanding its scope and role—as well as include other ministries such as the Ministries of Road Transport, Science and Technology, Education and Finance.
- **Liberia**: The MoH and WHO will lead the establishment of **a cross-sectoral TWG for AT and rehabilitation services** as coordination,
| Action planning | • **Malawi**: The Malawi MoH established a taskforce in January 2020 to develop a draft of the National Medical Rehabilitation Policy in which AT will be covered. In addition, the CCA report is informing the Action Research Group coordinated by the APPLICABLE project that is tasked with developing the National AT Policy.

• **Nigeria**: A Roadmap for Increasing Access to AT will be developed by the Commission for Persons with Disabilities currently being set up under Nigeria’s recent Disability Law. The CCA project team received a letter of Commendation from the Office of the President of Nigeria asking them to continue to work with the Senior Special Assistant to the President on Disability Matters who is responsible for setting up the Commission.

• **Sierra Leone**: The first task for the advisory body for AT in Sierra Leone is to advise on the development of a long-term costed national strategic plan for AT.

• **Rwanda**: Since the findings from CCA show a lack of data to understand the need and priority for AT, Rwanda Biomedical Center (RBC) is working with CHAI and the WHO to identify the appropriate methodology and approach to broaden the initiative, starting by understanding the burden of disease using available dataset in the country and later narrowing it to AT needs.

| Funding | • **Ethiopia**: The MoH allocated a budget to implement foundational AT work in Q1 2020 (including the development of APL and specifications, product regulatory standards, and service delivery guideline). |
Following the completion of CCA, the Ethiopia MoH established an AT team in December 2019 and has allocated a budget to implement foundational AT work. One of the activities is a National AT and Physical Rehabilitation Orientation Workshop from January 16-18, 2020. The objective of this workshop is to build the capacity of the AT National TWG members on disability and AT. The National TWG serve as a platform for stakeholder engagement and mobilization to support nationally coordinated approach on AT and integration of AT in the newly developed Health Sector Transformation Plan.