ASSISTIVE TECHNOLOGY IN THE AFRICAN REGION: RESULTS OF AN ONLINE RAPID ASSISTIVE TECHNOLOGY CAPACITY SURVEY
<table>
<thead>
<tr>
<th>CONTENTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Background</td>
</tr>
<tr>
<td>2</td>
<td>Objectives / Purpose</td>
</tr>
<tr>
<td>3</td>
<td>Methodology</td>
</tr>
<tr>
<td>4</td>
<td>Results</td>
</tr>
<tr>
<td>5</td>
<td>Limitations</td>
</tr>
<tr>
<td>6</td>
<td>Conclusions</td>
</tr>
<tr>
<td></td>
<td>References</td>
</tr>
</tbody>
</table>
 Assistive technology (AT) refers to the systems and services used to deliver assistive products that maintain or improve a person’s function and independence such as eyeglasses, hearing aids, wheelchairs, pill organizers, augmentative communication devices, and incontinence products (1). Assistive products can benefit a wide range of people, including those with disabilities, affected by non-communicable diseases, and older people (2). Globally, more than 1 billion people need 1 or more assistive products, and more than 2 billion people will need at least 1 assistive product by 2030, with many older people needing 2 or more (3). Although the socioeconomic benefits of promoting access to AT have shown results (3) in reducing the poverty line in people who need them, allowing more productivity and reducing social exclusion (e.g. staying in school or staying employed), today only 1 in 10 people worldwide have access to lifechanging AT. 75 million people globally need a wheelchair, but only 5–15% of the population has access to one. Similarly, 466 million people need hearing aids, however the productions of these products meets only 10% of global need and 3% of the need in low-income countries. Furthermore, 970 million people need glasses worldwide, but over 200 million people do not have access to spectacles or other low-vision devices (4).

For instance, in the African region, it was demonstrated that millions of Southern Africans are deprived of basic rights such as access to education and right to work because of the unmet demand for AT (5). While there is a large unmet need for all types of assistive products in African countries, the current coverage levels of assistive products are not proportional to prevalence of impairment types. As an example, in Botswana, 60% of those with hearing impairments and 31% of those with mobility impairments did not have access to AT (6). A well-equipped, resilient health system that has the capacity to provide assistive products and services at an affordable price and in a timely manner is fundamental to ensuring equitable access to AT.

Remarkable progress has been made in recent years. Equitable access to affordable, quality AT became a fundamental human right and a legal obligation under the Convention on the Rights of Persons with Disabilities (7). In 2018, the World Health Assembly adopted a resolution (WHA71.8) on Improving access to assistive technology (8) which requests countries to include AT within universal health coverage. For this to be made a reality, it needs to be underpinned by government leadership, a multisectoral approach and adequate investment.

To support countries to improve access to AT, WHO published a Priority Assistive Products List in 2016 (9) and is developing tools to support countries to develop and implement National lists of priority assistive products as a first step towards improving access (see box 1).
2. Objectives/Purpose

The aim of this report is to give a high-level understanding of the current status of AT (especially procurement and service provision) in the African region using results of participating African countries. This report aims to raise awareness about the current gaps in access to life-changing AT and the significant benefits of accessing AT for the end-user, the community, and the national health and social care systems.

3. Methodology

The online rapid AT survey was adapted from a more comprehensive WHO Assistive Technology Capacity Assessment (ATA-C) which evaluates and monitors countries’ capacity to procure and provide AT that appropriately meet population needs. The rapid online AT survey was translated by the WHO African Regional Office in both English and French and disseminated to 165 professionals involved in AT provision identified through 47 countries in the African Region through e-mail and given 3 weeks’ time-period to respond. The survey was further distributed through the GATE community, an online discussion forum of over 1100 AT stakeholders around the globe. The survey included high-level questions relating to access to AT and the capacity of a country’s health system to procure and provide AT. A total of 111 people responded to the survey. However, incomplete surveys or surveys completed by respondents who were not from a WHO African Region country were excluded from the data set. In total, 46 responses were removed during data cleaning and processing.

Data analysis focused on four main domains, following the survey’s structure: policy and financing, product and procurement, service provision, and personnel (human resources). The questions and answers were grouped and analyzed according to these four main domains. In this report, the data analysis was carried out using responses to quantitative yes/no questions and multiple options responses. According to each question and response, categories were made. Counts of responses to each question were used to form statistical graphs to gain insight into the general picture of AT in the WHO African region.

The qualitative information provided in the survey was used in the report to support the quantitative data, although, due to limited responses, no detailed analysis was performed with this data.

4. Results

The results of the online rapid AT survey report on the responses of 65 stakeholders from 16 African countries. These 16 countries have ratified on the Convention on the Rights of Persons with Disabilities (CRPD), while only one country, Rwanda, has accepted accession. According to respondents, legal frameworks are in place, while there might be only some countries with government schemes covering the provision of AT. AT is mainly available through the private sector and charity organizations. AT is mainly provided in the tertiary and secondary healthcare levels, while little regulation exists to guide the prescription and provision of AT. Most respondents reported that personnel for the provision of AT exist in these countries; however, these are mainly available in the secondary and tertiary level. The following sections provide more details on the results of the survey.

4.1 Stakeholders and participating countries

The online rapid AT capacity survey was sent to various stakeholders across the African Region involved in AT access and provision. Respondents were from 16 African countries (Figure 1): Burkina Faso, Burundi, Comoros, Ghana, Kenya, Madagascar, Malawi, Mali, Morocco, Nigeria, Republic of Guinea, Republic of South Africa, Republic of Central Africa, Rwanda, Tanzania, Uganda, and Zimbabwe. From the participating countries, a small number of stakeholders responded to the survey per country (except for South Africa). Although this report presents results of a limited number of African countries, it can provide general overview of the situation of access to AT that might be applicable to other African countries.

Figure 1. Participating countries in the ATA-C survey and number of respondents

*Colors represent the number of participants responding to the survey per country.*
Several types of participants responded to the survey, providing valuable information on the capacity of their country to provide access to AT (Figure 2). Most of the participants were healthcare professionals related to AT, which included physicians, physiotherapists, occupational therapists, audiologists, language therapists, etc. Other participants included members of user groups and NGOs, as well as government officers.

Frequently, respondents from the same country gave differing responses. This finding can show that, although opinions do differ between stakeholders (and depending on their role and function related to AT), there can be a lack of knowledge, understanding, and/or awareness on the different domains and aspects governing access to AT.

Figure 2. Type of participants responding to the ATA-C survey.

4.2 Policy and Financing

All 16 countries have ratified in the Convention on the Rights of Persons with Disabilities (CRPD) (Figure 3). Of these, only Rwanda has accepted accession.

Figure 3. Countries (of study) that have ratified and/or accepted accession in the CRPD.
According to stakeholders, most countries have a legal framework in place addressing the implementation of CRPD, which should set a basis for action towards addressing the needs and rights of persons with disabilities. A legal framework to implement CRPD can also address issues relating to access to AT to guarantee the wellbeing and life quality of persons with disabilities. But, despite the legal framework, responses point out that nearly half of the countries’ legal framework mention AT and less than half of the countries have a government financing or insurance scheme in place which provides AT coverage (Figure 4). This shows that there is a wide range of legal policies and frameworks within each country, demonstrating the need for further research to specify each countries involvement including the structure and entitlements of the policies, and the gaps to be addressed. Further research should also thoroughly analyze the policies and legal frameworks that address the rights and needs of people in need of AT to identify if the necessary mechanisms to enable equitable access to healthcare and AT are in place.

Some stakeholders have reported on the marginalization of people who need AT and the difficulties to access AT, on the limited funds to provide AT coverage as people continue to pay out of pocket for their AT, and the long waiting times to access AT. Therefore, the implementation of legal frameworks addressing the rights of people in need of AT in each country need to include provisions that enable the development of government schemes that provide health coverage of AT, as well as other necessary considerations to facilitate access to healthcare and AT.

4.3 Products and Procurement

Of the 15 assistive products included in the survey, all are available in the 16 participating countries (Figure 5), mainly in the private sector. However, for all assistive products, some stakeholders reported that such products were not available in their country. These results may respond to the lack of awareness of the product or poor availability of the product in all regions of the country. Further assessments are required to explore the availability and access of these products in each country.

Another major provider is the non-for-profit sector (NGOs). Only few assistive products (communication boards, hearing aids, spectacles, prostheses, and orthoses) are more available in the public sector (government) than in the non-for-profit sector. These results show the reliance on the private sector and the non-for-profit sector (i.e. charity/philanthropy) to have access to assistive products. Having access to assistive products through the private sector implies, in many cases, that these assistive products are paid out of pocket by persons who need assistive products or their families. The results presented in Figure 5 also show that the strong dependence on charity and NGOs can evidence gaps and weaknesses in the public health sector to cover and provide...

…very little actual realization or substantial or meaningful implementation [of policies governing CRPD and AT]… Not all disabilities are equally catered for or even acknowledged.
access to assistive products. Assistive products supplied through charity can be of lower quality.

However, according to stakeholders surveyed, most assistive products in these countries lack a standard or regulatory requirement before entering the market (Figure 6). Appropriate and comprehensive legislation and regulatory frameworks can play important roles in promoting and improving access to assistive products that fulfil the safety and quality standards in national and international regulations. Regulatory frameworks should also consider supply and provision considerations for the efficient procurement and supply of appropriate assistive products and delivery systems. Furthermore, these regulations should be applicable to the whole assistive products market in each country.

**Figure 5. Availability of assistive products across sectors.**

**Figure 6. Regulation of assistive products before entering the market**
4.4 Personnel

Trained personnel are necessary for the safe and effective provision of AT; including comprehensive assessment and prescription, fitting, user training and access to follow-up services, including maintenance and repairs. Results show that the required personnel exist in the countries of study (Figure 7). Furthermore, these results also show that most of the personnel has access to training and education on AT to receive the qualifications required. However, almost half of the respondents reported that there is no training available for CBR workers, who are well placed to provide AT at the community level. The main limitation of these findings is that it gives a limited perspective on the amount of personnel available to attend the population in need. According to stakeholders, the amount of skilled workforce available is limited and not sufficient to address demand and the needs of people who need AT.

Further efforts are necessary to expand the capacity of the workforce by employing the sufficient amount of trained personnel alongside proper working conditions. These efforts need to go in hand with the establishment of training and education programs that guarantee the availability of trained personnel to meet the demand.

*Figure 7. Availability of relevant AT workforces and training of these workforces.*

*For the existent workforce in the participating countries, the blue color shows the percentage of respondents reporting that this workforce has access to training and educational programs. The yellow shows the percentage of respondents reporting that there are no training or educational programs for this specialized workforce in the country.

“The workforce is low since the government is reluctant to employ to meet the growing need.”

Regarding the workplace, most of the specialized workforce is available in the tertiary healthcare level, except for community based rehabilitation (CBR) workers, which are mainly available at the primary healthcare level (Figure 8). However, respondents reported that CBR workers were less available than any other specialist in the participating countries. There is consistently low workforce coverage at the primary healthcare level for the different specialists, with no representation at primary level for P&O technicians. Primary healthcare services have the lowest overall workforce availability. Only opticians and audiologists are more commonly available in the secondary healthcare level. Developing trained personnel in the primary healthcare or community level can facilitate provision of AT to people and, therefore, final access to people in need of AT.
4.5 Provision

According to stakeholders, there is little regulation on the prescription and/or provision of AT (Figure 9). These results show that clear guidelines need to be in place to indicate who can prescribe and provide AT. Having prescription and provision guidelines promote adequate use of AT to guarantee the satisfaction and improved quality of life of persons using AT.

The provision of AT happens mainly at the tertiary healthcare level, followed by the secondary level (Figure 10). This is an important consideration as the tertiary level facilities might not be as accessible as primary healthcare level facilities. Expansion on the availability and provision of AT through primary healthcare level facilities can help improve access to AT for persons requiring and/or using AT.

However, it was noted by stakeholders that some of the providers might not have the adequate training to prescribed and particularly provide AT. Some of the training that providers receive might be inadequate, which reinforces the need to develop prescription and provision guidelines for all providers at all levels of care.
5. Limitations

This report provides a general overview of the capacity and access to AT in some African countries. Therefore, one main limitation of this report is the limited number of participating countries. This report provides information on only 16 countries and provides a limited overview of the region, as some aspects discussed in this report might or might not be applicable to other African countries. Therefore, its generalizability should be taken with restraint.

The limited number of respondents per country also limited the possibility to thoroughly analyze trends and more specific aspects in each country. We found a wide variation of responses between respondents within the same country, which did not allow us to infer or draw conclusions on aspects, issues, and barriers related to AT.

The online survey had some limitations, as it may not allow to realize or infer barriers within the country and the health system on access to AT (e.g. economic barriers, geographical barriers, etc.). The online survey may not have reached all relevant stakeholders. In future, the survey should be complemented with other tools that measure the people’s experiences and explore other barriers and aspects that influence access and use of AT.

6. Conclusions

This report presents findings from respondents of 16 African countries and provides a broad overview on access to AT in participating countries from the region. In order to gain a more in-depth understanding of the AT landscape in a country and to set priorities to improve access to appropriate, affordable, and quality AT, a more in-depth assessment is recommended. The WHO ATA-C survey is currently being developed for this purpose.

African countries participating in the online survey present some common aspects influencing access to AT. Since most AT is more readily available through charity and the private sector, this calls upon governments to strengthen policy and regulation around financing, procurement, and provision of AT.
References


