

AT 2030
Research Paper

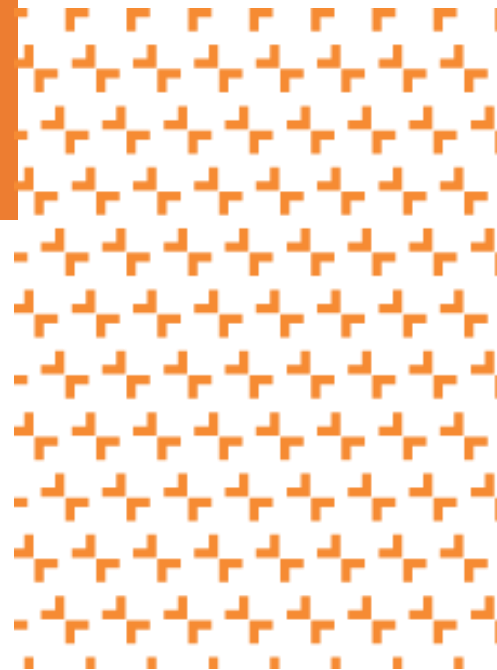
Assistive Technology in Two Humanitarian Contexts: Bangladesh and Jordan

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The views expressed in this publication do not necessarily reflect those of the New Zealand government.

Abbreviations

AT – Assistive technology

BDT – Bangladeshi Taka

CBR – Community-based rehabilitation

CDD – Centre for Disability in Development (Bangladesh)

DG ECHO – Directorate-General for European Civil Protection and Humanitarian Aid

EMT – Emergency medical team

GDI Hub – Global Disability Innovation Hub

HAI – HelpAge International

HI – Humanity & Inclusion

HRP – Humanitarian response plan

MFAT - Ministry for Foreign Affairs and Trade (New Zealand)

NGO – Non-governmental organisation

OT - Occupational therapist

PHC – Primary healthcare centre

PT - Physiotherapist

rATA – rapid Assistive Technology Assessment

SLT - Speech and language therapist

UNCRPD – United Nations Convention on the Rights of Persons with Disabilities

UNICEF – United Nations Children’s Fund

WGSSQ – Washington Group Short Set Questions

WHO – World Health Organization

Executive Summary

Despite increased focus on the need for assistive technology (AT), along with estimates of need and gaps in provision in humanitarian contexts, very little is actually known about how people who need AT are managing in these contexts. In order to address this need, this study explored four main questions:

- What do we currently know about the need for AT in humanitarian contexts?
- How is this need currently met?
- What gaps are there in the evidence about these needs?
- What mechanisms are needed to ensure provision of AT in humanitarian contexts?

It explored these questions through individual interviews with AT users and their families, as well as people working in the sector, in two humanitarian response contexts: Bangladesh and Jordan. A total of 79 interviews were undertaken across the two countries, with both men and women. All were over the age of 18, and most were in contact with services. In Bangladesh, we partnered with CBM Global Disability Inclusion (CBM Global) and their local partner, the Centre for Disability in Development, and in Jordan, all those interviewed were beneficiaries of HelpAge International. The sample presented here is therefore not representative of all users of AT, but rather gives a sense of what and how people are currently managing to access AT across camp and host community settings.

The questions focused on the areas identified as gaps in the initial literature review and used qualitative methodologies to probe and gain further insight into gaps across the entire AT ecosystem. To reflect this, we have framed the findings around the WHO's 5 Ps framework:

Products – What kinds of AT are developed and used in humanitarian settings?

People – Who uses and creates AT in humanitarian settings? (This includes personnel.)

Provision – How is AT in humanitarian settings currently funded and how sustainable are these models? (This often overlaps with Procurement.)

Place – How does place (location) impact on access?

Policy – Is AT in humanitarian settings influenced by existing policy frameworks?

The research found that it is clear that the provision of AT (in this case mainly assistive devices) is ad hoc, and largely related to the access, availability and focus of NGO-funded projects in camps or communities. This is perhaps unsurprising, given the general level of access to goods and services by refugees in both these settings. When it was available, for many of those interviewed, AT had a positive impact on their lives. **However, devices alone cannot ensure wider inclusion** – for that, there still needs to be attitudinal change, environmental adaptations, better provision of resources (including rehabilitation) and much wider awareness about the policies and legislation that support the rights of persons with disabilities, including those who have crossed an international border to seek safety and security.

However, **there is still very little research around the nexus between social protection and humanitarian responses, particularly for persons with disabilities.** Turning inclusion into action requires more connected thinking on joining up social assistance.

We saw this disconnect in the responses here – **many of those interviewed lacked the necessary support mechanisms to enable them to access their rights to work, education, healthcare,** etc. This perpetuates the idea that these people are ‘vulnerable’ and waiting to be assisted, rather than capable of being more independent if given the necessary support, including AT.

Provision of AT in humanitarian settings is likely to continue to be largely delivered through agencies and organisations, as often in these contexts formal healthcare structures are overwhelmed and do not have the resources. However, **there needs to be increased investment in, and focus on, strengthening healthcare systems to respond to the growing need for AT.** There has been a lack of focus on AT and allied services such as rehabilitation, and resource-constrained countries have often prioritised other aspects with the healthcare systems.

Finally, **our findings also indicate a need for more ‘translational’ research,** which takes data – such as prevalence data collected by Washington Group Short Set Questions, age-, sex- and disability-disaggregated data, or more needs-based data such as the rapid Assistive Technology Assessment – to develop and deliver effective, evidence-based health and rehabilitation services. As yet, there is still limited evidence on what works for effective AT, how to deliver it and how much it costs, and while programmes such as AT 2030 are beginning to unpack these, there is much more work needed in specific areas, including humanitarian contexts.

The report also makes a series of recommendations, also structured around the 5 Ps:

Products

- Provide AT as part of core healthcare provision in emergency settings.
- Where AT cannot be provided and fitted by a healthcare professional, provide users with appropriate guidance on the type of AT required, fitting requirements and safe and effective use.
- Leverage informal networks of AT providers as points of contact and/or resources to support strengthened AT provision within the health system.
- Support and invest in local production, repair and distribution of AT in emergency contexts.
- Identify opportunities for innovation in AT that can be utilised in humanitarian contexts.

People

- Include allied health professionals – a vital resource for AT assessment, training and follow-up – in formal healthcare structures and programmes.

- Provide disability-specific social protection and/or injury-related compensation.
- Asides from AT provision, address the challenges of stigma, inaccessible environments and the need for additional support or training to regain independence through efforts to support persons with disabilities in a humanitarian context.

Provision

- Provide more AT through existing public healthcare mechanisms, as well as ensure provision is more joined up across sectors.
- Focus more on local production and manufacturing.
- Ensure recommendations for guidance on budgeting for AT in HRPs is implemented – or budget an additional 3 to 7 per cent in HRPs for specialised non-food items, such as assistive devices and mobility equipment.
- Develop a standardised approach to AT assessment and provision in humanitarian settings.

Place

- Promote more collaboration and coordination between sectors and [UN clusters](#) to ensure the provision of appropriate and joined-up provision of AT for adults and children in humanitarian contexts.
- Ensure inclusive infrastructure guidelines are useful and used for temporary contexts.

Policy

- Develop specific policy around provision of AT in humanitarian emergencies, in line with recommendation 9 of the Global Report on Assistive Technology (include AT in humanitarian responses).
- Ensure specifically that assistive products are prioritised and available through appropriate procurement routes.
- Develop an *Assistive Products Priority List* specifically for humanitarian contexts.
- Capture AT provision in humanitarian settings through research to inform future policy and practice responses.

These recommendations are intended to improve the understanding of the need for AT in humanitarian settings and provide recommendations for action by key stakeholders, particularly global humanitarian coordination bodies and actors.

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1. Background to Global Disability Innovation Hub/AT 2030

Global Disability Innovation Hub (GDI Hub) is a research and practice centre driving disability innovation for a fairer world, which is part of a bigger movement for disability justice to disrupt current ideas and practice to create new possibilities.

Operational in over 35 countries, we work with more than 70 partners, delivering projects across a portfolio of £50 million. GDI Hub has reached 12 million people since its launch in 2016 by developing bold approaches, building innovative partnerships and creating ecosystems to accelerate change.

AT 2030 is our flagship programme, funded by UKAid, which tests ‘what works’ to improve access to life-changing assistive technology (AT) for all. AT 2030 has invested £40 million through grant and match-funding over five years to support solutions to scale. The programme delivers across four clusters of work: Data and Evidence, Innovation, Country Implementation, and Capacity and Participation. The research in this paper is supported under the Data and Evidence cluster, which aims to improve data and evidence to unlock investment into AT, including examining the need for AT in humanitarian settings.

2. Introduction

There is an urgent and growing gap in AT access for people with functional limitations in humanitarian settings. Recent research estimates that access to AT in these contexts is already limited and meets as little as 5–15 per cent of the population that needs it (Whittaker et al. 2021). Article 11 of the *UN Convention on the Rights of Persons with Disabilities* (UNCRPD) makes clear that State parties must ensure that AT is equitably provided to all who require it. In humanitarian crises, accountable agencies for the humanitarian response – including national government and UN agencies – must work together to comply with the requirements of the UNCRPD.¹ In doing so, they must consider three different but related groups of people with AT needs:

- people who newly acquire a disability as a result of the immediate or long-term effects of the crisis, who in some cases may represent only a minority of people with AT needs
- people who have lost or damaged their assistive product in the crisis (again, likely to be a relatively small number given the paucity of product availability in most pre-crisis settings)
- people who have unidentified AT needs that have not yet been met, even before the crisis. This third group is likely to be the biggest (Tataryn & Blanchet 2012, cited in Whittaker et al 2021).

Assistive technology needs also vary according to the specific situation, such as the nature of the humanitarian disaster, which may indicate the nature of injuries sustained and the need for rehabilitation and AT (e.g. bomb-blast injuries in conflict, crush injuries in earthquakes). Of course, the nature of injuries can overlap, and while some are newly acquired impairments,

¹ www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/article-11-situations-of-risk-and-humanitarian-emergencies.html.

others are exacerbations of existing impairments or disabilities. The number of crises and the number of people affected by crises is increasing, and more so in low- and middle-income countries. In addition to increasing disability rates, ageing populations and the higher prevalence of non-communicable diseases worldwide mean that we can expect AT needs in crisis settings to continue to grow. Humanitarian crises worsen the challenges in the environment: people might lose or damage their assistive products or live in inaccessible informal settlements as a result of displacement. In these circumstances, even those with pre-existing impairments that were not previously disabling may find that they are unable to function as before (WHO/World Bank 2011).

Humanitarian crises place pressures on existing systems for healthcare provision and are therefore likely to constrain these systems for AT provision (Bar-On et al. 2011, cited in Whittaker et al 2021) given the increased demand. However, there has been a lack of focus on AT and allied services such as rehabilitation, and resource-constrained countries have often prioritised other aspects with healthcare systems. The Director-General of the WHO indicated the need for long-term planning and sustainable systems in order to ensure a reliable supply of assistive devices and their replacement parts (WHO 2017). The Director-General's report also noted the need to plan and prepare better to ensure the access and availability of AT in emergencies, with the aim of facilitating earlier discharge from hospital and preventing excess morbidity. The report goes on to note that these products should be appropriate for the emergency context and setting, with mechanisms for follow-up, maintenance and repairs. It also notes the need for 'robust coordination mechanisms' to ensure appropriate procurement and provision (WHO 2017).

Other challenges include the growing population with AT needs, which may include newly displaced people relying on humanitarian support. This often coincides with an exodus of local professionals and experts with a role in healthcare and rehabilitation because of the deteriorating humanitarian situation. Distribution systems for AT face many practical obstacles in humanitarian contexts, including security restrictions and the prevention of access to areas controlled by different factions. The provision of AT may also be constrained by political issues, such as government policies on eligibility to receive healthcare and AT services in a national system, which may preclude refugees and displaced people, or restrictions on imports such as batteries for hearing aids.

2.1 Frameworks for Action

While there has been increased focus and attention on the inclusion of persons with disabilities within humanitarian responses, with a range of general and sector-specific guidelines (e.g. *The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response* (Sphere 2018), the Core Humanitarian Standard for Quality and Accountability, *Humanitarian Inclusion Standards for Older People and People with Disabilities* (CBM, HAI & HI 2018), *Operational Guidance on the Inclusion of Persons with Disabilities in EU-Funded Humanitarian Aid* (DG ECHO 2019), and the *Charter on Inclusion of Persons with Disabilities in Humanitarian Action* (World Humanitarian Summit 2016)), there remains significant gaps in the operationalisation of these policies, standards and guidelines at the field level (Rohwerder 2017). This has led to persons with disabilities continuing to be

excluded from both general humanitarian responses, including access to water, shelter, food or health, as well as more specialised services such as rehabilitation, assistive devices, social workers or interpreters (Holden et al. 2019). The *Charter on Inclusion of Persons with Disabilities in Humanitarian Action*, developed for the first World Humanitarian Summit in 2016, commits to five key principles: non-discrimination, participation, inclusive policy, inclusive response and services, and cooperation. Though all of these are key to achieving inclusion, it is the last two areas in particular that we will focus on in this research.

The charter notes that inclusive response and services must take into account:

*the diverse needs of persons with disabilities ... [and] strive to ensure that services and humanitarian assistance are equally available for and accessible to all persons with disabilities, and guarantee the availability, affordability and access to specialized services, **including assistive technology in the short, medium and long term.*** (World Humanitarian Summit 2016: art. 2.4; emphasis added)

The Inter-Agency Standing Committee's (2019) *Guidelines on Inclusion of Persons with Disabilities in Humanitarian Action* focus on a twin-track approach to inclusion across the key cluster sectors, with ATs being part of a specialist (targeted) support service. The guidelines use the WHO definition of assistive technology, devices and mobility aids as:

external products (devices, equipment, instruments, software), specially produced or generally available, that maintain or improve an individual's functioning and independence, participation, or overall well-being. They can also help prevent secondary impairments and health conditions. Examples of assistive devices and technologies include wheelchairs, prostheses, hearing aids, visual aids, and specialized computer software and hardware that improve mobility, hearing, vision, or the capacity to communicate. (Inter-Agency Standing Committee 2019: 8)

2.2 Ongoing Challenges

However, as Kirstin Lange (UNICEF) has noted, while there is increasing guidance on what inclusion looks like, there is much less on how to actually do it:

*Humanitarian Needs Overviews (HNOs) and Humanitarian Response Plans (HRPs) for 2020 are evidence of the increasing recognition of the vulnerability of persons with disabilities in humanitarian emergencies, and the need to do more to ensure their inclusion in humanitarian response. However, what those HNOs and HRPs also demonstrate is a gap in understanding of the specific factors that place persons with disabilities at heightened risk, and the concrete actions needed to make humanitarian response more inclusive. Following the launch of the guidelines, there **is a need now for attention to shift from global frameworks to operational support at field level, to ensure that humanitarian actors are equipped, not only with the knowledge of 'what' disability inclusion entails, but also the resources to address the 'how'.*** (Lange 2020: 4–5; emphasis added).

This is certainly the case for AT, where, beyond mapping availability and ensuring stocks and funding, there is little specific guidance on how products should be assessed, fitted or

distributed, let alone how to identify need. There is also a considerable mismatch between supply and demand, which in turn impacts on the market. If it is available at all, most AT in humanitarian settings is supplied by international organisations or other donor or charity funding. The type of AT provided is often not suitable for the specific context and/or sub-standard or not even used. It is often provided without appropriate services or support (Rohwerder 2018). Moreover, donations of this kind can absolve governments of taking responsibility for the provision of goods and services (Visagie et al. 2016, cited in Rohwerder 2018).

There is an overall lack of evaluations about ‘what works’ for person with disabilities humanitarian settings (White et al. 2018), let alone evidence around AT (devices and other products). This shortage of both information about, and access to, specialist services and equipment, leads to an unmet need for devices and services (Holden et al. 2019). To date, there is very little data available on the magnitude of these needs, in part because of issues of identification, assessment and reporting. The few reviews available tend to focus on the provision of physiotherapy (and some limited occupational therapy), and though usually favourable, they often highlight the ad hoc nature of the services and the lack of a comprehensive service model (e.g., Mousavi et al. 2019). They also tend to focus on functional rehabilitation and participation, rather than the provision of AT as a necessary component of the right to inclusion (e.g., to access education).

2.3 Capacities, Tools and Limitations

There is some guidance available for professionals working in rehabilitation in emergencies. These include: the *Guidance Note on Disability and Emergency Risk Management for Health* (WHO 2013); *Rehabilitation in Sudden Onset Disasters* (Skelton and Harvey 2015), developed for rehabilitation professionals (primarily physiotherapists and occupational therapists) and deployed through the UK International Emergency Trauma Register; *Management of Limb Injuries during Disasters and Conflict* (International Committee of the Red Cross 2016); and, specifically for physiotherapists, *The Role of Physical Therapists in Disaster Management* (World Confederation for Physical Therapy 2016). More recently, *Early Rehabilitation in Conflicts and Disasters* (HI 2020) and the WHO’s (2021b) *Rehabilitation Competency Framework* were published (though the latter does not mention humanitarian contexts specifically). The WHO’s (2010) *CBR Guidelines* also have a specific section on humanitarian action. However, it should be acknowledged that there may be a shortage of locally trained and available staff, services and products in many settings, something that is being addressed by the WHO Rehabilitation 2030 Initiative, which talks specifically of ‘strengthening rehabilitation planning and implementation at national and sub-national levels, including within emergency preparedness and response’ (Priority Action Area 2).²

In 2016, the WHO launched the first of a series of technical guidelines designed to provide minimum standards for emergency medical teams (EMTs) in sudden onset disasters – those who were sent as part of an assistance package. The first was a set of minimum technical standards and recommendations for rehabilitation (WHO 2016a), which outline the minimum

² See www.who.int/initiatives/rehabilitation-2030.

standards for EMTs with regards to the workforce, the field hospital environment, rehabilitation equipment and consumables, and information management. These are a comprehensive set of guidelines, including a list of minimum equipment required. However, it is unclear to what extent these are used in the field, and they were only intended for EMTs. This means the recommended equipment is primarily for immediate medical and surgical needs, based on function and participation, and does not cater for longer-term needs (or indeed rights, mental health and psychosocial needs). Though these aspects are not specifically included in the standards, the need is acknowledged, and local procurement is recommended, as is connection with local disabled people's organisations and other support organisations (WHO 2019). Moreover, while there is also some overlap with the WHO's (2016b) *Priority Assistive Products List* (launched in May 2016), there is no cross-referencing between the two.³

In order to better identify met and unmet need for AT, the Global Cooperation on Assistive Technology⁴ developed the population-based rapid Assistive Technology Assessment (rATA) survey tool. The rATA has seven sections, which gather basic data on demographics, needs, demand and supply, user satisfaction, and (optionally) recommendations, and can be administered either to specific groups, or as a specific (or part of another) population-based survey (WHO n.d.). The rATA is part of the WHO Assistive Technology Assessment (ATA) toolkit.⁵

While there have been some previous disability surveys in humanitarian contexts, for example of Syrian refugees in Jordan and Lebanon, and in South Sudan (HI & iMMAP 2018; HI & IOM 2018; Humanitarian Needs Assessment Programme 2019), results are largely based on the Washington Group Short Set Questions (WGSSQ).⁶ However, the WGSSQ give a prevalence, not a diagnosis, so it is difficult to link the results of the survey to perceived need. To our knowledge, to date there has only been one rATA undertaken in a humanitarian context (Bangladesh), which is discussed in further detail in Section 6 below. This means that while there are estimates of need, and gaps in provision, there is very little known about how people who do need AT are managing in humanitarian contexts.

3. Research Questions

In order to understand the need for, and access to, AT in the humanitarian sector, the study addressed the following overarching research questions:

- What do we currently know about the need for AT in humanitarian contexts?

³ It is also worth highlighting that while much of the guidance provided could be applicable in both disaster and conflict settings. In some complex humanitarian settings, such as Syria and Yemen, there have been incidences of the deliberate targeting of humanitarian agencies, health facilities and health workers, resulting in closure of services, including rehabilitation projects, and increasing the likely of need for services. See: www.ipinst.org/2019/05/finding-the-road-to-implementing-security-council-resolution-2286#2.

⁴ Established by the WHO in 2014 to improve access to high-quality and affordable AT.

⁵ See www.who.int/toolkits/ata-toolkit/.

⁶ See www.washingtongroup-disability.com/question-sets/wg-short-set-on-functioning-wg-ss/.

There is also Leonard Cheshire and HI's (2018) report, which focuses on use of the WGSSQ in humanitarian settings.

- How is this need currently met?
- What gaps are there in the evidence about these needs
- What mechanisms are needed to ensure provision of AT in humanitarian contexts?

This work is intended to improve understanding of the need for AT in humanitarian settings and provide recommendations for action by key stakeholders, particularly global humanitarian coordination bodies and actors.

4. Methodology

In order to facilitate the research and access to populations, two international NGOs partnered with GDI Hub for this work: CBM Global Disability Inclusion, with their partner, the Centre for Disability in Development (CDD), in Bangladesh, and HelpAge International (HAI) in Jordan. Both Cox's Bazar in Bangladesh and Jordan can be characterised by protracted crises, compounded by conflict, frequent disasters (such as cyclones and flooding), and most recently coronavirus. In Bangladesh, mainly members of the Rohingya population were interviewed, and in Jordan, those interviewed were mostly (but not exclusively) Syrian refugees. As both contexts have camp-based and host community participants, interviews reflect this. In Bangladesh, most of the host community are Bangladeshi, whereas in Jordan they were Syrians and Yemenis living in the host community. More details about the context are provided in Section 6 below.

Teams were asked to identify around 30 people to be interviewed in each of the two locations, based on the following criteria:

Interviewees should be over 18, ideally equal numbers of men and women, with a reasonable distribution across age cohorts (e.g., 18–30, 31–49, 50–65, 65–80, 80+), as well as across functional domains (e.g. seeing, hearing, walking, remembering, communicating, self-care). Both camp-based and host communities were included.

We also asked, where possible, to include those who were using homemade devices, as well as others who purchased devices, rather than all direct beneficiaries of clinical interventions. It was agreed that between five and ten therapists (e.g., physiotherapists or occupational therapists) would also be interviewed to give a local service-provider perspective.

As we had partnered with HAI in Jordan, all interviewees there were over the age of 50, and most had already received services from HAI. In Bangladesh, in addition to interviewees selected by CBM Global's implementing partners (CDD) from selected camps that CBM-CDD were already working in (or planned to work in), a small cohort were also selected from the rATA database using a set of agreed criteria (include sex, age and type of device used). In 2021, CBM Global partnered with REACH to undertake the rATA in all 34 camps.⁷ Interviews for the rATA were conducted from 3 to 15 March 2021, and in total 666 people from 401 households were interviewed. Only a small number of these met the agreed criteria, were re-

⁷ These are the camps recognised by the Inter Sector Coordination Group and Refugee Relief and Repatriation Commissioner.

traceable and agreed to be re-interviewed (n = 6). While the majority of those interviewed were already known to the teams, many had not yet received services.

A set of semi-structured interview questions were developed and used with both camp-based and host community participants. It was translated into Arabic for use in Jordan, and translation into Bangla (if needed) was agreed with the CBM Global team for Rohingya population. The same tool was used, with slightly adapted wording, for local practitioners in both countries (See Appendix 1).

Members of the CDD teams in Bangladesh (four in total) and HAI in Jordan (one) were trained on the interview process and undertook the interviews in the local languages. In Bangladesh, the teams transcribed and translated their own interviews; in Jordan, a translator was employed to facilitate the process.

In Bangladesh at the time of the fieldwork, face-to-face interviews were permitted in camps and host communities; in Jordan, interviews were undertaken online or via telephone, in line with government coronavirus restrictions.

In total, 79 interviews were undertaken. In Bangladesh, 24 interviews with AT users were recorded in camps in Cox's Bazar (11 women and 13 men), and 15 (6 women and 9 men) in host communities. Of the 24 interviews conducted in the camp, 6 were identified through rATA, 16 were identified by CDD but had not yet received services from the CDD and 4 were beneficiaries of CBM-CDD. Also interviewed were 2 programme managers and 4 camp-based therapists. In Jordan, all 30 interviews (15 male and 15 female) were in host communities, and all were beneficiaries of the HAI programme. A total of 5 therapists were also interviewed in Jordan.

The study only included those over 18 years old, so no data is available on what children and families are doing to mitigate need, though some of the respondents have been AT users all their lives, so do give an indication of how they have managed. In Bangladesh, the age range of those interviewed was 20–85 years old, and in Jordan 57–85 years old. The sample presented here is therefore not representative of all users of AT, but rather gives a sense of what and how people are currently managing to access AT across camp-based and host community settings.

The questions focused on the areas identified as gaps in the initial literature review and used qualitative methodologies to probe more deeply than existing tools (e.g. rATA) to gain further insight into gaps across the entire AT ecosystem. To reflect this, we have framed the findings around the WHO 5 Ps framework (Holloway et al. 2018):

Products – What kinds of AT are developed and used in humanitarian settings?

People – Who uses and creates AT in humanitarian settings? (This includes **personnel**.)

Provision – How is AT in humanitarian settings currently funded and how sustainable are these models? (This often overlaps with **Procurement**.)

Place – How does place (location) impact on access?

Policy – Is AT in humanitarian settings influenced by existing policy frameworks?

The research was undertaken as part of the AT 2030 programme (UCL ethics approval number 1106.014).

5. Limitations

It is important to note that these responses are not necessarily representative of the entire camp or host communities in both countries. They also represent a small sample size, based on a purposeful sampling of a target group. Nevertheless, they do highlight the challenges of accessing and using AT in protracted humanitarian contexts. It is highly likely that there are many others who would benefit from AT but have yet to be identified.

6. Context

6.1 Cox's Bazar, Bangladesh

Since 25 August 2017, extreme violence in Rakhine state in Myanmar has driven Rohingya people across the border into Cox's Bazar in Bangladesh. There are currently more than 860,000 Rohingyas living in 34 government-designated camps and host communities in the Ukhiya and Teknaf *Upazilas* of Cox's Bazar District (REACH 2021a). While conditions are difficult for most of those living in the camps, they are especially difficult for persons with disabilities. Prior to their departure from Myanmar, people with disabilities received limited services, with most never having received any form of rehabilitation or psychosocial support. Many experienced discrimination, stereotyping or ignorance of service providers about their specific requirements.

Within the camps, while there are primary healthcare centres (PHCs), more than half of the camps are not reached by rehabilitation services. Some services, including rehabilitation centres, mobile outreach teams and rehabilitation services within other health clinics, are provided by NGOs, including CBM-CDD, Humanity & Inclusion (HI) and HAI. The type of services offered depends on the provider, but usually includes physiotherapy, occupational therapy, hearing and vision screening, and mental health and psychosocial support. Most have a strong focus on caregiver training, provision of assistive devices, and home and community accessibility modifications. They are also referral points for other centres (CBM and CDD 2021).

In 2019, the REACH consortium undertook two surveys to obtain better data on persons with disabilities among the Rohingya population living in camps in Cox's Bazar. One focused on education, the other on water and sanitation. Embedding the WGSSQ in the Water and Sanitation Household Survey across all households in 33 (out of 34) camps elicited a prevalence of 14 per cent of households that have at least one individual with a disability as a member, and 5 per cent of Rohingya (5+ years old) having a disability. Of these, the most common functional difficulty was mobility (2.8 per cent), followed by vision/sight (1.5 per cent) and self-care (1.2 per cent). According to the survey data, of this group, only 34 per cent reported they could access any support services in Bangladesh (e.g. specialised equipment or rehabilitation services). However, they were unable to explore this data further due to the format of the survey (REACH 2019).

Subsequently, Rohingya people experienced severe restrictions due to coronavirus, as well as several fires in the camps.⁸ All of these can impact disproportionately on people with disabilities. An Age and Disability Inclusion Needs Assessment was undertaken in May 2021, with technical support from the Age and Disability Working Group (REACH 2021b).⁹ According to this data, 64 per cent of persons with disabilities faced barriers in accessing health services (compared to 39 per cent of persons without disabilities), with the biggest barriers being the distance to health services and the lack of transport to access the facilities. Older persons also experienced barriers to accessing health facilities (64 per cent of female older persons and 49 per cent of male older persons respectively). REACH also partnered with CBM Global to assess the prevalence and need for AT in the Rohingya populations using the rATA tool, as well as the impacts of COVID-19 on their needs and access to AT (REACH 2021a). According to the rATA data, only 1 per cent of respondents had their AT needs met; 51 per cent reported unmet needs, and these unmet needs increased with age (85 per cent of respondents older than 60 reported unmet needs for AT; CBM Global & REACH 2021).

Finally, it is worth noting that while cooperation and collaboration between agencies has improved in Cox's Bazar, the Bangladesh government does not recognise the right of the Rohingya to form organised groups in the camps, which includes organisations of persons with disabilities; those living in host communities have not fared much better, as there are limited such organisations in the district and they are not operating in the areas where Rohingya have settled. According to CBM-CDD, there are also some concerns that these organisations largely reflect the concerns of Bangladeshi citizens, which are not necessarily the same as the Rohingya population.

6.2 Jordan

The decade-long Syrian conflict has left thousands of people dead or injured.¹⁰ There is limited access to health and rehabilitation services inside Syria, especially in the conflict areas, and those with chronic diseases, injuries and disabilities are particularly vulnerable (Thompson 2017). Millions of people have been displaced to neighbouring countries, including Lebanon, Turkey and Jordan.¹¹ Even before the conflict, disability data was scarce, with estimates that 3–8 per cent of the Syrian populations had some kind of disability, though it is widely acknowledged the conflict will have increased these figures, given the mental and physical traumas experienced by those in Syria (Thompson 2017). Initial data on prevalence among those fleeing the conflict was patchy, but since 2018 the Humanitarian Needs Assessment Programme has been using the WGSSQ in household surveys to gather prevalence data inside Syria (Humanitarian Needs Assessment Programme 2020). However, there was very little data on prevalence of Syrian refugees in other countries, including Jordan, a major receiving country.

⁸ www.theguardian.com/world/2021/mar/22/bangladesh-fire-rohingya-refugee-camps.

⁹ www.reach-initiative.org/what-we-do/news/understanding-disability-in-rohingya-refugee-camps/.

¹⁰ www.bbc.co.uk/news/world-middle-east-35806229.

¹¹ www.unhcr.org/uk/syria-emergency.html.

In 2018, HI, in collaboration with iMMAP,¹² undertook an assessment of disability prevalence in two refugee camps in Jordan (Azraq and Zaatari) and one host community location (Irbid). Using the WGSSQ (enhanced), the study obtained a prevalence of 22.9 per cent of surveyed Syrian refugees aged two years old or more with a disability (1,374 persons out of 6,003). Of the sampled households, 62 per cent included at least one member with a disability. The survey also asked about causes of disability, and almost a third (29.9 per cent) reported illness or disease as the primary cause of functional difficulties (with walking being the most common activity followed by anxiety, depression, fatigue and seeing), and of these, 24.7 per cent considered the causes were related to the Syrian conflict. More women (34.6 per cent) than men (24.7 per cent) reported disabilities related to illness or disease, and more men reported a disability related to injury (14.7 per cent of men to 7.1 per cent of women), suggesting a relation to the conflict (HI & iMMAP 2018).

According to the data, the most commonly reported functional difficulties by adults aged 18 years old and above were walking (14.4 per cent), anxiety (11.4 per cent) and fatigue (10.9 per cent). Many functional difficulties remained even if the person had access to assistive devices, with 22.6 per cent of those who use glasses, 19 per cent of those who use hearing aids and 71 per cent of those who use mobility aids still reporting difficulties in seeing, hearing and walking respectively (HI & iMMAP 2018). The authors of the report speculate that these difficulties could be related to inappropriate fitting of assistive devices and lack of follow-up or support, including maintenance.

Finally, there is no organised group of older refugees in either context. If there are any groups, they are informal and self-organised. Those included here were mainly from a community project in the south of Jordan.

7. Results

7.1 Products

By far the most common AT in both countries was a walking stick/single crutch. In total, in Bangladesh four people in camps had two devices and one had three (results therefore reflect this overlap); in host communities, two people had three devices and five had two. The remainder had one. In Jordan, nine had two devices, one had three and another had four.

In Bangladesh, six of those interviewed in camps, and one person in the host community, were using homemade devices – these were very basic, usually a walking stick made out of bamboo. While not a device per se, one man had made a pulley system using wood and ropes to help develop his upper body strength, as advised by the local therapy team. Half of those in the camp (10), and just over half (9 out of 15) of the host community AT users had purchased their devices in the market or shop. Only four persons in camps, and four in host community, had received them from an NGO. One person in the host community received it from a private hospital (Union Health Complex). Only eight of those interviewed in Jordan had purchased the AT themselves, the majority (15) had received device(s) as donations – though note that this may be an artifact of the selection process (through NGOs). Several respondents

¹² <https://immap.org/>.

had initially been using homemade devices prior to receiving the donations, or a second-hand device:

I ... received the crutch from Médecins Sans Frontiers ... Soon after the accident I was admitted there [hospital] for 4 months ... I have been using both [an aluminium crutch and toilet seat] since February 2019 ... I didn't have to pay any money. Before that I received the wooden crutch from my neighbour free of cost ... I don't use it now due to its weight. However, I have kept it in my store. I didn't pay any money for the products I am using. Only the potty seat, I had to purchase from the local market. The seat is made of plastic. I cannot remember exactly the price is. It may be BDT 150–200.¹³ I didn't have to borrow money. (Saffar, 70-year-old male, host community, Cox's Bazar)

But most had bought their AT from the local market or shops:

I got the wheelchair from one of the donors, but the rest of the mobility aids [a crutch and toilet chair] were purchased from the shop for about 200 Jordanian Dinars.¹⁴ (Ahmed, 85-year-old male, Jordanian living in Juneid)

I have been using a wheelchair since 2016 ... I received [a wheelchair] from an NGO in 2019. I forgot the name. Before that I used another wheelchair which I bought from the market [at] Cox's Bazar at the cost of BDT 8000. (Shomoda, 57-year-old female, host community, Cox's Bazar)

With regard to where people heard about the availability or types of products, often it was from family, friends or neighbours:

I went to visit one of my relatives living in another block when I saw this device [a metal walking stick] in his shelter and wanted to know about this. My relative explained about this device and its benefits. Then, he suggested [I could] use it and I collected it. (Noor, 57-year-old female, camp-based, Cox's Bazar)

The point about where people acquired their devices was reiterated by a physiotherapist in Jordan, who noted:

The main source to get this kind of products [is] the private sector. You need to go to, let's say there are many shops here, but really when [there are] very high prices, there are not really, let's say suitable or easy to get them, so poor people try to borrow them ... or try to get them from the charity ... organisation or something like that. (Physiotherapist, Jordan)

Some respondents had quite specific ideas about what they needed, rather than what they actually had:

I need one stable walking stick (4-point stick) for walking and a toilet chair for toileting. Now I have less balance and low sitting difficulties. (Hafeza, 58-year-old female, camp-based, Cox's Bazar)

¹³ BDT 100 = USD 1.20.

¹⁴ JOD 200 = USD 282.

Others had very pragmatic suggestions as to how the devices could be adapted:

My wooden stick is a bit heavy; the weight can be reduced for better handling [then] I can easily transport it with me. (Probin, 76-year-old male, host community, Cox's Bazar)

I wish the quality of the product could be improved by adding legs to the crutch to facilitate my movement and adapt to the surrounding environment. I need the crutch daily to get around. I carry it with me in the car wherever I go, because I can't do without it as it keeps me from asking for help. (Muna, 74-year-old female, Syrian living in Al-Dulayl)

Some respondents also noted the need to adapt the surroundings, as well as the AT:

I transport it by car and face many difficulties and challenges while loading and unloading it from the car. (Huriah, 74-year-old female, Jordanian living in Al-Dulayl)

Despite what is often said anecdotally, it was mainly those working in the sector who reported that some people had more than one AT (that they did not need):

Sometimes it happens that some organisations give some assistive devices like sticks, toilet chairs from some 'Age Friendly Spaces' centre to elderly beneficiaries. Some beneficiaries have a tendency to hide the information and try to get another from anywhere and sell this in the local market. But we assess our beneficiaries very carefully and ask firstly 'do you have any kind of device or products like that?'. We also make several visits to beneficiary houses to provide therapeutic intervention and follow-up. If they already have one device, then we don't provide them with a similar device. (Rehabilitation Officer, Camp 11, Cox's Bazar)

However, as another staff member explained, some people need more than one device, or their existing devices needed replacement:

Sometime[s] ... there's a need more than one device. For example, he needs a wheelchair, as well as a toilet chair. So he will get for sure two because he needs for this two. And sometimes adults get one, and after, for example, one year, it's totally damaged, and this is not [used] anymore ... So, to replace this item is highly needed and highly requested so he sure will get more than one in this case. (Technical Officer, Jordan)

However, it is possible that users are unhappy with their existing device so seek to get a better one. One therapist suggested a way round this might be to give the funding directly to the client so they can procure whatever AT they chose:

[Client has a prosthesis], but this is what he says is low quality in comparison to another prosthesis. So [he got] another prosthesis, also from another [NGO] ... then he liked another prosthesis ... So [if] we pay [them] directly ... the processes are smarter ... the clients know where to go to get those products – hospital, NGO, etc. (Physiotherapist, Jordan)

This point about quality was also reflected by some of the staff working in the camps and surrounding areas, in particular reflecting how devices need to be able to withstand different climatic conditions over a long period of time:

Maybe it's not ... for just one to two months, sometimes six months in a good situation, and also taking into consideration the winter situation and condition, which also make things worse. So, the quality of assistive device capability is key and fundamental (Technical Advisor, Jordan)

One person mentioned a variety of AT he had heard about, but which were not available in Bangladesh:

I have heard about some specific programmes on assistive devices on social media that [are] happening in other countries which focus on custom-made prosthesis, 3D printed device technology, wheelchair donation, etc. (Rehabilitation Operational Manager, Ukhia Office, Cox's Bazar)

7.2 People

In this section, we present findings from people who need AT, as well as those who provide them. Inevitably, in both contexts, there were many who acquired their injury as a result of conflict:

Most of them [refugees] are war injuries and they have very complicated cases, and they need support. [Some] come direct from the border to the camps, to the hospitals, and we go there to visit them and do an assessment for them and provide them with different kinds of assistive devices for example. The most common things we give them are wheelchairs. We have different kinds of wheelchairs ... We give them some mobility devices ... like auxiliary crutches, elbow crutches, canes, and also we give them some orthoses and also special splint for the hands for legs. There is a lot of kinds of devices we provide for the clients. (Physiotherapist, Jordan)

Others had work-acquired injuries, such as Shamsu, who had been injured 10 years before, and had not worked subsequently. He has no source of income, and is dependent on others:

Due to my injuries, the doctor told me that I would never be able to walk again ... the doctor suggested me to use axilla crutch, since then I have had to move with the crutch. There is no other way for me to move without this crutch. I was a construction worker and after I got injured, I couldn't go back to my previous work. I haven't had any income-generating work for the last 10 years ... I feel sad most of the time and face difficulties in using the washroom and going outside. I need caregiver support, but when I get a pair of crutches and spectacles, I hope I will be able to walk independently. (Shamsu 68-year-old male, camp-based, Cox's Bazar)

Another woman told the story of her mother-in-law, highlighting how she herself had thought that only 'old' people needed or used AT, but subsequently her mother-in-law needed to use AT after her stroke, which made her rethink her views:

She had a stroke in ... 2016. She is using a toilet chair and a wheelchair since 2018. My husband bought [the] toilet chair from the market. We have received the wheelchair

from my relative after her death ... her [mother-in-law] physical condition has not been improved but with the support of these devices it becomes easy for us to take care of her. Our neighbours are very caring ... They don't show any negative or curiosity ... I was very sad at her [mother-in-law] conditions. Sometimes I cried at her grief. After all, she is my mother-in-law. I have seen many people to use such products at their old age. I thought these are only for them. (Daughter-in-law speaking on behalf of Momtaz, 70-year-old female, host community, Cox's Bazar)

Several respondents mentioned that they had received their AT from someone else, who either changed/upgraded as it became less useful for them, or a family member no longer needed it (e.g. they had passed away):

I am using a toilet chair which is good for me. I use it regularly. I had a tricycle which was very useful for me to move around but unfortunately I lost it. My friend gave it to me. I had a wheelchair as well which I received from the Government Department of Social Welfare. It was not user friendly to me. I gave it away to one of my friends who was in need. (Aziz, 65-year-old male, host community, Cox's Bazar)

For many, access to AT did enable a shift in what they could do in their daily lives, as these examples indicate:

[My] lifestyle changed ... [I] can visit neighbours and relatives, go to the toilet without assistance and walk short distances. (Mahmoud, 83-year-old male, Syrian living in Jerash)

Really, assistive devices can change life. I feel very happy that I can do activities independently. First few days I was feeling uneasy; after then I realised its [the walking stick] benefits ... People want to know about its benefits and information on where to buy it and how to collect this type of device. I think community awareness and training [is] needed on assistive device. (Noor, 57-year-old female, camp-based, Cox's Bazar)

Others spoke about the wider health benefits, and in particular highlighted the reduction in dependency on others:

I go out now, so I no longer feel bored, which helps maintain my mental health and peace of mind, but I only go out for very short distances ... I felt a little happy and hopeful, especially when I was able to walk outside the house. In terms of what I think about people who have mobility aids, I think of them as being like me, always needing help and that an assistive device is their lifeline, without which they can do nothing. I feel normal now with some hope because I am able to leave the house for a short period of time. (Aminah, 65-year-old female, Syrian living in Juneid, using a crutch donated by a friend)

I used to lean against the wall or on a family member, then used a cane before I got the crutch, but when I got it, I was so excited because I knew I would be able to stand on my own and that we would become inseparable. I used to look at people with mobility aids with pity, but when I started using the crutch, my opinion changed; I now see it as a source of independence ... [before I got it in 2020] I had a wooden cane that

used to be for a neighbour who had passed away and the crutch was donated to me, but it broke and became unsafe. I don't know where to get it or where it is sold. I was visited by one of the organisations where they promised to provide me with a crutch, but I waited 10 for months in vain, until I was visited by the HelpAge team who provided the crutch within a week. (Roja, 81-year-old female, Syrian in Manshiyah and Zaatari)

Some younger AT users highlighted how they wanted to be able to regain their functionality and independence with a view to returning to work:

I am using a four-point stick since last month ...It helps me to balance. I use it at home. I don't use it when I go out due to the uneven pathways. [I] felt shy while using the walking frame and then the stick. Before that, I thought only the old-aged people need these devices ... I don't need any devices. I believe I will get cured soon. I was injured in December 2020. I was in a coma for three months. When I got my sense back [regained consciousness], I returned to my native village ... Soon after my treatment and medical check-up I received the stick from Handicap International ... I [would] like to get cured because I am only 30 years of age. I want to work. (Jahirul, 30-year-old male, host community, Cox's Bazar)

Nevertheless, despite some expectations to the contrary, access to AT did not always convert to fulfilment:

I still can't leave the house, but I move around the house. I use the crutch [donated by an NGO] and lean on the wall to get around and get to the places I want ... I wish you could provide me with a wheelchair. (Saeedah, 85-year old female, Syrian living in Sahab)

My mobility improved after using the crutch [obtained for free from physiotherapy centre] and I didn't have to lean against the wall as much while walking. However, I wasn't able to go out of the house, because I never leave the house in the first place. (Mufida, 70-year-old female, Syrian living in Juneid)

For some, it is difficult to tell if they do not go out in general, or due to socially expected norms and roles (note the above quotes are both female) or because of (age-related) difficulties:

At the age of 70 I don't need to go out frequently ... I didn't find any barriers in terms of people attitudes which may hurt me. People are very friendly and respect me as senior citizen. (Md Saffar Ali; 70-year-old male, host community, Cox's Bazar, uses walking stick and toilet seat)

Many reported having to rely on family members for care and support, as there were no other services available to them where they were living:

I am using wheelchair and mattress, which was bought by my son from Kutupalong. As our home is very small area, that is why I am using my wheelchair less than the mattress. It helps me to move from one room to another and to sit down on the wheelchair by help of my daughter, otherwise it was difficult for my daughter to move

me and also the mattress help me to sleep properly, which also helps my daughter to clean my bed easily. Before those things, my daughter had to take more difficulties to help me in my movement and other activities. (Julekha, 64-year-old female, camp-based, Cox's Bazar)

Not much has changed for me. I was anxious and sad because my children had to carry me from one place to another sometimes, and that makes me sad and stressed out. (Ghamandar, 75-year-old female, Syrian living in Sahab, uses crutches and toilet chair)

With regard to how other people react to those using AT, attitudes vary from curiosity to more stigmatising behaviour:

People show curiosity [when] I use this device [metal walking frame, self-purchased] [as it] showed I cannot walk independently. If I fully recover, then they do not show this kind of behaviour. (Kolima, 32-year-old female, camp-based, Cox's Bazar)

At first, I tried to get used to it [wheelchair] and I don't deny that I felt nervous and annoyed by it because it felt like a burden in the beginning, as it stayed with me everywhere I went ... I don't like to use the wheelchair much because it makes me embarrassed by people's looks. (Khalil, 67-year-old male, Syrian living in Sahab)

However, one older man saw the attention in a more positive light, in that it highlighted his need for support and assistance:

Yes, it [the crutch] attracts people's attention but I'm fine with that ... because I still need assistance just as I did before having the products. (Ahmed, 85-year-old male, Jordanian living in Juneid)

7.3 Provision

As price, rather than availability, was often cited as the biggest barrier to AT in both settings, many of those we interviewed had made their own device at home, reducing the cost considerably:

It cost me a little just to buy a bamboo [for walking stick] at the cost of BDT 100 ... [and] took me an hour to make. (Kala, age unknown, camp-based, Cox's Bazar)

Others got their devices second hand, or had the devices purchased for them by their family:

I don't like to use the wheelchair much because it makes me embarrassed by people's looks ... [I got it] From some friends as my family can't afford to buy such products. (Khalil, 67-year-old male, Syrian living in Sahab)

I got it [a crutch] from the market, particularly from one of the shops that sold different types of mobility aids for older people, and it is widely available. I got it years ago. I bought several ones that got broken. Four or five Jordanian Dinars [was what] my children paid. It took seven days until my son got a job and was able to buy it for me. I used a tree branch before that. (Hazaa, 67-year-old female, Syrian living in Juneid)

However, while acknowledging the benefits that AT can bring to their lives, many people interviewed in Jordan spoke of having to make a choice between buying AT, or prioritising other key household items, including rent and food:

There are some shops and pharmacies that provide this type of product [a crutch], but I can't afford to buy it. Feeding my children is my priority. (Mohamed, 67-year-old male, Jordanian living in Manshiyah and Zaatari)

It [a crutch] was given to me for free (twice) by HelpAge, and if they hadn't given them to me, I wouldn't have been able to buy them until now due to my bad financial situation and lack of a breadwinner. I have monthly obligations, house rent, overdue utility bills and debts to the greengrocer and other shops, so these priorities are more important than the walker. (Etaf, 57-year-old female, Syrian living in Jerash)

Though it was rarely mentioned outright by any of the respondents, there were some suggestions by therapists that gender did play a factor in decision making about what meagre resources people have area used for:

From my experience ... as a physiotherapist, I dealt a lot with so many beneficiaries or clients, and the men that have the say. (Physiotherapist, Jordan)

Some highlighted the challenges of needing to replace broken or damaged AT:

I bought it [a crutch] with my own money, and it was locally manufactured. However, I can't buy a new one every time as I don't have a fixed income. I got one [crutch] four years ago, but it broke more than once, so I got a replacement out of my own pocket ... It cost me 25 dinars. Of course, my son helped me pay for it, as I do not have any source of income. It took a few months [before receiving it] ... So I used a tree branch, but it was so difficult to walk around with it; it would break while I was using it. Yes, the crutch I use is of poor quality and breaks all the time and I can't get a better one because it would cost a lot. (Badiyah, 80-year-old female, Syrian living in Mahis)

Many of the interviews highlight the role that family members and friends play in providing support, both in terms of assistance and financial support:

My son bought it [crutches] until I could work and afford to buy one. At first, things were difficult at home and I had to depend on my wife for support. (Mustafa, 65-year-old male, Syrian living in Al-Dulayl)

For many respondents, their need to use a specific type of AT was often suggested by medical professionals (usually doctors) after an illness or for a specific medical/health need:

Doctor from Health Complex suggested me to use a stick [which I received from Union Health Complex] and a toilet chair. The toilet chair cost me BDT 400 from the market.¹⁵ (Dilbahar; 63-year-old female, host community, Cox's Bazar)

¹⁵ USD 1.00 = BDT 86 (approximately).

However, for the people interviewed here, although medical professionals often suggested the need for some kind of AT, it was rare that devices were actually provided by any formal healthcare institutions, and if they were it was at a cost. Most were advised of the need by the healthcare professionals, then the individual (or more commonly, their family) purchased them elsewhere:

I have been using wheelchair from the beginning since 2010 and walking frame from 2012. My elder son bought the devices from a shop in Chittagong. My doctor advised me on the devices with available locations ... It was very difficult for me. My family support me with my daily needs. (Alam; 85-year-old male, host community, Cox's Bazar)

I bought the shoes [in Cox's Bazar] and [got them] modified ... by a cobbler according to doctor's advice. These shoes are available here but little expensive for me ... In total it was BDT 2500. I bought it from my own money ... [the] doctor assessed and took specific measurement of both legs for appropriate shoe modification. (Fariza, 20-year-old female, host community, Cox's Bazar)

However, despite being advised of the need, several respondents reported feeling that they were not given enough information by their doctors about what they needed, which led to them not only knowing little about the advised device, but also what else might be available:

Before getting this product [toilet chair, self-purchased], I went to the doctor, but no one told me about this device. I don't know why he didn't advise me about the chair. (Arifa, 52-year-old female, host community, Cox's Bazar)

Possibly due to where and how they obtained their devices, very few respondents claimed that they had had any training on use and maintenance of their AT. However, rehabilitation professionals were at pains to state that they did provide training, depending on the type of device:

The rehab professional demonstrates the use of product during the therapy sessions. It is done at the client's shelter, which takes approximately 30 minutes. For other devices like artificial limbs, it takes several sessions combining 5–10 hours ... We provide instruction but currently we are not providing any instruction material. But we have a plan to prepare one for distribution. Another reason is the wide variety of devices, so we will have to prepare a lot of instruction guidelines. (Rehabilitation Operational Manager, Ukhia Office, Cox's Bazar)

In terms of assessment for AT, some organisations (particularly those with a mandate to provide healthcare and support) trained staff to assess client need, taking measurements at their home, and recording the details on an assessment form specifically designed for this purpose. However, as many people had not acquired their AT through these organisations, some respondents had not been adequately assessed, creating further problems for them:

It [a crutch self-purchased from medical equipment centre] did not change my lifestyle and it causes embarrassment because of people's looks and their lack of understanding of my need for the product ... It is not suitable, because I fell while using it. I also rely

on my son instead of using an unstable toilet chair, which embarrasses me. (Badiyah, 80-year-old female, Syrian living in Mahis)

Many of those interviewed in both countries had received little or no assessment for the size and suitability of the device; little or no training on how to use it, and very little information on maintenance/repair or replacements:

The doctor just taught me how to use this crutch, that was not enough for me. I couldn't walk at first, later I got used to using it. It would be better [to have] a practical session that would help me get used to the device. (Shamsu, 68-year-old male, camp-based, Cox's Bazar)

Some had minimal training on use of specific devices, but nothing on how to maintain or care for the AT. This led some respondents to think quite creatively about where they would go if they needed to get a repair:

I tried the walker when they brought it to me [at their home] ... those who brought it advised me to always check the rubber ferrules of the walker in order to avoid any slipping, and not to move my feet before making sure that the walker is stabilised. It was an excellent training ... I've been trained on how to use it and take care of it, but not how to maintain/repair it. If it breaks, I can take it to a blacksmith near the house. I haven't been given any spare parts for the walker, but I suppose the blacksmith will have them. (Fawzia, 73-year-old female, Syrian refugee in Jerash).

In addition to thinking they might take items to a blacksmith to repair, one enterprising person in Bangladesh mentioned a bike mechanic could be an option for wheelchair repairs. No one mentioned returning them to the shop where they were purchased, or to the clinic or hospital where they were first told they needed one.

Given that the research was conducted during the COVID-19 pandemic, respondents were asked whether they had been given any additional information around hygiene or other precautions, though largely these were done via telephone:

I wasn't given any leaflets [about maintenance of crutches, self-purchased from medical equipment centre]. There are no maintenance places in the area, and I do the cleaning. Things have become more challenging with the COVID-19 pandemic. (Mustafa, 65-year-old male, Syrian living in Al-Dulayl)

I did not receive any leaflets on the maintenance of the product [a crutch], but I received support from HelpAge volunteers, who trained me on how to clean the crutch during their regular home visits. However, we communicated over the phone during the COVID-19 pandemic lockdown. (Muna, 74-year-old female, Syrian living in Al-Dulayl)

7.4 Procurement

Here we examine procurement processes of the organisations themselves. Obviously, these vary according to the agency or organisational policies and practices. Here rehabilitation professionals talk specifically about the processes to procure AT in Bangladesh:

The need for a device is identified by our Rehab Officer during their clinical assessment. After that the Rehab officer (PT, OT or SLT) conducts an in-depth device assessment to determine the required Assistive Device with measurements, using our assessment form ... Our rehab team then submit a Procurement Requestion to our Procurement department. The Procurement Department issues a work order to the vendor ... For ready-made devices, it takes 6 to 10 days to deliver to the client but in case of customized devices (like P&O devices, wheelchair, special chair & others), we need two to three weeks to deliver to the client. (Rehabilitation Manager, Ukhia Office, Cox's Bazar)

Therefore, while the vendors are often local, it is less clear if the AT is made locally or sourced elsewhere:

We procure some adjustable devices like a walking stick, walker, punch ball, spirometer, corset from local vendors, which can be provided as soon as the identification, probably within one week. For some custom-made devices like a special chair, wheelchair or artificial limbs, we need to send the measurement to Dhaka as these are not available locally. For these devices it takes approximately two to three weeks. In the meantime, the clients wait or use caregivers support. (Rehabilitation Manager, Ukhia Office, Cox's Bazar)

7.5 Place

Location, particularly where the devices are used, is central to the beneficial impacts of AT. For many persons with disabilities, especially those living in camp settings, physical accessibility is key, both in terms of getting around, but also in terms of independence:

I cannot walk independently because of muscle weakness ... my family members help me [to do] all activities. The doctor just taught me how to use this walking frame and the benefits of using the device. I think it's enough for me. I don't know actually if there are any other better solutions ... I faced difficulty while using it outside of my house. The outside environment is not accessible. (Kolima, 32-year-old female, camp-based, Cox's Bazar)

Several mentioned the particularly difficult terrain of the camps in Cox's Bazar:

I cannot use this device [a wheelchair] due to inaccessibility ... Most of the time I feel very upset. I want to go outside ... My home and environment are not accessible [for a wheelchair user]. The door is not wide enough for a wheelchair and needs a ramp rather the stairs in front of my house. And the pathway is also not accessible. I think the device may be perfect for me but I need to change the environment to ensure accessibility. I was excited because I was home-bound, and when I got this device, I was able to move outside with the support of my wife. When I see another person who uses assistive devices, I feel very happy that they can do activities independently. [But using] the wheelchair, I feel nervous sometimes and need caregiver support for sitting in the wheelchair. I wish to walk independently without any assistive device. (Ali, 68-year-old male, camp-based, Cox's Bazar)

Many of the respondents highlighted the poor accessibility and infrastructure of the locations they were living in, as well as the challenges in accessing devices and services:

I only use it [a wheelchair, donated by HAI] around the house. I can't take it outside because the streets are inaccessible and I could trip over anything, which could lead to bigger problems. It only helps me to sit with the family, but I can't go anywhere else ... there is no nearby transportation or any maintenance shops to repair the product at if it breaks. Due to the difficult financial situation, I cannot venture outside because I can't replace or repair the product. There are no means of transportation for people with disabilities in the area, which makes it difficult for us to get around. There's no place for repairing such equipment, and it's also difficult to get them for free. I need an electric wheelchair ... I have submitted a request to the Ministry of Social Development and have not received any response from them until this moment ... I live in a remote area that lacks health and financial services or support and any other type of assistance, and no one cares about older people there, especially those with disabilities. (Yusef, 63-year-old male, Syrian living in Jerash)

7.6 Policy

Despite a strong focus on inclusion in humanitarian settings, most of the staff interviewed only spoke about specific organisational policies regarding AT. For example:

I have heard about some policies related to the Assistive Devices. For our program we have developed and are using one Standard Operating Procedure ... on Assistive Devices. (Rehabilitation Manager, Ukhia Office, Cox's Bazar)

However, one respondent in Jordan was keenly aware about policies in place, though perhaps less sure about their implementation:

We have Jordan government [policy] for disabilities under this specific part of this law, talking about assistive devices, and assistive technology, and talking about access to information and different information and education and communication format[s] ... There is also guidelines and WHO [guidelines] ... about wheelchair assistive technology ... so we follow all of these four policy guidelines, and we try our best in order to update the Commission, also getting any training [and] capacity building in this regard, but also you know that assistive technology is something that is [updating] continuously. (Technical Advisor, Jordan)

Very few staff mentioned wider humanitarian inclusion initiatives that focus on AT, though one therapist in Bangladesh spoke about some international guidelines:

I heard about Minimum standards of EMT guidelines from WHO, WHO guidelines for the Assistive device provision and CBR [community-based rehabilitation] guidelines for the rehabilitation and UNCRPD guidelines, etc. We ... follow the standard guidelines for ensuring product quality and arrange advanced training on [the] products manual. (Rehabilitation Officer-Occupational Therapist, Cox's Bazar).

8. Discussion

Our findings indicate that respondents who have accessed AT in the two countries do share some commonalities, such as reliance on formal and informal markets and family rather than health or social care sector provision for AT, **but there are also some significant differences**. While the refugees had come from very different sets of circumstances and backgrounds, and while they often did face some similar challenges, respondents living in Jordan (especially those from Syria) tended to have more awareness about the range of AT possibilities compared to those in Bangladesh, in particular around medical aids (e.g., blood-glucose machines or blood-pressure monitors), rather than, or in addition to, AT. This may be because many of the Rohingya population had been living in precarious circumstances even before they fled to Bangladesh, whereas many of those now living in Jordan were from more affluent and/or well-connected backgrounds (in Syria particularly) and may have had more exposure prior to the conflict. Nevertheless, the duration of displacement and political circumstances mean that both groups lack financial or other capital. For example, the Bangladesh government does not allow cash transfer programming and restricts employment activities for the Rohingya population.¹⁶

Despite the acknowledged benefits, AT is rarely seen as a priority. Many of those interviewed portrayed a reality of having to choose between buying AT or spending money on other more essential household items such as rent and food. This indicates that while many would have liked the opportunity to access AT, their meagre living expenses did not enable them to. It was not clear from our research here that there was a specific gendered element to this decision-making process, as although while women are more likely to be carers, it is often men that made decisions about household spending. This may be mediated by age, dependency and other factors. However, in other project-focused research undertaken in Bangladesh, the findings indicated that initially **more men than women accessed rehabilitation services in the camps, although this shifted over time:**

Homebased rehabilitation ... delivers a positive impact on both the person receiving the services and the wellbeing of their family. Rehabilitation can empower women and girls, who are often primary caregivers, as improved health of their dependant family member may result in more time for caregivers to engage in livelihood or other meaningful activities ... Modifications to the shelter and provision of assistive devices also help improve client independence with ADLs and decrease reliance on a caregiver.
(CBM 2021: 23)

It is clear that **family members and friends play a vital role** in providing support to many AT users, as well as those who do not have access to AT but still need assistance. This does call into question **how those without any family to support them manage on a day-to-day basis**, given the very limited availability of any kind of home-based support outside of the family in the camps or host community.

¹⁶ www.thenewhumanitarian.org/news/2019/12/17/Rohingya-cash-World-Vision-livelihoods-education-refugees-WFP.

We now turn to discuss the issues arising under each of the 5 Ps more specifically in turn.

8.1 Products

From the results of the interviews, most of the focus is on mobility aids (e.g. walking stick, crutches, etc.). However, it should be cautioned that this may be a result of the use of the term 'products' in the interview (translated). No one mentioned other technology such as mobile phones. This may be because of their ubiquity, or rather because they are not seen as 'assistive' in the same way other more 'traditional' devices such as wheelchairs are, by therapists and respondents. It is also worth noting that most NGOs primarily distribute mobility aids.

While most of the AT users interviewed had been told they need some kind of AT by a healthcare professional, **most were not actually provided with these through the formal healthcare setting**. Rather, patients were advised **to procure their AT from a shop or market**. Some were given guidance by healthcare professionals on the type, and even the specification (such as sizing or make required), but most were not. There is also a likelihood that **many who are told they need AT do not go on to purchase it** in the first place, given the financial restrictions noted above (this group were also less likely to have been included in our sample in the first place as they are not currently using AT). Such an approach may also **increase the risk of the use of inappropriate or incorrectly fitted AT**, which may in turn exacerbate users' conditions. Assistive technology needs to be more widely available through formal healthcare settings to ensure adequate provision, safe and effective use and avoid further deterioration of users, **making AT provision a formal part of health system**.

Many respondents had purchased their AT from local shops or (informal) markets. Again, without proper assessment and fitting, these devices may be an incorrect fit, or the wrong device entirely, leading to (further) complications and a deterioration of conditions. But if, in addition to strengthening AT provision within the health system, these informal networks could be leveraged as points of contact and/or resources (e.g., for fittings and advice by visiting professionals), then **they have the potential to become useful points of access and/or information**. Traders themselves could even have training on tasks like correct measuring and fitting, as well as be made aware of existing standards and guidelines, where they exist. This approach could also increase employment opportunities in the longer term. Over and above employment, it would also offer points of contact for AT users and professionals to monitor and assess progress, any changes to need, as well as general advice and aftercare.

However, while such an approach supports local distribution, it does not address production. Assistive technology is often costly because it is imported, with most of the current AT products used sourced by local and international NGOs, hospitals and wholesale shops/markets from the same manufacturing bases in countries like China. There is **growing evidence around the ability to leverage local production and distribution in emergency**

contexts (see, for example, the work of COVIDaction in Nepal¹⁷) but as yet there is limited evidence of this happening in the humanitarian-affected areas in either Jordan or Bangladesh.

Given that most AT was either self-purchased, provided by NGOs, self-made or second hand or provided by other well-meaning family and friends, there is a strong possibility they will need alteration or repair at some point. Very few people had actually had their AT repaired, though some had abandoned broken or damaged items and got a replacement. While several respondents speculated where they might take items to be repaired – such as a blacksmith or bike mechanic – no one mentioned returning them to the shop where they were purchased, or to the clinic or hospital where they were first told they needed one. Again, this may be a missed opportunity for follow-up, and limits the likelihood of repair, resulting in disposal of the AT (or continued use of damaged and potentially dangerous AT), rather than sustainably of the AT economy. Finally, it is also another missed opportunity for employment potential.

8.2 People

As noted above, while some respondents had been advised to go and purchase AT from a private supplier, such as shops or markets, many felt they were not given enough information about either the device or how to use it or maintain it by their doctors or other healthcare workers. This led to a lack of knowledge around the current product, but also what else might be available, suitable and/or necessary for them. This lack also highlights **the need for more ancillary healthcare workers**, such as physiotherapists, occupational therapists, and speech and language therapists, to assist with assessment, training and follow-up, as well as highlighting a **lack of holistic care or multi-disciplinary teams within the formal healthcare structures**. Users whose AT had been provided by NGOs had often been assessed by a physiotherapist or occupational therapist, who also often provided some follow-up, but outside of the formal healthcare structure. It is clear that there is an overall lack of assessment mechanisms for AT in humanitarian contexts. This increases the likelihood of future problems for users and emphasises the need for better fit and support for existing users.

A separate, but related issue is that of the profile of AT users. In both countries, many of those who were accessing AT were considered to be 'old', despite a fairly broad age range (although note that all respondents in Jordan were HAI beneficiaries over the age of 50). What was striking was how ill health was inevitably correlated with ageing, so those who experienced an episode of ill health (e.g., a stroke) were considered 'old', even if not within the age range typically considered 'old'. This is in part because once someone experiences an episode of ill health that stops them working, **there is no income support available, as there is very little in the way of disability-specific social protection in either context, or pension support**. Few people had received any injury-related compensation or pension. **All of these factors reduce independence and create conditions of dependency**.

A key point highlighted by many of those interviewed is this need to rely on other people – usually family members – for care and support, as there were no other services available to

¹⁷ <https://medium.com/covidaction/rising-from-an-earthquake-to-fight-the-pandemic-in-nepal-3752b88e4314>.

them. This was particularly the case for older adults. Not only does this **raise the question of how those without any family manage**, but it also highlights how, despite some expectations to the contrary, access to AT did not always convert to functionality, independence, autonomy or fulfilment. Some reported that even if they have devices, they were still not able to do everything they wanted to do because of stigma, inaccessible environments and other barriers. However, in these long-term humanitarian contexts, there is little opportunity for work overall, so while there is an intention to be self-reliant, many are unable to regain their independence and return to work, particularly those with disabilities and older adults. Others may need additional support or training to regain independence. Again, there is very limited provision for this in either context, and again, older adults and those with significant impairments are more likely to be excluded from any existing provision.

8.3 Provision

As noted above, many of the AT products discussed here were either self-purchased or second hand, so how AT should be funded and provided in humanitarian settings remains a question. **Many devices are just too costly for many refugees or displaced people to buy, as they have limited resources and must prioritise how they spend them.** In some contexts, having refugee status does not allow people to access formal (government) healthcare provision, though this does depend on their (health) condition, for example if it is very serious and there is no provision to address it in the camps. In practice, in both Bangladesh and Jordan, people largely access healthcare through NGOs or private healthcare providers, not the government.

The WHO *Minimum technical standards and recommendations for rehabilitation in emergency medical teams* (2016a), aimed at national and international response teams, contains specifications for EMT kits, but these are for immediate needs rather than the longer term. The guidance indicates that wheelchairs, orthotics and prosthetics for longer-term use should be obtained from a local supplier where one is available; otherwise, the EMT should seek guidance from the host ministry of health or coordination mechanism. This means that there is a **risk that AT users end up continuing to use AT that is inappropriate for longer term use, or they abandon them.**

Sphere's (2018) handbook lists AT provision under 'medical devices', with specific guidance.¹⁸ It also suggests supporting MoH facilities with medical and assistive devices, among other aspects. Similarly, the Inter-Agency Standing Committee's (2019) guidelines indicate the need for AT across the emergency cycle, from preparedness to response and recovery and across all sectors, but do not provide more detailed specifications. UNICEF's *Guidance on Including Children with Disability in Humanitarian Action* states that in the absence of pre-existing data, agencies and actors should estimate that 3 per cent of the population needs assistive devices (but not what type or specification) (UNICEF 2017: 28).¹⁹ More recent work led by the UK

¹⁸ The guidance states: 'Ensure safe use of devices, including regular maintenance and spare parts supply, preferably locally. Decommission devices safely. Distribute or replace lost assistive devices and provide clear information on use and maintenance. Refer to rehabilitation services for appropriate size, fitting, use and maintenance. Avoid one-off distribution.'

¹⁹ Although the WHO/UNICEF catalogue addresses some of these issues.

Foreign, Commonwealth and Development Office (2019) recommended **that HRPs budgeted an additional 3 to 7 per cent for specialised non-food items, such as assistive devices and mobility equipment.**

These recommendations are aimed at agencies and actors in the field, with the implication that the AT will be procured and distributed to people in need. Evidence here suggests that to date, this is unlikely to be how many people access AT. As yet, there are no mechanisms in place for cash transfers specifically for AT; and though cash transfers are an increasingly popular modality in humanitarian settings (Lind et al. 2022), this is unlikely to be a popular option for AT provision for a number of reasons. The first is that there are just too many variables (e.g., cost of devices, how and where to access to appropriate device, etc.). There is also the risk that recipients might prioritise other expenses (if not a conditional cash transfer). Moreover, **this mechanism puts the onus on potential AT users, rather than the state (or other providers) to access AT.** In addition to affordability, users also need to consider availability, suitability and quality.

Another oft-cited concern by staff working in humanitarian contexts is that people have more than one device, which they may then sell. While some AT users no doubt accept whatever they are offered (without necessarily indicating they already have AT), our research suggests that overall, those who have 'stockpiled' several devices are more likely to be replacing broken or otherwise unused devices (e.g., replacing a stick with a wheelchair), or are not happy with the existing one (e.g.e.g., functionality, suitability to the environment, etc.). Another issue was the (lack of) awareness about the type of AT – some were told about 'better' AT available (though not necessarily where it was available) and were keen to get an upgrade. This was more apparent in refugees in Jordan, especially those from Syria, where AT provision prior to the war had been to a higher standard. Many AT users in Jordan had previously accessed specialised (medical) services or were treated by healthcare professionals during the conflict. However, for many of those who had received medical treatment but were transferred elsewhere for longer-term rehabilitation, neither the treatment nor the AT were available. Many had either purchased their AT from a private source or received it second-hand from family or friends, so were unlikely to be able to engage with any professionals. Again, this is a missed opportunity for engagement, education and training.

There is clearly **a need for a more standardised approach to AT assessment and provision in humanitarian settings.** There are already the WHO *Wheelchair Service Training Packages* (basic to advanced level),²⁰ and more recently the WHO has developed free online training packages for rehabilitation workers, specifically focused on COVID-19.²¹ The WHO and UNICEF have worked together to produce a manual for the 'public procurement of assistive products, accessories, spare parts', though not specifically focused on emergencies (WHO 2021). There has also been some discussion around developing **an Assistive Products Priority List specifically for humanitarian contexts,** though as yet this has not been implemented.

²⁰ See www.who.int/publications/i/item/9789241503471.

²¹ See www.who.int/news/item/05-02-2021-who-launches-free-openwho.org-training-on-rehabilitation-for-covid-19.

8.4 Place

Negotiating location of, and access to, shelter settlements for refugees and displaced people is hugely challenging and is often dictated by political as much as geographic decisions. While the humanitarian sector has seen a decline away from large camp-based settlements to more self-settlement (e.g., in host communities), the camp-based (or settlement) model is still operational in these two contexts.

There is now increasing focus on inclusion in shelter, including the Global Shelter Clusters Inclusion of Persons with Disabilities in Shelter Programming Working Group,²² and guidance on how to build accessible and inclusive shelter: *All Under One Roof: Disability-Inclusive Shelter and Settlements in Emergencies Guidelines* (International Federation of the Red Cross 2015). However, there is much less on inclusion in camp coordination and camp management. The *Minimum Standards for Camp Management* does have a 'Disability Inclusion Monitoring Checklist' in the annex (CCCM Cluster 2021: 59).

Many of those interviewed were using devices to assist with mobility, particularly walking sticks, crutches or wheelchairs. While for many persons with disabilities, especially those living in camp settings, physical accessibility is key, both in terms of getting around, but also in terms of independence, the terrain in camps (especially Cox's Bazar, which is built on muddy hills) was not at all conducive to mobility (or independent navigation). For some, even having AT did not enable them to be independent outside the home as the environment was not accessible or inclusive, and they still faced a number of barriers. Moreover, the inhospitable terrain and lack of any accessible transport meant that some people were too afraid to use the AT outside in case they damaged it or could not get around. **More joined-up thinking between clusters or sectors is needed to ensure that such challenges are reduced.**

8.5 Policy

Despite an increased strong focus on inclusion in humanitarian settings (e.g., Inter-Agency Standing Committee 2019), most of the staff interviewed only spoke about their specific organisational policies regarding AT; however, this may have been related to the wording of the question, and it is unclear if they are unaware of these wider policies or just did not mention them. There was very little mention of wider policy initiatives to support AT.

Moreover, while both Bangladesh and Jordan have supportive policies towards refugees, they are not always entitled to the same benefits as those living in host communities (e.g. applying for devices through social services). However, it is also possible that in some cases, refugees have better access to resources than the host communities, due to the NGOs operating there. This can be a source of friction, and also highlights the importance of offering support to host communities, particularly when they are also poor (which is anyway a requirement of the Bangladesh government for NGOs to operate in the area).

In Bangladesh, there is no centre where quality AT can be accessed in Cox's Bazar City. The Centre for the Rehabilitation of the Paralysed has a rehabilitation centre with a multi-disciplinary team in Chittagong, but this is 162 km far from Ukhia (the location of most of

²² See <https://sheltercluster.org/working-group/inclusion-persons-disabilities-shelter-programming-working-group>.

those interviewed here). Rohingya people are unable to independently seek services from health facilities outside of the camp. They can be referred to the government hospital outside of the camp, but only with special permission from the camp and health authorities, usually a PHC. This is usually for specific medical services, and the referral process is complicated. At first, the health service provider/organisation needs to prove or justify that required services are not available in the camp. They then have to submit an application to the health focal point and Camp in Charge person, giving all the relevant information, reason for referral, where they are referring and the date of referral. If this is approved, the Camp in Charge person refers them to a local government hospital (in this case the government hospital of Ukhia and Teknaf). If those in charge at the hospital agree that the client needs referral, they then refer the person to the Cox's Bazar Government Hospital. The only organisation that has special permission to refer Rohingya people with disabilities directly to Chittagong (Centre for the Rehabilitation of the Paralysed) for prosthetic devices is the International Committee of the Red Cross. This process is illustrated on a referral pathway flow chart (See Appendix 2).²³

Similarly, In Jordan, there is no specific policy with regard to refugees and AT. Given that there is a long waiting list for Jordanians to receive AT, which can take several years, then most people who need AT consider they have better chance of accessing it from NGOs.

9. Conclusions

This research set out to build on what we currently know about the need for AT in humanitarian contexts to gain a more nuanced picture of how these needs are currently met. We also wanted to identify the gaps in the evidence about these needs; and what mechanisms are needed to ensure provision of AT in humanitarian contexts.

It is clear that the provision of AT (in this case mainly assistive devices) is ad hoc, and largely related to the access, availability and focus of NGO-funded projects in camps or communities. This is perhaps unsurprising, given the general level of access to goods and services by refugees in both these settings. When it was available, for many of those interviewed, AT had a positive impact on their lives; **however, devices alone cannot ensure wider inclusion** – for that, there still needs to be attitudinal change; environmental adaptations, better provision of resources (including rehabilitation) and much wider awareness about the policies and legislation that support the rights of persons with disabilities, including those who have crossed an international border to seek safety and security.

However, **there is still very little research around the nexus between social protection and humanitarian responses, particularly for persons with disabilities**, as a recent review notes (Idris 2019). Turning inclusion into action requires more connected thinking on joining up social assistance, something the Better Assistance in Crises research programme, funded by the UK's Foreign, Commonwealth and Development Office, is addressing. As reported in a blog post, this programme is asking questions such as whether

*the most vulnerable people in crisis situations benefit from these [digitalised] systems?
This involves shifting the focus from 'inclusion errors' (those who are included/benefit*

²³ Personal communication, CDD.

by mistake) to those experiencing ‘exclusion errors’ (those who are excluded from benefits by system failings/errors); either because of the design of the system or because of structural inequalities in access to and use of digital technologies. (Sabates-Wheeler et al. 2021)

In the same blog, the authors go on to note that ‘transformative approaches to social protection that focus not just on assistance but on areas such as the right to work, freedom of movement and protection from violence are therefore especially needed, precisely when they are most difficult to put into place’ (Sabates-Wheeler et al. 2021).

We see this in the responses here – **many of those interviewed lacked the necessary support mechanisms to enable them to access rights such as their rights to work, education and healthcare.** This perpetuates the idea that these people are ‘vulnerable’ and waiting to be assisted, rather than capable of being more independent if given the necessary support – including AT.

Provision of AT in humanitarian settings is likely to continue to be largely delivered through agencies and organisations, as often in these contexts formal healthcare structures are overwhelmed and do not have the resources. However, **there needs to be increased investment in, and focus on, strengthening healthcare systems to respond to the growing need for AT.** There has been a lack of focus on AT and allied services such as rehabilitation, and resource-constrained countries have often prioritised other aspects with the healthcare systems. The Director-General of the WHO has indicated the need for long-term planning and sustainable systems in order to ensure a reliable supply of assistive devices and their replacement parts (WHO 2017). The Director-General’s report also noted the need to plan and prepare better to ensure access to and availability of AT in emergencies, with the aim of facilitating earlier discharge from hospital and the prevention of excess morbidity. The report goes on to note that these products should be appropriate for the emergency context and setting, with mechanisms for follow-up, maintenance and repairs, and ‘robust coordination mechanisms’ to ensure appropriate procurement and provision (WHO 2017). Recent efforts are starting to move in this direction, including the WHO Rehabilitation 2030 Initiative, which talks specifically of ‘strengthening rehabilitation planning and implementation at national and sub-national levels, including within emergency preparedness and response’ (Priority Action Area 2).²⁴

Finally, **our findings also indicate a need for more ‘translational’ research,** which takes data – such as prevalence data collected by WGSSQ, age, sex and disability-disaggregated data, or more needs-based data such as the rATA – to develop and deliver effective, evidence-based health and rehabilitation services. As yet, there is still limited evidence on what works for effective AT, how to deliver it and how much it costs – and while programmes such as AT 2030 are beginning to unpack these, there is much more work needed in specific areas, including humanitarian contexts.

²⁴ See www.who.int/initiatives/rehabilitation-2030.

10. Recommendations

For ease of reference, we structure our recommendations according to the 5 Ps, as outlined above.

Products

- Provide AT as part of core healthcare provision in emergency settings.
- Where AT cannot be provided and fitted by a healthcare professional, provide users with appropriate guidance on the type of AT required, fitting requirements and safe and effective use.
- Leverage informal networks of AT providers as points of contact and/or resources to support strengthened AT provision within the health system.
- Support and invest in local production, repair and distribution of AT in emergency contexts.
- Identify opportunities for innovation in AT that can be utilised in humanitarian contexts.

People

- Include allied health professionals – a vital resource for AT assessment, training and follow-up – in formal healthcare structures and programmes.
- Provide disability-specific social protection and/or injury-related compensation.
- Asides from AT provision, address the challenges of stigma, inaccessible environments and the need for additional support or training to regain independence through efforts to support persons with disabilities in a humanitarian context.

Provision

- Provide more AT through existing public healthcare mechanisms, as well as ensure provision is more joined up across sectors.
- Focus more on local production and manufacturing.
- Ensure recommendations for guidance on budgeting for AT in HRPs is implemented – or budget an additional 3 to 7 per cent in HRPs for specialised non-food items, such as assistive devices and mobility equipment.
- Develop a standardised approach to AT assessment and provision in humanitarian settings.

Place

- Promote more collaboration and coordination between sectors and [UN clusters](#) to ensure the provision of appropriate and joined-up provision of AT for adults and children in humanitarian contexts.
- Ensure inclusive infrastructure guidelines are useful and used for temporary contexts.

Policy

- Develop specific policy around provision of AT in humanitarian emergencies, in line with recommendation 9 of the Global Report on Assistive Technology (include AT in humanitarian responses).
- Ensure specifically that assistive products are prioritised and available through appropriate procurement routes.
- Develop an *Assistive Products Priority List* specifically for humanitarian contexts.
- Capture AT provision in humanitarian settings through research to inform future policy and practice responses.

11. Appendix 1: Semi-structured Interview

[Country]

[Location/camp]

Date of interview: [| | : | |]

Name of interviewee:

[Interviewer]

Product

1. Tell us a bit about the type of product(s) you have (Probe: do you use it, and if yes, how often? [Enumerator instructions – please take picture(s) of products where possible].)
2. Does the [product](s) enable you to do what you want? (Probe: e.g., go to school/work [ask what type of work, if adapted, etc.]/shopping, household activities, self-care, access support provided by NGOs or government, visiting friends or neighbours or going to worship place, or for leisure and recreation; if yes, in what ways, if no, why not? Do you use it daily or at certain times [especially if they have more than one product, e.g. toilet chair, glasses, hearing aid, etc.]?)
3. Were you able to do these things **before** you got your [product(s)]? (Probe: if yes, in what way did you do these things; and if no, why not? Did you have other products before this one, and if so, is there a difference between the two? [ask them to elaborate what these differences are?].)
4. To what extent has your lifestyle changed **since** you got your [product(s)]? (Probe: if yes, in what ways, and is it directly as a result of the product(s) specifically or other ways too [ask the respondent to elaborate on any other factors, such as people's attitudes, etc.]; if not, why not? [ask the respondent to elaborate on other factors, such as people's attitudes, environment, access to information, etc.]?) How do you manage to get around and do things? (Probe: do you need assistance, support, etc.)
5. Do you find the product is appropriate for your needs and the environment? (Probe: ask why or why not, and has this changed over the time you have had it? Do you think you are using the right product for you, and if not, why not, and what are you using instead?)
6. How could the product be improved to better suit your needs and the environment you live in? (Probe: What else is required for you to be able to do above highlighted tasks? Probe about these [e.g. adaptations to environment, more information, support, etc.]?) If you need to take [product] out with you how do you transport it? (Probe: ask if they can fit it in a car, bus, etc. or not.)
7. Do you remember how you felt when you first started using the product (Probe: Were you nervous, embarrassed or excited? Before you started using the product, what did you used to think about people using such products? [can you give examples, e.g. wheelchair, walking frame, hearing aid, etc.]?) How do you feel now about using the product? (Probe: Were you nervous, embarrassed, frustrated or excited?)

8. Does using this product cause you to attract other people's attention? (Probe: if yes, in what ways, and how do you feel about that? What could be done to improve this?)
9. Are there other assistive products you need but have not received? (Probe: Ask them to describe and why they think need them.)

Procurement

10. Can you tell us where you got your [product(s)] from? (Probe: was it an organisation, shop [If organisation or shop, ask what type, where, how they heard about them, etc.], homemade [if homemade, ask why they had to make it]; ask them about availability of product, affordability, whether the available product(s) were suitable for needs/environment, etc.)
11. Do you remember when you got this [product(s)]? (Probe: did you have other products before this? If yes, what were they and where did you get them from? Is this [the one they have now] the same one? If yes, when and where did they get the previous one from, and what happened to that one? If they don't have one, was it lost, are they awaiting a replacement?)
12. Do you remember how much/if you paid for it? (Probe: if not self, did your family help you to buy it? Did you need to borrow the money, do you have to pay it back, and if so, how did you/how will you raise the money? Is any interest being charged?)
13. Did you know where to go to get your [product(s)]? (Probe: e.g., a shop, NGO, hospital, etc.; ask how they found out the information about this, do they know of other places they could go – where? If it was a shop, was there a lot of choice? What other products did they sell?)
14. [Only for camp-based respondents] Did anyone ever talk to you about getting your [product(s)]? (Probe: if yes, who were they, what did they ask you about? Was it in this camp? If not, where was it? Do you know why they were talking to you about this, and what was the outcome?)

People

15. Were you provided with any sort of training and/or information (e.g. educational materials) on how to use your assistive device? (Probe: Please describe the training you received. Was it enough? Could it have been improved and if so, how? If no training, how did you learn to use the [product(s)]? Do you know why you did not receive any training when you received your assistive product? What sort of training would have been useful for you?)
16. Were you provided with any information (e.g. pictorial leaflets, etc.) or training on how to maintain [look after] the product(s), either by the place you got it from (organisation/shop) or by someone else? (Probe: If yes, describe the support you have received and who it was from. Was the information or training useful? If yes, how and if not, why not? What else could have been done to help you?) What about how to clean the product (if relevant) – did this change because of COVID?

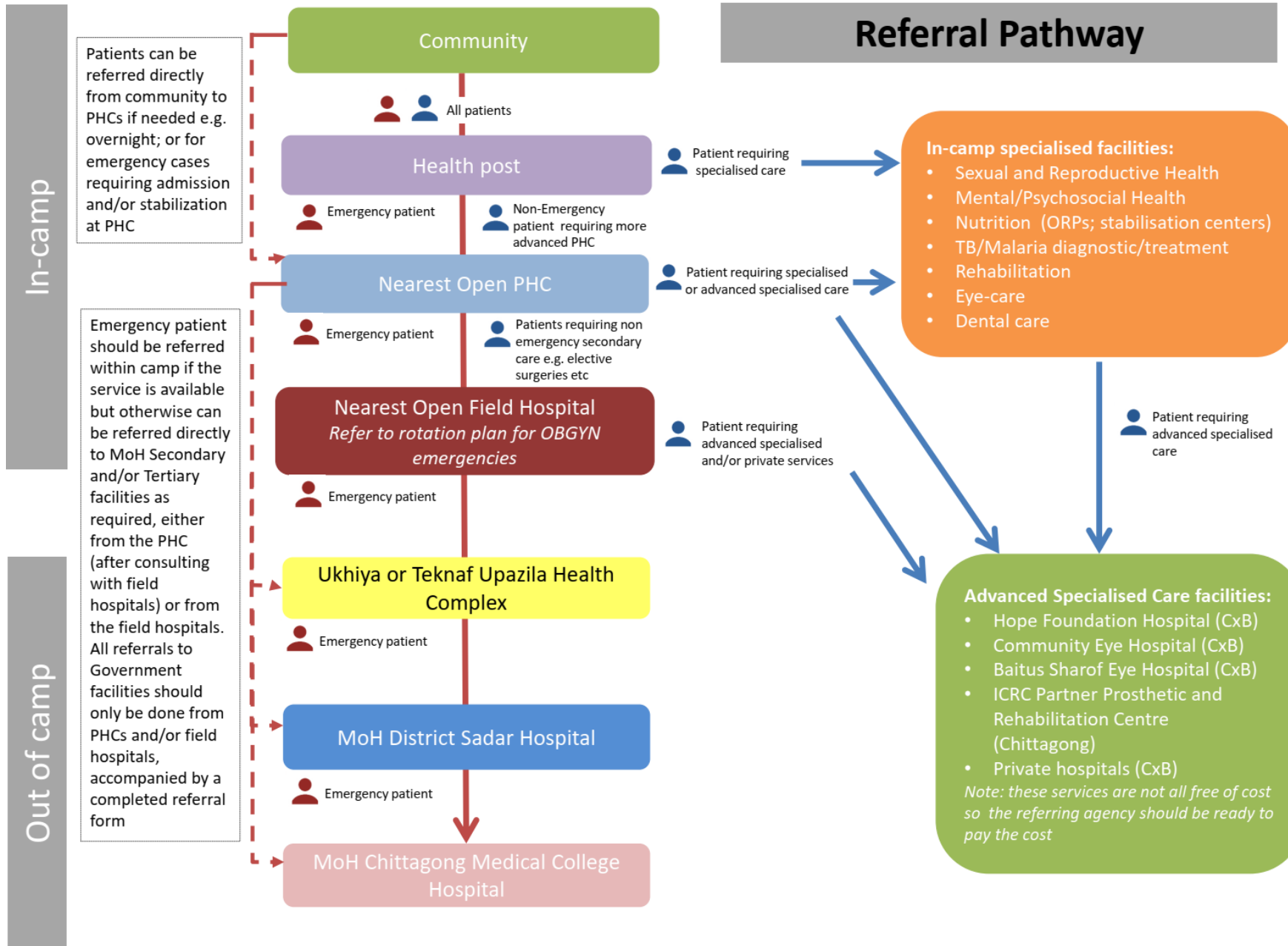
Provision

17. How long did it take for you to receive the [product(s)]? (Probe: did you use it straightaway, and if so, was that difficult? Please elaborate. If not, what did you do/use between being assessed for product and receiving it, for example, how did you manage to get around/do things?)
18. Did anyone assess you for the [product(s)]? (Probe: if yes, who, where, what did they do? If no, do you know why not? What was the outcome of the assessment?)
19. Did anyone measure you for the [product(s)]? (Probe: if yes, who were they and where did you get measured/fitted? If no, do you know why not?)
20. Have you received more than one of any single assistive products (or more than one of similar products)? (Probe: If yes, please describe where you received them from and what have you done with them? Did you have to pay for them, and if so, how much? Are you still using them? If not, why not?)
21. Did you receive any instructions of maintenance and repair of the product? (Probe: If yes, who from and what sort of information? Did you receive any spare parts [e.g. rubber tips for crutches], and if yes, who from? If no, where do you go to get these if you need them?)

Policy

22. Have you ever heard about any programmes or policies about these products where you live? (Probe: Has anyone ever asked you questions about products before, and if so, who were they and why did they ask?)
23. Is there anything else you would like to tell us [about the product, or other related issues]?

12. Appendix 2: Referral Pathway (Bangladesh)



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