Report on the

Consultative meeting on improving access to assistive technology in the Eastern Mediterranean Region

Islamabad, Pakistan
8–10 May 2018

World Health Organization

REGIONAL OFFICE FOR THE **Eastern Mediterranean**

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1. INTRODUCTION

The World Health Organization (WHO) Regional Office for the Eastern Mediterranean organized a consultative meeting on improving access to assistive technology in the Eastern Mediterranean Region in Islamabad, Pakistan, from 8 to 10 May 2018.

The objectives of the meeting were to:

- update participants on the progress made to improve access to assistive technology, and to operationalize the Global Cooperation on Assistive Technology (GATE), resolution EM/RC63/R.3 and the Islamabad Declaration; and

- finalize the draft strategic action framework on improving access to assistive technology in the Eastern Mediterranean Region, which was to be distributed to all WHO Member States during the Seventy-first World Health Assembly in May 2018.

The meeting brought together representatives of 13 countries in the WHO Eastern Mediterranean Region as well as experts, members of civil society and representatives from national and state-level governments of Pakistan. For the programme see Annex 1 and for the list of participants see Annex 2.

The President of Pakistan, His Excellency Mamnoon Hussain, officially opened the meeting by welcoming the participants to Pakistan and stating that the meeting's objective was to enable people with disabilities to realize their full potential in society. The President described the activities of the Government of Pakistan to improve access to assistive devices at the national level, and acknowledged the leadership of the Government and the Minister of National Health Services, Regulation and Coordination in pursuing the initiative and achieving success at the international level. He encouraged the meeting participants in their duties, prompting them to work together to change the destiny of people with disabilities in the Eastern Mediterranean Region. The President also officially appointed Dr Sana Hafeez as the WHO Global Ambassador of GATE.

Dr Zafar Mirza, Director, Health Systems Development, WHO Regional Office for the Eastern Mediterranean, delivered a message from Dr Jaouad Mahjour, Acting WHO Regional Director for the Eastern Mediterranean. Dr Mahjour thanked the Government of Pakistan and HE Ms Saira Afzal Tarar, Federal Minister for National Health Services, Regulation and Coordination, for hosting the consultative meeting, a clear expression of the high-level political commitment that assistive technology is gaining at both the global and regional levels. He emphasized that assistive products were needed by a broad range of population groups, such as people with noncommunicable diseases, mental health problems, injuries, and disabilities, as well as ageing populations. Access to assistive technology, an essential element of the continuum of health care, was an essential component of universal health coverage

and needed to be integrated into efforts to attain target 3.8 of the Sustainable Development Goals (SDGs), he said. The draft regional strategic action framework to improve assistive technology provision had thus been developed as part of efforts to provide the required technical support to countries in the Region to implement the related Regional Committee resolution re-asserting WHO's commitment in this regard. On behalf of WHO and the Director-General, Dr Tedros Adhanom Ghebreyesus, Dr Mahjour announced the designation of Dr Sana Hafeez as a global WHO assistive technology champion for 2018 and 2019.

In her address, Her Excellency Ms Saira Afzal Tarar, Federal Minister of National Health Services, Regulation and Coordination, Pakistan, stated that while there was collective resolve among countries of the Region to stand up for the rights of those in need of assistive technology, a lack of information, national policies and programmes, and financial and human resources, presented challenges for assistive technology provision. She said that without assistive technology, people were often excluded and isolated, resulting in their being condemned to poverty, and therefore assistive technology should be an inherent component of universal health coverage. Pakistan, she noted, had included disability in the prime minister's national health programme to provide access to facilities and assistive products to those who need them. She concluded by saying that despite progress, there remained much more to achieve, and that the mission would only be accomplished once each and every person who needs the benefits of assistive technology has the support they need and realizes the potential such devices can unlock.

Dr Sana Hafeez then spoke, citing her own history and her reliance on assistive technology, relating her memory of propelling her wheelchair across the stage during her medical school graduation. She spoke of the importance of increasing access for persons with disabilities and reducing barriers to them experiencing and leading fulfilling lives. She said that her own life had been an example; despite a spinal cord injury, she had pursued and realized her ambition to be a doctor, with the remaining goal of being a plastic surgeon. Dr Hafeez stressed the importance of raising awareness about assistive technology among the general public and within the health care system. As people get older, their demand for and reliance on assistive technology became greater, she noted. Equally vital was ensuring that assistive technology becomes more affordable to all who need it, she said.

Dr Mohamad Assai, WHO Representative in Pakistan, thanked participants for attending the meeting, which reconfirms the commitment of countries to improving access to assistive technology. He commended the Government of Pakistan's leadership in seeking regional cooperation and its commitment to the issue. Establishing the context for the meeting's work, Dr Assai described a world where everyone in need of assistive technology received it without suffering financial hardship as a result, allowing them to lead a dignified and robust life. Access to assistive technology was a global public health issue, a human rights issue, and a development priority because people with a disability are marginalized and under-

represented as a group, he said. They experienced high rates of poverty, he noted, which was why assistive technology must be made more affordable. Dr Assiai observed that the meeting was an opportunity for the technical experts to develop mutual understanding regarding the value of assistive technology.

Dr Assad Hafeez, Director General of Health for the Ministry of National Health Services, Regulation and Coordination and the Chair of the Executive Board of WHO, recognized the efforts of the Federal Minister of National Health Services, Regulation and Coordination, Her Excellency Ms Saira Afzal Tarar, who "led from the front" on this issue. The Minister had launched the list of assistive products at a side event at the Sixty-ninth World Health Assembly in 2016, enlisting the support of many countries for this initiative, he said. What began when Pakistan was elected to the Executive Board of WHO, he noted, had led to a resolution on assistive technology being considered at the Seventy-first World Health Assembly. Dr Hafeez thanked the WHO Country Office in Pakistan for its unwavering support and guidance, and stated that a course of action must be determined to enable those in need of assistive technology to receive it. He stressed that the meeting added tremendous value to that goal, stating that it was not only those with disabilities who require assistive technology but the elderly as well, and that pride could be taken in the fact that the Eastern Mediterranean Region will be the first WHO region to develop a framework on assistive technology.

2. SETTING THE SCENE

2.1 Introduction to the meeting: concept, objectives and expected outcomes
Dr Zafar Mirza, WHO

Universal health coverage is one of the top priorities for WHO and its Member States in seeking to improve global health. In WHO's definition of the concept, "universal health coverage means that all people and communities can use the promotive, preventative, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship." This concept has evolved over time and should be the vision for providing health care throughout the world. Increasingly, this vision is becoming the norm among Member States of the United Nations (UN) and WHO. The relationship between the concept of universal health coverage and assistive technology is evident. It is, therefore, equally clear that improving access to assistive technology is an effective complement to the advancement of universal health coverage.

Assistive technology is defined as "assistive products and related systems and services for people to maintain or improve functioning, thereby promoting well-being and enabling people to live healthy, productive, independent, dignified lives."

To claim to be working on the advancement of universal health coverage is to implicitly acknowledge an effort to improve access to assistive technology, essential

within the corpus of technical services in health care. Given the precarious situations in some parts of the world, improving access to assistive technology has become of greater importance, requiring its separation and prioritization relative to other issues. Only one in 10 persons in need of assistive technology actually has access to it, making it one of the most pressing health issues of our times. In the Eastern Mediterranean Region, the situation is even worse owing to the concentration of health emergencies within the Region. Conflicts have driven the need for assistive technology.

It is against this background that the consultative meeting was convened, with the hope of bringing together international and regional experience and experts to build the framework that will enable countries to improve access to assistive technology.

The five specific objectives of the meeting are to: understand the increasing population needs related to assistive technology in the Eastern Mediterranean Region in both development and emergency contexts; update participants on WHO efforts at the global and regional levels to improve access to assistive technology; share experiences, achievements and lessons learnt in relation to improving access to assistive technology; discuss and critically review the strategic action framework on improving access to assistive technology in the Eastern Mediterranean Region; and agree on practical steps towards the finalization and implementation of the framework at the country level.

2.2 The GATE initiative and the lead role of Pakistan
Dr Maryam Mallick, WHO

The global public health landscape is changing in the 21st century. An epidemiological transition has occurred as a result of the reduction in communicable diseases and the increase in noncommunicable diseases. By 2020, noncommunicable diseases will account for 80% of the global burden of disease: road traffic injuries are increasing as well: 20–50 million people will suffer non-fatal injuries as a result of motor vehicle collisions. Furthermore the global population is aging as life expectancy is increasing. Older people will soon outnumber younger people: it took approximately 100 years in Europe for the population aged 65 years or older to increase from 7% to 14%; that same increase has occurred in Asia in just over 20 years.

Right now, there are one billion people in the world who require assistive technology. That number is expected to double by 2050, that is, in a single generation. Regretfully, the current availability and supply of assistive technology does not meet the demand. Only one in 10 people who require assistive technology receive appropriate devices and products. For example, 70 million people require wheelchairs but only 5–15% of that number have them; 200 million people do not have glasses or other low-vision devices required. These shortages exist despite obligations set out in several international agreements such as the UN Convention on the Rights of Persons with Disabilities.

The barriers to accessing affordable assistive technology are many: lack of governance and regulation, lack of proper assessment and prescription, lack of procurement and production standards, and prohibitive production costs.

Undaunted by the challenges, the global community has sought to address these barriers and improve access. In 2013, at a High-level Meeting of the General Assembly on Disability and Development, WHO was mandated to develop and coordinate a global initiative to support the efforts of Member States to increase access to assistive technology. Thus, the Global Cooperation on Assistive Technology (GATE) was initiated, and has succeeded in shifting attention from limitation and disability to function and participation. As a result, assistive technology has been included among essential health products along with medicines, vaccines and medical devices.

One of the first accomplishments of GATE was the development of the Priority Assistive Products List, which emulates WHO's Model List of Essential Medicines. The list was developed through a series of studies, ranging from literature reviews to Delphi studies, which acted like screens or sieves filtering the data collected down to 50 essential products.

Much of this progress is due to the leadership of the Government of Pakistan and, specifically, HE Ms Saira Afzal Tarar, Federal Minister of National Health Services, Regulation and Coordination. Since 2015, Pakistan has pursued every opportunity to bring the issue of assistive technology to the attention of the UN, WHO and the world.

2.3   The regional situation and update on assistive technology
Dr Maha El-Adawy, WHO

Since 2016 and the Sixty-third Session of the Regional Committee for the Eastern Mediterranean, assistive technology has been among the highest priorities for the WHO Regional Office for the Eastern Mediterranean. At that session, ministers of health from the Region passed a landmark resolution (EM/RC63R.3). This was followed by further progress at the Sixty-fourth Session of the Regional Committee for the Eastern Mediterranean, held in Islamabad, Pakistan, in 2017. At a side event hosted by the Government of Pakistan and the Minister of National Health Services, Regulation and Coordination, countries shared best practices, promoted regional and subregional cooperation and underscored the importance and benefits of including assistive technology in the concept of universal health coverage. The Islamabad Declaration on Improving Access to Assistive Technology was endorsed by Member States, reinforcing their commitment in this regard.

Turning the Sixty-third Session of the Regional Committee for the Eastern Mediterranean resolution into action has produced two concrete results, a regional rapid assessment of assistive technology and the regional strategic action framework on improving access to assistive technology. The former was used to capture a snapshot of the use of and access to assistive technology in the Region. The latter was

drafted to assist countries in developing measures to improve access to assistive technology at the national level. By pursing the actions outlined in the framework, countries would also meet other international obligations defined in the Convention on the Rights of Persons with Disabilities and the targets of the SDGs. The growing demand for assistive technology is real. Not rising to meet this challenge potentially undermines efforts to achieve SDG 3, and in particular SDG target 3.8 concerning universal health coverage, as well as the other goals and targets.

In order for states to improve access to assistive technology, ministries of health must play a central role in mobilizing and organizing the necessary resources and efforts. Even in countries where other ministries have the primary responsibility for assistive technology, ministries of health should have an assistive technology programme aimed at serving the entire population and should be cooperating with other stakeholders.

This question of coordination is one of the regional challenges that have become apparent. It is reflected in the lack of policy and programmes in countries of the Region, as revealed in a 2005 global survey; 18 countries of the Region reported providing assistive products to individual recipients, but no legislation, policy or instituted programmes existed. Nongovernmental entities, such as private-sector providers, nongovernmental organizations, donors and international institutions, provide rehabilitation services, particularly in low- and middle-income countries. There are, however, inherent limitations when such groups deliver services, as they could inhibit the development of genuinely national and sustainable service delivery systems.

Another challenge is the inability to truly understand the need for assistive technology with any accuracy in the Region. Data from the Region covering ageing, noncommunicable diseases and injuries can be used in a macro fashion to understand the potential size of the market for required products, but lack any capacity to impart a micro-level appreciation.

A third regional challenge is the dearth of trained personnel and adequate products. It is difficult to deliver a service when not enough skilled practitioners can be found. Further complicating delivery are poor quality products, inadequate production levels of quality products to meet the demand and, ultimately, prohibitive costs.

Overcoming these challenges globally is why WHO launched GATE, which will benefit the Region as well. Given the increase in life expectancy, the rise in noncommunicable diseases and motor vehicle accidents, and other indicators reflecting the changes in health and well-being in the Region, assistive technology is essential for improving personal function, reducing the need for caregivers and rationalizing costs that these changes are going to drive upward. Integrating assistive technology into universal health coverage and emergency preparedness and response is vital. International and regional commitments to pursuing these actions are, however, only truly meaningful when countries implement these commitments and follow through with national actions.

2.4   The global situation and update on assistive technology
Mr Chapal Khasnabis, WHO

Assistive technology is not a facet of health care that is only applicable to certain populations or in specific places. Everyone will require assistive technology in some form eventually. It is not a question of "if" but "when". This reality is not merely because life expectancy is increasing globally but also because as people age, they require more assistive technology, both in terms of volume and variety. This is true regardless of geography, and therefore assistive technology is no longer just a concern of wealthier countries. Assistive technology enables all people to live productive, fulfilled, and dignified lives wherever they live.

It is recognized that 1 billion people globally are currently in need of assistive technology, and accepted that that number will double in the next 30 years. Consensus has formed around the notion that only one in 10 people is in receipt of the assistive technology that they require, meaning that 90% of those who require assistive technology are not having their needs met.

Looking at these statistics and the issue they represent from a different angle, however, is to realize that this sector has a 90% growth opportunity and presents a prospect for considerable innovation and entrepreneurship. It is a US$ 1 trillion industry, capable, like all industries, of creating jobs, exports and economic growth. Countries in the Eastern Mediterranean Region are capable of entering into the production of assistive products such as wheelchairs or hearings aids.

It is time now for countries to begin their individual efforts to incorporate nationally the work concerning assistive technology that has been done internationally and regionally. The leadership of Pakistan has spurred global awareness and efforts, resulting in the Priority Assistive Products List and the assistive technology framework, which has defined the four areas – policy, product, provision, and people – that countries should work on to improve access to assistive technology. Hence, WHO is eager to work with any country to help build capacity in these four areas, but it must be reiterated that including assistive technology in the SDGs, and specifically integrating it into the concept of universal health coverage, is paramount.

Other tools being developed by WHO include an app for rapid assessment to determine the needs of a specific group of people or an area within a country. In order to improve procurement and products, WHO is heavily engaged in market shaping around the products found on the Priority Assistive Products List. By working with the larger donor agencies and producers, it is hoped that products can become more affordable, as has transpired with medicines and vaccines. Coupled with this is an endeavour to promote pooled procurement. Another project is online training materials for primary health care workers and community health workers to improve human resources.

WHO therefore continues to advocate for the establishment of a national assistive technology centre in every country. In order for the true virtue of assistive technology to be realized, the environment in which it is deployed must be assistive technology-friendly. Public and residential buildings must become accessible to those who require assistive technology. In support of this ambition, WHO is working on the concept of lifetime housing and neighbourhoods, which looks at how someone can remain in their own home as they age.

There are significant events scheduled in the coming months: the Seventy-first World Health Assembly in May 2018, the Eleventh Conference of State Parties to the Convention on the Rights of Persons with Disabilities in June 2018, and the Global Disability Summit in July 2018. Each will be a platform where awareness is raised about efforts at both the international level and in the Region to increase access to assistive technology.

Discussion

There was an appeal from participants for WHO to develop product specifications. It was pointed out that while the Priority Assistive Products List of 50 products, developed by WHO, does have minimum specifications, WHO cannot impose those specifications on manufacturers or enforce them in countries. It can help individual countries develop standards, but given its global reach, WHO cannot impose a set of standards or specifications on countries.

Currently, WHO is developing standards for procurement and identifying the questions that should be asked and the issues that should be dealt with when buying assistive products in bulk.

2.6 Regional rapid assessment of assistive technology provision
Dr Malek Qutteina, WHO Consultant

As a first step towards implementing EM/RC63R.3, a rapid assessment was conducted in the Eastern Mediterranean Region between March and June 2017 to determine levels of access to assistive technology. It sought to identify areas that could be improved in the delivery of assistive technology in the Region. The assessment tool was adapted from the global assistive technology needs assessment tool, developed by WHO, to make it more applicable to measuring assistive technology at the regional level.

Key components of the rapid assessment included policy and financing, information and research, products, personnel and service provision. It was implemented in 17 countries of the Region of various income levels and development and emergency contexts.

The results regarding policy and financing indicate that 10 of the 17 participating countries have a national entity dedicated to assistive technology, while

nine reported having national level assistive technology strategies, plans or programmes. Ten countries allocated financial resources for assistive technology in national budgets and 11 reported tax exemptions on imported assistive technology.

With regard to information and technology, nine countries reported having an assistive technology information system and a similar number reported having agencies or institutes conducting research on assistive technology in the field.

The assessment focused on only 25 of the 50 products on the Assistive Products List, which were deemed as the most essential products and which can be provided at community level with little specialized training. This both simplified the analysis and made it more relevant. As in the Assistive Products List, the 25 products were classified into six groups: mobility, vision, hearing, personal care, communication and cognition.

In terms of availability, mobility products are in the most favourable situation compared with other groups. They are most commonly reported by participating countries as being on the national list of approved medical devices (having previous regulatory market approval), having generic technical specifications for their procurement, being supplied by local manufacturers and having the necessary supplies and services (consumables, spare parts, maintenance, and so on) available to maintain the functionality of the product. Conversely, communication and cognition products seem to be in the least favourable position.

In terms of affordability, wide variations seem to exist in the cost of products on the market, ranging from less than US$ 10 to over US$ 10 000 for the mobility and vision groups. However, responses indicated that costs are generally concentrated towards the low and average end (US$ 10 to US$ 1000). The cost of transportation and maintenance of products also showed similar wide variations.

Twenty-five assistive technology-related professions were examined within the assessment. Orthopaedists, ear, nose, and throat specialists, neurologists, and psychiatrists were reported by all countries. Most countries also reported having most of the other types of professionals. The only professions reported by less than 50% of countries were orthotists, wheelchair technicians and assistive technology practitioners. Nine countries reported that non-specialized health workers provide assistive products, mostly simple mobility products such as crutches, canes and walkers, but also including wheelchairs and other simple vision and hearing products. However, data on locally provided training courses was difficult to obtain.

For monitoring and regulations, five of the participating countries had monitoring and evaluation strategies for assistive technology provisioning, six had written protocols for providing assistive technology services, eight had written service standards and seven consulted user groups when developing standards.

In conclusion, the regional rapid assessment lays the foundations for more in-depth assessments in countries. Such assessments will aim to inform the development of national evidence-based policies to improve access to assistive technology and national priority assistive products lists, including minimum quality and safety standards. They will also aim to ensure adequately trained assistive technology-related human resources and the provision of priority assistive products during emergency situations.

3.   ASSISTIVE TECHNOLOGY FRAMEWORKS: PREVIOUS EXPERIENCE AND MODELS

3.1   The Norwegian experience
Dr Terje Sund, WHO Temporary Adviser

The Norwegian Labour and Welfare Service, Department of Assistive Technology constitutes the national assistive technology system in Norway, a northern European country with a population of 5.2 million people. The country has 18 counties, or regions, and 428 municipalities. Approximately 15% of the population is 65 years of age and older. In 2016, 138 150 users, or 2.7% of the population, received one or more assistive products from the national system. On average, each user received 3.2 products.

Prior to 1995, assistive technology services were fragmented and differed from one region to another. That year, however, the government amalgamated all assistive technology services into a national system. The system was designed with one goal: to provide the same level of service – products and human resources – regardless of where the user lived or the disability or limitation the user experienced. All services, regardless of the disability, are accessible through a single point of entry. User participation is prized and users were, and continue to be, involved in the development of the system. Users have access to the same products and same professions regardless of where they live in the country.

Eighteen technology centres were established, one for each county, staffed by experienced personnel with knowledge about the functional limitations of and solutions provided by all assistive products. Essential to the success of the system is the continued cooperation between the technology centres and local authorities in the municipalities and hospitals. The centres purchase and distribute all products and devices; they also repair the products, if broken, and provide regular servicing for the electronic devices.

Local authorities are primarily responsible for health care and social and rehabilitation services, including the provision of assistive technology. Trained professionals, physiotherapists and occupational therapists in the municipality are tasked with determining the needs of individual users and recommending assistive products. If services or products are not available at the municipal level, the individual user is referred to the assistive technology centre at the county level. These centres have an extensive roster of trained professionals, raging from therapists to engineers. As a case becomes

increasingly complex or rare, it is referred upward from the municipal level, first to the county technology centre and, in cases of the greatest complexity, to the national centre.

Assistive technology is provided free of charge to any person whose functional capacity is permanently impaired for more than two years due to illness, injury or physical disability. The only stipulation is that the product must be necessary and appropriate for a person's day-to-day practical needs. A user's right to receive a product is enshrined in law so long as they meet this standard of necessity and appropriateness.

Procurement is carried out on a national basis, with framework agreements signed between the national government and suppliers. Immediately following the first agreements negotiated in 2007, the costs of procuring products dropped by 30–35%. To accomplish procurement, teams are established, one managing the agreements and separate teams for each product group, which purchase the specific technology and devices for that group.

Complementing the procurement of new products is the use of second-hand products. Assistive technology centres are mandated to refurbish previously used products. In 2016, nearly 29% of all devices distributed were previously used. For power and manual wheelchairs, however, the percentage of previously used products jumps to nearly 50%. Again in 2016, the reuse of products equalled approximately US$ 78 million that would have been spent to purchase new products. The net saving, taking into account spare parts and other costs involved in refurbishment, was roughly US$ 50 million.

In Norway, no accredited post-graduate programmes in assistive technology exist, which is why assistive technology centres offer basic and advanced level courses on various assistive technologies. The centres are also responsible for providing service to electro-medical products on a nationwide schedule. Motorized wheelchairs must be checked every five years, lifts every year, and hoists every two years. Beds are checked every eight years.

Information is shared throughout the country via a national information communication system. This system gathers data and statistics very quickly, enabling planning for future services.

Discussion

Considerable interest was shown regarding the Norwegian model. It was clarified that Norway provides all assistive technology regardless of circumstances as long as the person has a disability or limitation, and the device is necessary and appropriate for the user's needs. Cars may be made available for persons with functional limitations, depending on the income of the user. However, assistive equipment required to improve accessibility and operation of the vehicle by someone with a disability is provided regardless. This should be viewed in light of the fact that Norway has a highly developed public transportation system that is considered very inclusive.

Products of everyday use that would be "normal" for anyone regardless of their functioning level, are not covered by the Norwegian system. Washing machines, for example, are not provided, as they are a product that anyone may need. Cellular telephones were previously provided, but given their current ubiquity, they are no longer covered despite their utility to a disabled person; likewise computers. Smart home technology can be included, such as systems that allow lights to be turned on remotely.

Forty-two percent of assistive devices in Norway go to people over 80 years of age, but assistive devices are provided to anyone, regardless of age, location or other personal details. In the Norwegian model, the assistive technology centres, the true hubs of the system, and local municipalities work together to provide a solution for users. At times, local hospitals, including rehabilitation hospitals, cooperate but the centres and local authorities handle most cases.

Assistive devices that are no longer in use are returned to the assistive technology centres where they are cleaned and refurbished, with broken or non-working parts being replaced. This practice reduces costs throughout the system.

Specialists employed at the assistive technology centres are often physiotherapists, nurses, technicians, occupational therapists, engineers and specialists in more particular fields such as hearing devices. There are approximately 1300 workers stationed in 18 assistive technology centres around Norway. There are various educational opportunities, including postgraduate opportunities for nurses and therapists, but also more technical courses aimed at local skilled workers who may be hired to install assistive devices in a home.

Dr Sund emphasized the dedication to data collection that exists within the Norwegian system, with the national centre analysing the data collected at the 18 regional centres. Enabling this collection and underpinning the entire system, including the national procurement system, is an information and communication technology programme, *Oracle E-Business Suite*, which has been adapted to suit specific needs. Regarding procurement, interaction between the government and industry is limited to negotiating contracts, although on occasion producers have sought the advice of experts from the assistive technology centres to improve products.

It was noted that as Norway has one of the world's highest GDPs there might be some debate about the applicability of the Norwegian model in many low-income countries, which may have little budget for assistive technology programmes. Nevertheless, it was agreed that the Norwegian model may be drawn upon when pursuing national efforts to improve access to assistive technology, taking into account local contexts and resources. Norway begins from the premise that everyone has access to the system, and the system is structured to achieve that goal. Ministries and agencies cooperate and collaborate; they do not compete with one another. Efficiencies are found in the system through the use of previously used products and an effective computer system. Cooperation and the construction of a national system

in other countries can bring about cost reductions, and would enable 100% access for those who need assistive devices.

3.2 Assistive technology in emergencies
Mr Firoz Alizada, WHO Temporary Adviser

In emergency situations, disasters and conflicts, assistive technology is essential. Disarmament conventions often contain some element dedicated to supporting victims. For example, emergency medical care and physical rehabilitation are two of the six pillars of the 1997 Anti-Personnel Mine Ban Convention (APMBC). Assistive technology is a requirement in the short-term, in emergency response, and in the longer-term in the framework for victim assistance under the APMBC.

The need for assistive technology is mentioned in the Maputo Plan of Action in the section dealing with systems (laws and policies) and delivery of rehabilitation services (availability and accessibility).

In preparing to respond to emergencies to ensure assistive technology and services exist during and after an event, planning is essential. Risk mapping, including identifying specific concerns such as landmines and other remnants of wars, can be used to build a response plan. Pre-emergency data on persons with disabilities living in areas with specific risks can be undertaken as well. This information can be utilized to assist in predicting needs should an emergency occur, and to enable rapid response by stockpiling products and devices in a particular location. Prior to any event occurring, it is also important to identify roles and responsibilities and ensure there are reliable communication and notification systems available.

During emergencies, communication is always important, and special consideration must be given to those who have functional limitations; for example, the ability to provide instructions in sign language or having assistive technology available to enable people with physical disabilities to move to safe locations should be taken into account. It is important, then, to work with community-based knowledge, where community is defined both geographically and in terms of disability. To ensure efficiency, assistive technology and physical rehabilitation professionals could be integrated into emergency response. Providing direct rehabilitation services during disasters offers an opportunity to minimize the extent of disability.

Post-emergency, assistive technology is crucial in facilitating the return of people with disabilities to their communities and in enabling their full inclusion back into society. A challenge to this aim is the provision of services after an emergency, especially in rural areas. Resources for assistive technology and services must be allocated after events, and consideration of the functional limitations of people living with disabilities should be included in concepts such as "Build Back Better" and "Build Back Safer".

4. STRATEGIC ACTION FRAMEWORK ON IMPROVING ACCESS TO ASSISTIVE TECHNOLOGY IN THE EASTERN MEDITERRANEAN REGION

4.1 Explanation of the strategic action framework
Dr Hala Sakr and Dr Adham Ismail, WHO

The strategic action framework on improving access to assistive technology in the Eastern Mediterranean Region is intended to assist countries in creating the architecture to construct realistic, practical and effective national plans for access to and delivery of assistive technology. It will form the basis of country-level action plans. Further progress is dependent on countries developing national programmes. The meeting presents an occasion for countries to help develop the framework as a feasible, useable and practical tool.

To advance the framework and national assistive technology programmes, efforts must be dedicated to four specific areas or strategic objectives:

- **policy**, defined as leadership, governance, financing, research and information-sharing;
- **products**, including assistive devices and their production;
- **provision**, the delivery of the products and services; and
- **personnel**, having a capable workforce.

Policy plays a fundamental role for the other three objectives as it sets the context within which the other three "P"s – product, provision and personnel – exist and operate. It is also important to remember that people – the beneficiaries of assistive technology – must be firmly at the centre of any system as it is for them that a programme has been developed.

Policy also enables coverage, and assistive technology coverage embraces three elements: coverage of people, coverage of products and coverage of payments. Personnel and services are inherent in all three as they influence which products are delivered to whom, where and at what cost. Again, policy acts as an overall umbrella enveloping all of these matters. Additional financial support would be extremely valuable in increasing the number of products being offered and the number of people being helped.

Based on the Priority Assistive Products List, a shorter product list has been created of the 25 most essential products. The ultimate goal is for the inclusion of assistive technology, including the products on this list, in primary health care delivery.

The guiding principles of the framework are: recognizing the entitlement of all to enjoy fundamental rights and freedoms; no one with functional limitations should bear additional costs; accessing assistive technology should be seamless and straightforward regardless of age, location or any other personal factor; assistive

technology must be safe and effective; and the SDGs should be considered when developing any part of the framework.

The framework would accompany the resolution brought to the Seventy-first World Health Assembly in May 2018. In so doing, the Eastern Mediterranean Region will have a unified voice in presenting this initiative to the other WHO regions.

4.2　Group work on the strategic objectives matrices
Dr Adham Ismail, WHO

The role of participants in reviewing the framework was explained. First, they were asked to review the titles and tasks for each of the four strategic objective matrices, which together make up the framework. Each matrix corresponded to one of the "P's" – policy, products, provision, and personnel. Once the titles and tasks had been considered, participants were to propose actions that the three main actors (WHO, Member States and other partners such as civil society and producers) should carry out to implement the related task.

Participants were encouraged to bear in mind the rationale for the framework when considering what actions to detail within it: that assistive technology improves and maintains the ability to function of those who need it and, therefore, improves their lives. Assistive technology provision must be cost-effective and must be considered part of universal health coverage. Participants were directed to consider the major unaddressed needs, the ones that would have the widest impact, rather than more specific and limited needs. It was also stressed that the framework must impress upon countries the need to ensure access to assistive technology. The target group of the framework is all people with functional limitations who need assistive technology, without any bias or distinction of any kind, and without regard to the stability of a country. It was underlined that countries in emergency situations, however, have particular needs, and for this reason, one working group looked at assistive technology needs in emergency situations.

In order to undertake this work, participants were organized into six groups, with three of the groups based on the income levels of the participating countries. One group included partipants from Pakistan alone and another focused on countries facing emergency contexts. A further group was organized for the civil society groups represented at the consultative meeting.

Each group's Chair would encourage the discussion but also be responsible for managing the time, and a Rapporteur would input the additions in the matrices.

See Annex 3 for the resulting draft strategic action framework on improving access to assistive technology in the Eastern Mediterranean Region incorporating the results of the group work.

4.3   Summary

The matrices completed by each group were assembled into a single document and similar responses across each group were retained as an action item. Some dissimilar responses were kept as well. It must be stressed, however, that there was a high degree of consistency in the responses. Variety existed in the way suggestions were expressed, but not in the nature of the suggestions. In most cases there was agreement or similarity in the actions suggested by each group. The responses for each actor (Member States, WHO, other partners) did not deviate from the customary architecture that has evolved over time between these three collaborators. All groups recognized that it was the responsibility of countries to undertake the greatest activity in order to implement the framework and improve access. It was recognized that WHO acted best in its traditional role of providing advice to countries. For example, many participants suggested that WHO could develop standards or models, which countries could then emulate in their own national contexts, and that WHO could also provide technical support and access to experts. As for other partners, many of the participants interpreted this description as civil society and nongovernmental organizations. Therefore, many of the actions that were assigned to this actor involved funding, awareness-raising and education initiatives. In specific cases, such as in products and provisions, a broader interpretation was agreed on that included manufacturers and private sector providers, which were tasked with being aware of any minimum standards and specifications that could be developed or adopted by countries.

4.4   Implementation challenges in development and emergency contexts

There was consistency among the five groups when it came to detailing the potential challenges of implementing the strategic action framework. It is possible to group the challenges specified into three broad categories: alacrity, resources and capacities.

Alacrity refers to speed, willingness and readiness. In terms of alacrity, a lack of political will and poor oversight were noted. A lack of awareness and understanding among the general public, decision-makers and within the health care system itself, has led to a lack of political will. Broad and sustained campaigns are required to educate, inform and inspire relevant audiences. Robust and thorough monitoring and evaluation schemes and practices are needed, as is political ownership. A memorandum of understanding between concerned ministries and leading public figures could be drawn up in each country. There is also a lack of collaboration between relevant stakeholders, including between ministries and other organizations in the provisioning of assistive technology.

All groups recognized the lack of resources as a significant barrier to implementing the framework. Not having appropriate, or even minimal, financial resources to support assistive technology programmes is compounded by the lack of political will to secure national resources for them. Insufficient human resources further impedes implementation.

There is a lack of capacity, including products and production ability to make products to meet identified needs. All groups agreed that inadequate training and education would limit implementation. Each group also singled out the dearth of capacity for providing assistive technology in emergency contexts. Most groups also cited the need to improve data collection and analysis; such improvement would allow for a better understanding of needs and would support any monitoring and evaluation of a national programme.

Participants identified a number of cross-cutting issues that affect the access to and provision of assistive technology. These included awareness at different levels (users, general public, health care providers, government), the role of gender, the place of assistive technology within universal health coverage, and the role of assistive technology in achieving the SDGs. Another issue identified was the surrounding environment. For example, there is no point in distributing assistive mobility products if pavements, kerbs and entry and egress points are not conducive to persons using these products. Affordability and financing also need to be considered. The collection and distribution of data allowing for evidence-based decision-making is another cross-cutting feature, as is the necessity for a plan at the national level. Cross-cutting issues such as these will not be found solely in one of the four "Ps" (policy, products, provision, or personnel), but in all of them. Success in any one of the "Ps" will require attention to be paid to these issues as well.

5. CONCLUSION

The draft strategic action framework will be updated based on the input of the participants and distributed at the Seventy-first World Health Assembly in May 2018. It is hoped that a resolution supporting the framework will be adopted by the Health Assembly at that time. The final framework, having been peer-reviewed, will then be presented to the countries of the Region in October 2018, at the Sixty-fifth Session of the Regional Committee for the Eastern Mediterranean. Following this, the framework will be piloted in three countries of the Region, including Pakistan.

Participants asked for the creation of a network to enable the continued growth of the relationships that many of the participants had forged during the three days, and to build on the spirit of collaboration of the meeting. A network would allow for continued discussion, promote the sharing of lessons learnt and best practices, and could become a mutually supportive group.

Participants also expressed their determination to develop a strategy on improving access to assistive technology in emergencies. Given the extensive experience of countries of the Region in attempting to provide assistive technology in the midst of conflicts, natural disasters and complex emergencies, it was recognized that such a strategy should be developed in the Region.

Annex 1

PROGRAMME

Tuesday, 8 May 2018

08:30–09:30   Registration

Session 1 – Setting the scene

09:30–09:35	Opening remarks	*Dr Mohamed Assai, WHO*
09:35–09:45	Welcome address	*Dr Assad Hafeez,* *Director General Health*
09:40–09:50	Introduction of the meeting: concept, objectives and expected outcomes, and adoption of the agenda	*Dr Zafar Mirza, WHO*
09:50–10:10	GATE initiative and lead role of Pakistan	*Dr Maryam Mallick, WHO*
10:10–10:25	Regional situation: Sixty-third Session of the Regional Committee for the Eastern Mediterranean technical paper and resolution	*Dr Maha El Adawy, WHO*
10:25–10:40	Global situation and update on assistive technology (AT)	*Mr Chapal Khasnabis, WHO*
10:40–10:50	Remarks by HE Federal Minister of Health	*Ms Saira Afzal Tarar*
11:20–11:40	Introduction of participants	
11:40–12:00	Regional rapid assessment of AT provision	*Dr Malek Qutteina, WHO Consultant*

Session 2 – Assistive technology frameworks: previous experience and models

12:00–12:20	The Norwegian experience	*Dr Terje Sund, WHO Temporary Adviser*
12:20–12:40	AT in emergencies	*Mr Firoz Alizada, WHO Temporary Adviser*
12:40–13:30	Discussion	
13:30–13:50	Draft strategic action framework on improving access to assistive technology in the Eastern Mediterranean Region	*Dr Hala Sakr and* *Dr Adham Ismail, WHO*
13:50–14:00	Wrap-up and key messages of day 1	

Official opening

16:00–16:20	Message from Dr Jaouad Mahjour, Acting WHO Regional Director for the Eastern Mediterranean
16:20–16:25	Address by Dr Sana Hafeez, WHO Global GATE Ambassador

16:25–16:35	Documentary video on assistive technology	
16:35–16:50	Address by HE Ms Saira Afzal Tarar, Federal Minister of National Health Services, Regulation and Coordination, Pakistan	
16:50–17:00	Official meeting inauguration by HE Mr Mamnoon Hussain, President of Pakistan	

Wednesday, 9 May 2018

| 08:30–08:45 | Recap of proceedings of day 1 | *Jonathan Waddell, Meeting Rapporteur* |
| 08:45–09:00 | Introduction to group work | *Dr Adham Ismail, WHO* |

Session 3 – Development of a regional AT framework (Policy)

| 09:00–10:45 | Group work |

Session 3 – Development of a regional AT framework (Products)

| 11:00–12:45 | Group work |

Session 3 – Development of a regional AT framework (Provisions)

| 13:45–15:30 | Group work |

Session 3 – Development of a regional AT framework (Personnel)

| 15:45–17:30 | Group work |

Thursday, 10 May 2018

Session 4 – Implementation challenges in development and emergency contexts

08:30–10:30	Group work
11:00–13:00	Group presentation
14:00–15:00	Agreement on next steps
15:00–16:30	Closing remarks

Annex 2

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Annex 3

DRAFT STRATEGIC ACTION FRAMEWORK ON IMPROVING ACCESS TO ASSISTIVE TECHNOLOGY IN THE EASTERN MEDITERRANEAN REGION

Strategic objective 1: Advance the policy framework for the progressive realization of universal assistive technology (AT) coverage

Action	Role of Member States	Role of WHO	Role of partners
Develop a unified national strategy that ensures the representation of ministries and different stakeholders	• Ministry of health to establish an AT committee for the coordination of resource dedication at national and sub-national levels • Identify stakeholders, including user representation, for the committee • Draft terms of reference, defining roles and responsibilities.	• Provide technical expertise • Share best practices • Provide training	• Raise awareness and advocate • Encourage active community participation • Provide funding
Actively involve and consult with people with functional limitations in the development and implementation of AT policy	• Identify, through criteria, representatives, disabled people's organizations and nongovernmental organizations • Create practical structure and process for engagement	• Support through training and best practices • Provide access to technical expertise • Help develop criteria	• Help identify potential representatives • Inform process through sharing of perspectives
Assess current AT resources	• Undertake mapping exercise	• Help develop mapping exercise through production of standards and financial support • Share lessons learnt and best practices	• Support mapping exercise through getting community engaged and providing perspectives and research
Determine current needs for assistive products (AP)	• Ensure disability questions included in other national census processes	• Support through assisting with developing assessment tools and other technical support	• Support through public advocacy and education • Review assessment tool and provide perspectives
Estimate needs for AP in locations with potential disaster risks	• Assess people in need of AP living in these locations • Predict gravity of potential disasters and associated needs for AT	• Support through assisting with developing assessment tools and other technical support	• Collaborate, support, invest and implement when needed

Define the beneficiaries to be covered by AT policy	• Develop criteria and common language and vocabulary • Secure stakeholder support for criteria	• Provide technical support in developing criteria • Help educate stakeholders in Member States	• Provide technical support in developing criteria • Undertake public advocacy and education around criteria and common language and vocabulary
Define the range of AP to be covered by AT policy	• Establish national list of AP and determine priority • Use the WHO priority AP list, tailored to national needs • Ensure inclusion of AT for activities of daily living • Set up schedule for review of the list	• Provide technical support in developing national lists • Help identify costs and availability of products • Identify innovative solutions used in other nations	• Raise public awareness • Provide input for list • Provide research of products
Identify needs for personnel	• Map service providers • Develop and adopt standards for service providers • Provide for learning opportunities, expanding of accreditation and certification • Enable team approach	• Provide technical support • Share best practices • Develop assessment and mapping tool • Develop standards and training materials • Provide scholarships in low-income countries to assist with learning opportunities	• Participate in mapping by identifying gaps and identify education needs • Support learning opportunities
Identify costs for providing AP	• Develop and implement process to identify and calculate costs • Conduct market survey to assess range of prices	• Provide technical support in the development of calculation tools • Share best practices and lessons learnt • Provide pricing on international products (for import)	• Provide technical support • Share lessons learnt on costing and planning • Identify quality and cost-effectiveness issues; and costs of locally produced and procured AP
Identify costs for establishing services	• Develop and implement process to identify and calculate costs	• Provide technical support in the development of calculation tools • Share best practices and lessons learnt	• Provide technical support • Share lessons learnt on costing and planning • Identify quality and cost-effectiveness issues
Ensure affordability for users of AP	• Determine services to be provided • Examine products on national list and determine rate of subsidization • Determine affordable payment levels for beneficiaries • Develop schedule of payments	• Provide technical support, especially around funding models • Share best practices and guidelines • Facilitate pool procurement • Advocate that Member States support provision of AT financially	• Raise awareness • Provide technical support, sharing best practices and social protection models • Assist with raising funds • Provide financial support

	• Educate on the link between providing AT and social interests of the nation • Ensure AT is included in health care insurance • Ensure AT is included in other social safety net policies • Subsidize AT		
Develop and implement an integrated AT policy or legislation	• legislation and policies adopt and Develop • Develop and implement accountability mechanisms	• Provide technical support in sharing of best practices and lessons learnt	• Provide support through advocacy
Develop and implement regulations and a regulatory system	• Develop legislation and policies in accordance with national process • Establish regulatory body at national and sub-national levels	• Provide technical support in sharing of best practices and lessons learnt	• Provide support through advocacy
Identify funding sources and strengthen mechanisms for resource mobilization	• Provide adequate and specified budget allocations for AT • Engage private sector • Formulate policy on public–private partnership • Encourage corporate social responsibility • Map donor agencies and service providers	• Provide technical support through providing funding models • Identify and connect governments with international donor organizations	• Support through fundraising and sharing best practices
Establish and enforce a fair pricing policy of AP	• Establish mechanisms to provide affordable products		
Develop tax exemption policy for imported AP	• Develop or amend policy or legislation allowing tax exemption status for AP (including for personal use)	• Support through technical expertise about tax exemption best practices	• Undertake pubic advocacy

Strategic objective 2: Increase the supply of high-quality, safe, effective and affordable assistive products (AP)

Action	Role of Member States	Role of WHO	Role of partners
Estimate supply needs for AP	• Translate user needs into supply needs • Maintain database sustained through ongoing data collection, including spare parts and maintenance data • Analyse data	• Provide technical support • Develop guidelines • Support research on needs and gaps • Support capacity-building • Provide IT equipment, software and other tools	• Support estimates of supply needs • Develop questions in monitoring of other projects • Support database • Develop questions on functional limitations in monitoring of other projects
Stimulate and conduct research on AP	• Fund research • Facilitate research agenda • Simplify procedures • Cooperate with relevant bodies • Partner with academia and industry	• Provide technical support • Facilitate networking and sharing of best practices • Provide financial support	• Provide technical support to the research process • Provide financial support • Conduct research
Stimulate innovation in AP	• Provide financial inducements for innovations • Put in place tax incentives • Provide financial rewards and prizes for distinguished innovations • Facilitate innovation • Engage universities, technical and vocational institutes and private sector • Assist with intellectual property rights	• Provide technical support • Facilitate networking, knowledge exchange, sharing of best practices • Assist countries on intellectual property rights matters • Provide financial support • Promote distinguished innovations • Identify manufacturers	• Support through advocacy • Promote employment of people with functional limitations by larger firms and distinguished innovations • Support with feasibility studies, finding manufacturers, training of local manufacturers • Provide financial support
Stimulate production of AP at national and regional levels	• Provide financial incentives • Introduce tax exception for local manufacturers • Support financing of local manufacturers • Ensure environment and policies are supportive and aligned • Protect local manufacturers	• Provide technical support • Share best practices and successful models • Support capacity-building	• Support through advocacy, encouraging governments to support local production • Provide financial support to local producers

Facilitate import of AP in absence of local alternatives	• Reduce import taxes, duties and customs fees • Simplify import regulations and procedures	• Provide technical expertise on bulk procurement, and information on importers and imported AP • Advocate for global tax exemptions and duty-free imports	• Provide perspective and feedback on policy formulation • Provide information on needs and costing, assisting with prioritizing products to be imported and costing of globally available AP
Facilitate testing and certification of AP	• Establish national or subregional testing facilities • Authorize existing facilities to carry out testing • Develop and enforce processes for testing • Develop and enforce certification standards • Include AP in existing certification regulations	• Provide technical support • Share criteria, guidelines, standards, protocols, best practices • Assist with and organize training • Include AT in WHO prequalification	• Support through sharing information, best practices, information on AP • Support through advocacy
Establish and maintain a register of manufacturers or importers of AP	• Develop registry, complete with registration requirements, minimum quality standards and standard operating procedures • Develop integrated management information system	• Provide technical support in developing system or database and IT models	• Provide technical support • Ensure that products comply with the registration compliance
Establish and maintain a register of certified or approved AP	• Develop registry, complete with registration requirements, quality requirements and standard operating procedures	• Provide technical support in developing registry	• Provide technical support • Ensure that products conform with the registration compliance
Establish and maintain a database or information system on AP	• Develop database of AP that meets quality requirements	• Provide technical support in system, developing and sharing best practices and guidelines	• Provide technical support and share feedback with government
Establish and maintain a post-market surveillance system	• Construct mechanism or method to conduct routine follow-up • Conduct market surveys among product users	• Provide technical support for follow-up mechanism or method development and customer survey • Share best practices	• Provide technical support • Share customer experiences with government and report adverse events

Ensure sufficient supply of AP appropriate for use in emergency contexts	• Prepare a priority AP list for use in emergency contexts • Develop mechanism to assess needs for AP during an emergency and a rapid procurement process • Ministry of health to engage ministries involved with emergency response and conduct planning based on risk • Deploy AT prior to disasters	• Provide technical support in developing emergency priority AP list and supporting ministry of health • Share best practices • Ensure sufficient AP is available at WHO procurement hub, AT is included in all WHO immediate intervention, and emergency hospitals are linked with AT centres	• Support through advocacy, raising awareness, sensitization and mobilization • Include AT in all emergency plans • Assist with government and WHO supply chain for AT
Follow up on maintenance and technical support for AP	• Set criteria and budget for corrective and preventative maintenance • Link to user database • Monitor and evaluate maintenance services through periodic inspection	• Share guidelines and best practices on preventative and corrective maintenance	• Comply with preventative and corrective maintenance criteria
Coordinate national AP procurement	• Develop centralized procurement for AP • Utilize existing or develop new inventory systems and develop aggregated procurement lists	• Provide technical support, assisting with building digital platform to aggregate data • Facilitate engagement among Member States	• Provide technical support in identifying needs
Establish regional collaboration for procurement of AP	• Develop and participate in regional network • Support using a memorandum of understanding • Develop regional-level guidelines • Aggregate procurement lists based on needs	• Provide technical support and facilitate engagement of regional Member States	• Provide technical support in identifying needs, oversight and guidance

Strategic objective 3: Expand the coverage of services for the provision of assistive products (AP)

Action	Role of Member States	Role of WHO	Role of partners
Increase the geographic coverage of the provisioning of AP	• Map existing provisions of AP • Establish services where needed • Task an agency to coordinate to avoid duplication	• Provide technical support • Share best practices • Develop indicators for coverage and assessment to measure coverage • Upload map to geographic location system	• Support through advocacy for equitable coverage • Support mapping exercise through sharing information and identifying gaps • Provide services to bridge gaps
Expand the range and quantity of provided AP	• Develop list of services provided at various levels • Identify resources required and increase budget where necessary • Ensure sufficient availability of AP on approved national list	• Provide technical support • Develop indicators and assessment to measure coverage • Provide a list of essential technology services • Provide financial support and help build capacity	• Provide technical support • Contribute to building list of essential products • Identify gaps • Provide financial support to help bridge gaps • Support through advocating for equitable coverage
Include provision of AP at primary, secondary and tertiary care levels as appropriate, and at other relevant ministries	• Establish services at each level and relevant ministry • Ensure functioning referral system is in place within health care system and other sectors (education, social welfare, and so on) • Increase the number of service outlets • Ensure adequate financial resources	• Provide technical support and share best practices • Advise on role at each level, protocols, and terms of references	• Provide technical support and collaborate with ministries to expand service outlets • Help with provision at various levels • Support building staff capacity and provide funding
Develop and implement a plan for ensuring that service facilities are physically, cognitively, socially and culturally accessible	• Develop standards, framework and requirements for accessibility • Provide logistical support • Use "One Window" concept for access • Implement changes in staffing and improve staff attitudes • Include more female staff • Provide training and raise awareness	• Provide technical support by sharing guidance and guidelines on inclusivity • Publicize service outlets publicly • Provide technical advice and assist with tool development • Provide financial support	• Provide technical support • Assist with implementation and monitoring • Assist with training and monitoring • Help communicate information regarding services • Assist with providing transportation • Provide financial support

Ensure that service facilities are equipped with accessibility codes for emergencies	• Educate facility designers in concerned ministries regarding emergency code requirements during design • Develop communication materials for building requirements during emergencies	• Provide technical support in developing emergency codes	• Comply with the developed emergency codes
Develop or strengthen AT assessment and referral system to and from rehabilitation services and follow-up care	• Enhance staff capacity and develop clinical practice guidelines • Promote skills development • Ensure all positions related to AT exist in service system • Map service providers and develop directory • Include AT in existing referral system • Improve knowledge of service providers on AT services and referral process • Train health care workers and develop multidisciplinary prescription teams • Develop and enforce guidelines for prescription	• Provide technical support and help build capacity • Develop protocols and standards • Provide technical support in developing referral models and instructions and share best practices	• Provide technical support and capacity-building through training and implementing services • Provide technical support in developing referral system and collaborate with it once in place
Improve services for fitting and adapting AP, and training of individual users	• Provide staff training • Develop standards and training packages • Enforce standards and good practices • Develop training materials for users and establish training teams	• Provide technical support in developing training and standards	• Provide technical support and capacity-building • Provide financial support for training • Provide oversight
Improve services for follow-up of AP users and maintenance and repair	• Develop follow-up and online user tracking system or mechanism, including compliance and grievance mechanism • Establish service ranking and expectations • Develop and enforce expectations and good practices • Develop service training	• Provide technical support in developing system or mechanisms and enabling capacity-building	• Provide technical support and capacity-building • Provide financial support • Help in reaching beneficiaries
Improve service provision in emergency contexts	• Identify the bodies and authorities responsible for service provision and intervention in emergency contexts • Ensure holistic and inclusive emergency services in coordination with all stakeholders • Create a committee to oversee provision of services in emergencies	• Provide financial support • Provide technical support • Give guidance and develop protocols on making AT available in emergencies	• Assist with service provision, fill gaps • Collaborate with government and WHO

Stimulate research studies on service provision	• Provide funding for research • Support research by providing access to data and information • Promote links with academia, good practices and operational research	• Provide technical support, sharing best practices, lessons learnt and research • Facilitate research, by providing researchers and experts	• Participate in research • ct researchCondu • Share research
Ensure appropriate means of communication with persons with disabilities during emergency contexts	• Train personnel on the different means of communication with persons with disabilities • Develop and disseminate communication guidelines for personnel as well as persons with disabilities	• Provide technical support for the development of the training curriculum and guidelines	• Provide technical and financial support for the development of the training curriculum and guidelines

Strategic objective 4: Improve the availability of qualified personnel at all levels

Action	Role of Member States	Role of WHO	Role of partners
Develop curricula and materials for training programmes on the provision of AT at primary, secondary and tertiary health care levels, or at other relevant ministries	• Form expert or technical committees to develop curricula and training programmes	• Provide technical support in developing curricula • Assist with training of trainers • Assist with funding training, or facilitating sending trainees abroad for training	• Provide technical support • Provide financial support
Develop capacity to train personnel for the provision of AT at primary, secondary and tertiary health care levels, or at other relevant ministries	• Develop training of trainers capacity • Recruit technical experts • Cooperate with universities and training institutions • Establish centre of excellence to provide training, work with existing facilities at tertiary care hospitals	• Provide technical support • Develop materials • Identify experts • Provide financial support • Fund scholarships • Encourage regional and multilateral cooperation	• Provide technical support • Provide financial support • Fund scholarships
Develop human resources for developing and designing AP	• Develop education and training opportunities • Include AT curricula in schools (health, engineering, and so on) • Encourage undergraduate and postgraduate AT programmes • Encourage innovation through incubators and start-ups	• Provide technical support • Share knowledge of existing WHO medical education programmes • Contribute to curricula development • Encourage sharing of best practices among Member States	• Provide technical support • Provide financial support • Fund scholarships • Ensure employees undertake appropriate training • Encourage ongoing capacity-building
Develop workforce for the provision of AT at primary, secondary and tertiary health care levels, or at other relevant ministries	• Assess current workforce and identify gaps • Ensure continuous training and education opportunities • Offer scholarships	• Provide technical support • Develop training materials • Provide financial support	• Ensure employees are properly trained • Provide technical support • Provide financial support
Develop workforce for managing national and subnational level programmes	• Ensure educational opportunities exist, such as health management systems • Encourage institutional development • Provide training of trainers	• Provide technical support • Provide financial support	• Provide technical support • financial support Provide

Integrate emergency response in AT curricula and materials for training programmes on the provision of AT in emergency contexts	• Develop training materials on inclusion of people with functional limitations and AT to be disseminated among emergency preparedness and response staff • Develop training materials for AT providers around emergency response	• Provide technical support in developing training materials and curricula, and sharing of best practices	• Provide technical support • Provide financial support • Help engage civil society
Sensitize and train the workforce for the provision of AT in emergency situations	• Develop curricula and materials for training programmes on the provision of AT in emergency contexts • Ensure deployment of AT professionals and focal persons in emergencies • Offer continuing education about AT in emergencies	• Provide technical support and capacity-building in developing training materials and standards • Provide financial support	• Provide technical support • financial support Provide • Support by raising awareness
Engage the community, nongovernmental organizations and disabled people's organizations in service provision through rapid training modules to be able to provide services in areas affected by emergencies	• Identify and train community champions and leaders in different geographic locations • Conduct community awareness campaigns	• Assist with community engagement model, including social stratification	• Partner with the related ministry to identify champions • Offer personnel for training • Disseminate community awareness campaigns
Establish professional associations for those involved in AP production, provision, training and use	• Establish policy for launching professional associations • Establish assessment criteria for judging associations	• Provide technical support	• Provide technical support • Collaborate with associations
Invest in peer support programmes and engage peers in strengthening AP provision	• Facilitate, invest and develop training manual on peer support • Provide training to peer supporters • Create mechanism for enforcement of peer support process	• Provide guidance and technical support upon request	• Collaborate with stakeholders
Develop a specific training programme to engage other development personnel, especially schoolteachers, family members and caregivers, employers and others, to further provision of AT	• Facilitate, encourage, allocate resources and implement	• Facilitate actions as needed	• Collaborate and implement where needed

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