

Implementation toolkit for accessible telehealth services



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Foreword

With the digital transformation of health care, it is fundamental to promote inclusion and ensure that every person achieves their right to equitable access and use of digital health services. The COVID-19 pandemic underscored the need for telehealth services as an important solution for delivering health care outside of established health-care facilities. As countries strive to achieve universal health coverage, the integration of telehealth into health systems has become fundamental, fostering a more inclusive and sustainable approach to health-care delivery. Despite its potential to advance equitable delivery of health care, millions of persons with disabilities, older people, indigenous communities, people with low literacy levels, and other population groups in marginalized situation experience a range of barriers in accessing and using telehealth services. A major factor for these barriers is the lack of universal design of telehealth platforms in line with information and communication technologies (ICT), digital accessibility requirements, principles, and standards.

To address this issue, the World Health Organization (WHO) and the International Telecommunication Union (ITU) have developed the *Implementation toolkit for accessible telehealth services*, which provides the necessary practical guidance and a stepwise approach to support Member States, industry, health service providers, and civil society in the implementation process of the Global standard for accessibility of telehealth services. The implementation of the accessibility features recommended here will be key to ensure equitable health-care delivery and health for all.

WHO and ITU call upon Member States, industry partners, health-service providers and civil society to join our efforts and play their part in promoting and implementing accessible and inclusive telehealth services.

The use of this toolkit will facilitate the implementation of the Global standard for accessibility of telehealth services and promote the responsible and inclusive use of technology to enhance health and well-being among its users.

Signed by



Dr Jérôme Salomon
Assistant Director-General, Universal
Health Coverage, Communicable
and Noncommunicable Diseases,
World Health Organization



Dr Cosmas Luckyson Zavazava
Director, Telecommunication Development
Bureau (BDT), International Telecommunication
Union

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Standard coordination and development

WHO Department of Noncommunicable Diseases, Rehabilitation and Disability:
Kaloyan Kamenov, Darryl Barrett, Alarcos Cieza.

ITU-T Question 28/16 “Multimedia Framework for e-Health Applications” team:
Masahito Kawamori, Keio University, Japan.

Guidance

WHO:

Jérôme Salomon, Assistant Director-General, Universal Health Coverage/Communicable and Noncommunicable Diseases; Bente Mikkelsen, Director, Department of Noncommunicable Diseases, Rehabilitation and Disability; Derrick Muneene, Unit Head, Digital Health and Innovation Department; Salim Azzabi Zouraq, Technical Officer, Digital Health and Innovation Department; Pascoal Bento, Technical Officer, Digital Health and Innovation Department.

ITU:

Simão Campos, Counsellor for ITU-T Study Group 16; Roxana Widmer-Iliescu, Senior Coordinator Digital Inclusion and ITU-D Focal Point for ICT accessibility; ITU-D Question 7/1 “Telecommunication/ICT accessibility to enable inclusive communication, especially for persons with disabilities”.

Further contributions

WHO: Mohammad Ameen, Department of Healthier Populations and Noncommunicable Diseases, South-East Asia Regional Office, Amani Siyam, Health Systems Development Department, South-East Asia Regional Office.

External contributors: Alessandra Aresu, Humanity & Inclusion, International Disability and Development Consortium; Andrea Pregel, Sightsavers, International Disability and Development Consortium; Sarah Collinson, Sightsavers; Jai Ganesh Udayasankaran, Sri Sathya Sai Central Trust, India; Brooke Winterburn, Humanity & Inclusion.

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Executive summary

This toolkit provides practical guidance to support governments, industry partners, health service providers and civil society groups in the use and implementation of the WHO-ITU F.780.2 Global standard for accessibility of telehealth services (1). The Global standard is the result of a collaboration between the World Health Organization (WHO) and the International Telecommunication Union (ITU) and was developed in response to the growing challenges that persons with disabilities and other marginalized populations experience when accessing and using telehealth platforms around the world. The aim of the toolkit is to facilitate stakeholders in adopting, implementing and monitoring the WHO-ITU Global standard for accessibility of telehealth services.

This toolkit provides a stepwise approach for implementation by four main stakeholders:

- ✓ governments
- ✓ industry
- ✓ health service providers
- ✓ civil society.

A section tailored to each actor outlines the steps necessary for effective implementation of the WHO-ITU Global standard. Supplementary tools are included to help with this, including a situation assessment tool and an outline of a stakeholder planning meeting for regulations on accessible telehealth services.



1. Background

1.1 Telehealth services

The World Health Organization (WHO) defines telehealth as the “delivery of health-care services, where patients and providers are separated by distance. Telehealth uses information communication technology for the exchange of information for the diagnosis and treatment of diseases and injuries, research and evaluation, and for the continuing education of health professionals” (2). By involving the use of information and communication technology (ICT), as well as digital technologies, telehealth has the capacity to overcome distance barriers in the delivery of health services, improve clinical management, and extend the coverage of services (3). As such, telehealth is a key enabler to achieving universal health coverage in countries by improving access to quality and cost-effective health services for all patients regardless of their setting. Although originally developed to provide basic care to rural and underserved patients, since the COVID-19 pandemic, higher rates of use of telehealth are now standard in many health-care practices (4). Increasing emphases on patient satisfaction, providing efficient and quality care, and minimizing costs have also led to greater telehealth implementation. In addition, the use of telehealth services reduces multiple inefficiencies such as unnecessary clinical visits and waiting times, and serves as an important mechanism for the uptake of self-care interventions.

Despite being a service for all populations, telehealth is particularly valuable for marginalized persons, such as persons with disabilities (see Box 1), older adults, Indigenous communities, or persons with low socioeconomic status who cannot afford to travel to health facilities, as well as those who live in remote areas without physical access to health services. These groups of people represent a significant proportion of the global population. For example, currently, approximately 1.3 billion people – about 16% of the global population – experience a significant disability (5); of these, 80% live in low- and middle-income countries. By 2050, the world’s population aged 60 years and older is projected to double, reaching 2.1 billion; the number of those aged 80 years or older is expected to triple, reaching 426 million. According to the United Nations, Indigenous peoples worldwide number 370 million, representing 15% of the world’s extreme poor and 33% of the rural poor (6). These figures show the enormous potential of telehealth services to reach billions of people around the world.

Box 1. Persons with disabilities

Persons with disabilities are a very diverse group of people; they include people experiencing a wide range of impairments, and can be of any age, gender identity, sexual orientation, race, religion, migratory status, or economic status. Different environmental barriers, such as inaccessible education, transportation, employment and health care, and the interaction of social determinants, may hinder persons with disabilities from participating fully and effectively in society on an equal basis with others. Regardless of the diversity of their impairments, the right of all persons with disabilities in accessing the highest attainable standard of health, is equal to any other person. This right is inherent and universal, and enshrined in international law through human rights treaties, and in domestic legal frameworks including national constitutions.

The United Nations Convention on the Rights of Persons with Disabilities (CRPD)^a is the core human rights treaty that fostered a new era reframing disability with respect to human rights and establishing the norm of participation of persons with disabilities in society on an equal basis with others. Article 25 of the CRPD states that countries shall take all appropriate measures to ensure access for persons with disabilities to the same range, quality and standard of affordable health care and programmes as provided to other persons, and as close as possible to a person's own community. Article 9 of the CRPD is also relevant in this context, requesting countries to take appropriate measures to ensure that persons with disabilities have access, on an equal basis with others, to information and communications, including information and communications technologies and systems.

^a See: <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-persons-disabilities>.

1.2 Rationale for regulatory measures and a dedicated standard for accessibility of telehealth services

Since the beginning of the COVID-19 pandemic, countries have demonstrated substantial acceptance and interest in implementing and scaling-up telehealth services. The American Hospital Association estimated that global telehealth investments reached a record US\$ 5 billion in mid 2021 – an increase of 169% from the same period during 2020 (7). In the United States of America, for example, a national study of 36 million working-age individuals showed that telehealth encounters increased 766% during the first 3 months of the pandemic (8); another US study revealed that approximately 20% of all US health-care visits in 2020 were conducted by telehealth (9).

In Latin America, the telehealth market, valued at more than US\$ 1.5 billion in 2019, is projected to grow at more than 20.5% annually between 2020 and 2026 (10).

Although governments are obligated to provide equitable telehealth services to every person, these services are very often not accessible, thus challenging the primary goal to expand and provide the means for health service provision for all people. Many persons with disabilities and other marginalized populations experience difficulties and challenges accessing and using telehealth services. There is significant evidence that, especially in low- and middle-income countries, persons with disabilities cannot benefit from telehealth services due to highly inaccessible formats of delivery (11). For example, telehealth platforms are frequently incompatible with assistive products such as screen readers that facilitate people with vision impairment to access information; or the lack of captioning or volume control in video conferencing impedes persons who are deaf or hard of hearing when interacting with health professionals virtually.

A major factor in inaccessibility at the level of provision of services is the lack of a universal design in telehealth platforms that aligns with ICT and digital accessibility. Accessibility is related to the concrete experience of using telehealth platforms (12). If telehealth platforms are inaccessible, persons with disabilities and other marginalized populations, including older persons and people with low literacy levels, are unable to use them. Building accessible digital systems that align to universal design principles ensures that the services provided can be used by everyone, regardless of ability, age or technical skills (see Box 2). For example, designing a telehealth platform that is usable by a person with limited strength in their hands could also facilitate use by someone who may be temporarily hindered by factors such as multitasking. Providing a manual on how to use a telehealth platform in easy-to-read language for persons with intellectual disabilities can also make the content accessible to young or non-native users. In addition, implementing accessibility features at the design phase of a product is more cost-effective than retrofitting them.

To ensure telehealth platforms are accessible for all, regulatory standards must be developed and adopted at a national level. Standards are vital in regulating and enabling the interoperability of digital health equipment and platforms manufactured by the telehealth industry around the world. Standards provide developers with a global market and bring benefits to users by, for example, ensuring that accessibility features are commonly applied across all products. The call to put in place a global standard that addresses barriers to the accessibility of telehealth services for all segments of the population, including persons with disabilities and other marginalized populations, was answered in 2022 by the WHO and ITU in their joint publication, the WHO-ITU [*Global standard for accessibility of telehealth services*](#) (13).

Box 2. The principles of universal design^a

Principle 1: Equitable use – the design is useful and marketable to people with diverse abilities.

Principle 2: Flexibility in use – the design accommodates a wide range of individual preferences and abilities.

Principle 3: Simple and intuitive use – the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current level of concentration.

Principle 4: Perceptible information – the design communicates the necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

Principle 5: Tolerance for error – the design minimizes hazards and the adverse consequences of accidental or unintended actions.

Principle 6: Low physical effort – the design can be used efficiently and comfortably and with minimum fatigue.

Principle 7: Size and space for approach and use – the appropriate size and space is provided for approach, reach, manipulation, and use, regardless of the user's body size, posture, or mobility.

^a Source: <https://universaldesign.ie/what-is-universal-design/the-7-principles/>.

1.3 WHO-ITU Global standard for accessibility of telehealth services

The WHO-ITU Global standard for accessibility of telehealth services is based on the best available evidence and is the result of a close and inclusive consultation process with civil society and the industry (13). The Global standard provides a comprehensive set of 25 technical requirements that telehealth platforms, regardless of the health service being provided, must include to ensure accessible telehealth service provision for persons with disabilities and other marginalized populations. All requirements are based on the best available evidence, as well as the comprehensive feedback and input collected from civil society and the industry. Specific requirements are provided for people with different types of impairments, including persons with vision impairment and blindness; deaf and hard-of-hearing persons; persons with speech difficulties; persons with mobility impairments; persons with mental health conditions and psychosocial disabilities; persons with developmental and intellectual disabilities;

and persons with learning disabilities. Although the standard focuses primarily on persons with disabilities, the requirements can equally benefit other marginalized populations, such as older persons, migrants, refugees, and Indigenous peoples, among others. In addition, enhancing the accessibility of telehealth services will also improve access for all health service users, which may include patients with situational, temporary or permanent health conditions or impairments.

1.4 Technical requirements included in the WHO-ITU Global standard for accessibility of telehealth services

1. Requirements for persons with vision impairment and blindness

Requirement 1 – The functioning of the telehealth platform should be compatible with assistive devices like screen readers or Braille keyboards.

Requirement 2 – Colour contrast and screen magnification shall be available to allow people to view images and text on the screen during virtual visits.

Requirement 3 – Services using telephone calls shall be accessible for a person with vision impairment who cannot access the digital platform.

Requirement 4 – “Telehealth apps” should avoid processes that require downloading specific software onto devices, specific platforms, different passwords and variable software development or support when possible.

Requirement 5 – Videos included on telehealth platforms should not include background music as it makes it difficult to listen to relevant information.

Requirement 6 – Ambiguous wording and inaccurate descriptions in videos should be avoided.

2. Requirements for deaf and hard-of-hearing persons

Requirement 7 – Video conferencing shall provide captioning and a monitored chat box that has volume control provisions along separate windows.

Requirement 8 – Text messaging shall be included as a service to be used when the video or audio are not working well along with a chat box. Text messaging shall be set up to allow text communication to and from patients.

Requirement 9 – Remote sign language interpretation or a video remote interpretation (VRI) system should be implemented and made available.

Requirement 10 – Videos on telehealth platforms should include clear subtitles (easy to read and large font size) and avoid background music as it makes it difficult to listen to relevant information.

Requirement 11 – The screen used for telehealth should be large enough for lipreading.

3. Requirements for persons with speech difficulties

Requirement 12 – Platforms should include voice synthesizers and/or text-to-speech generators which can translate what people with speech impairment say.

4. Requirements for persons with mobility impairments

Requirement 13 – The control of virtual visit applications should not be too restrictive in size, so that users with physical challenges will not have difficulty using the fine motor movements required to operate the platform.

Requirement 14 – The telehealth platform shall not explicitly require fine motor coordination e.g. double clicking which is difficult instead of single clicking.

Requirement 15 – The telehealth platform should avoid scrolling or using menu options to access information as much as possible.

5. Requirements for persons with mental health conditions and psychosocial disabilities

Requirement 16 – The telehealth platforms should avoid unexpected, irrelevant, and inappropriate content that can be upsetting and trigger negative feelings and reactions.

Requirement 17 – The telehealth platform shall explain the measures implemented to ensure that usage and data remain safe, private, and secure in effort to avoid negative thinking regarding the possibility of related undesirable consequences.

Requirement 18 – The telehealth platform should avoid using complicated user interfaces and language that are difficult to understand and providing inadequate guidance on how to complete tasks.

Requirement 19 – The telehealth platform should avoid unnecessarily effortful tasks and allowing malfunctioning features to persist.

Requirement 20 – The telehealth platform should avoid presenting low-quality information as this contributes to distrust.

6. Requirements for persons with developmental and intellectual disabilities

Requirement 21 – Key documents and information provided by health-care provider should be provided in accessible formats, such as in easy-read formats.

Requirement 22 – The telehealth platforms shall allow for more than two people to participate in a meeting, e.g. people who provide personal support to persons with developmental and intellectual disabilities should be able to attend their meetings with health-care providers.

Requirement 23 – Simple educational material on how to use telehealth services should be made available on the telehealth platform

7. Requirements for persons with learning disabilities

Requirement 24 – The layout of the text, instructions, documents and worksheets on the telehealth platform should be easily accessible for persons with dyslexia and other learning disabilities.

Requirement 25 – The text content should be made readable and understandable, and users need to be provided sufficient time to read and use content.

1.5 Objectives and target audience of the implementation toolkit

This toolkit aims to provide a practical guide to the adoption and implementation of the WHO-ITU Global standard for accessibility of telehealth services (13), which should be used as the basis for regulations, legislation and policies by all WHO Member States, or adopted voluntarily by manufacturers to ensure accessible use of telehealth services for all populations. The toolkit is designed to support countries, manufacturers of telehealth platforms, and health-service providers in a strategic, evidence-based and user-friendly way. In addition, it provides guidance to civil society, including organizations of persons with disabilities, in their unique and fundamental role in advocating and raising awareness on the importance of implementing the standard.

The toolkit includes sections that address four specific groups of stakeholders whose action is essential to ensure adoption of the WHO-ITU Global standard on accessibility of telehealth services. The groups of stakeholders include:

- ✓ governments, specifically governmental ministries and departments working in the field of health, technology and telecommunication, industry, and any other department related to disability, ageing or accessibility issues;
- ✓ public and private health service providers;
- ✓ industry, specifically manufacturers of telehealth platforms; and
- ✓ civil society organizations, including organizations that provide health services, as well as those that represent the rights of marginalized populations, such as persons with disabilities, older persons, migrants and refugees.

Each section provides the rationale for stakeholders to take action, as well as a list of possible approaches and concrete activities that can support the promotion and implementation of the Global standard.

The processes, steps and tools are provided for guidance and can be adapted, translated or tailored by each stakeholder group to suit the needs of individual countries and manufacturers.

1.6 Methodology and development process

For the development of this toolkit, WHO and ITU adopted a stepwise approach which included internal consultations, a review of the literature, and external consultations with a range of stakeholders who contributed to the design of the tool and provided inputs to the content. First, to initiate the process of development and shape the strategic directions of the document, internal consultations were held with WHO regional advisors who oversee country agendas on disability and digital health. As a next step, a scoping review of the literature was undertaken to explore existing good practices for the implementation of accessible and inclusive digital and telehealth strategies in countries. The scoping review looked closely at the mechanisms adopted by implementers of accessible telehealth services to ensure an equitable provision of services; examples included governance mechanisms such as processes of engaging organizations of persons with disabilities in the design and implementation stages, or advocacy initiatives organized by civil society. Finally, WHO and ITU engaged closely with civil society including persons with disabilities and their representative organizations, as well as the industry. Feedback was requested on the draft content, specifically inputs on the proposed steps to be followed by civil society and the manufacturers of telehealth platforms when implementing the Global standard. No conflict of interests was reported by external contributors.

2. Implementation by governments



This section provides guidance to governments, policy-makers and decision-makers to support the implementation of the Global standard on accessibility of telehealth services. Included are:

- ✓ public officials responsible for drafting and formulating legislation, policies and strategies; advising ministries; officials who set country national priority agendas in the field of health, education, information and communication technology, e-government services, within the ministries of health, telecommunications and informatics, social welfare and social protection, or other relevant ministries; and experts from regulatory or standardization bodies;
- ✓ officials within the Ministry of Health or other relevant ministries who are responsible for marginalized populations, such as persons with disabilities; and
- ✓ officials in charge of accessibility issues within governmental departments.

2.1 Rationale

Regardless of the diverse nature of marginalized persons, their right to the highest attainable standard of health is equal to any other person. It is a state obligation to address existing barriers that impede certain population groups to enjoy their inherent right to health. Although this obligation is created through international human rights treaties which are binding on the governments of States Parties, governments may also be bound under domestic policies and legislation.

For example, this governmental obligation was reaffirmed in 2007 in the United Nations Convention on the Rights of Persons with Disabilities (14), which recognizes that persons with disabilities have the right to the enjoyment of the highest attainable standard of health without discrimination on the basis of disability. States Parties to the Convention must provide persons with disabilities the same range, quality, and standard of affordable health care, including telehealth, as that provided to other persons.

In addition, several resolutions adopted by WHO and ITU Member States request that governments ensure accessibility of ICT to achieve equitable participation of persons with disabilities and other marginalized populations, given that ICTs have become a fundamental medium for communications, information, and health care worldwide (15–18). The implementation of these resolutions by legislators and

policy-makers in all countries is essential to ensure that every person's right to communicate in the digital health world is respected.

Providing equitable access to telehealth to persons with disabilities and to other marginalized population groups is also essential to countries' agendas to achieve national and global health priorities, such as the 2030 Sustainable Development Goal 3 (SDG3)¹ and universal health coverage. To achieve SDG3, countries must ensure healthy lives and promote well-being for all at all ages, leaving no one behind. Similarly, the United Nations political declaration on universal health coverage² commits countries to ensuring that all people can access the essential health services they need without financial hardship. This includes provision of equitable and accessible health services via digital means, such as telehealth.

For persons with disabilities, as well as other marginalized groups such as older persons, women and girls, or those living in displacement or resource-limited settings, digital technologies, including telehealth, have provided long-awaited opportunities to receive health care comfortably in their homes. However, the lack of accessibility to these platforms and technologies often remains a barrier when addressing equitable access to advancements in digital health. Digital applications and software can be universally designed and accessible to everyone through the adoption of international standards, such as the WHO-ITU Global standard on accessibility of telehealth services, which includes a set of requirements that governments, health-care providers and manufacturers of telehealth platforms can incorporate to ensure the provision of accessible, equitable and safe health-care services to persons with disabilities.

As 1 in 6 people globally is a person with a significant disability, ensuring accessible delivery of health services is fundamental for advancing universal health coverage and achieving SDG3. In addition, it has been demonstrated that investing in disability-inclusive health services brings substantial return (5). For example, for every US\$ 1 invested in accessible delivery of interventions for noncommunicable diseases, the anticipated return could be US\$ 10. This suggests that even when accounting for the additional costs of making services accessible to address barriers for those with disabilities, the return is still far more than the initial investment.

2.2 What actions can governments take?

The following actions are recommended to advance implementation of the WHO-ITU Global standard on accessibility of telehealth services:

1. *Integration in legislation:* The WHO-ITU Global standard should be integrated in laws and regulations related to the provision of telehealth services or to the manufacturing of telehealth and other digital health platforms.

¹ See: <https://www.un.org/sustainabledevelopment/health/>

² See: <https://www.un.org/pga/73/wp-content/uploads/sites/53/2019/07/FINAL-draft-UHC-Political-Declaration.pdf>.

2. *Enforcement through government regulation and policies*: The relevant government department (e.g. for health, telecommunications, technology) should define a mechanism enforcing policies and regulations on digital or telehealth service provision to comply with the WHO-ITU Global standard and to reach persons with disabilities.
3. *Procurement policies*: Government departments that regularly procure telehealth platforms or services on a large scale (through tenders and public procurement) should ensure that all procurements align with the WHO-ITU Global standard.
4. *Public awareness campaigns*: Undertaking such campaigns can raise awareness on:
 - the importance of disability inclusion and achieving health for all; and
 - accessibility as a means to advance health service provision and universal health coverage.

2.3 Engaging partners

All relevant stakeholders should be meaningfully involved, through planning, implementation and monitoring of the four actions highlighted in the previous section. Stakeholders include:

- ✓ different government departments such as health, telecommunications/information and communication, technologies, and education;
- ✓ industry manufacturers/the private sector;
- ✓ health-service providers;
- ✓ civil society groups, including persons with disabilities and their representative organizations, and organizations providing services;
- ✓ donors/development partners; and
- ✓ others relevant to the context of the country.

It is fundamental that different groups of persons with disabilities are directly involved in the development process and research into adaptive technology, so that the technology is made more effective and accessible to everyone. Examples of good practices include the digital transformation strategies of Sweden and Australia which state that marginalized groups must be included and integral to the processes of policy drafting and design. Likewise in Canada, where agencies providing funding for a digital health project are required to include persons with disabilities at every stage of the service implementation process (19–21). Evidence confirms that participatory design approaches foster access to digital health solutions for persons with disabilities and increases utilization of services (22).

2.4 Proposed steps

A stepwise approach is recommended for the integration of the WHO-ITU Global standard into relevant legislation and regulations.

Step 1: Assessment and policy development

Conduct a situation assessment: The initiating department should carry out a situation assessment in order to understand:

- ✓ availability and coverage of telehealth services;
- ✓ existing legislation, regulation and policies related to ICT accessibility of the digital health services and telehealth applications;
- ✓ existing accessibility features which are used in the telehealth platforms, at national or regional level;
- ✓ needs and priorities of persons with disabilities and other marginalized population groups, related to the use of telehealth services; and
- ✓ principal stakeholders, including government departments, civil society groups, and manufacturers.

Laws or policies regarding accessibility of digital health services may already exist in some countries. It is important, therefore, that the situation assessment maps the WHO-ITU Global standard to these policies.

A format for conducting a situation assessment is provided in Annex 1.

Organize a planning consultation: Following the situation assessment, the initiating department/ministry should organize a public consultation to plan for the adaptation of existing legislation, or for development of a new law or policy on implementation of the WHO-ITU Global standard, and to get buy-in from all relevant stakeholders. This public consultation should involve all key stakeholders identified in Step 1 – i.e. government departments, industry and civil society organizations, including organizations of persons with disabilities and other marginalized population groups. During the public consultation, which can also serve as an awareness-raising event, results of the situation assessment should be presented, the WHO-ITU Global standard outlined, and further steps for its implementation proposed. A working group should be convened by representatives from the Ministry of Health or other relevant governmental sectors such as the Ministry of Telecommunications/ICTs, and should include members of industry and civil society to work on the adoption of the Global standard.

An outline of a stakeholders' consultation is provided in Annex 2.

Adoption of the Global standard by adapting existing legislation, or developing a new law or policy on accessible telehealth services: Several activities should be considered under this step:

- ✓ The initiating department, or a working group, should provide input to those drafting the legislation or policy for discussion with the relevant ministerial/ governmental departments. This should then be shared with stakeholders to receive their feedback, which should be addressed prior to finalization and approval of the policy document.
- ✓ Throughout preparation of the legislation or policy, government bodies need to ensure the meaningful engagement of persons with disabilities in all planning and decision-making processes. Meetings need to be organized in a way that is accessible, both physically (e.g. in terms of access to rooms and equipment), and with resources (e.g. formats to be in Easy Read, Braille, etc.), as well as having equal representation of persons with disabilities and other marginalized populations in terms of diversity, gender balance, etc.
- ✓ From the planning and design stages, it is important to make sure that enforcement mechanisms and monitoring are referenced and considered. Key questions to be addressed include what mechanism will be established; which government departments will be responsible for enforcement and monitoring; and what is the planned budget allocation.
- ✓ In addition, procurement policies should also be assessed and amended so that government departments that regularly procure telehealth platforms or services on a substantial scale (through tenders and public procurement) can ensure that all procurements align with the WHO-ITU Global standard.

Step 2: Dissemination strategy and launch

Dissemination strategy among persons with disabilities as users of telehealth services: Along with the adoption of the Global standard, the initiating department should outline a strategy for raising awareness on the accessibility of telehealth services, and inform users about the new accessibility features proposed in the legislation and policies. This should be done in consultation with relevant health professionals and communication experts and be coordinated with any awareness-raising activities that aim to gather information and inform the development of the policy or legislation.

Organize a sensitization workshop with industry: Once the policy or legislation is finalized, a sensitization workshop/information session should be held by the initiating department in collaboration with other involved departments. The purpose of the workshop is to inform manufacturers and health service providers of the rationale and intent of the legislation and regulations and how these should be complied with. Training for community health workers to share information about available telehealth services can also be organized.

Undertake media outreach: A launching event can be organized to present the new standards. This should be accompanied by a media campaign through all channels relevant in the context of the country and the target group – for example, social media activities, print media, digital media, etc. To maximize the advocacy effort,

governments can launch the adoption of the standards on the International Day of Persons with Disabilities.

Step 3: Implementation and monitoring

Monitor policy implementation: Implementation of the legislation should be monitored by the government and enforced through established governmental regulation and policy mechanisms. The relevant government department (e.g. for health, telecommunications, technology) should define a mechanism to enforce policies or regulations on digital or telehealth service provision to comply with the WHO-ITU Global standard and reach persons with disabilities. This applies to all new telehealth platforms being developed; existing platforms should be adapted in accordance with the newly adopted standards for accessibility. Governments could also create a reporting system whereby the public can flag any inaccessible telehealth services they encounter.

Undertake evaluation and revision: The policy, regulation or legislation and its implementation should be evaluated at regular pre-designated intervals (e.g. every two years). This evaluation should further be discussed with the stakeholders and, depending on the feedback received, revisions made.

2.5 Additional actions

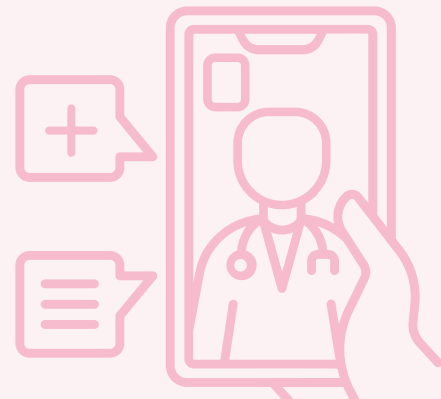
It is important that the adoption of the WHO-ITU Global standard is not an isolated effort by the government, but rather part of a larger strategy to advance health equity in the digital environment for persons with disabilities and other marginalized population groups. For example, although accessibility of telehealth services is fundamental, certain factors, such as affordability of the services, or even Internet connectivity, are essential prerequisites for the utilization of digital services. The WHO *Global report on health equity for persons with disabilities* (5) outlines 40 disability-targeted actions across 10 strategic areas within the health sector, which can be adopted to ensure health equity for persons with disabilities. Such actions can be integrated into areas such as health governance and financing, physical infrastructure, models of care, quality of health services, or health systems and policy research. Furthermore, governments and regulators should create environments that are friendly and conducive to the use of telehealth, and policies that enable health professionals to use and apply telehealth services in their workplace (23).

2.6 Tools

The following tools are available to guide governments in the application of the WHO-ITU Global standard:

- ✓ Situation assessment/analysis tool (Annex 1)
- ✓ Format for stakeholders' consultation (Annex 2)

3. Implementation by industry partners



This section is intended as guidance for manufacturers of telehealth platforms and products.

3.1 Rationale

Improving the outreach and coverage of different products is a good business investment for an industry that relies considerably on its clients' usage of services. At present, the increasing use of technology is an essential part of delivery of health services to the population. The limited accessibility of such technology, however, is putting at risk the health of millions of persons with disabilities and other marginalized populations across the world. With the growing penetration of technology, this challenge too is likely to grow, unless concrete steps are taken.

Hence, as part of equitable delivery of health services, and in line with principles of responsible business, manufacturers of telehealth platforms must share the responsibility of promoting accessible telehealth delivery and to address any potential barriers that hinder the use of their products. This can be achieved by proper implementation of the WHO-ITU Global standard.

3.2 What actions can manufacturers take?

As accessible telehealth policies are gradually developed at national level, manufacturers will be required to comply with them. However, by voluntarily implementing the WHO-ITU Global standard, and ensuring that their telehealth platforms and products comply with the requirements, manufacturers will have an opportunity to gain a competitive edge, expand their customer base, position themselves at the forefront of innovation for social good, and lead the field in accessible telehealth services.

The journey towards accessible telehealth platforms and products is as important as the achieving the goal. And it is of utmost importance that the end users – the persons with disabilities and other marginalized populations – are meaningfully involved in the processes of designing, developing and testing new products.

3.3 Engaging partners

All stakeholders in the field should be involved, including:

- ✓ government: when applying for any government contracts, the manufacturers can highlight the accessibility features available in their platforms;
- ✓ other telehealth manufacturers that have implemented the WHO-ITU Global standard;
- ✓ health service providers who use platforms for delivering telehealth;
- ✓ donors and investors; and
- ✓ civil society, especially persons with disabilities and their representative organizations;

3.4 Proposed steps

Step 1: Preparatory work

Download and understand the WHO-ITU Global standard for accessibility of telehealth services (13) (available at <https://apps.who.int/iris/handle/10665/356160>): Staff working on accessibility, as well as web developers in the company, should read the full WHO-ITU Global standard and applicable references, and understand the implications.

Carry out an internal assessment: Manufacturers should assess the current situation relating to accessibility features in the platforms, and the products they manufacture in different parts of the world. As part of this assessment process, manufacturers are particularly encouraged to identify good practice (e.g. some countries may have existing accessibility regulations and the telehealth platforms may already comply with them), as well as key features of their platforms and products which are currently not compliant with the WHO-ITU Global standard.

Step 2: Participatory planning

Carry out a participatory design process: Plan and carry out a participatory process through the meaningful engagement of different stakeholders, including persons with disabilities and their representative organizations. This process may include a variety of approaches, such as consultations with different client groups, review of relevant resources, and a validation workshop to review the internal assessment. During this step, the method of including the proposed accessibility features in telehealth platforms and creation of an implementation plan should be discussed. Many of the features in the WHO-ITU Global standard refer to the Web Content Accessibility Guidelines;³ staff working on accessibility or web developers may already be familiar

³ See: <https://www.w3.org/WAI/standards-guidelines/wcag/>.

with these. Provisions must be put in place to ensure reasonable accommodations and meaningful engagement of persons with different impairments.

Draft a costed implementation plan: Draft a costed implementation plan to address gaps and challenges identified through the previous steps, ensuring the meaningful engagement of different stakeholders. As part of this phase, manufacturers will need to consider investment required in the short, medium and long term to adapt existing platforms and products and incorporate accessibility in the design of future activities.

Step 3: Implementation and testing of accessibility features

Implement the 25 requirements of the WHO-ITU Global standard for accessibility of telehealth services (13): The WHO-ITU Global standard outlines 25 key requirements which need to be implemented on every telehealth platform (see section 1.4). Ideally, all manufacturers should adopt all 25 requirements. However, depending on resources, priority should be given to features that can be integrated within a shorter time frame; the adoption of those remaining can be planned for future updates of the platforms.

Involve persons with disabilities and their representative organizations: It is fundamental that persons with disabilities are involved in all parts of the process to share their perspectives and to test whether the platform is indeed accessible.

Check that your platform conforms to the WHO-ITU Global standard: Once the telehealth requirements are implemented in your company's products, they should be tested for compliance using a pre-established conformance assessment plan. ITU will publish such a plan in late 2024.

Step 4: Awareness-raising, promotion and publicizing

Raise awareness and promote the availability of the accessibility features of your telehealth platforms: Wherever possible, raise awareness on the accessibility features. This can help persons with disabilities better use the platforms and will highlight the company's responsible attitude towards its consumers. Publicizing can target the general public or potential buyers (e.g. private and public health sector providers).

Step 5: Reviewing and revision

Undertake revisions and improvements: The accessibility features of telehealth platforms should be revised periodically based on user feedback.

Keep up to date with the latest version of the WHO-ITU Global standard: Manufacturers should revise the accessibility features of their platforms as and when the WHO-ITU Global standard is revised.

4. Implementation by health service providers



This section is intended as guidance for health professionals or any health facility staff who either provide services, or are in charge of setting up a telehealth environment to provide health services to patients.

4.1 Rationale

Health and care professionals bear the responsibility of ensuring that all people who seek medical attention have access to and receive health care. They can then provide telehealth services through remote interactions with their patients. Many health institutions have now established a telehealth infrastructure and offer their patients remote telehealth sessions. Thus, as part of the equitable delivery of health services, and in line with ethical principles of health care, health professionals must ensure telehealth services delivery in accessible formats and address any potential barriers that may hinder the use of their telehealth-related platforms and services.

This can be achieved by proper implementation of the WHO-ITU Global standard.

4.2 What actions can health service providers take?

Several actions can be taken by public and private health service providers to ensure delivery of telehealth services in an accessible format:

- ✓ Purchase or require from vendors telehealth platforms that comply with the WHO-ITU Global standard.
- ✓ Ensure that their own platforms, the information they share, and the services they provide, are accessible and inclusive. A provider may purchase a license with a telehealth platform that is accessible; however, unless the website of the provider is accessible – along with the information they share (colour contrast, size, mentioning of accessibility features, positive representation of people with disabilities, etc.) – the telehealth platform alone will not be sufficient in providing the services required.
- ✓ Consult with patients about their technological needs and the related barriers experienced when using the telehealth platform and make sure that these needs are addressed. This may also involve allocating a budget to test existing platforms and make necessary changes through participatory approaches.

4.3 Engaging partners

All stakeholders in the field should be involved, including:

- ✓ government: service providers can require government to regulate the sector and ensure that manufacturers adopt the Global standard;
- ✓ manufacturers of telehealth platforms; and
- ✓ civil society, especially persons with disabilities and their representative organizations.

4.4 Proposed steps

Step 1: Preparatory work

Download and understand the WHO-ITU Global standard for accessibility of telehealth services (13) (available at: <https://apps.who.int/iris/handle/10665/356160>): Health professionals who interact with patients, and staff working on accessibility (e.g. IT staff) in the facility should read the full WHO-ITU Global standard and understand the implications. This is important to health professionals in that the Global standard serves as a source of information on the different requirements of persons with disabilities which must be considered when interacting with their patients.

Carry out an assessment of existing telehealth services: Staff responsible for telehealth services (e.g. IT staff) working in health facilities should assess the level of accessibility of the telehealth platforms their institutions use. As part of this process, service providers should aim to engage as many persons with disabilities and other marginalized populations as possible, through a meaningful and participatory approach, to gather insights from their experiences as end-users of telehealth services. If the health facility does not have the capacity or knowledge to undertake such an assessment, an external provider should be contracted to conduct this, or the manufacturer of the telehealth platform contacted to provide this information.

Step 2: Participatory planning

Carry out a participatory process to address issues identified: Plan and carry out a participatory process through the meaningful engagement of different stakeholders, including persons with disabilities and their representative organizations. During this step, health professionals, IT staff and other relevant staff members can hold discussions regarding the method of including the proposed accessibility features in telehealth platforms and create an implementation plan. This process may include a variety of approaches, such as consultations with different client groups, a review of relevant resources, and a validation workshop to review the internal assessment. Provisions must be put in place to ensure reasonable accommodations and meaningful engagement of persons with different impairments.

Draft a costed implementation plan: Draft a costed implementation plan to address gaps and challenges identified through the previous steps, ensuring the meaningful engagement of different stakeholders. As part of this phase, service providers will need to consider the investment required in the short, medium and long term to adapt existing platforms and products, purchase new tools, and incorporate accessibility into the design of future activities.

Step 3: Implementation of accessibility features

Purchase telehealth platforms that already comply with the WHO-ITU Global standard, or implement requirements to platforms currently in use: Health facilities can either purchase telehealth platforms that are already compliant with the WHO-ITU Global standard or implement the features that can feasibly be integrated. For example, redesigning the platform to include captioning for people who are deaf or hard of hearing may be difficult to implement at the facility, but other features such as providing health information in accessible formats should be possible.

Involve persons with disabilities and their representative organizations: It is fundamental that persons with disabilities are involved in all processes; they can share their perspectives and test whether the telehealth platform is indeed accessible. Health professionals can obtain this information through interactions with their patients.

Step 4: Awareness-raising, promotion and publicizing among users

Raise awareness and promote the accessibility features of your telehealth platforms: It is important that health professionals inform their patients about the accessibility features that can help persons with disabilities better use the platforms. This will also highlight the health facility/institution's responsible attitude towards its patients.

4.5 Additional actions

Along with increasing their knowledge and taking actions for advancing accessibility of telehealth services, health professionals need greater sensitization on disability inclusion. It is essential that health-care providers have the adequate knowledge, skills, and behaviours on disability and the rights of persons with disabilities, to be able to communicate with their patients directly and understand their diverse needs. In addition, this will help health and care workers understand the wide range of contributing factors that present challenges for persons with disabilities and their families when accessing health-care services and following advice. Training in disability inclusion can be integrated into the training activities of health and care workers already practicing, or be conducted as a separate activity. Wherever possible, persons with disabilities or their representative organizations should be directly involved in the conduct of the training, or even deliver it themselves.

5. The role of civil society



This section is intended as guidance for civil society organizations and groups either providing health services or representing persons with disabilities.

5.1 Rationale

Currently, 1.3 billion people globally have significant disability. Many of them experience a range of challenges and barriers in accessing health services through telehealth platforms. As digital health applications become widely used in countries and are expected to play a substantial part in the delivery of health services in the future, it is fundamental that every person has access to them. Civil society partners should therefore advocate with policy-makers for the implementation of the WHO-ITU Global standard as a means to ensure equitable access to health services for persons with disabilities.

5.2 What actions can civil society organizations take?

Civil society organizations should undertake the following actions:

- ✓ Advocacy work to persuade governments to develop regulations to implement the WHO-ITU Global standard.
- ✓ Awareness campaigns to sensitize people regarding disability inclusion and the importance of accessible telehealth.
- ✓ Sensitization of manufacturers of telehealth platforms to motivate them to voluntarily implement the WHO-ITU Global standard in the platforms they sell.

5.3 Engaging partners

All stakeholders in the field should be involved, including:

- ✓ other organizations working with disability;
- ✓ departments of health, telecommunications and technology in the government;
- ✓ the media; and
- ✓ corporate social responsibility departments of manufacturing organizations.

5.4 Proposed steps

Step 1: Plan

- ✓ Identify and brainstorm actions with other stakeholders.
- ✓ Determine the target audience civil society will address e.g. policy-makers, manufacturers, the community at large.
- ✓ Identify the key messages to be conveyed to the audiences, and the intended impact (e.g. policy development by government; implementation of accessibility features by manufacturers, etc.).
- ✓ Establish the most effective strategy for conveying messages (e.g. via meetings, media events, awareness sessions etc.).

Step 2: Advocate with the target group identified through available means

The means for advocacy could include:

- ✓ media outreach
- ✓ social media
- ✓ websites
- ✓ webcasts
- ✓ workshops on accessibility
- ✓ public events
- ✓ formal channels already established with governments.

Step 3: Follow up with the target group, monitor outcomes and impact

This step involves following up with the target group, and monitoring the outcomes and impact of implementing the Global standards in terms of:

- ✓ policies established or actions initiated by governments;
- ✓ implementation of accessibility features by manufacturers;
- ✓ implementation of accessibility features in health facilities/centres; and
- ✓ involvement of persons with disabilities and their representative organizations in the implementation of the WHO-ITU Global standard.

5.5 Additional actions

Alongside advocating for the adoption of the WHO-ITU Global standard, civil society partners can also advocate for a larger prioritization of disability in the health sector. Disability inclusion in digital health is only one strategic area for advancing health equity for persons with disabilities. Advocating for change at a system level by integrating disability in areas such as governance, financing, models of care, physical

infrastructure or data collection is essential for ensuring that persons with disabilities enjoy the highest attainable standard of care, on an equal basis with others. In 2022, WHO published the *Global report on health equity for persons with disabilities (5)*, which includes a list of disability-targeted actions that governments and health sector partners can implement to advance disability inclusion in the health sector. Civil society can use the report to advocate to governments to implement these actions.

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Annex 1. Situation assessment tool

This situation assessment tool can help governmental departments and ministries to gather relevant information, and promote and regulate accessible telehealth delivery in their country under the WHO-ITU Global standard for accessibility of telehealth services. Technical assistance in conducting a situation assessment or using the results is available from WHO and ITU by contacting disability@who.int.

[Country name]

Section A. General country information	
Name of the area (state, region, province, district) (if relevant) for which this situation assessment is being conducted	
Population number	
Languages used in the country	
Prevalence of disability in the country (Male/Female) and data source	
What is the % of population/area reached by internet services?	
What is the % of users of mobile devices and computers?	
Is there a national telehealth platform used in health services?	
If there is no common platform used, what are the names of telehealth platform brands used for health service provision?	
Section B. Leadership and governance	
Lead agency profile	
Is there a government agency or department that takes responsibility for overseeing and/or coordinating disability inclusion activities/plans (i.e. a lead agency) in your country?	<input type="checkbox"/> Yes, (please name the agency) <input type="checkbox"/> No (please skip to Section B) <input type="checkbox"/> Don't know (please skip to Section B)
Where is this agency located within the government structure (please tick one)?	The agency is a single government ministry/department, or the agency is situated within a government ministry/department (please specify ministry and department, if relevant) <input type="checkbox"/> Stand-alone entity <input type="checkbox"/> Other (please specify) <input type="checkbox"/> Don't know

<p>For which of the following functions is the lead agency responsible? (please tick all that apply)</p>	<p>Coordination</p> <p><input type="checkbox"/> Coordination of intergovernmental working processes, e.g. between ministries of health and telecommunications</p> <p><input type="checkbox"/> Coordination of disability decision-making across central government</p> <p><input type="checkbox"/> Coordination across different levels of government (e.g. central, regional, local)</p> <p>Legislation</p> <p><input type="checkbox"/> Periodic review of legislation, rules and standards against best practice, and recommendations for improvement</p> <p><input type="checkbox"/> Development and/or revision of legislation</p> <p>Monitoring and Evaluation</p> <p><input type="checkbox"/> Establishing and supporting monitoring processes on accessibility of telehealth services</p> <p>Others (Please, specify)</p>
<p>In the government budget, is there funding allocated for the lead agency to carry out the functions listed above?</p>	<p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p>
<p>Section C. Strategy and targets</p>	
<p>Is there a national strategy for disability in your country?</p>	<p><input type="checkbox"/> Yes (please submit relevant source documents)</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p>
<p>Is health equity for persons with disabilities included in the national health strategy of your country?</p>	<p><input type="checkbox"/> Yes (please submit relevant source documents)</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p>
<p>If yes, do any of the strategies include considerations for accessibility of telehealth or digital services?</p>	<p><input type="checkbox"/> Yes (please submit relevant source documents)</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p>
<p>Is there a regulation regarding accessibility features in telehealth platforms?</p>	<p><input type="checkbox"/> Yes (please submit relevant source documents)</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p>
<p>If a regulation exists regarding accessibility features in telehealth platforms, does it include gender considerations?</p>	<p><input type="checkbox"/> Yes (please submit relevant source documents)</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p>
<p>Are funds available to implement part or all of any existing strategies?</p>	<p><input type="checkbox"/> Yes, fully funded</p> <p><input type="checkbox"/> Partially funded</p> <p><input type="checkbox"/> Not funded</p> <p><input type="checkbox"/> Don't know</p>

If a national strategy exists, does it set any monitoring indicators to assess implementation?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know		
Section D. Stakeholder analysis			
Please mention all potential and existing stakeholders in your country that are or could be involved in telehealth services. Identify the lead or responsible position or person, where possible, and give contact details.			
Stakeholder profile			
1. Government departments			
Name of department	Lead/contact person		
	Name	Designation	Contact details
1			
2			
3			
4			
5			
2. Health professionals and associations of health professionals			
Name of health centre/institute or association	Lead/contact person		
	Name	Designation	Contact details
1			
2			
3			
4			
5			
3. Civil society groups, including organizations of persons with disabilities and relevant professional associations (e.g. association of sign language interpreters)			
Name of organization	Lead/contact person		
	Name	Designation	Contact details
1			
2			
3			
4			
5			

4. Industry partners			
Name of company	Lead/contact person		
	Name	Designation	Contact details
1			
2			
3			
4			
5			

5. Any others (can include any other groups that are interested in disability, accessibility or telehealth)			
Name of person/organization	Lead/contact person		
	Name	Designation	Contact details
1			
2			
3			
4			
5			

Annex 2. Outline of a stakeholder planning meeting

The following groups should be invited to the stakeholder planning meeting for the consultation of regulations on accessible telehealth services:

- Relevant government departments: health, technology, telecommunications, commerce and industry
- Civil society groups including service providers and organizations of persons with disabilities, and relevant professional associations (e.g. association of sign language interpreters)
- Health professionals and associations of health professionals
- Manufacturers of telehealth platforms and products
- WHO and ITU representatives.

Objectives:

By the end of the meeting, participants will have:

- gained knowledge about the WHO-ITU Global standard for accessibility of telehealth services, and the country's intention to implement it;
- identified roles and responsibilities of each stakeholder to support the implementation of the WHO-ITU Global standard in the country;
- identified the way forward and timelines regarding adoption of the Global standard and its implementation; and
- discussed a potential awareness campaign.

The following meeting outline is suggested:

- Introductions
- Need for accessible telehealth services
- Current status in the country regarding regulations on accessibility of telehealth services and digital health in general
- The WHO-ITU Global standard for accessibility of telehealth services
- Perspectives required to implement telehealth accessibility strategies and regulations:
 - Government (technology, health, any other)
 - Users (a representative to present user view)
 - Industry (umbrella organization or a company with leadership in this field to speak on behalf of industry)

-
- Health professionals (one member from a professional organization to speak)
 - Civil society (one speaker from a relevant civil society group to speak)
 - Possibilities regarding adoption, implementation and monitoring of the Global standard in the country (including timelines): discussion
 - Need for raising awareness
 - Determining the next steps for:
 - developing a regulation/legislation;
 - developing an awareness campaign

Annex 3. Useful resources

United Nations Convention on the Rights of Persons with Disabilities

<https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-persons-disabilities>

WHO Global report on health equity for persons with disabilities

<https://iris.who.int/handle/10665/364834>

WHO-ITU Global standard for accessibility of telehealth services

<https://iris.who.int/handle/10665/356160>

ITU-T F.780.2. Accessibility of telehealth services

<https://www.itu.int/rec/T-REC-F.780.2/en>

ITU ICT/Digital accessibility

<https://www.itu.int/en/ITU-D/Digital-Inclusion/Pages/ICT-digital-accessibility/default.aspx>

ITU toolkit “Towards building inclusive digital communities” 2023 and complementary self-assessment tools

<https://www.itu.int/en/ITU-D/Digital-Inclusion/Pages/ICT-digital-accessibility/toolkits/towards-building-inclusive-digital-communities/2023/default.aspx>

World Health Organization
20 Avenue Appia
1211 Geneva 27
Switzerland
Website: <https://www.who.int/health-topics/disability>
E-mail: disability@who.int

