

Guidelines to Make Surveys on Individuals and Households More Accessible

Specifying needs, designing and
building surveys, and collecting
data on persons with disabilities

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Abbreviations

ACR	Accessibility Conformance Report
CAPI	Computer-Assisted Personal Interview
CATI	Computer-Assisted Telephone Interview
CAWI	Computer-Assisted Web Interview
CRPD	Convention on the Rights of Persons with Disabilities
GSBPM	Generic Statistical Business Process Model
ICF	International Classification of Functioning, Disability and Health
IDA	International Disability Alliance
ILO	International Labor Organization
ISWGHS	Inter-secretariat Working Group on Household Surveys
NSOs	National Statistical Offices
OHCHR	Office of the United Nations High Commissioner for Human Rights
OPDs	Organizations of persons with disabilities
POUR	Perceivable, Operable, Understandable, Robust
SDGs	Sustainable Development Goals
TTY	Teletypewriters
UN	United Nations
UNSD	United Nations Statistics Division
UNICEF	United Nations agency for children
WASLI	World Association of Sign Language Interpreters
VPAT	Voluntary Product Accessibility Template
WCAG	W3C Content Accessibility Guidelines
WFD	World Federation of the Deaf
WHO	World Health Organization
W3C	World Wide Web Consortium

Executive Summary

This document provides practical guidance for making surveys on individuals and households more accessible for persons with disabilities. It consists of five chapters and annexes:

- Chapter 1 describes the objective of the guidelines and the reasons persons with disabilities may be excluded from surveys.
- Chapter 2 outlines key principles and international conventions that inform the Guidelines.
- Chapter 3 provides information on key concepts, definitions, and disability models.
- Chapter 4 provides practical guidance when planning and designing surveys and collecting data.
- Chapter 5 presents experience from countries.
- The Annexes provide resources, such as checklists and links to other resources.

Chapter 1: Introduction

The objective of the Guidelines is to support survey implementers, especially national statistical offices (NSOs) and other survey-implementing institutions, during the first four phases of the Generic Statistical Business Process Model (GSBPM): specifying needs, design, build, and collect data in making their surveys more accessible and inclusive of persons with disabilities.

Surveys on individuals and households continue to face challenges in limiting the full participation and inclusion of persons with visual, hearing, physical, cognitive, or neurological disabilities. The increased use of phone-based surveys and the growing move toward web-based and self-administered surveys have introduced new barriers. Without deliberate accessibility measures, surveys on individuals and households risk excluding persons with disabilities, thereby reducing representation and data quality.

The chapter outlines common reasons why persons with disabilities are often excluded from surveys, including communication barriers, lack of accessible technologies, insufficient interviewer training, cultural factors, and geographical isolation. From a statistical point of view, persons with disabilities are often absent from surveys due to underrepresentation in the numerator and/or the denominator (**section 1.2**).

Chapter 2: Key Principles and International Conventions Forming the Guidelines

Three core principles have guided the development of the Guidelines: robustness, practicality with internal resources, and practicality with external resources (**section 2.1**). The Guidelines were developed in close engagement with organizations of persons with disabilities (OPDs) and individuals with disabilities to accommodate a wide range of needs (the principle of

robustness). Further, two complementary principles of practicality are also highlighted: *practicality with external resources*, such as using sign language interpreters and Braille services, and *practicality with internal resources*, acknowledging time, staffing, and budget constraints faced by survey-implementing agencies.

The Guidelines are informed by the Convention on the Rights of Persons with Disabilities (CRPD), with particular emphasis on Article 31 on statistics and data collection (**section 2.2**). This article underscores the obligation of States to collect appropriate, disaggregated data in ways that respect privacy, confidentiality, ethical standards, and human rights, and to ensure that resulting statistics are accessible to persons with disabilities. The chapter also links the Guidelines to the CRPD's General Obligations (article 4), notably the promotion of universal design, the affordability and availability of assistive technologies, and the importance of training professionals and raising awareness about disability and accessibility.

Further, the Guidelines are situated within the core principles of the Human Rights-Based Approach to Data, namely participation, data disaggregation, self-identification, transparency, privacy, and accountability (**section 2.3**).

Chapter 3: Common Concepts and Definitions

The Convention on the Rights of Persons with Disabilities (CRPD) is used to introduce commonly used concepts and definitions related to disability, accessibility, inclusivity, reasonable accommodation, and universal design (**section 3.1**). Further, common concepts and definitions from other international frameworks are presented as plain text definitions to increase accessible understanding (**section 3.2**).

In addition, two important cross-cutting concepts, marginalization and intersectionality, are defined to highlight how disability often overlaps with other concepts (**section 3.3**).

The Guidelines present three disability models, the medical, social, and biopsychosocial models, used as analytical frameworks to determine how we perceive persons with disabilities (**section 3.4**). It explains why the Guidelines have adopted the biopsychosocial model, which takes a more comprehensive approach, recognizing the interconnectedness of disabilities with other categories of marginalization.

Chapter 4: Practical Guidance for Making Surveys More Accessible

This chapter provides detailed, practical guidance for implementing accessibility throughout needs specification, planning, building, and collecting data. Structured broadly around the first four phases of the GSBPM, the chapter demonstrates how accessibility can be systematically embedded in surveys.

Clearly defining the survey objectives and planning to be inclusive will help answer many questions in terms of accessibility (**section 4.1**). Understanding the target population and the type and sensitivity of information to be collected helps survey implementers anticipate accessibility needs from the outset.

Conducting desk research on the constantly evolving knowledge on disability, how the disability community operates, and existing knowledge from other surveys can help inform the survey design (**section 4.2**).

Building connections with OPDs is central to inclusive surveys. OPDs can play a key role in advising on cultural and communication practices, reaching persons with disabilities, and supporting survey design and implementation (**section 4.3**). OPDs might also need to be trained in understanding statistical processes and the survey phases.

Establishing a realistic timeline is highlighted as essential, given that accessibility measures, such as securing interpreters, producing alternative formats, and building trust with communities, often require additional time (**section 4.4**).

Budgeting for accessibility should be considered early in the planning. Smaller organizations and budgets may need to prioritize where accessibility investments have the greatest impact (**section 4.5**).

Planners should consider accessibility and inclusion when designing the sample for a survey in the general population, such as reviewing whether standard sampling methods unintentionally exclude certain groups and adjusting sampling frames to include institutions where persons with disabilities live, not just households (**section 4.6**).

Designating an accessibility focal point and, where appropriate, a steering committee can help oversee accessibility across the survey lifecycle (**section 4.7**).

Survey implementers need to anticipate the material requirements for in-person, telephone and/or digital accessibility features (**section 4.8**). Aside from various survey formats, instructions and information materials for interviewers and respondents need to be planned.

The Guidelines emphasize selecting and managing accessibility vendors to ensure surveys are inclusive for persons with disabilities (**section 4.9**). Choosing vendors that comply with accessibility standards and booking services early due to limited availability are key steps. Artificial intelligence should be used as a supplement rather than a replacement for professional services. Detailed considerations are outlined for sourcing Braille and sign language interpretation services, including understanding sign language variations, interpreter qualifications, scheduling needs, and best practices for working effectively with sign language interpreters to ensure accurate and respectful communication during surveys.

Whether you use persons with disabilities as interviewers, or you interview persons with disabilities, you will need to plan accessible transportation and necessary venues (**section 4.10**).

Guidance is provided on questionnaire design and formatting, including the application of digital accessibility standards such as the W3C Content Accessibility Guidelines (WCAG) (**section 4.11**). Recommendations are provided on the use of colours, images, and Alt text as well as special considerations for written surveys, web-based surveys, and phone-based surveys. Special attention is given to writing questions in accessible formats, such as attention to reading levels, supplementary content to support understanding and bulleted lists.

Piloting and field-testing surveys with persons with disabilities will ensure feedback on how accessible your questionnaire and approach are (**section 4.12**).

Interviewers need to be trained in disability, accessible communication and intersectionality to increase participation and data quality (**section 4.13**). Accessible communication entails, among others, using correct terminology on disability, adapting communication methods for different disabilities and simplifying language when needed. Advice on effective communication by different disability groups is presented. OPDs can play a role in training interviewers, both by contributing to content and working as trainers. Persons with disabilities should be recruited and work as interviewers on equal terms as everyone else.

Finally, the Guidelines provide practical guidance on asking survey questions in an accessible way when interviewing, particularly persons with neurological, cognitive, or learning disabilities (**section 4.14**). Interviewers are advised to phrase questions carefully to avoid misinterpretation and read back answers to confirm the response.

Chapter 5: Country examples

Kenya (**section 5.1**) integrates the disability module developed by the Washington Group into their household surveys, recruits persons with disabilities as interviewers, and partners with OPDs to support training and inclusive fieldwork. Kenya relies mainly on face-to-face interviews, allows proxy responses when needed, and adapts questioning techniques in practice.

Poland (**section 5.2**) demonstrates a technology- and resource-intensive approach, combining multiple data collection modes with different accessibility modes such as sign language services, Braille materials, digital accessibility features, instructional materials, physical accessibility, and tailored interviewer training.

Annexes

The annexes include a checklist for making accessible surveys, a list of key considerations for accessible physical venues, and a list of resources with links to more materials.

1. Introduction

Surveys on individuals and households remain foundational to national statistical systems, providing critical data on social and economic conditions and underpinning more than a third of the indicators used to monitor global development goals, including the Sustainable Development Goals (SDGs).¹ Surveys uniquely capture attitudinal, behavioral, and disaggregated data that administrative and non-traditional sources often cannot provide with the same depth and comparability. However, despite their central role, surveys face persistent and emerging challenges—declining response rates, rising costs, and ever-higher demands for timeliness, granularity, and policy relevance—especially in low- and middle-income countries.²

Surveys are increasingly moving towards phone surveys, web-based surveys and self-completion modes. This shift presents new accessibility challenges and raises important questions about the accessibility and inclusivity of surveys in the future. Phone surveys pose, e.g., challenges for persons with hearing, neurological, and cognitive disabilities. Web-based surveys and self-completion mode approaches assume a certain level of digital literacy, access to appropriate hardware and software, and the availability of assistive technologies. For some respondents—particularly those who are blind or who have specific motor or cognitive impairments—these conditions may not be met, resulting in reduced participation and representation. It is therefore crucial that data collection be designed with accessibility in mind from the outset.

As highlighted in “Positioning Household Surveys for the Next Decade”³, reimagining surveys calls for innovations that strengthen inclusivity and respondent-centred design⁴, so that these surveys remain robust, relevant, and equitable in the decade ahead. These priorities include enhancing survey methods, improving data quality, and ensuring that surveys reach all population, particularly those usually underrepresented or excluded.

Within this context, these **Guidelines to Make Surveys on Individuals and Households More Accessible** emerge as a targeted response to one of the most pressing inclusivity challenges: ensuring that persons with disabilities, along with other often-marginalized groups, are meaningfully covered in survey data collection. These guidelines build on the technical priorities

¹ United Nations (2019). Mapping of SDG indicators. Report of the Inter-Secretariat Working Group on Household Surveys, background document. The exercise was carried out before the IAEG-SDGs 2020 Comprehensive Review of the global indicator framework. The UN Statistical Commission adopted revisions of the SDG indicator framework at its 51st session (<https://unstats.un.org/unsd/statcom/51st-session/documents/2020-2-SDG-IAEG-E.pdf>)

² Carletto, C. et al. (2022). Positioning household surveys for the next decade. *Statistical Journal of the IAOS*, 38(3), pp. 923–946. Available at: <https://doi.org/10.3233/SJI-220042>.

³ Ibid.

⁴ Ibid, priority number 2.

articulated in the positioning paper by providing practical, rights-based guidance for survey practitioners to incorporate accessibility throughout planning and designing surveys to field operations—thereby improving both data quality and inclusivity.

By centring accessibility, the Guidelines align with broader global commitments—such as the Convention on the Rights of Persons with Disabilities—and equip statistical systems to collect data that truly reflect the diversity of populations. This contributes not only to better evidence for policymaking but also to fulfilling the promise of “leaving no one behind” at the heart of the 2030 Agenda.

The Guidelines also recognize that achieving full accessibility in surveys will entail additional costs, operational complexity, and capacity requirements that are not immediately feasible for all countries or survey programmes, especially in resource-constrained settings. Rather than assuming uniform readiness, the Guidelines therefore set out a high but progressive standard, offering a reference point for countries and survey operators to aspire to over time. By framing accessibility as a continuum rather than a binary condition, the Guidelines encourage incremental improvements—prioritizing feasible adaptations, informed trade-offs, and longer-term planning—while reinforcing the principle that accessibility is integral to data quality, inclusivity, and the credibility of surveys in the coming decade.

These guidelines have been prepared by the Inter-Secretariat Working Group on Household Surveys (ISWGHS) (<https://unstats.un.org/iswghs>) in collaboration with the Data for Now initiative (<https://unstats.un.org/UNSDWebsite/capacity-development/data-for-now/>) of the United Nations (UN).

This document consists of five chapters and annexes:

- Chapter 1 describes the objective of the guidelines and the reasons persons with disabilities may be excluded from surveys on individuals and households.
- Chapter 2 outlines the key principles and international conventions that inform the Guidelines.
- Chapter 3 provides information on key concepts, definitions, and disability models.
- Chapter 4 provides practical guidance when planning and designing surveys and collecting data.
- Chapter 5 presents experience from countries.
- The Annexes provide resources that might be useful for users, such as checklists and a list of additional resources.

1.1. Objective

This document aims to provide a set of guidelines for improving the accessibility of surveys on individuals and households to make all data collection inclusive for persons with disabilities. Thus, these Guidelines will help in reaching groups who may have the risk of being excluded from surveys. The Guidelines should not only be read within the context of interviewing those with disabilities about disability, but since any persons with disabilities would be included among the respondents in any data collection, all data collections would ideally need to be made accessible.

Persons with disabilities may include:

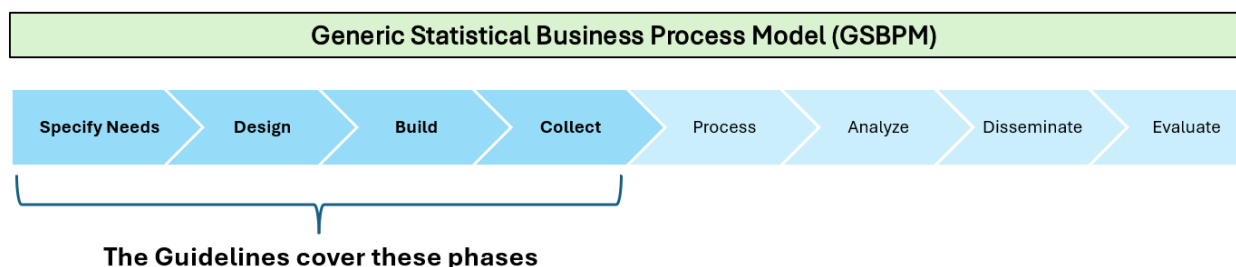
- Deaf, deafblind, and hard-of-hearing persons.
- Persons with physical disabilities.
- Blind and partially sighted persons.
- Persons with intellectual, cognitive, and neurological disabilities, who cannot read surveys easily or who interpret them differently than the interviewer.

These guidelines will support survey implementers such as National Statistical Offices (NSOs) and other public institutions responsible for surveys in the planning and implementation of surveys that are more accessible, thereby enabling the collection of more inclusive data.

The guidelines focus on the first four phases of the Generic Statistical Business Process Model (GSBPM), namely, specify needs, design, build and collection.

It is essential to note that these Guidelines do not provide recommendations on the GSBPM phases related to data processing, analysis, dissemination and evaluation, nor on statistical methodologies incl. sample design, during the planning and data collection phases.

Figure 1: GSBPM phases covered in these Guidelines



The Guidelines are prepared with a specific focus on persons with disabilities, but many of the principles also apply to other population groups, such as older persons.

The Guidelines and resources offered in this document should be adapted to the specific country and organizational context of the survey-implementing agencies. Survey implementers should use the Guidelines while considering their available resources, understanding their country's context, and aligning with existing institutional strategies. It is acknowledged that some of the recommendations provided in these Guidelines are resource-intensive and that full accessibility might not always be possible in all surveys. However, any efforts to make surveys more accessible are crucial to improve data quality, representation, and inclusivity.

1.2. Why are persons with disabilities often excluded from surveys?

There are multiple reasons why persons with disabilities may be excluded and, as a result, not counted in surveys on individuals and households. These barriers may range from physical and technological limitations (e.g., respondents' inability to use a telephone due to physical or neurological disabilities) to cultural biases. Some challenges include:

- **Lack of access to communication tools:** Individuals with disabilities may not have access to the internet or telephones due to visual, mobility, or cognitive impairments, making it more difficult to participate in surveys requiring the use of the internet or phones.
- **Communication barriers:** Reaching persons who have disabilities, such as the deaf, deafblind, mute, or persons with neurological disabilities, may require different modalities to communicate effectively compared to what the surveyors are equipped with.
- **Insufficient training of interviewers:** Interviewers may lack training, awareness, and resources to collect data from persons with disabilities.
- **Fewer specialized resources for accessibility:** Limited access to accessibility resources, such as sign language interpreters, can prevent persons with disabilities from fully participating.
- **Sign language variability:** Survey sign interpreters may be using a national or international sign language that the local respondent does not know.
- **Cultural habits and taboos:** The cultural habits of families or communities may result in them keeping a person with a disability away from the public, thus making them more difficult to reach. Interviewers may also hesitate in interacting with persons with disabilities due to cultural taboos.

- **Geographical isolation:** Persons with disabilities in remote locations often have limited access to public spaces, information, and transportation, making them less likely to participate in surveys than others in these communities.
- **Low literacy, less technological literacy, and less accessibility:** Even if persons with disabilities know of accessibility options, they may be less likely to participate using technologies such as screen readers, Braille readers, or Teletypewriters (TTY) due to limited access and knowledge in using these technologies.

From a statistical point of view, persons with disabilities are absent in surveys due to underrepresentation in the numerator and/or the denominator⁵:

- **Underrepresentation in the numerator** due to:
 - Underidentification when using narrow concepts of disability, such as considering disability based on a medical definition, as opposed to a broader concept that focuses on limitations or barriers in performing and participating in activities.
 - Underenumeration when a household member or an interviewer determines that the person who is eligible for the interview is 'incapacitated', or a lack of necessary accommodation, such as sign language interpreters, accessible digital design, etc., that hinders persons with disabilities from responding to the survey.
- **Underrepresentation in the denominator** due to the sample population excluding persons with disabilities e.g., when household surveys exclude institutions where persons with disabilities live (and are overrepresented), such as care homes.

⁵ UNICEF (2020). [Producing Disability-Inclusive Data. Why it matters and what it takes](https://data.unicef.org/resources/producing-disability-inclusive-data-why-it-matters-and-what-it-takes/). Available at <https://data.unicef.org/resources/producing-disability-inclusive-data-why-it-matters-and-what-it-takes/>

2. Key Principles and International Conventions Forming the Guidelines

This chapter outlines key principles and international conventions that form the foundation of the Guidelines. This approach ensures the Guidelines are ethical, rights-based, and aligned with international standards. The two international conventions referenced are the Convention on the Rights of Persons with Disabilities (section 2.2) and the Human Rights-Based Approach to Data (section 2.3).

2.1. Key principles in developing the Guidelines

The following key principles guide these guidelines, ensuring that they are both practical and inclusive:

Robustness: [One of the main principles of accessibility is robustness.](#)⁶ Inclusive measures for one type of disability can create barriers for other persons with other disabilities. Guided by organizations of persons with disabilities (OPDs) and individual persons with disabilities, these Guidelines were designed to be as robust as possible, to accommodate persons with all types of disabilities.

Practicality with external resources: Recommendations for accessibility for persons with disabilities often require hiring national sign language interpreters, using Braille printers, and obtaining resources that are not always easily accessible. These Guidelines help survey implementers and interviewers make connections in the community and provide interviewers with resources to educate and train them.

Practicality with internal resources: Making surveys more accessible often takes more effort, time, and resources to do common tasks. One of the biggest barriers to implementing accessibility is asking people to add significantly more time and energy to their existing processes.

2.2. Convention on the Rights of Persons with Disabilities

This document adheres to “Article 31 – Statistics and data collection” of the Convention on the Rights of Persons with Disabilities (CRPD),⁷ shown in the paragraphs below. The texts in

⁶ W3C (2025). [Introduction to Understanding WCAG 2.2](https://www.w3.org/WAI/WCAG22/Understanding/intro). Available at <https://www.w3.org/WAI/WCAG22/Understanding/intro>.

⁷ United Nations (2006). Convention of the Rights of Persons with Disabilities (CRPD), [Article 31](#). Available at <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/article-31-statistics-and-data-collection.html>.

boldface emphasize the main details that significantly influenced the development of the Guidelines.

1. **States Parties undertake to collect appropriate information**, including statistical and research data, to enable them to formulate and implement policies to give effect to the present Convention. The process of collecting and maintaining this information shall:

a) **Comply with legally established safeguards**, including legislation on data protection, to ensure confidentiality and respect for the privacy of persons with disabilities;

b) **Comply with internationally accepted norms to protect human rights** and fundamental freedoms and ethical principles in the collection and use of statistics.

2. The information collected in accordance with this article shall be disaggregated, as appropriate, and **used to help assess the implementation of States Parties' obligations under the present Convention**, and to identify and address the barriers faced by persons with disabilities in exercising their rights.

3. **States Parties shall assume responsibility for the dissemination of these statistics** and ensure their accessibility to persons with disabilities and others.

Furthermore, the General Obligations in the CRPD (Article 4)⁸ inform each aspect of the Guidelines. Although all obligations apply, the points below directly support the Guidelines.

As noted in Obligation (f), universal design is emphasized:

f) **To undertake or promote research and development of universally designed goods, services, equipment and facilities**, as defined in article 2 of the present Convention, which should require the minimum possible adaptation and the least cost to meet the specific needs of a person with disabilities, to promote their availability and use, and to promote universal design in the development of standards and guidelines;

The importance of affordability when it comes to accessibility technology is also stressed, as noted in Obligation (g):

g) **To undertake or promote research and development of, and to promote the availability and use of new technologies**, including information and communications technologies, mobility aids, devices and assistive technologies, suitable for persons with disabilities, **giving priority to technologies at an affordable cost**;

Lastly, emphasis is placed on the importance of educating surveyors, interviewers, communities and persons with disability on disability and accessibility topics. This corresponds to Obligations (h) and (i):

⁸ United Nations (2006). Convention of the Rights of Persons with Disabilities (CRPD), [Article 4](https://social.desa.un.org/issues/disability/crpd/article-4-general-obligations). Available at <https://social.desa.un.org/issues/disability/crpd/article-4-general-obligations>.

- h) **To provide accessible information to persons with disabilities about mobility aids, devices and assistive technologies**, including new technologies, as well as other forms of assistance, support services and facilities;
- i) **To promote the training of professionals and staff working with persons with disabilities in the rights** recognized in the present Convention so as to better provide the assistance and services guaranteed by those rights.

2.3. Human Rights-Based Approach to Data

The Guidelines also adhere to the Human Rights-Based Approach to Data,⁹ developed by the Office of the United Nations High Commissioner for Human Rights (OHCHR). Six core principles are covered in the Approach:

- participation,
- data disaggregation,
- self-identification,
- transparency,
- privacy, and
- accountability.

⁹ Office of the United Nations High Commissioner for Human Rights (OHCHR) (2018). [A Human Rights-Based Approach to Data, Leaving No One Behind in the 2030 Agenda for Sustainable Development](https://www.ohchr.org/sites/default/files/Documents/Issues/HRIndicators/GuidanceNoteonApproachtoData.pdf). Available at <https://www.ohchr.org/sites/default/files/Documents/Issues/HRIndicators/GuidanceNoteonApproachtoData.pdf>.

3. Common Concepts and Definitions

Establishing common concepts and definitions is vital for the Guidelines because they enable the audience to have a shared understanding, ensuring consistency and clarity in interpretation and application. This chapter introduces key concepts and their definitions, referencing international standards whenever possible. For those terms that are essential to the Guidelines but are lacking internationally agreed definitions, their relevant definitions will be outlined; these definitions are intended for use exclusively within the context of this set of Guidelines.

3.1. Official definitions in the Convention on the Rights of Persons with Disabilities

The [CRPD definitions](#) are directly quoted below. These specific definitions are often worded with more complexity than the common concepts in Section 3.2. They are often a lot less accessible in reading level for persons with cognitive, neurological, or reading disabilities. They are included here for reference because these are the most widely accepted definitions. They are also comprehensive and include examples.

“Communication” includes languages, display of text, Braille, tactile communication, large print, accessible multimedia as well as written, audio, plain-language, human-reader and augmentative and alternative modes, means and formats of communication, including accessible information and communication technology;

“Language” includes spoken and signed languages and other forms of non-spoken languages;

“Discrimination on the basis of disability” means any distinction, exclusion or restriction on the basis of disability which has the purpose or effect of impairing or nullifying the recognition, enjoyment or exercise, on an equal basis with others, of all human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field. It includes all forms of discrimination, including denial of reasonable accommodation;

“Reasonable accommodation” means necessary and appropriate modification and adjustments not imposing a disproportionate or undue burden, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms;

“Universal design” means the design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. “Universal design” shall not exclude assistive devices for particular groups of persons with disabilities where this is needed.

3.2. Common concepts

The definitions provided below are those accepted by the UN, the CRPD,¹⁰ or the World Health Organization (WHO).¹¹ These are plain text definitions that are more accessible to read for persons with cognitive, neurological, or reading disabilities:

- **Disability** is the result of the interaction between individuals with a health condition (such as cerebral palsy, down syndrome, and depression) and personal and environmental factors. These factors include negative attitudes, inaccessible transportation and public buildings, and limited social support.¹²
- **“Persons with disabilities” is the internationally accepted term to use to refer to individuals who have any form or forms of disabilities.** It is defined as those with “long-term physical, mental, intellectual, or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others”.¹³
- **Accessibility enables persons with disabilities to live independently and participate fully in all aspects of life** by ensuring access to the physical environment, transportation, information, and communications, on an equal basis with others.¹⁴
- **Reasonable accommodations are necessary and appropriate modifications** to ensure that persons with disabilities enjoy human rights and fundamental freedoms on an equal basis with others; here, “appropriate” means not imposing a disproportionate or undue burden on others.¹⁰

¹⁰ United Nations (2006). Convention of the Rights of Persons with Disabilities (CRPD), [Article 2 – Definitions](#). Available at <https://social.desa.un.org/issues/disability/crpd/article-2-definitions>. Much of Article 2 has also been directly quoted in Section 3.11.

¹¹ World Health Organization (WHO). Webpage: [Health Topic: Disability](#). Available at <https://www.who.int/health-topics/disability>.

¹² World Health Organization (WHO) (2021). [WHO Policy on Disability](#). Available at <https://iris.who.int/bitstream/handle/10665/341079/9789240020627-eng.pdf?sequence=1>.

¹³ United Nations (2006). Convention of the Rights of Persons with Disabilities (CRPD) (2006). [Article 1](#). Available at <https://social.desa.un.org/issues/disability/crpd/article-1-purpose>.

¹⁴ United Nations (2006). Convention of the Rights of Persons with Disabilities (CRPD) (2006). [Article 9](#). Available at <https://social.desa.un.org/issues/disability/crpd/article-9-accessibility>.

- [Inclusivity aims to engage persons with disabilities in the wider society](#) and in making decisions that will affect them, encouraging them to be active in their own lives and within the community. Inclusion (any inclusive practice) is a two-way process: persons who have no disabilities should be open to the participation of those with disabilities.¹⁵
- [Universal design](#) involves creating products and environments that can be used by the highest number of people.¹⁶

While accessibility and reasonable accommodations deal with disabilities, inclusivity and universal design take all marginalized people into consideration.

3.3. Other concepts

Although the two concepts listed below lack an official definition at the international level, it is essential for the audience of these Guidelines to share a common understanding of them:

- **Marginalized** describes someone who society relegates to less importance and less power than other people.
- **Intersectionality** is the situation in which multiple forms of discrimination (such as racism, sexism, and classism) combine, overlap, or intersect in marginalizing individuals or groups.

3.4. Relevant disability models

Disability models are analytic frameworks to determine how we perceive persons with disabilities. How we perceive them determines how we approach accommodating them. For instance, the Charity model considers persons with disabilities as objects of pity, with society assisting them as an act of charity.

There are several [internationally recognized disability models](#).¹⁷ Below are the most relevant models to this document.

¹⁵ United Nations, Office of the United Nations High Commissioner for Human Rights, and the Inter-Parliamentary Union (2007). Handbook for Parliamentarians on the Convention on the Rights of Persons with Disabilities. [Chapter 2: The Convention in detail – The rights and principles enumerated in the Convention](#). Available at <https://www.un.org/development/desa/disabilities/resources/handbook-for-parliamentarians-on-the-convention-on-the-rights-of-persons-with-disabilities/chapter-two-the-convention-in-detail-3.html>.

¹⁶ United Nations (2006). Convention of the Rights of Persons with Disabilities (CRPD), [Article 2 – Definitions](#). Available at <https://social.desa.un.org/issues/disability/crpd/article-2-definitions>.

¹⁷ International Association of Accessibility Professionals (IAAP) (2023). [Certified Professional in Accessibility Core Competencies \(CPACC\). Body of Knowledge](#). Available at <https://www.accessibilityassociation.org/sfsites/c/resource/CPACCBok>.

Medical model: The medical model defines disability in terms of biology. Disability is viewed as a problem that is caused by medically diagnosed genetic disorders, disease, trauma, or other health conditions. Disability is treated as a biological problem that diminishes quality of life and needs to be treated with professional medical care.

Social model: The social model of disability is a direct response to the medical model. Rather than place the definition of “disability” entirely on the person with a disability, the social model points out that society creates disabling conditions. To a large extent, “disability” is an avoidable condition caused by poor design.

Biopsychosocial model: The biopsychosocial model recognizes that disability is a complex and multifaceted concept, and it incorporates the perspectives of the medical and social models. This includes biological, individual, and social aspects of disability. The biopsychosocial model is the basis for the [International Classification of Functioning, Disability and Health \(ICF\)](#), a 2001 framework of the World Health Organization.¹⁸

The Guidelines use the biopsychosocial model in approaching how to accommodate persons with disabilities because it is more realistic. It therefore makes the approach to accommodations more practical.

Some models, such as the medical model, focus on persons with disabilities in ways that can isolate them from other types of marginalization. The biopsychosocial model, however, takes a more comprehensive approach, recognizing the interconnectedness of disabilities with other categories of marginalization.

For instance, women may experience social limitations that transform certain physical characteristics into perceived disabilities within society. When buildings are designed with fewer women’s bathrooms than needed, or when the standard corporate office temperature is adjusted for men, women are at a disadvantage, thus in some ways “disabled”, due to mental and physical discomfort.

For the first scenario, if a woman has a physical disability and needs to use a wheelchair-accessible bathroom, then the effects of the disability will be greater than those of a man using a wheelchair in the same building; the man will have easier access to bathrooms because they are more abundant. For the second scenario, if a woman has a chronic illness and inhospitable temperatures make the woman more susceptible to illness or pain, the woman is effectively

¹⁸ World Health Organization (WHO) (2022). [International Classification of Functioning, Disability and Health \(ICF\)](https://www.who.int/standards/classifications/international-classification-of-functioning-disability-and-health). Available at <https://www.who.int/standards/classifications/international-classification-of-functioning-disability-and-health>.

more “disabled” at the standard office temperature than a man with the same chronic illness in the same setting.

People may approach accessibility solely as a matter of disabilities. In this case, an accessibility policy addressing the above-mentioned corporate office buildings may consider installing a wheelchair-accessible stall in every bathroom. However, for usability and inclusivity, the social context should be taken into consideration. In the above examples, the fact that the setting is less hospitable to women than men should also be considered. A policy of usability and inclusivity would require a wheelchair-accessible stall in every bathroom, but it would additionally ensure that all men and women have access to the same number of bathrooms.

The biopsychosocial model’s intersectionality — recognizing that disability is often combined with other forms of marginalization — is why we will focus on usability and inclusivity in this document. While the adoption of other disability models is not precluded, it is important to note that the Guidelines here may not always be applicable to those models.

4. Practical Guidance for Making Surveys More Accessible

This chapter provides details on crucial measures that can increase the accessibility of surveys on individuals and households. The Guidelines enable the creation of an accessibility framework, where persons with disabilities are systematically accommodated. The chapter provides guidance for the first four phases of the [Generic Statistical Business Process Model \(GSBPM\)](#).¹⁹ This ensures that persons with disabilities are considered from specifying needs to collecting data.

Figure 2: The sections of this chapter are organised by the first four phases of GSBPM

Specify needs

- Defining the survey objectives and planning to be inclusive (section 4.1)
- Conducting desk research (section 4.2)
- Building connections with organizations of persons with disabilities (section 4.3)
- Establishing a realistic timeline (section 4.4)
- Budgeting for accessibility (section 4.5)

Design

- Designing the sample (section 4.6)
- Designating an accessibility focal point and a steering committee (section 4.7)
- Planning for material requirements (section 4.8)
- Selecting and managing accessibility vendors (section 4.9)
- Planning accessible transportation and venues (section 4.10)

Build

- Design and formatting the survey (section 4.11)
- Piloting and field-testing (section 4.12)

Collect

- Training interviewers and learning about accessible communication (section 4.13)
- Asking survey questions in an accessible way (section 4.14)

4.1. Defining the survey objectives and planning to be inclusive

A clear definition of the purpose of the survey will answer many of the questions when it comes to accessibility.

What population do you want to describe? The size of the geographical area you need to cover will tell you how many languages or dialects you may need sign interpreters to know. It will indicate how many isolated communities will require you to develop local relationships to reach them.

¹⁹ United Nations Economic Commission for Europe (UNECE) Statistics Division (2025). [Generic Statistical Business Process Model \(GSBPM\) version 5.2](#). Available at <https://unece.org/statistics/gsbpm-v5.2>.

What information are you trying to gather? Considering the nature of the desired data can help you understand some of the disabilities you may have to accommodate. For instance, if you want to know the percentage of residents who use a home phone, you will need to communicate with residents who may not use a home phone because they are deaf.

How sensitive is the information you need? It is important to consider if the desired information has sensitivities that vary by certain demographic attributes (e.g., location, age, sex). These sensitivities may make it more difficult to collect all the necessary data. If you need information like domestic abuse rates, you will need to have relationships with organizations for many kinds of marginalized people.

4.2. Carrying out desk research

Any existing information on disabilities should be reviewed. Even if you have existing knowledge, our understanding of disability is continuously growing and evolving at a fast rate; this is especially true with respect to our understanding of neurological and cognitive disabilities.

It is important to understand the communities in the country – their infrastructure and their cultural attitudes towards marginalized people. This can be achieved through desktop research, and your findings can help you anticipate what to expect when reaching persons with disabilities.

By researching field work or statistics that were previously done on disabilities, you will not only discover more facts on disabilities, but you will also find out if they have implemented an effective methodology that could be adapted for your survey. For instance, there have been [research studies examining how to adapt the National Quality of Life Survey for the deaf population in Colombia](#).²⁰ This research documents the cultural and linguistic adaptation step-by-step, guided by a literature review, participatory group discussions, and qualitative testing with the deaf population. Methods included measures such as engaging the deaf community through flyers, social media, word of mouth, organizations, and university websites.

²⁰ Izquierdo Martinez, L.C. et al (2024). [Linguistic and cultural adaptation of the National Quality of Life Survey in Colombia for the deaf population](#). *Translation and Interpreting Studies. The Journal of the American Translation and Interpreting Studies Association*, vol. 19, pp. 302–322. Available at <https://doi.org/10.1075/tis.22084.izq>. Further [details](#) are provided at <https://drive.google.com/file/d/1qA0eoOL3RB9inR6FsJminNfGEKqnYrXU/view?usp=sharing>.

4.3. Building connections with the community

4.3.1. Considerations in establishing connections with the community

Initially, the following questions should be considered: *Are you already familiar with the community and accepted as part of their culture? Do you have relationships and resources to personally approach persons with disabilities in the community? What about communities that are not easily approachable due to a lack of infrastructure or economy?*

If you do not have relationships with the community, you will need to establish connections and/or work with organizations that do.

Additionally, consider how to reach isolated people. With these persons rarely seen in public, it will be especially challenging to reach them. By considering the likely cause(s) of their isolation, you will be better able to decide whether you could reach them. Some typical reasons for their isolation are listed below.

- They do not attend school due to a lack of accessibility at school.
- Cultural barriers and/or stigma make them ashamed to be seen.
- Domestic violence makes them too scared to go out.
- Limitations in communication (e.g., speech disabilities) and lack of access to accommodations or assistive technology (e.g., qualified sign language interpreters, Braille printers, screen readers or computer-mouse alternatives) discourage or prevent them from going out.
- Poverty prevents accessible travel or outings.

4.3.2. Collaborating with organizations of persons with disabilities

Collaborating with OPDs will be essential in locating and reaching out to persons with disabilities. OPDs will most likely have a strong rapport with the community and understand the community's social nuances.

If you do not have any connections with OPDs, one possible place to start is the [International Disability Alliance](#) (IDA).²¹ The 14 IDA members around the world are associations comprising the OPDs for their region. The IDA website can provide you with information about the OPDs in the relevant region.

OPDs are often understaffed and overworked. As a result, when you contact an OPD, you should tell them what you need *and* what you can offer to make the process easy for them. To

²¹ [International Disability Alliance \(IDA\)](https://www.internationaldisabilityalliance.org/content/ida-members). Available at <https://www.internationaldisabilityalliance.org/content/ida-members>.

make the partnership efficient and practical, it would be helpful to provide training on survey processes and to set a budget to help facilitate their work.

In cases where relevant OPDs do not exist, you will need to find informal groups of persons with disabilities. Ultimately, it is imperative to ensure that persons with disabilities can be actively engaged in the survey design — whether or not it is through OPDs.

You might also need to train OPDs in understanding statistical processes and the survey phases to ensure they have the needed capacity to understand the context and properly provide the support you need.

4.3.3. Connecting with other representative groups

In building connections with the community, the main goal is to have all parts of a population involved in the design and planning of the survey, including traditionally excluded population groups. In addition to OPDs, consulting local, national, and international advocacy groups that have experience with empowering marginalized population groups would be useful. They may help locate isolated persons that may otherwise not be captured by the survey sample (e.g. due to the stigma related to persons with disabilities, ageism, or limited internet/phone access).

4.4. Establishing a realistic timeline

The project timeline will be influenced by many factors in the planning and design phase. Identifying the relevant factors will require some research. Any existing work in your country and/or communities involving accessibility should be considered. Available accessibility resources and any connections you have made or are making with the community will also influence how long data collection will take.

In your timeline, it is important to make sure to account for all the tasks and phases described in Chapter 4; additionally, include time to resolve any roadblocks you may have to deal with. For example, desktop research may take months. Accessibility resources such as local sign interpreters may be rare, and they may already be booked for a large portion of the year. Additionally, building trust with communities and organizations of persons with disabilities (OPDs) can take a long time.

4.5. Budgeting for accessible surveys

Budgeting for accessibility should be considered early in the planning. You will need to identify vendors for accessibility: sign language interpreters, captioners, and vendors that prepare materials in Braille and other alternate formats. Sources for accessibility funding and no-cost support services should also be considered. If you will work with OPDs, you should prepare a budget for their services.

4.5.1. Budget early

Often, accessibility is not considered in the initial survey budget. But it should be. It is impractical to add accessibility late in the process.

Accessibility infrastructure is expensive to budget after most of the survey has been designed. Additionally, the survey planning might have progressed too far for accessibility to fit the design.

If you do not have good local options for accessibility, you need to budget to get people trained, though this might lead to higher costs. Hiring foreign services might mean that local skills never develop. To gain local trust and confidence, the best option may be to train locals in the accessibility services required.

4.5.2. Funding sources

If your budget is limited, but you decide it is necessary for your survey, you may be able to apply for funding from external sources.

Regardless of how much funding you acquire for accessibility, accessibility volunteering (e.g., volunteer interpreters) is not recommended.

Aside from funding assistance, another option would be to find foundations that provide specific services. Some foundations will send resources internationally, such as interpreters, interpreter-training, or other disability-support services.

4.5.3. Whether to budget accessibility at all

It is also important early on to consider if your survey budget is too small to include an accommodation budget. This may sound counterintuitive, given the previous discussions; however, the Guidelines aim for practicality as well as inclusivity.

If your budget is very small, then a budget for accessibility (e.g., for sign interpreters and assistive technology) would be inordinately large.

If you have a small organization or a small budget, you may need to be strategic about your accessibility budget. You should consider where inclusion is most important and where it would have the largest impact; your accessibility budget should be directed to surveys where accessibility is most necessary.

4.6. A few considerations on designing the sample

Though these Guidelines do not intend to provide details on the methodology for designing the frame and sample, a few considerations are provided here. When designing a sample for a

survey in the general population, planners should consider accessibility and inclusion, rather than leaving it to chance. Specifically, sampling methods can be designed to ensure that persons with disabilities are adequately represented, both in private households and in institutional settings such as care homes, residential facilities, or similar environments.

In practical terms, this could involve:

- Reviewing whether standard sampling methods unintentionally exclude certain groups.
- Adjusting sampling frames to include not just households but also institutions where persons with disabilities live, such as care homes.
- Make adequate arrangements to interview persons with disabilities as identified in the sample and not exclude them because there is no reasonable accommodation to interview them.

A survey that is specifically targeted to a population with disabilities will have a different design approach from a survey in the general population.

4.7. Establishing a system of accountability for accessibility

4.7.1 Designating an accessibility focal point and steering committee

An accessibility focal point should be designated, and their phone number and/or email address should be easily located (e.g., online, on a consent form) by respondents if needed. The focal point will be responsible for making sure that all accessibility requests and complaints by respondents are recorded and responded to; they should be involved in building relationships with the relevant OPDs and be educated (possibly also certified) in accessibility knowledge. The [International Association of Accessibility Professionals \(IAAP\)](#)²² issues internationally recognized [certificates of accessibility knowledge and competence](#).²³

Depending on the size of your project or organization, a steering committee including the focal point may be worth creating. Committee members would be responsible for the following:

- Which accessibility relationships to make;
- Which experts to approach or appoint, and
- How to integrate accessibility into each part of the survey process, from preparation to implementation.

²² International Association of Accessibility Professionals ([IAAP](#)). Available at <https://www.accessibilityassociation.org/>.

²³ International Association of Accessibility Professionals (IAAP). [Certification Overview](#). Available at <https://www.accessibilityassociation.org/certification-overview>.

Persons with disabilities should be involved at every stage of survey development and implementation. At a minimum, their feedback should be collected regarding the accessibility of the survey questionnaire.

4.7.2. Incorporating an accessibility statement

An accessibility statement should be included in the survey, preferably prior to the actual questionnaire e.g., as part of the introduction. This statement serves to instruct and provide guidance to persons with disabilities who may encounter difficulties with the survey content. It must include:

- A primary point of contact who is responsible for respondents' questions related to accessibility issues (i.e., the aforementioned focal point);
- Which accessibility standards the survey aims to meet (e.g., [Web Content Accessibility Guidelines or WCAG 2.2](#)),²⁴ and;
- How close — or far — the survey is from achieving those standards.

The W3C (World Wide Web Consortium), which created and regularly updates the internationally recognized digital accessibility guidelines (WCAG 2.2), has an [accessibility statement generator](#)²⁵ to help create one.

4.8. Planning materials to aid circulation

To prepare for various survey scenarios during data collection, you will need to anticipate the material requirements for in-person, telephone and/or digital accessibility features. For example, to implement surveys in a mixed mode (i.e., in-person as well as through the internet or telephones), barriers for deaf and hard-of-hearing respondents need to be considered, so that the in-person and phone survey versions are accessible. In general, materials should be made available in various accessible formats (e.g., in Braille, national sign language, large print, high colour contrast).

Aside from various survey formats, instructions and information materials for both interviewers and respondents will be needed. The following items could be prepared for interviewers to use or to have available for respondents:

- Training materials that explain how to find and engage with respondents with disabilities.

²⁴ World Wide Web Consortium (W3C) (2024). [Web Content Accessibility Guidelines](https://www.w3.org/tr/wcag22) WCAG 2.2. Available at <https://www.w3.org/tr/wcag22>.

²⁵ World Wide Web Consortium (W3C). [Generate an Accessibility Statement](https://www.w3.org/WAI/planning/statements/generator/#create). Available at <https://www.w3.org/WAI/planning/statements/generator/#create>.

- Communication guidelines, in general and for interacting with persons with disabilities. Cultural guide or community-relationship guidelines.
- Offline questionnaires to reach persons who cannot access the phone or the internet.
- Digital questionnaires to reach more people.
- Accessibility resources such as videos in sign language, for online questionnaires or when in-person interviewers have access to digital data collection tools.
- Instructions on how to use the accessibility features of accessible venues and transportation.

In addition, respondents should have the accommodations they need. The following questions show what should be considered, at a minimum level. If the answer is no to any of them, you will need to include them in the budget (which is discussed next in Section 4.5).

- Do the blind and partially sighted population have access to screen readers?
- Are surveys accessible in the country's national sign language for deaf persons?
- Do the deafblind respondents have access to an in-person sign language interpreter?
- Do respondents who cannot speak well have persons who can assist?
- Can respondents reach your institution (e.g., the focal point) or the surveying venue?

4.9. Choosing accessibility vendors

When choosing a vendor or contractor required for your survey (e.g., a website development vendor), you should ensure that the vendor abides by accessibility guidelines. If the vendor does not produce accessible products, then the survey will likely not be accessible either. To verify the accessibility of a vendor or contractor, you should ask them what their plans are for implementing accessibility in their product or service and how they plan to verify the accessibility.

One way of checking if an information or communication technology product is accessible is by checking the vendor's Accessibility Conformance Report (ACR). An ACR details the accessible features of a product or service. ACRs are usually produced by users who test the product using the [Voluntary Product Accessibility Template \(VPAT®\)](#),²⁶ a template containing testing criteria for accessibility features of products and services.

4.9.1. Book early

As soon as you know the dates for implementing the survey, all necessary vendors and contractors should be booked. Vendors involved with creating the survey (i.e., web developers

²⁶ Information Technology Industry Council (ITI). [VPAT](https://www.itic.org/policy/accessibility/vpat). Available at <https://www.itic.org/policy/accessibility/vpat>.

or Braille services) should know the deadline as early as possible and be given as much time as possible to complete their service. You also need time to check the accessibility of products and services generated for you.

Contractors needed during the survey implementation (e.g., sign interpreters) will need to be booked as far in advance as possible. These services can be scarce, and their schedules can fill up quickly.

4.9.2. Use artificial intelligence (AI) with caution

When searching for accessibility tools and vendors, you will come across AI tools, such as apps to translate words into sign language. At this time, however, technology has not progressed to the point that any AI app can replace professional accessibility providers, such as sign interpreters.

If an AI app is affordable and used in a very limited way, it may be useful as a supplement, rather than a replacement. For instance, an AI app may be useful to an interviewer who is trying to communicate something specific to a deaf interpreter in the field. The app may be able to translate the interviewer's speech into the spelling of the word using a sign language alphabet.

4.9.3. Sourcing Braille vendors

The following information on Braille vendors and sign language services (next subsection) has been adapted from the [CBM's Accessible Meetings Toolkit](#).²⁷ Additionally, [Braille and Braille training services](#) are available at resources such as the Braille Institute.²⁸

Braille comes in two grades: Grade 1 (uncontracted) and Grade 2 (contracted). Grade 1 Braille is a letter-for-letter substitution of its printed counterpart. Grade 2 Braille uses "contractions" that substitute letter groups with shorter sequences. For example, "the" is usually a single character in Grade 2 Braille. Grade 2 is often used to reduce the amount of time needed to both read and type Braille documents, and to reduce the amount of special embossed paper needed.

Some people may only be able to read one type of Braille, so you should determine which Grade is preferred by respondents.

Braille translations and printing services should be requested early in the planning process. To find Braille providers, you can ask for recommendations from a local OPD for blind and partially sighted persons. The Braille provider will need to be sent an unformatted digital document (i.e.,

²⁷ Christian Blind Mission (CBM) (2020, May). [Toolkit: Accessible Meetings](#). Available at https://www.internationaldisabilityalliance.org/sites/default/files/accessible_meetings_toolkit.docx.

²⁸ [The Braille Institute](#). Available at <https://brailleinstitute.org/>.

without text formatting like bullet points) prepared in a common word processing program. As a general rule, Braille uses three sheets of paper for every one page in standard print.

4.9.4. Sourcing sign language interpretation vendors

Sign language interpreters are needed on the exact dates and times of when the survey is implemented.

Sign languages are natural languages that have the same linguistic properties as spoken languages. They have evolved over the years in different deaf communities and vary greatly between countries and regions. In fact, some countries have more than one sign language or dialect. A single universal sign language does not exist. However, an auxiliary language, often referred to as International Sign, has developed for use at international gatherings.

International Sign is not a fully-fledged language, but it is a communication solution when having to provide access to a diverse audience. It cannot replace national sign languages, and although not optimal, it is an acceptable solution in international-level contexts. International Sign may not be understood by all sign language users, so it is important to check with respondents on their language and interpreter preferences. For more information on International Sign, the World Federation of the Deaf (WFD) and World Association of Sign Language Interpreters (WASLI) have provided a resource, [Frequently Asked Questions about International Sign](https://wasli.org/wp-content/uploads/2022/11/FAQ-on-IS-June-17-2019-FINAL-included-IS.pdf).²⁹

Deaf, hard-of-hearing, and deafblind persons who use sign language as a mode of communication need sign language interpretation to ensure equal access to information and participation. Interpretation is usually carried out by either individual sign language interpreters or deaf–hearing interpreter teams.

A sign language interpreter is a trained professional who is fluent in two or more (sign and/or spoken) languages; they interpret between a source language and a target language, and they mediate across cultures. The role of the interpreter is to interpret between people who use a signed language and a spoken language, and to provide complete and accurate information to deaf and hearing persons.

The interpreter's task is to facilitate communication, ensuring equal access to information and participation. Depending on the length of surveys and number of people surveyed, there may need to be two interpreters present. Additionally, if survey venues are used, the team will usually be composed of three interpreters to allow for periods of rest.

²⁹ World Federation of the Deaf (WFD) and World Association of Sign Language Interpreters (WASLI) (2019, June). [Frequently Asked Questions about International Sign](https://wasli.org/wp-content/uploads/2022/11/FAQ-on-IS-June-17-2019-FINAL-included-IS.pdf). Available at <https://wasli.org/wp-content/uploads/2022/11/FAQ-on-IS-June-17-2019-FINAL-included-IS.pdf>.

Sign language interpreters can be deaf or hearing persons. They should always carry appropriate sign language interpreter qualifications from their respective country. Deaf interpreters typically work in tandem with hearing interpreters, but not always. **A deaf–hearing interpreter team** ensures that the spoken language is interpreted into a form of sign language that is most accessible for as many deaf individuals as possible. And, in turn, the team ensures that the deaf person can share their messages successfully in the spoken language. WASLI provides information on the role of sign language interpreters.³⁰

International Sign may not be understood by all sign language users, so it is important to check with respondents on their language and interpreter preferences.

Finding sign language interpreters

For national sign language interpreters, the relevant national association of the deaf or the national interpreter association can be contacted (see links below). In the context in which no formal interpreters exist, the relevant national association of the deaf will be able to recommend appropriate interpreters.

The following links may be useful for finding sign language interpreters for International Sign and other sign languages:

- For International Sign interpreters: [WFD-WASLI Accredited International Sign Interpreter List](#)³¹
- For national sign language interpreters in Europe: [European Union of the Deaf](#),³² [European Forum of Sign Language Interpreters](#)³³
- For national sign languages around the world, contact one of the national associations of the deaf that are [members of the World Federation of the Deaf](#).³⁴

Guide interpreters for deafblind persons

Deafblind persons often use **guide interpreters** who facilitate communication as well as orientation, so that the deafblind person understands what is happening in their environment. A variety of communication methods are used depending on whether the person has some hearing or some vision. Some methods of communication include speech, sign language, tactile

³⁰ World Association of Sign Language Interpreters (WASLI) (2014). [Statement on the Role of Sign Language Interpreters](#). Available in English, Arabic and Spanish at <https://wasli.org/sign-language-interpreters/role-of-interpreters/>.

³¹ World Federation of the Deaf (WFD) and World Association of Sign Language Interpreters (WASLI). [International Sign \(IS\) Accredited Interpreters](#). Available at <https://wasli.org/sign-language-interpreters/is-accredited-interpreters/>.

³² [European Union of the Deaf](#). Available at <https://www.eud.eu>.

³³ [European Forum of Sign Language Interpreters](#). Available at <http://efsl.org>.

³⁴ [Members of the WFD](#). Available at <https://wfdeaf.org/who-we-are/members/>.

communication, objects of reference, picture symbols, or any combination of these methods. Guide interpreters work on a one-to-one basis with deafblind persons and do not typically serve multiple deafblind persons simultaneously. Often, more than one guide interpreter is needed to support a deafblind person.

Deafblind persons often establish a deep rapport with interpreters, and together they establish a highly individualized system of communication. Since there are very few professionally trained guide interpreters, family members will often serve as guide interpreters. When working with guide interpreters, speakers may need to allow more time for interpretation, especially if the deafblind respondent communicates through tactile signing by spelling out each letter of each word. It may not always be possible to adjust the pace completely for deafblind respondents so flexibility in time use for the interview is needed.

Guidelines for hiring and working with sign language and guide interpreters

The first list is directed at the survey organizers, while the second list provides tips that should be passed on to interviewers.

- Interpreters should be booked as soon as organizers determine the exact times their services will be needed. There are shortages of interpreters in most countries, and sometimes it is difficult to guarantee this service.
- If interpreters are required for more than one hour, at least two interpreters must be provided.
- Interpreters must be given appropriate break times, as they are co-working at all times, supporting their colleagues.
- Background materials, including the questionnaire with the names of relevant people, must be sent to the interpreters prior and at least a week in advance. This will enable the interpreters to provide a higher quality of service.
- Sign language interpreters must be visible; surveys should be given where there is appropriate lighting. Guide interpreters and deafblind respondents will usually sit close together and will require a setup that is unique to the needs of the deafblind respondent. For example, they may require face-to-face seating with their interpreter if using certain forms of tactile sign language.
- The organizers are responsible for adequate remuneration of professional sign language and guide interpreters, similar to spoken language interpreters. Depending on the assignment and availability of interpreters in the survey location, this may include appropriate lodging and travel-cost reimbursements.
- A practical way to make sign language interpretation available is to allow interviewers to book an appointment with the assigned sign language interpreter (e.g. for the specific

region) when the interviewer encounters a deaf person and thus determine the need for sign language interpretation. A family members can also work as a proxy though it comes with the risk of bias.

Interviewers should be informed of the following, so that they will enable interpreters to effectively carry out their role.

- Speech should be natural and at a regular pace.
- Slight delays in sign language interpretation are expected. Longer delays for the interpretations for deafblind persons — often double the time to speak — should be expected.
- Interviewers should verify that the sign language interpreters can hear them sufficiently for interpretation.
- Interviewers should avoid jargon, idioms, and acronyms. They should refer to the full name of an entity and not assume knowledge of abbreviations.

4.10. Planning accessible transportation and venue

Whether you use persons with disabilities as interviewers, or you interview persons with disabilities, you will need to plan accessible transportation and possibly venues.

Accessible transportation begins with accessible outreach. There needs to be an accessible way to invite people in an inclusive manner.

If much of your survey will be online, do you have the budget and people to travel to potential respondents in isolated or rural areas without access to the internet? Will you need to invite populations to a centralized location to survey many people at once? An example where a centralized location was used to survey is the [Profiling of Persons with Disabilities in Las Piñas 2021 \(Word doc\)](#).³⁵

Many circumstances will require you to make accessible transportation arrangements. You should plan where and when you can arrange things, according to your resources. And you should keep the following considerations in mind:

- Persons with disabilities often need more flexibility. Schedule transport arrangements for when they do not need to arrange childcare.

³⁵ Las Pinas Persons with Disability Federation, Inc. (2021). [Profiling of Persons with Disabilities in Las Pinas City 2021](https://cbm-global.org/wp-content/uploads/2023/08/Data-Profiling-Las-Pinas-Philippines-Case.docx). Available at <https://cbm-global.org/wp-content/uploads/2023/08/Data-Profiling-Las-Pinas-Philippines-Case.docx>.

- Locations for parking, or for embarking and disembarking transportation, should not be in a place where traffic is dangerous.
- Paths between the transportation and the venue should be very intuitive, short, and safe.
- If you need to arrange the vehicle, you may need to consider if it has a ramp and space for a wheelchair.
- In some countries, consider where you invite deaf persons. Even with interpreters, they might feel out of their element and less open with answers. Instead, consider going to places where deaf persons meet. They will likely have tight knit communities with their own meeting spaces, and they will feel more open in those settings.

More information is available in Chapters 6 and 8 of the [CBM's Accessible Meetings Toolkit](#)³⁶ and the checklist for key considerations for venues in [Annex 2: Key accessibility considerations for venues](#).

4.11. Designing and building data collection

4.11.1. Consent

Before the survey questions, it is necessary to have an introductory consent section. As described by the [World Blind Union and CBM Global's Accessibility GO](#) guide:³⁷

Obtaining free, prior and informed consent for use of personal data and images is a legal obligation. For this to happen, all data collection processes must be fully accessible, using respectful and inclusive methods of communication, so that all persons with disabilities can make informed and independent choices about the use of their personal information.

This is applicable to all types of data, be this use of images, surveys, feedback mechanisms, registration processes, personal testimonies, case studies, campaigns.

It is also important to ensure that consent forms are available in local languages, including sign language and multiple formats such as Braille, large print and Easy Read versions, as well as child-friendly versions where applicable.

For a variety of reasons, persons with disabilities may have reason to fear giving information about themselves. As a result, an explanatory text should be included for persons with

³⁶ Christian Blind Mission (CBM) (2020, May). [Toolkit: Accessible Meetings](#). Available at https://www.internationaldisabilityalliance.org/sites/default/files/accessible_meetings_toolkit.docx.

³⁷ World Blind Union (WBU) and CBM Global Disability Inclusion (2020). [Accessibility GO! A Guide to Action](#). Available in English, French and Spanish at <https://cbm-global.org/resource/accessibilitygo-a-guide-to-action>.

disabilities; this text should explain what they are committing to if they agree to participate, and it should explicitly highlight which sections are optional and which are compulsory. Respondent should be informed about which information may become shared or public.

Obtaining consent from persons with disabilities can be challenging for interviewers who do not have experience in interacting with persons with disabilities. As described in [Section 4.13.2 Accessible communication](#), it is important for interviewers to learn how to communicate with persons with disabilities effectively.

4.11.2. Questionnaire design and formatting

In designing questionnaires, the barriers to communication between interviewers and respondents should be considered; these could be attitudinal, environmental, or institutional barriers.

Persons with disabilities often have higher rates of unemployment and lower rates of education. Therefore, the questionnaire should be designed for audiences who have limited literacy, limited technical knowledge, and a lack of access to technology. This also helps in other scenarios (i.e., not related to disabilities).

For persons with learning or reading disabilities, iconography and visual cues can be included, enabling more people to understand the survey firsthand. The following items should be included in the design of the questionnaire. How these items can be accomplished is discussed in the next sections.

- Prioritize clear language, multiple formats, and compatibility with assistive technologies.
- Feature web accessibility, mobile optimization, and clear error messaging.
- Conduct pilot tests with diverse disability groups and establish robust feedback mechanisms.

The design guidelines, especially for digital surveys, are guided by the [W3C Content Accessibility Guidelines \(WCAG 2.2\)](#).³⁸ These are organized into four guiding principles, the [POUR principles](#).³⁹

- **Perceivable (P):** Can people use one of their senses to perceive your survey content? For example, does each video have an audio description for blind users? Do images have Alt text for people using screen readers, such as deafblind users?
- **Operable (O):** Can people interact with your digital content regardless of disability? For example, can mobility-disabled users navigate your survey without having to use a

³⁸ World Wide Web Consortium (W3C) (2024). [Web Content Accessibility Guidelines WCAG 2.2](https://www.w3.org/tr/wcag22). Available at <https://www.w3.org/tr/wcag22>

³⁹ United Nations. [Accessibility Guidelines for UN Websites](https://www.un.org/en/webaccessibility/). Available at <https://www.un.org/en/webaccessibility/>.

mouse, e.g., by using keyboard navigation or a sip-and-puff switch? Does your survey have [proper headlines](#),⁴⁰ a proper content hierarchy, and [proper content structure](#)⁴⁰ to make it easy to navigate for screen reader users?

- **Understandable (U):** Does your survey make it clear how to operate the page? Does your survey label where and what input is required of the user? For multi-page surveys, does your survey maintain predictable navigation elements in the same locations on every page? If a user inputs an answer incorrectly, are error messages clear?
- **Robust (R):** Can your online or digital survey be accessed by people using many different types of devices? Will people be able to complete your survey on their mobile phones, on tablets in either portrait or landscape mode, or on library computers with limited capabilities? Does your survey have properly nested tags to make it easy for any browser or device to display it properly?

To achieve many of these principles, the survey should be designed with [a content hierarchy in mind, with proper headlines and labels](#).⁴¹ You can think of it this way: When you look at a newspaper, the size and importance of headlines and content are in a predictable visual hierarchy. The top headline is predictably the largest and most important. It is easy to correlate which subheadlines are under the main article headlines. All content, such as lists and blockquotes, is easily identified.

The next sections on ***Questionnaire Design*** concern how to handle specific graphical elements.

Colours

Colour should not be the only way you convey meaning in your survey. For instance, do not use different coloured fonts to designate which questions are for men versus those for women.

Many people are **colour-blind**,⁴² and almost half of them do not know they are colour-blind.⁴³ Your designs should be tested using [red-green colour-blindness simulators](#)⁴⁴ to ensure that information will not be lost if viewed by a respondent with colour-blindness.

⁴⁰ World Wide Web Consortium (W3C) Web Accessibility Initiative. [Page Structure Tutorial](https://www.w3.org/WAI/tutorials/page-structure/). Available at <https://www.w3.org/WAI/tutorials/page-structure/>.

⁴¹ World Wide Web Consortium (W3C) (2024). WCAG 2.2 Understanding Docs. [Headings and Labels](https://www.w3.org/WAI/WCAG22/Understanding/headings-and-labels). Available at <https://www.w3.org/WAI/WCAG22/Understanding/headings-and-labels>.

⁴² Enchroma. [Fact about Color Blindness](https://enchroma.com/pages/facts-about-color-blindness). Available at <https://enchroma.com/pages/facts-about-color-blindness>.

⁴³ Dieck, W.B. (2023, May). [How to Tell If You're Color Blind](https://thewell.northwell.edu/healthy-living-fitness/color-blind-test). The Well. Available at <https://thewell.northwell.edu/healthy-living-fitness/color-blind-test>.

⁴⁴ a) Colblindor. [Coblis - Color Blindness Simulator](https://www.color-blindness.com/coblis-color-blindness-simulator/). Available at <https://www.color-blindness.com/coblis-color-blindness-simulator/>. b) Michel Fortin. [Sim Daltonism. The Color Blindness Simulator](https://michelf.ca/projects/sim-daltonism/). Available at <https://michelf.ca/projects/sim-daltonism/>.

For autistic persons, there is also an [autism colour guide](#)⁴⁵ to consider. Colours that are considered **good for autistic persons** are

- Green
- Blue
- Most of all, neutral colours such as black, white, grey, beige

The following are considered **bad for autistic persons** as these may cause distraction, discomfort, etc.

- Reds
- Yellows
- Neon colours

Maintaining good colour contrast is necessary for ensuring your survey is readable. For instance, use an off-white background with dark-coloured text, or use a darker background and a light font colour.

The arrangement where light text is on a dark background is called “night mode” or “dark mode.” [Night mode](#)⁴⁶ is preferred by dyslexics as well as by those with affected eyesight. Most cited statistics say that over 80% of users use dark mode on their devices.⁴⁷

Black text on white paper or screen is a good default. However, a slightly off-white or dark-blue background may be less strain on the eyes. When concentrating on too strong a contrast, you may start to see red and green shadow images around text. This gives an effect described as “moving letters” or “dizzying text.” This is especially true for long documents and for people who read through a magnifying glass.

Images

Your survey may include images (e.g., a map, pictures showing different types of living conditions). In these cases, it is best to **avoid laying text over images**; this makes the text difficult to read.

Images of text should also be **avoided**. The words will not be viewable by a screen reader. Even if Alt text is used for the image, the text will not be included in the headline hierarchy.

⁴⁵ Clayton, M. (2021, April). [The Ultimate Guide to Autism Friendly Colours](https://www.experia.co.uk/blog/ultimate-guide-to-autism-friendly-colours/). Experia. Available at <https://www.experia.co.uk/blog/ultimate-guide-to-autism-friendly-colours/>.

⁴⁶ Kohler, T. and Zhang, A. (2023, August). [Dark Mode: How Users Think About It and Issues to Avoid](https://www.nngroup.com/articles/dark-mode-users-issues/). NN/G. Available at <https://www.nngroup.com/articles/dark-mode-users-issues/>.

⁴⁷ Wise, J. (2025, November). [How Many People Use Dark Mode in 2025? \(Usage Statistics\)](https://earthweb.com/blog/how-many-people-use-dark-mode). Earthweb. Available at <https://earthweb.com/blog/how-many-people-use-dark-mode>.

It is also recommended to **avoid using complex graphics** such as tables or graphs, which are likely to require complicated Alt text. Unless they are invaluable to understanding the question, complex graphics will make survey participation more difficult for screen-reader users, persons with low vision, persons with cognitive or neurological disabilities, or persons with reading disabilities.

Graphics made to appear with motion may trigger seizures or other motion-sensitive issues.

Alt text

Some of the previous discussions about images mentioned their Alt texts. An image on digital media (e.g., a web page) requires Alt text, which is intended to help users understand what the content of an image is. It not only helps blind users. If an image fails to load on a respondent's survey page (due to low bandwidth or another reason), the Alt text will appear instead, allowing users to still understand what content was supposed to be there.

[Alt text is different from captions.](#)⁴⁸ A graduation photo caption may say "Class of 2025," but the Alt text would say something along the lines of "A group of students in graduation gowns standing on a lawn, throwing their graduation caps into the air."

A common mistake is to write Alt text starting with "an image of" or "a picture of." Screen readers announce the presence of an image before reading the Alt text. So Alt text like that will result in the screen reader reading "image: image of a house cat."

To set decorative images to be ignored by screen readers, set their Alt tag to "" empty quotes. Microsoft Office documents have [a native function to set items as decorative](#).⁴⁹

4.11.3. Special considerations for written surveys

If you are distributing written surveys, all materials should be available in Easy Read, large print, and Braille, if possible. Questionnaire design and formatting for written surveys should keep this in mind. The following subsections provide guidelines for written surveys, which have been adapted from [CBM's Accessible Meetings Toolkit](#).⁵⁰

Easy Read

"Easy Read" describes a way of making written information easier to understand for persons with intellectual disabilities, although it can be helpful for many people, including non-native-

⁴⁸ WebAIM (2021, October). [Alternative Text](https://webaim.org/techniques/alttext). Available at <https://webaim.org/techniques/alttext>.

⁴⁹ Microsoft Office Support. [Add alternative text to a shape, picture, chart, SmartArt graphic, or other object](https://support.microsoft.com/en-us/office/add-alternative-text-to-a-shape-picture-chart-smartart-graphic-or-other-object-44989b2a-903c-4d9a-b742-6a75b451c669#ID0EDFBJBBDDBD). Available at <https://support.microsoft.com/en-us/office/add-alternative-text-to-a-shape-picture-chart-smartart-graphic-or-other-object-44989b2a-903c-4d9a-b742-6a75b451c669#ID0EDFBJBBDDBD>.

⁵⁰ Christian Blind Mission (CBM) (2020, May). [Toolkit: Accessible Meetings](https://www.internationaldisabilityalliance.org/sites/default/files/accessible_meetings_toolkit.docx). Available at https://www.internationaldisabilityalliance.org/sites/default/files/accessible_meetings_toolkit.docx.

language users. Easy Read uses basic language and may use pictures to illustrate information. It aims to help persons with intellectual disabilities understand information more easily.

To convert documents into Easy Read, resources are available for reference,⁵¹ with the following guidelines summarizing the essential features:

- Use short, clear sentences with one piece of information in each sentence.
- Include clear instructions, facts, and statements.
- Limit detailed background information.
- Eliminate jargon, acronyms, and abbreviations.
- Be consistent with words and terminology.
- Avoid using contractions.
- Use active verbs.
- Use fonts at least 16px in size for text, and at least 18px in size for headings.
- Use a Sans Serif font.
- Aim for no more than 15 words per sentence.
- Include a word bank (keywords with definitions) in addition to explaining words as you use them.
- Maintain plenty of white space on each page.
- Print with black text on a white or very light background.
- Keep the document as short as possible.
- Use pictures and graphics, such as speech or thought bubbles, arrows, colours, and thumbs up or down. Pictures should be large and clear, and they should directly reflect and support text. Multiple pictures can help to create a visually supportive document.
- Consult with persons with intellectual disabilities to create documents and seek feedback before publishing.

If you develop an Easy Read version of the questionnaire, it should be integrated into survey operations and evaluated to learn whether the end result is consistent with the original, as you would with any other translation. Ideally, Easy Read Versions should be considered equivalent to any translation of a survey instrument and subject to the same evaluation to assure data quality.

⁵¹ Change. [How To Make Information Accessible: A guide to producing easy read documents](https://www.changepeople.org/images/001-how-to-make-information-accessible.pdf). Available at <https://www.changepeople.org/images/001-how-to-make-information-accessible.pdf>.

Braille

Some persons who are blind, deafblind, or partially sighted use Braille, which is a tactile writing system using embossed dots on paper. However, not all blind, deafblind, and partially sighted persons can read Braille, so it is important to ask respondents if they require Braille versions of documents. Respondents should also be asked if they prefer Grade 1 or Grade 2 Braille ([see Section 4.9.3. Sourcing Braille vendors](#)).

One misconception about Braille is that it is universal. In fact, every spoken language has its own form of Braille. As a result, you should determine which versions of Braille will be needed, and you may need to have the survey translated into several languages in Braille.

Large print

Large print refers to the formatting of a text document in which the typeface (or font), and sometimes the medium, are considerably larger than usual; this is done to accommodate persons with low vision. It is important to note that for persons with low vision, visual acuity and individual needs vary greatly. It is important to ask people requiring large print if they have specific requirements regarding the formatting. You can convert documents into large print, or you can ask an OPD for persons with low vision if they can recommend a consultant to do this work.

To create documents with large print, use the following guidelines:

- Use at least an 18px-size font, and preferably at least 20px, bold, Sans Serif, mono- or fixed-space font.
- Ensure a line spacing (leading) of at least 1.5 to provide good readability and to help reduce eye strain.
- Make titles and headings larger than the text of the document and use both upper- and lower-case letters.
- Align titles and headings to the left, where possible.
- Ensure double spacing between paragraphs.
- Make sure that page numbers are the same font style and size as the document text and that they are positioned in the top right corner.
- Use paper that has a matte or dull finish to reduce glare, preferably with an eggshell colour to minimize eye strain.
- Use asterisks, dashes, double bolding, or underlining to bring emphasis to an individual word, rather than using colour or italics for emphasis.
- Isolate graphs, charts, and images on individual pages, accompanied by explanatory captions.

- Note that the enlargement feature on a copy machine does not produce large print documents; therefore, documents need to be formatted to meet large print specifications.
- Characteristics that have the greatest effect on the readability can be ranked as follows: spacing, font size, contrast, and font style.

4.11.4. Special considerations for web-based surveys

When designing web-based surveys, ensure they are compatible (i.e., responsive) with various devices (e.g., mobile phones, tablets, computers) and web browsers. Ensure your survey meets web accessibility standards (WCAG) and rigorously test it with persons with disabilities to ensure both technical accessibility and cognitive understanding.

To ensure that no respondent is left behind, the survey platform should provide a flexible interface, allowing respondents to choose how questions are presented and answered.

Key best practices include:

- **Alternative formats:** Offering questions in a range of alternative formats, such as Sign Language videos and "Read Aloud" audio functions.
- **Visual Customization:** Providing users with the options to adjust themes, colour contrast, and text size dynamically to suit their visual requirements.
- **Audio input:** Offering respondents the choice to answer open questions by leaving a voice message, which is then automatically transcribed into text.

Considerations for a digital or web-based version of the survey also include:

- Make sure the survey web page or app is compatible with screen readers.
- Minimize flashing images and consider colour contrast. One resource to test if your text-to-background colour contrast is accessible is [WebAIM's colour contrast checker](#).⁵²
- Whether it is a web page or other type of digital document, [use the digital medium's built-in content structure](#)⁴⁰ for headlines, lists, tables, and other content types.
- Properly [nest headlines to create a proper content hierarchy](#).⁵³ Persons with visual or mobility disorders often scan through a document by reading the headline structure.
- Make the font size at least 16px in size. If possible, 18px or larger is better.
- Provide captions for any audio and video included in the web page or app.
- Include clearly defined buttons to assist in finding content and information.

⁵² WebAIM. [Contrast Checker](https://webaim.org/resources/contrastchecker/). Available at <https://webaim.org/resources/contrastchecker/>.

⁵³ World Wide Web Consortium (W3C) Web Accessibility Initiative. [Page Structure Tutorial](https://www.w3.org/WAI/tutorials/page-structure/). Available at <https://www.w3.org/WAI/tutorials/page-structure/>.

- If your document has links, [use descriptive link text](#).⁵⁴ Persons with visual or mobility disorders often scan through a document by tabbing through all the document's links. If every link's text says something like "click here," it is of no use to such users.
- Adapt appearance between portrait and landscape viewing modes on tablets and mobile phones.
- It is good to offer digital documents in multiple formats. One example is having a survey in Microsoft Word and also online in HTML.
- Remember that persons with disabilities have problems with PDF documents compared to any other digital medium.⁵⁵

Resilience to poor or intermittent connectivity accessibility means ensuring that a lack of bandwidth does not lead to a loss of data or respondent frustration. Implementing an "Offline-First" architecture can help respondents when they lose connection, e.g., by providing a clear notification that they are offline. Respondents should be able to continue the survey without interruption. This can e.g. be done by saving answers locally and synchronizing them automatically with cloud once a stable connection is restored. Further, robust state management ensures that if a respondent can return to the survey on the same device and is greeted with their progress intact. This "pick up where you left off" functionality is vital for maintaining high completion rates.

When making a web-based survey, consent becomes even more important. Persons with disabilities can have legitimate fears about putting information about themselves out on the internet. Make it clear how their data will be handled.

A hybrid survey can have an in-person questionnaire as well as a digital or web-based version. It is one way to reach more persons with disabilities.

The following resources may also be helpful for the design and formatting of the digital or web-based survey:

- [Mobile Accessibility at W3C](#)⁵⁶
- Mobile Accessibility: [How WCAG 2.0 and Other W3C/WAI Guidelines Apply to Mobile](#)⁵⁷

⁵⁴ World Wide Web Consortium (W3C) (2024). WCAG 2.2 Understanding Docs. [Link Purpose \(In Context\) \(Level A\)](#). Available at <https://www.w3.org/WAI/WCAG22/Understanding/link-purpose-in-context>.

⁵⁵ WebAIM (2019, September). [Screen Reader User Survey Results #8](#). Available at <https://webaim.org/projects/screenreadersurvey8/#pdf>.

⁵⁶ World Wide Web Consortium (W3C) Web Accessibility Initiative. [Mobile Accessibility at W3C](#). Available at <https://www.w3.org/WAI/standards-guidelines/mobile/>.

⁵⁷ World Wide Web Consortium (W3C) (2015). [Mobile Accessibility: How WCAG 2.0 and Other W3C/WAI Guidelines Apply to Mobile](#). Available at <https://www.w3.org/TR/mobile-accessibility-mapping/>.

- [How to make your video accessible and reach a bigger audience](#)⁵⁸
- [App Accessibility is The New Must in Mobile Development](#)⁵⁹

4.11.5. Special considerations for phone surveys

Interviewing people via the phone creates barriers for deaf and hard-of-hearing persons and persons with communication difficulties. Phone-based surveys might face sample bias, as persons with disabilities might have less access to phones and might face barriers in communicating with the phone interviewer, risking leaving these populations out of the survey.

Solutions to address barriers include, among others:

- Carry out the survey via an online platform with automatic captions.
- Use a typing function to ask the questions and get responses.
- Use a paper questionnaire that is sent to the respondent.
- Use video relay service, if available, where the respondent and interviewer communicate via a sign language interpreter. However, note that sometimes video relay service interpreters do not necessarily have the background and information about the survey, and misunderstandings can occur.
- Meet physically with the deaf respondent and communicate via a sign language interpreter.

When the phone-based survey is turned into written communication, the questions should be written as spoken and include all the answer categories.

Note that the use of formats where reading and writing are needed (e.g., paper questionnaire or typing on an online platform) can be complicated for some deaf persons who are not skilled in written language.

For household surveys, it is important to be aware of the cultural context where stigma on disability might lead family members to hide a person with disabilities. This is particularly easy in phone surveys, where the interviewer cannot see the household by themselves. Accessible communication techniques should be applied and developed for the concrete cultural context to increase the inclusion of persons with disabilities.⁶⁰

⁵⁸ Shearer, S. (2016, October). [How to make your video accessible and reach a bigger audience](https://abilitynet.org.uk/news-blogs/how-make-your-video-accessible-and-reach-bigger-audience). AbilityNet. Available at <https://abilitynet.org.uk/news-blogs/how-make-your-video-accessible-and-reach-bigger-audience>.

⁵⁹ Buildfire (2024, September). [App Accessibility is The New Must in Mobile Development](https://buildfire.com/app-accessibility-mobile-development/). Available at <https://buildfire.com/app-accessibility-mobile-development/>.

⁶⁰ Washington Group on Disability Statistics. [Using the Washington Group Short Set in a Telephone Survey](https://www.washingtongroup-disability.com/wg-blog/using-the-washington-group-short-set-in-a-telephone-survey-267/). Available at <https://www.washingtongroup-disability.com/wg-blog/using-the-washington-group-short-set-in-a-telephone-survey-267/>

4.11.6. Writing questions and other content in accessible formats

You can develop survey questions in accessible formats by using the [accessible communication skills presented in Section 4.13.2](#). Cooperating with OPDs can help with keeping the culture and context in mind. Survey content beyond the questions also needs to be written in accessible communication.

Reading level

Survey wording should be easy to understand. This is especially important if survey respondents will read the survey questions, either on paper or on a web page.

Your content should be at an “accessible reading level”, which generally means that the text can be easily read and understood by a 12- to 15-year-old who is in school, or anyone within reading levels 7 and 9 on the reading level scale. With the Hemingway App,⁶¹ you can [test your content’s reading level](#).

Bulleted lists

In addition to considering the text’s reading level when creating survey questions, you should make use of bulleted lists in a manner appropriate for (web) surveys.

[Bulleted lists](#) should be easy to grasp.⁶² Each list item should be succinct and ideally of similar length. Numbered lists should only be used for sequential items. Nested lists should only be used when necessary, and if so, layers of nested lists should be avoided.

The purpose of a list, in the context of accessibility, is to help the user understand and remember a lot of information or instructions. By making list items succinct and by giving each list item a similar reading cadence, the information will hopefully be easy to absorb and remember. The following is a good unordered list with these characteristics:

- Do big dogs think they’re small dogs?
- Do small dogs think they’re big dogs?
- Do heavy dogs think they’re lap dogs?
- Do shedding dogs think they’re hairless dogs?

Each list item is short, and each has a similar sentence structure and cadence.

⁶¹ Hemingway Editor. [Hemingway App](https://hemingwayapp.com/). Available at <https://hemingwayapp.com/>.

⁶² Loranger, H. (2017, April). [7 Tips for Presenting Bulleted Lists in Digital Content](#). NN/G. Available at <https://www.nngroup.com/articles/presenting-bulleted-lists/>.

Supplementary content

If the content is not at an accessible reading level, supplementary materials can be provided. The [supplementary content can aid respondents](#) in understanding the content,⁶³ and the following are examples of possible forms.

- **Graphical aids:** A graphic can be used to illustrate complex concepts in the text; this can include icons and simple line drawings.
- **Summaries:** You should avoid complexity in your survey, but it may sometimes be unavoidable. For instance, perhaps you are collecting a lot of information to measure complex social issues, and you need to explain your survey methods or data-sharing policies with respondents. You could provide supplementary content in which you summarize long passages of methodology or policies, with brief and easily understood paragraphs.
- **Audio version:** The text content can be made into an audio version and provided as supplementary content. For digital surveys, this can help persons with visual disabilities, e.g., low vision. It can also be helpful to persons with cognitive disabilities, reading disorders, and neurological disabilities; they can read along with the narrated content, helping them comprehend and retain what they read. Persons with mobility disabilities can also use audio to listen to the content without having to work to scroll or navigate the document.
- **Web content:** A link to web content that has simplified explanations could be provided as supplementary content. For example, complex words could be linked to pages that define and explain them: “[There is a bibliography](#) to show our sources and methods.” This sample text contains a link, located at the blue underlined text, that would lead to an online explanation of the bibliography (<https://www.grammarly.com/blog/bibliography>).
- **Plain language version:** Another option would be to link a plain language paper on the topic you are surveying about. For instance, this sentence: “Those who want to understand the topic better, can refer to the [Survey Report](#),” The blue underlined text contains a link to an online plain-text document about the survey.
- **Links to alternative reading levels:** You can also overtly state the reading level of the content, and then provide links to comparable documents or websites that have alternative reading levels.

⁶³ World Wide Web Consortium (W3C) (2025). WCAG2.2 Understanding Docs. [Reading Level](#). Available at <https://www.w3.org/WAI/WCAG22/Understanding/reading-level.html>.

Resources for preparing questions and supplemental content

The following list is a compilation of resources that can be used in preparing survey questions as well as certain forms of supplemental content, such as plain text or audio content.

- Plain text paraphrasing of technical details for POUR Guidelines:
[WCAG 2.1, POUR Guidelines](https://www.w3.org/WAI/standards-guidelines/wcag/glance/),
<https://www.w3.org/WAI/standards-guidelines/wcag/glance/>
- [Plain text explanation of content structure and relationships](https://www.w3.org/WAI/WCAG21/Understanding/info-and-relationships.html),
<https://www.w3.org/WAI/WCAG21/Understanding/info-and-relationships.html>
- [Tips for using bullet points and numbered lists](https://www.nngroup.com/articles/presenting-bulleted-lists/),
<https://www.nngroup.com/articles/presenting-bulleted-lists/>
- [WebAIM Accessible Writing Guide](https://webaim.org/techniques/writing/), <https://webaim.org/techniques/writing/>
- [WebAIM Alt Text Writing Guide](https://webaim.org/techniques/alttext/), <https://webaim.org/techniques/alttext/>
- [Reading-level testing app: Hemingway App](https://hemingwayapp.com/), <https://hemingwayapp.com/>
- [Examples of supplemental content](https://www.w3.org/WAI/GL/wiki/Supplemental_content),
https://www.w3.org/WAI/GL/wiki/Supplemental_content
- [Cognitive Accessibility Design Pattern: Provide Alternative Content for Complex Information and Tasks](https://www.w3.org/WAI/WCAG2/supplemental/patterns/o7p02-alternative-content/),
<https://www.w3.org/WAI/WCAG2/supplemental/patterns/o7p02-alternative-content/>
- [An example using graphics and audio to aid the message](https://www.w3.org/WAI/wcag-curric/sam115-0.htm),
<https://www.w3.org/WAI/wcag-curric/sam115-0.htm>
- [Cognitive Accessibility Guidance](https://www.w3.org/WAI/WCAG2/supplemental/),
<https://www.w3.org/WAI/WCAG2/supplemental/>
- [Making Content Usable for People with Cognitive and Learning Disabilities](https://www.w3.org/TR/coga-usable/),
<https://www.w3.org/TR/coga-usable/>

4.11.7 Questions on disability from the Washington Group on Disability Statistics

The Washington Group on Disability Statistics⁶⁴ was formed to promote and coordinate international cooperation in generating statistics on disability that are suitable for censuses and national surveys.

The Group has developed several sets of questions to capture disability, such as the:

- Short Set on functioning consisting of six questions⁶⁵;
- Extended Set on Functioning⁶⁶;
- Child Functioning Module⁶⁷, which is designed to better identify all children with disability (in collaboration with UNICEF);
- Labor Force Survey Disability Module⁶⁸ intended for Labor Force Surveys and other surveys that collect data on employment (in collaboration with ILO).

These questions are intended as a supplement to surveys, not as a replacement for standard questions. Persons with disabilities should respond to all questions in the questionnaire in the same way as any other respondent, ensuring their full inclusion in the data collection.

4.12. Field testing and piloting the data collection instrument

Even if you follow all the proper guidelines, you will not truly know if the survey is accessible until persons with disabilities evaluate it. You should seek feedback from persons with disabilities on how accessible your questionnaire is. After piloting the questionnaire with a small group of persons with disabilities, their feedback should be incorporated before conducting the survey.

Ideally, persons with disabilities will be involved in the conception, writing, and implementation of the survey. Hopefully, you have persons with disabilities in your steering committee. At the very least, persons with disabilities should be the final judge on the accessibility of the survey.

⁶⁴ More information about the Washington Group on Disability Statistics is available at <https://www.washingtongroup-disability.com/>

⁶⁵ [WG Short Set on Functioning \(WG-SS\)](https://www.washingtongroup-disability.com/question-sets/wg-short-set-on-functioning-wg-ss/). Available at <https://www.washingtongroup-disability.com/question-sets/wg-short-set-on-functioning-wg-ss/>

⁶⁶ [WG Extended Set on Functioning \(WG-ES\)](https://www.washingtongroup-disability.com/question-sets/wg-extended-set-on-functioning-wg-es/). Available at <https://www.washingtongroup-disability.com/question-sets/wg-extended-set-on-functioning-wg-es/>

⁶⁷ [WG/UNICEF Child Functioning Module \(CFM\)](https://www.washingtongroup-disability.com/question-sets/wg-unicef-child-functioning-module-cfm/). Available at <https://www.washingtongroup-disability.com/question-sets/wg-unicef-child-functioning-module-cfm/>

⁶⁸ [WG ILO Labor Force Survey Disability Module \(LFS-DM\)](https://www.washingtongroup-disability.com/question-sets/wg-ilo-labor-force-survey-disability-module-lfs-dm/). Available at <https://www.washingtongroup-disability.com/question-sets/wg-ilo-labor-force-survey-disability-module-lfs-dm/>

4.13. Accessible communication and training of interviewers

Prior to the survey, you should develop a training plan for the survey team, interviewers and any relevant stakeholders. It should enable everyone to be more inclusive and thus help increase responses from persons with disabilities. To make use of OPDs' understanding of the community's social nuances, you should incorporate their input and their insights into inclusivity into the training of your team. E.g., OPDs can be consulted on how to train interviewers and survey teams in accessible communication and could work as trainers.

The training (which, for interviewers, should be part of their regular training in questionnaire and interviewing techniques) should also include attention to intersectionality (Section 4.13.1) and accessible communication (Section 4.13.2).

Persons with disabilities should be recruited and work as interviewers on equal terms as everyone else.

4.13.1. Intersectional training

Disabilities define only one type of marginalized group that needs to be included. Your team needs to learn about all types of marginalization — and their intersectionality. Race, ethnicity, indigeneity, gender, sexual orientation, economic status, religious affiliation, age, disability, education status, rural/urban location, and other factors affect each other. Your team will need to be familiar with intersectionality to both be inclusive of new and diverse team members and to be able to include as many respondents as possible.

There are various resources you can use to learn more. One example is UN Women and UNPRDP's [Intersectionality Resource Guide and Toolkit](#)⁶⁹. A more specialized example is a compilation from the World Health Organization (WHO): [Caregiver skills training for families of children with developmental delays or disabilities](#).⁷⁰

4.13.2. Accessible communication

Your team (of OPD members, interviewers and other survey team members) needs to prepare itself to effectively communicate with people of all social identities. Fortunately, there are resources to help with this. For example, the WHO's [Strategic Communications Framework for](#)

⁶⁹ UN Women and UNPRDP (2022). [Intersectionality Resource Guide and Toolkit](https://www.unwomen.org/sites/default/files/2022-01/Intersectionality-resource-guide-and-toolkit-en.pdf). Available at <https://www.unwomen.org/sites/default/files/2022-01/Intersectionality-resource-guide-and-toolkit-en.pdf>.

⁷⁰ World Health Organization (WHO) (2022). [Caregivers Skills Training for Families of Children with Developmental Delays and Disorders](https://www.who.int/teams/mental-health-and-substance-use/treatment-care/who-caregivers-skills-training-for-families-of-children-with-developmental-delays-and-disorders). Available at <https://www.who.int/teams/mental-health-and-substance-use/treatment-care/who-caregivers-skills-training-for-families-of-children-with-developmental-delays-and-disorders>.

[effective communications](#)⁷¹ has relevant information in the section “Planning Questions to Ensure Communications Are Accessible”.

It is important that interviewers are sensitised and trained on how to interact respectfully and effectively with persons with disabilities. Where feasible, they should be encouraged to use aides or visual cues to help facilitate communication—especially for respondents who may not communicate verbally.

Developing communication guidelines can help the survey team and interviewers to learn how to best communicate with persons with disabilities. E.g., instructions related to asking questions could include attention to:

- The importance of being patient and to repeat a question if asked, but not to reword it.
- The importance of interviewers not assuming to know the answer to a question because of what is seen. E.g., a person in a wheelchair might be able to walk, or a person who cannot speak or feed themselves may have no cognitive difficulties.
- It is not embarrassing to ask someone a question that seems obvious -- for example, asking a person with no legs if they have difficulty walking. The interviewer can explain from the beginning that to get consistent quality data, it is important to ask everyone all questions the same way - even if the respondent or the interviewer thinks the answer is obvious.

Correct terminology

Accessible communication is largely made possible by using the correct terminology when it comes to persons with disabilities. For instance, you do not want to upset a respondent by using outmoded, offensive terms.

The following disability language can be used by the survey team:

- All persons with disabilities [exclusive answer]
- Persons with an intellectual disability
- Autistic persons
- Persons with deafblindness
- Persons with a psychosocial disability
- Persons who are blind or partially sighted
- Persons with physical disabilities

⁷¹ World Health Organization (WHO) (2017). [WHO Strategic Communications Framework for Effective Communications](https://www.who.int/docs/default-source/documents/communicating-for-health/communication-framework.pdf). Available at <https://www.who.int/docs/default-source/documents/communicating-for-health/communication-framework.pdf>.

- Deaf persons
- Persons who are hard of hearing
- Sign language users
- Persons with a disability not mentioned above [specify other]

Communicating the survey for deaf persons

It is important to have a qualified and certified sign language interpreter to be able to fully understand the interviewer and the context. Communication barriers can occur if the sign language interpreter is not skilled or does not understand the local deaf person's culture, sign language, and background. In such cases, the interpreter cannot accurately interpret between a deaf and a hearing person.

For more on communicating with deaf persons, refer to the Sign Language Interpretation section in Chapter 5 of the [CBM's Accessible Meetings Toolkit](#).⁷²

Communicating the survey for blind persons

When the survey is face-to-face, the interviewer can simply read aloud the questions clearly. For digital surveys, a hybrid method can be useful, with offline materials (e.g., Braille versions) supplementing the digital survey. However, Braille may be considered a privileged format. In some countries, there may be only one Braille printer per major city. Screen readers may also not fully enable accessibility, even in countries where most people have smartphones; for instance, some phones do not support certain languages for screen reading. In order to reach most people, you should have alternative formats such as a read-out-loud option on a digital document.

Although widespread, the portable document format, PDF, is the least accessible digital format for persons with any disability. Web pages are usually more accessible, especially when screen readers or document read-out-loud options are functional. Web pages are also flexible; while PDFs can only be easily modified by the original creator, web pages can be adjusted by others to meet different requirements.

For more on communicating with blind persons, refer to the Braille section in Chapter 5 in [CBM's Accessible Meetings Toolkit](#).⁷³

⁷² Christian Blind Mission (CBM) (2020, May). [Toolkit: Accessible Meetings](#). Available at https://www.internationaldisabilityalliance.org/sites/default/files/accessible_meetings_toolkit.docx.

⁷³ Christian Blind Mission (CBM) (2020, May). [Toolkit: Accessible Meetings](#). Available at https://www.internationaldisabilityalliance.org/sites/default/files/accessible_meetings_toolkit.docx.

Communicating the survey for neurodivergent persons

Surveyors often rely on proxy respondents to collect information on neurodivergent persons. While this is a practical solution, it does introduce potential biases, since proxies may interpret or report experiences differently from the actual respondent.

An [accessible reading level \(see Section 4.11.6 Writing the questions\)](#) is essential for reaching persons with intellectual, cognitive, and neurological disabilities. Simplifying the language of questions, without altering their meaning, could improve comprehension and lead to more accurate and meaningful responses.

It would be ideal if a neurodivergent person could assist in formulating questions to adjust for possible misunderstanding. E.g., for the question “How many weeks have you been looking for a job?”, different interpretations are possible. A neurodivergent person may take it very literally and only count days in which they searched for a job.

Other considerations

It is also useful to expand your team’s knowledge and understanding of infants, toddlers, and children with disabilities, as well as those at risk for disabilities.

Another important topic that your team needs knowledge on is assistive technologies; [an instructive overview of Assistive Technologies](#)⁷⁴ is available on the WHO website.

The Washington Group on Disability Statistics has provided recommendations on how to communicate when it comes to disability⁷⁵. For instance, the Washington Group has determined that using the term “disability” results in the interviewer being uncomfortable; as a result, training on disability awareness is essential for interviewers. Because of this discomfort and the stigma that persons with disabilities and their family sense from society, they may answer no when in fact it is yes. Consequently, the Washington Group encourages creating questions using the WHO’s International Classification of Functioning, Disability, and Health (ICF) as a conceptual framework, in order to move away from medicalizing disability.

4.14. Asking the questions

If you conduct surveys in person, you should find out if a respondent needs to use a proxy, such as a family member, to answer questions. You should determine if they need a sign language

⁷⁴ World Health Organization (WHO). [Training in Assistive Products](https://www.who.int/teams/health-product-policy-and-standards/assistive-and-medical-technology/assistive-technology/training-in-products). TAP. Available at <https://www.who.int/teams/health-product-policy-and-standards/assistive-and-medical-technology/assistive-technology/training-in-products>

⁷⁵ Washington Group on Disability Statistics (2020, June). [Washington Group Methodology](https://www.washingtongroup-disability.com/fileadmin/uploads/wg/Documents/WG_Methodology.pdf). Available at https://www.washingtongroup-disability.com/fileadmin/uploads/wg/Documents/WG_Methodology.pdf

interpreter or an OPD representative. Also, the allotted time to collect data from persons with disabilities will usually be longer.

Before implementing the survey, you should have feedback from persons with disabilities on the accessibility of your questions. This input may also help streamline how to ask follow-up questions or confirm answers.

4.14.1. Phrasing questions

You may have written questions that gather quantitative data, but respondents may still misinterpret or have difficulty understanding those questions. They may misinterpret questions for many reasons, e.g., cultural or neurological reasons, or age differences.

For example, an interviewer may ask, “Do you want to have access to these job-seeking resources?” A person with autism may think, “Do I *want* them? It would be useful to have access to them, and I would probably use them a lot. But *want*? They don’t interest me, they cause me stress, and they don’t make me feel a sense of desire; they’re just utilitarian needs. So no, I would *not* want access.”

An interviewer may ask a question like “Do you have more access to technology at school or at home?” A blind interviewee may live in a household that has a lot of technology, but most of that technology may only be accessible to sighted family members. Their school may have much less technology, but it may have accessibility technology that the interviewee spends more time with, such as a Braille reader. As a result, the blind person may say, “I have a lot more access to technology at school.”

Because there are, in fact, too many possible reasons for misinterpretation, interviewers should make use of any insights from the local OPDs, information on [accessible communication \(Section 4.13.2\)](#), and other [materials made available to them \(Section 4.8\)](#). With a better understanding of the local culture and of the relevant disabilities, interviewers will be better prepared to ask the questions to collect data.

When surveys are conducted in person, respondents with neurological, cognitive, or learning disabilities may have difficulty interpreting the questions. In such cases, interviewers may need to carefully elaborate or rephrase questions to support understanding. However, rephrasing should be kept to a minimum and done in a way that preserves the original meaning of the question, so as not to affect data quality or comparability.

Interviewers should first assess the respondent’s level of understanding and only adapt the wording when necessary. Any reformulation should aim to elicit the same information that the original question was designed to capture, avoiding leading prompts or changes in intent that could impact data quality. While brief conversational clarification may be needed, interviewers

should remain focused on the core concept being measured. Interviewers will need to make use of their [disability communication training \(Section 4.13\)](#).

Importantly, these situations highlight the need for inclusive question design from the outset. Survey questions should be carefully phrased and tested in advance, including with persons who have neurological, cognitive, or learning disabilities, to reduce the need for rephrasing during interviews and to safeguard data quality.

4.14.2. Confirming responses

For reasons like the above, when asking questions to a blind person or a person with autism, you may need to confirm your respondent's answers. By paraphrasing the respondent's response or reading it back to them, you can ask for confirmation.

For example, perhaps a person with autism says their household consists of their mom, sister, and cousin. You may want to confirm the answer by asking, "So, it sounds like you have a mom, sister, and cousin living in your house, is that right? Do they each have their own place to sleep?"

It may turn out that they respond with "Oh, my sister doesn't have her own place to sleep in the apartment. She lives in the apartment next door, but comes over every day to help out, and we live in the same building, so she's part of the household." Although here, the desired information was revealed, you may need to clarify or modify the question further.

5. Country examples

5.1. Experience from Kenya

The Kenya National Bureau of Statistics (KNBS) has taken important steps to make its household surveys more accessible and inclusive of persons with disabilities. A key milestone was the inclusion of disability questions in the 2019 Population and Housing Census, after which most household survey questionnaires have incorporated a dedicated disability module. This has helped KNBS systematically identify and collect data on disability within its regular statistical operations.

A central element of KNBS's approach is collaboration with the umbrella organization United Disabled Persons of Kenya (UDPK). UDPK has been involved in survey planning, recruitment, and the training of enumerators. KNBS has invested in building the capacity of UDPK to better understand statistical processes, which has strengthened dialogue and cooperation. Working through an umbrella organization such as UKPD has proven more effective than engaging with multiple specialized groups individually. Further, they have jointly reviewed data collection tools to enhance accessibility and inclusivity (e.g., layout, language, and mode of administration). UDPK serves on Technical Working Groups on disability data.

Since the 2019 census, KNBS has actively recruited persons with disabilities as enumerators, giving them equal opportunities and, in more recent surveys, prioritizing their inclusion. Enumerators with disabilities work on the same terms as others and are assigned regular interview workloads. KNBS's internal human resources practices have also become more inclusive, extending beyond survey operations to staff recruitment more broadly.

Enumerator training is a key aspect in making surveys accessible. Enumerators need to be confident and skilled in interacting with persons with disabilities—neither fearful nor overly cautious—and this requires focused training on interview techniques. UDPK has been involved in co-developing training modules for enumerators on inclusive communication and disability-sensitive data collection.

In terms of accommodating different types of disabilities, KNBS has found that physical disabilities generally present fewer challenges in face-to-face survey implementation. Face-to-face interviews allow enumerators to communicate directly with blind respondents. However, KNBS is exploring the translation of questionnaires into Braille as a future improvement. For deaf respondents, KNBS assigns one sign language interpreter per region, who can be booked when needed. In practice, enumerators first try to identify a household member who can respond on behalf of a person with a disability if needed; in some cases, written communication is also used.

KNBS uses one questionnaire version for all respondents, including those with disabilities. Disabilities are identified through random household sampling rather than pre-identification by civil society organizations, meaning that disability is discovered only during the interview process, at which point the disability module is applied. One methodological limitation noted by KNBS is that residential homes for persons with disabilities are not classified as households and are therefore excluded from the sample, highlighting an ongoing gap in coverage.

From a resource perspective, the primary cost related to accessibility is sign language interpretation, with plans to procure Braille translation services as a next step.

5.2. Experience from Poland

5.1.1 Making the population census accessible for persons with disabilities

Statistics Poland put in a great deal of effort to make the 2021 population census accessible for persons with disabilities, including those who are hearing impaired, deaf, persons with deafblindness, persons with mobility disabilities (including wheelchair users), as well as persons who are blind or partially sighted.

The census was carried out using multiple data collection modes to accommodate diverse needs:

- **Online self-enumeration (CAWI)** – the mandatory form of participation in the census. The online questionnaire could be completed on various electronic devices (computers, tablets, smartphones), either by respondents themselves or with the assistance of family members or census helpline consultants (via the Census 2021 helpline);
- **Telephone interview (CATI)** – for those who preferred or required telephone assistance;
- **"Census on request"** – a telephone interview initiated at the respondent's request, available through the census helpline;
- **In-person interview (CAPI)** – face-to-face enumeration for respondents requiring personal assistance.

Partnerships and support networks

Statistics Poland established cooperation with numerous organizations professionally supporting persons with disabilities. These organizations implemented additional measures to support individuals in fulfilling their census obligations, including assistants to help persons with disabilities complete the census forms.

Digital accessibility features

One of the priorities in designing the census website and the web-based form application was to meet the needs of persons with disabilities in accordance with the WCAG 2.1 (Web Content

Accessibility Guidelines) standard. This ensured compatibility with assistive technologies and adherence to international accessibility best practices.

Innovations for persons with hearing disabilities

The 2021 population census was the first one to enable participation of persons with hearing disabilities. This achievement was made possible by:

- recruiting and training census enumerators with sign language skills (sign enumerators);
- creating a dedicated census website for deaf, deafblind, and hard-of-hearing persons, featuring MP4 video files with census questions translated into Polish Sign Language (PJM – *Polski Język Migowy*) and a request form for sign language contact during enumeration;
- establishing a video chat function with PJM interpreters to provide real-time assistance with census-related questions and issues.

Support for persons with visual impairments

Information materials in Braille were developed specifically for persons who are blind or partially sighted. The census website and the web-based form application were designed to be compatible with screen readers and other assistive technologies, enabling these respondents to complete the form independently. Additionally, respondents could receive assistance via the census helpline with dedicated support for their needs.

Multimedia accessibility

An instructional video for self-enumeration was produced with comprehensive accessibility features, including audio description, subtitles, and sign language translation. This video was created for respondents with hearing and visual impairments and was distributed widely through the census website, television broadcasts, social media platforms, and other communication channels, reaching persons with special needs.

Physical accessibility at census locations

Physical census desks and service points were designed to meet the needs of persons with disabilities, ensuring both architectural and communication accessibility in accordance with the Act on Sign Language and Other Means of Communication. Sign language interpretation services were provided at municipal offices and regional statistical offices throughout the country.

Prioritized outreach strategy

The person-address-housing list imported into the CORstat_census management system included priority flags to optimize the census enumeration sequence. For example:

- Priority 2: dwellings inhabited by persons with disabilities,

- Priority 3: households with only elderly persons aged 70 and above.

This strategic approach enabled census enumerators to reach out to persons with disabilities and those with special needs, making it possible for them to participate in the census.

5.1.2 Making ongoing surveys accessible for persons with disabilities

Beyond the census, Statistics Poland has developed comprehensive guidelines for interviewers conducting regular statistical surveys. These guidelines address the barriers faced by respondents with disabilities or special needs during survey interactions. The training covers:

- **Inclusive language** principles and practices;
- **General principles** for serving respondents with disabilities and special needs;
- **Communication and behavioural guidelines** tailored to different disability types, including respondents who are blind or partially sighted, respondents who are hard of hearing or deaf, respondents with physical disabilities, respondents on the autism spectrum, respondents experiencing mental health crises, and other specific accessibility needs.

Survey data collection methods

Statistical surveys are conducted via face-to-face interviews or telephone interviews, with data recorded directly by interviewers using the CAPI (Computer-Assisted Personal Interview) application. In the household budget survey, respondents can also collect receipts documenting their expenditures, which interviewers subsequently record in the CAII (Computer-Assisted Inventory Interview) application. This flexible approach is particularly beneficial for persons with various disabilities who may have different preferences regarding participation.

Interviewers are also equipped with paper questionnaires specifically adapted for persons with disabilities, which can be used when necessary, during interviews with respondents who may benefit from alternative formats.

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Annexes

Annex 1: Checklist for making accessible surveys

- [Plan to be inclusive](#) from the beginning. If the project is big enough to have accessibility be part of the budget, begin [making your accessibility framework](#).
- Appoint a disability focal point.
- Determine the geographical areas and their size, to help with the stage of [defining the objectives and planning to be inclusive](#). For instance, how many forms of sign language will interpreters need to know?
- [Make a desktop research plan](#) on how difficult it will be to reach an inclusive sample of survey respondents with disabilities, for any reason, practical, or cultural.
- Research how many remote villages with limited communication or transportation infrastructure in the survey area will make reaching persons with disabilities even more difficult.
- [Determine which local relationships you need](#) with OPDs, other local organizations, or (in the absence of OPDs) informal disability groups, to reach persons with disabilities. You will often need to start by communicating with umbrella OPDs, to find out if there are local OPDs to contact.
- [Form relationships with local OPDs](#) or other organizations for marginalized people.
- [Create your survey circulation plan](#). Determine if you need a venue, transportation, or other services to reach persons with disabilities.
- Accordingly, [establish your budget](#).
 - Discern if you need a budget for [transportation and venue](#).
 - Establish a budget for all the community resources that you will need, e.g., for the OPD or disability accommodations services.
 - Establish a vendor budget to procure or [develop relevant accessibility survey tools](#), if needed, to collect data. For instance, do you need to make a website as part of a hybrid survey? Do you need sign language interpreters or Braille translation?
- [Book all necessary accessibility services and vendors](#). Schedule time to check the accessibility of the products and services the vendors provide you.

- [Design your survey tool](#) based on whether it is written, by phone, digital, or hybrid. Make the purpose and consent aspects extremely clear for respondents with any type of disability.
- [Design your survey's questions](#). Make sure they are clear and simple and that they are difficult to misinterpret, especially for persons with neurological or cognitive disabilities.
- Get [feedback](#) from persons with disabilities on the accessibility of your survey.
- Ensure an [accessible venue and transportation](#) if needed. Have interviewers work with interpreters before implementing the survey, so interviewers learn how to work efficiently with interpreters.
- [Educate and train your team](#) on the culture, disability, and intersectionality issues. Establish if you need to provide training and resources to the community to make a survey possible.
- Allocate longer times for [questioning](#) respondents with disabilities.

Annex 2: Key accessibility considerations for physical venues

Formulated in consultation with the International Organization for Migration (UN IOM).

How to Reach

- ☐ The venue is well-known to the community and has considerations for deaf, blind, and other attendees with different disabilities.
- ☐ The venue is reachable via accessible public transportation.
- ☐ The location of the venue is easy to identify by beneficiaries.
- ☐ If the venue is not on a ground floor, is it equipped with an elevator?

How to Enter

- ☐ The entrance of the venue is at ground level.
- ☐ If not at ground level, the entrance of the venue is equipped with a smooth-slope ramp easily accessible and usable by wheelchair users from the sidewalk.
- ☐ The entrance/doorway is wide enough to accommodate a wheelchair user.
- ☐ The sidewalk and entrance have tactile paving.
- ☐ Other entrances inside the building can accommodate a wheelchair user.
- ☐ Entrance to the elevator is wide enough to accommodate at least one wheelchair user.
- ☐ Entrances to toilet facilities can accommodate a wheelchair user.

How to Circulate

- ☐ Corridors are wide enough to accommodate wheelchair users.
- ☐ Activity/event rooms and halls are spacious enough to allow wheelchair users to move freely.
- ☐ Toilet facilities are wide enough to allow a wheelchair user to use them freely and independently.
- ☐ There is tactile paving and Braille orientation.
- ☐ The venue is wide enough to allow wheelchair users to move around freely between the different facilities inside the venue.

How to Use

- ☐ The venue is equipped with signs indicating the different activities carried out inside the venue.
- ☐ The venue is equipped with signs indicating the different rooms/halls utilized for the different activities/events.
- ☐ Information is provided in various formats (verbal, written, videos, sign language).
- ☐ Information about activities is communicated through various communication channels (accessible social media, written, verbal, and communication apps).
- ☐ Information about activities or events is shared via organizations of persons with disabilities (OPDs) and disability representatives on a regular basis.
- ☐ Handouts are provided in various formats (Word, pdf, ppt).
- ☐ Sign language interpreters are available to support events/trainings where possible.

Annex 3: Resources

The [Disability Data Working Group](#) website of the Stakeholder Group of Persons with Disabilities and the [Data and Persons with Disabilities](#) page of CBM Global Disability Inclusion have many resources.

Data and OPD capacity strengthening resources:

- The [Disability Data Advocacy Toolkit](#) and a report on resulting [lessons learned](#)
- The collaboratively developed [Disability Data Advocacy Workshop Materials](#) for OPDs
- A report compiling case studies of data generated by OPDs, [Citizen-Generated Data and Persons with Disabilities](#)

[Disability Data Initiative](#): This initiative provides analyses of disability data to help advance the rights of persons with disabilities, including some country briefs with data on disability prevalence.

[Centre of Excellence on Data for Children with Disabilities](#): UNICEF hosts the Centre to enhance the ability of stakeholders to make timely and data-driven decisions affecting children with disabilities. The Centre engages in a wide variety of activities, and the website includes a data warehouse and an SDGs (Sustainable Development Goals) section where data can be filtered by country.

The Washington Group on Disability Statistics is a UN Statistical Commission City Group. More details are in [Section 4.11.7. Resources from The Washington Group on Disability Statistics](#). The Washington Group provides many resources, e.g.,

- [An Introduction to the Washington Group on Disability Statistics Question Sets](#)
- [A Brief Explainer on the Washington Group Questions on Disability](#)
- Guidance: [The Data Collection Tools Developed by the Washington Group on Disability Statistics and their Recommended Use](#)
- Blog: [Using the Washington Group Short Set in a Telephone Survey](#)
- [Videos by the Center for Inclusive Policy](#) on Washington Group Questions
- [Does the Washington Group Short Set identify all persons with disabilities?](#)
- [Translation of the Washington Group Question Sets: Part 1](#)
- [Translation of the Washington Group Question Sets: Part 2](#)
- [How does the WG approach to measuring disability relate to the Social Model?](#)

Additional resources, including those referenced in this document

- [AbilityNet](#)
- [Accessibility in Mobile Development](#)
- [Accessible Surveys](#)
- [AccessibilityGO! A Guide to Action](#) by the World Blind Union and CBM Global
- [Autism Colour Guide](#)
- [Braille Institute](#)
- [CBM's Accessible Meetings Toolkit](#)
- CBM Global Disability Inclusion: [Using the Washington Group questions on disability data](#) in development programs: A learning brief.
- CBM Global's Disability Data Collection Practices: [Collecting and using data on disability to inform inclusive development](#)
- [Convention on the Rights of Persons with Disabilities \(CRPD\)](#)
- [European Forum of Sign Language Interpreters](#)
- [European Union of the Deaf](#)
- [Hemingway App](#)
- [How to Make Information Accessible: A Guide to Easy Read Documents](#)
- [International Association of Accessibility Professionals \(IAAP\)](#)
- [IAAP Educational Training Database](#)
- [International Classification of Functioning, Disability and Health \(ICF\)](#)
- [International Disability Alliance \(IDA\)](#)
- [Linguistic and Cultural Adaptation of the National Quality of Life Survey in Colombia for the Deaf Population](#)
- Microsoft Office Support [instructions to add alt text to images](#)
- [Mobile Accessibility](#)
- [Mobile Accessibility: How WCAG 2.0 and Other W3C/WAI Guidelines Apply to Mobile](#)
- [Profiling of Persons with Disabilities in Las Piñas 2021](#)
- [Sim Daltonism Color Blindness Simulator](#)

- An example of an online survey service's [accessibility guide, by SurveyMonkey](#).
- University of California has [guidelines for accessible surveys and forms](#)
- UN Women and UNPRPD's [Intersectionality Resource Guide and Toolkit](#)
- [Voluntary Product Accessibility Template \(VPAT\)](#)
- [Washington Group on Disability Statistics \(WG\)](#)
- [WebAIM's Color Contrast Checker](#)
- [Web Content Accessibility Guidelines \(WCAG\) 2.2](#)
- [World Association of Sign Language Interpreters \(WASLI\) statement on the Role of Sign Language Interpreters](#)
- [WFD-WASLI Accredited International Sign Interpreter List](#)
- [WFD-WASLI Frequently Asked Questions about International Sign](#)
- [World Federation of the Deaf \(WFD\)](#)
- [World Health Organization \(WHO\)](#)
- [WHO's compiled Caregiver Skills Training for Families of Children with Developmental Delays or Disabilities](#)
- [WHO Strategic Communications Framework for effective communications](#)
- [WHO resources to learn assistive technologies](#)
- [W3C Accessibility Statement Generator](#)