The Missing Billion

ACCESS TO HEALTH SERVICES FOR 1 BILLION PEOPLE WITH DISABILITIES

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Cover photo: Carlos Litulo

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Executive Summary

Context
The global health community has set overarching, ambitious goals for 2030:

- The United Nation’s Sustainable Development Goal 3 (SDG 3), to “ensure healthy lives and promote well-being for all at all ages.”¹
- The World Health Organization’s “triple billion” targets—one billion more people benefitting from Universal Health Care (UHC); one billion more people better protected from health emergencies; and one billion more people enjoying better health and well-being.²

Underlying each of these two goals is the achievement of UHC itself, which will be subject to further deliberations in September 2019 during the UN High-Level meeting. Through all of these efforts, the global health community is committed to “reach the unreached” and “leave no one behind.” The UN resolution on the 2030 Agenda for Sustainable Development even committed to “reaching the furthest behind first.”³ Yet it is clear that the targets of SDG 3 cannot be met without accelerated progress in general,⁴ and, specifically, better efforts to include marginalised groups, such as people with disabilities.

This report
One billion people around the world live with disabilities. This report makes the case that they are being “left behind” in the global community’s work on health. This lack of access not only violates the rights of people with disabilities under international law, but UHC and SDG 3 cannot be attained without better health services for the one billion people with disabilities.

People with disabilities include those with long-term physical, mental, intellectual, developmental, or sensory impairments. These impairments—in interaction with various barriers—may stop people from participating equally in society. There are one billion people with disabilities globally, and they are concentrated in low- and middle-income countries and the poorest sections of society.⁵

Health and healthcare are critical issues for people with disabilities. People with disabilities often need specialized medical care related to the underlying health condition or impairment (e.g., physiotherapy, hearing aids). They also need general healthcare services like anyone else (e.g., vaccinations, antenatal care). On average, those with disabilities are more vulnerable to poor health, because of their higher levels of poverty and exclusion, and through secondary conditions and co-morbidities.

People with disabilities therefore may require higher levels of prevention, diagnosis, and treatment services. However, health services are often lower quality, not affordable, and inaccessible for people with disabilities. In many situations these barriers are even more significant for women with disabilities, compared to men with disabilities.⁶

People with disabilities face higher healthcare needs, more barriers to accessing services, and less health coverage, resulting in worse health outcomes.

The authors of this report—with the support of a Steering Committee—have brought together existing knowledge on access to health services for people with disabilities. Additionally, we have provided a human experience perspective of those living with disabilities, as well as some practical principles and seven immediate actions for change, and recommendations that should inform the way forward. We hope that the needs of people with disabilities will

³ UN Resolution A/RES/70/1, September 2015.
be recognized by governments, health funders, and global health leaders as essential for SDG 3 and UHC achievement and that country-level planning mechanisms will take particular consideration of their access barriers and needs.

Key messages from this report:

› **UHC and SDG 3 are unattainable without better health services for the 1 billion people with disabilities:** Across all indicators of SDG 3, studies from different countries and including people with different or multiple types of impairments have shown that people with disabilities have worse health access and poorer health outcomes. That means that current systems are failing them. If the current approach remains insconsiderate of specific needs of people with disabilities, then UHC, SDG 3, and WHO's triple-billion target are unattainable, given that 15% of the world's population has some form of severe or moderate disability.

› **UHC and SDG 3 are not the only reasons why this matters:** Improving access to healthcare for people with disabilities is critical to ensuring compliance with international law, avoiding unnecessary cost for the health system, and achieving all SDGs (given these goals’ interdependence). Most importantly, it is essential for ensuring the attainment of everyone's individual highest quality of life and well-being. Designing health systems with consideration of people with disabilities will also improve health services for everyone.

› **A targeted strategy inclusive of the needs of people with disabilities is necessary; some actions can be taken immediately.** The 1 billion people with severe or moderate disabilities worldwide are not a homogenous group. Further work is required to better understand differentiated needs and responses. However, while this strategy may take time, some changes can be implemented immediately. These include health worker training about disability awareness, provider accessibility audits, and making health information accessible.

**Examples:**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Likelihood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>3x more likely</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>2x more likely</td>
</tr>
<tr>
<td>Malnourished and die as a child</td>
<td>2x more likely</td>
</tr>
<tr>
<td>Seriously ill as a child</td>
<td>10x more likely</td>
</tr>
<tr>
<td>Catastrophic health expenditure</td>
<td>50x more likely</td>
</tr>
<tr>
<td>Health system reason for low life expectancy</td>
<td>40% of cases</td>
</tr>
</tbody>
</table>

**Note:** The references to these statistics are listed in the main body of the report.

**Recommendations**

Given these findings we recommend the following actions:

› **To global policy makers** – (i) Recognize persons with disabilities as a large vulnerable population that represents a critical pathway risk for UHC; (ii) Ensure that the health needs of people with disabilities and their access barriers are addressed in in-country UHC and SDG 3 Action planning processes; (iii) Consider health access for people with disabilities a key driver of and metric for UHC achievement

› **To governments** – (i) Develop and/or reform health and disability laws, policies and plans; (ii) improve access; (iii) review budgets for addressing access barriers, rehabilitation services and assistive technologies; (iv) collect data on health disaggregated by disability

› **To funders** – (i) Develop/review criteria for grant making to make sure that all programming ensures equitable access for people with disabilities; (ii) Make catalytic investments in activities that we know will have impact on improving healthcare access for this group; 7 areas of immediate actions are included in this report; (iii) Invest in further operational research and human-centered design work to strengthen our knowledge and understanding of the barriers to healthcare facing people with disabilities

› **To implementers and advocates** – (i) Ensure that all health services, programming, and trainings consider the needs of people with disabilities; (ii) Create a coalition of organizations and advocates focused on this topic to organize a shared strategy to hold policy-makers and governments accountable

**Actions are required by all stakeholders to improve health services for people with disabilities. All in-country planning and implementation work needs to address particular access barriers for people with disabilities.**

**This Report**

This report includes the following sections:

1. The case: People with disabilities are pathway-critical for the achievement of UHC and SDG 3
2. Informing a better approach: Current situation, principles for change, and immediate actions
3. The importance of data and metrics
4. Recommendations
Disability is a core element of the 2030 Sustainable Development Goals agenda

The 2010 World Disability Report estimated that there are one billion people with severe or moderate disabilities globally. As the graphs below show, disability is most common among older people and in lower-resource settings. Yet still, worldwide, around 100 million children have severe or moderate disabilities. With trends such as growth and ageing, shifting disease burden and the climate crisis these numbers are expected to increase significantly.

What is disability? According to the UNCRPD the definition of disability is: Persons with disabilities include those who have 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. People with disabilities are not a homogenous group, and the experiences of individuals will be influenced by their impairment type, gender, age, family support, environment, and so on.

Across the world, people with disabilities are more likely to be poor, excluded from education and employment opportunities, and face social exclusion and poor quality of life. In recognition of these gaps, the SDG framework explicitly emphasizes including people with disabilities in terms of education, employment, reducing inequality, inclusive settlements, and data collection as part of its commitment “to leave no one behind.”

People with disabilities, severe or moderate

1. The case: People with disabilities are pathway-critical for the achievement of UHC and SDG3

Disability is an umbrella term for impairments, activity limitations, and participation restrictions, denoting the negative aspects of the interaction between an individual (with a health condition) and that individual’s contextual factors (environmental and personal factors).


2 The UNCRPD definition of disability was not used in the World Report on Disability to estimate the global magnitude at 1 billion people. Instead, the ICF-compatible definition of disability was used. In the ICF, disability is an umbrella term for impairments, activity limitations, and participation restrictions, denoting the negative aspects of the interaction between an individual (with a health condition) and that individual’s contextual factors (environmental and personal factors).
The UNCRPD is also critical for ensuring disability-inclusive development to close these gaps. This international human rights treaty, adopted in 2006, had 161 signatories as of 2019. Parties to the Convention are required to promote, protect, and ensure the full enjoyment of human rights by persons with disabilities, and to ensure that they enjoy full equality under the law.

The focus on disability, however, is less clear in the health development agenda. SDG 3 does not explicitly mention disability, although, of course, UHC (SDG target 3.8) implicitly includes people with disabilities. Some health-related policy frameworks do include disability. For instance, the WHO Disability Action Plan 2014-2021 provides specific guidance for improving the health of people with disabilities, in terms of better access to healthcare and rehabilitation, and improved data collection. UNCRPD does address equality in terms of the right to health in Article 25 and habilitation and rehabilitation in Article 26,8 which means that signatories are under immediate obligation to tackle discrimination in access to health. However, the UNCRPD country evaluations make it clear that current efforts are inadequate to achieve equity in healthcare access.

Health inequities and poorer results for people with disabilities

There are three important points with respect to the need for healthcare for people with disabilities.

First, on average, people with disabilities are more likely to experience poor health. A variety of factors drives this vulnerability to poor health among people with disabilities, including the existence of an underlying health condition/impairment, higher levels of poverty, stigma, and discrimination, and barriers faced to accessing healthcare services.

Second, people with disabilities need health services like anyone else. This includes access to promotion, prevention, diagnosis, and treatment, including sexual and reproductive health services. However, because they are more likely to experience poor health, they will have an even greater need for services compared to others in the population.

Third, people with certain impairments may also require specialized medical treatment or rehabilitation services (e.g. occupational therapies, psychological care, or the fitting of an assistive technology).

Collectively, these points mean that on average, people with disabilities will have greater need for healthcare services, including both general and specialist services. Yet, as discussed in more detail below, people with disabilities face different barriers to accessing healthcare, such as poverty, inaccessible transport, negative attitudes and poor training of healthcare workers and lack of social support. As a consequence, people with disabilities may have lower coverage of healthcare services, despite their greater need.

A recent systematic review, including 127 studies from low- and middle-income countries, shows that people with disabilities tend to have higher need for general healthcare services, but poorer coverage, more healthcare expenses, and low access to specialist healthcare services, such as rehabilitation and assistive technologies.10,11

Who are people with disabilities and what could their health concerns be?

People with disabilities are not a homogeneous group, and include people with different impairment types, and varying in age, gender, and country of residence. This will influence their healthcare needs and access. For instance, children with disabilities need early identification and additional support in their early years to allow them to maximize their development and functioning. Older adults with disabilities are particularly likely to experience multiple impairments, which makes seeking healthcare more difficult. Women with disabilities may face dual discrimination, on the basis of gender and disability, and so have greater difficulties accessing services. Based on qualitative studies and interviews, the following representative personas provide a better understanding of what an individual’s situation might be.
As is clear from the personas described above, people with disabilities are a very diverse group and have different health care needs. These needs will also vary over time. For instance, Sylvia (the child born with Zika) has multiple and severe impairments and needs early intervention with regular physiotherapy and speech and language support to help her maximize her functioning. But she can also experience regular health concerns, like an ear infection as described here, which must be addressed in addition to her chronic needs.

To further understand the current health situation of people with disabilities, the authors reviewed, for the purpose of this report, the existing literature in relation to health and health outcomes in the context of the SDG 3 indicators specifically.

In the context of SDG 3, examples from studies suggest that people with disabilities ...
This pattern of outcomes in terms of SDG 3 indicators is global in nature, with examples from all over the world.

Examples from studies suggest disparities in health outcomes for people with disabilities in all parts of the world.

Currently, people with disabilities have poorer healthcare outcomes, access, and coverage for all SDG 3 indicators. This pattern is seen across the world, and for people with different impairment types.

**These health gaps matter**

Addressing the health gaps experienced by people with disabilities is critical for several reasons:

1. **Achieving global health goals, i.e. SDG 3:** Already, current projections show that the world is “off-target” to meet SDG 3. However, SDG 3 and all its sub-indicators (such as the aspiration of UHC, reducing child mortality, reducing the burden of NCDs, and eliminating the epidemics of AIDS and malaria) will become unachievable if the gap in health and healthcare access persists for the 1 billion people with disabilities.

2. **Complying with international law:** People with disabilities have the right to equal access to the highest attainable standard of physical and mental health and rehabilitation without any discrimination, according to UNCRPD Article 25 and Article 26. These rights/obligations are often not fulfilled. Indeed, lack of equity in access to healthcare for people with disabilities will likely reflect the lack of inclusion of people with disabilities in society more widely, as well as perpetuate discrimination against them and the disability experience.

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1 Reichard A et al, “Health disparities among adults with physical disabilities or cognitive limitations compared to individuals with no disabilities in the US.” Disability Health Journal
2 Kuper H et al, “Can we achieve universal health coverage without a focus on disability? Results from a national case-control study in Guatemala.” PLoS One
3 University of Bristol, Annual Report, the Learning Disabilities Mortality Review Programme
4 World Health Organization, Model Disability Survey Pakistan

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3. **Improving health services for all through universal design:** “Universal design” is an approach that ensures services and products are usable by all people to the greatest extent possible. If a design works well for people with disabilities, it works better for everyone. Improving the health system to meet the needs of people with disabilities will also help meet the needs of all, including other vulnerable groups (e.g. elderly people or minority language speakers.)

4. **Preventing unnecessary cost for the health system:** People with disabilities are more likely to experience reduced or delayed access to healthcare. For example, people with disabilities have lower rates of cancer screening and ultimately present later-stage disease, when treatment is more difficult and expensive. Lack of specialist services, such as vision correction or occupational therapies, makes people more vulnerable to falls, which will require healthcare attention. Lack of provision therefore raises the risk of unnecessarily high healthcare costs.

5. **Achieving all SDGs:** The SDGs are inter-linked. Access to healthcare, rehabilitation, and assistive technologies is crucial for enabling effective and sustained access to other services. If people with disabilities do not achieve good health, then they are less likely to get a good education (SDG 4) or be able to earn a living wage (SDG 1). If people are unhealthy, they may require care from family members who are then also less likely to be able to work. So, if the health system does not deliver, the individual, the family, and the society will suffer economic damage.

6. **Most importantly, it matters to the individual’s quality of life:** Health is important in itself, because it enables a person to have a good life and a full life expectancy. In particular, “rehabilitation and assistive devices can enable people with disabilities to be independent,” which is foundational to all other areas of life.

Despite the importance of this issue, there is currently almost no consideration of people with disabilities in the overall UHC context. There are no indicators tracking progress towards UHC or the other SDG 3 targets with respect to disability. The current draft of the SDG 3 Action Plan includes the word “disability” only once. Organizations such as CBM, Humanity & Inclusion, Special Olympics, Sightsavers, ATscale, and different WHO teams are important advocates, working to focus greater attention on health barriers for people with disabilities. However, there have been limited investments in data strengthening and operational research, and overall health-system grants from institutional and other funders in global health show insufficient, and often no, consideration to people with disabilities.

Lack of access to healthcare services is a violation of the rights of people with disabilities. Without a specific focus on improving healthcare access for this large and excluded group all dimensions of UHC—coverage of services, appropriate services, and affordability— won’t be met. And if the health system does not deliver, good education, poverty reduction and independent living are less likely too.

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15 October 2018 version, available as the latest draft on the WHO website June 2019.
2. Informing a better approach: Current situation, principles for change, and immediate actions

Understanding the current situation: experiences of accessing health services and underlying drivers across the health-seeking journey

We have introduced different illustrations of personas with disabilities and their health needs. The following illustrates the difficulties that these people with different types of impairment may experience when accessing health services. A comprehensive description of each individual’s journey is included in the appendix.

Summary of experiences when accessing health services

<table>
<thead>
<tr>
<th>I perceive a need</th>
<th>I reach the healthcare venue</th>
<th>I decide to seek healthcare</th>
<th>I engage with healthcare staff</th>
<th>I access a healthcare services</th>
<th>I receive treatment and follow up care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Man with intellectual disabilities United States</td>
<td>Dustin - “The only dentist that gave me an appointment is one hour from home.”</td>
<td>Dustin - “It took one week to find a dentist that will see me.”</td>
<td>Dustin - “I tried to stay quiet and follow his instructions, but he still did not have much patience with me.”</td>
<td>Dustin - “The dentist said he couldn’t do much for me because I only have Medicaid.”</td>
<td>Dustin - “The dentist only gave me medication. My teeth started hurting again.”</td>
</tr>
<tr>
<td>Tuwafu - “When he was not able to follow at school we decided to do something.”</td>
<td>Dustin - “I am not sleeping well. I wake up in the middle of the night because of my teeth.”</td>
<td>Tuwafu - “The health centre said they cannot do anything and also didn’t refer us anywhere else.”</td>
<td>Tuwafu - “The doctor seemed impatient with Simon.”</td>
<td>Tuwafu - “We had to wait for the whole day. They said they have only 3 Audiologists in the whole country.”</td>
<td>Tuwafu - “Three weeks later, back in the village, the hearing aid stops working. What now?”</td>
</tr>
<tr>
<td>Morowa - “I can’t paddle my wheelchair to the health center for the ANC checkups, it is far.”</td>
<td>Anesu - “I receive double negative reception – a disability and HIV. I dread going to clinic.”</td>
<td>Morowa - “The second child I will deliver in the facility because this time a family member can come with me.”</td>
<td>Morowa - “We live 230 km from the specialized hospital. They want us to go there just for a simple ear infection.”</td>
<td>Anesu - “I only go because I know I have to. Other girls are not going because we are treated badly.”</td>
<td>Morowa - “After delivery, they said I should exercise by walking daily.”</td>
</tr>
<tr>
<td>Maria - “She is a very calm child, but she was restless. That’s when I noticed something coming from her ear.”</td>
<td>Maria - “I took one week to get to the hospital. It took us 8 hours to get there and I had to leave my farm alone.”</td>
<td>Anesu - “I can’t get on the public bus because my wheelchair is a problem. If I had enough money I would hire a taxi to take me.”</td>
<td>Anesu - “Public transport and the busy hospital are difficult to navigate for me. I don’t feel very comfortable going alone.”</td>
<td>Maria - “When he was no longer able to hear, I took him to hospital. The nurses are rude to me. And they talk loudly about my HIV status and what I am there for.”</td>
<td>Anesu - “I need assistance taking my ARV medication. They write 1x3, 2x4, but I cannot even go up onto the delivery bed myself.”</td>
</tr>
<tr>
<td>Girl born with Zika syndrome, and her mother twins</td>
<td>Maria - “I went there and showed a video of Sylvia at home to explain how she is normally. They, they finally treated her.”</td>
<td>Maria - “We only have a disability, and her mother twins. They had told us before that if we want to have a disability, we have to pay 1000 kwacha for a simple treatment.”</td>
<td>Maria - “We live 230 km from the specialized hospital. They want us to go there just for a simple ear infection.”</td>
<td>Maria - “I went again the next day and prepared a list with all the things I wanted to tell her so I know what to tell the doctor.”</td>
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</tr>
</tbody>
</table>

Personas and their journeys derived through interviews with proxy users and key informants, and qualitative literature review.
These personas and their experiences highlight challenges in health-service delivery and underlying health-system functions. Understanding these can inform practical changes and adjustments.

Overview health services and system challenges

Common barriers for people with disabilities are:

- **Affordability at the household level:** People with disabilities are on average poorer but also incur higher healthcare costs. Consequently, the World Report on Disability found that half of people with disabilities cannot afford healthcare, and they are 50% more likely to experience catastrophic health expenditure. Transport cost is often cited as a key barrier for access.16

- **Health workers knowledge and skills:** Disability-related skills, information, and sensitization are rarely included in health-worker training. For instance, in one review, only 8% of Western Pacific countries incorporated disability-related information into healthcare undergraduate training.17 Evidence from the Special Olympics revealed that 80% of U.S. medical students received no clinical training for treating people with intellectual disabilities, and that 52% of medical school deans and 56% of students reported that graduates were “not competent” to treat people with intellectual disabilities.18 Because of this training gap, healthcare professionals may exhibit negative attitudes and poor skills in communicating with people with disabilities. The World Report on Disability16 found that people with disabilities were twice as likely to find healthcare providers’ skills and facilities inadequate, 3 times more likely to be denied care, and 4 times more likely to be treated badly in the healthcare system.

Specialized health workforce capacity: There are substantial worldwide shortages of rehabilitation workers (including for example physical therapists, mental health professionals, occupational therapists, speech-language pathologists, prosthetic and orthotic practitioners). The scenario is worst in lower income countries. For example, there are only six physicians specialized in rehabilitation in all of sub-Saharan Africa, or there are fewer than ten physiotherapists per million inhabitants in many countries in the South-East Asia Region.

Health-provider infrastructure: There is often limited physical accessibility of healthcare facilities, including buildings, rooms, equipment, and toilets. A survey from Florida showed that people with disabilities were 5-10 times more likely to encounter physical barriers to access as well as communication challenges. In a study from Lesotho, more than 40% of respondents with disabilities claimed that facilities were not accessible. Few attempts are made to provide information in formats such as braille or sign language, to adapt guidelines or campaigns, or to include pictures of people with disabilities in information. Overall, there is little monitoring of the inclusion of people with disabilities or penalties for exclusion, so that there is little incentive to improve accessibility.

Specialized service provision capacity: There is a gap in the availability of specialized service provision, especially at the primary and community healthcare level. And where services are available they are often for a narrow scope, e.g. occupational services, and not including prosthetics, wheelchair services, or are very fragmented. In countries like Kenya or Malawi, for example, hearing aid fitting and services are not available through the government public health system, but only provided through a limited set of NGO facilities that are funded through donations.

Plans, legislation, and policy: Most countries have ratified UNCPDR and have legislation or policies to protect the rights of people with disabilities to healthcare; yet these are rarely monitored or enforced. In WHO’s Western Pacific region, for example, 70% of countries have no insurance discrimination laws prohibiting exclusion of people with disabilities. National health plans often don’t specifically mention access to healthcare for people with disabilities. For example, two reviews, one focusing on national strategic plans on HIV and the other on legislation in eastern and southern Africa, reveal that only a few countries have acknowledged the need to include people with disabilities, and none have included disability comprehensively.

Financing and funding: Ministry of Health budgets often lack funding for rehabilitation, assistive devices and their delivery, or adaptations to health services. Too few insurance schemes and approaches exist to help with particular financing challenges people with disabilities face—for example, transport cost. And in some situations, insurance schemes even exclude people with disabilities altogether. For example, in the U.S. public system there is no coverage of dental care access for adults with intellectual disabilities.

Management and leadership: Responsibility for disability and rehabilitation services does not always lie with the Ministry of Health. That makes implementation of disability-inclusive health plans more challenging. Many Ministries of Health also lack a department or staff member with dedicated responsibility on disability or rehabilitation. Again, in WHO’s WPRO region, 20% of countries had no disability-related capacity within the Ministry of Health.

The appendix includes a list of best practice examples addressing each of these areas.

"Health care and health systems need to shape up to better identify, remedy and care for people with disabilities — else there will be no UHC. U is for universal!"

STEFAN PETERSON, UNICEF

20 Rehab2030, “The need to scale-up rehabilitation – background paper”, available on the WHO website
26 Boston Consulting Group analysis for ATscale – the Global Partnership for Assistive Technologies, 2018
27 Interview with Clinical advisor on dentistry, Special Olympics International
Guiding principles for the way forward

The following principles are based on experience in disability-inclusive development, and on existing policy frameworks such as the WHO Disability Action Plan. They are a work in progress, to be honed by new research, consultations, and experience. But here is what we know so far:

1. A “twin-track” approach is needed. This means that people with disabilities must be incorporated within mainstream services, but also need focused attention in order to “remove barriers and improve access to health services and programs, and meet their specific needs” (WHO Disability Action Plan).

2. Changes must be informed by people with disabilities to be contextually relevant.

3. It is more efficient to incorporate changes into programs from the planning stage, rather than attempting to adapt existing programs.

4. Efforts to include people with disabilities and to overcome barriers throughout the health seeking journey should be made across the whole spectrum of health care services (promotive, preventive, curative, rehabilitative, and palliative), across the lifecourse (including children) and for both men and women.

Immediate actions

More work needs to be done to understand this population group and develop tailored approaches that build on the above principles; however, there are obvious actions that can be taken. The authors of this report, together with the Steering Group members, have identified the following seven actions that can be taken immediately and that will improve health access and reduce barriers. Some of these actions won’t require significant additional budget.

Make health services better

1. Consult: contact people with disabilities in local contexts to understand key barriers and gather suggestions for how these may be overcome

2. Curricula: include information about disability awareness in training curricula for all types of health workers (medical doctors, nurses, community health workers, etc.) and in post-qualification training

3. Health facility accessibility: conduct accessibility audits in all types of health facilities

4. Health information: make all health information, education and prevention opportunities (e.g. leaflets) accessible for different types of disabilities

Start changing the system

5. Accountability: develop an accountability mechanism, which could also include a UHC metric on access to healthcare for people with disabilities

6. Budget: review case for dedicated funding for adaptations, rehabilitation and assistive technologies

7. Collect data: Conduct research studies to understand the barriers and facilitators for people with disabilities in accessing healthcare
Improving our knowledge will require better **data and metrics**:

- **Data – overall routine health metrics, disaggregated by disability**: The need to improve routine data collection and focused research on disability has been highlighted in several documents and is also promoted as part of WHO's general program of work, 2019-2023. National health-related surveys need to include disability indicators so that health data can be disaggregated by disability.

- **Data – individual healthcare coverage, by disability**: The two systematic reviews show that there is limited data available on healthcare access, and existing studies have focused on the use of services by people with disabilities.29 However, since people with disabilities on average have higher healthcare needs, utilization of services is not an appropriate measure to assess equity. Coverage is a better measure to assess whether people with disabilities have equitable access to healthcare. Ideally, these coverage indicators would also include a measure of affordability (e.g., risk of catastrophic expenditure) and quality of experience. A common metric should be developed so that data are collected consistently in different countries, and at different times.

  - **Example indicators**: Comparison of people with and without disabilities, for the sixteen tracer indicators selected to monitor progress towards UHC on coverage of essential health services

  - **Source of data**: Disability surveys (e.g., Model Disability Survey) or health surveys (e.g., SAGE) where disaggregation by disability is possible

- **Metrics – local level measures to ensure performance management for equity**: Data on coverage and access to health services for people with disabilities, as well as other social determinants of health and equity measures, need to be included at local levels of health systems. Such data should be integrated with routine health information systems and made actionable for primary health care workers, in real time, at a granular and local level.

- **Metrics – systems level measures of inclusive health**: Consistent and comparable data are needed at national level of activities to ensure inclusive health.

  - **Example indicators** (from WHO Global Action Plan):
    - % of countries with national health policies that explicitly mention that persons with disabilities have the right to the highest attainable standard of health
    - % of countries that prohibit health insurers from discriminating against pre-existing disability
    - % of healthcare facilities that are accessible for people with disabilities

  - **Source of data**: Within-country assessment, routine accessibility audits of health care units

- **Evidence – effective interventions/intervention packages to ensure equitable and effective health services**: An Evidence and Gap Map was undertaken in 2018 to chart what works for disability-inclusive development.30 This review highlighted the lack of evidence on how to improve access to healthcare services for people with disabilities. Rigorous studies are needed to understand which policies and programs are most effective.

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4. Recommendations

For Global Policymakers

› Recognize persons with disabilities as a “cohort”/vulnerable population that represents a critical pathway risk for UHC.

› Ensure people with disabilities and their access barriers are addressed as part of in-country UHC and SDG 3 Action planning processes.

› Consider health access for people with disabilities as a key driver of and metric for UHC achievement, and establish an accountability mechanism.

For Funders

› Develop/review criteria for grant making and monitoring and evaluation frameworks to ensure that all programming on health makes specific considerations for people with disabilities, eg., in line with other efforts to ensure equity and gender. This applies to all funders, in particular institutional funders in health.

› Invest in catalytic activities that are known to be high-impact. These include trainings for health workers about disability awareness, analysis to understand the ROI from investments in more available health services, market-shaping opportunities for assistive technologies as identified by ATscale, and the development of accessibility audits. This report also provides 7 areas of immediate action to improve service delivery and to start changing the system.

› Invest in further operational research and human-centered design work to strengthen our knowledge and understanding and allow for more tailored strategies.

For Governments

› Develop and/or reform health and disability laws, policies, strategies, and plans to make them consistent with CRPD.

› With participation of people with disabilities, improve access to and quality of general health services, rehabilitation services, and assistive technologies; improve data in line with the Global Disability Action Plan.

› Review funding in Ministry of Health budgets for any adaptions to address access barriers, rehabilitation services and assistive technologies.

› Collect data on healthcare disaggregated by disability.

“People with disabilities are amongst those in greatest need of health services and at greatest risk of financial hardship when seeking health care. They must be a priority for UHC - both in terms of service delivery and financing packages. To ensure that people with disabilities are not left behind in the global movement towards UHC, we need multi-stakeholder efforts that define and implement UHC inclusive of people with disabilities.”

OLA ABU ALGHAIB, THE UN PARTNERSHIP TO PROMOTE THE RIGHTS OF PERSONS WITH DISABILITIES (UNPRPD)

For Implementers and Advocates

› Ensure that all health services, programming, and trainings consider the needs of people with disabilities; adaptions to address access barriers, rehabilitation services and include content on disability awareness in all health care worker curriculum.

› Create a coalition of organizations and advocates focused on people with disabilities to organize a shared strategy to hold policy-makers and governments accountable.
5. Appendix

5.1. Detailed journeys of five personas accessing health services

<table>
<thead>
<tr>
<th>Community perception</th>
<th>Awareness</th>
<th>Getting to the facility</th>
<th>Accessing what is needed</th>
<th>Communication</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesu, adolescent with visual impairment</td>
<td>&quot;I definitely feel like I receive more rejection at the health clinic and in the community, as a person with a disability and HIV, more than if I just had HIV. Thankfully I go to school and my parents support me.&quot;</td>
<td>&quot;I need to go to the clinic for my ongoing HIV treatment. But I dread it. I know that other girls simply don’t go. In the past I have heard people, including some of the health workers, in the queues in the clinic ask each other why I would need ARVs as a disabled.&quot;</td>
<td>&quot;I feel more comfortable if somebody would accompany me on the way to the clinic. Public transport and the busy hospital are not easy to navigate. I sometimes ask my family, but I wished I wouldn’t have to do that.&quot;</td>
<td>&quot;They provide HIV information flyers. Relevant for me that I cannot read them. &quot;</td>
<td>&quot;Some of the nurses don’t have patience for us. They’d say things like, So if you are blind, are you also deaf, can’t you hear what I am saying? Also, the nurse always talks loudly about my HIV status when explaining things to me. I don’t feel comfortable about this.&quot;</td>
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</table>

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Community perception</th>
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</tr>
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</table>
| Limited community support | Limited community support | Lack of accessible transport | Limited accessibility of health information | Negative attitude of health workers | Limited accessibility of health information/ instruction | "I need assistance with my medication. Usually the health workers are writing the instructions on the package, for example 1x3, 2x4 and so on, but I cannot read that. If they are home, my parents help me with the medication." |"I definitely feel like I receive more rejection at the health clinic and in the community, as a person with a disability and HIV, more than if I just had HIV. Thankfully I go to school and my parents support me."

| Limited accessibility of health information/ instruction |

South Africa

Anesu, adolescent with visual impairment

Accessing HIV treatment services

I perceive a need

I decide to seek healthcare

I reach the healthcare venue

I access healthcare services

I engage with healthcare staff

I continue with treatment and follow up care
**Dustin, man with intellectual disabilities**

**Accessing dental care services**

### Barriers

- Lack of available health providers
- Lack of appropriate financial coverage and reimbursement mechanisms
- Lack of health worker knowledge, skills and awareness
- Lack of appropriate treatment

**USA**

"I am not sleeping very well. I wake up in the middle of the night because my teeth are hurting. I have been two months with this problem every night. I speak with the home leader and he gives me pain medication."

"After I told my group home leader a few times, he called a few dentists to try and make an appointment for me. It took him one week to find a dentist that was willing to see me."

"The driver from the group home took me to the appointment. The only dentist that gave me an appointment is one hour from home."

"The dentist only spent minutes with me and did not check much. The dentist said he couldn't do much for me because I only have Medicaid."

"The dentist was abrupt when he said things like 'open your mouth' and 'don't move'. I tried to stay quiet and follow his instructions, but he still did not have much patience with me."

"The dentist gave me medication. My teeth started hurting again now."

---

**Morowa, woman with physical impairment**

**Accessing maternal health services**

### Barriers

- Lack of transport options
- Limited community support
- Lack of transport options
- Limited accessibility of facilities and equipment
- Negative attitude of health workers
- Lack of knowledge and awareness of health workers

**Ghana**

"It is not that I don’t want to. I really want to go check my pregnancy. But I can’t paddle my wheelchair to the health centre, it is far. My first birth was also not easy."

"I delivered my first child at home because my husband was away and I didn’t get help from my family. For this second one, I will deliver in the hospital no matter what. Now, at least my first child will be able to help me."

"I live in the city, but the hospital is still 10km away from my home. If I had enough money I would hire a taxi to take me... I can’t get on the public bus without somebody to help. Even if I get on, where do I put my wheelchair? This is a problem."

"Luckily the hospital had a ramp for my wheelchair. But the doorframes of the maternity ward weren’t wide enough. We eventually found a way. The nurses then told me to get on the delivery bed, but it was too high for me to get up there."

"They said ‘You who cannot even get up on the bed. Why did you even get pregnant? Why do you try to handle jobs that you cannot manage?’ You can tell that the nurses don’t want to help me. It is as if they are afraid of me like I’m a lion waiting to eat them."

"The nurses don’t really think about my situation. After delivery, they said I should exercise by walking daily. But look at me, I can’t stand and walk. I can only move about in this wheelchair. So how is this advice relevant?"
**Simon & Tuwafu, boy with hearing impairment, and his father**

Seeking specialized hearing services  

**Malawi**

- **Understanding the situation**
  - “We noticed he only heard us when he looked at us. When he was not able to follow at school we decided to do something. The traditional healer in the village said we should put cooking oil in the ear.”

- **Barriers**
  - Limited awareness on when and were to seek care
  - Lack of counselling through primary care health workers
  - Lack of transport options
  - Limited affordability for health access
  - Lack of trained specialized health workers

- **Making the journey**
  - “Our village is 100km from Blantyre. It takes 4 hours to get there with two minibuses. We didn’t get any money for the trip nor instructions on where to go in the city. We are harvesting now. I hired a helper since I cannot be there. This is not good for our family income.”

- **Waiting**
  - “Once we arrived at the hospital, we had to wait for the whole next day until somebody saw us. The doctor was telling us that there are only 3 of him (audiologists) in the whole country.”

- **With the doctor**
  - “Simon was feeling tired. It was difficult for him to communicate. The doctor seemed impatient. He then said Simon can get a hearing aid. It usually costs USD 100. That’s more than we earn in a month. The NGO paid for this one, so we got it 5 hours later.”

- **Solution not working**
  - “The hearing aid helped a lot...at first. But after three weeks, Simon complained that it stopped working. I couldn’t fix it. Nobody at the health centre could either. What shall we do? Travel again for 3 days to the hospital? We cannot do that. I hope the NGO has a camp here soon, then we can ask them.”

**Sylvia & Maria, girl born with Zika and her mother**

Trying to access health services for an ear infection  

**Brazil**

- **Noticing something**
  - “Despite Sylvia’s disability and pathology, she is a very calm child. When she became irritable and was crying a lot, I got really worried because her behaviour wasn’t normal. That’s when I noticed a discharge coming from her little ear.”

- **Barriers**
  - Lack of health worker knowledge, skills and awareness
  - Long distance to specialised services
  - Lack of health worker knowledge, skills and awareness

- **Getting rejected**
  - “We took her to the closest clinic, but the doctor told us she cannot treat her because of her disability. She said she needs special services that she cannot provide and suggested we go to the hospital. We left there not being attended to and feeling restless.”

- **Returning home**
  - “On the way back home, the bus driver did not stop when he saw us. We had to wait a while for the next bus. We live 230km from the hospital where we were told to go to. Just for an ear infection, we cannot go all that way.”

- **Preparing for the doctor**
  - “After speaking with my neighbour, I found the courage to go and insist again to get her examined by the doctor. I prepared a list of all the things I wanted to tell the doctor.”

- **Perseverance**
  - “I went back and showed the doctor a video of Sylvia at home. I wanted to show how differently she behaves at home when she is happy and relaxed. The doctor finally examined her ear and gave us the right medication. We went home feeling much calmer.”

- **Quick recovery**
  - “After Sylvia started taking the medication she felt better instantly. I’m glad I knew what it was.”
### 5.2 Best practice examples

| Education materials (e.g., Beyond Words books) |
| Parent groups (e.g., for children with Zika/CP) |
| Peer education programs (e.g., for people with hearing loss) |
| Training of health workers, i.e. primary healthcare workers, about disabilities (on-line, on-site, during medical school, etc.) |
| “Contact-events” for health workers (e.g., shadow person with disabilities for CHWs) |
| Innovation and market shaping activities (e.g., AT2030, ATscale) |
| Accessibility standards and checklists (e.g., Special Olympics) |
| Fully inclusive health services for specific services (e.g., Sightsavers eye health) |
| Documenting gaps in health care access and health status of people with disabilities (e.g., Sintef, DHDS) |
| Documenting gaps in health care access and health status of people with disabilities |
| Disability Acts ensuring free and high-quality healthcare (e.g., Sierra Leone) |
| Full insurance coverage and schemes (e.g., for rehab/AT) to address particular financial burden (e.g., transport) (e.g., Indonesia, Vietnam) |
| Global partnerships to action (e.g., ATscale – the global partnership for assistive technologies, Rehab 2030) |

Note: sources and more information in appendix
<table>
<thead>
<tr>
<th>Relevant SDG Target Number(s)</th>
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<tr>
<td><strong>TARGET 3.1</strong></td>
<td>Maternal Health</td>
<td>Women with disabilities are more likely to have pre-term births and low-weight babies (1.5x)</td>
<td>Rhode Island, USA</td>
<td>Multiple</td>
<td>Adults (birthing age)</td>
<td>M. Mitra, K.M. Clements, J. Zhang, et al., &quot;Maternal Characteristics, Pregnancy Complications, and Adverse Birth Outcomes Among Women With Disabilities,&quot; Medical Care (December 2019); 53(12):1027-32. Available from: <a href="http://www.ncbi.nlm.nih.gov/pubmed/26492209">http://www.ncbi.nlm.nih.gov/pubmed/26492209</a>. The incidence of stillbirth among disabled females aged 15 years old and above was 53% higher compared to females without disability of the same age. Among disabled women, 7.0% (111) reported stillbirths, while the corresponding figure for non-disabled was 6.4% (84) (n.s.). Mean number of stillbirths was 1.6 among disabled women and 1.4 among non-disabled, but this difference is not large enough to be statistically significant. There is thus a weak but non-significant tendency for disabled women to have more stillbirths than the non-disabled control group.</td>
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<td><strong>TARGET 3.1</strong></td>
<td>Maternal Health</td>
<td>Women with disabilities are more likely to have pre-term births and low-weight babies (1.5x)</td>
<td>Lesotho</td>
<td>Multiple</td>
<td>Women 15+</td>
<td>Y. Kamaleri and A.H. Eide, &quot;Living Conditions among People with Disabilities in Lesotho: A National Representative Study,&quot; SINTEF Technology and Society: Global Health and Welfare, 2011. Available from: <a href="http://www.sintef.no">www.sintef.no</a>. The incidence of stillbirth among disabled females aged 15 years old and above was 53% higher compared to females without disability of the same age. Among disabled women, 7.0% (111) reported stillbirths, while the corresponding figure for non-disabled was 6.4% (84) (n.s.). Mean number of stillbirths was 1.6 among disabled women and 1.4 among non-disabled, but this difference is not large enough to be statistically significant. There is thus a weak but non-significant tendency for disabled women to have more stillbirths than the non-disabled control group.</td>
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<td><strong>TARGET 3.2</strong></td>
<td>Child Health</td>
<td>Children with disabilities are more likely to be malnourished (2-3x) &amp; die from malnutrition (2x)</td>
<td>Malawi</td>
<td>Multiple types</td>
<td>Children</td>
<td>M. Kerac, J. Bunn, G. Chagaluka, et al., &quot;Follow-Up of Post-Discharge Growth and Mortality after Treatment for Severe Acute Malnutrition (SAM) Study: A Prospective Cohort Study,&quot; PLoS One (June 3, 2014); 9(6):e96030. Available from: <a href="http://www.ncbi.nlm.nih.gov/pubmed/24892281">http://www.ncbi.nlm.nih.gov/pubmed/24892281</a>. Hazard ratios for death for malnourished people with disability (any) - 2.77 (1.43-5.34) p=0.002 for those who were HIV positive and for those who were HIV negative 1.76 (0.94-3.28) p=0.08. Relative Risk Ratio, 1.6-2.9 times more likely to have malnutrition in comparison to controls. Wasting OR=1.9, 95% CI 0.8-2.7.</td>
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<tr>
<td>Target 3.2</td>
<td>Child Health</td>
<td>Children with disabilities are more likely to experience serious illness in last year (5-10x)</td>
<td>30 countries</td>
<td>Multiple types (Learning, Communication, Vision, Hearing, Physical)</td>
<td>Children aged 0-17</td>
<td>H. Kuper, A. Monteath-van Dok, K. Wing, et al. “The Impact of Disability on the Lives of Children: Cross-Sectional Data Including 8,900 Children with Disabilities and 898,834 Children without Disabilities across 30 Countries.” S. Federici, editor, PLoS One (Sept. 9, 2014); 9(9):e07300. Available from: <a href="http://www.ncbi.nlm.nih.gov/pubmed/25202999">http://www.ncbi.nlm.nih.gov/pubmed/25202999</a></td>
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<tr>
<td>Target 3.2</td>
<td>Child Health</td>
<td>Children with disabilities are more likely to suffer from severe diarrhea (2x)</td>
<td>Guatemala</td>
<td>Multiple types</td>
<td>Adults and Children 2 years and older</td>
<td>H. Kuper, I. Mactaggart, C. Dionicio, et al., “Can we achieve universal health coverage without a focus on disability? Results from a national case-control study in Guatemala,” K. Latham-Mintus, editor, PLoS One (Dec. 27, 2018); 13(12):e0209774. Available from: <a href="http://dx.plos.org/10.1371/journal.pone.0209774">http://dx.plos.org/10.1371/journal.pone.0209774</a></td>
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<tr>
<td>Target 3.3</td>
<td>HIV/AIDS</td>
<td>Adults with disabilities have a higher HIV prevalence (2x)</td>
<td>Yaoundé, Cameroon</td>
<td>Multiple Types</td>
<td>15 to 49 years</td>
<td>P. De Beaudrap, G. Beninguisse, E. Pasquier, et al., “Prevalence of HIV infection among people with disabilities: a population-based observational study in Yaoundé, Cameroon (HandIVH),” Lancet HIV (April 2017); 4(4):e161-8. Available from: <a href="http://www.ncbi.nlm.nih.gov/pubmed/28126484">http://www.ncbi.nlm.nih.gov/pubmed/28126484</a></td>
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<td>Target 3.3</td>
<td>HIV/AIDS</td>
<td>Adults with disabilities have a higher risk of HIV infection (30%)</td>
<td>Systematic Review - studies from 6 countries in sub-Saharan Africa</td>
<td>Mental illness/intellectual disabilities; hearing impairment</td>
<td>Adults</td>
<td>P. De Beaudrap, Muriel Mac-Seing, and Estelle Pasquier, “Disability and HIV: a systematic review and a meta-analysis of the risk of HIV infection among adults with disabilities in Sub-Saharan Africa,” AIDS Care 26(12): 1467–1476 (July 17, 2014).</td>
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<tr>
<td>Target 3.4</td>
<td>Diabetes</td>
<td>Adults with disabilities have a higher diabetes prevalence (2-3x)</td>
<td>USA</td>
<td>Cognitive limitations; physical impairment</td>
<td>Adults 18+</td>
<td>A. Reichard, H. Stolzle, and M.H. Fox, “Health disparities among adults with physical disabilities or cognitive limitations compared to individuals with no disabilities in the United States,” Disability and Health Journal (April 1, 2011); 4(2):59-67. Available from: <a href="https://www.sciencedirect.com/science/article/pii/S1936657410000373?via%3Dihub">https://www.sciencedirect.com/science/article/pii/S1936657410000373?via%3Dihub</a></td>
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<td><strong>Cardiovascular Disease/Hypertension</strong></td>
<td><strong>Cameroon</strong></td>
<td>Multiple types</td>
<td>Children and Adults</td>
<td>Special Olympics, Healthy Athletes Prevalence Report 2016, 2017.</td>
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</table>

### Annual no. of new cases of diagnosed diabetes per 1000 persons
- **USA**: 16.3
- **Cameroon**: 16.2
- **Pakistan**: 16.0

### % Prevalence According to Disability Status
- **Diabetes**
  - USA: 56.4%
  - Cameroon: 56.4%
  - Pakistan: 56.4%
- **Cardiovascular Disease/Hypertension**
  - USA: 31.8%
  - Cameroon: 31.8%
  - Pakistan: 31.8%
- **Mental Health**
  - USA: 21.8%
  - Cameroon: 21.8%
  - Pakistan: 21.8%

### People with disabilities have a higher cardio-vascular disease prevalence (2x)
- The proportion of disabled respondents who answered that their overall mental health status was poor or not very good was almost 5 times higher than the proportion of non-disabled respondents. Only 5.7% of disabled respondents stated that their current mental health was very good compared to 16.2% among non-disabled respondents.

### People with disabilities are more likely to have a mental health status (x4)
- The proportion of disabled respondents who answered that their overall mental health status was poor or not very good was almost 5 times higher than the proportion of non-disabled respondents. Only 5.7% of disabled respondents stated that their current mental health was very good compared to 16.2% among non-disabled respondents.
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<tr>
<td><strong>TARGET 3.4</strong></td>
<td>Mental Health</td>
<td>People with disabilities are less likely to receive treatment for psychiatric or behavioral disorders than those without disabilities</td>
<td>Guatemala</td>
<td>Multiple types</td>
<td>Adults and Children 2 years and older</td>
<td>H. Kuper, I. Mactaggart, C. Dionicio, et al., “Can we achieve universal health coverage without a focus on disability? Results from a national case-control study in Guatemala,” K. Latham-Mintus, editor, PLoS One (Dec. 27, 2018); 13(12):e0209774. Available from: <a href="http://dx.plos.org/10.1371/journal.pone.0209774">http://dx.plos.org/10.1371/journal.pone.0209774</a></td>
<td>Coverage of treatment for mental (psychiatric) or behavioral disorders: people with disability 33 (5%), people w/o disabilities 8 (2%); Age, sex, region, SES adjusted OR 3.3 (1.5-74); Prevalence ratio of coverage: 5/2 = 2.5</td>
</tr>
<tr>
<td><strong>TARGET 3.5</strong></td>
<td>Substance Use</td>
<td>More likely to abuse substances</td>
<td>USA</td>
<td>Defined disability as: a) reported a work disability, or b) age under 65 (non-aged) and Medicare-eligible</td>
<td>Working age (18-64 years)</td>
<td>R. E. Glazier and R. N. Kling, “Recent trends in substance abuse among persons with disabilities compared to that of persons without disabilities,” Disability and Health Journal (April 2013); 6(2):107–15. Available from: <a href="http://www.ncbi.nlm.nih.gov/pubmed/23350716">http://www.ncbi.nlm.nih.gov/pubmed/23350716</a></td>
<td>Among younger adults (18-24 years), persons with disabilities were more likely than those without disabilities to report that they had used heroin (adjusted odds ratio [OR] = 6.89; 95% confidence interval [CI] = 1.35, 35.3) or crack cocaine (OR = 6.38; 95% CI = 1.05, 38.6). Among older adults (35 years and older), persons with disabilities were more likely to report the use of sedatives (OR = 2.46; 95% CI = 1.21, 4.94) or tranquilizers (OR = 2.18; 95% CI = 1.08; 4.42) not medically prescribed.</td>
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<tr>
<td><strong>TARGET 3.7</strong></td>
<td>Family Planning</td>
<td>Women with disabilities are less likely to use reversible contraceptives than women without disabilities</td>
<td>Systematic Review - 62 publications of 54 original studies were included for review</td>
<td>Women with intellectual, physical, or sensory impairments</td>
<td></td>
<td>W. Horner-Johnson, E. L. Moe, P. C. Stoner, et al., “Contraceptive knowledge and use among women with intellectual, physical, or sensory disabilities: a systematic review,” Disability and Health Journal (April 2019); 12(2):139–54. Available from: <a href="http://www.ncbi.nlm.nih.gov/pubmed/30473221">http://www.ncbi.nlm.nih.gov/pubmed/30473221</a></td>
<td>Estimates of the proportions of women with disabilities using contraceptives varied widely, reflecting substantial diversity in study samples and methods. The majority of the comparative studies we reviewed – including those that were methodologically strongest – found that women with disabilities were less likely than women without disabilities to use reversible contraceptive methods, especially the most effective methods.</td>
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<tr>
<td><strong>TARGET 3.8</strong></td>
<td>UHC – Access</td>
<td>Women with disabilities less likely to seek antenatal care</td>
<td>Guatemala</td>
<td>Multiple</td>
<td>15–49 years who had given birth in the last 5 years</td>
<td>Kuper, Mactaggart, Dionicio, et al., op. cit.</td>
<td>OR 0.4, 0.1-1.0</td>
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<tr>
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<td><strong>TARGET 3.8</strong></td>
<td>UHC – Access (continued)</td>
<td>People with disabilities don’t receive assistive device services when they need it</td>
<td>Mozambique</td>
<td>Multiple types</td>
<td>Children and Adults</td>
<td>A. H. Eide, Y. Kamaleri, K-G. Hem, and I.B. Scheel, “Living Condition among People with Disabilities in Mozambique,” SINTEF Technology and Society: Global Health and Welfare, 2009. Available from: <a href="https://www.sintef.no/globalassets/upload/helse/levekar-og-tjenester/lc-report-mozambique---2nd-revision.pdf">https://www.sintef.no/globalassets/upload/helse/levekar-og-tjenester/lc-report-mozambique---2nd-revision.pdf</a></td>
<td>The results showed that less than one-tenth of people who were in need of vocational training and educational services received the services. Other services that also have a noticeable wider gap include assistive devices services, counselling for person with disability and welfare services: 82%, 78% and 85% respectively. People with disabilities don’t receive assistive device services when they need it. Mozambique Multiple types Children and Adults. A. H. Eide, Y. Kamaleri, K-G. Hem, and I.B. Scheel, “Living Condition among People with Disabilities in Mozambique,” SINTEF Technology and Society: Global Health and Welfare, 2009. Available from: <a href="https://www.sintef.no/globalassets/upload/helse/levekar-og-tjenester/lc-report-mozambique---2nd-revision.pdf">https://www.sintef.no/globalassets/upload/helse/levekar-og-tjenester/lc-report-mozambique---2nd-revision.pdf</a>.</td>
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<td><strong>TARGET 3.8</strong></td>
<td>Quality</td>
<td>More likely to find health care provider’s skills and facilities inadequate (2x)</td>
<td>Mozambique</td>
<td>Multiple types</td>
<td>Children and Adults</td>
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<tr>
<td>Relevant SDG 3 Target Number(s)</td>
<td>Topic</td>
<td>Claim</td>
<td>Place</td>
<td>Type of Disability</td>
<td>Age</td>
<td>Source</td>
<td>Evidence</td>
</tr>
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<tr>
<td><strong>TARGET 3.9</strong></td>
<td>Environmental Health</td>
<td>Persons with disabilities are more likely to be poor, and thus are more likely to be exposed to environmental risk factors/tobacco</td>
<td>UK</td>
<td>Intellectual Disabilities</td>
<td>Children</td>
<td>E. Emerson, J. Robertson, C. Hatton, and S. Baines, &quot;Risk of exposure to air pollution among British children with and without intellectual disabilities,&quot; <em>Journal of Intellectual Disability Research</em> (Feb. 1, 2019); 63(2):161–7. Available from: <a href="http://doi.wiley.com/10.1111/jir.12561">http://doi.wiley.com/10.1111/jir.12561</a></td>
<td>Averaging across ages, children with IDs were 33% more likely to live in areas with high levels of diesel particulate matter, 30% more likely to live in areas with high levels of nitrogen dioxide, 30% more likely to live in areas with high levels of carbon monoxide and 17% more likely to live in areas with high levels of sulphur dioxide.</td>
</tr>
</tbody>
</table>