



How Can We Promote Equitable Access to Health Care in the Context of Climate Change?

THE INVISIBILITY OF PEOPLE WITH DISABILITIES AND THEIR ANIMALS

In Canada, people with disabilities aged 15 and older represent 27% of the population, according to Statistics Canada. However, despite their significant numbers, people with disabilities remain overlooked in public policies and programs designed to address health crises, such as the current climate crisis.

Climate change has a significant impact on public health and disproportionately affects vulnerable and marginalized groups:

- It negatively impacts public health by altering the resilience of health care systems and access to services of all kinds, particularly health care.
- It exacerbates health access inequities among people in vulnerable situations, particularly those with disabilities.
- It also affects the health of animals (companions, service animals, and livestock) in countries irrespective of their level of development.

In this context, the research team explored the intersection of access to health services for people with disabilities and their animals, and climate change, in Quebec, Canada (a high-income country), and in Gulu, Uganda (a low-income country). Both countries are among the 182 United Nations member states that have ratified the Convention on the Rights of Persons with Disabilities, which requires protecting and upholding the health rights of this population in accordance with the principles of non-discrimination, accessibility, and inclusion.

This fact sheet presents the results of a study combining a scoping review and a qualitative study conducted with people with visible and invisible disabilities, as well as intersectoral experts. These discussions identified new research priorities that will guide future work.



SUMMARY

- Research, programs, and policies must take into account the realities and experiences of people living with various disabilities, as well as those of their animals, to meet their specific needs.
- It is imperative to involve people with disabilities and their representative organizations in planning inclusive emergency measures and in developing and implementing appropriate policies, to ensure equitable access to health services in the face of climate change.
- Inter-sectoral collaborations (human and animal health, climate and environment, disability, agriculture, and development) are essential to improving access to human and animal health services based on the "One Health" approach.
- Raising awareness and training service providers on the diverse needs of people with disabilities, whether visible or invisible, and their animals, as well as ongoing knowledge sharing, are among the areas for improvement identified in the research.
- Data collection related to disability must continue to provide a more accurate picture of actual access to health services.
- The participants in this study highlighted the need for animal health services tailored to the needs and circumstances of people with disabilities, as well as the importance of ensuring these services are affordable and accessible in terms of communication.

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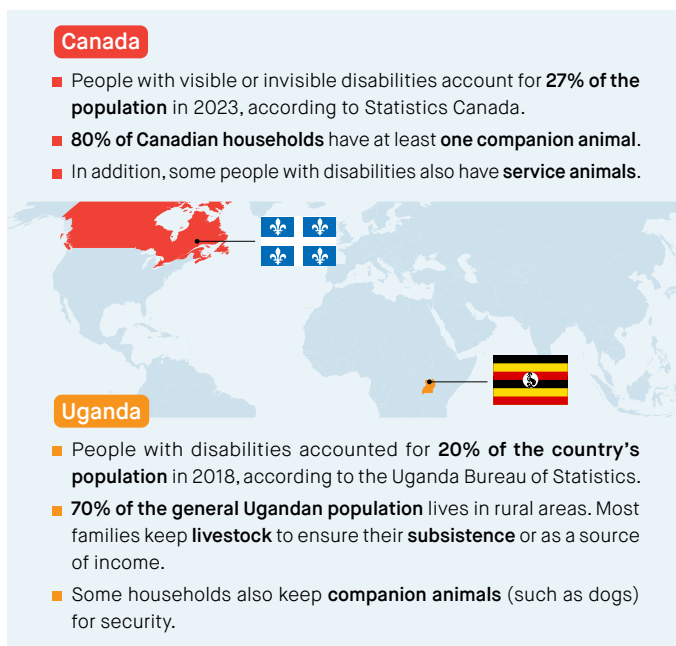


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Background

In 2022, **1.3 billion people** (**1 in 6 people** worldwide, or **16% of the population**) live with disability, whether motor, sensory, intellectual, or mental, according to the World Health Organization (WHO).



Despite their large numbers, people with disabilities remain invisible in global and national policies and programs designed to address health crises, such as the COVID-19 pandemic and the current climate crisis.

Key Terms

People with disabilities: The 2006 United Nations Convention on the Rights of Persons with Disabilities defines this population as people with long-term physical, mental, intellectual, or sensory impairments, whose interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.

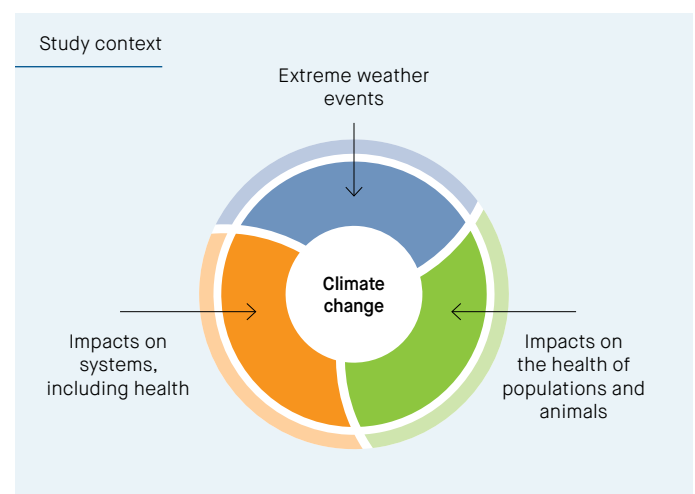
Animals: Regardless of the role they play (assistance, companionship, or livestock), animals are an integral part of the lives of people with disabilities, providing them with vital support. Studies show that service dogs trained to perform physical tasks can also improve psychological and social well-being, quality of life, and vitality.

Climate Change: The Intergovernmental Panel on Climate Change (IPCC) defines climate change as the global disruption of the Earth's climate system, caused primarily by increases in greenhouse gases (CO₂, methane, etc.) resulting from human activities (fossil fuel combustion, deforestation, etc.). Climate change is reflected not only in rising global average temperatures (global warming), but also in the intensification and alteration of extreme weather events (droughts, floods, storms, melting ice, and rising sea levels).

Study on the Intersection of Climate Change, Disability, and Human and Animal Health

The study aims to explore the intersection between access to health services for people with disabilities and their animals in the context of climate change. To this end, the research team conducted an exploratory, multi-site study in Quebec and Gulu, Uganda. Two approaches were adopted:

- **Intersectionality** helps bring invisible intersectional health inequities to light. As a result, the research team moved beyond superficial solutions to pursue transformative change, ensuring the needs of the most marginalized communities are considered in the pursuit of health equity for all.
- **The "One Health"** approach takes a multidimensional view of human, animal, and environmental health, emphasizing their interactions. Within this framework, zoonoses and emerging infectious diseases, as well as noncommunicable diseases such as mental health conditions, were addressed.



Inequities in Access to Health Care Services

"It's mainly about access to health care, it's not related to climate change, but solely to access, specifically access to health care services for people with disabilities, especially those with invisible disabilities."

Group discussion with people with disabilities (Quebec)

The testimonies collected in this study demonstrate that **access to health care is always unequal** for people with disabilities and their animals, even without taking climate change into account.

In both Quebec and Gulu, Uganda, study participants consistently highlighted the barriers that significantly hindered equitable access to health care for people with disabilities and their animals.

SPECIFIC CASES

- **People with hearing impairments:** Sign language interpretation is often limited or scarce in health care facilities in both regions studied, regardless of the country's income level.
- **People who need service dogs:** Participants in Quebec with disabilities who use guide dogs reported facing financial and structural barriers to accessing veterinary services. This is largely due to a lack of structural prioritization of their needs, as people with disabilities, and the health of their service animals, which are crucial for them to navigate both their personal and professional lives.

AVENUES FOR ACTION

In anticipation of potentially more frequent extreme weather events, better planning by government agencies would ensure equitable access to health services for people with disabilities, particularly through:

- The development of proactive measures to remove physical, communication, and structural barriers to accessing human and animal health services by adapting these services and making them more inclusive and accessible.
- Raising awareness and providing training for service providers on the different needs of people with disabilities, whether visible or invisible.

ACCESS TO HEALTH CARE SERVICES IN THE CONTEXT OF CLIMATE CHANGE

The first phase of the study focused on equity issues in access to health care services for people with disabilities in the context of climate-related events, as part of a **scoping review**. Of the 5,077 references identified in the review of the existing scientific literature, 16 studies met the inclusion criteria. Of these, 15 were from the Global North (the USA, Canada, Australia, and the UK) and one was from Mexico.

The most frequently cited climate-related events were the exacerbation of natural disasters caused by climate change and extreme weather events, at both small and large scales.

The scoping review highlighted enabling factors and barriers related to access to health services for people with disabilities.

Enablers

- Triage tools adapted for people with disabilities.
- Existence of a registration system for people with disabilities in preparation for evacuations.
- Disaster preparedness education.
- Implementation of telemedicine before the event.
- Emergency planning laws and policies that include people with disabilities.

Barriers

- Lack of staff training on communication, infrastructure, and health needs for people with disabilities.
- Insufficient access to emergency shelters adapted to their needs.
- Lack of adapted information and evacuation procedures for people with hearing impairments.

Equity considerations

There are numerous equity issues regarding access to health services for people with disabilities:

- Categorizing these individuals as a "vulnerable group" or as having limited resources fails to capture the diversity of factors they face.
- The barriers that people with disabilities face are more closely linked to social and environmental factors than to individual factors.
- The inaccessibility and lack of disability awareness in existing systems prevent people with disabilities from having appropriate access to recovery resources.

Key Findings from the Qualitative Component of the Study

In the context of climate change, the study demonstrates that people with disabilities and their animals face numerous challenges. To address this inequity in access to health services, study participants, including intersectoral experts (in disability, health and public health, climate and environment, and agriculture), as well as people with disabilities at both study sites, identified concrete avenues for improvement. These solutions can be implemented within the framework of current policies, promoting greater integration of the “One Health” approach with the intersectional perspective of inclusion for people with disabilities and interspecies equity in health.

RECOMMENDATIONS MADE BY PARTICIPANTS IN QUEBEC

POLICIES

Inter-sectoral integration of disability, health and climate, and leveraging existing normative documents

- Integrate climate change into the health sector, while taking into account the vulnerability of the population.

“One recommendation I find essential is that we need a government, or more specifically, health ministries, that more fully integrate climate change into their programs or the adaptation of health infrastructures. If we do that work, there will be room to consider patients who present vulnerability criteria or have specific needs. This could include older adults, people with disabilities, or children. I believe this lens is essential.”

Health and climate expert (Quebec)

- Integrate disability into climate change adaptation measures.

“The inclusion of people with disabilities in climate adaptation plans, particularly to improve access to information and the responsiveness of services, with a focus on the specific needs of people with hearing disabilities.”

Results-sharing workshop (Quebec)

RESEARCH

Strengthening disability-related data collection

- Collect more data and conduct research involving people with disabilities in the context of climate change.

“I hope there will be more projects like yours, because the climate crisis is here to stay, we need to collect data the way you do.”

Disability expert (Quebec)

- Collect more data on climate change and mental health.

“It is also important to include mental health and invisible disabilities, with a commitment to conducting more research on these issues, as they are rarely considered.”

Disability expert (Quebec)

- Conduct collaborative work, including in the field of research.

“It’s crucial to work together – bringing researchers, practitioners, disability advocacy groups, and public authorities – to address these challenges.”

Results-sharing workshop (Quebec)

PROGRAMS

Promotion of climate-friendly, disability-friendly and animal-friendly health services

- Implement disability-sensitive climate-related measures.

“In the context of ‘natural disasters’, it’s important to be informed about what’s happening, when, and how, in real time. Maybe cities could send us a text message to inform us directly (...). Some Deaf people use text messages, but there are also Deaf people who don’t read. So, sending a text message could be an option, but it could also be video clips or having a sign language interpreter shown in a corner of the news broadcast.”

Group discussion with people with hearing disabilities (Quebec)

- Setting up animal health services adapted to the needs of people with disabilities.

“The recommendations include, for example, suggesting that veterinarians provide sign language interpretation services that are covered, meaning free for us, so that it matches what is available for humans.”

Group discussion with people with hearing disabilities (Quebec)

- Address the issue of affordability of animal health services and structural barriers.

“Remotely [via telemedicine], it’s difficult without being able to touch the patient, because the symptoms are vague and people with disabilities have a hard time interpreting them. [...] There are also veterinarians who make house calls. [...] We refer them to people who can’t travel, but it’s more expensive. Many people with disabilities ask us if we offer discounts because of their disability, since these consultations sometimes take longer. Blind people ask if their service dogs qualify for discounts at the clinic.”

Veterinarian (Quebec)



A CLOSER LOOK AT RECOMMENDATIONS GATHERED IN GULU

The discussions held as part of the study in Uganda highlighted recommendations that differ from those issued in Quebec, and which could be used as models:

- Incorporating disability considerations into sector-based budgeting (independent of climate change) would allow for the implementation of concrete actions.

"We have to make disability in our forthcoming budget a priority. I want to talk about the health issues because nowadays, when you go to most of the health centers, I can see that the deliverables for people with disabilities are available. The ramps are available. This shows that disability is considered a priority."

Results-sharing workshop (Gulu)

- Identifying people with disabilities and establishing their profiles within communities would facilitate planning based on their needs.

"Without information, we cannot proceed. With data on disability, we can progress, and that would inform the intervention."

Results-sharing workshop (Gulu)



COMMON GROUND

Although their circumstances differ, study participants in Gulu and Quebec agree on the need to improve equitable access to health care services.

Participants interviewed at both study sites agree that there is a **pressing need to collect and document new evidence** regarding people with disabilities and their animals. This new evidence would serve as the **cornerstone for advocacy aimed at advancing equity** within the framework of an inclusive public health system sensitive to their diverse and specific needs. A consensus also emerged on the following topics:

- The need to strengthen the links between human health, animal health, and environmental health within existing intersectoral programs.
- The importance of stepping up data collection on disabilities to ensure that interventions are appropriately tailored not only during climate emergencies but also in advance, during disaster preparedness.
- The establishment of animal health services tailored to the needs of people with disabilities and affordable to them.

Impact of Climate Change-Related Events on Health

During the interviews in Quebec, heat waves, floods, wildfires, and irregular winter freeze-thaw cycles were the most frequently mentioned climate events. In Gulu, the focus was instead on prolonged, delayed, or irregular hot and rainy seasons.

In all cases, the scoping review shows that these events have affected the mental and physical health of people with disabilities and have also compromised the health of their animals, sometimes leading to the animals' death. Climate emergencies can deteriorate road conditions, complicating transportation, support services, and access to health care. Combined with high levels of air pollutants, these events influence the spread of infectious diseases and increase the risk of chronic illnesses. Moreover, to combat climate change, the Sustainable Development Goals (SDGs) adopted by the United Nations have prioritized climate adaptation and mitigation measures. However, in reality, these measures take little account of the specific realities and needs of vulnerable populations, such as people with disabilities.

"When we talk about climate change, it is people in precarious economic situations [such as people with disabilities] who are the first to be affected, along with the animals that live with them. We want to avoid at all costs having these people separated from their animals, because they will not be able to find them again. Their animals provide important support for their mental health and psychological well-being."

Rural veterinarian (Quebec)

In Uganda, the "One Health" approach comes more naturally, as the daily lives of the population, including people with disabilities, are closely tied to livestock and the products they provide.

"Most people with disabilities raise animals such as goats, cows, or pigs, as this is their source of income. However, due to climate change, this activity is declining: the green grass has dried up, the land continues to be burned, and harsh weather conditions are causing some animals to die or fall ill. It is too hot, pastures and water are in short supply, some animals get lost, and people with disabilities cannot travel long distances to track them down."

Environmental and agricultural expert (Gulu)

"This isn't just a matter for farmers, environmentalists, educators, or health professionals. [...] The effects of climate change are a cross-cutting issue, and we must therefore address them in an integrated manner. So, when I plan health-related measures, I take into account the fact that climate change is a reality."

Public Health expert (Gulu)



The Intersection of Disability, Health, and Climate Change

Although climate change poses a threat to human, animal, and environmental health, little is known about the actual access to health services for people with disabilities and the animals they own or raise, in both high- and low-income countries.

Research on climate change as it relates to disability represents a gap that needs to be addressed.

Situated at the intersection of SDGs 3 (good health and well-being), 10 (reduced inequalities), and 13 (climate action), our research findings with cross-sectoral stakeholders, including people with disabilities, highlight several avenues for action.

AVENUES FOR ACTION

The discussions held as part of this research, as well as the reviewed literature, highlight the importance of systematically including people with disabilities in the "One Health" approach. This inclusion is essential to combating the effects of climate change on this population's health, as they are vulnerable to zoonotic diseases and face numerous barriers to accessing human and veterinary health services, as well as social and environmental services, both at work and in their personal lives.

To achieve this, efforts must take disability into account by ensuring that collaboration and communication are fostered between the disability sector and other sectors (human and animal health, climate and environment, agriculture, and others).

Leaders in public health, climate and the environment, and disability must ensure that intersectoral governance structures, information systems, and communication processes are accessible and tailored to the realities and needs of people with disabilities to respect their fundamental rights and recognize them as full members of the community.

Considerations Related to Sex and Gender

In Quebec, participants in the results-sharing workshop held as part of the study emphasized the importance of **not treating people with disabilities as a homogeneous group**. Indeed, the diversity of realities and intersecting identities within this population, such as sex, gender, age, or socioeconomic status, combined with social barriers and structural injustices, can further marginalize certain groups, such as women with disabilities.

That said, people with disabilities, as a whole, remain in the shadow of non-disabled populations in the context of climate action at the intersection of human, animal, and environmental well-being. **To be equitable and truly comprehensive, the "One Health" approach to climate change must integrate both disability and gender through an intersectional lens.**

Stigmatization and Invisibilization

The study's findings reveal that, when accessing health care services, people with disabilities and their animals face various forms of discrimination and ableist barriers¹. Indeed, this issue is well documented in the literature.

Inequity in access to health care reflects **discriminatory societal structures that systematically, even unintentionally, devalue and render invisible the experiences of people with disabilities** in order to prioritize the perspectives of non-disabled groups. The inability of health care systems to adequately meet the needs of people with disabilities also stems from social discrimination and stigmatization toward these individuals and those around them, including their animals.

Furthermore, little attention is paid to the barriers faced by people with disabilities who own animals and seek veterinary services, whether in high- or low-income settings, and, moreover, often in rural and peri-urban areas. This study highlighted the need to address the underlying structural and social determinants that hinder access to health services for both people with disabilities and their animals, regardless of the impact of climate change.

1. Ableism is a power structure that systematically discriminates against people with disabilities and favours people without disabilities.

Animal Health: Best Practices from Uganda

In Uganda, animals play a central role in daily life. For many people with disabilities, they represent a source of livelihood, security, and independence in a society that remains largely agricultural.

Ensuring access to services for animals, particularly veterinary care, is therefore not a luxury, but a necessity. This example highlights a fundamental reality: **the health and well-being of people with disabilities are closely linked to the health of the animals that accompany them and that they raise.**

Participants in the study in Gulu suggested several potential solutions:

- Better integrate human, animal, and environmental health into existing intersectoral programs by adopting a **holistic approach** to combating climate change.
- Establish animal health services for people with disabilities.

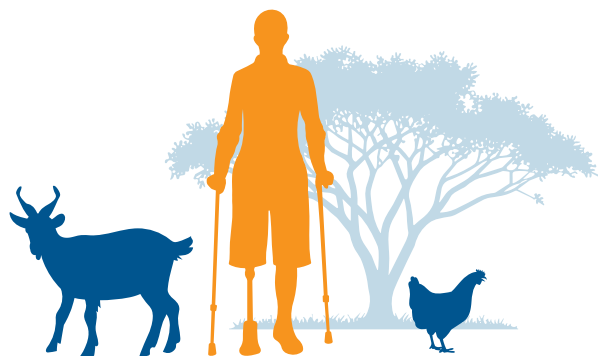
"There should be a treatment point for the animals from the villages, or it should be done from the homes of people with disabilities [as many face physical obstacles]... There should be proper allocations of funds (...), and training."

Group discussion with people with disabilities (Gulu)

- Address the issue of financial and physical access to animal health services

"There is a need to subsidize the cost of hiring veterinary services and to provide physical accessibility."

Group discussion with people with disabilities (Gulu)



Next Steps

The researcher is continuing her study on the impacts of climate change on the mental and physical health of people with disabilities, this time in three regions of Quebec (Montréal, Capitale-Nationale, and Gaspésie–Îles-de-la-Madeleine), with funding from the Canadian Institutes of Health Research (CIHR) (2025–2026).

Other research projects are currently being developed, particularly in collaboration with the community sector, to strengthen their advocacy strategy with evidence-based data.

Furthermore, to continue developing research projects that consult with and give a voice to people with disabilities, the principal investigator plans to conduct a collective exercise in spring 2026 to prioritize the most pressing climate issues in collaboration with organizations representing people with disabilities.

AVENUES FOR ACTION

With the goal of developing regional public health climate adaptation plans (PARC), Quebec's public health departments have been conducting an assessment of regional vulnerabilities and risks related to climate change (VRAC) since 2019, with support from the *Institut national de santé publique du Québec* (INSPQ) and the Ministry of Health and Social Services.

People with disabilities have been identified as being among those most at risk from the effects of climate change. To promote equitable access to health services in the context of climate change, **public health departments must involve people with disabilities or representatives of organizations for people with disabilities and take their experiential knowledge into account.**

The *Direction régionale de santé publique de Montréal* (DRSP) has already launched a consultation process to develop equitable adaptation solutions. The Montreal DRSP has invited Muriel Mac-Seing, principal investigator of the Quebec-Gulu research project, to serve on the VRAC-PARC project team's coordination committee and advise on strategies and approaches to better include people with disabilities in climate adaptation measures.

ABOUT THE STUDY

OBJECTIVES

- Identify priority research areas through a scoping review that synthesizes the existing literature and identifies gaps in research on the relationships between access to health services for people with disabilities, including access to animal health services for their animals, and climate change.
- To explore in greater depth the perspectives of relevant cross-sectoral stakeholders on the relationship between access to health services for people with disabilities, including access to animal health services for their animals, and climate change in Quebec (Canada) and in the Gulu District (northern Uganda).
- Strengthen collaboration and solidarity in research through co-creation, the building of trusting relationships, and inclusive learning among partners and researchers in Uganda and Canada.

METHODS

- Scoping review.
- Qualitative study involving people with disabilities and intersectoral experts in Quebec and Gulu.
- Interactive results-sharing workshops to present the findings at both sites, where the results were validated by the workshop participants. These participants were also invited to provide recommendations on issues not addressed in the study.

Ethics certificate from: *Comité d'éthique de la recherche en santé de l'Université de Montréal* (CERSES-2023-5217), from Lacor Hospital Institutional Review Ethics Committee (LHIREC-2024-310), and from Uganda National Council for Science and Technology (SS35007ES).

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Learn more

- Scientific publications
- Results-sharing workshop. Invisibility of disability in the Global South and North.
- National Institute for Equity, Equality and Inclusion of People with Disabilities (INÉÉI-PSH)
- Gulu Disabled Persons Union (GDPU)



Please visit the webpage of *Spotlight on the research*

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