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## Reports on Disability and Accessibility in Canada

# Barriers to Accessibility in Public Spaces: Findings from the 2022 Canadian Survey on Disability

by Youssef Hachouch, Huda Akef, Carrly McDiarmid, Marysa Vachon, Stuart Morris and Diana Simionescu

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# Barriers to Accessibility in Public Spaces: Findings from the 2022 Canadian Survey on Disability

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## Abstract

This study uses the 2022 Canadian Survey on Disability to explore the experiences of barriers to accessibility in public spaces among persons with disabilities aged 15 years and over. More closely examining the barriers encountered by persons with disabilities as they navigate their environments is important in furthering progress towards an accessible and inclusive Canada. The descriptive statistics show that over half of persons with disabilities experience barriers in public spaces and that the proportion experiencing barriers in this domain varies by disability-related and sociodemographic characteristics. When multiple factors are taken into account using multivariate techniques, many of these characteristics continued to be significantly associated with experiencing barriers in public spaces. Disability-related factors independently associated with higher odds of experiencing barriers included having more severe disabilities, having unmet needs for disability supports and having unmet needs for help with everyday activities. In terms of sociodemographic factors, the odds of experiencing barriers to accessibility in public spaces increased with age and were higher among women, 2SLGBTQ+ persons and those residing in medium or large urban population centres.

## Introduction

The [Accessible Canada Act \(ACA\)](#), along with its regulations<sup>1</sup> and related standards,<sup>2</sup> aims to make Canada barrier-free by 2040. The ACA defines a barrier as anything that prevents persons with disabilities from fully participating in society.<sup>3</sup> The ACA provides a framework for making progress towards more inclusive communities, workplaces, programs and services through the identification, removal, and prevention of barriers to accessibility. It includes the following priority areas: employment; built environment;<sup>4</sup> information and communication technologies (ICT);<sup>5</sup> communication, other than ICT; procurement of goods, services, and facilities; design and delivery of programs and services; and transportation. Research indicates that barriers to accessibility can manifest in different forms and affect persons with disabilities in a variety of situations, such as limiting their employment opportunities (Grisé et al., 2019), social participation (Sundar et al., 2016; Wee & Lysaght, 2009) and overall quality of life (Forster et al., 2023).

Canada has embraced the social model of disability, which conceptualizes disability as the result of interactions between functional limitations and barriers to accessibility in the environment (Pianosi et al., 2023). Developing a better understanding of barriers to accessibility encountered by persons with disabilities is a critical step towards the design of appropriate interventions to remove them and, ultimately, ensure that our communities, workplaces and services are fully accessible.

While previous research has highlighted issues related to barriers to accessibility in Canada (Choi, 2021; McDiarmid, 2021), data from the 2022 Canadian Survey on Disability (CSD) provides an opportunity to more closely examine barriers to accessibility encountered by Canadians with disabilities. The 2022 CSD collected information on 27 types of barriers to accessibility experienced by persons with disabilities because of their condition across four domains: public spaces; behaviours, misconceptions or assumptions; communication; and Internet use. This is the first in a series of four reports (one for each domain) providing further analyses of barriers to accessibility among persons with disabilities aged 15 years and over. The report focuses on barriers encountered by persons with disabilities in public spaces, which can be understood as indoor or outdoor built environments designed for utilization by the public.

1. Employment and Social Development Canada. 2022. [Summary of guidance on accessibility plans](#).

2. Accessibility Standards Canada. 2023. [Accessibility Standards Canada and CSA Group collaborate to publish three new accessibility standards](#).

3. The [ACA defines a barrier](#) as “anything physical, architectural, technological, or attitudinal, anything that is based on information or communications or anything that is the result of a policy or a practice — that hinders the full and equal participation in society of persons with an impairment, including a physical, mental, intellectual, cognitive, learning, communication or sensory impairment or a functional limitation.”

4. This can include buildings, homes, parks, streets, sidewalks and other public spaces.

5. This can include assistive aids, devices or technologies such as closed captioning or subtitles, video relay services (VRS), speech to text functions, or computers with specialized software, apps or other adaptations.

Persons with disabilities navigate a variety of environments in their daily activities and these spaces can include diverse barriers, such as those related to structural design or navigation (Gupta et al., 2020; Hammel et al., 2015). Inclusive design in the physical environment has emerged as an important aspect of increasing accessibility, seeking to address physical accessibility while considering cognitive, sensory and other diverse needs (Fernandez et al., 2021; Zallio & Clarkson, 2021). Facing environmental challenges has been associated with being less likely to leave one's home environment, being less physically active, having less independence and poorer well-being outcomes among persons with disabilities (Forster et al., 2023; Eisenberg et al., 2017; Satariano et al., 2016; Beard et al., 2009; White et al., 2010). While research on barriers to accessibility is often based on qualitative studies capturing the lived experiences of persons with disabilities, the current study allows for a quantitative examination of experiences of specific barriers among this population.

The main goal of this report is to examine the associations between disability-related and sociodemographic characteristics and the likelihood of experiencing barriers to accessibility in public spaces. The report starts with an examination of the prevalence of experiencing barriers with various features in public spaces. Next, it focuses on how the prevalence of experiencing at least one barrier varies based on disability-related factors and across sociodemographic groups. Finally, logistic regression modelling is used to determine the association of each variable with the odds of experiencing barriers in public spaces, while controlling for sociodemographic and disability-related characteristics.

## Data and Methods

### Data source

#### The Canadian Survey on Disability

Statistics Canada has collected data on disability for more than 30 years. Since 2012, the Canadian Survey on Disability (CSD) has been Canada's main source of that data. The CSD provides comprehensive data on persons with disabilities for each province and territory. The survey also collects essential information on disability types and severity, supports for persons with disabilities, their employment profiles, income, education and other disability-specific information.

The survey population for the 2022 CSD was comprised of Canadians aged 15 years and over as of the date of the 2021 Census of the Population (May 2021) who were living in private dwellings. It excludes those living in institutions, on Canadian Armed Forces bases, on First Nations reserves and those living in collective dwellings. As the institutionalized population is excluded, the data, particularly for the older age groups, should be interpreted accordingly.

The CSD uses Disability Screening Questions (DSQ) which are based on the social model of disability (Grondin, 2016). This model defines disability as the relationship between body function and structure, daily activities, and social participation, while recognizing the role of environmental factors. In keeping with this framework, the CSD targeted respondents who not only have a difficulty or impairment due to a long-term condition or health-related problem but also experience limitations in their daily activities. The CSD definition of disability includes anyone who reported being "sometimes", "often" or "always" limited in their daily activities due to a long-term condition or health problem, as well as anyone who reported being "rarely" limited if they were also unable to do certain tasks or could only do them with a lot of difficulty.

### Measures

#### Barriers to accessibility in public spaces

The main outcome of interest is whether at least one barrier to accessibility in public spaces was experienced at least sometimes in the last 12 months. Using a frequency scale (not applicable, never, sometimes, often or always),

CSD respondents were asked to rate how often they experienced barriers<sup>6</sup> with any of the following 11 features inside or outside public spaces because of their condition in the past 12 months:

- a. Entrances or exits to buildings
- b. Floorplans inside buildings
- c. Lighting or sound levels inside buildings
- d. Public washrooms
- e. Wait lines
- f. Self-serve technology
- g. Announcements or alarms
- h. Signs or directions
- i. Pedestrian signals at intersections or crosswalks
- j. Sidewalks when covered in ice or snow
- k. Sidewalks in general

For the purposes of this report, those who indicated that they experienced barriers “sometimes”, “often” or “always” were classified as “experienced a barrier.”

## Disability-related characteristics

Disability-related factors can shape the experience of persons with disabilities with barriers to accessibility. For example, certain disability types are associated with experiencing certain types of barriers in the environment, and higher degrees of severity likely exacerbate the challenges of navigating everyday life (Hébert et al., 2024; Choi, 2021). Persons with disabilities often need certain disability supports or help from paid or unpaid caregivers to overcome barriers to accessibility in their daily lives (Wray, 2024; Berardi et al., 2021; Allen & Mor, 1997). Having unmet needs in this regard is associated with decreased ability to participate in everyday activities and lower wellbeing ratings (Casey, 2015; Shooshtari et al., 2012; Zwicker et al., 2017). The following disability-related characteristics are included in all analyses conducted.

## Disability types

The CSD collects information on 10 disability types: seeing, hearing, mobility, flexibility, dexterity, pain-related, learning, developmental, mental health-related and memory. To meet the definition of a disability for a particular type, respondents must have reported being “sometimes”, “often” or “always” limited in their daily activities due to a long-term condition or health problem or reported being “rarely” limited if they were also unable to do certain tasks or could only do them with a lot of difficulty.<sup>7</sup> An additional variable that counts the number of co-occurring disability types is included in the descriptive analysis.

## Severity of disability

A global severity score was developed for the CSD, which was calculated for each person using: the number of disability types that a person has, the level of difficulty experienced in performing certain tasks, and the frequency of activity limitations. To simplify the concept of severity, four severity classes were established: mild, moderate, severe and very severe. Note that the name assigned to each class is intended to facilitate use of a severity score and is not a label or judgement concerning the person’s level of disability. In this report, any reference to severity is based on the global severity classes.

6. Using a simplified version of the definition of a barrier included within the ACA, respondents were instructed to think of a barrier as “something that could be removed, modified or done differently”.

7. The exception to this is developmental disabilities, where a person who has been diagnosed with a developmental disorder is identified as having a disability regardless of the level of difficulty or frequency of activity limitation.

## Unmet needs for disability supports

The 2022 CSD asks several questions regarding needs for various disability supports, including personal aids and assistive devices (e.g., canes, walkers, specialized software or architectural features in the home such as widened doorways and ramps), prescription medication, as well as access to healthcare therapies and services (e.g., counselling services, physiotherapy). In this report, an unmet need for disability supports refers to instances in which persons with disabilities need but do not have at least one type of disability support – whether it be for aids and assistive devices, medication or access to healthcare therapies and services.

## Unmet needs for help with everyday activities

The 2022 CSD asks questions regarding the need for help with any of the following everyday activities: preparing meals, everyday housework, heavy household chores, getting to appointments or running errands, looking after personal finances, personal care, basic medical care at home, moving around inside a residence or other types of help. The help could be provided by family, friends, neighbours or organizations and could include both paid and unpaid work. In this report, an unmet need for help with everyday activities refers to instances in which persons with disabilities need help they don't usually receive or need more help than they usually receive with at least one type of everyday activity.

## Sociodemographic characteristics

Intersectional approaches are consistent with the social model of disability and consider how disability interacts with other social characteristics to create distinct experiences (Björnsdóttir & Traustadóttir, 2010). For example, among youth and young adults with disabilities, those belonging to racialized groups tend to have worse school and work outcomes (Lindsay et al., 2022). It is important to include sociodemographic factors within the analysis as these characteristics can have effects of marginalization, which may lead to increased likelihood to experience barriers to accessibility. These sociodemographic characteristics include age, gender, 2SLGBTQ+ identity, racialized groups and immigrant status.<sup>8</sup>

Persons with disabilities often cite cost as a reason for unmet needs for supports (Hébert et al., 2024), therefore, income level is essential to consider when examining issues related to accessibility. Given the differences in the layout and features of public spaces among rural areas and urban population centres of different sizes, place of residence is also included as a sociodemographic characteristic.

Age was categorized into four groups: 15 to 24 years, 25 to 44 years, 45 to 64 years and 65 years and over. For gender, a two-category gender variable was used to protect the confidentiality of non-binary persons, given the relatively small size of this population in Canada. More specifically, non-binary persons have been redistributed into the “men” and “women” categories. The category of “men” includes cisgender and transgender men (and/or boys), as well as some non-binary persons, while “women” includes cisgender and transgender women (and/or girls), as well as some non-binary persons (in tables these categories are denoted as “men+” and “women+”). Using questions on sex at birth, gender identity and sexual orientation, the 2SLGBTQ+ variable includes those who reported being lesbian, gay, bisexual, pansexual or another sexual orientation that is not heterosexual (LGB+), as well as non-binary persons and transgender women and men.<sup>9</sup>

Immigrant status was categorized as immigrant, non-immigrant and non-permanent resident.<sup>10</sup> “Immigrant” refers to a person who is, or who has ever been, a landed immigrant or permanent resident. Immigrants who have obtained Canadian citizenship by naturalization are included in this group.<sup>11</sup> “Racialized” refers to whether a person is a visible minority as defined by the *Employment Equity Act* as “persons, other than Aboriginal peoples, who are non-Caucasian in race or non-white in colour”. The visible minority population consists mainly of the following groups: South Asian, Chinese, Black, Filipino, Arab, Latin American, Southeast Asian, West Asian, Korean and Japanese. The non-racialized category includes those who identified as White only and excludes Indigenous people.

8. Indigenous identity is another important intersectional sociodemographic characteristic to study, however, proper examination of experiences of Indigenous persons with disabilities would require more thorough disaggregated analysis that is beyond the scope of the present study.

9. The Government of Canada adopted the acronym 2SLGBTQI+ to refer to Two-Spirit, lesbian, gay, bisexual, transgender, queer, and intersex people and those who use other terms related to gender and sexual diversity. Statistics Canada uses the acronym 2SLGBTQ+ for data analysis purposes, as information is not yet collected specifically about intersex people in surveys.

10. Analysis includes all three groups but results for the non-permanent resident category are not presented in the tables.

11. Information on immigrant status was obtained from the 2021 Census and therefore includes immigrants who were admitted to Canada on or prior to May 11, 2021.



Income was represented by quintiles which were based on after-tax economic family income adjusted by family size.<sup>12</sup> Place of residence differentiates between rural areas and population centres of different sizes. Population centres are classified into three groups, depending on the size of their Census population: small population centres, with a Census population between 1,000 and 29,999; medium population centres, with a Census population between 30,000 and 99,999; or large urban population centres, with a Census population of 100,000 or more. Rural areas are classified as outside of population centres.

## Analysis

Descriptive statistics were used to estimate the prevalence of experiencing barriers to accessibility in public spaces in the last 12 months among persons with disabilities aged 15 years and over. In all instances, proportions are calculated based on the entire population of persons with disabilities.<sup>13</sup>

Logistic regression modeling was used to identify key factors associated with higher or lower odds of experiencing barriers to accessibility among persons with disabilities, while controlling for the effects of other disability-related and sociodemographic covariates at the same time. Given that severity accounts for each of the 10 disability types, the individual disability types are excluded from the initial logistic regression model. The inclusion of both severity and all ten disability types in a single regression model introduces multicollinearity issues. Accordingly, the 10 disability type variables were assessed in a separate logistic regression model that excludes the severity variable, but controls for all other covariates.

Findings from the logistic regression analysis are reported using odds ratios (ORs) and their 95% confidence intervals. An odds ratio represents the ratio of the odds of an event occurring (i.e., experiencing at least one barrier to accessibility) for one group vs the odds of the same event occurring for a reference group. Accordingly, an odds ratio tells us about the difference in odds of experiencing such barriers between groups after controlling for other predictors in the model and could point to: no difference in odds (OR=1), higher odds for a given group compared with a reference group (OR>1), or lower odds for a given group compared with a reference group (OR<1). Higher odds ratios indicate that a given group is more likely to experience barriers compared with the reference group.

Interpreting odds ratio results should be done with caution. The value of odds ratio estimates determines the direction of the effect (i.e., whether a certain group has higher or lower odds of experiencing barriers) but their magnitude may vary given a different set of covariates or a different sample; they are accordingly challenging to interpret and should not be compared with odds ratios from other analyses (Norton et al., 2018).

For this report, the significance level was set at  $p < 0.05$ . All estimates were weighted to represent the Canadian population of persons with disabilities aged 15 years and over. The bootstrap technique was used to estimate variance and 95% confidence intervals (CIs) to account for the complex survey design.

## Results and Discussion

### Prevalence of experiencing barriers to accessibility in public spaces

#### Over half of persons with disabilities experience barriers to accessibility in public spaces

Of the nearly 8 million persons with disabilities aged 15 years and over, approximately 4.5 million (56%) experienced one or more barriers to accessibility in public spaces at least sometimes during the last 12 months. When examined by feature, barriers related to “sidewalks when covered in ice or snow” (36%), “wait lines” (31%), “sidewalks in general” (26%) and “entrances or exits to buildings” (20%) were the most common<sup>14</sup> (Chart 1).

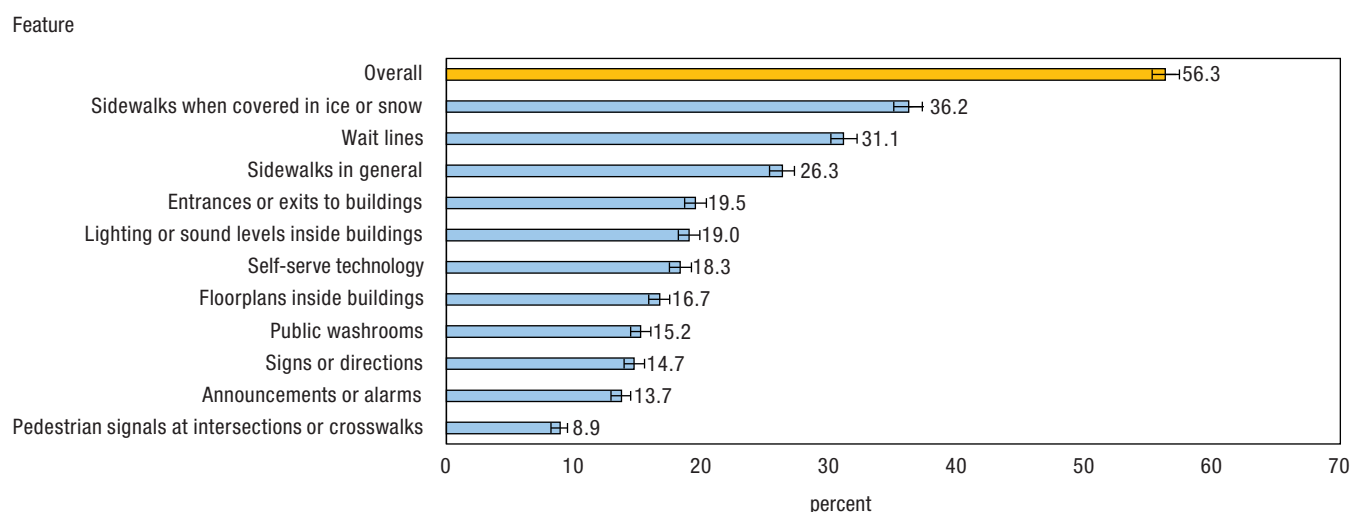
12. Income information was obtained from the 2021 Census and therefore reflects the reference year of 2020.

13. Missing values were not excluded from the denominator so that proportions can be representative of the entire population of persons with disabilities. This improves comparability of proportions within and across domains, given that each has a different set of missing values.

14. Irrespective of feature, persons with “more severe” (severe or very severe) disabilities were significantly more likely to experience barriers to accessibility than those with “milder” (mild or moderate) disabilities. For example, persons with “more severe” disabilities were more likely than those with “milder” disabilities to encounter barriers related to “sidewalks when covered in ice or snow” (52% vs. 25%), “wait lines” (48% vs. 19%) and “sidewalks in general” (42% vs. 16%). For more disaggregated information by severity class and frequency of experiencing barriers, see *Table 13-10-0900-01 Barriers to accessibility for persons with disabilities aged 15 years and over, by disability severity, age group and gender* (Statistics Canada, 2024).



**Chart 1**  
**Barriers to accessibility in public spaces, persons with disabilities, aged 15 years and over, by feature, Canada, 2022**



**Note:** The overall calculation includes persons who experienced barriers with at least one of these features. The categories include persons who were deemed to have experienced a barrier if they encountered it "at least sometimes" in the last 12 months.

**Source:** Statistics Canada, Canadian Survey on Disability, 2022.

### Prevalence of experiencing barriers to accessibility in public spaces increases with disability severity and number of co-occurring disability types

As disability severity increased, so did the proportion of persons with disabilities who experienced at least one barrier to accessibility in public spaces. Persons with very severe disabilities (81%) were more likely to experience such barriers compared with those with mild disabilities (37%) (Table 1).

Persons with multiple disabilities were more likely to experience barriers to accessibility in public spaces compared with those with a single disability. For example, those with four or more disability types (77%) were more than twice as likely to experience at least one barrier to accessibility than those with one disability type (33%).

More than 7 in 10 (71%) persons with disabilities have two or more co-occurring disability types (Hébert et al., 2024). The co-occurrence of disability types means that experiences of barriers may be a result of a specific disability type or a combination of disability types. As such, this report did not focus on descriptive analysis by disability type, however prevalence of experiencing barriers to accessibility in public spaces by disability type is presented in Chart 2 (Annex) for information purposes. Logistic regression modelling (discussed in the next section) was utilized to examine the association between each disability type and the likelihood of experiencing barriers while controlling for all other disability types (Table 3).

Persons with disabilities with unmet needs for disability supports (i.e., aids and assistive devices, medication, or healthcare therapies and services) were more likely to experience at least one barrier to accessibility in public spaces compared with those who did not have any unmet needs (65% vs. 45%). Similarly, those who reported unmet needs for help with everyday activities were more likely to experience such barriers compared with those who had their needs met (76% vs 46%) (Table 1).

**Table 1**  
**Barriers to accessibility in public spaces, persons with disabilities aged 15 years and over, by select characteristics, Canada, 2022**

| Characteristics  | Percent | 95% confidence interval |       |
|--|---------|-------------------------|-------|
|  |         | lower                   | upper |
| <b>Overall</b>   | 56.3    | 55.2                    | 57.3  |
| <b>Severity of disability</b>                              |         |                         |       |
| Mild (reference category)                                  | 37.0    | 35.2                    | 38.7  |
| Moderate   | 54.9*   | 52.3                    | 57.4  |
| Severe   | 69.9*   | 67.5                    | 72.1  |
| Very severe  | 80.5*   | 78.4                    | 82.4  |
| <b>Number of disability types</b>                          |         |                         |       |
| 1 (reference category)                                     | 33.4    | 31.5                    | 35.5  |
| 2 to 3   | 55.5*   | 53.6                    | 57.3  |
| 4 or more  | 76.9*   | 75.3                    | 78.5  |
| <b>Unmet needs for disability supports</b>                 |         |                         |       |
| Needs met (reference category)                             | 45.1    | 43.4                    | 46.9  |
| Unmet needs  | 64.8*   | 63.4                    | 66.2  |
| <b>Unmet needs for help with everyday activities</b>       |         |                         |       |
| Needs met (reference category)                             | 45.9    | 44.5                    | 47.3  |
| Unmet needs  | 75.9*   | 74.3                    | 77.5  |
| <b>Age group</b>   |         |                         |       |
| 15 to 24 years (reference category)                        | 41.1    | 38.8                    | 43.5  |
| 25 to 44 years   | 44.7*   | 42.6                    | 46.8  |
| 45 to 64 years   | 57.5*   | 55.3                    | 59.7  |
| 65 years and over  | 69.0*   | 67.2                    | 70.8  |
| <b>Gender</b>  |         |                         |       |
| Men+ (reference category)                                  | 52.6    | 50.9                    | 54.3  |
| Women+   | 59.1*   | 57.7                    | 60.5  |
| <b>2SLGBTQ+</b>  |         |                         |       |
| Non-2SLGBTQ+ (reference category)                          | 55.7    | 54.4                    | 56.9  |
| 2SLGBTQ+   | 55.5    | 52.0                    | 59.0  |
| <b>Racialized group</b>                                    |         |                         |       |
| Non-racialized, non-Indigenous groups (reference category) | 56.7    | 55.5                    | 57.9  |
| Racialized groups  | 54.3    | 51.2                    | 57.4  |
| <b>Immigrant status</b>                                    |         |                         |       |
| Non-immigrants (reference category)                        | 55.2    | 54.1                    | 56.4  |
| Immigrants   | 60.3*   | 57.6                    | 63.0  |
| <b>Income quintile</b>                                     |         |                         |       |
| Fifth quintile, highest income (reference category)        | 49.8    | 46.8                    | 52.7  |
| Fourth quintile  | 49.6    | 46.9                    | 52.3  |
| Third quintile   | 55.9*   | 53.5                    | 58.4  |
| Second quintile  | 60.4*   | 58.0                    | 62.7  |
| First quintile, lowest income                              | 62.6*   | 60.3                    | 64.9  |
| <b>Place of residence</b>                                  |         |                         |       |
| Rural areas (reference category)                           | 53.8    | 51.3                    | 56.4  |
| Small population centres                                   | 57.5    | 54.6                    | 60.4  |
| Medium population centres                                  | 60.9*   | 57.5                    | 64.2  |
| Large urban population centres                             | 55.8    | 54.3                    | 57.3  |

\* significantly different from reference category ( $p < 0.05$ )

**Notes:** Persons were deemed to have experienced a barrier if they encountered it "at least sometimes" in the last 12 months. Unmet needs for disability supports refers to unmet needs for aids and assistive devices, medications (due to cost), or healthcare therapies and services. Unmet needs for help with everyday activities includes help with preparing meals, everyday housework, heavy household chores, getting to appointments or running errands, looking after personal finances, personal care, basic medical care at home, moving around inside a residence, or other types of help. The overall calculation includes persons who experienced barriers with at least one of these features. The categories include persons who were deemed to have experienced a barrier if they encountered it "at least sometimes" in the last 12 months. The 2SLGBTQ+ variable groups all LGB+ and nonbinary and transgender persons into a single category to facilitate analysis of this small population. In addition to the two categories shown in the table, this variable included an 'unknown' category to capture proxy respondents who were not asked this question and who otherwise would have been excluded from the sample used to estimate the model.

In this release, data on 'racialized groups' is measured with the 'visible minority' variable. The 'non-racialized group' is measured with the category 'Not a visible minority' of the variable, excluding Indigenous respondents. For the purpose of this study, Indigenous respondents are not part of the racialized group, nor the non-racialized group.

**Source:** Statistics Canada, Canadian Survey on Disability, 2022.

## Prevalence of experiencing barriers to accessibility in public spaces increases with age and is greater among women, immigrants, persons with lower income, and those living in medium population centres

Among persons with disabilities, the proportion who experienced at least one barrier to accessibility in public spaces varied by age, gender, immigrant status, income and place of residence (Table 1). Persons with disabilities aged 65 years and over (69%), 45 to 64 years (58%) and 25 to 44 years (45%) were all more likely to experience such barriers compared with those aged 15 to 24 years (41%). Women (59%) were more likely than men (53%) to encounter one or more barriers to accessibility in public spaces.

Immigrants (60%) were more likely than non-immigrants (55%) to experience at least one barrier to accessibility in public spaces. There were no significant differences in the prevalence of experiencing barriers between: 2SLGBTQ+ and non-2SLGBTQ+ persons with disabilities, or racialized and non-racialized persons with disabilities.

Encountering barriers to accessibility in public spaces was more prevalent among persons with disabilities in lower income groups. For example, the proportion of persons with disabilities who reported such barriers increased from 50% among those in the highest income quintile to 63% among those in the lowest income quintile.

When examined by place of residence, persons with disabilities living in medium population centres (61%) were more likely to experience at least one barrier to accessibility in public spaces compared with those living in rural areas (54%). However, there were no significant differences for either small or large urban population centres relative to rural areas.

## Key factors associated with the likelihood of experiencing barriers to accessibility in public spaces

While descriptive analyses highlighted how some groups are more likely to experience barriers than others, they do not simultaneously account for other characteristics that may increase the likelihood of experiencing barriers. Logistic regression modeling was used to identify the key factors associated with the likelihood of experiencing barriers to accessibility among persons with disabilities, while controlling for the effect of other disability-related and sociodemographic covariates at the same time.

## More severe disabilities and unmet needs for disability supports or help with everyday activities are associated with higher odds of experiencing barriers

The importance of disability-related factors was further confirmed by the logistic regression modelling. After controlling for other covariates, the odds of experiencing at least one barrier to accessibility in public spaces steadily increased with severity of disabilities. Compared with persons with mild disabilities, those with very severe disabilities faced over four times higher odds (OR=4.1; 95% CI: 3.4, 4.8) of experiencing such barriers (Table 2). When all other factors were considered, persons with at least one unmet need for help with everyday activities had higher odds (OR=2.2; 95% CI: 1.9, 2.4) of experiencing at least one barrier compared with those who had their needs met. Similarly, persons with disabilities who reported at least one unmet need for disability supports (OR=1.7; 95% CI: 1.5, 1.9) had higher odds of experiencing barriers to accessibility compared with persons who had their needs met for these supports. Since disability within the social model is understood as the interaction between a person's functional limitations and barriers in their environment, some features in public spaces may cease to impose barriers if persons with disabilities have all required disability supports or help from paid or unpaid caregivers. When persons with disabilities don't have access to required supports, it follows that they are more likely to experience barriers to accessibility. This is consistent with qualitative research demonstrating that access to different types of support (e.g., assistive technology, social support) can impact the everyday participation of persons with disabilities (Hammel et al., 2015).

**Table 2**  
**Results from logistic regression showing the associations between the experience of barriers to accessibility in public spaces, disability-related and sociodemographic characteristics, persons with disabilities aged 15 years and over, Canada, 2022**

| Characteristics  | Odds ratio | 95% confidence limits |     |
|--|------------|-----------------------|-----|
|  |            | from                  | to  |
| <b>Severity of disability</b>                              |            |                       |     |
| Mild (reference category)                                  | 1.0        | ...                   | ... |
| Moderate   | 1.7*       | 1.5                   | 2.0 |
| Severe   | 2.9*       | 2.5                   | 3.3 |
| Very severe  | 4.1*       | 3.4                   | 4.8 |
| <b>Unmet needs for disability supports</b>                 |            |                       |     |
| Needs met (reference category)                             | 1.0        | ...                   | ... |
| Unmet needs  | 1.7*       | 1.5                   | 1.9 |
| <b>Unmet needs for help with everyday activities</b>       |            |                       |     |
| Needs met (reference category)                             | 1.0        | ...                   | ... |
| Unmet needs  | 2.2*       | 1.9                   | 2.4 |
| <b>Age group</b>   |            |                       |     |
| 15 to 24 years (reference category)                        | 1.0        | ...                   | ... |
| 25 to 44 years   | 1.2*       | 1.0                   | 1.4 |
| 45 to 64 years   | 2.0*       | 1.7                   | 2.3 |
| 65 years and over  | 3.2*       | 2.7                   | 3.8 |
| <b>Gender</b>  |            |                       |     |
| Men+ (reference category)                                  | 1.0        | ...                   | ... |
| Women+   | 1.2*       | 1.1                   | 1.4 |
| <b>2SLGBTQ+</b>  |            |                       |     |
| Non-2SLGBTQ+ (reference category)                          | 1.0        | ...                   | ... |
| 2SLGBTQ+   | 1.4*       | 1.2                   | 1.7 |
| <b>Racialized group</b>                                    |            |                       |     |
| Non-racialized, non-Indigenous groups (reference category) | 1.0        | ...                   | ... |
| Racialized groups  | 0.9        | 0.7                   | 1.1 |
| <b>Immigrant status</b>                                    |            |                       |     |
| Non-immigrants (reference category)                        | 1.0        | ...                   | ... |
| Immigrants   | 1.0        | 0.8                   | 1.2 |
| <b>Income quintile</b>                                     |            |                       |     |
| Fifth quintile, highest income (reference category)        | 1.0        | ...                   | ... |
| Fourth quintile  | 0.8        | 0.7                   | 1.0 |
| Third quintile   | 1.1        | 0.9                   | 1.3 |
| Second quintile  | 1.2        | 1.0                   | 1.4 |
| First quintile, lowest income                              | 1.1        | 0.9                   | 1.3 |
| <b>Place of residence</b>                                  |            |                       |     |
| Rural areas (reference category)                           | 1.0        | ...                   | ... |
| Small population centres                                   | 1.2        | 1.0                   | 1.4 |
| Medium population centres                                  | 1.5*       | 1.2                   | 1.8 |
| Large urban population centres                             | 1.2*       | 1.1                   | 1.4 |

... not applicable

\* significantly different from reference category ( $p < 0.05$ )

**Notes:** Persons were deemed to have experienced a barrier if they encountered it "at least sometimes" in the last 12 months. Unmet needs for disability supports refers to unmet needs for aids and assistive devices, medications (due to cost), or healthcare therapies and services. Unmet needs for help with everyday activities includes help with preparing meals, everyday housework, heavy household chores, getting to appointments or running errands, looking after personal finances, personal care, basic medical care at home, moving around inside a residence, or other types of help. The 2SLGBTQ+ variable groups all LGB+ and nonbinary and transgender persons into a single category to facilitate analysis of this small population. In addition to the two categories shown in the table, this variable included an 'unknown' category to capture proxy respondents who were not asked this question and who otherwise would have been excluded from the sample used to estimate the model. In this release, data on 'racialized groups' is measured with the 'visible minority' variable. The 'non-racialized group' is measured with the category 'Not a visible minority' of the variable, excluding Indigenous respondents. For the purpose of this study, Indigenous respondents are not part of the racialized group, nor the non-racialized group.

**Source:** Statistics Canada, Canadian Survey on Disability, 2022.

## The likelihood of experiencing barriers increases with age and is higher among women, 2SLGBTQ+ persons, and those living in medium or large urban population centres

When it comes to sociodemographic covariates, age, gender, identifying as 2SLGBTQ+ and place of residence were significant predictors of experiencing at least one barrier to accessibility in public spaces, after controlling for other covariates. While significant differences by immigrant status and income were observed in the descriptive analyses, these differences did not persist when all other variables were held constant.

The odds of experiencing one or more barriers in public spaces increased with age. Compared with youth with disabilities (15 to 24 years), those aged 25 to 44 (OR=1.2; 95% CI: 1.0, 1.4), 45 to 64 (OR=2.0; 95% CI: 1.7, 2.3), and 65 years and over (OR=3.2; 95% CI: 2.7, 3.8) had higher odds of experiencing such barriers (Table 2). Women with disabilities faced higher odds (OR=1.2; 95% CI: 1.1, 1.4) of encountering barriers in public spaces than men with disabilities.

While there was no significant difference between the 2SLGBTQ+ and non-2SLGBTQ+ populations in the prevalence of experiencing barriers in the descriptive analysis, it was a significant predictor after controlling for other factors. 2SLGBTQ+ persons with disabilities had higher odds (OR=1.4; 95% CI: 1.2, 1.7) of experiencing such barriers compared with non-2SLGBTQ+ persons with disabilities. This is consistent with research about transgender people indicating that their marginalization and oppression can have disabling effects, thereby increasing their likelihood of experiencing barriers in different contexts (Baril et al., 2020). Age was a particularly important covariate to take into account, given a previous research study found that persons with disabilities who identify as 2SLGBTQ+ are substantially younger on average than their non-2SLGBTQ+ counterparts (Rabinowitz, 2024). Additionally, the study found that among persons with disabilities aged 15 to 24 and 25 to 34 years, 2SLGBTQ+ persons were more likely to experience barriers in public spaces compared with their non-2SLGBTQ+ counterparts.

With regards to place of residence, compared with persons with disabilities living in rural areas, those living in medium or large urban population centres had higher odds (OR=1.5; 95% CI: 1.2, 1.8 and OR=1.2; 95% CI: 1.1, 1.4, respectively) of experiencing barriers in public spaces. It is worth noting that the barriers in public spaces that were included in the CSD were more relevant to urban rather than rural areas, where there may be less expectation for a pedestrian environment. Examining accessibility in rural areas may require a closer look at barriers related to specific geographic features in rural areas and barriers related to transportation (Levesque, 2020; Vitale Brovarone & Cotella, 2020). Another important consideration is that while place of residence may result in increased interactions with the local environment, people may frequently visit different sized population centres as part of their regular work, school, leisure, retail or service use activities.

### **Developmental, mobility and hearing disability types are associated with experiencing barriers**

Given that 71% of persons with disabilities have two or more co-occurring disability types (Hébert et al., 2024), the effect of each disability type must be determined while the effects of all other disability types are controlled for. Using a separate logistic regression model, the likelihood of encountering at least one barrier to accessibility in public spaces was examined when considering all 10 disability types as predictors and controlling for other covariates.

The odds of experiencing barriers in public spaces were higher among those with developmental (OR=2.2; 95% CI: 1.7, 2.8), mobility (OR=2.1; 95% CI: 1.8, 2.4) or hearing (OR=1.5; 95% CI: 1.2, 1.8) disabilities (Table 3). Given that the barriers in public spaces examined in this study have to do with movement, navigation, interpreting information, or receiving and responding to auditory signals, this may give rise to difficulties specific to these disability types. When thinking about accessibility in public spaces, design elements to address the needs of persons with mobility and hearing disabilities may be prioritized, with less attention given to the heterogeneous nature of developmental disabilities (Sherman & Sherman, 2013). Other disability types that were associated with higher odds of experiencing barriers were flexibility (OR=1.4; 95% CI: 1.2, 1.6), dexterity (OR=1.3; 95% CI: 1.1, 1.6), pain-related (OR=1.4; 95% CI: 1.3, 1.6), learning (OR=1.3; 95% CI: 1.1, 1.6) and memory (OR=1.3; 95% CI: 1.1, 1.6). No significant differences in odds were found based on having mental health-related or seeing disabilities.<sup>15</sup> These findings emphasize the importance of studying different limitations in research on barriers to accessibility in public spaces, which has been found to focus primarily on mobility limitations (Carlsson et al., 2022).

15. While seeing and mental-health related disabilities were not independently associated with a higher likelihood of experiencing barriers in public spaces, further analysis revealed that persons who have more severe seeing or more severe mental health-related disabilities were found to be more likely to experience barriers compared to those without those disabilities or those with less severe levels of the disability type.

**Table 3**  
**Results from logistic regression showing the associations between the experience of barriers to accessibility in public spaces, disability type and sociodemographic characteristics, persons with disabilities aged 15 years and over, Canada, 2022**

| Characteristics  | Odds ratio | 95% confidence limits |     |
|--|------------|-----------------------|-----|
|  |            | from                  | to  |
| <b>Seeing disability</b>   |            |                       |     |
| Did not have a seeing disability (reference category)                    | 1.0        | ...                   | ... |
| Had a seeing disability  | 1.1        | 1.0                   | 1.3 |
| <b>Hearing disability</b>  |            |                       |     |
| Did not have a hearing disability (reference category)                   | 1.0        | ...                   | ... |
| Had a hearing disability   | 1.5*       | 1.2                   | 1.8 |
| <b>Mobility disability</b>   |            |                       |     |
| Did not have a mobility disability (reference category)                  | 1.0        | ...                   | ... |
| Had a mobility disability  | 2.1*       | 1.8                   | 2.4 |
| <b>Flexibility disability</b>  |            |                       |     |
| Did not have a flexibility disability (reference category)               | 1.0        | ...                   | ... |
| Had a flexibility disability   | 1.4*       | 1.2                   | 1.6 |
| <b>Dexterity disability</b>  |            |                       |     |
| Did not have a dexterity disability (reference category)                 | 1.0        | ...                   | ... |
| Had a dexterity disability   | 1.3*       | 1.1                   | 1.6 |
| <b>Pain-related disability</b>   |            |                       |     |
| Did not have a pain related disability (reference category)              | 1.0        | ...                   | ... |
| Had a pain related disability  | 1.4*       | 1.3                   | 1.6 |
| <b>Learning disability</b>   |            |                       |     |
| Did not have a learning disability (reference category)                  | 1.0        | ...                   | ... |
| Had a learning disability  | 1.3*       | 1.1                   | 1.6 |
| <b>Developmental disability</b>  |            |                       |     |
| Did not have a developmental disability or disorder (reference category) | 1.0        | ...                   | ... |
| Had a developmental disability or disorder                               | 2.2*       | 1.7                   | 2.8 |
| <b>Mental health-related disability</b>                                  |            |                       |     |
| Did not have a mental health related disability (reference category)     | 1.0        | ...                   | ... |
| Had a mental health related disability                                   | 1.1        | 1.0                   | 1.3 |
| <b>Memory disability</b>   |            |                       |     |
| Did not have a memory disability (reference category)                    | 1.0        | ...                   | ... |
| Had a memory disability  | 1.3*       | 1.1                   | 1.6 |

... not applicable

\* significantly different from reference category ( $p < 0.05$ )

**Notes:** Persons were deemed to have experienced a barrier if they encountered it "at least sometimes" in the last 12 months.

The model was adjusted for unmet needs for disability supports and help with everyday activities, age, gender, 2SLGBTQ+ identity, immigrant status, racialized group, income quintile, and place of residence. For the full model with all covariates, see Table 4 in the Annex.

**Source:** Statistics Canada, Canadian Survey on Disability, 2022.

## Conclusion

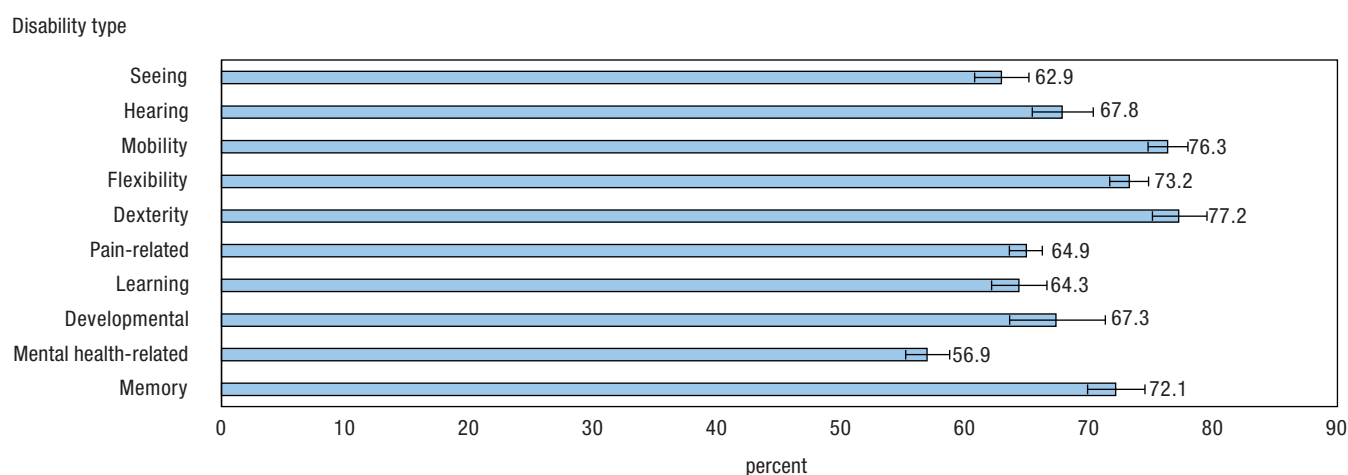
This report demonstrates the importance of considering severity and type of disability, unmet needs, age, gender, 2SLGBTQ+ identity and place of residence (urban/rural) when examining experiences of accessibility in public spaces among persons with disabilities. By identifying disability-related and sociodemographic factors that place persons with disabilities at higher risk of experiencing barriers in public spaces, these findings can inform programs and interventions aimed at improving accessibility in this domain. For example, the strong association between unmet needs for disability supports or help with everyday activities and the likelihood of experiencing barriers suggests that interventions aimed at addressing unmet needs could be effective in improving accessibility in the built environment.

Further research is needed to examine the various ways in which barriers to accessibility are experienced within different contexts and for different subpopulations, utilizing both quantitative and qualitative methods. For example, it's important to explore the driving factors for experiencing barriers in urban population centres compared to rural areas. Similarly, more qualitative research can inform our understanding of higher odds of experiencing barriers among women and 2SLGBTQ+ persons with disabilities.

## Annex

### Chart 2

#### Barriers to accessibility in public spaces, persons with disabilities aged 15 years and over, by disability type, Canada, 2022



**Notes:** Persons were deemed to have experienced a barrier if they encountered it "at least sometimes" in the last 12 months.

Significance tests were not performed since the disability types are not mutually exclusive groups. When analyzing the prevalence of encountering barriers to accessibility based on disability type, it's important to practice caution when interpreting the data as persons with disabilities often have multiple co-occurring disability types.

**Source:** Statistics Canada, Canadian Survey on Disability, 2022.

### Table 4

#### Results from logistic regression (full model) showing the associations between the experience of barriers to accessibility in public spaces, disability type and sociodemographic characteristics, persons with disabilities aged 15 years and over, Canada, 2022

| Characteristics  | Odds ratio | 95% confidence limits |     |
|--|------------|-----------------------|-----|
|  |            | from                  | to  |
| <b>Seeing disability</b>   |            |                       |     |
| Did not have a seeing disability (reference category)                    | 1.0        | ...                   | ... |
| Had a seeing disability  | 1.1        | 1.0                   | 1.3 |
| <b>Hearing disability</b>  |            |                       |     |
| Did not have a hearing disability (reference category)                   | 1.0        | ...                   | ... |
| Had a hearing disability   | 1.5*       | 1.2                   | 1.8 |
| <b>Mobility disability</b>   |            |                       |     |
| Did not have a mobility disability (reference category)                  | 1.0        | ...                   | ... |
| Had a mobility disability  | 2.1*       | 1.8                   | 2.4 |
| <b>Flexibility disability</b>  |            |                       |     |
| Did not have a flexibility disability (reference category)               | 1.0        | ...                   | ... |
| Had a flexibility disability   | 1.4*       | 1.2                   | 1.6 |
| <b>Dexterity disability</b>  |            |                       |     |
| Did not have a dexterity disability (reference category)                 | 1.0        | ...                   | ... |
| Had a dexterity disability   | 1.3*       | 1.1                   | 1.6 |
| <b>Pain-related disability</b>   |            |                       |     |
| Did not have a pain related disability (reference category)              | 1.0        | ...                   | ... |
| Had a pain related disability  | 1.4*       | 1.3                   | 1.6 |
| <b>Learning disability</b>   |            |                       |     |
| Did not have a learning disability (reference category)                  | 1.0        | ...                   | ... |
| Had a learning disability  | 1.3*       | 1.1                   | 1.6 |
| <b>Developmental disability</b>  |            |                       |     |
| Did not have a developmental disability or disorder (reference category) | 1.0        | ...                   | ... |
| Had a developmental disability or disorder                               | 2.2*       | 1.7                   | 2.8 |



**Table 4**  
**Results from logistic regression (full model) showing the associations between the experience of barriers to accessibility in public spaces, disability type and sociodemographic characteristics, persons with disabilities aged 15 years and over, Canada, 2022**

| Characteristics  | Odds ratio | 95% confidence limits |     |
|--|------------|-----------------------|-----|
|  |            | from                  | to  |
| <b>Mental health-related disability</b>                              |            |                       |     |
| Did not have a mental health related disability (reference category) | 1.0        | ...                   | ... |
| Had a mental health related disability                               | 1.1        | 1.0                   | 1.3 |
| <b>Memory disability</b>   |            |                       |     |
| Did not have a memory disability (reference category)                | 1.0        | ...                   | ... |
| Had a memory disability  | 1.3*       | 1.1                   | 1.6 |
| <b>Unmet needs for disability supports</b>                           |            |                       |     |
| Needs met (reference category)                                       | 1.0        | ...                   | ... |
| Unmet needs  | 1.6*       | 1.4                   | 1.9 |
| <b>Unmet needs for help with everyday activities</b>                 |            |                       |     |
| Needs met (reference category)                                       | 1.0        | ...                   | ... |
| Unmet needs  | 2.1*       | 1.9                   | 2.4 |
| <b>Age group</b>   |            |                       |     |
| 15 to 24 years (reference category)                                  | 1.0        | ...                   | ... |
| 25 to 44 years   | 1.1        | 1.0                   | 1.4 |
| 45 to 64 years   | 1.7*       | 1.4                   | 2.1 |
| 65 years and over  | 2.5*       | 2.0                   | 3.2 |
| <b>Gender</b>  |            |                       |     |
| Men+ (reference category)  | 1.0        | ...                   | ... |
| Women+   | 1.3*       | 1.1                   | 1.4 |
| <b>2SLGBTQ+</b>  |            |                       |     |
| Non-2SLGBTQ+ (reference category)                                    | 1.0        | ...                   | ... |
| 2SLGBTQ+   | 1.4*       | 1.1                   | 1.7 |
| <b>Racialized group</b>  |            |                       |     |
| Non-racialized, non-Indigenous groups (reference category)           | 1.0        | ...                   | ... |
| Racialized groups  | 0.9        | 0.7                   | 1.1 |
| <b>Immigrant status</b>  |            |                       |     |
| Non-immigrants (reference category)                                  | 1.0        | ...                   | ... |
| Immigrants   | 1.0        | 0.8                   | 1.3 |
| <b>Income quintile</b>   |            |                       |     |
| Fifth quintile, highest income (reference category)                  | 1.0        | ...                   | ... |
| Fourth quintile  | 0.9        | 0.8                   | 1.1 |
| Third quintile   | 1.0        | 0.9                   | 1.3 |
| Second quintile  | 1.2*       | 1.0                   | 1.5 |
| First quintile, lowest income  | 1.1        | 0.9                   | 1.4 |
| <b>Place of residence</b>  |            |                       |     |
| Rural areas (reference category)                                     | 1.0        | ...                   | ... |
| Small population centres   | 1.2*       | 1.0                   | 1.5 |
| Medium population centres  | 1.5*       | 1.2                   | 1.9 |
| Large urban population centres                                       | 1.3*       | 1.1                   | 1.5 |

... not applicable

\* significantly different from reference category ( $p < 0.05$ )

**Notes:** Persons were deemed to have experienced a barrier if they encountered it "at least sometimes" in the last 12 months. Unmet needs for disability supports refers to unmet needs for aids and assistive devices, medications (due to cost), or healthcare therapies and services. Unmet needs for help with everyday activities includes help with preparing meals, everyday housework, heavy household chores, getting to appointments or running errands, looking after personal finances, personal care, basic medical care at home, moving around inside a residence, or other types of help. The 2SLGBTQ+ variable groups all LGB+ and nonbinary and transgender persons into a single category to facilitate analysis of this small population. In addition to the two categories shown in the table, this variable included an 'unknown' category to capture proxy respondents who were not asked this question and who otherwise would have been excluded from the sample used to estimate the model. In this release, data on 'racialized groups' is measured with the 'visible minority' variable. The 'non-racialized group' is measured with the category 'Not a visible minority' of the variable, excluding Indigenous respondents. For the purpose of this study, Indigenous respondents are not part of the racialized group, nor the non-racialized group.

**Source:** Statistics Canada, Canadian Survey on Disability, 2022.

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