

Accessibility for Persons with Hidden Mobility Disabilities
Research Report #2
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Context

This research report provides a more detailed analysis of the issues facing persons with hidden mobility disabilities (HMD) – i.e., those who are independently mobile but who have trouble walking more than a short distance or standing unsupported for more than a brief time. The previous report, which can be found at www.HiddenMobilityDisabilities.com/research-report/, provided the first published data on these persons with mobility issues for whom *distance* and *time standing* are primary access barriers, rather than maneuverability (for those with visible mobility disabilities). That first report was based on an initial sample of 648 qualified participants and covered the prevalence of hidden mobility disabilities, distance as a primary access barrier, the consequences of walking too far, the role of impediments to mobility, stairs as an access barrier, standing as an access barrier, barriers to community engagement, use of mobility aids, use of medications, and underlying health condition.

This second report is based on a larger sample of 890 qualified survey participants, with the results being reliable within ± 3.4 percent at the 95 percent confidence level (also known as a five percent significance level). A discussion of methodological issues in research on hidden mobility disabilities can be found at <http://hiddenmobilitydisabilities.com/methodological-issues/>.

As a reminder, individuals with HMD usually manage effectively within their home environment, where they can arrange matters to minimize any limitations. Access issues arise from the interaction between their mobility limitations and the structure of the external environment, combined with the expectations of others regarding what constitutes a “short distance” or a “brief time standing.”

Age as a Factor in Hidden Mobility Disabilities

Data from the larger sample confirm that hidden mobility disabilities are not restricted to any particular age group, though societal myths assume that HMD is a characteristic primarily of older people. Again respondents to this survey ranged from 15 years old to over 80 years old.

While in general accessibility experiences did not vary by age, there were a few exceptions worth discussing where the differences were statistically significant at a 95 percent or more confidence level. Younger survey participants reported being able to stand unsupported for a *shorter* period of time (see Table 1) than those 55 and older. This is an important finding since society tends to assume that the older one is the more difficulty one is likely to having in standing – and therefore to be more patient with those who are older.

Table 1: Difficulty standing without pain

Difficulty standing	Under 55	55 & older	Total
2 minutes or less	52%	34%	36%
3-15 minutes	48%	66%	64%
Total	100%	100%	100%

In addition, younger survey participants reported taking significantly longer to recover from walking too far as compared with those 55 and older (see Table 2).

Table 2: Length of time to recover from walking too far

Recovery time	Under 55	55 & older	Total
1 or 2 minutes	17%	27%	26%
At least 5 minutes	83%	73%	74%
Total	100%	100%	100%

Similarly when asked about the consequences of walking further than was comfortable, younger participants were significantly more likely to report difficulties (see Table 3). These findings again raise the issue of societal challenges that those under 55 years old with HMD may face.

Table 3: Consequence of walking further than is comfortable

Consequence	Under 55	55 & older	Total
Increased pain in joints	90%	75%	77%
Have trouble walking next day	75%	39%	43%
Increased muscle spasms	47%	27%	29%

Not surprisingly, in line with general societal prejudices, younger participants reported that they were likely to be greeted by irritation or anger if they started walking more slowly, while older participants reported being more likely to be asked if they needed help (see Table 4).

Table 4: Reactions to walking more slowly due to pain

Public reaction	Under 55	55 & older	Total
Treat the person as invisible	36%	35%	35%
Ask if the person needs help	11%	29%	27%
Irritation or anger	40%	14%	17%
Other	13%	22%	21%

Gender as a Factor in Hidden Mobility Disabilities

While there were very few differences in experience by gender, the following differences were statistically significantly at a 95 percent or more confidence level. Females were more likely to report frequent limitations walking more than 35 feet without a cane or other mobility aid (see Table 5).

Table 5: Frequency of limitation when walking >35 feet without mobility aids

Limitations walking >35 feet	Female	Male	Total
Rarely or never	15%	25%	18%
Sometimes	29%	26%	28%
Always or often	56%	49%	54%
Total	100%	100%	100%

A similar gender difference can be seen with regard to reported frequency of limitations walking up or down 12 stairs, with females more likely to report limitations (see Table 6). Whether these gender differences are actual or whether they are the result of males not wishing to appear incapable is not clear from the survey data.

Table 6: Frequency of limitation when walking up or down 12 stairs

Limitations climbing stairs	Female	Male	Total
Rarely or never	11%	21%	13%
Sometimes	24%	22%	24%
Always or often	65%	57%	63%
Total	100%	100%	100%

With regard to what typically happens when a person walks further than is comfortable, Table 7 shows gender differences in consequences. Males were statistically less likely to report that they have difficulty as a result of walking further than is comfortable than were females. Again it is not clear whether these are actual differences or whether males wish to appear “macho” and devoid of difficulties.

Table 7: Consequence of walking further than is comfortable

Consequence	Female	Male	Total
Increased pain in joints	79%	70%	77%
Walk more & more slowly	55%	46%	52%
Have trouble walking next day	45%	35%	43%
Increased muscle spasms	31%	22%	29%

A final gender difference that the survey data show is in the health condition the person identified as being primarily responsible for the person’s hidden mobility difficulty. Females were more likely to report arthritis as the underlying cause – which is the cause most frequently associated with hidden mobility disabilities – and males were more likely to report heart disease (see Table 8).

Table 8: Health condition underlying HMD

Underlying health condition	Female	Male	Total
Arthritis	52%	34%	48%
Heart disease	4%	13%	6%

Differences by nationality

Canadian and U.S. participants were the two largest nationality groups responding to the survey. While the general patterns of response were similar, there were statistically significant differences on some items as reported below.

While a “short distance” remained defined as 35 feet for both Canadian and U.S. participants, Canadians were more likely to indicate that they could walk further than Americans (see Table 9).

Table 9: Distance to be walked comfortably

Distance walked comfortably	Canadian	U.S.	Total
35 feet or less	31%	33%	31%
36-70 feet	24%	39%	27%
71-210 feet	45%	28%	42%
Total	100%	100%	100%

Canadian participants confirmed this difference by indicating that half of them seldom had difficulty walking more than 35 feet without a cane or other mobility aid, in contrast to the 57 percent of Americans who indicated that they usually had difficulty walking more than 35 feet without a mobility aid (see Table 10).

Table 10: Difficulty walking >35 feet without mobility aids

Difficulty walking >35 feet	Canadian	U.S.	Total
None or some	52%	43%	50%
A lot or can’t do	48%	57%	50%
Total	100%	100%	100%

With regard to the consequences of walking further than is comfortable, there were again nationality differences. Americans were more likely to report difficulties as a result of walking too far (see Table 11).

Table 11: Consequence of walking further than is comfortable

Consequence	Canadian	U.S.	Total
Increased pain in joints	74%	86%	76%
Have trouble walking next day	39%	50%	41%
Begin to stagger & lose balance	38%	50%	40%

There were also nationality differences in the length of time that it took participants to recover if they walked too far (see Table 12), with more Americans reporting that it took at least five minutes to recover.

Table 12: Length of time to recover from walking too far

Recovery time	Canadian	U.S.	Total
1 or 2 minutes	29%	14%	26%
At least 5 minutes	71%	86%	74%
Total	100%	100%	100%

Reactions from others to persons with HMD walking more slowly also differed by nationality. Canadians with HMD were most likely to report simply being ignored and being less likely to receive queries about whether or not they needed help. Americans were significantly more likely to experience others expressing irritation or anger if they started walking more slowly and appeared to be getting in the way of pedestrian traffic (see Table 13).

Table 13: Reactions to walking more slowly due to pain

Public reaction	Canadian	U.S.	Total
Treat the person as invisible	37%	27%	35%
Ask if the person needs help	28%	32%	28%
Irritation or anger	14%	21%	16%
Other	21%	20%	21%

One other significant difference by nationality was in regard to experiences with obtaining timely wheelchair assistance in airports. In the U.S. such assistance is typically provided by porters at curbside or immediately at the check-in counter, and wheelchairs are waiting for passengers when the plane lands. In Canada such assistance is often provided from a special assistance counter that may be some distance from check-in, and Air Canada does not allow wheelchair assistance on the jetway until the entire plane has disembarked (see Table 14).

Table 14: Timeliness of wheelchair assistance in airports

Timely wheelchair assistance	Canadian	U.S.	Total
Not a problem	69%	78%	71%
A problem	31%	22%	29%
Total	100%	100%	100%

Implications for Accommodation

Based on the results of the *Survey on Hidden Mobility Disabilities*, the primary accommodation issue is a need for awareness of the challenges facing persons with hidden mobility disabilities from societal

expectations regarding distance to be walked and time standing. Public education needs to address “sidewalk rage,” or frustration with people who walk slowly, which is increasingly an issue.

There are some specific nuances that also need to be emphasized in any messaging around hidden mobility disabilities:

- Younger people with HMD may actually have *more* limitations than those 55 and older. HMD is not simply a matter of aging.
- Males may downplay the mobility difficulties they experience, thus exacerbating joint inflammation and other health consequences.
- While arthritis is the most common health condition underlying HMD, for males the underlying condition may be heart disease.

Regarding national differences, Americans participating in the survey may either experience more limitations than Canadians or may be more willing to acknowledge them. The issue of timely access to wheelchair assistance in Canadian airports needs to be addressed.

In closing, we need to educate not only the general public, but also health care professionals (including physiotherapists) who are often the person with HMD’s primary point of contact, planning departments, architects, and others involved in designing public space. In addition, we need to empower persons with HMD, letting them know that their experiences are shared by others and helping them strategize regarding when and where to obtain assistance.