

**ASSESSING THE INFLUENCE OF ASSISTIVE TECHNOLOGY ON PEOPLE WITH  
SPINAL CORD INJURY USING A MEASURE OF PARTICIPATION**

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## **ABSTRACT**

### **ASSESSING THE INFLUENCE OF ASSISTIVE TECHNOLOGY ON PEOPLE WITH SPINAL CORD INJURY USING A MEASURE OF PARTICIPATION**

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The occurrence of a spinal cord injury (SCI) leads to an enormous change in an individual's lifestyle. Limitation related to mobility can become critical affecting ability to participate in nearly all activities of daily living (ADL) <sup>1</sup>. People with SCI rely on assistive technology (AT), especially wheelchair to facilitate the return to as many pre-injury activities as possible and serve as a resource tool for community living and participation<sup>12</sup>. The purpose of this study was to investigate the wheelchair and related factors that affect the participation of individuals with SCI in activities performed in three settings including home, community and transportation.

Seventy individuals with SCI who use wheelchairs for mobility participated in this study. A written survey, which recorded AT usage in daily activities, was distributed among individuals from Pittsburgh (Pitt) and Saint Louis (SL). The wheelchair was found to be the most limiting factor in activities performed in the home, community and transportation use. The second most limiting factor was physical impairment and environment. Significant differences were shown among individuals from Pitt and SL. A higher number of individuals from SL indicated pain, fatigue, wheelchair seating, social attitudes and self-concept as factors that limit their participation. In addition, significant differences were revealed in transportation use between individuals with paraplegia and tetraplegia. Pain was shown as a limiting factor for people with paraplegia, whereas, lack of equipment was indicated by people with tetraplegia.

AT and related factors impact participation of individuals with SCI. The wheelchair was the most common limiting factor, followed by physical impairment and physical environment. The wheelchair is most likely their most important mobility device while also the one that is most associated with barriers.

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*To accomplish great things...*

*We must not only act but also dream...*

*Not only plan but also believe.*

Anatole France

## TABLE OF CONTENTS

ABSTRACT.....	iii
AKNOWLEDGMENT .....	v
TABLE OF CONTENTS.....	vi
1. INTRODUCTION .....	8
1.1 Specific Aims and Hypothesis .....	11
2. METHODS .....	12
2.1 Subjects .....	12
2.2 Protocol .....	13
2.4 Statistical Analysis.....	14
3. RESULTS .....	15
3.1 All Participant.....	15
3.3 Level of Injury .....	18
3.2 Study Location.....	19
4. DISCUSSION.....	20
5. CONCLUSION.....	26
APPENDIX A.....	27
REFERENCES .....	70

## LIST OF TABLES

Table 1. Illustrate nineteen components of AT provision.....	9
Table 2. Subject's demographic information .....	12
Table 3. Factors limiting participation in activities in the home. ....	15
Table 4. Factors limiting participation in activities in the community. ....	16
Table 5. Factors limiting participation in using transportation.....	16
Table 6. Factors limiting access to the community.....	17
Table 7. Factors affecting access to using transportation. ....	18

## 1. INTRODUCTION

The occurrence of a spinal cord injury (SCI) leads to an enormous change in an individual's lifestyle. Limitation related to mobility can become critical affecting ability to participate in nearly all activities of daily living (ADL) <sup>1</sup>. Quality of life (QOL) and perception of life satisfaction have also been shown to be affected <sup>2-3</sup>. Hence, the focus of research has been to identify predictors of QOL to minimize the risk of poor life contentment <sup>4-5-6</sup>. QOL associated with SCI is affected mainly by health<sup>3</sup> and social factors<sup>4,5</sup>. Treischmann et al <sup>7</sup> identified what a person with SCI has to do to avoid deterioration of his/her health. Initially, the person should be involved in self-care and health care activities. Secondly, he should maintain appropriate participation in productive activities. Participation is defined as the extent of a person's involvement in life situations in relation to impairments, activities, health condition and contextual factors<sup>8</sup>.

Assistive technology (AT) has been used by people with disabilities to facilitate the return to as many pre-injury activities as possible <sup>9</sup>. People with SCI rely on AT, and especially their wheelchairs to engage in many of life's activities. Wheelchairs are used to enhance function, improve independence and enable a person to successfully live at home and in the community <sup>9</sup>. The wheelchair may be perceived as a negative impact on an individual's life if does not enable him to fully participate in his social and community roles<sup>10</sup>. The wheelchair and seating system can be limitations or facilitators for participations dependent upon how well the seating and wheelchair meet the capacities of



the person. Research has shown that the successful use of AT is dependent upon two major factors: 1) process of service delivery <sup>11</sup> and 2) environmental intervention <sup>12</sup>.

Regarding the service delivery, nineteen components of AT provision should be followed<sup>11</sup>. The nineteen components are illustrated in table 1. The successful use of AT is dependent on this full range of services. How the devices are applied and the training techniques that are implemented affect outcomes, which ultimately impact a person's quality of life <sup>11</sup>.

Table 1. Illustrate nineteen components of AT provision.

<b>Nineteen components of AT provision</b>
1. Identify potential users
2. Establish needs and potential benefits of system
3. Select appropriate components of system from special and general market devices
4. Make necessary modifications
5. Assemble the system
6. Mount the system
7. Fit the system, including adjustments and initial customization
8. Select the most appropriate training materials and plan
9. Perform initial user training
10. Perform training for people in user's environment
11. Provide ongoing training
12. Be on-call for subsequent questions and needs
13. Provide ongoing preventative maintenance and replacement of components
14. Provide repairs
15. Update system when improvements are available
16. Periodically reevaluate the degree of integration of the initial system in user's life
17. Use updated data to refine or improve system
18. Provide a more appropriate system when needed by user
19. Provide more appropriate system when marketplace advances more appropriate products.

The combination of AT and environmental interventions have been used by people with disabilities as resource tools for community living and participation<sup>12</sup>. Hoenig et al.<sup>13</sup> concluded that individuals who lived in wheelchair accessible homes were more likely to use their wheelchairs. In addition, a new paradigm that considers the

environment and AT in the determination of disability has been proposed by Seelman and the International Classification of Functioning and Disability (ICIDH-2) <sup>8-15</sup>. The central theme of this new approach to studying disability is that while medical indicators are necessary they are not sufficient for developing complete explanations of disability. In this document the environmental factors are considered as either facilitators or barriers to participation for persons with impairments or activity limitations. This new paradigm has a great potential for demonstrating the role of AT in affecting disability and ultimately, an individual's participation.

Little empirical work has been done to assess the effects of AT interventions on the lives of consumers. Research has focused on a narrow range of activities and ignored the role of assistive technology <sup>4-5</sup>. Most of the literature on AT is focused around issues of design, consumer preferences, use, disuse, abandonment, cost and policy <sup>16-17-18</sup>. What is not known is how AT and related factors of a physical disability affect overall participation. There is also a need for outcomes research in service provision and activities that support the AT service provision system <sup>11</sup>. Hence, the AT assessment of daily participation, as well as their provision, need to be considered in order to identify gaps in activity involvement by people with SCI. The survey used in this research was specially designed with participation as defined by the ICIDH-2 in mind <sup>19</sup>.

## **1.1 Specific Aims and Hypothesis**

The overall aim of this study was to investigate the wheelchair and related factors that affect the participation of individuals with SCI in activities performed in three settings including home, community and transportation use. The specific aims were:

**Specific Aim 1:** Determine wheelchair and related factors that individuals with SCI rank as the most limiting for participation in the three settings.

**Specific Aim 2:** Compare the perceived wheelchair and related limiting factors on participation between individuals with tetraplegia and paraplegia for activities in all three settings. It was hypothesized that the factors limiting participation for individuals with paraplegia were less than those with tetraplegia for activities in all three settings.

**Specific Aim 3:** Investigate if wheelchair users from Pittsburgh (Pitt) cite different primary limiting factors of participation when compared to wheelchair from Saint Louis (SL). It was hypothesized that the factors limiting participation for individuals from Pitt were different than those cited by the SL subjects in all three settings. Specifically, it was hypothesized that wheelchair and related factors would be less limiting for Pitt subjects when compared to SL subjects.

## 2. METHODS

### 2.1 Subjects

Seventy individuals with SCI who use wheelchairs for mobility provided written informed consent. All participants had to be discharged from rehabilitation for at least one year and had to live in a community setting. There were 55 men and 15 women with a mean age of 41 years ( $\pm$  STDV 10.75). The average time post injury was 14 years ( $\pm$  STDV 9.82). Twenty-nine individuals were tetraplegic, 38 paraplegic and 3 had no classified level. Fifty-four subjects used manual wheelchairs and 16 used power wheelchairs. Pitt had a total of 37 subjects participating in this study. There were 30 men and 7 women with mean age of 42 years ( $\pm$  STDV 11.33). The time post injury was 16 years ( $\pm$  STDV 9.13). Thirteen individuals were tetraplegic and 21 were paraplegic. Thirty-two were manual wheelchair user and 5 were power wheelchair user. SL had a total of 33 subjects. There were 25 men and 8 women with the mean age of 39 years ( $\pm$  STDV 9.86). The average time post injury was 12 years ( $\pm$  STDV 10.25). Sixteen were tetraplegic and 17 were paraplegic. Twenty-two used manual wheelchairs and 11 used power wheelchairs. The subject's demographic information is presented in table 2.

Table 2. Subject's demographic information

Study groups	Mean age $\pm$ Stdv (years)	Average time post injury $\pm$ Stdv (years)	Gender N (%)		Level of injury # N (%)		Type of wheelchair N (%)	
			M	F	T	P	Manual	Power
<b>All participants</b> N=70	41 $\pm$ 10.75	14 $\pm$ 9.82	55 (77)	15 (21)	29(41)	38(54)	54 (77)	16 (23)
<b>Pitt</b> N=37	42 $\pm$ 11.33	16 $\pm$ 9.13	30 (81)	7 (18)	13(35)	21(56)	32 (87)	5 (13)
<b>SL</b> N=33	39 $\pm$ 9.86	12 $\pm$ 10.25	25 (76)	8 (24)	16(49)	17(51)	22 (67)	11(33)

# Note: data on level of injury was unavailable for three subjects. T=tetraplegia; P=paraplegia.

## **2.2 Protocol**

The Institutional Review Board (IRB) approval was obtained prior to initiation of the study. A written survey that recorded AT usage in daily activities was distributed among clients from Pitt and SL. Pitt subjects were recruited through research centers and through a comprehensive AT clinic that uses a client centered multi-disciplinary team approach. SL subjects were recruited from research centers and rehabilitation centers. In both locations subjects were recruited via flyer or approached by clinical study coordinators, who asked if they were interested in participating. A written informed consent was obtained from all subjects prior to engaging in the study.

## **2.3 Questionnaire**

The questionnaire used in this study was a combination of two surveys: 1) Participation Survey/Mobility (PARTS/M) and, 2) Facilitators and Barriers Survey/Mobility (FABS/M). The PARTS/M and FABS/M are available in the appendix section. The PARTS/M is composed of 25 major life activities. Analysis of the PARTS/M surveys returned by 108 polio survivors showed internal consistency values for the P-evaluative scores range from .39 to .77 with most values over .65. All but two of the test-retest values were over .68 with 18 of 25 over .74. Comparison of the cross population similarities and differences are currently underway<sup>20</sup>.

The FABS/M consist of 191 items that probe the situational specificity of activity limitations, request information on the type of assistive technology used in activities, and ask the respondents to categorize aspects of their environments as barriers or facilitators to participation. The FABS/M values for internal consistency and test retest ranged from .73 to .97 with most being above .9. The PARTS/M and FABS/M have good

psychometric properties for the polio survivor sample. For this study, only activity performance limiting factors of the home, community and transportation, were analyzed. Subjects were asked five questions within each setting related to their perceived reason of functional limitations (see Table 2-6). Final subject responses were divided into two categories: 1) Participation limitations- defined as health-related factors that interfere with the ability to do activities (e.g. wheelchair, physical impairment, wheelchair seating, pain, fatigue and illness), and 2) Access limitations- defined as non health-related issues that interfere with the opportunity to participate in activities (e.g. wheelchair, physical environment, wheelchair seating, lack of assistance, lack of equipment, social attitudes, self-concept and family attitudes). The wheelchair and wheelchair seating were cited as participation limitations because they are used to compensate for health conditions (i.e. inability to walk). For example, manual wheelchairs for most individuals limit distance traveled, whereas power wheelchairs that do not go through gravel and sand limit participation in those environments. Therefore, if the device does not assist the person in an activity, the device limits the person's participation. Access limitations were cited as inability to obtain a suitable wheelchair. However, not having the equipment would result in even greater limitations to participation.

## **2.4 Statistical Analysis**

SPSS software (SPSS, Inc.) was used to calculate frequencies of perceived limitations. The frequency of perceived reasons for limitation in activities performed at home, community and transportation were used to calculate the percentage of time that each factor was perceived as a limitation. Percentages were reported for subjects with paraplegia and tetraplegia. The differences in the perceived reasons for limitation at the

Pitt and SL were examined for each task using a chi-square test or Fishers Exact if appropriate.

Differences between perceived reasons for limitations to complete a task for individuals with paraplegia and tetraplegia were analyzed using a chi-square test. To ensure groups between the two clinical settings were comparable, demographic characteristics (gender, injury level and type of wheelchair) were matched using a chi-square. The significance level was set a priori at  $< 0.05$ .

### 3. RESULTS

#### 3.1 All Participant

Participation limitations: The wheelchair most often limited participation in each of the three settings (home, community and transportation) followed by (2) physical impairment, (3) wheelchair seating, (4) pain, (5) fatigue, and (6) illness. Tables 3, 4 and 5 illustrate the relative percentages of the participation limitation for all participants.

Table 3. Factors limiting participation in activities in the home.

Is your participation in moving around your <i>home</i> limited by...	% of participants	Study Location		Level of injury	
		Pitt %	SL %	Tetraplegia %	Paraplegia %
Wheelchair	69	68	70	59	74
Physical impairment	41	43	39	31	45
Wheelchair seating	16	11	21	17	13
Pain	11	5	18#	3	15
Fatigue	6	3	9	3	5
Illness	3	3	3	3	3
No limitation (# $p < 0.01$ )	19	24	12	17	21

Table 4. Factors limiting participation in activities in the community.

Is your participation in <i>leaving your home</i> limited by...	% of participants	Study Location		Level of injury	
		Pitt %	SL %	Tetraplegia %	Paraplegia %
Wheelchair	64	70	58	59	68
Physical impairment	36	27	45	38	29
Wheelchair seating	14	5	24*	10	16
Pain	13	8	18	7	16
Fatigue	11	8	15	7	13
Illness	6	3	9	7	5
No limitation	23	27	18	28	21

(\*p <0.05)

Table 5. Factors limiting participation in using transportation.

Is your participation in using <i>transportation</i> limited by...	% of participants	Study Location		Level of injury	
		Pitt %	SL %	Tetraplegia %	Paraplegia %
Wheelchair	61	62	60	59	63
Physical impairment	39	35	42	34	37
Wheelchair seating	16	14	18	14	16
Pain	14	8	21	3	21*
Fatigue	9	3	15*	7	8
Illness	3	3	3	3	3
No limitation	20	21	8	24	18

(\* p<0.05)



Access limitation: Wheelchair most often limited access to the community, followed by (2) physical environment, (3) lack of assistance, (4) wheelchair seating, (5) social attitudes, (6) lack of equipment, (7) self-concept and (8) family attitudes. Wheelchair was also the most common cause for limited access to transportation use, followed by (2) physical environment, (3) limited finances, (4) wheelchair seating, (5) lack of assistance, (6) social attitudes, (7) lack of equipment and (8) self-concept (9) family attitudes. Tables 6 and 7 illustrate the relative percentages of access limitations for all respondents.

Table 6. Factors limiting access to the community.

Is your access to leaving your home to go out into the <i>community</i> limited by...	% of participants	Study Location		Level of injury	
		Pitt %	SL %	Tetraplegia %	Paraplegia %
Wheelchair	53	57	49	45	60
Physical environment	47	43	58	51	53
Lack of assistance	19	16	21	14	18
Wheelchair seating	14	5	24*	14	16
Social attitudes	9	0	18*	10	8
Lack equipment	7	8	6	7	8
Self-concept	7	0	15*	3	10
Family attitudes	1	0	3	14	16
No limitation	14	16	12	14	18

(\*p<0.05)

Table 7. Factors affecting access to using transportation.

Is your participation in using <i>transportation</i> limited by...	% of participants	Study Location		Level of injury	
		Pitt %	SL %	Tetraplegia %	Paraplegia %
Wheelchair	67	73	60	55	74
Physical environment	41	32	51	41	42
Limited finances	16	11	21	21	13
Wheelchair seating	13	11	15	14	10
Family attitudes	1	0	3	3	3
Lack of assistance	9	10	6	7	5
Social attitudes	7	0	5*	7	8
Lack of equipment	3	3	3	7#	3
Self-concept	3	0	6	3	3
No limitation	20	13	12	10	16

(\* p<0.05; # p<0.01)

### 3.3 Level of Injury

Ninety five percent (N=38) of individuals with paraplegia used manual wheelchairs. In addition, 55% (N=29) of individuals with tetraplegia used power wheelchairs.

Participation limitation: Significant differences were found regarding the level of injury. Individuals with paraplegia (21%) reported pain as a limiting factor for their transportation use significantly more than people with tetraplegia (3%).

Access limitations: Lack of equipment limiting transportation use was the only significant difference seen in the area of access limitations with a higher percentage of

individuals with tetraplegia (tetraplegia= 7% paraplegia= 3%) citing it as a limiting factor.

### **3.2 Study Location**

Comparisons between Pitt (N=37) and SL (N=33) regarding gender, level of injury and type of wheelchair were performed. A borderline significant difference was found only with the type of wheelchair used ( $p<0.05$ ). A greater number of subjects in Pitt (87%) used manual wheelchairs and a larger number of individuals from SL (33%) used power wheelchairs.

Participation limitation: Significant differences were shown between Pitt (N=37) and SL (N=33) with respect to activities performed at home (Table 3) , limiting factors of leaving home (Table 4) and transportation (Table 5). For activities in the home, a higher percentage of SL participant (SL=18% Pitt=5%) indicated pain as a limiting factor. For leaving the home, a higher percentage of SL individuals (SL=24% Pitt= 5%) reported wheelchair seating as a limiting factor; whereas for transportation, SL (SL=15% Pitt=3%) were more likely to report fatigue as a limiting factor.

Access limitation: Access limitation factors are shown in Tables 6 and 7. SL individuals were more likely to indicate that wheelchair seating (SL=24% Pitt=5%), social attitudes (SL=18% Pitt=0) and self-concept (SL=15% Pitt=0) were limiting factors. For factors affecting transportation, a greater number of participants from SL reported social attitudes (SL=15% Pitt=0) as a limiting factor.

#### 4. DISCUSSION

The data indicates that the main cause for limited participation inside the home, leaving the home, and for transportation was the wheelchair. The use of a wheelchair that did not enable individuals with SCI to participate fully in their social and community roles appears to have made a considerable impact on their lives <sup>16</sup>. However, the wheelchair is not only most likely their most important mobility device, but also the one that is most associated with barriers. According to Post et al.<sup>21</sup>, there are significant complaints about wheelchairs among individuals with SCI. Manual wheelchairs are often considered to be heavy and difficult to maneuver. The dimensions of the mobility device will determine how the wheelchair can negotiate through tight spaces. Similarly, Mann et al.<sup>10</sup> found that 26% of the problems related to the physical characteristics of the wheelchair (too heavy to push and too wide to use inside the home). In a real sense, a wheelchair is an extension of the user's body. Therefore, it is critical that a wheelchair must match the user's current expectations, preferences, physical needs and functional requirements based on his or her interactions with the environment <sup>22</sup>.

The second most limiting cause of decreased participation in the three settings was the physical environments and physical impairments. Problems in daily activities are viewed as a process of matching the person's capability, resulting from a physical impairment, to the most appropriate setting <sup>24</sup>. The physical environment determines the task performance and it can impact the individual's ability to live independently <sup>24</sup>. Richards et al.<sup>25</sup> reported that environmental access increases the likelihood that a person with SCI will engage in a variety of meaningful activities. Hanrison et al.<sup>26</sup> reported that ramps, wider doors, or wheelchair lifts were pointed out by individuals with SCI as

equipment that would make their homes completely accessible. People who had assistance available or who lived in wheelchair-accessible homes were more likely to use their wheelchairs. However, people with lower income levels were less likely to have their homes modified<sup>13</sup>. Dudgeon et al.<sup>27</sup> also illustrated the importance of having an accessible environment in a school setting. They highlighted that barriers within school environments do not directly affect academic achievements among students with SCI, but discourage socialization and community participation.

Our study findings indicate that wheelchair seating was the third main cause for limited participation in the three settings as well as the fourth access-limiting factor for leaving the home and for transportation use. Mann et al.<sup>10</sup> reported that 41% of wheelchair problems are related to the fit between the user and the wheelchair (e.g. uncomfortable to sit in). When comparing SL and Pitt, more SL participants reported wheelchair seating as a limiting participation factor in activities in the community. A larger number of individuals from SL cited pain and fatigue as limiting factors in activities in the home and transportation respectively. A number of possibilities may explain the differences in the results between the two locations. The type of technology might be appropriate at a given point in time, but later the AT may be obsolete for the individual and his particular needs. Therefore, the length of time a given technology is appropriate becomes an important factor to measure. It is important to keep in mind that most of the subjects were recruited during a seating assessment with the goal of improving or replacing current wheelchairs.

From a different prospective, the lack of specific training for wheelchair prescription and fitting by suppliers and clinicians may also have occurred. Experts indicated that most clinicians do not receive any specific training for prescribing wheelchairs <sup>28</sup>. Only a very small number of therapy or medical residency programs dedicate more than a few hours to training students in the proper selection and use of AT, especially wheelchairs <sup>28</sup>. Another possible reason is related to the lack of consideration of the user's opinion in the AT prescription process, his level of knowledge regarding the available technology and his insight into his own needs. A client's lack of practical experiences makes him unable to fully participate in choosing wheelchair features that best fit his needs <sup>10</sup>. More active user and caregiver/family member participation in the prescription of AT is necessary to increase compliance and facilitate effective outcomes <sup>17</sup>. Moreover, the lack of financial resources, fraud, and denials of prescribed equipment by third-party payers are also among the most frequent reasons why clients receive inadequate equipment <sup>18</sup>.

A greater number of individuals with paraplegia reported pain as a transportation-limiting factor when compared with individuals with tetraplegia. This may be explained by the fact that 95% of the individuals with paraplegia were using manual wheelchairs, which require more effort to load and unload in and out of a vehicle. Another possible reason may be related to transfers in and out of the vehicle seat. Pain and injury of the upper extremities are experienced by as much as 70% of manual wheelchair users <sup>30</sup>. Pain represented a form of overuse syndrome related to wheelchair usage and transfers <sup>31</sup>. Furthermore, exposure to vibrations and shock, resultant to the wheelchair rider, can also lead to neck and back pain <sup>32</sup>. Individuals with tetraplegia indicated that the lack of

equipment is a limiting factor in transportation use. This may due to difficulties in transporting a power wheelchair in vehicle. Accessible transportation increases the likelihood that individuals with SCI will participate in the community <sup>21</sup>.

Our finding showed that wheelchair and related factors were less limiting for Pitt subjects when compared to SL subjects. The data also revealed that a greater number of individuals from Pitt used manual wheelchairs, whereas a higher number of people from SL used a power wheelchair. It is possible that the differences between the two sites are because of this difference in populations. Unfortunately our sample size is not large enough to allow us to control for this statistically. Other reasons that may explain the difference between the two sites include the presence of a specialized AT clinic in Pittsburgh. It is possible that such a clinic provided chairs better matched to the user and environment and this was responsible for the differences. In order to definitively determine if a specialized AT clinic makes a difference a controlled longitudinal study is needed. Another important finding indicated that a greater number of individuals from SL indicated social attitudes and self-concept as an obstacle to participation in the community and transportation use. It is difficult to understand why these differences exist; however Pierce et al.<sup>29</sup> showed that the public lack of understanding of the life of people with disabilities as well as the attitudes of others can have an impact on activities performance. Therefore, consideration of social attitudes is essential when AT is prescribed.

It was identified through this study that AT and related factors impact daily participation of individuals with SCI individuals. Unfortunately, we do not have any data

regarding the direct cause of those reported limiting factors. For futures studies, finding the cause of the problems of each factor identified in this study would be useful to lead to an understanding of the limitations that individuals with SCI face in daily routines. Measuring the length of time a given technology is appropriate would also be useful. Investigating not only the impact of seating intervention, but also environmental modifications and related factors on changes in daily participation of an individual with SCI are needed. It is important to keep in mind that an appropriate wheelchair and seating system have only a valuable impact on activities performance if environmental intervention is made.

This study is ongoing and surveys, administered after the individual receives a seating intervention, are being collected. Therefore, analyzing and comparing the results of both surveys (prior and post receiving the new wheelchair) would be useful to understand the impact of the seating intervention, and related factors on changes in the daily participation of an individual with SCI. Determining the changes in SCI individuals lives, pre and post intervention with AT, may provide essential information for the selection of AT that best fits life styles, justification for the purchase of AT for third-party payment, and formation of a data base. A database could be used to advocate for social policy change in support of the provision of AT. Furthermore, exploration into the experiences of people who use wheelchairs would deepen the understanding of the critical success factors involved in wheelchair prescription and ultimately lead to more positive outcomes.



Clinicians should look for evidence to support clinical practice. Keeping in mind the home and community environment, outcomes need to measure the function and quality of life that interventions provide to people with SCI. Hence, incorporating clinical practice supported by evidence and documenting actual long-term outcomes are important strategies for meeting the activity participation needs of a person with SCI. More research is needed to guide the clinical interventions used for improved participation of people with SCI. Critical to all clinicians and their clients is the incorporation of these research findings into routine clinical practice.

## 5. CONCLUSION

The outcome of AT use and related factors that affect participation in the home, community and transportation use were identified among wheelchair users. The wheelchair was the most common limiting factor, followed by physical impairment and physical environment. The wheelchair is most likely the most important mobility device, but also the one that is most associated with barriers. Moreover, the wheelchair may be the most empowering and limiting technology at the same time.

The wheelchair is an essential device, because it provides mobility. However, the wheelchair needs to match the user's current expectations, preferences, physical needs and functional requirements based on his or her interactions with the environment. Providing a wheelchair that fits well and is easy to operate without addressing environmental access may limit the potential benefits of the equipment. Similarly, an accessible environment is of no benefit if the equipment is difficult for the user to operate.

It is important to keep in mind that it is not an isolated factor that restricts a person with SCI from successfully participating in activities at home and in the community. It has been shown through this study that many factors determine the success of wheelchair mobility. An understanding of the factors that limit participation will help us better understand the effects disability has on functioning. It is important to identify the type and severity of activity limitations so that programs can be planned and developed which will assist in full participation in society.

**APPENDIX A**  
Core survey  
**YOU AND YOUR HEALTH**

This interview is completely voluntary on your part. The questions will take about two hours of your time to answer. There are three sections to this interview. The first section includes questions about background information and health status; the second section involves participation in various activities; and the last section deals with the accessibility of your physical environment and support systems. Please select the answers most appropriate to you. Thank you for agreeing to participate.

1. What is your gender? ☐ *Male* ☐ *Female*
2. What is your birthdate? \_\_\_\_ / \_\_\_\_ / \_\_\_\_ (*MM/DD/YY*)
3. What is your race/ethnicity? (*Check all that apply.*)  
☐ *White* ☐ *Asian/Pacific Islander*  
☐ *Black/African American* ☐ *American Indian/Alaskan Native*  
☐ *Other (specify)* \_\_\_\_\_
4. Are you of Spanish/Hispanic origin?  
☐ *Yes* ☐ *No*
5. Are you: (*Check all that apply.*)  
☐ *Married* ☐ *Separated*  
☐ *Divorced* ☐ *Never been married*  
☐ *Widowed* ☐ *Member of an unmarried couple*
6. What is the highest grade or year of school you have completed?  
☐ *Never attended school or only kindergarten*  
☐ *Grades 1 through 8*  
☐ *Grades 9 through 11*  
☐ *Grade 12 or GED (high school graduate)*  
☐ *College 1 year to 3 years*  
☐ *College 4 years or more (college graduate)*
7. Is your annual household income from all sources:  
☐ *Less than \$10,000*  
☐ *\$10,000 to less than \$15,000*  
☐ *\$15,000 to less than \$20,000*  
☐ *\$20,000 to less than \$25,000*  
☐ *\$25,000 to less than \$35,000*

- ☐ \$35,000 to less than \$50,000
- ☐ \$50,000 to \$75,000 or
- ☐ Over \$75,000
- ☐ Don't know/Not sure

8. Which of the following benefits are you currently receiving?

*Check all that apply.)*

- ☐ SSI (Supplemental Security Income)
- ☐ SSDI (disability benefits from Social Security)
- ☐ Medicare    ☐ Medicaid    ☐ Food Stamps    ☐ Subsidized Housing
- ☐ Personal Care Assistance    ☐ Meals on Wheels
- ☐ Other \_\_\_\_\_ ☐ None

9. Do you have any of the following impairments? *Check all that apply.)*

- ☐ Mobility impairment (difficulty moving your legs or arms)
- ☐ Visual impairment
- ☐ Hearing impairment
- ☐ Cognitive impairment (difficulty with thinking)
- ☐ Mental health illness

10. What level is your spinal cord injury? \_\_\_\_\_

11. Are you a person with: ☐ Paraplegia ☐ Quadriplegia    ☐ Don't know

12. Is your injury: ☐ Complete    ☐ Incomplete    ☐ Don't know

13. When was the onset of your spinal cord injury? \_\_\_\_ / \_\_\_\_ (month/year)

*Do you have any of the following secondary conditions? If Yes, how often do you experience the condition?*

Condition <i>Check all that apply.)</i>	How often do you experience this condition?
<input type="checkbox"/> 1. Pain	<input type="checkbox"/> Constantly <input type="checkbox"/> Off and on <input type="checkbox"/> Rarely
<input type="checkbox"/> 2. Osteoporosis	<input type="checkbox"/> Constantly <input type="checkbox"/> Off and on <input type="checkbox"/> Rarely
<input type="checkbox"/> 3. Spasticity	<input type="checkbox"/> Constantly <input type="checkbox"/> Off and on <input type="checkbox"/> Rarely
<input type="checkbox"/> 4. Upper Respiratory Infection	<input type="checkbox"/> Constantly <input type="checkbox"/> Off and on <input type="checkbox"/> Rarely
<input type="checkbox"/> 5. Circulatory problems	<input type="checkbox"/> Constantly <input type="checkbox"/> Off and on <input type="checkbox"/> Rarely
<input type="checkbox"/> 6. Scoliosis	<input type="checkbox"/> Constantly <input type="checkbox"/> Off and on <input type="checkbox"/> Rarely

<input type="checkbox"/> 7. Weight problems	<input type="checkbox"/> <i>Constantly</i> <input type="checkbox"/> <i>Off and on</i> <input type="checkbox"/> <i>Rarely</i>
<input type="checkbox"/> 8. Skin problems	<input type="checkbox"/> <i>Constantly</i> <input type="checkbox"/> <i>Off and on</i> <input type="checkbox"/> <i>Rarely</i>
<input type="checkbox"/> 9. Depression	<input type="checkbox"/> <i>Constantly</i> <input type="checkbox"/> <i>Off and on</i> <input type="checkbox"/> <i>Rarely</i>
<input type="checkbox"/> 10. Contractures – permanent limitation of joint movement	<input type="checkbox"/> <i>Constantly</i> <input type="checkbox"/> <i>Off and on</i> <input type="checkbox"/> <i>Rarely</i>
<input type="checkbox"/> 11. Bladder incontinence	<input type="checkbox"/> <i>Constantly</i> <input type="checkbox"/> <i>Off and on</i> <input type="checkbox"/> <i>Rarely</i>
<input type="checkbox"/> 12. Bowel incontinence	<input type="checkbox"/> <i>Constantly</i> <input type="checkbox"/> <i>Off and on</i> <input type="checkbox"/> <i>Rarely</i>
<input type="checkbox"/> 13. Stomach problems	<input type="checkbox"/> <i>Constantly</i> <input type="checkbox"/> <i>Off and on</i> <input type="checkbox"/> <i>Rarely</i>
<input type="checkbox"/> 14. Urinary Tract Infection	<input type="checkbox"/> <i>Constantly</i> <input type="checkbox"/> <i>Off and on</i> <input type="checkbox"/> <i>Rarely</i>
<input type="checkbox"/> 15. High Blood Pressure	<input type="checkbox"/> <i>Constantly</i> <input type="checkbox"/> <i>Off and on</i> <input type="checkbox"/> <i>Rarely</i>
<input type="checkbox"/> 16. Phlebitis – inflammation of blood vessels	<input type="checkbox"/> <i>Constantly</i> <input type="checkbox"/> <i>Off and on</i> <input type="checkbox"/> <i>Rarely</i>
<input type="checkbox"/> 17. Fingernail or toenail infections	<input type="checkbox"/> <i>Constantly</i> <input type="checkbox"/> <i>Off and on</i> <input type="checkbox"/> <i>Rarely</i>
<input type="checkbox"/> 18. Fatigue	<input type="checkbox"/> <i>Constantly</i> <input type="checkbox"/> <i>Off and on</i> <input type="checkbox"/> <i>Rarely</i>
<input type="checkbox"/> 19. None of these	

***These next two questions are about your support needs and life satisfaction.***

*1. How often do you get the social and emotional support you need?*

*Would you say . . .*

- ☐ Always
- ☐ Usually
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

*2. In general, how satisfied are you with your life? Would you say . . .*

- ☐ Very satisfied
- ☐ Satisfied
- ☐ Dissatisfied
- ☐ Very dissatisfied

***The following questions are about limitations you may have in your Daily life.***

1. Are you limited in the kind or amount of work you could do because of any impairment or health problem?

- ☐ Yes
- ☐ No

2. Because of any impairment or health problem, do you have any trouble learning, Remembering or concentrating?

- ☐ Yes
- ☐ No

3a. Do you use special equipment or help from others to get around?

- ☐ Yes (Continue.)
- ☐ No special equipment or help used (Go to Question 5)

\*\*\*\*\*

3b. If you use special equipment or help from others to get around, what type do you use? (Check all that apply.)

- ☐ Other people
- ☐ Cane or walking stick
- ☐ Walker
- ☐ Crutch or crutches
- ☐ Manual wheelchair
- ☐ Motorized wheelchair
- ☐ Electric mobility scooter
- ☐ Artificial leg
- ☐ Brace
- ☐ Service Animal (i.e., guide dog or other specifically trained to assistance)
- ☐ Other (Specify) \_\_\_\_\_

4. Using special equipment or help, what is the farthest distance that you can go?

- ☐ Across a small room
- ☐ About the length of a typical house
- ☐ About one or two city blocks
- ☐ About one mile
- ☐ More than one mile

5. What is the farthest distance you can walk by yourself, without any special equipment or help from others?

- ☐ Unable to walk
- ☐ Across a small room
- ☐ About the length of a typical house
- ☐ About one or two city blocks
- ☐ About one mile

☐ More than one mile

6. Are you *LIMITED* in any way in any activities because of any impairment or health problem?

☐ Yes

☐ No (Go to question 9.)

7. What is the *MAJOR* impairment or health problem that limits your activities?

☐ Arthritis/rheumatism

☐ Back or neck problem

☐ Fractures, bone/joint injury

☐ Walking problem

☐ Lung/breathing problem

☐ Hearing problem

☐ Eye/vision problem

☐ Heart problem

☐ Stroke problem

☐ Hypertension/high blood pressure

☐ Diabetes

☐ Cancer

☐ Depression/anxiety/emotional problem

☐ Other impairment/ problem ☐ Not applicable

8. For *HOW LONG* have your activities been limited because of your major impairment or health problem?

☐ Days      ►      How many days?      \_\_\_\_\_

☐ Weeks      ►      How many weeks?      \_\_\_\_\_

☐ Months      ►      How many months?      \_\_\_\_\_

☐ Years      ►      How many years?      \_\_\_\_\_

☐ Not applicable

9. Because of any impairment or health problem, do you need the help of other persons with your *PERSONAL CARE* needs, such as eating, bathing, dressing, or getting around the house?

☐ Yes

☐ No

☐ Not applicable

10. Because of any impairment or health problem, do you need the help of other persons in handling your *ROUTINE* needs, such as everyday household chores, doing necessary business, shopping, or getting around for other purposes?

☐ Yes

☐ No

☐ Not applicable

11. During the past 30 days, for about how many days did *PAIN* make it hard for you to do your usual activities, such as self-care, work, or recreation?

11a.    ☐ Number of days:      \_\_\_\_\_

☐ None

12. *During the past 30 days, for about how many days have you felt SAD, BLUE, or DEPRESSED?*

12a.    ☐ Number of days: \_\_\_\_\_    ☐ None

13. *During the past 30 days, for about how many days have you felt WORRIED, TENSE, or ANXIOUS?*

13a.    ☐ Number of days: \_\_\_\_\_    ☐ None

14. During the past 30 days, for about how many days have you felt you did NOT get ENOUGH REST or SLEEP?

14a.    ☐ Number of days: \_\_\_\_\_    ☐ None

15. During the past 30 days, for about how many days have you felt VERY HEALTHY AND FULL OF ENERGY?

15a.    ☐ Number of days: \_\_\_\_\_    ☐ None



## PARTICIPATION SURVEY / ASSISTIVE TECHNOLOGY

The first part of the survey is completed. The next section asks about **participation in major life activities**. This part consists of 13 different areas of major life activities, and the questions are similar in each area. Please answer the questions using the framework of a **typical day in the past 4 weeks**. A **typical day** is neither your worst day nor your best day but represents most of your days during the past 4 weeks.

**The following definitions may help you answer these survey questions:**

**Choice** means having the opportunity to select freely from a number of available options concerning when, where, how, how often, and with whom you participate in an activity.

**Help from another person** refers to either paid help (such as a paid attendant) or unpaid help (such as from a family member or friend).

**Access limitations** may be anything that keeps you from participating in activities (such as people's attitudes, your self-concept, physical factors in the environment, or lack of special equipment).

**Adaptations** are changes made to rooms or buildings, such as lowered shelves or widened doors, or the use of special devices, such as a raised toilet, hand-held shower, grab bars, a ramp, or a modified cutting board to secure food. Adaptations could also include choosing to purchase such things as a portable phone instead of a stationary phone, a long-handled shoehorn instead of a short one, or a refrigerator with a freezer on the side or bottom instead of on the top.

**Accommodations** are ways of changing your environment to make activities easier to do. Some examples are placing items within reach, arranging furniture so that you can move around more easily, scheduling preparation time for activities, or calling ahead to check on accessibility.

**Special equipment** is equipment made especially for people with disabilities, including, but *Not Limited* to, a wheelchair, scooter, walker, cane, crutches, orthotic or prosthetic device, reacher, communication board, sliding board, adapted vehicle, lift, or an accessible *Parking* permit. Also included would be a catheter for bladder management.

**GROOMING:** The following questions are about grooming. Grooming includes shaving, combing and brushing hair, applying makeup, brushing teeth, etc.

1. How **frequently** do you groom?  
☐ 2 or 3 times a week   ☐ Once a day   ☐ 2 - 3 times a day   ☐ More than 3 times a day
2. How much **time** do you require for grooming on a typical day?  
☐ Less than 10 minutes   ☐ 10 to 20 minutes   ☐ More than 20 minutes
3. Is your participation in grooming **limited** by ... (Check all that apply.)  
☐ Illness   ☐ A physical impairment   ☐ Pain   ☐ Fatigue   ☐ Wheelchair  
☐ Wheelchair seating   ☐ Other \_\_\_\_\_   ☐ Not limited
4. When grooming, how much **choice** do you have compared to others without disabilities? (Choice includes how often, when, where and how you groom.)  
☐ A lot of choice   ☐ Some choice   ☐ Little choice   ☐ No choice
5. How **satisfied** are you with your participation in grooming?  
☐ Very satisfied   ☐ Satisfied   ☐ Somewhat satisfied   ☐ Dissatisfied
6. How much **help from another person** do you require for grooming?  
☐ None   ☐ Just a little   ☐ A moderate amount   ☐ A great deal
7. If you use assistance, **who helps you** with grooming? (Check all that apply.)  
☐ No one   ☐ Family/Significant Other   ☐ Friends   ☐ People I hire
8. How often do you use **accommodations, adaptations, or special equipment** to groom?  
☐ Never   ☐ A little of the time   ☐ Some of the time   ☐ Most of the time   ☐ All of the time
9. If you use **accommodations, adaptations, or special equipment** to groom, what do you use? (Check all that apply.)
 

<input type="checkbox"/> N/A <input type="checkbox"/> Dressing table <input type="checkbox"/> Electric shaver <input type="checkbox"/> Electric toothbrush <input type="checkbox"/> Grab bars <input type="checkbox"/> Lift <input type="checkbox"/> Long-handled equipment <input type="checkbox"/> Wheelchair - manual <input type="checkbox"/> Wheelchair seating	<input type="checkbox"/> Orthotic/prosthetic device <input type="checkbox"/> Shower chair <input type="checkbox"/> Special grooming device <input type="checkbox"/> Specialized bathroom equipment <input type="checkbox"/> Special seat/chair <input type="checkbox"/> Lowered shelves/counters <input type="checkbox"/> Wheelchair - power <input type="checkbox"/> Other _____
--	--

**MEAL PREPARATION and CLEAN-UP:** The following questions involve meal preparation and cleaning after the meal is finished.

1. In a typical day, how much time do you spend on meal preparation and cleanup?  
☐ None →   ☐ I choose not to do this   ☐ I am unable to do this  
☐ Under 1 hour

2. Is your participation in meal preparation limited by ... (Check all that apply.)

- ☐ Illness    ☐ A physical impairment    ☐ Pain    ☐ Fatigue    ☐ Wheelchair  
☐ Wheelchair seating    ☐ Other \_\_\_\_\_ ☐ Not limited

3. For meal preparation and clean-up, how much choice do you have compared to others without disabilities?

(Choice includes when, what, where and with whom you prepare meals.)

- ☐ A lot of choice    ☐ Some choice    ☐ Little choice    ☐ No choice

4. How satisfied are you with your participation in meal preparation and clean-up?

- ☐ Very satisfied    ☐ Satisfied    ☐ Somewhat satisfied    ☐ Dissatisfied

5. How much help from another person do you need to prepare/clean up?

(Check all that apply.)

- ☐ None    ☐ Just a little    ☐ A moderate amount    ☐ A great deal

If you use assistance, who helps you to prepare and clean up?

(Check all that apply.)

- ☐ No one    ☐ Family/Significant Other    ☐ Friends    ☐ People I hire

7. How often do you use accommodations, adaptations, or special equipment to prepare and clean up?

- ☐ Never    ☐ A little of the time    ☐ Some of the time    ☐ Most of the time    ☐ All of the time

8. If you use accommodations, adaptations, or special equipment for meal preparation, what do you use? (Check all that apply.)

(N/A

- |   |  |
|---|--|
| <input type="checkbox"/> Cane                       | <input type="checkbox"/> Scooter                       |
| <input type="checkbox"/> Adaptive cooking utensils  | <input type="checkbox"/> Special seat/chair            |
| <input type="checkbox"/> Lap board/TV tray          | <input type="checkbox"/> Specialized kitchen equipment |
| <input type="checkbox"/> Specialized wheelchair     | <input type="checkbox"/> Universal cuff                |
| <input type="checkbox"/> Lowered shelves/counters   | <input type="checkbox"/> Reacher/grab stick/grabber    |
| <input type="checkbox"/> Orthotic/prosthetic device | <input type="checkbox"/> Walker                        |
| <input type="checkbox"/> Wheelchair - manual        | <input type="checkbox"/> Wheelchair – power            |
| <input type="checkbox"/> Wheelchair seating         | <input type="checkbox"/> Other _____                   |

**BLADDER CARE: The next questions involve emptying your bladder, which includes getting to a bathroom, adjusting clothing, using accommodations, or using special equipment.**

1. How much time do you require for bladder care on a typical day?  
☐ Less than 30 minutes    ☐ 30 to 60 minutes    ☐ More than 60 minutes
2. Is your participation in performing and managing bladder care limited by ...  
(Check all that apply.)  
☐ Illness    ☐ A physical impairment    ☐ Pain    ☐ Fatigue    ☐ Wheelchair  
☐ Wheelchair seating    ☐ Other \_\_\_\_\_    ☐ Not limited
3. For management of bladder care, how much choice do you have compared to others without disabilities? (Choice includes when, where and how care takes place.)  
☐ A lot of choice    ☐ Some choice    ☐ Little choice    ☐ No choice
4. How satisfied are you with your participation in bladder care?  
☐ Very satisfied    ☐ Satisfied    ☐ Somewhat satisfied    ☐ Dissatisfied
5. Do problems associated with bladder care affect your participation in Daily activities, such as attending a movie, going shopping, or working?  
☐ No, not at all    ☐ Once in a while    ☐ Sometimes    ☐ Most of the time
6. How much help from another person do you require for bladder care?  
☐ None    ☐ Just a little    ☐ A moderate amount    ☐ A great deal
7. If you use assistance, who helps you with bladder care? (Check all that apply.)  
☐ No one    ☐ Family/Significant Other    ☐ Friends    ☐ People I hire
8. How often do you use accommodations, adaptations, or special equipment for bladder care?  
☐ Never    ☐ A little of the time    ☐ Some of the time    ☐ Most of the time    ☐ All of the time
9. If you use accommodations, adaptations, or special equipment for bladder care, what do you use? (Check all that apply.)  

<input type="checkbox"/> N/A	<input type="checkbox"/> Absorbency pads/undergarments <input type="checkbox"/> Accessible bathroom <input type="checkbox"/> Urinal/bedpan/potty chair <input type="checkbox"/> Catheter <input type="checkbox"/> Leg bag/overnight bags/bed bags <input type="checkbox"/> Wheelchair - manual <input type="checkbox"/> Wheelchair seating	<input type="checkbox"/> Grab bars <input type="checkbox"/> Medication <input type="checkbox"/> Orthotic/prosthetic device <input type="checkbox"/> Raised toilet <input type="checkbox"/> Shower chair <input type="checkbox"/> Wheelchair - power <input type="checkbox"/> Other _____
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**MOVING AROUND INSIDE YOUR HOME:** The following questions are about moving around inside your home. This includes getting out of bed, getting out of a chair, going from room to room or getting to another floor, such as the basement.

1. How many waking hours each day do you spend in the following rooms of your home?

Living room	<input type="checkbox"/> Less than 1 <input type="checkbox"/> 1 to 4 <input type="checkbox"/> More than 4 <input type="checkbox"/> Not applicable to my home
Dining room	<input type="checkbox"/> Less than 1 <input type="checkbox"/> 1 to 4 <input type="checkbox"/> More than 4 <input type="checkbox"/> Not applicable to my home
Kitchen	<input type="checkbox"/> Less than 1 <input type="checkbox"/> 1 to 4 <input type="checkbox"/> More than 4 <input type="checkbox"/> Not applicable to my home
Bathroom	<input type="checkbox"/> Less than 1 <input type="checkbox"/> 1 to 4 <input type="checkbox"/> More than 4 <input type="checkbox"/> Not applicable to my home
Bedroom	<input type="checkbox"/> Less than 1 <input type="checkbox"/> 1 to 4 <input type="checkbox"/> More than 4 <input type="checkbox"/> Not applicable to my home
Study	<input type="checkbox"/> Less than 1 <input type="checkbox"/> 1 to 4 <input type="checkbox"/> More than 4 <input type="checkbox"/> Not applicable to my home
Basement	<input type="checkbox"/> Less than 1 <input type="checkbox"/> 1 to 4 <input type="checkbox"/> More than 4 <input type="checkbox"/> Not applicable to my home
Other (specify) _____	<input type="checkbox"/> Less than 1 <input type="checkbox"/> 1 to 4 <input type="checkbox"/> More than 4 <input type="checkbox"/> Not applicable to my home

Is your participation in moving around your home limited by ...

(Check all that apply.)

- ☐ Illness   ☐ A physical impairment   ☐ Pain   ☐ Fatigue   ☐ Wheelchair  
☐ Wheelchair seating   ☐ Other \_\_\_\_\_   ☐ Not limited

3. When moving around your home, how much choice do you have compared to others without disabilities? (Choice includes when, where and how you move around).

- ☐ A lot of choice   ☐ Some choice   ☐ Little choice   ☐ No choice

4. How satisfied are you with your participation in moving around your home?

- ☐ Very satisfied   ☐ Satisfied   ☐ Somewhat satisfied   ☐ Dissatisfied

5. Do problems associated with moving around your home affect your participation in Daily activities, such as doing laundry, cooking, or making home repairs?

- ☐ No, not at all   ☐ Once in a while   ☐ Sometimes   ☐ Most of the time

6. How much help from another person do you need to move around your home?

- ☐ None   ☐ Just a little   ☐ A moderate amount   ☐ A great deal

7. If you use assistance, who helps you move around your home?

(Check all that apply.)

- ☐ No one   ☐ Family/Significant Other   ☐ Friends   ☐ People I hire

## MOVING AROUND INSIDE YOUR HOME (continued)

8. How often do you use accommodations, adaptations, or special equipment to move around your home?

☐Never ☐A little of the time ☐Some of the time ☐Most of the time ☐All of the time

9. If you use accommodations, adaptations, or special equipment to move around your home, what do you use? (Check all that apply.)

- |  |   |
|--|---|
| <input type="checkbox"/> N/A                   | <input type="checkbox"/> Walker                     |
| <input type="checkbox"/> Lift                  | <input type="checkbox"/> Orthotic/prosthetic device |
| <input type="checkbox"/> Wheelchair - manual   | <input type="checkbox"/> Wheelchair - power         |
| <input type="checkbox"/> Wheelchair seating    | <input type="checkbox"/> Widened doors              |
| <input type="checkbox"/> Other _____           |   |
| <input type="checkbox"/> Cane                  |   |
| <input type="checkbox"/> Scooter               |   |
| <input type="checkbox"/> Crutches              |   |
| <input type="checkbox"/> Special seat or chair |   |
| <input type="checkbox"/> Grab bars             |   |
| <input type="checkbox"/> Ramp                  |   |
| <input type="checkbox"/> Hand rails            |   |

**LEAVING YOUR HOME:** The following questions are about leaving your home to go into the community (such as to go shopping or to the doctor). This includes getting into a vehicle.

1. How frequently do you leave your home?

☐ Never → ☐ I choose not to do this ☐ I am unable to do this  
(Go to question 3 on next page.)

- ☐ Once or twice a month (Continue)  
☐ Once or twice a week (Continue)  
☐ Once or twice a day (Continue)  
☐ 3 or more times a day (Continue)

2. For the following activities you do outside your home, please indicate how often you do each activity and how long it takes you to prepare to do them.

Community Activities	How often do you do the activity?	(Please answer corresponding follow-up question)
Shopping for groceries	<input type="checkbox"/> Never →	<input type="checkbox"/> I choose not to do this activity <input type="checkbox"/> I am unable to do this activity
	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month → <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	Preparation time <input type="checkbox"/> Under 10 minutes <input type="checkbox"/> 10-20 minutes <input type="checkbox"/> More than 20 minutes
Shopping for clothes	<input type="checkbox"/> Never →	<input type="checkbox"/> I choose not to do this activity <input type="checkbox"/> I am unable to do this activity
	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month → <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	Preparation time <input type="checkbox"/> Under 10 minutes <input type="checkbox"/> 10-20 minutes <input type="checkbox"/> More than 20 minutes
Going to the pharmacy	<input type="checkbox"/> Never →	<input type="checkbox"/> I choose not to do this activity <input type="checkbox"/> I am unable to do this activity
	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month → <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	Preparation time <input type="checkbox"/> Under 10 minutes <input type="checkbox"/> 10-20 minutes <input type="checkbox"/> More than 20 minutes
Going to the bank	<input type="checkbox"/> Never →	<input type="checkbox"/> I choose not to do this activity <input type="checkbox"/> I am unable to do this activity
	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month → <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	Preparation time <input type="checkbox"/> Under 10 minutes <input type="checkbox"/> 10-20 minutes <input type="checkbox"/> More than 20 minutes

### LEAVING YOUR HOME (continued)

Community Activities	How often do you do the activity?	(Please answer corresponding follow-up question)
Going to the doctor's office	<input type="checkbox"/> Never →	<input type="checkbox"/> I choose not to do this activity <input type="checkbox"/> I am unable to do this activity
	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month → <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	Preparation time <input type="checkbox"/> Under 10 minutes <input type="checkbox"/> 10-20 minutes <input type="checkbox"/> More than 20 minutes
Going to the post office	<input type="checkbox"/> Never →	<input type="checkbox"/> I choose not to do this activity <input type="checkbox"/> I am unable to do this activity
	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month → <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	Preparation time <input type="checkbox"/> Under 10 minutes <input type="checkbox"/> 10-20 minutes <input type="checkbox"/> More than 20 minutes
Going to the friend's home	<input type="checkbox"/> Never →	<input type="checkbox"/> I choose not to do this activity <input type="checkbox"/> I am unable to do this activity
	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month → <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	Preparation time <input type="checkbox"/> Under 10 minutes <input type="checkbox"/> 10-20 minutes <input type="checkbox"/> More than 20 minutes
Other (specify) _____	<input type="checkbox"/> Never →	<input type="checkbox"/> I choose not to do this activity <input type="checkbox"/> I am unable to do this activity
	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month → <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	Preparation time <input type="checkbox"/> Under 10 minutes <input type="checkbox"/> 10-20 minutes <input type="checkbox"/> More than 20 minutes

3. Is your access to leaving your home to go out into the community limited by ...

(Check all that apply.)

- ☐ Physical factors in the environment    ☐ Social attitudes    ☐ Family attitudes  
☐ Self-concept    ☐ Lack of assistance    ☐ Wheelchair    ☐ Wheelchair seating  
☐ Lack of special equipment    → What equipment would be helpful?

\_\_\_\_\_

☐ Other (specify) \_\_\_\_\_

☐ Not limited

4. Is your participation in leaving your home limited by ... (Check all that apply.)

- ☐ Illness    ☐ A physical impairment    ☐ Pain    ☐ Fatigue    ☐ Wheelchair  
☐ Wheelchair seating    ☐ Other \_\_\_\_\_    ☐ Not limited



5. To leave your home, how much choice do you have compared to others without disabilities? (Choice includes how often, when, and how you leave and where you go.)  
☐ A lot of choice    ☐ Some choice    ☐ Little choice    ☐ No choice
6. How satisfied are you with your participation in leaving your home?  
☐ Very satisfied    ☐ Satisfied    ☐ Somewhat satisfied    ☐ Dissatisfied
7. How important is it for you to leave your home?  
☐ Very important    ☐ Somewhat important    ☐ Somewhat unimportant    ☐ Not important
8. How much time do you need to prepare to go to a place that is ...  
 a. Unfamiliar? ☐ Less than 10 minutes    ☐ 10 to 30 minutes    ☐ More than 30 minutes  
 b. Familiar?    ☐ Less than 10 minutes    ☐ 10 to 30 minutes    ☐ More than 30 minutes
9. How much help from another person do you need to leave your home?  
☐ None    ☐ Just a little    ☐ A moderate amount    ☐ A great deal
10. If you use assistance, who helps you with leaving your home?  
 (Check all that apply.)  
☐ No one    ☐ Family/Significant Other    ☐ Friends    ☐ People I hire
11. How often do you use accommodations, adaptations, or special equipment to leave your home?  
☐ Never    ☐ A little of the time    ☐ Some of the time    ☐ Most of the time    ☐ All of the time
12. If you use accommodations, adaptations, or special equipment to leave your home, what do you use? (Check all that apply.)
- |  |  |
|--|--|
| <input type="checkbox"/> N/A                   | <input type="checkbox"/> Walker              |
| <input type="checkbox"/> Handrails             | <input type="checkbox"/> Wheelchair seating  |
| <input type="checkbox"/> Level threshold       | <input type="checkbox"/> Wheelchair - manual |
| <input type="checkbox"/> Lift                  | <input type="checkbox"/> Wheelchair - power  |
| <input type="checkbox"/> Pedal for car         | <input type="checkbox"/> Widened doors       |
| <input type="checkbox"/> Elevator              |  |
| <input type="checkbox"/> Scooter               |  |
| <input type="checkbox"/> Grab bars             |  |
| <input type="checkbox"/> Ramp                  |  |
| <input type="checkbox"/> Vehicle (not adapted) |  |
| <input type="checkbox"/> Other _____           |  |

**TRANSPORTATION:** The following questions involve accessing and using different forms of transportation.

1. How **frequently** do you use transportation?

☐ *Never* → ☐ *I choose not to do this* ☐ *I am unable to do this*  
(Go to question 3 on next page)

- ☐ *Once or twice a month*
- ☐ *Once or twice a week*
- ☐ *Once or twice a day*
- ☐ *More than twice a day*

2. Which of the following types of **transportation do you use** and how do they **influence your participation** in activities?

Please check all forms of transportation that you use	Overall, how does this type of transportation influence your Participation in activities?
<input type="checkbox"/> Own car/van (not adapted)	<input type="checkbox"/> <i>Helps a lot</i> <input type="checkbox"/> <i>Helps some</i> <input type="checkbox"/> <i>No effect</i> <input type="checkbox"/> <i>Limits some</i> <input type="checkbox"/> <i>Limits a lot</i>
<input type="checkbox"/> Own adapted car/van	<input type="checkbox"/> <i>Helps a lot</i> <input type="checkbox"/> <i>Helps some</i> <input type="checkbox"/> <i>No effect</i> <input type="checkbox"/> <i>Limits some</i> <input type="checkbox"/> <i>Limits a lot</i>
<input type="checkbox"/> Buses	<input type="checkbox"/> <i>Helps a lot</i> <input type="checkbox"/> <i>Helps some</i> <input type="checkbox"/> <i>No effect</i> <input type="checkbox"/> <i>Limits some</i> <input type="checkbox"/> <i>Limits a lot</i>
<input type="checkbox"/> Taxis	<input type="checkbox"/> <i>Helps a lot</i> <input type="checkbox"/> <i>Helps some</i> <input type="checkbox"/> <i>No effect</i> <input type="checkbox"/> <i>Limits some</i> <input type="checkbox"/> <i>Limits a lot</i>
<input type="checkbox"/> Airlines	<input type="checkbox"/> <i>Helps a lot</i> <input type="checkbox"/> <i>Helps some</i> <input type="checkbox"/> <i>No effect</i> <input type="checkbox"/> <i>Limits some</i> <input type="checkbox"/> <i>Limits a lot</i>
<input type="checkbox"/> Light rail / subway	<input type="checkbox"/> <i>Helps a lot</i> <input type="checkbox"/> <i>Helps some</i> <input type="checkbox"/> <i>No effect</i> <input type="checkbox"/> <i>Limits some</i> <input type="checkbox"/> <i>Limits a lot</i>

Special services:	
<input type="checkbox"/> Paratransit (such as Call-A-Ride)	<input type="checkbox"/> Helps a lot <input type="checkbox"/> Helps some <input type="checkbox"/> No effect <input type="checkbox"/> Limits some <input type="checkbox"/> Limits a lot
<input type="checkbox"/> Adapted taxi	<input type="checkbox"/> Helps a lot <input type="checkbox"/> Helps some <input type="checkbox"/> No effect <input type="checkbox"/> Limits some <input type="checkbox"/> Limits a lot
<input type="checkbox"/> Adapted rental car/van	<input type="checkbox"/> Helps a lot <input type="checkbox"/> Helps some <input type="checkbox"/> No effect <input type="checkbox"/> Limits some <input type="checkbox"/> Limits a lot
<input type="checkbox"/> Other _____	<input type="checkbox"/> Helps a lot <input type="checkbox"/> Helps some <input type="checkbox"/> No effect <input type="checkbox"/> Limits some <input type="checkbox"/> Limits a lot

### TRANSPORTATION (continued)

3. Is your **access** to using transportation limited by ... (Check all that apply.)
- ☐ Physical factors in the environment   ☐ Social attitudes   ☐ Family attitudes  
☐ Self-concept   ☐ Lack of assistance   ☐ Limited finances  
☐ Wheelchair   ☐ Wheelchair seating  
☐ Lack of special equipment → What equipment would be helpful?  
\_\_\_\_\_
- ☐ Other (specify) \_\_\_\_\_  
☐ Not limited
4. Is your **participation** in using transportation limited by ... (Check all that apply.)
- ☐ Illness   ☐ A physical impairment   ☐ Pain   ☐ Fatigue   ☐ Wheelchair  
☐ Wheelchair seating   ☐ Other \_\_\_\_\_   ☐ Not limited
5. How much **choice** do you have about using transportation, compared to others without disabilities? (Choice includes when, where, how and with whom you use transportation.)
- ☐ A lot of choice   ☐ Some choice   ☐ Little choice   ☐ No choice
6. How **satisfied** are you with your participation in using transportation?
- ☐ Very satisfied   ☐ Satisfied   ☐ Somewhat satisfied   ☐ Dissatisfied
7. How **important** is it for you to use transportation?
- ☐ Very important   ☐ Somewhat important   ☐ Somewhat unimportant   ☐ Not important
8. How much **help from another person** do you need when using transportation?
- ☐ None   ☐ Just a little   ☐ A moderate amount   ☐ A great deal
9. If you use assistance, **who helps you** to use transportation?  
(Check all that apply.)
- ☐ No one   ☐ Family/Significant Other   ☐ Friends   ☐ People I hire
10. How often do you use **accommodations, adaptations, or special equipment** when using transportation?
- ☐ Never   ☐ A little of the time   ☐ Some of the time   ☐ Most of the time   ☐ All of the time

11. If you use **accommodations, adaptations, or special equipment** when using transportation, what do you use? (*Check all that apply.*)

- |   |  |
|---|--|
| <input type="checkbox"/> <i>N/A</i>                       | <input type="checkbox"/> <i>Lift</i>                       |
| <input type="checkbox"/> <i>Accessible parking permit</i> | <input type="checkbox"/> <i>Ramp</i>                       |
| <input type="checkbox"/> <i>Adapted vehicle</i>           | <input type="checkbox"/> <i>Scooter</i>                    |
| <input type="checkbox"/> <i>Cane</i>                      | <input type="checkbox"/> <i>Walker</i>                     |
| <input type="checkbox"/> <i>Crutches</i>                  | <input type="checkbox"/> <i>Orthotic/prosthetic device</i> |
| <input type="checkbox"/> <i>Door opener</i>               | <input type="checkbox"/> <i>Wheelchair - power</i>         |
| <input type="checkbox"/> <i>Wheelchair - manual</i>       | <input type="checkbox"/> <i>Other</i> _____                |
| <input type="checkbox"/> <i>Wheelchair seating</i>        |  |

**TAKING VACATIONS:** The next questions are about taking vacations away from home.

1. How **often** do you take a vacation?  
☐ *Never*    ☒ *→*    ☐ *I choose not to do this*    ☐ *I am unable to do this*  
☐ *Less than once a year*  
☐ *Once or twice a year*  
☐ *More than twice a year*
2. Is your **access** to vacations limited by ... (*Check all that apply.*)  

<input type="checkbox"/> <i>Physical factors in the environment</i>	<input type="checkbox"/> <i>Social attitudes</i>	<input type="checkbox"/> <i>Family attitudes</i>
<input type="checkbox"/> <i>Self-concept</i>	<input type="checkbox"/> <i>Limited finances</i>	<input type="checkbox"/> <i>Lack of assistance</i>
<input type="checkbox"/> <i>Wheelchair</i>	<input type="checkbox"/> <i>Wheelchair seating</i>	

☐ *Lack of special equipment*    ☒ *→ What equipment would be helpful?*  
\_\_\_\_\_  
☐ *Other (specify)* \_\_\_\_\_  
☐ *Not limited*
3. Is your **participation** in taking a vacation limited by ... (*Check all that apply.*)  

<input type="checkbox"/> <i>Illness</i>	<input type="checkbox"/> <i>A physical impairment</i>	<input type="checkbox"/> <i>Pain</i>	<input type="checkbox"/> <i>Fatigue</i>	<input type="checkbox"/> <i>Wheelchair</i>
<input type="checkbox"/> <i>Wheelchair seating</i>	<input type="checkbox"/> <i>Other</i> _____	<input type="checkbox"/> <i>Not limited</i>		
4. When taking a vacation, how much **choice** do you have compared to others without disabilities? (Choice includes how, where, when and how often you take a vacation.)  
☐ *A lot of choice*    ☐ *Some choice*    ☐ *Little choice*    ☐ *No choice*
5. How **satisfied** are you with your participation in taking a vacation?  
☐ *Very satisfied*    ☐ *Satisfied*    ☐ *Somewhat satisfied*    ☐ *Dissatisfied*
6. How **important** is it for you to take a vacation?  
☐ *Very important*    ☐ *Somewhat important*    ☐ *Somewhat unimportant*    ☐ *Not important*
7. If you haven't taken a vacation in the last year, would you like to?    ☐ *Yes*    ☐ *No*

**IF YOU TAKE VACATIONS:**

8. How much time do you need to **prepare** for a vacation? (This might include arranging airline seating or accessible lodging.)  
☐ *Under 1 hour*    ☐ *1 to 3 hours*    ☐ *More than 3 hours*

## TAKING A VACATION (continued)

9. How much **help from another person** do you need to take a vacation?  
☐ *None*    ☐ *Just a little*    ☐ *A moderate amount*    ☐ *A great deal*
10. If you use assistance, **who helps you** with taking a vacation?  
(Check all that apply.)  
☐ *No one*    ☐ *Family/Significant Other*    ☐ *Friends*    ☐ *People I hire*
11. How often do you use **accommodations, adaptations, or special equipment** for a vacation?  
☐ *Never*    ☐ *A little of the time*    ☐ *Some of the time*    ☐ *Most of the time*    ☐ *All of the time*
12. If you use **accommodations, adaptations, or special equipment** to take a vacation, what do you use? (Check all that apply.)
- |                                     |   |  |
|-------------------------------------|---|--|
| <input type="checkbox"/> <i>N/A</i> | <input type="checkbox"/> <i>Accessible parking permit</i> | <input type="checkbox"/> <i>Ramp</i>                       |
|                                     | <input type="checkbox"/> <i>Adapted vehicle</i>           | <input type="checkbox"/> <i>Scooter</i>                    |
|                                     | <input type="checkbox"/> <i>Cane</i>                      | <input type="checkbox"/> <i>Special chair</i>              |
|                                     | <input type="checkbox"/> <i>Crutches</i>                  | <input type="checkbox"/> <i>Walker</i>                     |
|                                     | <input type="checkbox"/> <i>Lift</i>                      | <input type="checkbox"/> <i>Orthotic/Prosthetic device</i> |
|                                     | <input type="checkbox"/> <i>Wheelchair - manual</i>       | <input type="checkbox"/> <i>Wheelchair - power</i>         |
|                                     | <input type="checkbox"/> <i>Wheelchair seating</i>        | <input type="checkbox"/> <i>Vehicle</i>                    |
|                                     | <input type="checkbox"/> <i>Other</i> _____               |  |

**WORKING INSIDE YOUR HOME:** The following questions refer to working inside your home. This topic includes washing dishes, doing laundry, cleaning house, or making repairs.

1. How **frequently** do you participate in housework or home maintenance activities?

- ☐ *Never*      ☒ *I choose not to do this*      ☐ *I am unable to do this*  
☐ *1 to 2 times a week*  
☐ *3 to 4 times a week*  
☐ *5 or more times a week*

2. Is your participation in housework or home maintenance **limited** by ...

(Check all that apply.)

- ☐ *Illness*      ☐ *A physical impairment*      ☐ *Pain*      ☐ *Fatigue*      ☐ *Wheelchair*  
☐ *Wheelchair seating*      ☐ *Other* \_\_\_\_\_      ☐ *Not limited*

3. To participate in housework or home maintenance activities, how much **choice** do you have compared to others without disabilities? (Choice includes how often, when, how and by whom these activities are completed.)

- ☐ *A lot of choice*      ☐ *Some choice*      ☐ *Little choice*      ☐ *No choice*

4. How **satisfied** are you with your participation in housework or home maintenance?

- ☐ *Very satisfied*      ☐ *Satisfied*      ☐ *Somewhat satisfied*      ☐ *Dissatisfied*

5. How **important** is it for you to participate in housework or home maintenance?

- ☐ *Very important*      ☐ *Somewhat important*      ☐ *Somewhat unimportant*      ☐ *Not important*

**IF YOU PARTICIPATE IN HOUSEWORK OR HOME MAINTENANCE ACTIVITIES:**

6. How much **help from another person** do you require?

- ☐ *None*      ☐ *Just a little*      ☐ *A moderate amount*      ☐ *A great deal*

7. If you use assistance, **who helps you** with housework or home maintenance?

(Check all that apply.)

- ☐ *No one*      ☐ *Family/Significant Other*      ☐ *Friends*      ☐ *People I hire*

8. How often do you use **accommodations, adaptations, or special equipment** for housework or home maintenance activities?

- ☐ *Never*      ☐ *A little of the time*      ☐ *Some of the time*      ☐ *Most of the time*      ☐ *All of the time*

9. If you use **accommodations, adaptations, or special equipment** for housework or home maintenance activities, what do you use? (Check all that apply.)

- ☐ *N/A*  
☐ *Cane*  
☐ *Scooter*  
☐ *Walker*  
☐ *Computer*

- ☐ *Stair glide*
- ☐ *Wheelchair - power*
- ☐ *Crutches*
- ☐ *Special seat/chair*
- ☐ *Wheelchair - manual*
- ☐ *Lowered shelves/counters*
- ☐ *Reacher/grab stick/grabber*
- ☐ *Orthotic/prosthetic device*
- ☐ *Urinal/bedpan/potty chair*
- ☐ *Wheelchair seating*
- ☐ *Other* \_\_\_\_\_

**LEISURE ACTIVITIES: The following questions are about leisure activities, such as spectator sports, playing cards and going to movies.**

1. For the following leisure activities, please indicate **how often** you do them and **how long** it takes you to **prepare** to do them.

Leisure Activities	<i>How often do you do the activity</i>		Preparation time (in minutes)
Dine out	<input type="checkbox"/> Never ↓	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	<input type="checkbox"/> Under 10 <input type="checkbox"/> 10-20 <input type="checkbox"/> More than 20
Attend movies	<input type="checkbox"/> Never ↓	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	<input type="checkbox"/> Under 10 <input type="checkbox"/> 10-20 <input type="checkbox"/> More than 20
Attend concerts	<input type="checkbox"/> Never ↓	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	<input type="checkbox"/> Under 10 <input type="checkbox"/> 10-20 <input type="checkbox"/> More than 20
Play cards	<input type="checkbox"/> Never ↓	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	<input type="checkbox"/> Under 10 <input type="checkbox"/> 10-20 <input type="checkbox"/> More than 20
Play board games	<input type="checkbox"/> Never ↓	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	<input type="checkbox"/> Under 10 <input type="checkbox"/> 10-20 <input type="checkbox"/> More than 20
Watch sports	<input type="checkbox"/> Never ↓	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	<input type="checkbox"/> Under 10 <input type="checkbox"/> 10-20 <input type="checkbox"/> More than 20
Read	<input type="checkbox"/> Never ↓	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	<input type="checkbox"/> Under 10 <input type="checkbox"/> 10-20 <input type="checkbox"/> More than 20
Hobby (specify) _____	<input type="checkbox"/> Never ↓	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	<input type="checkbox"/> Under 10 <input type="checkbox"/> 10-20 <input type="checkbox"/> More than 20
Other (specify) _____	<input type="checkbox"/> Never ↓	<input type="checkbox"/> Less than once a month <input type="checkbox"/> 1-2 times a month <input type="checkbox"/> 1-2 times a week <input type="checkbox"/> More than twice a week	<input type="checkbox"/> Under 10 <input type="checkbox"/> 10-20 <input type="checkbox"/> More than 20



2. Is your **access** to leisure activities limited by ... (Check all that apply.)

- ☐ *Physical factors in the environment*
  - ☐ *Social attitudes*
  - ☐ *Family attitudes*
  - ☐ *Self-concept*
  - ☐ *Limited finances*
  - ☐ *Lack of assistance*
  - ☐ *Wheelchair*
  - ☐ *Wheelchair seating*
  - ☐ *Lack of special equipment* → *What equipment would be helpful?*
- 

- ☐ *Other (specify) \_\_\_\_\_*
- ☐ *Not limited*

3. Is your **participation** in leisure activities limited by ... (Check all that apply.)

- ☐ *Illness*    ☐ *A physical impairment*    ☐ *Pain*    ☐ *Fatigue*    ☐ *Wheelchair*
- ☐ *Wheelchair seating*    ☐ *Other* \_\_\_\_\_    ☐ *Not limited*

4. To participate in leisure activities, how much **choice** do you have compared to others without disabilities? (Choice includes how, where, when, how often, and with whom you participate in leisure activities.)

- ☐ *A lot of choice*    ☐ *Some choice*    ☐ *Little choice*    ☐ *No choice*

5. How **satisfied** are you with your participation in leisure activities?

- ☐ *Very satisfied*    ☐ *Satisfied*    ☐ *Somewhat satisfied*    ☐ *Dissatisfied*

6. How **important** is it for you to participate in leisure activities?

- ☐ *Very important*    ☐ *Somewhat important*    ☐ *Somewhat unimportant*    ☐ *Not important*

### IF YOU PARTICIPATE IN LEISURE ACTIVITIES:

7. How much **help from another person** do you need to participate?

- ☐ *None*    ☐ *Just a little*    ☐ *A moderate amount*    ☐ *A great deal*

8. If you use assistance, **who helps you** with leisure activities?

(Check all that apply.)

- ☐ *No one*    ☐ *Family/Significant Other*    ☐ *Friends*    ☐ *People I hire*

9. How often do you use **accommodations, adaptations, or special equipment** to do leisure activities?

- ☐ *Never*    ☐ *A little of the time*    ☐ *Some of the time*    ☐ *Most of the time*    ☐ *All of the time*

10. If you use **accommodations, adaptations, or special equipment** to do leisure activities, what do you use? (Check all that apply.)

- ☐ *N/A*
- ☐ *Card holder*
- ☐ *Scooter*
- ☐ *Computer (adaptive)*

- ☐ Remote control
- ☐ Computer (regular)
- ☐ Wheelchair - manual
- ☐ Wheelchair - power
- ☐ Wheelchair seating
- ☐ Other \_\_\_\_\_

**ACTIVE RECREATION: The following questions are about active recreational activities, such as a team sport or camping.**

1. **How often** do you participate in this type of activity?

- ☐ Never → ☐ I choose not to do this ☐ I am unable to do this  
(Go to question 4)

- ☐ Less than once a month (Continue)
- ☐ 1-2 times a month (Continue)
- ☐ 1-2 times a week (Continue)
- ☐ More than twice a week (Continue)

2. If you participate in active recreation, what is **one activity that you participate in the most?**

\_\_\_\_\_

3. **How long** does it take you to prepare to do this activity?

- ☐ Under 10 minutes ☐ 10-20 minutes ☐ More than 20 minutes

4. Is your **access** to active recreational activities limited by ...

(Check all that apply.)

- ☐ Physical factors in the environment
- ☐ Lack of assistance
- ☐ Social attitudes
- ☐ Family attitudes
- ☐ Limited finances
- ☐ Lack of organized accessible teams
- ☐ Self-concept
- ☐ Wheelchair
- ☐ Wheelchair seating
- ☐ Lack of special equipment → What equipment would be helpful?

\_\_\_\_\_

☐ Other (specify) \_\_\_\_\_

☐ Not limited

5. Is your **participation** in active recreational activities limited by ...

(Check all that apply.)

- ☐ Illness ☐ A physical impairment ☐ Pain ☐ Fatigue ☐ Wheelchair  
☐ Wheelchair seating ☐ Other \_\_\_\_\_ ☐ Not limited

6. To participate in active recreational activities, how much **choice** do you have compared to others without disabilities? (Choice includes how, where, when, how often, and with whom you participate in activities.)  
☐ *A lot of choice*   ☐ *Some choice*   ☐ *Little choice*   ☐ *No choice*
7. How **satisfied** are you with your participation in active recreational activities?  
☐ *Very satisfied*   ☐ *Satisfied*   ☐ *Somewhat satisfied*   ☐ *Dissatisfied*
8. How **important** is it for you to participate in active recreational activities?  
☐ *Very important*   ☐ *Somewhat important*   ☐ *Somewhat unimportant*   ☐ *Not important*

### IF YOU PARTICIPATE IN ACTIVE RECREATIONAL ACTIVITIES:

9. How much **help from another person** do you need to participate?  
☐ *None*   ☐ *Just a little*   ☐ *A moderate amount*   ☐ *A great deal*
10. If you use assistance, **who helps you** with active recreational activities?  
*(Check all that apply.)*  
☐ *No one*   ☐ *Family/Significant Other*   ☐ *Friends*   ☐ *People I hire*
11. How often do you use **accommodations, adaptations, or special equipment** for active recreational activities?  
☐ *Never*   ☐ *A little of the time*   ☐ *Some of the time*   ☐ *Most of the time*   ☐ *All of the time*
12. If you use **accommodations, adaptations, or special equipment** to do active recreational activities, what do you use? *(Check all that apply.)*
- ☐ *N/A*  
☐ *Scooter*  
☐ *Wheelchair seating*  
☐ *Wheelchair - power*  
☐ *Wheelchair - manual*  
☐ *Other* \_\_\_\_\_

**SOCIALIZING:** The next questions are about socializing with people. This includes visiting with friends or family at home, at the homes of others, or at social events.

1. How **frequently** do you socialize with others?  
☐ *Less than once a week*      ☐ *1 to 2 times a week*  
☐ *3 to 4 times a week*      ☐ *Daily or almost daily*
2. Is your **access** to social activities limited by ... (Check all that apply.)  
☐ *Physical factors in the environment*  
☐ *Social attitudes*  
☐ *Family attitudes*  
☐ *Self-concept*  
☐ *Lack of assistance*  
☐ *Limited finances*  
☐ *Lack of companion(s)*  
☐ *Wheelchair*  
☐ *Wheelchair seating*  
☐ *Lack of special equipment* → *What equipment would be helpful?*  
\_\_\_\_\_  
☐ *Other (specify)* \_\_\_\_\_  
☐ *Not limited*
3. Is your **participation** in social activities limited by ... (Check all that apply.)  
☐ *Illness*    ☐ *A physical impairment*    ☐ *Pain*    ☐ *Fatigue*    ☐ *Wheelchair*  
☐ *Wheelchair seating*    ☐ *Other* \_\_\_\_\_    ☐ *Not limited*
4. When socializing, how much **choice** do you have compared to others without disabilities? (Choice includes how often, when, how and with whom you socialize.)  
☐ *A lot of choice*    ☐ *Some choice*    ☐ *Little choice*    ☐ *No choice*
5. How **satisfied** are you with your participation in social activities?  
☐ *Very satisfied*    ☐ *Satisfied*    ☐ *Somewhat satisfied*    ☐ *Dissatisfied*
6. How **important** is it for you to participate in social activities?  
☐ *Very important*    ☐ *Somewhat important*    ☐ *Somewhat unimportant*    ☐ *Not important*
7. How much **help from another person** do you need to socialize?  
☐ *None*    ☐ *Just a little*    ☐ *A moderate amount*    ☐ *A great deal*
8. If you use assistance, **who helps you** with socializing? (Check all that apply.)  
☐ *No one*    ☐ *Family/Significant Other*    ☐ *Friends*    ☐ *People I hire*
9. How often do you use **accommodations, adaptations, or special equipment** to socialize?  
☐ *Never*    ☐ *A little of the time*    ☐ *Some of the time*    ☐ *Most of the time*    ☐ *All of the time*
10. If you use **accommodations, adaptations, or special equipment** to socialize, what do you use? (Check all that apply.)  
☐ *N/A*    ☐ *Accessible parking permit*    ☐ *Orthotic/prosthetic device*  
☐ *Adapted vehicle*    ☐ *Scooter*

- ☐ *Adapted telephone*
- ☐ *Cane/crutches*
- ☐ *Computer*
- ☐ *Hearing aid*
- ☐ *Lift*

- ☐ *Walker*
- ☐ *Wheelchair seating*
- ☐ *Wheelchair – manual*
- ☐ *Wheelchair - power*
- ☐ *Other* \_\_\_\_\_

**RELIGIOUS ACTIVITIES:** The following questions are about participation in religious activities. This topic includes attending *Weekly* religious services or classes or singing in a choir.

1. How much **time** do you spend on participation in religious activities?

- ☐ None → ☐ I choose not to do this ☐ I am unable to do this  
☐ 1 to 5 hours a week  
☐ More than 5 hours a week

2. Is your **access** to religious activities limited by ... (Check all that apply.)

- ☐ Physical factors in the environment ☐ Social attitudes ☐ Family attitudes  
☐ Self-concept  
☐ Lack of assistance ☐ Wheelchair ☐ Wheelchair seating  
☐ Lack of special equipment → What equipment would be helpful?  
\_\_\_\_\_

- ☐ Other (specify) \_\_\_\_\_  
☐ Not limited

3. Is your **participation** in religious activities limited by ... (Check all that apply.)

- ☐ Illness ☐ A physical impairment ☐ Pain ☐ Fatigue ☐ Wheelchair  
☐ Wheelchair seating ☐ Other \_\_\_\_\_ ☐ Not limited

4. How much **choice** do you have about participating in religious activities compared to others without disabilities? (Choice includes when, where, how and with whom.)

- ☐ A lot of choice ☐ Some choice ☐ Little choice ☐ No choice

5. How **satisfied** are you with your participation in religious activities?

- ☐ Very satisfied ☐ Satisfied ☐ Somewhat satisfied ☐ Dissatisfied

6. How **important** is it for you to participate in religious activities?

- ☐ Very important ☐ Somewhat important ☐ Somewhat unimportant ☐ Not important

### IF YOU PARTICIPATE IN RELIGIOUS ACTIVITIES:

7. How much **help from another person** do you require?

- ☐ None ☐ Just a little ☐ A moderate amount ☐ A great deal

8. If you use assistance, **who helps you** participate in religious activities?

(Check all that apply.)

- ☐ No one ☐ Family/Significant Other ☐ Friends ☐ People I hire

9. How often do you use **accommodations, adaptations, or special equipment** to participate in religious activities?

- ☐ Never ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time

10. If you use **accommodations, adaptations, or special equipment** to participate in religious activities, what do you use? (*Check all that apply.*)

- ☐ N/A
- ☐ Elevator
- ☐ Scooter
- ☐ Grab bars
- ☐ Vehicle (not adapted)
- ☐ Handrails
- ☐ Walker
- ☐ Level threshold
- ☐ Wheelchair seating
- ☐ Lift
- ☐ Wheelchair - manual
- ☐ Pedal for car
- ☐ Wheelchair - power
- ☐ Ramp
- ☐ Widened
- ☐ Other \_\_\_\_\_

**EMPLOYMENT: The next questions are about part-time or full-time work.**

1. Are you currently employed?    ☐ Yes                      ☐ No
2. Is your **access** to employment limited by ...    (*Check all that apply.*)
- ☐ Physical factors in the environment    ☐ Social attitudes    ☐ Family attitudes
- ☐ Self-concept
- ☐ Lack of assistance                              ☐ Wheelchair                      ☐ Wheelchair seating
- ☐ Lack of special equipment    ➔ What equipment would be helpful?

- ☐ Other (specify) \_\_\_\_\_
- ☐ Not limited

3. Is your **participation** in employment limited by ...    (*Check all that apply.*)
- ☐ Illness    ☐ A physical impairment    ☐ Pain    ☐ Fatigue    ☐ Wheelchair
- ☐ Wheelchair seating    ☐ Other \_\_\_\_\_    ☐ Not limited

4. How much **choice** do you have about employment compared to others without disabilities? (Choice includes when, where, how much and how you work.)
- ☐ A lot of choice    ☐ Some choice    ☐ Little choice    ☐ No choice

5. How **satisfied** are you with your participation in work?
- ☐ Very satisfied    ☐ Satisfied    ☐ Somewhat satisfied    ☐ Dissatisfied

6. How **important** is it for you to work?
- ☐ Very important    ☐ Somewhat important    ☐ Somewhat unimportant    ☐ Not important

**IF YOU ARE EMPLOYED:**

7. a. What type of work do you do? \_\_\_\_\_  
b. In a typical week, how many hours do you work?  
☐ Less than 10   ☐ 11 to 30   ☐ 31 to 40   ☐ More than 40
8. How much **help from another person** do you require to participate in work?  
☐ *None*   ☐ *Just a little*   ☐ *A moderate amount*   ☐ *A great deal*
9. If you use assistance, **who helps you** with participating in work?  
(*Check all that apply.*)  
☐ No one   ☐ Family/Significant Other   ☐ Friends   ☐ People I hire
10. How often do you use **accommodations, adaptations or special equipment** to participate in work?  
☐ *Never*   ☐ *A little of the time*   ☐ *Some of the time*   ☐ *Most of the time*   ☐ *All of the time*
11. If you use **accommodations, adaptations, or special equipment** to participate in work, what do you use? (*Check all that apply.*)
- |                                     |   |  |
|-------------------------------------|---|--|
| <input type="checkbox"/> <i>N/A</i> | <input type="checkbox"/> <i>Accessible parking permit</i>   | <input type="checkbox"/> <i>Lift</i>                       |
|                                     | <input type="checkbox"/> <i>Adaptive computer equipment</i> | <input type="checkbox"/> <i>Orthotic/Prosthetic device</i> |
|                                     | <input type="checkbox"/> <i>Adapted vehicle</i>             | <input type="checkbox"/> <i>Scooter</i>                    |
|                                     | <input type="checkbox"/> <i>Cane</i>                        | <input type="checkbox"/> <i>Walker</i>                     |
|                                     | <input type="checkbox"/> <i>Computer</i>                    | <input type="checkbox"/> <i>Wheelchair seating</i>         |
|                                     | <input type="checkbox"/> <i>Crutches</i>                    | <input type="checkbox"/> <i>Wheelchair – power</i>         |
|                                     | <input type="checkbox"/> <i>Hearing aid</i>                 | <input type="checkbox"/> <i>Wheelchair – manual</i>        |
|                                     | <input type="checkbox"/> <i>Other</i> _____                 |  |



## FACILITATORS AND BARRIERS SURVEY / ASSISTIVE TECHNOLOGY

*The last section of the survey relates to your environment and includes sections about:*

- ❖ *The accessibility of buildings within your home and community environments*
- ❖ *Mobility devices you use*
- ❖ *Health benefits*
- ❖ *Social support*
- ❖ *The services and attitudes of people*

*You will note that the questions ask how the accessibility of your environment influences your participation. By participation we mean not only what you do, but how independently you do it, how much choice you have, and how satisfied you are.*

*In this section, accessibility refers to your ability to go into and move around inside the various places listed. Accessibility can involve doorway size, the weight of doors, the direction a door opens or how fast it closes; convenient location of ramps, if applicable; availability of elevators or escalators; the size of restrooms; the location of furniture in a room, etc. All these things can affect accessibility.*

*The first group of questions relates to the accessibility of buildings.*

1. How does the accessibility of **your residence** influence your participation in Daily activities?

☐ Helps a lot   ☐ Helps some   ☐ Has no effect   ☐ Limits some   ☐ Limits a lot



What about **your residence** limits you? (Check all that apply.)

☐  
Not Limited  
↓

☐ Entrance assistance

☐ Bathroom

☐ Kitchen

☐ Lack of personal finances

☐ Parking

☐ Lack of personal

☐ Lack of special equipment → What equipment would be helpful?

\_\_\_\_\_

☐ Other \_\_\_\_\_

2. How does the accessibility of **your place of employment** influence your participation in working?

☐ Helps a lot   ☐ Helps some   ☐ Has no effect   ☐ Limits some   ☐ Limits a lot   ☐ Not employed



What about **your place of employment** limits you? (Check all that apply.)

☐  
Not Limited  
↓

☐ Entrance

☐ Workstation

☐ Bathroom

☐ Parking

☐ Lack of child care

☐ Lack of personal assistance

☐ Lack of transportation

☐ Lack of special equipment → What equipment would be helpful?

\_\_\_\_\_

☐ Other \_\_\_\_\_

3. How does the accessibility of **your grocery store** influence your participation in shopping?

☐ *Helps a lot*   ☐ *Helps some*   ☐ *Has no effect*   ☐ *Limits some*   ☐ *Limits a lot*  
☐ *Do not shop for groceries*



What about **your grocery store** limits you? (Check all that apply.)

☐  
*Not  
Limited*  
↓

☐ *Entrance*  
☐ *Lack of personal finances*  
☐ *Parking*  
☐ *Lack of child care*  
☐ *Accessibility of shelves and freezers*  
☐ *Lack of scooter/wheelchair at the store*  
☐ *Lack of special equipment*   ➔   *What equipment would be helpful?*  
☐ *Lack of transportation*  
☐ *Lack of personal assistance*

☐ *Other* \_\_\_\_\_

4. How does the accessibility of **your doctor's office** influence your participation in health care?

☐ *Helps a lot*   ☐ *Helps some*   ☐ *Has no effect*   ☐ *Limits some*   ☐ *Limits a lot*  
☐ *Do not go to a doctor*



What about **your doctor's office** limits you? (Check all that apply.)

☐  
*Not  
Limited*  
↓

☐ *Entrance*  
☐ *Lack of personal assistance*  
☐ *Lack of transportation*  
☐ *Lack of special equipment*   ➔   *What equipment would be helpful?*  
☐ *Lack of personal finances*  
☐ *Lack of child care*  
☐ *Waiting rooms and exam rooms*  
☐ *Parking*  
☐ *Lack of insurance*

☐ *Other* \_\_\_\_\_

5. How does the accessibility of **your religious institution or place of worship** influence your participation in religious activities?

☐ *Helps a lot*   ☐ *Helps some*   ☐ *Has no effect*   ☐ *Limits some*   ☐ *Limits a lot*  
☐ *Do not go to a religious institution or a place of worship*



What about **your religious institution** limits you? (Check all that apply.)

☐  
*Not  
Limited*  
↓

☐ *Entrance*   ☐ *Seating*   ☐ *Lack of personal finances*   ☐ *Parking*  
☐ *Lack of personal assistance*   ☐ *Lack of child care*   ☐ *Lack of transportation*  
☐ *Lack of special equipment*   ➔   *What equipment would be helpful?*

☐ *Other* \_\_\_\_\_

6. How does the accessibility of **restaurants** influence your participation in dining out?

☐ *Helps a lot*   ☐ *Helps some*   ☐ *Has no effect*   ☐ *Limits some*   ☐ *Limits a lot*  
☐ *Do not go to restaurants*

What about **restaurants** limits you? *(Check all that apply.)*

☐ *Entrance*      ☐ *Lack of personal finances*      ☐ *Parking*  
☐ *Lack of personal assistance*      ☐ *Lack of child care*      ☐ *Lack of transportation*  
☐ *Tables too close together*      ☐ *Height of counters, tables, and booths*  
☐ *Lack of special equipment*      ➔ *What equipment would be helpful?*

☐ *Other*

7. How does the accessibility of **movie theaters** influence your participation in going to movies?

☐Helps a lot   ☐Helps some   ☐Has no effect   ☐Limits some   ☐Limits a lot  
☐Do not go to movie theaters



What about **movie theaters** limits you? *(Check all that apply.)*

☐ Entrance    ☐ Stadium seating    ☐ Lack of personal finances    ☐ Parking  
☐ Lack of child care    ☐ Lack of personal assistance  
☐ Lack of transportation  
☐ Lack of special equipment → What equipment would be helpful?

☐ *Other*

8. How does the accessibility of **shopping malls** influence your participation in shopping?

☐Helps a lot   ☐Helps some   ☐Has no effect   ☐Limits some   ☐Limits a lot  
☐Do not go to shopping malls

What about **shopping malls** limits you? (*Check all that apply.*)

☐ *Not Limited*      ☐ Entrance      ☐ Lack of personal finances      ☐ Parking  
☐ Lack of personal assistance      ☐ Lack of child care      ☐ Lack of transportation  
☐ Lack of special equipment      ➔ What equipment would be helpful?

☐ *Other*



	<input type="checkbox"/> Not accessible <input type="checkbox"/> Somewhat accessible <input type="checkbox"/> Very accessible <input type="checkbox"/> Don't know <input type="checkbox"/> Not applicable
<input type="checkbox"/> Airlines	<input type="checkbox"/> Not accessible <input type="checkbox"/> Somewhat accessible <input type="checkbox"/> Very accessible <input type="checkbox"/> Don't know <input type="checkbox"/> Not applicable
<input type="checkbox"/> Light rail/subway	<input type="checkbox"/> Not accessible <input type="checkbox"/> Somewhat accessible <input type="checkbox"/> Very accessible <input type="checkbox"/> Don't know <input type="checkbox"/> Not applicable
Special services: <input type="checkbox"/> Paratransit (such as Call-A-Ride)	<input type="checkbox"/> Not accessible <input type="checkbox"/> Somewhat accessible <input type="checkbox"/> Very accessible <input type="checkbox"/> Don't know <input type="checkbox"/> Not applicable
<input type="checkbox"/> Adapted taxi	<input type="checkbox"/> Not accessible <input type="checkbox"/> Somewhat accessible <input type="checkbox"/> Very accessible <input type="checkbox"/> Don't know <input type="checkbox"/> Not applicable
<input type="checkbox"/> Adapted rental car/van	<input type="checkbox"/> Not accessible <input type="checkbox"/> Somewhat accessible <input type="checkbox"/> Very accessible <input type="checkbox"/> Don't know <input type="checkbox"/> Not applicable
<input type="checkbox"/> Other _____	<input type="checkbox"/> Not accessible <input type="checkbox"/> Somewhat accessible <input type="checkbox"/> Very accessible <input type="checkbox"/> Don't know <input type="checkbox"/> Not applicable

*The following items relate to your HOME environment and to devices that may influence how you move around and carry out activities. Please mark the choice that is closest to your experience.*

**In your home, do the following influence your participation in activities?**

1. Stairs <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
2. Ramps <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
3. Doors <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
4. Carpets <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly

5. Hardwood floors <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
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6. Handrails <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
--	--

7. Adapted computer <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Helps a lot <input type="checkbox"/> Helps some <input type="checkbox"/> Limits some <input type="checkbox"/> Limits a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
---	--

8. Room temperatures <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
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***The following items relate to your COMMUNITY environment and to devices that may influence how you move around and carry out activities. Please mark the choice that is closest to your experience.***

In your community, do the following influence your participation in activities?

1. Curb cuts <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
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2. Ramps <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
--	--

3. Elevators <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
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4. Flat terrain <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Helps a lot <input type="checkbox"/> Helps some <input type="checkbox"/> Limits some <input type="checkbox"/> Limits a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
---	--

5. Gravel surfaces <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
--	--

6. Paved surfaces <input type="checkbox"/> No	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot
--	--

↓	<b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
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7. Summer weather (heat and humidity) <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Helps a lot <input type="checkbox"/> Helps some <input type="checkbox"/> Limits some <input type="checkbox"/> Limits a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
--	--

8. Winter weather (ice and snow) <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Helps a lot <input type="checkbox"/> Helps some <input type="checkbox"/> Limits some <input type="checkbox"/> Limits a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly (During the season)
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9. Rain <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Helps a lot <input type="checkbox"/> Helps some <input type="checkbox"/> Limits some <input type="checkbox"/> Limits a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
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10. Crowds <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes <b>How much?</b> <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot <b>How often?</b> <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
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**The following items relate to your WORK or SCHOOL environment.**  
 Do you work?   ☐Yes   ☐No                      Do you attend school?   ☐Yes   ☐No

If you have answered “No” to both questions, please skip to next page.  
 If you work AND attend school, please answer the following questions based on where you spend the most time:                      ☐ Work                      ☐ School  
 Please mark the choice that is closest to your experience.  
 At work or school, do the following influence your participation in activities?

1. Ramps <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes How much? <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot How often? <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
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2. Elevators <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes How much? <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot How often? <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
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3. Floor surfaces <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes How much? <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot How often? <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
---	--

4. Distances between rooms <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes How much? <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot How often? <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
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5. Work or school cafeteria <input type="checkbox"/> No ↓	<input type="checkbox"/> Yes How much? <input type="checkbox"/> Helps a lot <input type="checkbox"/> Helps some <input type="checkbox"/> Limits some <input type="checkbox"/> Limits a lot How often? <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Less than monthly
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### ***Mobility Devices***

*Please answer the following questions for the mobility devices you use. Mobility devices could include a manual wheelchair, a power wheelchair, or a scooter.*

Do you use a mobility device?

☐ Yes (Continue below.) ☐ No (Go to Health Benefits on next page.)

1. Name of mobility device: MANUAL WHEELCHAIR

MAKE: \_\_\_\_\_

YEAR PURCHASED \_\_\_\_\_

a. How often do you use this device at home, at work or school, and in your community?					b. How does it influence your participation in <i>Daily</i> activities?				
	Never	Sometimes	Often	Always		<i>Helps a lot</i>	<i>Helps some</i>	<i>Limits some</i>	<i>Limits a lot</i>
Home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work/School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Work/School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Name of mobility device: POWER WHEELCHAIR

MAKE: \_\_\_\_\_

YEAR PURCHASED \_\_\_\_\_

a. How often do you use this device at home, at work or school, and in your community?					b. How does it influence your participation in <i>Daily</i> activities?				
	Never	Sometimes	Often	Always		<i>Helps a lot</i>	<i>Helps some</i>	<i>Limits some</i>	<i>Limits a lot</i>
Home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work/School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Work/School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Name of mobility device: SCOOTER

MAKE: \_\_\_\_\_

YEAR PURCHASED \_\_\_\_\_

a. How often do you use this device at home, at work or school, and in your community?					b. How does it influence your participation in <i>Daily</i> activities?				
	Never	Sometimes	Often	Always		<i>Helps a lot</i>	<i>Helps some</i>	<i>Limits some</i>	<i>Limits a lot</i>
Home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work/School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Work/School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Health Benefits

***The following questions are about your health benefits. Health benefits may include:***

***private insurance - such as Blue Cross/Blue Shield or AetN/A***

***government insurance - Medicaid/Medicare or Veterans Administration Benefits***

What health insurance or benefits do you have?

☐ *I have NO insurance or benefits (Go to next page.)*

1. Name of benefit or insurance \_\_\_\_\_

a. Is this benefit

☐ *A private plan*    ☐ *A public (government) plan*    ☐ *Don't know*

b. Who pays for this benefit? (*Check all that apply.*)

☐ *Self*    ☐ *Employer*    ☐ *Government*    ☐ *Other* \_\_\_\_\_

c. How many years have you had this benefit?

☐ *1 year or less*    ☐ *2 to 5*    ☐ *6 to 10*    ☐ *More than 10*

d. To what extent does this benefit influence your access to health care?

☐ *Helps a lot*    ☐ *Helps some*    ☐ *Has no effect*    ☐ *Limits some*    ☐ *Limits a lot*

2. Name of benefit or insurance \_\_\_\_\_
- a. Is this benefit  
☐ *A private plan*   ☐ *A public (government) plan*   ☐ *Don't know*
- b. Who pays for this benefit? (*Check all that apply.*)  
☐ *Self*   ☐ *Employer*   ☐ *Government*   ☐ *Other* \_\_\_\_\_
- c. How many years have you had this benefit?  
☐ *1 year or less*   ☐ *2 to 5*   ☐ *6 to 10*   ☐ *More than 10*
- d. To what extent does this benefit influence your access to health care?  
☐ *Helps a lot*   ☐ *Helps some*   ☐ *Has no effect*   ☐ *Limits some*   ☐ *Limits a lot*

### Agencies and Organizations

*The following questions are about other types of benefits, as well as agencies and organization may provide assistance to you.*

<b>1. Do you receive any of the following?</b> <i>(Check all that apply.)</i>	To what extent does this benefit influence your participation in daily activities.?																														
<div style="background-color: #cccccc; padding: 5px;"> <input type="checkbox"/> <b>No</b>  <input type="checkbox"/> <b>SSDI</b>          (Supplemental Security Income)  <input type="checkbox"/> <b>SSDI</b> (Social Security Disability Insurance)  <input type="checkbox"/> <b>Worker's Compensation</b> </div>	<table border="0" style="width: 100%;"> <tr> <td><i>Helps a lot</i></td> <td><i>Helps some</i></td> <td><i>No effect</i></td> <td><i>Limits some</i></td> <td><i>Limits a lot</i></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><i>Helps a lot</i></td> <td><i>Helps some</i></td> <td><i>No effect</i></td> <td><i>Limits some</i></td> <td><i>Limits a lot</i></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><i>Helps a lot</i></td> <td><i>Helps some</i></td> <td><i>No effect</i></td> <td><i>Limits some</i></td> <td><i>Limits a lot</i></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	<i>Helps a lot</i>	<i>Helps some</i>	<i>No effect</i>	<i>Limits some</i>	<i>Limits a lot</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Helps a lot</i>	<i>Helps some</i>	<i>No effect</i>	<i>Limits some</i>	<i>Limits a lot</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Helps a lot</i>	<i>Helps some</i>	<i>No effect</i>	<i>Limits some</i>	<i>Limits a lot</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																											

### 2. The Department of Vocational Rehabilitation **helps people find and maintain jobs. Do you use Vocational Rehabilitation services?**

<input type="checkbox"/> <b>No</b> <input type="checkbox"/>	<input type="checkbox"/> <b>Yes</b> - How do these services influence your access to work?  <input type="checkbox"/> <i>Help a lot</i> <input type="checkbox"/> <i>Help some</i> <input type="checkbox"/> <i>No effect</i> <input type="checkbox"/> <i>Limit some</i> <input type="checkbox"/> <i>Limit a lot</i>
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*The next questions deal with personal support and the services of people. Please mark how both the services and the attitudes of these people influence your participation in activities.*

<input type="checkbox"/> Never ↓	<input type="checkbox"/> Rarely <input type="checkbox"/> Once or twice a year <input type="checkbox"/> Once or twice a month <input type="checkbox"/> Once or twice a week <input type="checkbox"/> More than twice a week ♦♦♦♦♦♦♦♦♦♦ <b>How does the <u>care</u> you receive influence your participation in <i>Daily</i> activities?</b> <input type="checkbox"/> Helps a lot <input type="checkbox"/> Helps some <input type="checkbox"/> No effect <input type="checkbox"/> Limits some <input type="checkbox"/> Limits a lot ♦♦♦♦♦♦♦♦♦♦ <b>How do the <u>attitudes</u> of doctors influence your use of health care services?</b> <input type="checkbox"/> Help a lot <input type="checkbox"/> Help some <input type="checkbox"/> No effect <input type="checkbox"/> Limit some <input type="checkbox"/> Limit a lot
-------------------------------------	--

☐ Never  
↓

☐ Rarely    ☐ Once or twice a year    ☐ Once or twice a month  
☐ Once or twice a week    ☐ More than twice a week

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How does the therapy you receive influence your participation in *Daily Activities*?  
☐ Helps a lot    ☐ Helps some    ☐ No effect    ☐ Limits some    ☐ Limits a lot


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How do the attitudes of therapists influence your use of therapy services?  
☐ Help a lot    ☐ Help some    ☐ No effect    ☐ Limit some    ☐ Limit a lot


[illegible]



**8. How often do you ask for help from strangers?**

<input type="checkbox"/> <i>Never</i> 	<input type="checkbox"/> <i>Rarely</i> <input type="checkbox"/> <i>Once or twice a year</i> <input type="checkbox"/> <i>Once or twice a month</i> <input type="checkbox"/> <i>Once or twice a week</i> <input type="checkbox"/> <i>More than twice a week</i>
	<div style="border-top: 1px dashed black; height: 1px;"></div>
	<p><b>How does their <u>assistance</u> influence your participation in <i>Daily</i> activities?</b></p>
	<input type="checkbox"/> <i>Helps a lot</i> <input type="checkbox"/> <i>Helps some</i> <input type="checkbox"/> <i>No effect</i> <input type="checkbox"/> <i>Limits some</i> <input type="checkbox"/> <i>Limits a lot</i>
	<div style="border-top: 1px dashed black; height: 1px;"></div>
	<p><b>How do their <u>attitudes</u> influence your participation in <i>Daily</i> activities?</b></p>
	<input type="checkbox"/> <i>Help a lot</i> <input type="checkbox"/> <i>Help some</i> <input type="checkbox"/> <i>No effect</i> <input type="checkbox"/> <i>Limit some</i> <input type="checkbox"/> <i>Limit a lot</i>

**9. How often do you use a special equipment repair service?**

<input type="checkbox"/> <i>Never</i> 	<input type="checkbox"/> <i>Rarely</i> <input type="checkbox"/> <i>Once or twice a year</i> <input type="checkbox"/> <i>Once or twice a month</i> <input type="checkbox"/> <i>Once or twice a week</i> <input type="checkbox"/> <i>More than twice a week</i>
	<div style="border-top: 1px dashed black; height: 1px;"></div>
	<p><b>How do their <u>services</u> influence your participation in <i>Daily</i> activities?</b></p>
	<input type="checkbox"/> <i>Helps a lot</i> <input type="checkbox"/> <i>Helps some</i> <input type="checkbox"/> <i>No effect</i> <input type="checkbox"/> <i>Limits some</i> <input type="checkbox"/> <i>Limits a lot</i>
	<div style="border-top: 1px dashed black; height: 1px;"></div>
	<p><b>How do the <u>attitudes</u> of equipment repair personnel influence your participation in <i>Daily</i> activities?</b></p>
	<input type="checkbox"/> <i>Help a lot</i> <input type="checkbox"/> <i>Help some</i> <input type="checkbox"/> <i>No effect</i> <input type="checkbox"/> <i>Limit some</i> <input type="checkbox"/> <i>Limit a lot</i>

**Who assisted in completing this survey? (Check all that apply.)**

- |  |  |
|--|--|
| <input type="checkbox"/> Participant   | <input type="checkbox"/> Paid personal attendant |
| <input type="checkbox"/> Family member | <input type="checkbox"/> Interviewer             |
| <input type="checkbox"/> Friend        | <input type="checkbox"/> Other _____             |

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