A report by the University of Vermont Transportation Research Center

Personal Transportation Plan Pilot Program Phase 1: Exploring Transportation Behaviors and Needs of Veterans and People with Physical Disabilities and Mobility Constraints

TRC Report 17-003

June 2017

Personal Transportation Plan Pilot Program Phase 1: Exploring the Transportation Behaviors and Needs of Veterans and People with Physical Disabilities and Mobility Constraints

June 2017

Prepared by:
UVM TRC
Transportation Research Center
Farrell Hall 210 Colchester Avenue Burlington, VT 05405
Phone: (802) 656-1312
Website: www.uvm.edu/trc

Contents

Acknowledgements

The authors would like to acknowledge the Vermont Agency of Transportation (VTrans) for providing funding for this work.

Special research contributions by:

Samantha Tilton
Sean Neely
Paola Rekalde Aizpuru
Geoff Battista

Special Thanks to staff and members of the following organizations for their thoughtful assistance in planning and organizing of outreach for this project:

AARP-VT
Canal Street House
Cathedral Square
MS Society
University of Vermont
Vermont Association for the Blind and Visually Impaired
Vermont Center for Independent Living
Veterans Inc.
Vermont National Guard State Family Program

Disclaimer

List of Figures

1 Introduction and Background

This report summarizes the initial phase of the Personal Transportation Plan Pilot Program (PTP3). The purpose of the PTP3 initiative is to develop a personal transportation planning tool that can be used by disabled Vermonters and Vermont veterans to match existing transportation resources with their travel needs. In order to accomplish this goal, a comprehensive understanding of the travel needs, current travel options, and travel challenges facing these two target populations is essential. The first phase of this project, therefore, has the following objectives:

> Objective 1: Identify mobility needs of Vermonters with disabilities and Vermont veterans, for all aspects of their lives, including employment, health care, social interactions, and education.
>
> Objective 2: Measure the ability of these target populations to meet their travel needs. This includes the use of existing public transportation services as well as any private support from family, friends, and the community.
>
> Objective 3: Inform the subsequent phases of the pilot program through empirically-based policy recommendations.

This report consists of seven sections. The remainder of this section presents background information about the mobility of disabled persons and veterans, with particular attention paid to their experiences in Vermont. In Section 2, we outline the methods used to document the travel needs, options and challenges of disabled Vermonters and Vermont veterans. These methods include both focus groups and survey data collection. In Sections 3 and 4 we present the results of these data collection efforts for disabled Vermonters and Vermont veterans respectively. Finally, we situate our findings in the current policy environment and put forth recommendations for the future stages of the PTP3 program in Section 5 for disabled Vermonters, and Section 6 for Vermont veterans. Section 7 provides recommendations for next steps in the PTP3 development process.

1.1 Disabled Persons

The Americans with Disabilities Act of 1990 classifies *disability* as a "physical or mental impairment that substantially limits one or more major life activities" (42 USC § 12102) – phrasing that has been closely replicated in Vermont law.[1] These impairments have been codified to include a wide range of conditions ranging from musculoskeletal pain and sensory loss to intellectual disabilities and mental illness. These codified standards serve to systematically determine eligibility for benefits such as Medicaid, Social Security, and disability-related veterans' benefits for offices such as Vermont Disability Determination Services and the U.S. Department of Veterans Affairs. In addition, these criteria allow for the systematic collection of descriptive statistics for which we can sketch the current state of persons with disabilities throughout the state.

[1] "An individual with a disability: means any natural person who has a physical or mental impairment which substantially limits one or more major life activities or has a history of such an impairment; or is regarded as having such an impairment" (21 VSA §495d(5)).

Thirteen percent of Vermonters have a disability, compared to 12% of Americans nationwide (U. S. Census Bureau, 2015). Age is perhaps the most significant predicator of disability; approximately one out of every hundred young children has a disability compared to a majority of Vermonters 75 years of age and older. Individuals without a post-secondary education are also much more likely to be disabled, though it should be noted this number includes persons with cognitive disabilities. Vermont residents with disabilities who are 18-64 years-old are more likely to be unemployed (33%) or outside the labor force altogether (41%) than counterparts without disabilities (5% and 16%, respectively).

These statistics (U.S. Census Bureau, 2015) frame the general environment in which this study takes place. However, we note two caveats before continuing. First, this study focuses exclusively on persons with physical disabilities. Second, preliminary conversations with state officials and disability advocates indicate that many individuals without a formal disability diagnosis face the same mobility constraints as those with diagnosed disabilities. This study therefore relies on the participants' self-identification as the sole criterion for being disabled.

1.1.1 **Transportation Resources for Disabled Vermonters**

The wide spectrum of physical disabilities necessitates a nuanced perspective about the mobility of disabled persons. Having a disability does not necessarily result in difficulty moving around independently to meet daily needs. For example,

- automobiles can be adapted to accommodate musculoskeletal disabilities;
- visually-impaired persons can walk and access public transport using tactile devices; and
- hearing-impaired persons can travel comparably to their hearing counterparts.

Nevertheless, many physically-disabled persons face challenges navigating even the most familiar environments, from driving after dark to traversing a poorly-maintained sidewalk.

In Vermont, the rural landscape presents specific challenges to independent mobility for many residents. A majority of Vermonters live in census-designated rural areas, often miles from small town centers with amenities such as shopping, health care, and employment. Because the population is sparse in these areas, the fixed-line public transportation system is also sparsely distributed across space and has low frequency trip scheduling, sometimes as limited as two trips per line per weekday.

Additionally, as Lubin and Deka (2012) note in their study of New Jersey commuters, people with disabilities may find it difficult or unsafe to access fixed-line public transportation at home or work in areas that would be considered accessible by able-bodied standards. In areas with fixed-route transit, the ADA requires public entities that provide fixed route service to accommodate persons with a disability with paratransit which is "comparable to the level of designated public transportation services provided to individuals without disabilities using such a system" (42 USC § 12143). In areas without fixed-route transit, general demand-response paratransit is available and is a critical component for disabled persons in automobile-dependent areas, as it can provide door-to-door service to reach a variety of amenities during business hours at a generally lower cost than private taxi (Sanchez, Brenman, Ma, & Stolz, 2008). Furthermore, eligible persons using designated transportation services may pay for non-emergency health care

trips through Medicaid. In Vermont, there are 10 public paratransit providers, all of whom accept Medicaid as a method of payment for non-emergency health care transportation.

However, paratransit is subject to well-defined eligibility criteria that may exclude many individuals with self-identified disabilities. Regional paratransit services are gradually tightening eligibility and reservation criteria as their financial resources are stretched to operational limits, which, in turn, creates uncertainty for potential riders (Battista, Lee, Kolodinsky, & Heiss, 2015). Furthermore, paratransit services generally prioritize health care trips as most essential, and many areas offer little service for habitual trips to employment, shopping, and recreation.

Persons with disabilities often rely on family or extended social networks for their travel needs. In the case of Vermont, Battista et al. (2015) found that robust social networks drastically increase transportation accessibility to healthcare beyond that provided by formal public transportation services. However, there are costs to using social networks for transportation. Litman (2015) notes several direct and indirect costs to chauffeuring persons, including the fuel and time costs imposed on drivers and broader economic and environmental costs if one is chauffeured despite an available public transportation alternative. In addition, our preliminary discussions with disabilities advocates throughout the state indicate that disabled persons are wary of being dependent on other people for travel – particularly individuals outside of their immediate family. It is therefore important to offer formal alternatives to mobility in rural regions.

1.2 **Veterans**

Veterans are individuals honorably discharged from "active military, naval, or air service" (38 USC § 101). This definition encapsulates several generations of servicemen and women with varying characteristics. Mandatory service requirements and draft policies place a large proportion of male baby-boomers in the veterans demographic. Post-Vietnam, a shift toward a volunteer-based force has shrunk the proportion of later generations that have experienced military service, but those in service are more diverse because of policy-based initiatives, i.e., increased opportunities for women and the changing demographic characteristics of the nation.

Veterans are arguably more advantaged compared to the general population. They have a higher median income than the general population, due in part to the higher median age of the veteran population (National Center for Veterans Analysis and Statistics, 2013), and experience a lower unemployment rate thanks to service skills and preferential hiring policies throughout the public sector and many businesses (Ellis et al., 2013; National Center for Veterans Analysis and Statistics, 2013).

However, a significant subset of veterans' experience physical disability and mental illness related to their service, increasing the demand for social and health services while decreasing the ability to access them. Older veterans are susceptible to aging-related health issues, while younger veterans are more likely to be physically or mentally distressed (Kazis et al., 1998). Younger and rural veterans encounter a higher unemployment rate than other veterans, with the latter having less access to veteran and non-veteran social services than urban residents (Ellis et al., 2013; USDA Economic Research Service, 2013).

There has been little evaluation of the transportation habits in veterans as a distinct group. Existing literature focuses on access to veteran services, particularly non-emergency

transportation to VA health care facilities. Weeks et al. (2006) and Schooley et al. (2010) found that older veterans often encounter difficulty in meeting their transportation-to-health care needs. Rural veterans also have less access to medical services due to longer travel times, especially for carless households (Fortney, Owen, & Clothier, 1999; LaVela, Smith, Weaver, & Miskevics, 2004; Mooney, Zwanziger, Phibbs, & Schmitt, 2000; Schooley et al., 2010; Weeks et al., 2006; West et al., 2010). Poor communication and information gaps among veterans, veterans advocates, and public transportation providers negatively impact accessibility to non-emergency medical transportation (Iezzoni, Killeen, & O'Day, 2006).

We can infer additional information about the transportation habits of veterans based on certain subsets' socioeconomic and health characteristics. The 2009 National Household Travel Survey indicates that household size, income, and being employed positively impact number of trips taken. Older individuals and those with chronic medical conditions commute to work less, travel to health care more, and express a desire to leave home more often (Mattson, Urban, & Center, 2012). Rural residents heavily rely on automobiles for their transportation needs, given the lack of centralized land use development and viable transportation alternatives (Brown, 2008; Brown & Stommes, 2004; Dufresne, Raines, Souffrant, & Wohlgemuth, 2009). Active-duty service members and their households also use personal automobiles more frequently than the general population (Morrison & Lin, 2011). Social exclusion negatively impacts mobility among carless individuals (Gray, Shaw, & Farrington, 2006). Mental illness shapes both mobility and social service requirements (Laferrier, McFarland, Boninger, Cooper, & Reiber, 2010).

1.2.1 **Transportation Resources for Vermont Veterans**

We spoke to several veteran-oriented organizations during the preliminary stage of this study (summer 2014) to gauge veteran travel behaviors and needs throughout the state. The conversations indicated transportation experiences similar to the general population: a heavy reliance on the automobile in a rural environment. Stakeholders willing to estimate statistics remarked that between 10-20% of veterans face transportation challenges to some degree, though it is unclear how this qualification differs from the general population. Veterans with transportation challenges, however, have access to dedicated services for transportation needs, particularly as they relate to health care. Because these services are more geographically varied more varied in their eligibility requirements than disability services, this section delves into the veterans' transportation system in greater depth.

Disabled American Veterans (DAV) is arguably the most well-known veteran transportation coordinator in the state. DAV shuttles bring veterans from larger towns to the White River Junction VA Medical Center for non-emergency health care. The shuttles are "no-frills passenger vans" purchased through organizational donations, and continuing costs including fuel and insurance are covered by the White River Junction VA Medical Center. In the words of an employee of the organization, Vermont "is pretty well covered" by the shuttles with 1084 passengers served between January 1 and March 31, 2014. Vans are based at local veteran service organizations (Veterans of Foreign Wars, American Legion) and operated by volunteer drivers, who must pass a months-long background and health assessment before they are qualified to drive.

There is no indication that the stringent driver certification process directly discourages volunteering, though willing drivers have been held up in the preliminary stages of the application process for months at a time. Moreover, a chronic shortage of volunteer drivers constrains the operational scale of the DAV shuttles. Densely-populated regions such as

Burlington and Montpelier have vans that operate on a daily basis, while rural areas have less consistent service, e.g., weekly service from Bennington and Newport and case-by-case service in the Middlebury region as of June 2014. Local veteran service organizations actively recruit drivers, but they have encountered mixed results despite the eligibility of non-veteran volunteers. The resulting network is fragile; for example, there have been cases when a volunteer's summer vacation paralyzes regional service for days at a time.

Although individuals have never been turned away because of funding constraints, DAV is currently unable to accommodate all non-emergency medical transportation for veterans. Passengers must be independently mobile, as the vans lack wheelchair access. The vans also focus on the White River Junction Medical Center and do not serve the system of VA Community-based Outpatient Clinics (CBOCs), where veterans may receive primary care closer to home. DAV has contacted non-veteran transportation resources on behalf of veterans whose needs they cannot meet. These include regional public transportation providers, local senior centers, and even town clerks who may be able to network transportation in close-knit rural communities.

Disabled American Veterans is one among several veteran service organizations (VSOs) shaping the transportation environment. VSOs are social groups consisting of and managed by veterans. Veterans of Foreign Wars (VFW), American Legion, and Vietnam Veterans of America offer social networks where veterans can acquire unofficial transportation to all amenities, including social meetings. For example, approximately 15-20 members of the 470-member Montpelier's VFW Post 792 have transportation problems, according to one of its officers, but they are able to reach post functions thanks in part to other members. In addition, the Ladies Auxiliary VFW has provided local transportation to the Burlington CBOC on a case-by-case basis.

The Vermont Office of Veterans Affairs has occasionally contacted rural VSOs when a nearby veteran requests travel assistance, and these rural VSOs have generally been able to accommodate requests on a case-by-case basis. However, the role of VSOs as a transportation resource is at risk due to aging and declining membership. A VSO administrator mentioned that the average member of his organization is 70 years old, and "a lot of them do not care to drive after dark or at all." Membership is forecasted to decline as generations of mandatory service requirements gives ground to veterans of today's volunteer military. This demographic shift will be felt strongest in rural areas, where smaller VSO posts may close and consolidate over the coming decades.

Social service agencies are another transportation resource, particularly for socioeconomically-disadvantaged veterans. Vermont Veteran Services and Vermont Veterans Outreach employ case managers to assist veterans as they navigate health, legal, and welfare institutions. These managers often provide ad-hoc unofficial transportation to appointments, including court dates, parole officer meetings, and emergency mental health care. Vermont Veterans Outreach notes that it had to fill a transportation gap among its clients during the three-week-long CCTA bus strike of 2014. Vermont Veterans Services does its best to incorporate travel planning into its sustainable housing policy for homeless veterans, ensuring that temporary homes have adequate access to public transportation. However, the high cost of housing in urban areas is a significant barrier to this goal.

The relationship between land use and transportation is important for organizations such as The Veterans' Place in Northfield and Canal Street Veterans Housing in Winooski, both of which

cater to veterans transitioning to civilian life. Veterans temporarily reside at these facilities as they establish employment and credit for independent living. Residents can utilize their own vehicles, and it is not uncommon for residents to provide transportation for one another. These homes also lie within walking distance of a local bus route. The Veterans' Place has two vans – 6 and 15 passengers, respectively – that can shuttle residents to jobs, events, and medical services as necessary.

This report describes the interaction between veteran status and other characteristics shaping travel behavior. It acknowledges that the majority of veterans' travel in ways that are indistinguishable from the state's non-veteran residents, and pays particular attention to the experience of the most socio-economically precarious segment of veterans who, at the end of the day, have the most to gain from a personal transportation planning tool.

2 Methods

In order to more completely document the transportation needs of disabled Vermonters and Vermont veterans as well as the challenges and opportunities associated with meeting these needs, this study employed a rigorous two-step data collection approach. The first step was to conduct a series of focus groups intended to gather foundational knowledge in an open-ended manner. The second step was to design, disseminate, and analyze the results of a survey instrument based on the themes revealed in these focus groups.

Separate focus groups were conducted with disabled Vermonters and with Vermont veterans – regardless of their disability status. The focus groups for disabled, non-veteran Vermonters targeted residents of Chittenden County while the focus groups for Vermont veterans targeted veterans statewide. A single survey instrument was disseminated to disabled veterans and to disabled, non-veteran Vermonters statewide. The results for the two groups are reported separately in this report.

2.1 Focus Groups

Focus groups are commonly used for exploratory research since this format allows participants to express their experiences in their own terms and build from each other's experiences in an open-ended format (Krueger & Casey, 2000). The format offers participants more control over the discussion than traditional, individual interviews (Wilkinson, 1998) and therefore empowers the participants to determine the issues that are addressed.

The research team contacted a wide range of state and regional stakeholders working with disabled persons and veterans to prepare for and organize focus groups with their members. Organizations from across the state were contacted for informational telephone interviews in order to obtain more detailed information of the services they offer, and for input regarding the travel needs and barriers for their constituents. Contacted organization are listed in Table 1.

TABLE 1. ORGANIZATIONS ASSISTING WITH FOCUS GROUP AND SURVEY DEVELOPMENT/OUTREACH.

AARP-Vermont	UVM Student Veterans Organization
American Legion	UVM's Center on Aging
Burlington's Advisory Committee on Accessibility	Vermont Agency of Transportation
Canal Street Veterans Housing	VT Assoc. of the Blind & Visually Impaired
Center on Disability and Community Inclusion	Vermont Center for Independent Living
Chittenden County Transportation Authority	Vermont Coalition for Disability Rights
Community Action Organizations (statewide)	VT Dept for the Blind & Visually Impaired
Department of Vermont Health Access	VT Dept of Disabilities, Aging & Independent Living
Disability Services at ACCESS UVM	VT Department of Labor
Disabled American Veterans	VT Disability Determination Services
Hinesburg Rides	VT Division of Vocational Rehabilitation
Home Share Vermont	VT Family Network
MS Government Relations Committee	VT National Guard Family Programs
Multiple Sclerosis Society of Greater New England	VT Occupational Therapy Association
National Rural Transit Assistance Program	VT Office of Veterans Affairs
Northeast Disabled Athletic Association	VT Public Transportation Association
Norwich University	VT Speech-Language-Hearing Association
Public Transit Advisory Council	VT State Rehabilitation Council
Special Services Transportation Agency	VT Statewide Independent Living Council
Statewide Independent Living Council	VT Veteran Services
The Veterans' Place	VT Veterans Outreach Program
United Way	VT Sensory Access Project
United Way 211	Veterans of Foreign Wars
United Way Chittenden County, Neighbor Rides	Vocational Rehabilitation Counselor for the Deaf
United We Ride	White River Junction VA Medical Center
UVM Student Veteran Services	

Based on input from these stakeholder groups and on previous mobility and accessibility studies conducted by the University of Vermont Transportation Research Center, a thematic guide (provided in Appendix A) was developed to initiate the focus group proceedings. The guide asked participants to discuss the destinations and modes of their recent trips before describing access to specific amenities, e.g., employment and health care. The conversation was frequently shaped by emerging, participant-led themes such as using local transit providers, finding transportation through social networks, and navigating non-transportation state and federal services. A final question asked participants for policy recommendations to meet their needs and those of their peers. The focus group instrument and procedure were approved by the University of Vermont Institutional Review Board in early August 2014.

Focus groups were recorded and transcribed verbatim. Conversations were iteratively coded according to emerging themes through constant comparative and axial approaches (Charmaz, 2014; Corbin & Strauss, 2008) using HyperResearch 3.5, a specialized qualitative research software package (Researchware, Inc., 2013). The resulting core thematic categories and their

attributes richly describe participants' transportation behaviors and needs and simultaneously informed the survey instrument design.

A total of nine focus groups were held between August 2014 and September 2014, six with organizations working with disabled persons (Table 2) and three with organizations working with veterans (Table 3). The focus groups with veterans' organizations include both disabled and non-disabled veterans. The focus groups represented a cross-section of the state's population with specific attention paid to socially-disadvantaged subsections of the population.

TABLE 2. FOCUS GROUPS WITH DISABILITY ORGANIZATIONS

Organization	Date	Focus group participants:		
		Total	Women	Car owners
VT Assoc. for the Blind & Visually Impaired (VABVI)	8/06	12	10	2
National Multiple Sclerosis Society: VT Branch	8/25	5	4	5
AARP	9/03	1	1	0
Vermont Center for Independent Living (VCIL)	9/19	1	1	0
Cathedral Square	9/22	5	3	0
University of Vermont	10/6&9	3	1	1
	Total	27	20	8

TABLE 3. FOCUS GROUPS WITH VETERANS ORGANIZATIONS

Organization	Date	Focus group participants:		
		Total	Women	Car owners
National Guard Family Program (NGFP)*	8/8	11	2	11
Canal Street House	9/22	6	1	0
Bradford House	9/29	14	0	8
	Total	31	3	19

***** The National Guard Family Program focus group consisted of caseworkers, all veterans themselves, from across the state who were intimately familiar with the transportation behavior and needs of veterans. The discussion focused on their clients' experiences.

2.2 Survey

The findings from the informational interviews with stakeholder organizations and from the nine focus groups were used to design a survey for widespread dissemination to disabled Vermont veterans and disabled, non-veteran Vermonters. The survey covered five core areas:

- basic demographics (including veteran status and mobility limiting conditions);
- transportation options (ability to use/access a car/bus);
- travel behaviors (frequency and mode of travel for various trip purposes);
- transportation challenges (barriers to using various modes); and
- means and ability of accessing transportation-related information and the internet.

The final survey was open to disabled Vermonters and family members or other caretakers that assisted a disabled Vermonter. It was deployed in the summer of 2015 as both a paper survey and online using the LimeSurvey software package. The complete survey is provided in Appendix B. The survey was distributed by many of partner organizations listed in Table 1 and via email lists provided by these organizations. Complete, validated surveys were collected from 299 individuals, consisting of 267 disabled, non-veteran Vermonters and 32 disabled Vermont veterans. The total number of respondents, broken out by veteran/non-veteran status, in the service territories of each of the public transportation providers in the state is shown in Figure 1.

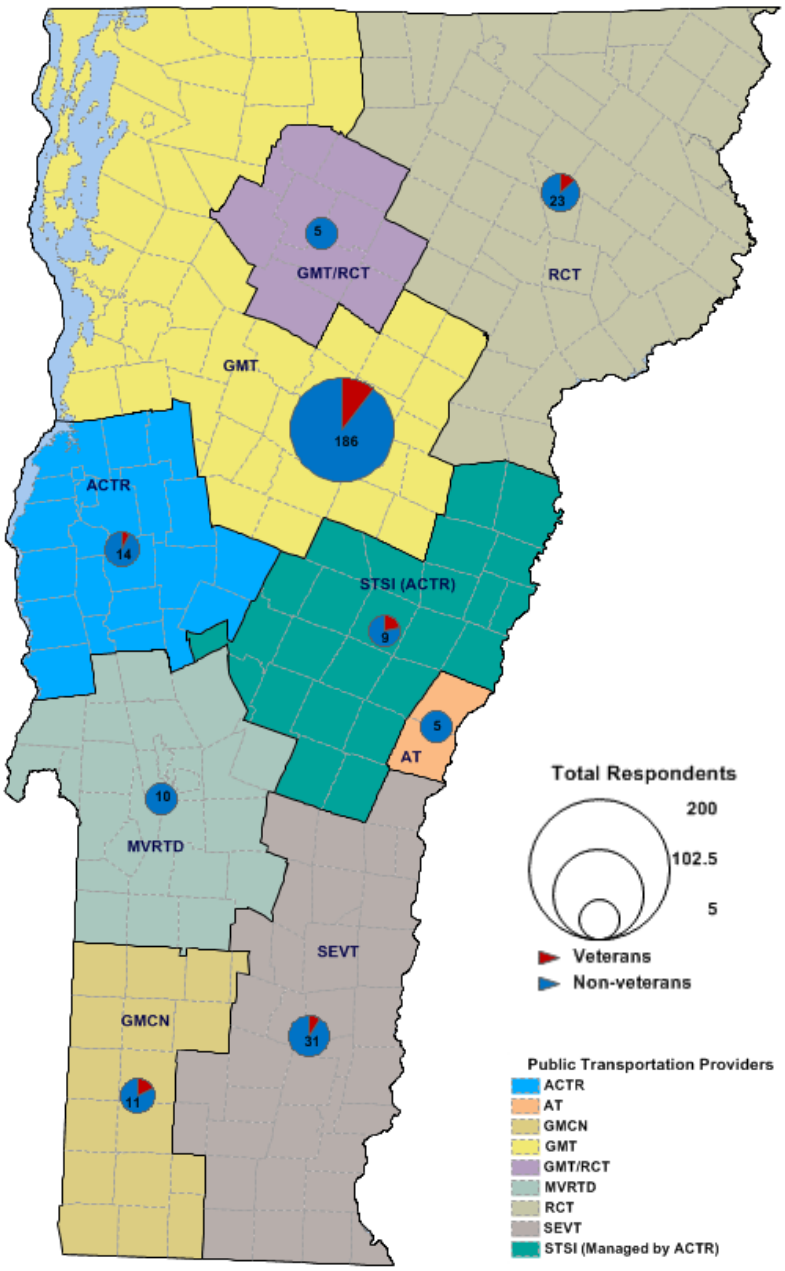

FIGURE 1. SURVEY RESPONDENTS BY PUBLIC TRANSPORTATION PROVIDER SERVICE TERRITORY

3 Results for Vermonters with Disabilities

3.1 Focus Group with Vermonters with Disabilities

Focus groups are useful for revealing the interaction among the personal, socioeconomic, and environmental circumstances that influence individuals' travel behavior and needs. This section explores the transportation related experience of disabled Vermonters in Chittenden County as revealed through the focus groups listed in Table 2.

People with disabilities in Vermont have access to non-emergency health care transportation through Medicaid-eligible paratransit services. In Chittenden County, the largest paratransit provider is the Special Services Transportation Agency (SSTA). Focus group participants appreciated the door-to-door aspect of the service as well as its low cost. The participants

expressed a clear preference for paratransit over fixed-line bus alternatives that, despite lower fares and helpful staff, could be physically inaccessible with fellow passengers visibly wary of delays for embarking/disembarking by wheelchair. In addition, paratransit was preferred by visually-impaired persons over bus service due to the challenges posed by navigating between the bus stop and the health care facility entrance.

Nevertheless, paratransit service received generalizable complaints regarding the accuracy and flexibility of scheduling. Participants are required to schedule rides two days in advance and, upon the day of the ride, be prepared to be picked up nearly a half-hour before or after their appointed time. Riders occasionally waited by their doors for periods approaching an hour for their van or car to appear. If they missed their ride due to a lapse in vigilance or poor driver communication, they not only lost their transportation opportunity but were penalized by SSTA for their failure to appear. Specifying pick-up times from medical appointments could be particularly daunting, as patients cannot predict delays at the doctor's office. Paratransit users did not blame the paratransit drivers, who were perceived as courteous and professional, but they noted that they perceived that efficiency was prioritized over quality of service, illustrating a lack of resources—empathy included—at the paratransit provider's disposal. Furthermore, several participants suggested that the quality of service had declined over time. As an example, one woman recalled that SSTA used to welcome early pick-up requests, as they could "finish a route, a cycle" ahead of schedule. Today, the woman claims "I'm like [an] ax-murderer because I ask for an early pickup" (VCIL Focus Group Participant).

Another recurring complaint about paratransit was the eligibility review process. To qualify for paratransit rides, people with disabilities must undergo an eligibility review every 3 years. The people we spoke to found the eligibility process a bureaucratic nuisance more than a profound barrier to mobility. Nonetheless, the scrutiny by paratransit providers was a source of tension. One resident of Cathedral Square recounted that:

> "I said to [an SSTA employee] that I talked to on the phone, 'Look, I have MS. There is no cure. It is never going to go away.' [And he responded,] 'Well, we gotta do what we gotta do.' And they said it's some kind of thing elicited by Burlington city because there was rumor that somebody was scamming them for rides, and I thought, I don't know, 'Who would act like a disabled person to get a ride?" (Cathedral Square Focus Group Participant)

State transportation resources for people with disabilities prioritize non-emergency health care transportation. There are few public resources that target people with disabilities in the labor force who require transportation to employment. An advocate for visually-impaired persons noted that, "There is no support to help people get to work. (VABVI Focus Group Participant)

Among the significant minority of participants who were employed at the time of the focus groups, [2] their commuting behavior was secure due to the geographic and temporal consistency of home-to-work trips as well as the additional resources available to individuals with a private source of income. A handful of people drove themselves with technical assistance, such as re-

[2] It should be noted that many focus group members with disabilities were retired from the workforce.

designed car interiors, or carpooled with family members or other staff at their workplace. Participants could also rely *ad hoc* on volunteer drivers or private taxi service or, as was the case with a visually-impaired resident of Burlington, walk to work through the familiar environment between home and her volunteer position. Otherwise, workers relied on fixed-line bus service provided by CCTA.

Bus service was lauded for its low cost, consistent scheduling, and empathetic drivers who could be relied on to assist them at all stages of the journey. However, bus riders reported sensing glares from passengers, perhaps because their wheelchair was delaying the progress of the bus. Workers with disabilities could also face challenges at pick-up locations, including with signage and poorly-maintained shelters. One participant noted that schedule changes are not relayed to visually-impaired people in the event that buses are re-routed or re-scheduled.

> "Well, 'we posted signs,' is the first answer I get when I call CCTA to ask about these things. […] But, that's not really useful [...] If they've changed the bus route, I'm really out of luck." (UVM Focus Group Participant)

Furthermore, winter conditions could make it difficult or dangerous to wait for the bus. The presence of snow drifts, for example, could make it impossible to embark using a wheelchair ramp or easily access the bus despite a tactile cane, even after sidewalks had been plowed. The unexpected difficulties of scheduling and climate mean that a daily experience with the bus system is no guarantee of service, especially as information about changing schedules and service conditions are not effectively relayed to disabled riders. The focus groups did not reveal any disabled participants who did not work because of a complete lack of transportation, though we advise policy-makers to consider such a group while designing workplace transportation services.

There are few public transportation resources suitable for recreational activity. The schedules of public transportation resources poorly coincided with social events, especially on the weekend, and social activities are not a priority for paratransit providers. One participant noted that "You can't go anywhere after a certain time. You can't go anywhere at night. You can't go anywhere pretty much on the weekend" (UVM Focus Group Participant). Most groups featured a story about a participant or an acquaintance who was left at an event and had to wait a long period for a ride or, in a worse-case scenario, attempt to get back home through their own means. For example, our focus group at Cathedral Square discussed the story of a resident who planned a day to the Champlain Valley Fair:

> **Caregiver:** I know sometimes they have difficulty being able to go to social events because like, recently, [a resident] actually wanted to go to the fair, and he actually had to wheel himself from the fair to here because the bus wouldn't come to pick him up in the evening.
> **Resident:** He wanted to go to one of the concerts that they had set up. He had bought tickets and everything for this concert. But SSTA told him if he wasn't going to be picked up by 8:15, they wouldn't be picking him up.
> **Facilitator:** So let me clarify: he wheeled himself from Essex Junction to—
> **Resident:** It took him 2 ½ hours to get here.

While such instances are far from the norm, they illustrate the length that people with disabilities may go to participate in community activities readily accessible to most Chittenden County residents.

We have thus far focused on the public transportation experience, yet some people with disabilities continue to drive themselves. One participant discussed a special program (now discontinued) that allowed her to purchase adaptive equipment so she could drive her car during the early stages of multiple sclerosis, while two individuals discussed friends who renewed their licenses as long as possible as their eyesight degenerated. Medical confidentiality protected drivers with emerging disabilities from having their licenses immediately revoked, but case workers and personal judgment propelled some members of our focus groups to voluntarily turn in their licenses. In the case of one woman with multiple sclerosis:

> "It hit me all of the sudden and when I was driving, I noticed my response time was... So I voluntarily stopped driving. […] And so the counselor recently said to me, 'You didn't do well on multitasking. And therefore, our recommendation would be that you don't drive.'"

Our focus groups also suggest that people with disabilities prefer chauffeuring by close family members and housemates whenever possible. It was not lost on focus group participants that their transportation needs incurred costs for their driver—even if the driver had willingly volunteered. Participants were wary of wasting social capital for rides except as a last resort. Furthermore, the idea of requesting a ride from someone outside their household tended to evoke feelings of dependence. We spoke to individuals who employed different strategies to combat these notions of dependence and "being a burden," from trying their best to use public transport—no matter how inconvenient—to, in the instance of one visually-impaired person, reimbursing even the closest of friends for the cost of driving.

> "I make a very good salary. So like I said, I take cabs. When I have a friend drive me, I pay them. Whether they want it or not, I'm going to shove it down their throat. They're going to get paid. […] I'm very diplomatic and, you know, I shove it down their throat. I just remind people that I have money, I'm not poor, and I can reciprocate, that I need to do this." (VABVI Focus Group Participant)

Individuals with sparse social networks cannot take advantage of chauffeuring to the same degree. Their reliance on public transportation places them at risk for long periods of home-bound activity.

3.2 Survey of Disabled Vermonters

Because many of stakeholder groups work throughout Vermont and because the electronic survey could be distributed at virtually no cost, the survey of disabled Vermonters targeted residents statewide. As described previously, the survey covered five areas 1) basic demographics, 2) available transportation options, 3) travel behaviors, 4) transportation

challenges, and 5) information access. Survey responses from non-veteran, disabled Vermonters are summarized in Sections 3.2.1 – 3.2.5.

3.2.1 Overview of the Demographics of Disabled Vermonters

In total, 267 disabled Vermonters or their family members/caretakers completed the PTP3 survey. While the focus group process for disabled Vermonters was limited to Chittenden County, the survey was distributed statewide through the distribution list of stakeholder organizations. Table 4 documents the number of responses from disabled Vermonters and their family members/caretakers by the public transportation service territories shown previously in Figure 1.

TABLE 4. DISABLED VERMONT SURVEY RESPONDENTS BY TRANSIT PROVIDER SERVICE TERRITORY

Public Transportation Provider	Survey Completed By:		Total
	Disabled Person	Family/Caretaker	
ACTR	7	6	13
AT	4	1	5
GMCN	4	5	9
GMT	114	53	167
GMT/RCT	3	2	5
MVRTD	3	7	10
RCT	8	12	20
SEVT	25	3	28
STSI (Managed by ACTR)	5	2	7
Invalid Zip code	3	0	3
Total	176	91	267

The Vermonters that completed the survey had a number of mobility-limiting physical conditions, as summarized in Table 5. Conditions that limited respondents ability to walk on uneven surfaces such as stairs, hills or curbs, were most commonly reported.

TABLE 5. DISABLED VERMONTERS' MOBILITY LIMITING CONDITIONS

Number of respondents reporting a physical condition that limits their ability to:	
Climb stairs	187
Walk on a hill	179
Step on/off the curb	165
Stand for more than 10 minutes	149
Lift/carry personal items	127
Walk on level ground	119
Go to a doctor's appointment on their own	116
Get up from a seated position	113
Reach with their arms	70

Note: Multiple selections allowed.

As shown in Table 6 through Table 8 a majority of the respondents were over 56 years old, lived alone or with a spouse, and had a household income of $30,000 or less. Respondents' highest levels of education attainment varied considerably from less than a high school degree through a graduate degree (Table 9).

TABLE 6. AGE DISTRIBUTION OF DISABLED VERMONT RESPONDENTS

Age	Number	Percent
Under 18	9	3.4%
18-25	10	3.7%
26-35	20	7.5%
36-45	26	9.7%
46-55	39	14.6%
56-65	54	20.2%
65 Plus	109	40.8%

TABLE 7. DISABLED VERMONT RESPONDENTS' LIVING ARRANGEMENTS

Living Arrangement	Number	Percent
Lives alone	123	42.7%
Lives with spouse	75	26.0%
Lives with parents	31	10.8%
Lives with housemates	27	9.4%
Lives with child(ren)	26	9.0%
Lives in a Group Home	3	1.0%
Does not have consistent living arrangement	3	1.0%

TABLE 8. HOUSEHOLD INCOME OF DISABLED VERMONT RESPONDENTS

Household Income	Number	Percent
Less than $15,000	88	38.8%
$15,000 to $30,000	49	21.6%
$30,000 to $45,000	29	12.8%
$45,000 to $60,000	18	7.9%
$60,000 to $75,000	13	5.7%
$75,000 to $90,000	17	7.5%
$90,000 to $105,000	5	2.2%
$105,000 to $120,000	3	1.3%
Above $120,000	5	2.2%

TABLE 9. DISABLED VERMONTERS' EDUCATIONAL ATTAINMENT

Education	Number	Percent
Some High School	17	7.0%
High School Degree	74	30.5%
Some College	41	16.9%
2-year College Degree	15	6.2%
4-year College Degree	47	19.3%
Graduate Degree	49	20.2%

3.2.2 Overview of Transportation Options Available to Disabled Vermonters

Disabled Vermonters were surveyed about their ability to drive and to access a vehicle as well as their ability to ride a bus and to access the bus system. These questions help to reveal the transportation options that are available for disabled Vermonters.

Over 60% of disabled Vermonters reported that they could not drive a car and an additional 6% reported they required a vehicle with special modifications (Table 10). Approximately 40% of disabled Vermonters reported that they did not have regular access to a vehicle; somewhat less than 3% had access to a vehicle that they did not own or lease themselves. The remaining respondents owned or leased their own vehicle, though half of these respondents could not drive the vehicle themselves (Table 11).

TABLE 10. DISABLED VERMONTERS' ABILITY TO DRIVE

Are you able to drive a vehicle?	Number	Percent
No.	164	61.4%
Yes, I can drive any vehicle.	86	32.2%
Yes, but I can only drive an adapted vehicle.	17	6.4%

TABLE 11. DISABLED VERMONTERS' VEHICLE ACCESS

Do you have access to a vehicle regularly?	Number	Percent
No.	107	40.1%
Yes, I/we have access to a vehicle regularly but do not own/lease it.	7	2.6%
Yes, I/we own/lease a vehicle and I can drive it myself.	78	29.2%
Yes, I/we own/lease a vehicle but I not able to drive it.	75	28.1%

As shown in Table 12, nearly half of disabled Vermonters reported that they could ride any bus and an additional 16% plus reported that they could ride wheelchair accessible buses. Approximately 27% of disabled Vermonters reported that they could not ride a bus while slightly less than 10% reported that they did not know if they could ride a bus. Though approximately 64% of the disabled Vermonters surveyed reported that they could ride a bus equipped with a wheelchair lift, only 23% of respondent rode the bus either seasonally or year-round (Table 13). Nearly half of the respondents reported that they did not have bus access near their homes and a third reported that they did not ride the bus though they did have access to the bus near their homes.

TABLE 12. DISABLED VERMONTERS' ABILITY TO RIDE PUBLIC BUSES

Can you ride on a public bus?	Number	Percent
I don't know.	26	9.7%
No.	71	26.6%
Yes, I can ride in any bus.	126	47.2%
Yes, but I can only ride in a bus with a wheelchair lift.	44	16.5%

TABLE 13. DISABLED VERMONTERS' ACCESS TO PUBLIC BUSES

Can you access public bus service near your home?	Number	Percent
No, there is no bus access near my home.	118	44.2%
Yes, and I ride the bus year-round.	40	15.0%
Yes, but I do not ride the bus.	89	33.3%
Yes, but I only ride the bus during certain months.	20	7.5%

3.2.3 Overview of the Travel Behavior of Disabled Vermonters

Disabled Vermonters were surveyed about how frequently they had traveled for a variety of trip purposes (personal, medical, for school, and for work) in the winter of 2014-15 as well as their mode choices for these trips. As a group, disabled Vermonters traveled most frequently for personal trips and medical appointments. Almost 80% of the respondents reported taking personal trips at least 2-3 times per month and almost half (49%) reported traveling for medical appointments at least this frequently. Only 5% of respondents had not traveled to a single medical appointment in the preceding winter. In contrast, relatively few disabled Vermonters had traveled for work (31%) or for school (9%). A full breakdown of travel frequency by trip purpose is provided in Figure 2.

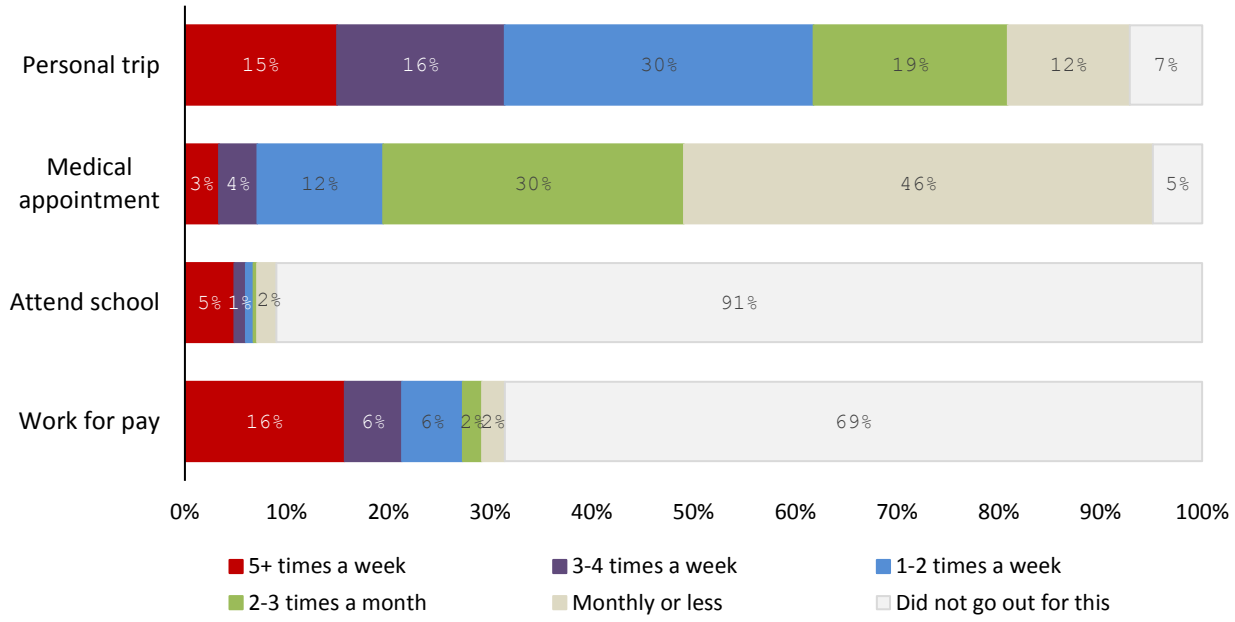

FIGURE 2. DISABLED VERMONTERS' FREQUENCY OF TRAVEL BY TRIP PURPOSE (WINTER 2014-2015)

As shown in Figure 3, private car was the most frequently used transportation mode for all trip purposes. On-demand transit was the second most frequent mode for medical appointments while public bus and walk, bicycle, wheelchair, or scooter were the second most frequent modes for personal trips.

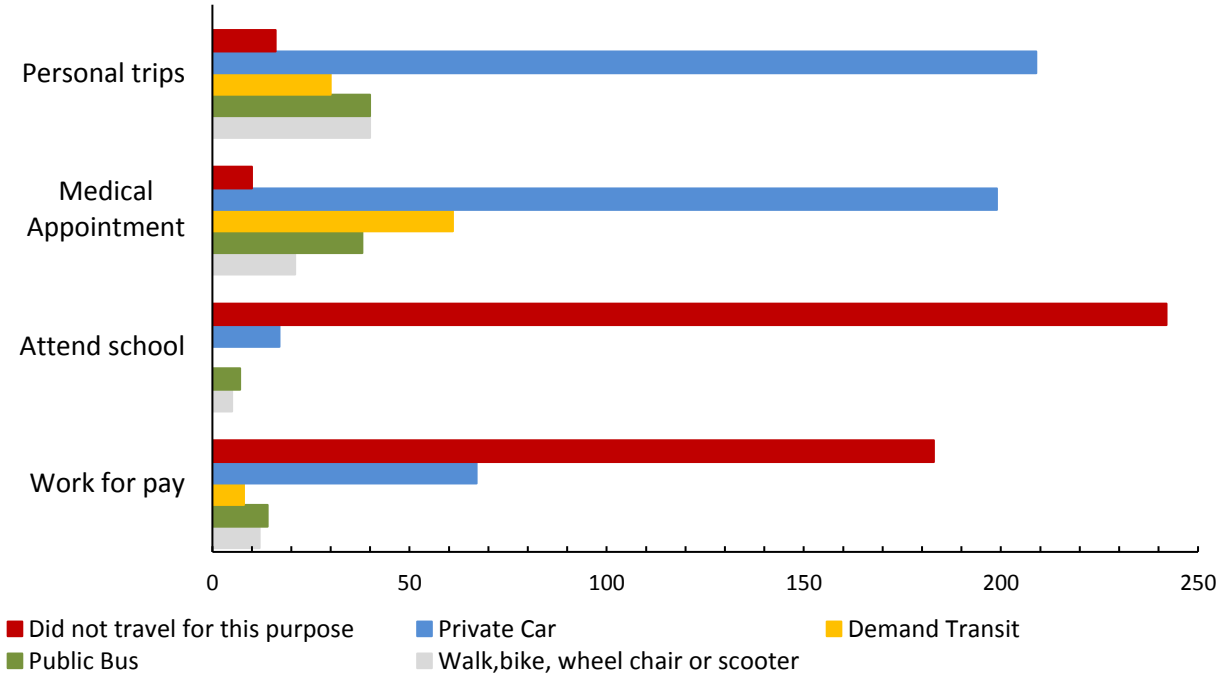

FIGURE 3. DISABLED VERMONTERS' MODE CHOICE BY TRIP PURPOSE (WINTER 2014 -2015)

Disabled Vermonters were also asked whether they expected to leave their home more or less often in the summer compared to the December 2014 – March 2015 period. Nearly 45% of respondents anticipated traveling more frequently for personal trips as compared to only 5% who anticipate traveling less often for this purpose. More frequent medical trips were anticipated by 17% of respondents as opposed to 10% of respondents who anticipated fewer of these trips. Anticipated changes in work frequency were about equally divided between those who anticipate more frequent (9%) and less frequent trips (10%).

3.2.4 Overview of the Transportation Challenges Facing Disabled Vermonters

Respondents were asked to reflect on the obstacles they face when using different transportation modes. Question about the obstacles associated with each mode were only asked of those disabled Vermonters that reported having used that mode during the preceding winter. Respondents were also asked about the strategies that they used to accommodate last-minutes changes in the timing of appointments and trips to return home.

Fifty-one disabled Vermonters reported having walked, biked, or used a wheelchair or scooter in the winter of 2014-15. Of these respondents, only two individuals did not report any obstacle associated with these modes. Inadequate snow plowing, surface problems such as potholes, and problems with curbs, stairs or grade were the most commonly experienced obstacles. All obstacles reported are present in Table 14.

TABLE 14. OBSTACLES TO WALKING, BIKING, USING A WHEELCHAIR OR SCOOTER

Obstacle	**Experienced By:**
Inadequate snow plowing or deicing	37
Surface problems (potholes or cracks)	33
Problems with curbs, stairs, or grades	28
Insensitive/unaware drivers	23
Too few or missing sidewalks, paths, or crosswalks	22
Traffic light time too short to cross	20
Lighting inadequate, difficult to see or be seen	12
Too close to moving vehicles or not enough space for passing	11
Safety/travel information not adapted for my needs	10
Other	0
I did not experience any of these obstacles	2

Multiple selections allowed. Total number of respondents: 51

Sixty-four disabled Vermonters reported riding a public bus in the winter of 2014-15, fifty-four of whom reported at least one obstacle associated with this mode. As with the walk/ bike/ wheelchair/ scooter question, inadequate snow plowing was the most commonly cited obstacle. Other commonly reported obstacles were the timing of bus routes and issues with bus stop infrastructure, including inadequate sidewalks and shelters (Table 15).

TABLE 15. OBSTACLES TO RIDING A PUBLIC BUS FOR DISABLED VERMONTERS

Obstacle	**Experienced By:**
Inadequate snow plowing or deicing at bus stop	28
Bus does not run when needed	27
Too few or missing sidewalks, paths, or crosswalks	20
Inadequate or lack of bus stop shelter	19
Bus schedule not reliable	14
Boarding or exiting problems	11
Crowding or inadequate seating space	9
Street lighting inadequate, difficult to see or be seen	9
Purchasing fare difficult	8
Insensitive/unaware passengers	8
Safety/travel information not adapted for my needs (e.g., Braille signs, beeping, or flashing signals)	7
Driver/staff assistance or sensitivity poor	6
Other	0
I did not experience any of these obstacles	10

Multiple selections allowed. Total number of respondents: 64

Sixty-four disabled Vermonters reported using on-demand transit services in the winter of 2014-15. For on-demand transit services, the top reported obstacle was scheduling for return trips, while service hours and problems with home pickups came in at a close second. In addition, the inability to schedule repeating trips was a commonly cited obstacle.

TABLE 16. OBSTACLES TO USING ON-DEMAND TRANSIT SERVICE FOR DISABLED VERMONTERS

Obstacle	Experienced By:
Schedule for return-to-home pickup not kept or long waits	29
Service not available when needed	24
Schedule for home pickup not kept or long waits	24
Cannot schedule repeating trips (e.g., trips at the same time each day)	19
Cost is too high	12
Insensitive/unaware driver	10
Scheduling staff assistance or sensitivity poor	9
Missed return-to-home pickup	7
Vehicle in poor mechanical condition	1
Crowding or inadequate seating space	0
Vehicle not wheelchair accessible	0
Other	0

Multiple selections allowed. Total number of respondents: 64

Scheduling travel and in particular scheduling *changes* in travel was consistently cited as a significant concern for respondents. Nearly half, 125 out of 267, disabled respondents had been forced to cancel medical appointments due to last minute scheduling changes (Table 17). Almost as many respondents reached out to family members, friends, or caretakers for help in these circumstances. This strategy was also the most commonly used accommodation for last minute changes to plans to return home (Table 18), emphasizing the importance of individuals' personal networks for accommodating last minutes travel plan changes.

TABLE 17. STRATEGIES FOR ACCOMMODATING LAST MINUTE CHANGES TO MEDICAL APPOINTMENTS

Accommodation	Used By:
Canceled my appointment	125
Called family member, friend, or caretaker to reschedule or get a ride	119
Drove myself and had flexibility to go when needed	60
Went to appointment early and waited	44
Called taxi cab to reschedule or get a ride	31
Called on demand transit to try to reschedule	18
Took earlier/later public bus	18
I walked, used my wheelchair or scooter, or bicycled	16
Other	0
I have not been in such situations	28

Multiple selections allowed.

TABLE 18. STRATEGIES FOR ACCOMMODATING LAST MINUTE CHANGES TO PLANS TO RETURN HOME

Accommodation	Used By:
Called family member, friend, or caretaker to reschedule or get a ride	101
Waited for your pre-arranged ride	60
Drove myself and had flexibility to go when needed	54
Called taxi cab to reschedule or get a ride	38
I walked, used my wheelchair or scooter, or bicycled	26
Took earlier/later public bus	21
Called on demand transit to try to reschedule	16
Other	0
I have not been in such situations	53

Multiple selections allowed.

3.2.5 **Overview of Disabled Vermonters' Access to Information**

Access to information is essential for making and adjusting travel plans. To better understand how disabled Vermonters accessed transportation related information, respondents were asked about the source of information that they used as well as their access to the internet and mobile phones.

Disabled Vermont respondents reported accessing information about transportation options in a variety of ways, as listed in Table 19. Asking family members, friends, or caretakers was the most commonly reported method for obtaining this information. Calling transit providers or accessing their websites were the second and third most commonly reported methods.

TABLE 19. DISABLED VERMONTERS' ACCESS TO TRANSPORTATION INFORMATION

How do you get information on your transportation options?	Respondents
Ask family member, friend, or caretaker	119
Call transit providers or other public agencies	79
Use websites by transit providers or other public agencies	76
Use paper schedules and information	65
From organizations to which I belong	47
Get information in person (e.g., at bus stop, from driver)	42
Other	0

Multiple selection allowed.

A majority of disabled Vermonters (178 out of 267) reported that they could access the internet from home, as shown in Table 20. Likewise a majority of the respondents (137 out of 267) had access to some kind of mobile phone (Table 21). A significant number of respondents reported that they did not have access to the internet at all (68 out of 267) and/or that they did not have mobile phone access (130 out of 267).

TABLE 20. DISABLED VERMONTERS' MEANS OF ACCESSING THE INTERNET

How do you access to the internet?	Respondents
At home	178
At work or school	57
At home of family or friends	33
At a public place (e.g., library, cafe, etc.)	45
On a cellular network with a mobile device (e.g., smartphone, tablet)	62
I do not have access to the internet	68

Multiple selection allowed.

TABLE 21. DISABLED VERMONTERS' MOBILE PHONE ACCESS

Do you have a cell phone or smartphone with a data plan?	Respondents
Cell phone	79
Smartphone with a data plan	63
Neither	130

Multiple selection allowed.

4 Results for Vermont Veterans

4.1 Focus Groups with Veterans

Focus groups are useful for revealing the interaction among the personal, socioeconomic, and environmental circumstances that influence individuals travel behavior and needs. This section explores the transportation related experience of Vermont veterans statewide as revealed through the focus groups listed in Table 3.

Medicaid- and Medicare-eligible veterans use regional paratransit services with eligibility requirements and service experiences—positive and negative alike—that are similar to those of other users. In addition, many of the veterans with whom we spoke used the veteran-specific Disabled American Veterans (DAV) shuttles that run between rural population centers and the White River Junction VA Medical Center. Their experience with the shuttles coincided with much of the information acquired during our initial investigation of the service (see Section 1.2.1). The veterans typically met at a common location and travelled free-of-cost to the hospital thanks to volunteer drivers. The most common complaint associated with the service was that it required most of a day to go to the hospital, as riders would have to wait for the medical appointments of all other riders to be complete before they were able to return home. A younger veteran pointed out that he used the shuttles on occasion:

> "But my dad usually gives me a ride, especially to White River Junction because if I don't get a ride from him, then you have to take the VA shuttle, and that's like...they get here at 6 in the morning and you come back whenever the van's full. So you might end up being stuck up there for like 6-7 hours for an appointment that you've completed at 10 in the morning." (Canal Street Focus Group Participant)

If a doctor's appointment was exceptionally late in the day, riders could take advantage of limited on-site accommodations and return to their homes the following day. We did not encounter any veterans who were unhappy with the frequency of van service in their region, though the geographic scope of our focus groups did not touch on all areas of the state.

Veterans rarely travelled to the hospital frequently enough to observe any systematic issues with the DAV shuttles. However, the case workers at the National Guard Family Program discussed what they perceived to be a glaring oversight in the purpose of the shuttles: primary care access. There are several community-based outreach clinics (CBOCs) dotted throughout the state to address non-emergency and non-specialized health care needs for veterans. One case worker noted that:

> "If you're living in Island Pond and you've got to get to the CBOC in Newport or Littleton, there's no DAV transportation that can take them to that clinic. It will only take them to the medical centers." (NGFP Focus Group Participant).

The shortage of veteran-specific paratransit service in the state's most rural areas leaves veterans to rely on family members or case workers. Case workers "do not want to be a taxi service" for scheduled appointments because "it's easy for people to become dependent on their ability to take you somewhere, if they know all I have to do is pick up the phone and I'll have a ride" (NGFP Focus Group Participant). That being said, the case workers made clear that they provide *ad hoc* transportation for emergency situations for their clients. While spur-of-the-moment transportation and counseling was not ideal, they valued the "windshield time" (NGFP Focus Group Participant) that allowed them to connect with their clients while transporting them from one place to another. As one case worker noted:

> "You can do a lot of peer-support stuff kind of under the covers. It doesn't...no it doesn't bother me. It's never a conflict with, you know, 'I need to be in three places at once. Now I need to take this guy.' It's never been a conflict." (NGFP Focus Group Participant)

Windshield time alludes to a unique aspect of veteran-specific transportation services – a mutual understanding between staff and passengers about the veteran experience. Veteran-specific transportation is primarily staffed by veterans who drive their passengers to veteran-specific facilities. There is an intimate knowledge of veteran's needs at all points of the non-emergency medical transportation trip, promoting a degree of empathy that cannot be easily reproduced for disabilities-oriented transportation. Regional and state policy-makers would be well-advised to protect and reproduce such a supportive environment as they work on veterans' transportation services in the future and to explore whether there might be ways to generalize at least some aspects of the windshield time to non-veteran specific paratransit.

Veterans have access to a combination of general population and veteran-specific resources for non-emergency health care transportation in Vermont. Similar to the general population, however, there are few transportation services available for day-to-day tasks such as employment or recreation. One case worker noted that if one of his clients needed to travel from Fair Haven to Rutland, the regional veteran- and state-resource hub that is approximately 20-minutes away by car, the round trip would "take the whole day" to complete. (NGFG Focus Group Participant)

The vast majority of veterans in the focus groups were able-bodied enough to drive a car, yet car ownership was far below the state average. This is primarily due to the high cost of buying and maintaining a car and, in certain cases, suspension of one's license. The veterans and case workers that we spoke to both suggested that special financing services would drastically improve mobility in locations where public transportation was too sparse for the frequent and consistent travel patterns of workplace commuting. The residents of Bradford House, the most rural focus group site, placed particular attention on helping veterans acquire and maintain automobiles to mitigate poor public transportation access.

Even in transit-dense Chittenden County, off-peak work schedules could exclude public transportation as a viable commuting alternative. One participant had training for his nighttime job from the evening to the break of dawn and, upon finishing, would walk from the South End of Burlington to the University Mall – a distance of several miles— to access the first bus back to his halfway house. During the 2014 CCTA strike, veterans at Burlington's veterans housing complexes—previously well-connected to the bus network—found themselves cut off from workplaces and supermarkets. Case workers at the National Guard Family Group invested a great deal of effort to shuttle veterans from the city's periphery across non-walkable distances. While many state residents contend with the same temporal and spatial inaccessibility, poor workplace transportation can be particularly hard on the most disadvantaged segment of veterans as they try to build their capabilities and independence.. Furthermore, transportation difficulties crowd out time for other utilitarian and recreational activities that are crucial to building and maintaining one's well-being.

We uncovered a handful of factors that distinguish non-driving veterans from other non-driving state residents. The majority of veterans in our focus groups lived in shared housing where they could ride with car-owning housemates for shopping and recreational trips that were mutually-convenient to driver and rider. Several group houses also had their own vans or, given their connection to other social services, could network van rides from neighboring veteran service organizations—including informal service. A member of the Canal Street focus group noted that:

> "[DAV drivers] don't allow for grocery shopping or anything. We did hook up with the American Legion out of Essex, way back when this program started maybe 4 years ago now. They send a van on the first Sunday of every month to go to Price Chopper, Shaw's, wherever everyone decides on where to go. Picks everybody up at 11:00am. The only stipulation is that the driver wants to be home by 1:00pm so that 'I can watch the Patriots play!'" (Canal Street Focus Group Participant)

Shared housing therefore served as a transportation nexus for residents.

> "[O]ur transportation is solely by [the van], unless you get a ride. Like, travelling with, you know, somebody's going that way, they'll offer you a ride because some of us don't have vehicles. Or, like right now I'm sitting without a license and, you know, a registered car. It kind of puts a damper on my driving." (Bradford House Focus Group Participant)

Conversely, our discussion with case workers highlighted that low socioeconomic status veterans living independently are relatively more isolated, particularly non-drivers in rural areas. Their

immobility may not only foster social exclusion, but also exacerbate existing emotional problems.

4.2 Survey of Disabled Vermont Veterans

Survey responses from Vermont veterans (or veterans' family members/care takers) are summarized in Sections 4.2.1 – 4.2.5. These sections cover veterans' 1) basic demographics, 2) available transportation options, 3) travel behaviors, 4) transportation challenges, and 5) information access.

4.2.1 Overview of the Demographics of Disabled Vermont veterans.

In total, 32 Vermont veterans completed the PTP3 survey. Responses were collected from veterans throughout the state. Table 22 documents the number of responses from disabled veterans and their family members/caretakers by the public transportation service territories shown previously in Figure 1.

TABLE 22. VETERAN SURVEY RESPONDENTS BY TRANSIT PROVIDER SERVICE TERRITORY

Transit Provider	Survey Completed By:		Total
	Veteran	Family/Caretaker	
ACTR	0	1	1
GMCN	0	2	2
GMT	13	6	19
RCT	0	3	3
SEVT	2	1	3
STSI (Managed by ACTR)	0	2	2
Invalid Zip Code	2	0	2
Total	17	15	32

The veterans that completed the survey had a number of mobility-limiting physical conditions, as summarized in Table 23. Conditions that limited respondents ability to walk on uneven surfaces such as stairs, hills or curbs, were most commonly reported.

TABLE 23. VETERANS' MOBILITY LIMITING CONDITIONS

Number of respondents reporting a physical condition that limits their ability to:	
Climb stairs	25
Walk on a hill	24
Stand for more than 10 minutes	22
Step on/off the curb	19
Lift/carry personal items	19
Walk on level ground	17
Go to a doctor's appointment on their own	17
Get up from a seated position	15
Reach with their arms	10

Note: Multiple selections allowed.

As shown in Table 24 through Table 26, most of the veteran respondents were over 65 years old, lived alone or with a spouse, and had a household income of $30,000 or less. Respondents' highest levels of educational attainment varied considerably, as shown in Table 27.

TABLE 24. AGE DISTRIBUTION OF VETERAN RESPONDENTS

Age	Number	Percent
Under 18	1	3.1%
46-55	3	9.4%
56-65	4	12.5%
65 Plus	24	75.0%

TABLE 25. VETERAN RESPONDENTS' LIVING ARRANGEMENTS

Living Arrangement	Number	Percent
Lives alone	18	56.3%
Lives with spouse	12	37.5%
Lives with kids	1	3.1%
Lives in a group home	1	3.1%

TABLE 26. HOUSEHOLD INCOME OF VETERAN RESPONDENTS

Household Income	Number	Percent
Less than $15,000	7	30.4%
$15,000 to $30,000	9	39.1%
$30,000 to $45,000	2	8.7%
$45,000 to $60,000	1	4.3%
$75,000 to $90,000	1	4.3%
$90,000 to $105,000	3	13.0%

TABLE 27. VETERANS' EDUCATIONAL ATTAINMENT

Education	Number	Percent
Some High School	3	10.3%
High School Degree	8	27.6%
Some College	7	24.1%
2-year College Degree	3	10.3%
4-year College Degree	1	3.4%
Graduate Degree	7	24.1%

4.2.2 Overview of Transportation Options Available to Disabled Vermont Veterans

The survey asked veterans about their ability to drive and to access a vehicle as well as their ability to ride a bus and to access the bus system. These questions help to reveal the transportation options that are available for disabled Vermont veterans.

Exactly half of the veterans reported that they could drive a vehicle while half reported that they could not. None of the respondents indicated that they needed a vehicle with special modifications (Table 28). One quarter of veterans reported that they did not have regular access to a vehicle, an additional 15% had access to a vehicle that they did not own or lease themselves while the remaining respondents owned or leased their own vehicle (Table 29).

TABLE 28. VETERANS' ABILITY TO DRIVE

Are you able to drive a vehicle?	Number	Percent
No.	16	50.0%
Yes, I can drive any vehicle.	16	50.0%
Yes, but I can only drive an adapted vehicle.	0	0.0%

TABLE 29. VETERANS' VEHICLE ACCESS

Do you have access to a vehicle regularly?	Number	Percent
No.	8	25.0%
Yes, I/we have access to a vehicle regularly but do not own/lease it.	5	15.6%
Yes, I/we own/lease a vehicle and I can drive it myself.	10	31.3%
Yes, I/we own/lease a vehicle but I am not able to drive it.	9	28.1%

As shown in Table 30, 38% of veterans reported that they could ride any bus and an additional 16% report that they could ride wheelchair accessible buses. Approximately 28% of veterans reported that they could not ride a bus while slightly less than 20% reported that they did not know if they could ride a bus. Though more than half of the veterans surveyed reported that they could ride a bus equipped with a wheelchair lift, only 5 of the 32 respondents rode the bus either seasonally or year-round (Table 31). Nearly half of the veterans reported that they did not have bus access near their homes and more than a third reported that they did not ride the bus though they did have access to the bus near their homes.

TABLE 30. VETERANS' ABILITY TO RIDE PUBLIC BUSES

Can you ride on a public bus?	Number	Percent
I don't know.	6	18.8%
No.	9	28.1%
Yes, I can ride in any bus.	12	37.5%
Yes, but I can only ride in a bus with a wheelchair lift.	5	15.6%

TABLE 31. VETERANS' ACCESS TO PUBLIC BUSES

Can you access public bus service near your home?	Number	Percent
No, there is no bus access near my home.	15	46.9%
Yes, and I ride the bus year-round.	3	9.4%
Yes, but I do not ride the bus.	12	37.5%
Yes, but I only ride the bus during certain months.	2	6.3%

4.2.3 Overview of the Travel Behavior of Disabled Vermont Veterans

Veterans were surveyed about how frequently they had traveled for a variety of trip purposes (personal, medical, for school, and for work) in the preceding winter (December 2014 through March of 2015) as well as their mode choices for these trips. As a group, veterans traveled most frequently for personal trips and medical appointments. More than two thirds (71%) of the respondents reported taking personal trips at least 2-3 times per month and more than half (59%) reported traveling for medical appointments at least this frequently. Only 3% of respondents had not traveled to a single medical appoint in the preceding winter. In contrast, relatively few veterans had traveled for work (12%) or for school (6%). A full breakdown of travel frequency by trip purpose is provided in Figure 4.

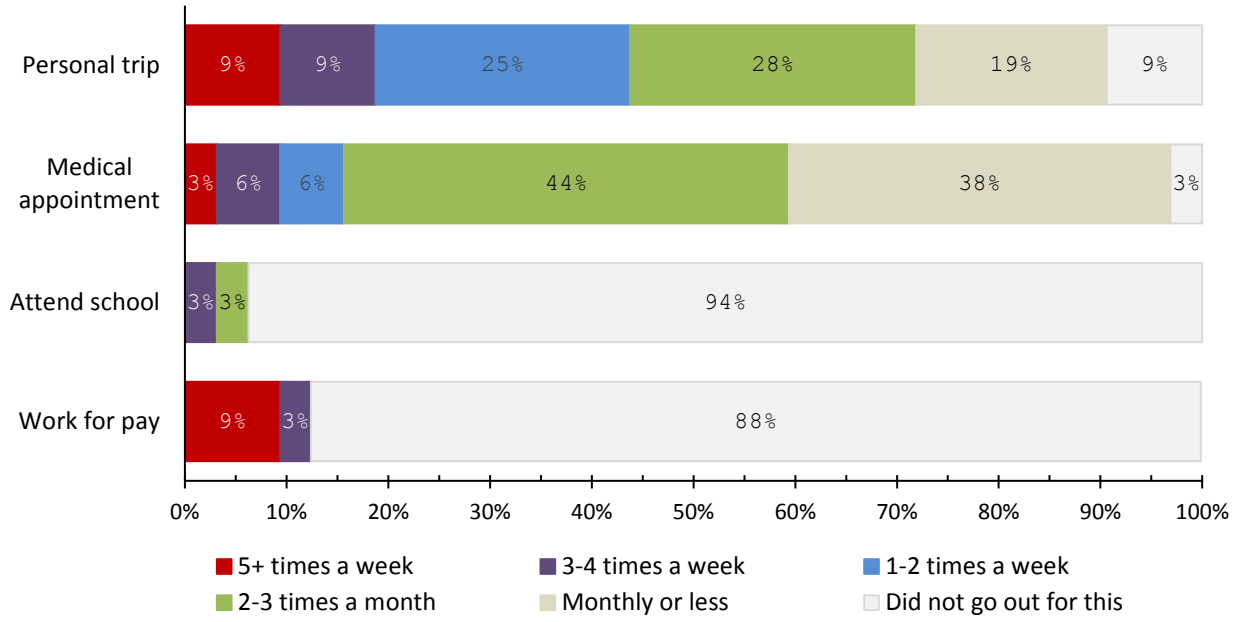

FIGURE 4. VETERANS' FREQUENCY OF TRAVEL BY TRIP PURPOSE (WINTER 2014 -2015)

As shown in Figure 5, private car was the most frequently used transportation mode for all trip purposes. On demand transit was the second most frequent mode for medical appointments while walk, bicycle, wheelchair, or scooter was the second most frequent mode for personal trips.

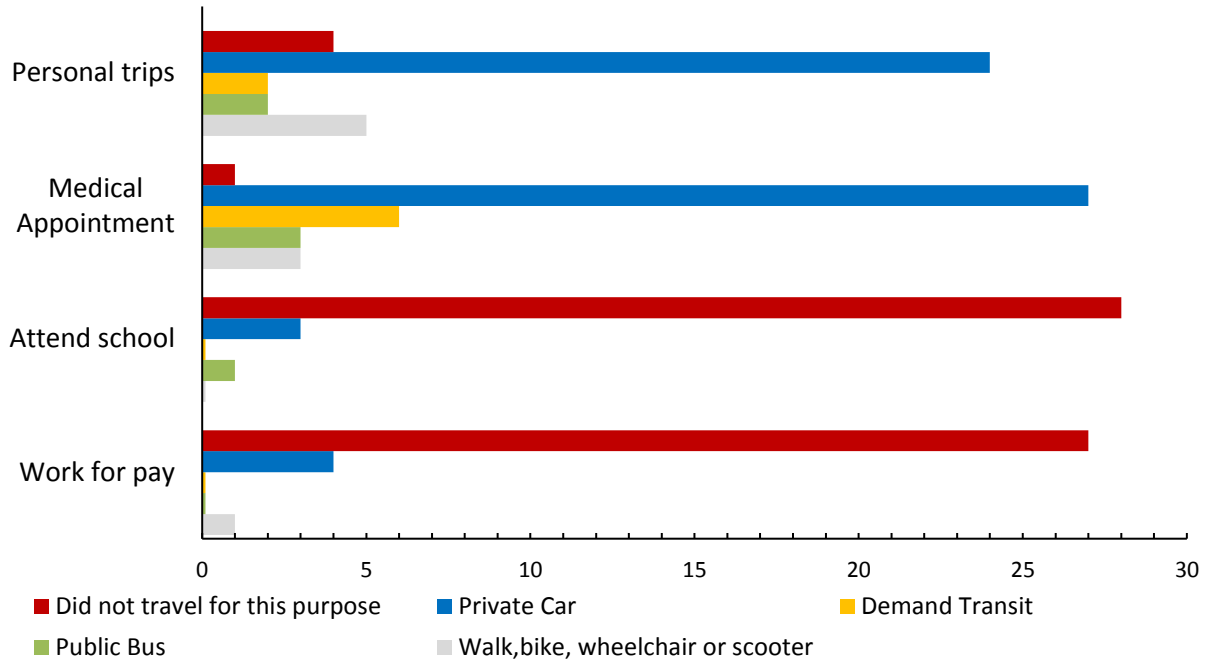

FIGURE 5. VETERANS' MODE CHOICE BY TRIP PURPOSE (WINTER 2014 -2015)

Veterans were also asked whether they expected to leave their home more or less often in the summer compared to the December 2014 – March 2015 period. Most veterans reported little change in their anticipated travel frequency though 28% of respondents anticipated more travel for personal trips and medical appointments as compared to only 5-10% of respondents who anticipated traveling less often for these reasons.

4.2.4 Overview of the Transportation Challenges Facing Disabled Vermont Veterans

Respondents were asked to reflect on the obstacles they face when using different transportation modes. Questions about the obstacles associated with each mode were only asked of those veterans that reported having used that mode during the preceding winter. Veterans were also asked about the strategies that they used to accommodate last-minute changes in the timing of appointments and trips to return home.

Seven veterans reported having walked, biked, or used a wheelchair or scooter in the winter of 2014-2015. Of these respondents, only one individual did not report any obstacle associated with these modes. Consistent with the mobility limiting conditions reported in Table 23, surface problems, such as potholes, and problems with curbs, stairs or grade were the most commonly experienced obstacles. All obstacles reported by the veteran users of these modes are present in Table 32.

TABLE 32. OBSTACLES TO WALKING, BIKING, USING A WHEELCHAIR OR SCOOTER

Obstacle	Experienced By:
Surface problems (potholes or cracks)	5
Problems with curbs, stairs, or grades	4
Too few or missing sidewalks, paths, or crosswalks	3
Inadequate snow plowing or deicing	2
Insensitive/unaware drivers	2
Traffic light time too short to cross	2
Lighting inadequate, difficult to see or be seen	1
Too close to moving vehicles or not enough space for passing	1
Safety/travel information not adapted for my needs	1
Other	0
I did not experience any of these obstacles	1

Multiple selections allowed. Total number of respondents: 7

Six veterans reported riding a public bus in the winter of 2014-2015 and every participant reported at least one obstacle to using this mode. The most commonly reported obstacles were the timing of bus routes, snow and ice at the bus stop, and problems boarding and exiting the bus (Table 33).

TABLE 33. OBSTACLES TO RIDING A PUBLIC BUS

Obstacle	Experienced By:
Bus does not run when needed	3
Inadequate snow plowing or deicing at bus stop	2
Boarding or exiting problems	2
Too few or missing sidewalks, paths, or crosswalks	1
Bus schedule not reliable	1
Inadequate or lack of bus stop shelter	0
Crowding or inadequate seating space	0
Street lighting inadequate, difficult to see or be seen	0
Purchasing fare difficult	0
Insensitive/unaware passengers	0
Safety/travel information not adapted for my needs (e.g., Braille signs, beeping, or flashing signals)	0
Driver/staff assistance or sensitivity poor	0
Other	0
I did not experience any of these obstacles	0

Multiple selections allowed. Total number of respondents: 6

Seven veterans reported using on-demand transit services in the winter of 2014-2015. For on-demand transit services, scheduling for return trips, service hours and scheduling for the home

pickup were cited by four of the seven respondents. In addition, multiple respondents cited scheduling repeat trips and poor driver/scheduling staff sensitivity as obstacles associated with the mode.

TABLE 34. OBSTACLES TO USING ON-DEMAND TRANSIT SERVICE

Obstacle	Experienced By:
Schedule for return-to-home pickup not kept or long waits	4
Service not available when needed	4
Schedule for home pickup not kept or long waits	4
Insensitive/unaware driver	3
Scheduling staff assistance or sensitivity poor	3
Cannot schedule repeating trips (e.g., trips at the same time each day)	2
Missed return-to-home pickup	1
Vehicle in poor mechanical condition	1
Cost is too high	0
Crowding or inadequate seating space	0
Vehicle not wheelchair accessible	0
Other	0

Multiple selections allowed. Total number of respondents: 7

Scheduling travel and in particular scheduling *changes* in travel was consistently cited as a significant concern for respondents. More than half, 18 out of 32, veteran respondents had been forced to cancel medical appointments due to last minute scheduling change (Table 35). A majority of respondents had reached out to family members, friends, or caretakers for help in these circumstance. This strategy was also the most commonly used accommodation for last minutes changes to plans to return home (Table 36), emphasizing the importance of individuals' personal networks for accommodating last minute travel plan changes.

TABLE 35. STRATEGIES FOR ACCOMMODATING LAST MINUTE CHANGES TO MEDICAL APPOINTMENTS

Accommodation	Used By:
Called family member, friend, or caretaker to reschedule or get a ride	19
Canceled my appointment	18
Drove myself and had flexibility to go when needed	6
Went to appointment early and waited	5
Called taxi cab to reschedule or get a ride	4
Called on demand transit to try to reschedule	4
I have not been in such situations	4
I walked, used my wheelchair or scooter, or bicycled	2
Took earlier/later public bus	0
Other	0

Multiple selections allowed.

TABLE 36. STRATEGIES FOR ACCOMMODATING LAST MINUTE CHANGES TO PLANS TO RETURN HOME

Accommodation	Used By:
Called family member, friend, or caretaker to reschedule or get a ride	11
I have not been in such situations	8
Called taxi cab to reschedule or get a ride	7
Drove myself and had flexibility to go when needed	7
Waited for pre-arranged ride	6
Called on demand transit to try to reschedule	3
Took earlier/later public bus	2
I walked, used my wheelchair or scooter, or bicycled	1
Other	0

Multiple selections allowed.

4.2.5 **Overview of Disabled Vermont Veterans' Access to Information**

Access to information is essential for making and adjusting travel plans. To better understand how Vermont veterans accessed transportation related information, respondents were asked about the source of information that they used as well as their access to the internet and mobile phones.

Respondents reported accessing information about transportation options in a variety of ways, as listed in Table 37. Asking family members, friends, or caretakers was the most commonly reported method for obtaining this information. Using paper schedules or calling transit providers were the next most commonly reported methods for accessing this information.

TABLE 37. VETERANS' ACCESS TO TRANSPORTATION INFORMATION

How do you get information on your transportation options?	Respondents:
Ask family member, friend, or caretaker	17
Use paper schedules and information	9
Call transit providers or other public agencies	9
From organizations to which I belong	4
Get information in person (e.g., at bus stop, from driver)	3
Use websites of transit providers or other public agencies	3
Other	0

Multiple selection allowed.

Slightly fewer than half of veteran respondents reported that they could access the internet from home (Table 38) and exactly half had some type of mobile phone access (Table 39). A significant number of respondents reported that they did not have access to the internet at all (10 out of 32) and/or that they did not have mobile phone access (16 out of 32).

TABLE 38. VETERANS' INTERNET ACCESS

How do you access to the internet?	Respondents:
At home	14
I do not have access to the internet	10
At a public place (e.g., library, cafe, etc.)	7
On a cellular network with a mobile device (e.g., smartphone, tablet)	3
At work or school	1
At home of family or friends	1

Multiple selection allowed.

TABLE 39. VETERANS' MOBILE PHONE ACCESS

Do you have a cell phone or smartphone with a data plan?	Respondents:
Cell phone	12
Smartphone with a data plan	4
Neither	16

Multiple selection allowed.

5 Discussion & Implications for Disabled Vermonters

The mobility and independence enjoyed by disabled Vermonters is influenced both by the specifics of their disabilities and the structure of the transportation system. The focus group process revealed that disabled Vermonters rely on a combination of fixed-route public transit, paratransit, and automobile usage (both as drivers or chauffeured passengers in private cars and as passengers in taxis, etc.) to meet their mobility needs. Overall, scheduling, particularly for recurring trips such as commutes and for off-peak social and recreational trips, was identified as a significant challenge by many focus group participants.

The survey responses reinforced the significance of scheduling challenges when using the bus and demand-response transit systems. Four of the top five obstacles to using on-demand transit services and two of the top five obstacles to riding a public bus related to schedule limitations.

In addition, the survey revealed that infrastructure issues posed challenges for using the bus system and for walking, biking, and using a wheelchair or scooter. These issues included inadequate snow plowing, insufficient or poorly maintained sidewalks, bus shelters and lighting as well as a failure to adapt signage and light signal timing to meet the needs of segments of the disabled population.

Finally, a smaller number of respondents also reported issues related to the insensitivity of drivers for both bus and on-demand transit.

As a result of these challenges, almost half of the survey respondents (125 out of 267) reported having to cancel a medical appointment due to an inability to accommodate last minute scheduling changes. Nearly as many respondents (119) reported calling a family member friend or caretaker under these circumstances.

6 Discussion & Implications for Vermont Veterans

The travel options and behaviors of many veterans are similar to that of the state's population at large. Stakeholders estimated that between 10-20% of veterans face transportation challenges to some degree. These veterans have access to dedicated services for some transportation needs, particularly as they relate to healthcare, but these services are fairly geographically varied. Additionally, since Vermont's veterans are aging faster than the general population, veterans are increasingly likely to have physical disabilities.

The veterans' focus groups covered several veteran specific transportation options including the DAV shuttle system and informal ride-sharing at shared housing facilities. The DAV shuttles were generally rated well in terms of the frequency of van service but focus group participants did note that, because the timing of return trips depended on the when the last rider finished his or her medical appointment, trips to the VA medical facility could take all day.

The survey of disabled veterans also suggested that scheduling challenges could be significant when using the bus and demand-response transit systems. Three of the top five obstacles to using on-demand transit services and two of the top five obstacles to riding a public bus related to schedule or scheduling limitations.

In addition, the survey revealed that infrastructure issues posed challenges for using the bus system and for walking, biking, and using a wheelchair or scooter. These issue included inadequate snow plowing and insufficient or poorly maintained sidewalks and curbs.

As a result of these challenges, more than half of the veteran survey respondents (18 out of 32) reported having to cancel a medical appointment due to an inability to accommodate last minute scheduling changes. Nineteen respondents reported calling a family member friend or caretaker under these circumstances.

7 Pilot Project Implications for future study and development

- Socially inclusive transportation projects require continuous and seamless collaboration among multiple types of agencies (health, veteran, disability, transit, paratransit, taxi) at several scales (state, regional, local) in both the public and private several sectors.
- Fostering knowledge exchange of this caliber poses significant challenges for the Vermont Agency of Transportation as it considers further development of a pilot project. The fundamental first step toward building a tool or service, which includes up-to-date information on scheduling, areas of operation, methods of payment, and rider eligibility, is forming closer relationships across agency types, particularly those whose primary concern is not transportation.
- Designing a comprehensive system goes beyond posting the latest official information. As Lucas (2006) points out, potential partners may not find transparency to be in their interest. A rural taxi service, for example, could see little benefit in outlining its fares alongside public transportation alternatives.
- Certain transportation services have strict qualification requirements. People who self-identify as disabled may not have explicit or up-to-date diagnoses, particularly in cases

where personal circumstances preclude health care visits. In addition, even documenting eligibility oftentimes does not guarantee service, which may be precluded by personal constraints (e.g., the difficulty of wheelchair-bound veteran to travel on the current fleet of DAV vehicles) and institutional constraints (budgets, timing, available fleets, advanced scheduling).

- Organizations are operating at different time scales with different payment models. A comprehensive personal travel planning service would have to contend with personal and organizational factors beyond geography and scheduling. It requires not only transparency, but a willingness to speak the same language during construction of personal transportation planning tool.
- To facilitate personal transportation planning, we suggest that the Vermont Agency of Transportation continue to expand its outreach and engagement with these groups. Lucas (2006) points out that successful integration includes knowledge management, activity management, and community expertise.
- It is clear that what is called for is an integrated policy response to the needs of people with disabilities and the needs of veterans, not just information coordination, but service coordination.

8 References

Battista, G. A., Lee, B. H., Kolodinsky, J., & Heiss, S. (2015). Exploring Transportation Accessibility to Health Care Among Vermont's Rural Seniors. *Transportation Research Record: Journal of the Transportation Research Board*.

Brown, D. M. (2008). *Public Transportation on the Move in Rural America*. Economic Research Service. Retrieved from http://www.nal.usda.gov/ric/ricpubs/publictrans.htm

Brown, D. M., & Stommes, E. S. (2004). Rural Governments Face Public Transportation Challenges and Opportunities. *Amber Waves, 2*(1), 11.

Charmaz, K. (2014). *Constructing Grounded Theory* (Second Edition). Thousand Oaks, CA: SAGE Publications Ltd.

Corbin, J., & Strauss, A. L. (2008). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. SAGE Publications.

Dufresne, K., Raines, C. R., Souffrant, C., & Wohlgemuth, T. K. (2009). *Public Transportation in Vermont: An Assessment of Applicable Methods of Improvement and Funding for Vermont Transportation* (No. PRS Policy Brief 0809-03). Rockefeller Center at Dartmouth College.

Ellis, E. National Research Council (U.S.), Transportation Research Board, Transit Cooperative Research Program, United States, Federal Transit Administration, & Transit Development Corporation. (2013). *Community tools to improve transportation options for veterans, military service members, and their families*. Washington, D.C.: Transportation Research Board.

Fortney, J. C., Owen, R., & Clothier, J. (1999). Impact of travel distance on the disposition of patients presenting for emergency psychiatric care. *The Journal of Behavioral Health Services & Research*, *26*(1), 104–108. http://doi.org/10.1007/BF02287798

Gray, D., Shaw, J., & Farrington, J. (2006). Community transport, social capital and social exclusion in rural areas. *Area*, *38*(1), 89–98.

Iezzoni, L. I., Killeen, M. B., & O'Day, B. L. (2006). Rural Residents with Disabilities Confront Substantial Barriers to Obtaining Primary Care. *Health Services Research*, *0*(0), 060720074824052–??? http://doi.org/10.1111/j.1475-6773.2006.00534.x

Kazis, L., Miller, D., Clark, J., Skinner, K., Lee, A., Rogers, W., … Linzer, M. (1998). Health-related quality of life in patients served by the department of veterans' affairs: Results from the veterans' health study. *Archives of Internal Medicine*, *158*(6), 626–632. http://doi.org/10.1001/archinte.158.6.626

Krueger, R. A., & Casey, M. A. (2000). *Focus Groups: A Practical Guide for Applied Research*. SAGE.

Laferrier, J. Z., McFarland, L. V., Boninger, M. L., Cooper, R. A., & Reiber, G. E. (2010). Wheeled mobility: Factors influencing mobility and assistive technology in veterans and servicemembers with major traumatic limb loss from Vietnam war and OIF/OEF conflicts. *Journal of Rehabilitation Research & Development*, *47*(3), 349–360. http://doi.org/10.1682/JRRD.2009.03.0022

LaVela, S. L., Smith, B., Weaver, F. M., & Miskevics, S. A. (2004). Geographical proximity and health care utilization in veterans with SCI&D in the USA. *Social Science & Medicine*, *59*(11), 2387–2399. http://doi.org/10.1016/j.socscimed.2004.06.033

Litman, T. (2015). Evaluating Household Chauffeuring Burdens: Understanding Direct and Indirect Costs of Transporting Non-Drivers. Presented at the Transportation Research Board 94th Annual Meeting. Retrieved from http://trid.trb.org/view/2015/C/1338639

Lubin, A., & Deka, D. (2012). Role of Public Transportation as Job Access Mode: Lessons from Survey of People with Disabilities in New Jersey. *Transportation Research Record: Journal of the Transportation Research Board, 2277*(-1), 90–97. http://doi.org/10.3141/2277-11

Lucas, K. (2006). Providing transport for social inclusion within a framework for environmental justice in the UK. *Transportation Research Part A: Policy and Practice, 40*(10), 801–809. http://doi.org/10.1016/j.tra.2005.12.005

Mattson, J. W., Urban, S., & Center, R. T. (2012). *Travel Behavior and Mobility of Transportation-Disadvantaged Populations: Evidence from the National Household Travel Survey*. Upper Great Plains Transportation Institute. Retrieved from http://www.ugpti.org/pubs/pdf/DP258.pdf

Mooney, C., Zwanziger, J., Phibbs, C. S., & Schmitt, S. (2000). Is travel distance a barrier to veterans' use of VA hospitals for medical surgical care? *Social Science & Medicine, 50*(12), 1743–1755. http://doi.org/10.1016/S0277-9536(99)00414-1

Morrison, G. M., & Lin, C.-Y. C. (2011). Driving in Force: Why the US Military Commutes by Automobile. Retrieved from http://pubs.its.ucdavis.edu/download_pdf.php?id=1656

National Center for Veterans Analysis and Statistics. (2013). *Profile of Veterans: 2011*. Retrieved from http://www.va.gov/vetdata/docs/SpecialReports/Profile_of_Veterans_2011.pdf

Researchware, Inc. (2013). HyperRESEARCH (Version 3.5.2). ResearchWare, Inc.

Sanchez, T. W., Brenman, M., Ma, J. S., & Stolz, R. H. (2008). *The Right to Transportation: Moving to Equity*. Chicago, IL: APA Planners Press.

Schooley, B. L., Horan, T. A., Lee, P. W., & West, P. A. (2010). Rural Veteran Access to Healthcare Services: Investigating the Role of Information and Communication Technologies in Overcoming Spatial Barriers. *Perspectives in Health Information Management / AHIMA, American Health Information Management Association, 7*(Spring). Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2889372/

U. S. Census Bureau. (2015). Disability Characteristics (S1810). Retrieved July 3, 2015, from http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_13_5YR_S1810&prodType=table

USDA Economic Research Service. (2013). *Rural Veterans at a Glance* (Economic Brief No. 25).

Weeks, W. B., Bott, D. M., Rebecca, P., & Wright, S. M. (2006). Veterans Health Administration and Medicare outpatient health care utilization by older rural and urban New England veterans. *The Journal of Rural Health, 21*(2), 167–171.

West, A. N., Lee, R. E., Shambaugh-Miller, M. D., Bair, B. D., Mueller, K. J., Lilly, R. S., … Hawthorne, K. (2010). Defining "Rural" for Veterans' Health Care Planning. *The Journal of Rural Health, 26*(4), 301–309. http://doi.org/10.1111/j.1748-0361.2010.00298.x

Wilkinson, S. (1998). Focus groups in feminist research: Power, interaction, and the co-construction of meaning. *Women's Studies International Forum, 21*(1), 111–125. http://doi.org/10.1016/S0277-5395(97)00080-0

9 Appendix A: Focus Group Thematic Guide

Thank you all for taking the time to participate in our study. These focus groups will provide valuable insight for policymakers as they examine veterans' transportation issues throughout the state of Vermont.

This discussion will last up to an hour and a half, depending on the sort of topics we uncover. Feel free to take as much time as you need to discuss each question. You may choose to pass on any question you do not like, and you can leave the discussion at any time. Your participation will be held confidential, as will the names of anyone you mention during the discussion. Everything said inside this room stays within the room. Is this okay with everyone? (IF YES, CONTINUE)

Here is a slip with the contact information of me and the project's primary investigator – Dr. Brian Lee (PROVIDE SLIP). You may contact us with your questions and concerns at any time. If you decide after today that you would like to withdraw from the study, let us know and we'd be happy to accommodate you.

Before we begin, I'd like to explain how I envision this discussion moving forward. I'm going to toss out questions, and anyone is welcome to speak up. You're also free to respond to whatever other people say. You may disagree with someone else's opinion, but be respectful and understanding of other points of view. My role is to nudge the conversation forward, especially if it gets off topic. Does everyone agree to this format? (IF YES, CONTINUE)

I have a voice recorder with me today, and I would like to record the discussion with your permission. Everything you say will be kept secure to protect your confidentiality, and we will delete the audio recording after the interview is transcribed. The written transcription will not contain any information identifying you. If you're uncomfortable with this, I'd be happy to write down your answers. Shall we begin? (IF YES, BEGIN)

Suggested Questions / Themes*

General Introductions: First name, Hometown**,** What you're doing this weekend

"Now that we're a little more acquainted, I'd like to know about how you get around, so someone jump in and tell me about the last time you got out of the house. Where did you go? How did you get there?"

(let people build off similar experiences)

"Okay, let's categorize where you travel, starting with the most frequent place."
"How long is your drive to work?"

"Have you guys ever had trouble getting to these places? Weather? Car breaking down? Someone forgot to pick you up?"
"If your car broke down, how would you get to _____?"

"The VA hospital and benefits office are both in White River Junction. Can it be a hassle to get there?"
"Have you ever run into trouble getting to a (VFW, AL, legal, etc.) meeting?"

"Okay, let's categorize how you travel, starting with the most frequent mode."
"Are you aware of bus service? Dial-a-ride?"
"What are you experiences with them?"

"That's a good example. And how does _____ impact transportation / your quality of life?"
Ask for elaboration from an individual and expand to the whole group: "Have any of you had similar experiences?"

"Suppose you were in charge and could make one change…"
"What can be done to help you get around?
"More services? Better services?"

"How often do you use the internet? Would you use it to find a ride?"

*** These questions are a discussion guide, not a concrete script.**

Closing Remarks

We have covered all the major points for today's discussion. Is there anything else you would like to say before we conclude?

Thanks again for taking time out of your day to participate in this discussion. Your insight will go a long way in understand the needs of you and your community. Feel free to take some donuts and coffee on the way out!

10 Appendix B: PTP3 Survey Form

The UNIVERSITY of VERMONT
TRANSPORTATION RESEARCH CENTER

Getting There and Back Again:
Improving transportation for people of all physical abilities

The University of Vermont is conducting this survey with the Vermont Agency of Transportation and the Vermont Statewide Independent Living Council to assess the transportation needs of people with any mobility limiting physical conditions. Your participation is voluntary and your responses will remain confidential. We encourage you to ask questions and discuss this with anybody you think can help you decide to participate. Upon completing the survey, you can enter a raffle for a $100 Visa gift card!

Who should fill out this survey? This is for Vermont residents with any physical conditions that limit their mobility, or their caretakers. You must be 18 years or older to complete the survey. You may be an adult with any physical conditions that limit your mobility. OR you may be an adult family member, friend, or caretaker for a Vermonter (including a minor) with any mobility limiting physical conditions.

What is involved in this survey? There are questions about places you go, your experiences in getting there and back home again, and how you maintain your independence.

What about confidentiality? The survey data will be stored in a secure database, accessible only by the researchers. Any paper records will be destroyed after the data has been transferred to the database.

Contact information: Please contact us (802-656-0566 or transitproject@uvm.edu) with any questions.

Statement of Consent: You have read, or have had read to you, a summary of this survey. Your consent to participate is implied upon its completion. To participate, please proceed to the next section.

Part A) Introductory Questions

A1.	Do you have a physical condition that limits your mobility? *If "No" then SKIP to A5.*	☐ Yes ☐ No
A2.	Are you 18 years of age or over? *If "No" then STOP. You must be 18 or over to participate. Thank you for your time.*	☐ Yes ☐ No
A3.	Do you live in Vermont? *If "No" then SKIP to A5.*	☐ Yes ☐ No
A4.	Are you a veteran?	☐ Yes ☐ No
Please proceed to Part B.		

A5.	Are you a family member, friend, or caretaker of someone who has a physical condition that limits his/her mobility? *If "No" then STOP. Thank you for your time.*	☐ Yes ☐ No
If you care for multiple people with mobility limiting physical conditions, then please ONLY consider the one with whom you spend the most time and respond *for* that person for all remaining questions.		
A6.	Does this person live in Vermont? *If "No" then STOP. Thank you for your time.*	☐ Yes ☐ No
A7.	Is this person 18 years of age or over?	☐ Yes ☐ No
A8.	Is this person a veteran?	☐ Yes ☐ No

Part B) Physical Conditions

B1. Do you have a physical condition that limits your ability to: *(check any that apply)*

- ☐ Walk on level ground
- ☐ Step on/off the curb
- ☐ Reach with your arms
- ☐ Stand for more than 10 minutes
- ☐ Lift/carry personal items (e.g., backpack, purse, groceries)
- ☐ Walk on a hill
- ☐ Climb stairs
- ☐ Get up from a seated position
- ☐ Go to a doctor's appointment by yourself
- ☐ Other: (please explain) _____

REMINDER: If you are a caretaker, then please respond *for* the person with the physical conditions.

B2. Are you able to drive a vehicle? *(choose only one)*

☐ Yes, I can drive any vehicle ☐ Yes, but I can only drive an adapted vehicle ☐ No

B3. Do you or your household own, lease, or have access to a vehicle regularly? *(choose only one)*

☐ Yes, I/we own/lease a vehicle and I can drive it myself.
☐ Yes, I/we own/lease a vehicle but I not able to drive it.
☐ Yes, I/we have access to a vehicle regularly but I/we do not own/lease it.
☐ No.

B4. Can you ride on a public bus if it gets you to where you want to go? *(choose only one)*

☐ Yes, I can ride in any bus.
☐ Yes, but only with a wheelchair lift.
☐ I do not know.
☐ No. Please explain why not: _____

B5. Can you access public bus service near your home? *(choose only one)*

☐ Yes, and I ride the bus year-round.
☐ Yes, but I only ride during certain months.
Which months & why? _____
☐ Yes, but I do not ride the bus.
Why not? _____
☐ No, there is no bus access near my home.

Part C) Your Travels

C1. On average in this past winter (December 2014 to March 2015), how often did you leave your home for the following reasons? *(choose only one for each reason)*

	5+ times a week	3-4 times a week	1-2 times a week	2-3 times a month	Once a month or less	I did not go out for this
Work for pay	☐	☐	☐	☐	☐	☐
Attend school	☐	☐	☐	☐	☐	☐
Medical appointment	☐	☐	☐	☐	☐	☐
Personal (shopping, social)	☐	☐	☐	☐	☐	☐

C2. During this past winter when you left your home for the following reasons, what mode(s) of transportation did you use? *(check any that apply)*

	Walk, bicycle, wheelchair, or scooter	Public bus	On demand transit (Dial-A-Ride, DAV)	Private car (drove or got ride)	I did not go out for this
Work for pay	☐	☐	☐	☐	☐
Attend school	☐	☐	☐	☐	☐
Medical appointment	☐	☐	☐	☐	☐
Personal (shopping, social)	☐	☐	☐	☐	☐

C3. In this coming summer, do you expect to leave your home more or less often compared to this past winter for the following reasons? *(choose only one for each reason)*

	More often	No change	Less often
Work for pay	☐	☐	☐
Attend school	☐	☐	☐
Medical appointment	☐	☐	☐
Personal (shopping, social)	☐	☐	☐

Part D) Mode Specific Travel (You may SKIP D1, D2, or D3 if you did not use the travel modes specified.)

D1. If you walked, bicycled, or used a wheelchair or scooter during this past winter (**see C2**), then what obstacles, if any, did you face while getting around in these ways? *(check any that apply)*

- ☐ Safety/travel information not adapted for my needs (Braille signs, beeping, flashing signals)
- ☐ Traffic light time too short to cross
- ☐ Problems with curbs, stairs, or grades
- ☐ Lighting inadequate, difficult to see/be seen
- ☐ Insensitive/unaware drivers
- ☐ Surface problems (potholes or cracks)
- ☐ Too close to moving vehicles or not enough space for passing
- ☐ Too few/missing sidewalks, paths, crosswalks
- ☐ Inadequate snow plowing or deicing
- ☐ I did not experience any of these obstacles
- ☐ Other: (please explain) _____

D2. If you rode the public bus during this past winter (**see C2**), then what obstacles, if any, did you experience riding the bus? *(check any that apply)*

- ☐ Safety/travel information not adapted for my needs (Braille signs, beeping, flashing signals)
- ☐ Lighting inadequate, difficult to see/be seen
- ☐ Too few/missing sidewalks, paths, crosswalks
- ☐ Inadequate plowing/deicing at bus stop
- ☐ Inadequate or lack of bus stop shelter
- ☐ Bus schedule not reliable
- ☐ Bus does not run when needed
- ☐ Driver/staff assistance or sensitivity poor
- ☐ Boarding or exiting problems
- ☐ Purchasing fare difficult
- ☐ Crowding or inadequate seating space
- ☐ Insensitive/unaware passengers
- ☐ I did not experience any of these obstacles
- ☐ Other: (please explain) _____

D3. If you used on demand transit (Dial-A-Ride, DAV) during this past winter (**see C2**), then what obstacles, if any, did you experience with these rides? *(check any that apply)*

- ☐ Cannot schedule repeating trips (e.g., trips at the same time each day)
- ☐ Service not available when needed
- ☐ Home pickup schedule not kept or long waits
- ☐ Return-to-home pickup schedule not kept or long waits
- ☐ Missed return-to-home pickup
- ☐ Cost is too high
- ☐ Scheduling staff assistance or sensitivity poor
- ☐ Insensitive/unaware driver
- ☐ Crowding or inadequate seating space
- ☐ Vehicle in poor mechanical condition
- ☐ Vehicle not wheelchair accessible
- ☐ I did not experience any of these obstacles
- ☐ Other: (please explain) _____

Part E) Making Travel Plan Changes

E1. Consider situations when you had to make a last minute, day-of change to a medical appointment while still at home. What have you done to accommodate such a change? *(check any that apply)*

- ☐ Called family member, friend, or caretaker to reschedule or get a ride
- ☐ Called taxi cab to reschedule or get a ride
- ☐ Called on demand transit to try to reschedule
- ☐ Took earlier/later public bus
- ☐ Went to appointment early and waited
- ☐ Drove myself, had flexibility to go any time
- ☐ Walked, used wheelchair or scooter, or biked
- ☐ Canceled my appointment
- ☐ I have not been in such situations
- ☐ Other: (please explain) _____

E2. Consider situations when you had to accommodate a last-minute change to your plans to return home while you were out. What has worked to get you home? *(check any that apply)*

- ☐ Called family member, friend, or caretaker to reschedule or get a ride
- ☐ Called taxi cab to reschedule or get a ride
- ☐ Called on demand transit to try to reschedule
- ☐ Took earlier/later public bus
- ☐ Waited for my pre-arranged ride
- ☐ Drove myself, had flexibility to go any time
- ☐ Walked, used wheelchair or scooter, or biked
- ☐ I have not been in such situations
- ☐ Other: (please explain) _____

Part F) You and your community

REMINDER: If you are a caretaker, then please respond *for* the person with the physical conditions.

F1. How do you access to the internet? *(check any that apply)*

- ☐ At home
- ☐ At work or school
- ☐ At home of family or friends
- ☐ At a public place (e.g., library, cafe, etc.)
- ☐ On a cellular network with a mobile device (e.g., smartphone, tablet)
- ☐ I do not have access to the internet

F2. Do you have a cell phone or smartphone with a data plan? *(check any that apply)*

☐ Cell phone ☐ Smartphone with a data plan ☐ Neither

F3. How do you get information on your transportation options? *(check any that apply)*

- ☐ Use paper schedules and information
- ☐ Get information in person (e.g., at bus stop, from driver)
- ☐ Use websites by transit providers or other public agencies
- ☐ Call transit providers or other public agencies
- ☐ Ask family member, friend, or caretaker
- ☐ From organizations to which I belong
- ☐ Other: (please explain) _____

F4. What is your zip code? ☐☐☐☐☐

F5. What is your age? *(choose only one)*

☐ Under 18 ☐ 18-25 ☐ 26-35 ☐ 36-45 ☐ 46-55 ☐ 56-65 ☐ 65 Plus

F6. What is your living arrangement? *(check any that apply)*

- ☐ Alone
- ☐ With spouse or significant other
- ☐ With child(ren)
- ☐ With parent(s)/guardian(s)
- ☐ In a group home
- ☐ With housemates
- ☐ I do not have a consistent living arrangement

F7. What is your highest completed education level? *(choose only one)*

- ☐ Some high school
- ☐ High school degree
- ☐ Some college
- ☐ 2-year college degree
- ☐ 4-year college degree
- ☐ Graduate degree

F8. What is your total combined income for all persons living in your household for the past 12 months? *(choose only one)*

- ☐ Less than $15,000
- ☐ $15,000 to $30,000
- ☐ $30,000 to $45,000
- ☐ $45,000 to $60,000
- ☐ $60,000 to $75,000
- ☐ $75,000 to $90,000
- ☐ $90,000 to $105,000
- ☐ $105,000 to $120,000
- ☐ Above $120,000

THANK YOU for Completing the Survey!

If you have anything else that you would like to share with us, then please do so in this space.

Enter in a Raffle to Win a $100 Visa Gift Card

To enter, please provide both your home AND email addresses. This information will not be stored with your survey data and it will not be shared with anyone else. We will contact you if you are a winner!

Name: _____ Email Address: _____

Street Address: _____

City/Town: _____ State: _____ Zip Code: _____

PLEASE Use the Pre-Paid Envelope to Return the Completed Survey.