

Driver to Non-Driver Transitions: Related Health, Mobility, and Safety Outcomes

Final Report

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16. Abstract

The transition from driver to non-driver is critical in later life for older adults' health and mobility, yet little is known about how its impacts vary by geography, demographic characteristics, and whether driving stops gradually or abruptly. This study examined the health and mobility outcomes of driving cessation among older adults, with particular attention to Wisconsin's diverse urban and rural contexts, in order to inform state transportation policy related to non-drivers. The research used an integrated mixed-method approach combining longitudinal analysis of the Health and Retirement Study, travel-behavior analysis of the National Household Travel Survey, semi-structured interviews with Wisconsin transportation professionals, and a structured review of federal programs and peer-state practices. Quantitative results showed that driving cessation was predicted most strongly by advancing age, poor health, cognitive decline, and depressive symptoms, yet no to little association with social isolation. Both gradual and abrupt transitioners experienced poorer self-rated health, more chronic conditions, higher depression, and notably lower physical activity than continuous drivers, with abrupt transitions generally being more harmful. Approximately 34% of older adults appear to self-control their driving to shorter distance when they are aware of their health conditions. Non-drivers also made fewer and shorter trips, and rural residents traveled the longest distances for essential needs. Interviews confirmed these patterns and identified persistent gaps in service coverage, funding stability, volunteer-driver capacity, broker performance, and program information across the state. The study concludes that supporting non-drivers requires treating transportation access as a foundational component of healthy aging, and recommends that Wisconsin should strengthen regional coordination, protect volunteer driver programs, improve oversight of its non-emergency medical transportation broker, consolidate program information, and increase and sustain funding for non-driver mobility services.

17. Key Words

Older adults, driver-to-non-driver transition, driving cessation, non-drivers, trip purpose, travel behavior, mobility, urban, rural, paratransit, volunteer driver program

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Executive Summary

For the majority of adults in the United States, mobility and quality of life are closely related to the ability to drive, since the majority of communities lack public transportation that is sufficient, safe, and reliable enough to meet everyday travel needs (Cevallos et al., 2010; Kim, 2011; Musselwhite & Haddad, 2010). As a result, many older adults continue driving well beyond the point of safety (National Highway Traffic Safety Administration & American Society on Aging, 2007). Driving cessation among older adults eventually occurs due to age-related declines in cognition, vision, and motor functions (Ang et al., 2019; Dellinger et al., 2001; Skyving et al., 2021; Wood et al., 2023). The cessation may happen gradually through self-regulation or abruptly, often caused by an acute medical event or a cognitive diagnosis.

The research study focuses on the impact of transitioning from driver to non-driver on the mobility, health, and well-being of an individual, and the variation of these impacts based on geography, demographic characteristics, and the condition under which an individual stops driving. The study examines this variation along with determining how these differences shape the mobility needs and support strategies within Wisconsin. This gap is particularly important for Wisconsin, where dense urban centers coexist with remote rural communities and where harsh winters can further complicate mobility. This study was undertaken to address that need by generating both national-scale evidence and Wisconsin-specific insight to inform transportation policy and practice. This study considers the diverse transportation contexts across Wisconsin, including Tribal lands, recognizing that older adults living in Tribal communities may experience unique mobility challenges and transportation needs.

Research Approach: The study used an integrated mixed-method design informed by a social-ecological framework, which interprets the transition to non-driving as a context-dependent process shaped by individual, community, and structural factors. Three lines of complementary evidence were used. The quantitative component was based on two national datasets. The National Household Travel Survey (NHTS) provided detailed household travel-behavior data, allowing analysis of trip frequency, purpose, and distance across driver-status groups and residential contexts. The Health and Retirement Study (HRS), a nationally representative longitudinal survey of U.S. adults aged 50 and older, provided individual-level longitudinal data on driving status, health, cognition, and psychosocial well-being for adults aged 65 and older. Using its longitudinal

driving behavior data, this study analyzes who stops driving and what happens to their health afterward. HRS data were examined using multilevel discrete-time survival analysis and logistic and linear regression, while the NHTS data were examined using descriptive travel-behavior comparisons and multinomial logistic regression models.

The qualitative component consisted of eleven semi-structured interviews with Wisconsin-based transportation professionals (public transit operators, paratransit providers, and planners) to triangulate the quantitative findings, identify institutional knowledge not captured in secondary data, and inform the policy recommendations. The study also reviewed federal funding programs (FTA Section 5310 and OAA Title III-B) and specialized senior transportation services in Wisconsin, in peer states with comparable demographics, and in national benchmark states recognized for their senior mobility strategies. A comparative analysis of urban, suburban, and rural contexts, along with a distinction between gradual and abrupt transition, was carried out.

Key Findings:

NHTS Analysis: Travel Behavior and Driver-Status Classification

Method: A sample of 4,182 adults aged 65 and older was classified into four groups, i.e., healthy drivers (n = 3,239), health-limited drivers without restrictions (n = 455), health-limited restricted drivers (n = 225), and health-limited non-drivers (n = 263). Descriptive statistics were combined with a multinomial logistic regression of driver-status classification.

Descriptive results. Non-drivers were the most disadvantaged group: women comprised 69% of non-drivers versus 50% of healthy drivers, and 27% of non-drivers reported household income below \$25,000 versus 7% of healthy drivers. Non-drivers also made the fewest trips, averaging 5.7 trips per person per week against 15.6 for healthy drivers, and traveled shorter distances (median 2.4 versus 4.0 miles). Grocery trips dominated travel for every group, ranging from 31% of weekly trips among healthy drivers to 42% among restricted drivers. Rural travel distances were consistently longer, i.e., the mean grocery-trip distance reached 8.8 miles in rural areas versus 3.1 miles in urban areas, and the mean work-trip distance rose from 9.5 to 19.6 miles.

Econometric modeling results. The multinomial logistic regression found the sharpest contrasts for non-drivers. Being male and having more household vehicles were associated with a markedly lower relative risk of being a non-driver, whereas older age, larger household size, and lower educational attainment were associated with a higher relative risk of being a non-driver, compared

with being a healthy driver. Individuals with higher household incomes were less likely to be classified as non-drivers than as healthy drivers.

HRS Analysis I: Predictors of Driving Cessation

Method: A multilevel discrete-time survival model was estimated for 7,442 adults aged 65 and older who were active drivers in 2006, with hazard ratios (HR) and 95% confidence intervals reported for each covariate.

Results: Increasing age was the strongest predictor: each additional year raised the hazard of cessation by 9%. Non-Hispanic Black older adults faced a 39% higher hazard than non-Hispanic White adults, while Hispanic and non-Hispanic Other groups did not differ significantly. Each \$10,000 increase in household income lowered the hazard by 4%. Among health predictors, poor self-rated health, greater depressive symptoms, and lower cognitive function each independently increased cessation risk. Educational attainment, living alone, neighborhood socioeconomic status, and urbanicity were not statistically significant after adjustment. Descriptive comparisons further showed that Wisconsin residents who stopped driving were older and lower-income than their Midwest and national counterparts.

HRS Analysis II: Health and Well-Being After Cessation

Method: Logistic regression (binary outcomes) and linear regression (continuous outcomes) compared four driving-trajectory groups: gradual transitioners (n = 1,059), abrupt transitioners (n = 370), continuous drivers (n = 4,667), and continuous non-drivers (n = 1,534), over a ten-year follow-up. Each model was estimated twice, using continuous drivers and then continuous non-drivers as the reference group.

Results: Relative to continuous drivers, both transitioner groups showed significantly worse outcomes. Transitioners also reported more chronic conditions and higher depressive symptoms. The largest effect was for physical activity, which declined sharply in both groups. When continuous non-drivers served as the reference, the differences in poor health, chronic disease, and depression were no longer significant, indicating that the health of the transitioning older adult converges with the established non-driver population, but physical activity remained significantly lower.

Wisconsin Context and Interview Results: The interviews strongly supported the quantitative evidence and added depth specific to Wisconsin. Respondents uniformly described the loss of driving as harmful to physical and mental health, a contributor to social isolation, and a constraint

on independence and employment. They confirmed that abrupt transitions are more damaging than gradual ones, largely because abrupt transitioners must rapidly learn an unfamiliar and fragmented system of transportation options, and that rural non-drivers face the most severe barriers due to long travel distances, limited services, and difficult winter conditions.

Examining Wisconsin's programs, respondents found that public transit works well where it exists but is constrained by geographic and temporal coverage gaps, funding pressures, and the absence of regional transit authorities to coordinate service across jurisdictions. Paratransit and volunteer driver programs were described as most critical and often the only option in rural and tribal communities, yet they are increasingly strained by funding instability, rising costs, a shrinking volunteer pool, and burdensome insurance treatment of volunteer drivers. Respondents also identified consistent problems in the performance of the state's non-emergency medical transportation broker and persistent information gaps that prevent non-drivers from learning about and accessing the services available to them.

The findings reflect the diverse geographic contexts of Wisconsin, including urban, suburban, rural, and Tribal communities, where transportation challenges and mobility needs may differ substantially.

Recommendations: The findings together demonstrate that the transition from driver to non-driver status is both a mobility issue and a broader public health and community accessibility concern. Although this study focused primarily on older adults and individuals with disabilities, people may also become non-drivers because of limited access to a vehicle, financial hardship, personal choice, legal restrictions, or other circumstances. These groups may experience many of the same barriers to employment, healthcare, essential services, and community participation. However, the recommendations presented here are guided principally by the study's evidence on aging-related driving reduction and cessation.

As Wisconsin's older adult population grows, more residents will face driving cessation or reduction. Although the state offers diverse mobility options for non-drivers, gaps in geographic coverage, hours of service, and accessible information, as well as the need to protect the services that already operate, are essential to support healthy aging, community participation, and quality of life across both urban and rural communities. These recommendations call for a coordinated statewide approach to improving transportation for non-drivers by strengthening regional

collaboration, protecting volunteer driver programs, improving oversight of the state non-emergency medical transportation broker, consolidating transportation information systems, increasing funding for underserved rural and tribal communities, and making non-driver needs a formal part of future transportation planning. Together, they aim to expand access, reduce service silos, improve program usability, support volunteer-based transportation, and create a more stable and equitable transportation system for people who cannot drive.

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List of Acronyms

AAA	-	Area Agency on Aging
ACL	-	Administration for Community Living
ADA	-	Americans with Disabilities Act
ADRC	-	Aging and Disability Resource Center
AIC	-	Akaike Information Criterion
ASA	-	American Society on Aging
ATP	-	Wisconsin Active Transportation Plan 2050
BPSOS	-	Boat People SOS
CAMPO	-	Capital Area Metropolitan Planning Organization
CARS	-	Call A Ride of Southlake
CARTS	-	Capital Area Rural Transportation System
CES-D	-	Center for Epidemiologic Studies Depression Scale
CHTS	-	California Household Travel Survey
CI -	-	Confidence Interval
COG	-	Council of Governments
COVID-19	-	Coronavirus Disease 2019
CTA	-	Chicago Transit Authority
CUATS	-	Chattanooga Urban Area Transportation Study
DART	-	Dallas Area Rapid Transit / Des Moines Area Regional Transit Authority
DHS	-	Department of Health Service
DOT	-	Department of Transportation
DRT	-	Demand-Responsive Transit
FHWA	-	Federal Highway Administration
FTA	-	Federal Transit Administration
GATRA	-	Greater Attleboro Taunton Regional Transit Authority
GED	-	General Educational Development
HCBS	-	Home and Community-Based Services
HR -	-	Hazard Ratio

HRS	- Health and Retirement Study
LFB	- Wisconsin Legislative Fiscal Bureau
LLR	- Log-Likelihood Ratio
MBTA	- Massachusetts Bay Transportation Authority
MDOT	- Maryland Department of Transportation
MPO	- Metropolitan Planning Organization
MTM	- Medical Transportation Management, Inc.
MWCOG	- Metropolitan Washington Council of Governments
NCDOT	- North Carolina Department of Transportation
NEMT	- Non-Emergency Medical Transportation
NEWCAP	- Northeast Wisconsin Community Action Program
NHTS	- National Household Travel Survey
NHTSA	- National Highway Traffic Safety Administration
OAA	- Older Americans Act
OATA	- Older Adult Transportation Assistance
OR -	- Odds Ratio
RSVP	- Retired and Senior Volunteer Program
RRR	- Relative Risk Ratio
RTA	- Regional Transit Authority
SETHRA	- Southeast Tennessee Human Resource Agency
SMART	- South Metro Area Regional Transit
SMILES	- Senior Miles
STAR	- Senior Transportation Service
STS	- Social Transportation for Seniors
TAP	- Transportation Alternatives Program
TAT	- Thumb Area Transit
TDOT	- Tennessee Department of Transportation
USDOT	- United States Department of Transportation
WisDOT	- Wisconsin Department of Transportation

1 Introduction

1.1 Background

For any individual, regardless of age, maintaining quality of life depends on having continuous mobility (Kim, 2011), not only to access resources that satisfy their basic needs but also to have control over their lives and remain independent (Musselwhite & Haddad, 2010). However, mobility largely depends on driving, as most U.S. cities lack sufficient, safe, and reliable public transportation to meet individuals' travel needs (Cevallos et al., 2010). Hence, most adults perceive a car as synonymous with transportation and continue driving well beyond the point of safety; on average, 7 to 10 years longer than medically advised, as they age (NHTSA & ASA, 2007). Specific driving maneuvers, such as left turns and negotiating intersections, become more demanding due to declines in cognitive and motor functions (Skyving et al., 2021). In response, many older drivers adopt self-regulation strategies, such as avoiding nighttime driving or high-traffic areas, as a gradual transition toward non-driving. In some cases, however, driving cessation is more abrupt, especially when prompted by the onset of disease. For instance, approximately 6.7 million adults aged 65 and older in the U.S. were living with Alzheimer's disease or other dementias in 2024. Individuals with cognitive disabilities, such as Alzheimer's, typically stop driving within three years of diagnosis (Breen et al., 2007). Whether gradual or sudden, eventually, older adults cease driving due to age-related declines in cognition, vision, and motor function.

Regardless of the cause of driving cessation, the transition to non-driving has substantial implications for individuals' mobility, safety, and overall quality of life. Research consistently shows that adults who stop driving experience increased risks of social isolation, depression, and reduced access to essential services, especially in rural areas where alternative transportation options are limited. However, less is known about how the impacts of driving cessation vary by geography, demographic factors, and the circumstances under which individuals stop driving, whether gradually or suddenly. While prior research highlights the negative effects of sudden driving cessation, the degree and nature of these outcomes can differ significantly depending on where individuals live, their access to mobility services, socioeconomic status, and the level of social support they receive. In Wisconsin, where geographic diversity includes dense urban centers and remote rural communities, mobility transitions must be understood within individual and social

context, whether a person gradually self-regulates driving or abruptly stops due to a medical event, which will eventually affect both immediate and long-term outcomes.

1.2 Research Objectives

The study has addressed five main objectives:

- i. Assess the health and mobility impacts of transitioning from driver to non-driver status for all individuals, with special emphasis on older adults and individuals with disabilities.
- ii. Identify individual-level and contextual factors (e.g., age, social support, residential environment) that affect non-driver transitions and their outcomes, such as healthcare, physical activity, and mental health over time.
- iii. Examine differences in mobility and health outcomes across diverse geographic contexts (urban, suburban, rural) in Wisconsin and comparable states.
- iv. Synthesize evidence from pilot projects and community-based mobility programs to identify effective and scalable strategies to support Wisconsin drivers' transition to non-driving.
- v. Provide data-driven policy recommendations tailored to Wisconsin's demographic and infrastructure context to enhance aging in place and safe mobility for non-drivers.

1.3 Research Approach

The study used an integrated approach, including longitudinal databases, geospatial analysis, and a review of existing programs to examine the safety, mobility, and health consequences for older adults transitioning from driver to non-driver status. This approach was structured around five sequential yet interconnected objectives, ensuring that findings were built systematically toward actionable outcomes. Quantitative analyses of longitudinal health and mobility data captured individual-level changes over time, while geospatial methods were used to compare urban, suburban, and rural contexts in Wisconsin and comparable states. Additionally, semi-structured interviews were conducted with key stakeholders to gather qualitative insights into non-driver contexts and to determine their transportation needs in Wisconsin. The interviews explored the unique obstacles faced by non-drivers across various contexts such as health, mobility, and safety, as well as the opportunities available to address them. Together, these components formed a cohesive analytical framework that connected individual experiences, geographic contexts, and policy-level applications. The comprehensive approach produced findings relevant to both Wisconsin's specific demographic and infrastructure landscape and broader conversations on safe, equitable mobility for aging and disabled populations.

2 Literature Review

2.1 Non-Driving Transitions and the Impacts

This chapter first reviews the state-of-the-art related to mobility transitions in the U.S. Driving is widely considered a medium of independence and community participation in the U.S., where car-dependent infrastructure makes the use of a personal vehicle the dominant mode of transportation for all adults (Pristavec, 2018; Qin et al., 2020). The transition from driver to non-driver for older adults and individuals with disabilities is often an unavoidable life event with significant health, psychological, and social consequences. Several important factors influence the transition from being a driver to becoming a non-driver among older adults. Research identifies six major categories affecting this transition, including physical health, psychological health, social or interpersonal influences, sociodemographic characteristics, and transportation policies (Maliheh et al., 2023).

Physical fitness and mental well-being play a critical role, as declining health conditions, depressive symptoms, and cognitive impairments can reduce an individual's confidence and ability to drive safely (Ang et al., 2019 ;Wood et al., 2023). Longitudinal evidence from earlier studies indicates that even subtle cognitive decline, which is detectable before clinical dementia, has a stronger association with driving cessation than age or biological indicators of Alzheimer's disease (Babulal et al., 2024). Functional limitations, vision impairment, and the use of medications that affect alertness or reaction time are also important factors leading to driving cessation (Dellinger et al., 2001). For individuals with disabilities, particularly those acquiring mobility impairments later in life, the decision to stop driving is often shaped by accessibility constraints and the availability of adaptive equipment rather than by aging alone (Remillard et al., 2022). Several studies found that driving cessation nearly doubled the risk of depressive symptoms among older adults in comparison to those who continue driving, even after adjustment for demographic and baseline health factors, followed by increased depression, anxiety, pain interference, and fatigue, along with declines in self-reported physical functioning (Chihuri et al., 2016; Ragland et al., 2005).

Social interactions and the level of support available from family, friends, and communities also strongly affect how individuals adapt to driving cessation. Additionally, factors such as age, sex, particularly being female, and financial stability contribute to the likelihood of transitioning to non-driving status. It is associated with declines in productive and social engagement, including reduced participation in volunteering, religious activities, and informal visits with friends and family (Curl

et al., 2014). Cheng & Roque (2025) estimated that driving cessation was associated with a 33.6% increase in the probability of cognitive impairment or dementia, and that social support from friends, in particular, partially attenuated this risk.

Access to alternative transportation options is another key determinant, as individuals living in areas with limited transit services, especially rural communities, often face greater challenges because they must travel longer distances and have fewer mobility alternatives (Stinchcombe et al., 2025). Despite the growing availability of ride-hailing services, paratransit, and community shuttle programs, evidence suggests that alternative transportation has not been able to fully compensate for the loss of a personal vehicle. Older adults are not usually confident in their ability to identify or use alternative transportation after cessation, and few of them engage in planning. Even among older adults who do access alternative modes, declines in fatigue and short-term social engagement persist following cessation (Mielenz et al., 2024).

Individuals with disabilities face a distinct but overlapping set of challenges when navigating life as a non-driver, categorized by a lower trip rate, particularly for social purposes. People with mobility disabilities encounter persistent barriers related to the availability, accessibility, safety, and advance-planning requirements of paratransit and public transportation, where the divided federal policy adds to the gaps in services (Remillard et al., 2022). These structural challenges mean that the loss of a personal vehicle does not affect all non-drivers equally, and rural residents, those with limited income, or those with mobility impairments often experience the most acute reductions in community participation.

2.2 Practices and Mobility Options for Non-Driving Populations

The study explores practical strategies, policies, and mobility options available to non-driving older adults across different states, cities, and counties, with particular attention to the differences between urban and rural settings and what these differences mean for the options and challenges faced by non-drivers. We also identify federally funded programs designed to enhance mobility for older adults and individuals with disabilities, analyzing how these funds have been implemented across diverse geographic contexts to highlight best practices, innovative approaches, and regional variations in transportation service delivery. Collectively, this review recognizes critical gaps in service that can intensify mobility restrictions, social isolation, and adverse health outcomes, especially in underserved rural communities, and establishes the empirical foundation for the analyses and policy recommendations presented in subsequent chapters.

The differences in transportation services for senior adults and individuals with disabilities have been observed across three contexts: Federal Transit Administration (FTA) Section 5310 funding allocation, the Older Americans Act (OAA) Title III-B funding, and geographical characteristics. To understand how FTA Section 5310 funds are used to enhance mobility of older adults and individuals with disabilities across different geographic area, states receiving this funding for large urbanized, small urbanized, and rural areas were selected. Priority was given to states that provided complete descriptions of fund allocations to specific programs by designated recipients, enabling meaningful comparisons.

2.2.1 FTA Section 5310 Program

FTA Section 5310 "Enhanced Mobility of Seniors & Individuals with Disabilities" funds are allocated to state transportation departments, local government agencies, and non-profit organizations to address transportation gaps by funding the creation and growth of specialized services that non-drivers rely on for community mobility.

The funds are distributed in proportion to the number of elderly and disabled individuals in urban and rural areas. It is required that more than 55 percent of the allocated funds must be used for traditional projects, such as purchasing vehicles, transit information systems, wheelchairs, and ramps. In contrast, less than 45 percent of allocated funds must be used for non-traditional projects, such as travel training, volunteer driver programs, and signage improvements. This ensures that the basic transportation infrastructure required to support accessibility is consistently strengthened, which is particularly important in rural areas, where ADA accessible vehicles and basic accessibility equipment are key components of good mobility service.

In fiscal year 2024-25, Wisconsin received two Section 5310 funding allocations: \$2,416,243 for small urbanized areas with populations of 50,000 to 199,999, and \$2,506,449 for rural, or nonurbanized, areas. These funds support transportation services for older adults and individuals with disabilities. Wisconsin itself allocated \$15,977,800 for county assistance program to aid county transportation services, \$1,070,500 for purchase of vehicle and mobility management and \$435,600 for tribal elderly transportation program. The specialized assistance funding was combined with the section 5310 funding to create grant opportunities for public and private non profit organizations. However, 43.9% of the project remained unfunded under this program along with no vehicle expansion purchase projects due to limited available funding. Thus, Section 5310

funding has a greater impact on vehicle capital projects which are relatively in high demand in Wisconsin. (Wisconsin Legislative Fiscal Bureau [LFB], 2025).

Table 2-1 summarizes differences in transportation service programs for older adults and individuals with disabilities between urban and rural areas, funded by Section 5310, with examples from six states: Illinois, Washington, North Carolina, Tennessee, Wisconsin, and Maryland. We categorized geographical areas into urban, suburban, and rural regions based on the criteria of Census Bureau as follows:

- Urban area: high levels of development satisfying minimum housing unit density requirements, i.e., at least 2,000 housing units or 5,000 inhabitants.
- Suburban area: area that does not belong to both urban and rural, lower density than urban area, a larger ratio of single-family homes to apartments, (defined by U.S. Department of Justice), driveway density 10-30/mile (defined by Texas Department of Transportation)
- Rural area: fewer than 2000 housing units or 5000 inhabitants.

The categorization of rural and urban areas in any states helps review variability in the use of the same funds across different geographical areas within a state and between states.

Table 2-1: FTA Section 5310 Funded Transportation Services: Urban vs. Rural Differences

Aspect	Urban	Rural
Fund management	Regional authority, Metropolitan Planning Organizations or Council of Governments (e.g., RTA in Chicago, MWCOG in Washington, GoRaleigh & CAMPO in Raleigh-Cary)	State Department of Transportation, in collaboration with regional planning and local transit agencies (e.g., MDOT, TDOT)
Uses	Operating assistance, mobility management, and expansion of existing services (e.g., Chicago: CTA real-time digital displays)	Maintenance and operation of existing services by fleet replacement and expansion of volunteer driver programs (e.g., Wisconsin: vehicle replacements in Buffalo, Walworth, Monroe; Tennessee: Volunteer Assisted Transportation mileage reimbursement in rural west, northeast and rural Greene county)
Types of Services	Fixed route and paratransit services with emphasis on high-density coverage (e.g., Washington: BPSOS RISE-TRANS project combining MetroAccess, taxis, and rideshare)	Demand-responsive and community-based services (e.g., Tennessee: SETHRA rural demand-response trips)

Mobility management	Trip planning, coordination across multiple providers, and integration with regional services	Supporting volunteer drivers, outreach, and maintaining existing service (e.g., Wisconsin – NEWCAP mobility management initiatives)
Innovative approach	Use of digital tools, real-time information systems, and partnerships with ridesharing services (e.g., Chicago: CTA audio-enabled digital displays; Washington: Uber/Lyft integration)	Operational efficiency through fleet upgrades, volunteer-supported solutions, and flexible service delivery (e.g., Tennessee: ridesharing programs explored in the CUATS Lee Highway route)
Collaboration	Nonprofits, municipalities, and regional agencies (e.g., Chicago: Clearbrook, CTF Illinois)	Primarily with local nonprofits, private service agencies, and volunteers (e.g., Tennessee: Emory Valley, Hilltoppers, Thrive 55+)

In urban areas, characterized by higher population densities and developed transportation infrastructure, the Section 5310 program often focuses on capital projects, such as purchasing accessible vehicles and developing mobility management systems. The focus is on the expansion of existing fixed-route services, along with the use of innovative approaches to improve senior transportation services. Conversely, rural areas face unique challenges due to lower population densities and limited transportation infrastructure. The Section 5310 program in these regions often emphasizes providing operating assistance to support the delivery of basic transportation services. This support is crucial to maintaining existing transportation services essential to seniors and individuals with disabilities, who may otherwise have limited access to transportation. Furthermore, rural areas may struggle to meet local match requirements for federal programs due to limited financial resources, which can limit their ability to leverage federal funds effectively.

2.2.2 OAA Title III-B Program

The Older Americans Act (OAA) states the provision of health and social services for adults aged 60 years and older, including transportation, meals, caregiver support, long-term care oversight, and protection against abuse, neglect, and exploitation. The Older Americans Act (OAA) Title III-B establishes a framework for Area Agencies on Aging (AAAs) to provide a variety of home and community-based services (HCBS) for older adults, including transportation. Title III-B is the primary source of funding for transportation services provided by AAA, covering both medical and non-medical transportation. AAAs are essential participants in initiatives to create coordinated transportation systems at the local level because of their roles as planners and advocates, as well as their ability to identify coverage gaps. The Administration for Community Living (ACL) allocates

funds to state aging and disability agencies based on the proportion of the population that is senior adults, and these funds are subsequently awarded to local AAAs responsible for planning, coordinating, and implementing transportation services that meet the specific needs of communities. In FY 2024, Wisconsin received \$7,447,891 in supportive services funding (which includes both assisted and general transportation service for older adults) out of a \$28,450,592 total Title III allocation, placing it ahead of Minnesota (\$6,830,100) and well ahead of Iowa (\$4,171,008), though behind Michigan (\$12,347,441), which received the largest Supportive Services allotment in the region (Administration for Community Living [ACL], 2024). Across the four states, Supportive Services accounts for roughly 26–27% of each state's total Title III award, meaning transportation competes with case management, homemaker services, adult day care, and legal assistance for the same pool of funding.

Table 2-2 summarizes differences in transportation services provided by various Area Agencies on Aging across urban and rural contexts.

Table 2-2: OAA Title III-B Funded Transportation Services: Urban vs. Rural Differences

Aspect	Urban	Rural
Collaboration entity	Works with larger transit agencies or city DOTs (e.g., Los Angeles DOT with Aging's CityRide/paratransit; NYC DOT working with NYC aging)	Works through local providers, senior centers, volunteer drivers (e.g., Coastal Bend AAA using local/rural providers; Egyptian AAA coordinating rides via senior centers and Rides Plus)
Service Types Offered	Curb-to-curb rides through multipurpose senior centers, fixed-route transit passes; door-to-door shuttles, including paratransit services (e.g., LA, Boston, Philadelphia)	Demand-response rides with volunteer driver program operating on a donation or suggested donation basis (e.g., Central Illinois, Upper Cumberland, Bay Transit)
Mobility Accessibility Measures	Wheelchair-accessible shuttles with paratransit options and scheduled ride programs (e.g., Boston's wheelchair-accessible Age Strong Shuttle; King County Metro's Access Transportation; LA CityRide)	Volunteer driver services with donation-based rides. The rides are scheduled through local senior centers through phone reservations (e.g., Montana's ADRCs linking to non-emergency rides, Egyptian AAA's Rides Plus)
Geographical coverage area	City or metro / suburban areas having dense populations (e.g., Seattle/King County; Boston; Philadelphia)	Across multiple counties (especially less densely populated areas), rural counties, often wide areas with fewer fixed transit services (e.g., Coastal Bend AAA across seven rural counties; Bay Transit across

		several rural counties in Virginia; Central Illinois counties)
Cost/ Funding mechanism	Discounted fares, coupon programs, “free” rides for certain purposes, subsidization through AAA funding or city programs (e.g., Boston’s free medical rides, Philadelphia’s free rides	Suggested donations or donation-based rides; free or low-cost rides but often through volunteer or coordinated local provider (e.g., Central Illinois donation-based; Egyptian AAA referrals

In urban areas, Aging and Disability Resource Centers (ADRCs) and Area Agencies on Aging (AAAs) emphasize coordinating with existing transit infrastructure by aligning bus networks, paratransit services, and mobility management programs to enhance accessibility, affordability, and individualized assistance in navigating more complex urban networks. In contrast, ADRCs and AAAs in rural states primarily emphasize helping older adults and people with disabilities access basic and essential transportation, since options are limited. They are more focused on arranging or directly operating demand-response or group rides to meet essential needs, as fixed-route transit is often unavailable.

2.2.3 Existing Senior Transportation Services

Senior transportation services comparable to Handitran in Arlington, Texas- a well-established city operated paratransit program for senior adults and people with disabilities were studied. The geographic priority was given to the state of Texas because of its familiarity to the researchers and the diverse mix of urban, suburban, and rural contexts. This focus also allowed us to understand variations within the administrative and funding structure of a single state. The search was conducted using targeted web queries (e.g., “senior transportation services,” “paratransit,” “rural mobility for elderly,” “programs similar to Handitran”) and official government and agency websites. Programs were included in the sample if they offered dedicated or demand-responsive transportation specifically designed for senior adults or people with disabilities.

Urban vs. suburban vs. rural

In urban contexts, transportation services specifically designed for older adults and disabled individuals are characterized by a well-organized senior transportation system using professional vehicles and the integration of senior transportation services into the broader transit network. Handitran in Arlington, Texas; the Senior Transportation Program in Austin; and Houston’s METROLift offer door-to-door services within the city with wheelchair accessibility at scheduled hours, along with multiple booking options. Dallas-Fort Worth’s DART paratransit provides an

integrated feeder service that connects certified passengers to the regional rail and bus network, thereby extending mobility options beyond specialized services. For the Houston and Dallas-Fort Worth region, Texas, eligibility for services is determined by need based on criteria set by the Aging and Disability Act (ADA) rather than by age. These systems operate for longer hours, while some charge modest fares for transportation, others - such as Galveston, which is free for non-emergency and routine medical appointments in Austin- offer free services for eligible riders based on their predefined criteria, ensuring affordability and maintaining consistency in larger urban transit networks. Senior transportation services in urban areas offered flexibility (door-to-door service) and coverage (within city limits), ensuring that older adults and individuals with disabilities did not feel constrained by limited mobility options.

In suburban areas such as Buda, Humble, Southlake, and North Richardson Hills in Texas, senior transportation services are often offered free of charge through volunteer-based, curb-to-curb models with an emphasis on accessibility. Senior Transportation Services (STAR), Social Transportation for Seniors (STS), and Transportation Services for Seniors in Humble offer coordinated rides for grocery shopping, non-medical appointments, and social activities, with more limited hours of operation than in urban areas. Call A Ride of Southlake's (CARS) curb-to-curb service, which relies on volunteer drivers, highlights a community-based approach to transportation. Overall, suburban areas tend to balance accessibility with resource constraints, offering essential mobility for older adults, though not at the same scale or level of integration typically seen in urban settings.

In rural areas, senior transportation services such as Senior Access in Central Texas and Ride Connection in rural Washington County, Oregon, operate under structural conditions shaped by their dispersed populations and limited transit infrastructure. Senior Access focuses on low-income areas where aging adults cannot afford transportation. Senior Access and Ride Connection for rural Washington County in the Portland region is a volunteer-driven, demand-responsive service operating primarily on weekdays and targeting essential trips such as medical appointments, grocery shopping, and social activities, provided free of cost through phone reservations.

Compared with urban and suburban services for older adults, rural systems are frequently offered free of charge or at extremely low fares through volunteers, reflecting both the resource constraints of rural communities and the social policy objective of ensuring basic mobility. This approach ensures that the transportation services in the rural areas are affordable and convenient for senior

adults, as the community often operates them with volunteer drivers. However, transportation services may not be available on short notice, since the volunteers may not always be available. Also, as the services are usually provided by volunteers using their own vehicles, they may not always comply with ADA accessibility standards, creating difficulties for disabled individuals. Table 2-3 summarizes the key differences in transportation services for older adults and individuals with disabilities across urban, suburban, and rural areas.

Table 2-3: Senior Transportation Services: Urban, Suburban and Rural Differences

Aspect	Urban	Suburban	Rural
Geographic coverage	Available within a specific city, county, or region (e.g., a single transportation program for a city)	Limited-service radius	Broader geographic coverage with limited resources (e.g., a single transportation program for 3 to 4 counties)
Service Types Offered	Shared ride services operated by a well-organized system	Localized and community-driven	Relying on volunteer drivers
Hours of operation	Available on weekends as well as weekdays, and for longer hours	Available usually on weekdays for limited hours	Available usually only on weekdays
Cost	Affordable fare for the use of services	Usually free of charge	Free or minimum affordable fare service
Eligibility	Eligibility determined by ADA criteria rather than by age (need-based)	Senior adults and individuals with disabilities are eligible	Senior adults and individuals with disabilities are eligible
Service Scope	Services such as METROLift and DART connect to a larger transit network	Ensure basic mobility	Ensure basic mobility

Despite variation in scale and structure, we found that transportation services for older adults and individuals with disabilities across urban, suburban, and rural contexts share several core features. One major similarity is the prioritization of affordability and accessibility in transportation services. Services available in all the regions and cities incorporate wheelchair accessibility and reservation-based scheduling, whether through apps (e.g., Capital Area Rural Transportation System (CARTS) in Bastrop), phone calls (e.g., Austin’s Senior Transportation Program and North Richland Hills’ social transportation for seniors), or online forms (e.g., Buda’s Seniors Taking a Ride (STAR)). Senior transportation services consistently prioritize non-emergency medical trips, as well as access

to regular grocery shopping, social activities, and community programs, reflecting an understanding of mobility as central to both health and social inclusion.

There exist significant differences in the patterns in which senior transportation services are structured and delivered across rural and urban areas. Larger, formalized, and regionally integrated transit services are delivered in urban areas. In contrast, suburban programs are generally more localized and community-driven, often free of charge but with a limited service radius and hours. Senior- and disabled-oriented transportation services available in rural areas differ further in that they offer broader geographic coverage with limited resources, relying heavily on volunteer drivers and demand-responsive scheduling. The contrast among the three areas demonstrates that demography, geographic context, and resource constraints shape the design and operation of specialized transportation services.

2.2.4 Specialized Transportation Services in Comparison and Benchmark States

To examine how other states support older adults and individuals with disabilities who no longer drive, the research team reviewed transportation programs in states with demographic, infrastructure, and socioeconomic profiles comparable to Wisconsin, as well as national leaders recognized for their senior mobility strategies. Minnesota, Iowa, and Michigan were selected as comparison states because they share demographic, geographic, climatic, or rural-urban characteristics with Wisconsin. California, Oregon, and Massachusetts were selected as benchmark states because they demonstrate comparatively extensive approaches to supporting non-drivers, including travel training, coordinated paratransit, aging-in-place initiatives, regional transportation authorities, healthcare–transportation coordination, and more developed transportation data systems. The benchmark designation reflects the research team’s assessment of the breadth and structure of these practices and is not based on a formal national ranking or standardized outcome measure. The review examined how these policies and service models may inform strategies to improve mobility, access, and safety for non-drivers in Wisconsin. The objective was to determine how active policies and well-designed programs influence health, mobility, and safety outcomes for non-drivers.

Table 2-4 describes states comparable to Wisconsin in terms of population and urban vs. rural dynamics, as well as national leaders in supporting non-driving transition.

Table 2-4: National Benchmark and Comparable States to Wisconsin

Type	State	Population	Other factors
States comparable to Wisconsin	Minnesota	5.8M	Similar rural-urban distribution and climate
	Iowa	3.2M	Similar rural dynamics, but strong community-based transportation
	Michigan	10M	Comparable climate and aging trends
National benchmark supporting non-driving transitions	California	39M	Travel training and paratransit services; advanced data collection through CHTS
	Oregon	4.2M	Leadership in aging-in-place programs
	Massachusetts	7M	Non-driver mobility programs through regional transit authorities; strong healthcare-mobility integration

Comparative states like Minnesota, Iowa, and Michigan, senior transportation is primarily built around ADA-compliant paratransit and reservation-based door-to-door services designed for individuals who cannot use fixed-route transit. Minnesota's Metro Mobility serves individuals who have been determined eligible for ADA paratransit because a disability or functional limitation prevents them from independently using regular fixed-route transit in the metropolitan area, while Arrowhead Transit's Dial-A-Ride and Community Transit extend coverage to rural and community settings through volunteer drivers and reduced-fare rides. In Iowa, DART's BusPlus program operates wheelchair-accessible paratransit within federally required service corridors, accommodating medical appointments, shopping, and other essential trips. Michigan's approach is notably diverse; programs like RideLink, Myride2.com, the Mecosta County Commission on Aging, and the Tokens for TAT program each address distinct gaps, whether through coordinated online transportation options, county-level medical-trip support, or free rides for adults 60 and older. Across these states, Area Agencies on Aging play a central coordinating role, often bridging paratransit providers, volunteer programs, and human service organizations to ensure broader and more consistent coverage.

Benchmark states, i.e., California, Oregon, and Massachusetts, operate at a larger scale and tend to feature more integrated, multi-layered transportation ecosystems that go beyond basic paratransit. California is particularly notable, with each county developing its own robust system: Los Angeles County's Access Services is one of the largest ADA paratransit providers in the nation, while San Diego County layers RideFACT, volunteer ride programs, on-demand rideshare apps, and capped monthly mileage programs to give seniors multiple affordable options. Orange County and Ventura County add further depth through targeted programs such as Senior Wheels and ElderHelp

MediRides, which extend services beyond city limits to meet medical needs. Oregon's model combines regional dial-a-ride providers like SMART and Bend's Ride Assist with a statewide network of 16 Area Agencies on Aging, ensuring coordinated coverage across urban and rural communities alike. Massachusetts also provides a useful benchmark through MBTA's The RIDE, which serves the Greater Boston area; regional transit authorities like GATRA extending dial-a-ride access to suburban areas, and municipal Councils on Aging coordinating volunteer drivers and community shuttles in smaller towns. Together, these states illustrate how layering services, building strong interagency partnerships, and tailoring programs to local needs can dramatically improve mobility outcomes for older adults.

2.2.5 Wisconsin Senior Mobility Programs

Several specialized transit programs are designed to improve the mobility of seniors and individuals with disabilities in Wisconsin. The County Elderly and Disabled Transportation Assistance Program provides funding to counties to operate efficient transportation services for older adults and individuals with disabilities. The Tribal Transportation for Elders offers financial assistance to improve transportation for tribal elders. The Wisconsin Department of Transportation implements mobility management and Coordination in transportation to improve services for seniors.

Dane County, Wisconsin, offers transportation services for adults above 60 years and individuals with disabilities through General Access Services (group rides in scheduled hours and fares), Retired Senior and Volunteer Program (RSVP), and Older Adult Transportation Assistance (OATA), providing door-to-door independent rides for medical appointments and other destinations with volunteer drivers and their vehicles, free of charge or donations. The Elderly and Disabled Transportation Program at Wood County offers shared bus rides for shopping and medical appointments on weekdays, with volunteer assistance for longer-distance medical appointments. Care-A-Van provides paratransit services within the city of Kenosha, operating throughout the week for \$4 per one-way trip with prior on-call reservations. LINK-Western Kenosha Transportation provides door-to-door, ADA-compliant rural public bus services throughout the week.

The Aging and Disability Resource Center (ADRC) in Wisconsin facilitates transportation services for older adults and individuals with disabilities by collaborating with local and regional transportation providers to offer a wider range of services. Wood County's ADRC offers bus

services with wheelchair lifts during weekdays, while Jefferson County's ADRC offers driver/escort services for medical appointments, prioritizing individuals without other means of transportation. In Crawford County, the ADRC operates a door-to-door service for medical, social, and special events, requiring reservations at least 48 hours in advance. Eau Claire County's Aging and Disability Resource Center (ADRC) offers non-medical rides on weekdays, information on private vehicle options such as Economy Cab, and reduced-fare bus transportation within city limits. In collaboration with Abby Vans, door-to-door paratransit services are also provided throughout the week.

Summary

The review shows that senior and disability transportation consistently prioritizes affordability, accessibility, and reservation-based, accessible service. At the same time, delivery models vary by context, large integrated systems in urban areas, community-driven programs in suburbs, and volunteer, demand-responsive coverage in rural regions. Funding frameworks such as FTA Section 5310 and OAA Title III (via AAAs/ADRCs), as illustrated by Wisconsin and peer states, further highlight these patterns and point to scalable strategies to support a safe and efficient transition for non-drivers.

3 Research Methodology

3.1 Research Design

The study integrated longitudinal quantitative analysis and qualitative inquiry to examine health and mobility outcomes associated with the transition of older adults from driver to non-driver status. The study employed a social-ecological framework to understand the driver-to-non-driver transition as a complex, context-dependent process that is influenced by individual, community, and structural factors. By combining large-scale secondary datasets and semi-structured expert interviews, the study aimed to produce both generalizable findings and context-specific insights relevant to Wisconsin's diverse geographic and demographic landscape, as shown in Figure 3-1.

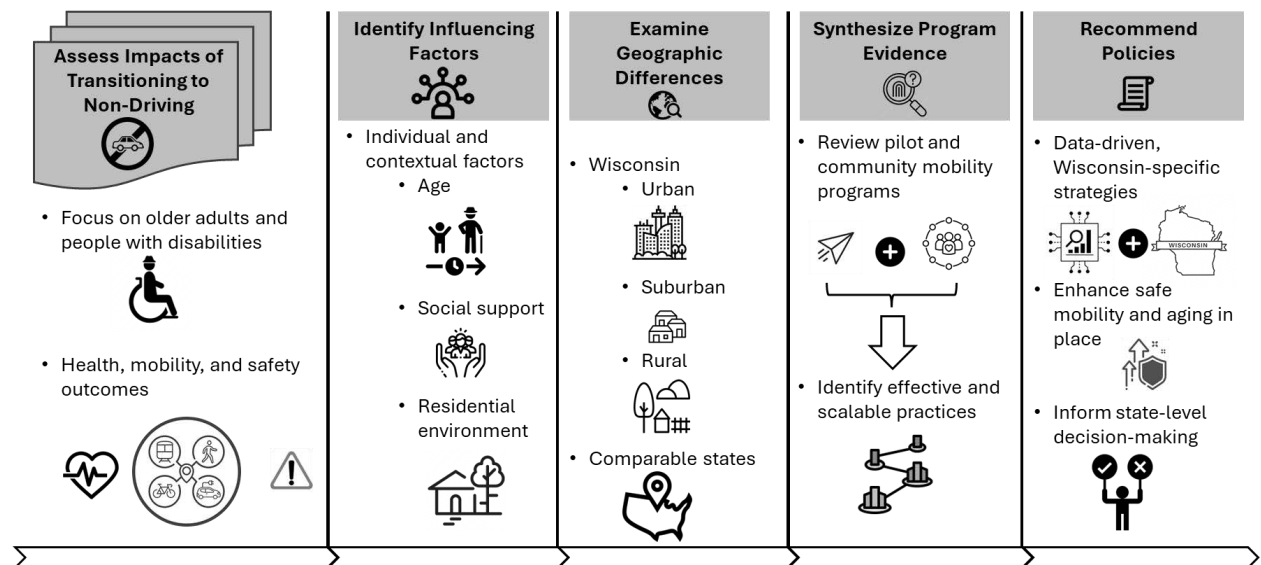


Figure 3-1: Overall Research Framework

The quantitative component used longitudinal survey data from the Health and Retirement Study (HRS) and the National Household Travel Survey (NHTS). This information helped to analyze changes in health, mobility, and functional status over time and sets these trends within broader community and geographic contexts. The qualitative component involved semi-structured interviews with WisDOT personnel and relevant stakeholders to triangulate quantitative findings, compare with interpretations, and inform policy recommendations.

The study differentiated between gradual transitions, described as progressive self-regulation due to aging or health decline, and abrupt transitions, resulting from acute medical events, cognitive diagnoses, or external influences such as financial hardship or the loss of a vehicle. This

distinction was important because the type of transition likely influences both short-term disruption and long-term adaptation. The design also considered geographic context by comparing outcomes across urban, suburban, and rural communities and benchmarking against states with established non-driver transportation support systems for older adults and people with disabilities.

3.2 Quantitative Data Sources

The primary dataset used in the study was the Health and Retirement Survey (HRS), which offers longitudinal, individual-level data on driving status, health, mobility, and psychosocial well-being for U.S. adults aged 50 and older. The HRS was supplemented by the National Household Travel Survey (NHTS), which provided household-level travel behavior data. Table 3-1 categorized these databases by scope, measurement frameworks, population coverage, and relevance.

Table 3-1: Database List

Database	Coverage	Description
Health and Retirement Survey (HRS)	National; longitudinal	Longitudinal panel data including detailed health information
National Household Travel Survey (NHTS)	National; cross-sectional	Household travel behaviors

The HRS provides comprehensive individual-level longitudinal health data, allowing researchers to examine how driving transitions affect health outcomes over time, although its smaller sample size and limited mobility information present some limitations. In contrast, the NHTS offers a much larger sample and detailed information about travel behaviors, including mode choices, trip purposes, and travel frequency, but it relied on cross-sectional and self-reported health data.

This study first applied NHTS to understand older adults' general travel behaviors, such as trip purpose, frequency, and distance, and sequentially uses HRS to further investigate the impact of non-driving transition. Together, these datasets complemented one another by combining detailed health trends with broader mobility patterns to better understand the impacts of transitioning from driving to non-driving among older adults.

3.2.1 National Household Travel Survey (NHTS)

The National Household Travel Survey (NHTS), administered by the Federal Highway Administration (FHWA), is the primary national source of data on personal travel behavior in the U.S. The NHTS collects household and person level characteristics and uses a travel diary to record all trips made by each participating household member during an assigned 24-hour travel day. Each

trip is recorded separately, including its mode, purpose, travel time, and distance, including self-reported conditions or disabilities that affect an individual's ability to drive or travel, as well as questions about voluntary or involuntary reduced driving.

The NHTS analysis first used descriptive statistics to characterize observed travel behavior among adults aged 65 and older. This analysis compared trip frequency, trip-purpose composition, trip distance, and essential-trip patterns across driver-status groups and urban, suburban, and rural contexts to answer the following research question.

Research Question 1: What are the mobility patterns of older adults, including trip frequency, trip purpose, and travel distance?

The second NHTS analysis classified older adults along a driver-status continuum, such as healthy drivers, health-limited drivers without restrictions, health-limited restricted drivers, and non-drivers, and used econometric models to examine how household resources, socioeconomic status, and residential context were associated with both driver-status classification and long-distance essential travel. The following research question was investigated.

Research Question 2: How do sociodemographic, household, and residential characteristics differ across older adult driver-status groups?

Key NHTS variables relevant to the driver categorization included questions on whether respondents have *limited their driving to daytime hours due to a condition or disability*, whether they have *given up driving due to a condition or disability*, whether they have *reduced travel due to a health condition or disability*, and whether health problems were the stated reason for not making trips on the travel day. These items allowed identification of individuals at various stages of the driver-to-non-driver transition, from partial driving to full cessation, and enabled analysis of how mobility limitations are distributed across demographic groups and geographic areas. The NHTS also captures reason-for-trip data to assess changes in access to essential destinations, such as healthcare facilities, grocery stores, and community activity sites, as individuals reduce or stop driving altogether.

While the HRS provides critical health information related to driving transition, the NHTS offers several advantages as a supplement to the HRS. First, the NHTS provides geographic identifiers

at the state, metropolitan area, and urbanization classification levels. These features facilitate comparative analysis of travel behavior and transportation limitations across diverse geographic contexts, including the rural-urban distinction present in Wisconsin. Second, the NHTS records actual trip-making behavior, such as trip frequency by mode, purpose, and destination type. This approach yields a more direct and behaviorally grounded assessment of mobility outcomes.

3.2.2 Health and Retirement Survey (HRS)

The Health and Retirement Survey (HRS) has been conducted biennially since 1992 by the University of Michigan and funded by the National Institute on Aging and the Social Security Administration. It is considered the gold standard for longitudinal research on gerontology, health, and economic well-being in the U.S. The survey follows a nationally representative cohort of adults aged 50 and older, adding new birth cohorts every six years to maintain representativeness. The HRS's comprehensive data on health, cognitive function, socioeconomic status, transportation behavior, and social engagement make it well-suited to examine the multidimensional effects of driving cessation over time. This study starts with the following research question for HRS analysis:

Research Question 1: How do we predict driving cessation for older adults? What are the predictors of driving cessation?

This study used driving cessation as the outcome of interest, defined using the HRS item asking respondents in each wave whether they currently drive. Respondents who reported driving at baseline (2006) but indicated in a later wave that they no longer drove were coded as having stopped driving, with the transition timed to the nearest two-year wave.

To examine who stops driving, this study drew on a range of sociodemographic, health, and geographic characteristics as exposures. Sociographic measures included age, race and ethnicity, educational attainment, household income, and whether the respondent lived alone. Three health-related measures were also included. General health was captured by the standard self-rated health item and dichotomized into poor or fair versus good, very good, or excellent. Depressive symptoms were measured with the eight-item CES-D scale embedded in the HRS (range: 0-8; higher scores indicate more symptoms). Cognitive function was derived from a composite of immediate and delayed word recall, serial 7 subtraction, and backward counting (range: 0-27; higher scores

indicate better function). Geographic context was captured by urbanicity and neighborhood socioeconomic status, a composite index of the socioeconomic conditions in the respondent's neighborhood.

The second research question is as follows:

Research Question 2: What are the health and well-being impacts after driving cessation?

Respondents were grouped into four mutually exclusive categories based on their driving trajectory: (1) gradual transitioners, who moved from limited driving to non-driving ($n = 1,059$); (2) abrupt transitioners, who moved directly from active, non-limited driving to non-driving ($n = 370$); (3) continuous drivers, the primary comparison group ($n = 4,667$); and (4) continuous non-drivers, a secondary comparison group ($n = 1,534$).

This study examined five health and well-being outcomes to capture how driving cessation affects older adults across physical, mental, and social dimensions. Self-rated health was measured on a five-point scale from excellent to poor and dichotomized into poor or fair versus good, very good, or excellent. The number of chronic diseases was constructed as a count of seven physician-diagnosed conditions (arthritis, cancer, diabetes, heart disease, high blood pressure, lung disease, and stroke), ranging from 0 to 7. Depressive symptoms were measured using the eight-item CES-D scale (range: 0-8), with higher scores reflecting greater burden. Physical activity was captured by the HRS physical activity scale, which reflects the frequency of vigorous, moderate, and light activity, with higher scores indicating greater participation. Finally, social isolation was measured as a composite index (range: 0-5) summing five indicators of social disconnection: being unmarried, living alone, less-than-monthly contact with children, less-than-monthly contact with other family or friends, and less-than-monthly participation in any group of organization.

3.3 Interview Data and Design

A series of semi-structured, in-depth interviews with WisDOT personnel and relevant stakeholders with expertise in non-driver mobility programs, public transit planning, paratransit services, aging-in-place policy, or related areas of transportation practice were conducted to understand the practical realities of Wisconsin's transportation system. The interview allows participants to elaborate on professional experience, reveal institutional knowledge absent from secondary

datasets, and introduce perspectives not anticipated in the research design. These characteristics make semi-structured interviews the most suitable tool for adding to quantitative findings and for gathering expert-informed insights to support the policy recommendations.

The interview sample consisted of 10 personnel, purposively selected for their professional roles and expertise in non-driver mobility. Purposive sampling was employed to ensure that participants possessed the specialized knowledge required to speak authoritatively to the focal questions of the study. Participants were selected based on their relevant professional expertise rather than through random sampling. The research team initially sought approximately eight participants, expecting that this number would provide sufficient information because the pool of qualified experts was relatively small and specialized. Recruitment was conducted through online invitation, with voluntary participation and confidentiality assured.

The interview protocol was semi-structured, comprised of a series of open-ended questions organized around four thematic domains: (1) the nature and diversity of non-driver mobility needs across urban and rural contexts within Wisconsin; (2) the challenges and barriers non-drivers encounter when accessing transportation alternatives after driving cessation; (3) the current landscape of WisDOT programs, partnerships, and initiatives that address non-driver mobility needs, including their perceived strengths, limitations, and scalability; and (4) the opportunities and constraints faced by WisDOT in developing more responsive and integrated non-driver support systems in the future. Follow-up probes and open-ended questions were used to obtain more detailed responses and explore topics further, while allowing participants to share unanticipated perspectives. All interviews were conducted virtually using secure video conferencing platforms, were expected to last approximately 45-60 minutes, and were audio-recorded with the participant's explicit informed consent. Recordings were professionally transcribed, cross-referenced with the recordings, and checked for accuracy before analysis.

3.4 Analytical Approach

The analytical strategy is a multi-stage process that progresses from descriptive statistics to causal analysis and comparative policy evaluation. The strategy was organized around three principal analytical phases: descriptive and exploratory analysis, multilevel longitudinal modeling, and comparative geospatial and cross-state analysis. These phases were supported by the qualitative

analysis of interview data described above. They were integrated at the final stage to provide a clear understanding of the non-driver transition and its impacts.

This study used the Health and Retirement Survey (HRS) as its primary data source due to its longitudinal design, which followed the same individuals over time and allows rigorous assessment of the effects of driving cessation on health and mobility outcomes. The National Household Travel Survey (NHTS) was incorporated as a supplementary dataset to provide background information related to trip-level behavioral measures.

To appropriately understand the structure of the data, the study applied multilevel regression modeling for both HRS and NHTS. The study employed a comparative analytical design, examining variation between urban and rural areas and benchmarking against selected comparator states with comparable demographic and policy characteristics. This approach influences natural variation in policy environments to strengthen causal inference and generate evidence-based insights to inform transportation and public health policy.

3.4.1 National Household Travel Survey (NHTS)

The NHTS analysis examined travel behavior and driver-status classification among adults aged 65 and older. Using person, household, and trip records from the NHTS, respondents were classified into four driver-status groups based on reported health limitations and driving behavior: healthy drivers, health-limited drivers without restrictions, health-limited restricted drivers, and non-drivers. Descriptive analyses were then conducted to compare sociodemographic characteristics, residential context, trip purpose composition, trip frequency, trip distance, and trip chaining patterns across these groups. Trip purposes were grouped into work, health, grocery, social, and other categories.

Econometric analysis used multinomial logistic regression to examine factors associated with driver-status group classification, with healthy drivers serving as the reference group. This model was estimated using the urban-rural subsample, excluding suburban respondents by design to focus on contrasts between the two most distinct residential contexts. Health limitations and driver count were excluded from this model because they overlap with the group definition, while demographic, socioeconomic, household, and residential characteristics are included as explanatory variables. Model results were reported using relative risk ratios (RRRs) for the multinomial logit model.

3.4.2 Health and Retirement Study (HRS)

The HRS analysis addressed two research questions: who stops driving and what happens to health and well-being after driving cessation. For the first question, driving cessation was modeled using multilevel discrete-time survival analysis. The analytic sample consisted of adults aged 65 and older who were active drivers in 2006 and contributed at least one follow-up observation between 2008 and 2020 ($N = 7,442$). Person-wave records were constructed for each respondent across all observed waves, with the outcome coded as 1 in the wave cessation first occurred and 0 in all preceding waves. Once cessation was recorded, subsequent waves were excluded. The multilevel structure accounts for repeated observations nested within individuals, and hazard ratios with 95% confidence intervals are reported for all covariates. Additionally, a sub-analysis characterized the profile of drivers and non-drivers in Wisconsin relative to the 12-state Midwest region and the national sample. Given the small Wisconsin cell size ($n = 129$), this component relied on descriptive comparisons rather than inference modeling. Means and proportions are reported separately for continued drivers and those who stopped driving within each geographic stratum, and estimates for cells with fewer than 11 respondents are suppressed to protect confidentiality.

The second research question followed participants from 2008 to 2022 to track health and well-being after the transition out of driving. Four groups are compared: gradual transitioners ($n = 1,059$), abrupt transitioners ($n = 370$), continuous drivers ($n = 4,667$), and continuous non-drivers ($n = 1,534$). Logistic regression was used for binary outcomes (i.e., self-rated poor health and social isolation) and linear regression for continuous ones (i.e., number of chronic diseases, depressive symptoms, and physical activity). Each model was estimated twice, first with continuous drivers as the reference group and then with continuous non-drivers. All models adjust for age, gender, race and ethnicity, educational attainment, household income, urbanicity, and the respondent's baseline score on each outcome, measured two waves before the transition. Predicted values were generated from Year 0 through Year 10 to trace how outcome differences change after transition.

4 Quantitative Data Analysis and Results

This chapter presents the modeling findings, describing the procedures and results from descriptive analyses and multilevel modeling.

4.1 NHTS Findings

4.1.1 Classification of Older Adults using the NHTS Dataset

Using NHTS, we categorized adults aged 65 and older into four distinct groups based on their driving behavior and health status: (1) Healthy drivers, defined as individuals who report no health limitations and continue to drive; (2) Health-limited drivers without restrictions, who report health limitations but did not report clear driving restrictions; (3) Health-limited restricted drivers, who reported health limitations and limited their driving, such as by restricting themselves to short-distance driving; and (4) Health-limited non-drivers, who did not drive and rely on non-driving travel options, including passenger rides and other available options as illustrated in Figure 4-1. The final focus sample included 4,182 respondents: 3,239 healthy drivers, 455 health-limited drivers without restrictions, 225 health-limited restricted drivers, and 263 health-limited non-drivers.

Healthy Drivers	Health-limited, no restriction drivers	Health-limited, restricted drivers	Non-drivers
•N=3,239 •No health limitation •continue to drive without restrictions	•N=455 •Health-limited, those who do not modify their driving behaviors •Most vulnerable and at-risk group	•N=225 •Health-limited, those who limit themselves to short-distance driving	•N=263 •Health-limited, Non-drivers •Multi modal users

Figure 4-1: Driver Classification based on Health Constraints

4.1.2 Sociodemographic and Geographic Characteristics by Driver Group

Based on this classification, descriptive statistics were examined to compare demographic, socioeconomic, and residential characteristics across the four driver-status groups: (1) Healthy drivers, (2) Health-limited, no restriction drivers, (3) Health-limited, restricted drivers, and (4) Health-limited non-drivers. The comparison focused on gender, race, educational attainment, household income, and residential location because these characteristics are closely related to

transportation access, availability of alternative modes, and mobility constraints observed at the time of the NHTS survey.

Gender composition showed some variation across the four groups. As shown in Table 4-1, (1) Healthy drivers were close to evenly distributed by gender, with women accounting for 50.4%. The (2) Health-limited, no restriction drivers were also relatively balanced by gender, with women accounting 49.2%. In comparison, the share of women was higher among (4) Health-limited non-drivers, at 68.8%

Table 4-1: Gender distribution based on NHTS Data

Gender	(1) Healthy driver	(2) Health-limited, No Restriction	(3) Health-limited- Restricted	(4) Health-limited Non-driver	TOTAL
Male	1,595 (49.6%)	230 (50.8%)	97 (43.1%)	82 (31.2%)	2,004 (48.2%)
Female	1,619 (50.4%)	223 (49.2%)	128 (56.9%)	181 (68.8%)	2,151 (51.8%)
TOTAL	3,214 (100.0%)	453 (100.0%)	225 (100.0%)	263 (100.0%)	4,155 (100.0%)

Race composition was also summarized across the four driver-status groups. As shown in Table 4-2, White respondents accounted for the majority of all groups. White respondents represented 92.6% of (1) Healthy drivers and 93.4% of (2) Health-limited, no restriction drivers. In (3) Health-limited, restricted drivers, most respondents in the sample were White, with very limited racial variation in this group. Among (4) Health-limited non-drivers, White respondents still represented the majority, but the shares of Black and Asian respondents were somewhat higher than the healthy driver group.

Table 4-2: Race Distribution based on Driver Status

Race	(1) Healthy driver	(2) Health-limited, No Restriction	(3) Health-limited- Restricted	(4) Health-limited Non-driver	TOTAL
White	3,000 (92.6%)	425 (93.4%)	208 (92.4%)	223 (84.8%)	3,836 (91.7%)
Black	111 (3.4%)	14 (3.1%)	9 (4.0%)	18 (6.8%)	160 (3.8%)
Asian	78 (2.4%)	6 (1.3%)	2 (0.9%)	14 (5.3%)	111 (2.7%)
Others	50 (1.5%)	10 (2.2%)	6 (2.7%)	8 (3.0%)	74 (1.8%)
TOTAL	3,239 (100.0%)	455 (100.0%)	225 (100.0%)	263 (100.0%)	4,181 (100.0%)

Educational attainment also varied across driver-status groups. As shown in Table 4-3, (1) Healthy drivers had relatively higher educational attainment, with bachelor's degree holders accounting for 26.7% and graduate degree holders accounting for 24.9%. Among (4) Health-limited non-drivers, the corresponding shares were lower, at 16.3% and 12.9%. Lower educational categories were

more common among non-drivers, including less than high school (8.4%), some high school without a diploma or GED (7.6%), and high school graduate (30.4%). The two health-limited driver groups were generally distributed between healthy drivers and non-drivers across most education categories.

Table 4-3: Education levels based on Driver Status

Education Level	(1) Healthy driver	(2) Health-limited, No Restriction	(3) Health-limited- Restricted	(4) Health-limited Non-driver	TOTAL
Less than high school	18 (0.6%)	6 (1.3%)	5 (2.2%)	22 (8.4%)	51 (1.2%)
Some high school (no diploma/GED)	52 (1.6%)	10 (2.2%)	6 (2.7%)	20 (7.6%)	88 (2.1%)
High school graduate (diploma/GED)	512 (15.8%)	81 (17.8%)	45 (20.0%)	80 (30.4%)	718 (17.2%)
Some college / some trade school	581 (17.9%)	104 (22.9%)	46 (20.4%)	43 (16.3%)	774 (18.5%)
Associate degree / trade certificate	406 (12.5%)	50 (11.0%)	26 (11.6%)	21 (8.0%)	503 (12.0%)
Bachelor's degree	865 (26.7%)	105 (23.1%)	39 (17.3%)	43 (16.3%)	1,052 (25.2%)
Graduate degree	805 (24.9%)	99 (21.8%)	58 (25.8%)	34 (12.9%)	996 (23.8%)
TOTAL	3,239 (100.0%)	455 (100.0%)	225 (100.0%)	263 (100.0%)	4,182 (100.0%)

Household income also varied across groups. As shown in Table 4-4, the largest income category for (1) Healthy drivers was \$50,000-\$99,999, accounting for 39.1% of the group. The same category was also the largest share among (2) Health-limited, no restriction drivers (38.9%). Among (4) Health-limited non-drivers, the largest share was in the lower-income category. The largest share of non-drivers reported household income below \$25,000 (27.4%), followed by \$25,000-\$49,999 (24.7%) and \$50,000-\$99,999 (27.8%). Higher income categories were more common among healthy drivers than among non-drivers.

Table 4-4: Household Income based on Driver Status

Household Income	(1) Healthy driver	(2) Health-limited, No Restriction	(3) Health-limited- Restricted	(4) Health-limited Non-driver	TOTAL
<\$25k	236 (7.4%)	49 (11.0%)	48 (21.6%)	71 (27.4%)	404 (9.9%)
\$25k–49k	603 (19.0%)	106 (23.7%)	56 (25.2%)	64 (24.7%)	829 (20.2%)
\$50k–99k	1,241 (39.1%)	174 (38.9%)	68 (30.6%)	72 (27.8%)	1,555 (37.9%)
\$100k–149k	602 (19.0%)	66 (14.8%)	34 (15.3%)	31 (12.0%)	733 (17.9%)
\$150k–199k	208 (6.6%)	22 (4.9%)	8 (3.6%)	11 (4.2%)	249 (6.1%)
\$200k+	282 (8.9%)	30 (6.7%)	8 (3.6%)	10 (3.9%)	330 (8.0%)
TOTAL	3,172 (100.0%)	447 (100.0%)	222 (100.0%)	259 (100.0%)	4,100 (100.0%)

Residential location differed modestly across the four groups. As shown in Table 4-5, all groups were more concentrated in suburban and rural areas than in urban areas. Among (1) Healthy drivers, 41.9% lived in suburban areas and 48.8% lived in rural areas. Among the (4) Health-limited non-drivers, 38.8% lived in suburban areas and 41.8% lived in rural areas, while the urban share was 19.4%, higher than the other groups. This pattern may reflect the relatively greater availability of alternative transportation options in urban areas, although most non-drivers in the sample still lived in suburban or rural areas.

Table 4-5: Geographic Characteristics based on Driver Status

Residential Location	(1) Healthy driver	(2) Health-limited, No Restriction	(3) Health-limited- Restricted	(4) Health-limited Non-driver	TOTAL
Urban	300 (9.3%)	48 (10.5%)	30 (13.3%)	51 (19.4%)	429 (10.3%)
Suburban	1,357 (41.9%)	215 (47.3%)	80 (35.6%)	102 (38.8%)	1,754 (41.9%)
Rural	1,582 (48.8%)	192 (42.2%)	115 (51.1%)	110 (41.8%)	1,999 (47.8%)
TOTAL	3,239 (100.0%)	455 (100.0%)	225 (100.0%)	263 (100.0%)	4,182 (100.0%)

4.1.3 Trip Purpose and Travel Characteristics

In this section, trip characteristics are summarized by residential location and driver-status group. The analysis was conducted to describe how travel behavior differs by driver status and to identify how trip purpose, average trip distance, and trip chain vary across residential contexts. As shown in Table 4-6, grocery trips accounted for the largest share of trips across all three area types, representing 32.8% of trips in urban areas, 33.7% in suburban areas, and 32.1% in rural areas. Social trips represented a moderate share of total trips, ranging from 13.8% to 15.6%. Health trips included health care visits and health-related activities such as exercise. Work trips accounted for the smallest share across all three area types, ranging from 6.3% to 6.8%. Other trips accounted for a comparable or sizable share, ranging from 29.1% in urban areas to 37.2% in rural areas, and include purposes such as personal errands, recreation, exercise, religious activities, and other non-work-related activities.

Table 4-6: Trip Characteristics: Urban, Suburban and Rural

Residential Location	Purpose	Purpose share (%)	Mean distance (mi)	Average trip chain	Trips/week/person
Urban	Grocery	32.8	3.1	1.9	15.7
	Social	13.8	31.5	1.4	10.2
	Health	17.4	6.0	1.6	9.3

	Work	6.8	9.5	1.3	14.2
	Other	29.1	5.6	1.9	13.2
Suburban	Grocery	33.7	5.3	2.0	14.8
	Social	15.6	22.6	1.4	10.6
	Health	11.2	6.5	1.7	9.2
	Work	6.3	11.2	1.2	12.9
	Other	33.2	12.2	2.0	13.4
Rural	Grocery	32.1	8.8	2.3	14.4
	Social	13.9	26.1	1.5	10.7
	Health	10.0	11.5	1.5	8.4
	Work	6.8	19.6	1.2	14.5
	Other	37.2	11.9	2.2	15.5

Average trip distances were generally longer in rural areas than in urban and suburban areas. This pattern was observed across most trip purposes. For example, grocery trips averaged 3.1 miles in urban areas, 5.3 miles in suburban areas, and 8.8 miles in rural areas. Work trips increased from 9.5 miles in urban areas to 19.6 miles in rural areas. Health trips also showed longer average distances in rural areas than in urban and suburban areas. The trip chain differed modestly by location and purpose. Grocery and Other trips showed relatively higher average trip chain values, whereas work trips had lower average trip chain values across all three area types.

After summarizing trip characteristics by residential location, trip purpose composition was compared across the four driver-status groups using average weekly trips per person. In this descriptive analysis, trips were counted at the NHTS trip-record level. Therefore, each destination-to-destination movement was counted as a separate trip, even when multiple trips belonged to the same home-to-home trip chain. For example, a home-to-grocery-to-healthcare-to-home outing would contribute multiple trip records rather than a single chain. This distinction is important because Figure 4-2 describes the frequency of observed trip links by purpose, while the later chain-based analysis examines how those trips are combined into longer essential chains. Figure 4-2 presents the overall trip purpose composition by driver status group, measured as average weekly trips per person. Total weekly trips varied across the four groups. (1) Healthy drivers had the highest observed average, at 15.6 trips per person per week, followed by (3) Health-limited, restricted drivers at 12.8 and (2) Health-limited, no restriction drivers at 12.0. (4) Health-limited non-drivers had the lowest average, at 5.7 trips per person per week.

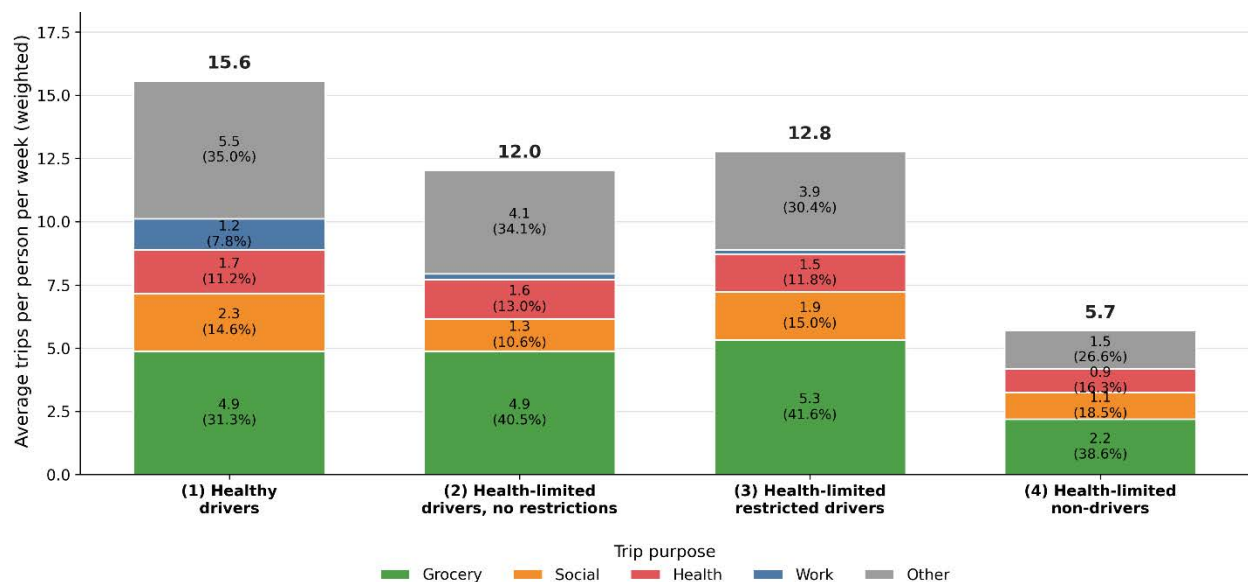


Figure 4-2: Trip Purpose Composition by Driver Status

Across all groups, grocery trips and other-purpose trips accounted for the largest share of weekly trips. Grocery trips represented 31.3% of trips among (1) Healthy drivers, 40.5% among (2) Health-limited, no restriction drivers, 41.6% among (3) Health-limited, restricted drivers, and 38.6% among (4) Health-limited non-drivers.

Figure 4-3 extends the overall comparison by presenting trip purpose composition separately for urban, suburban, and rural areas. Across residential contexts, grocery trips remained an important component of weekly travel for all driver-status groups, but the share varied by group and area. Among (2) Health-limited, no restriction drivers, grocery trips accounted for 30.8% of trips in urban areas, 49.9% in suburban areas, and 29.5% in rural areas. Among (3) Health-limited, restricted drivers, grocery trips accounted for 30.0% of trips in urban areas, 44.2% in suburban areas, and 41.8% in rural areas. This indicated that grocery trips remained important for health-limited driver groups, although other-purpose trips also represented a sizable share. The figure also shows that (4) Health-limited non-drivers had a lower average weekly trip frequency than the other groups across all three residential areas. Their total weekly trips were 5.4 trips per person in urban areas, 7.4 in suburban areas, and 4.3 in rural areas. Within the non-driver group, grocery trips accounted for the largest or one of the largest shares in all three areas, representing 40.1% of trips in urban areas, 34.4% in suburban areas, and 44.3% in rural areas. Work-related trips accounted for 0.0% of trips among non-drivers in each residential area.

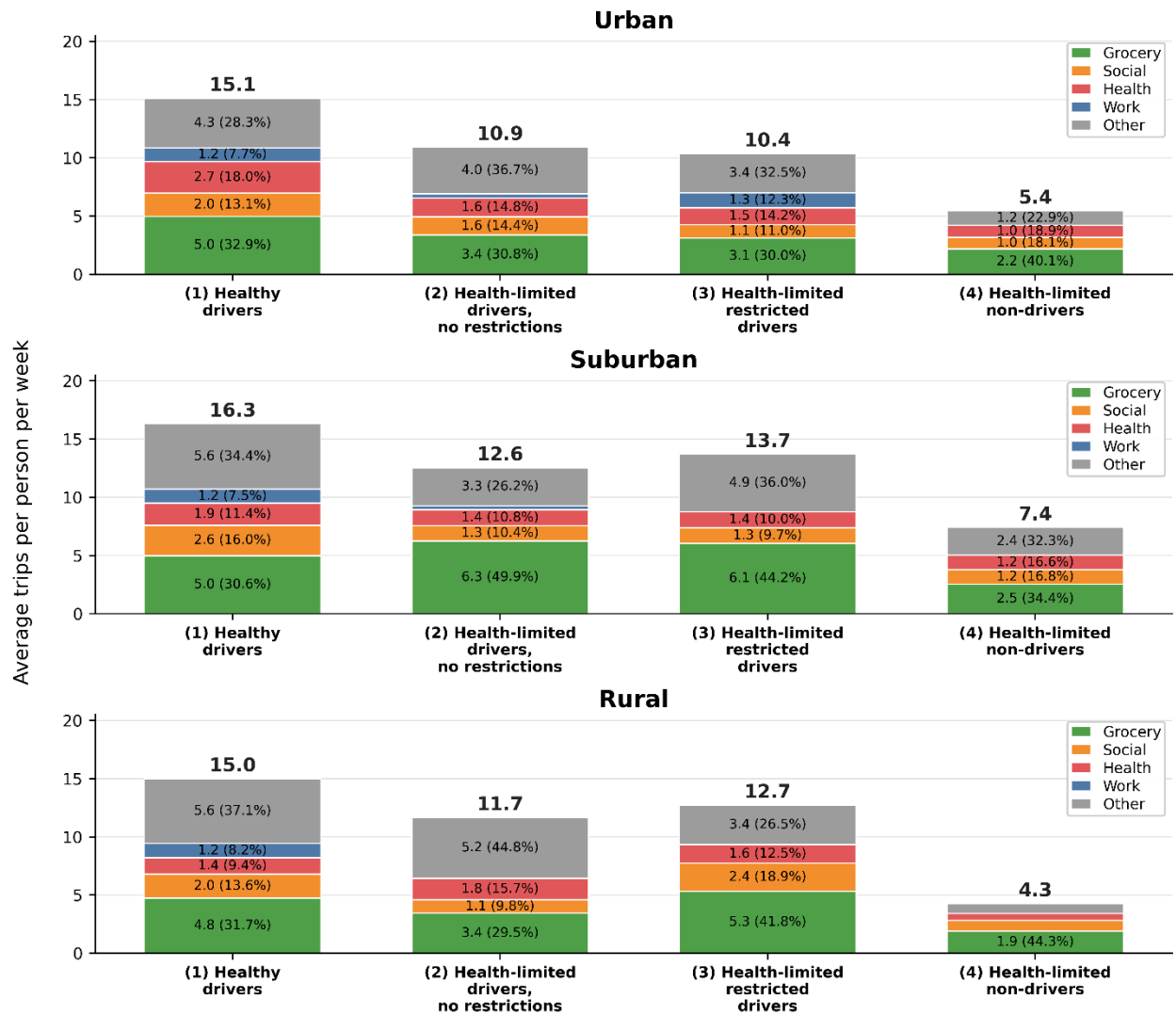


Figure 4-3: Trip Purpose Composition by Driver status and Residential Location

In addition to trip purpose composition, trip distance was compared across driver-status groups to describe differences in the spatial range of observed travel. Figure 4-4 presents the overall distribution of trip distance by driver-status group. The median trip distance was highest among (1) Healthy drivers, at 4.0 miles, followed by (2) Health-limited, no restriction drivers at 3.5 miles and (3) Health-limited, restricted drivers at 3.3 miles. (4) Health-limited non-drivers had the lowest median trip distance, at 2.4 miles. The interquartile range also generally narrowed across the groups, from 1.7-8.7 miles among (1) Healthy drivers to 1.0-6.6 miles among non-drivers. This pattern suggests that more mobility-limited groups tended to have shorter and more compact trip-distance distributions, although two health-limited driver groups still showed broader ranges than (4) Health-limited non-drivers.

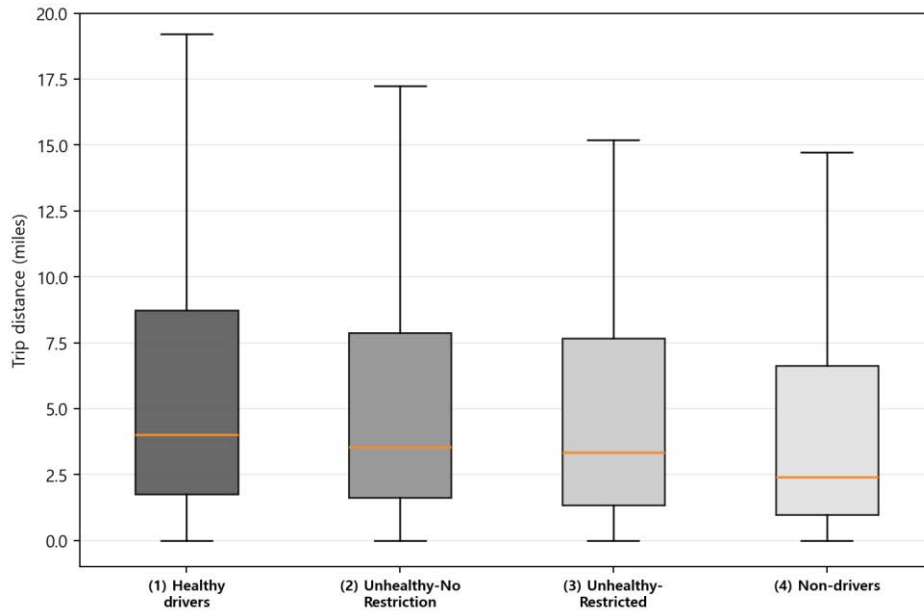


Figure 4-4: Trip Distance Distribution by Driver Status

Figure 4-5 further compares trip distance distributions within urban, suburban, and rural areas. Across driver-status groups, rural trips generally extended over longer distances than urban and suburban trips. For example, the median trip distance among (1) Healthy drivers increased from 2.5 miles in urban areas to 5.1 miles in rural areas. A similar pattern was observed among (2) Health-limited, no restriction drivers, whose median trip distance was 4.3 miles in urban areas and 4.8 miles in rural areas. The (3) Health-limited, restricted drivers generally showed a more compact trip-distance distribution than the (1) Healthy driver and (2) Health-limited, no restriction drivers, particularly in rural areas. The rural (4) Health-limited non-drivers showed a wider upper range in the boxplot, but this should not be interpreted as evidence that rural non-drivers generally travel longer distances. Only 13 of the 110 rural non-drivers had observed trips with valid distance information, while 97 had no recorded trips during the survey period. Therefore, the rural non-driver distribution should be interpreted cautiously as reflecting a small subset of rural non-drivers with travel.

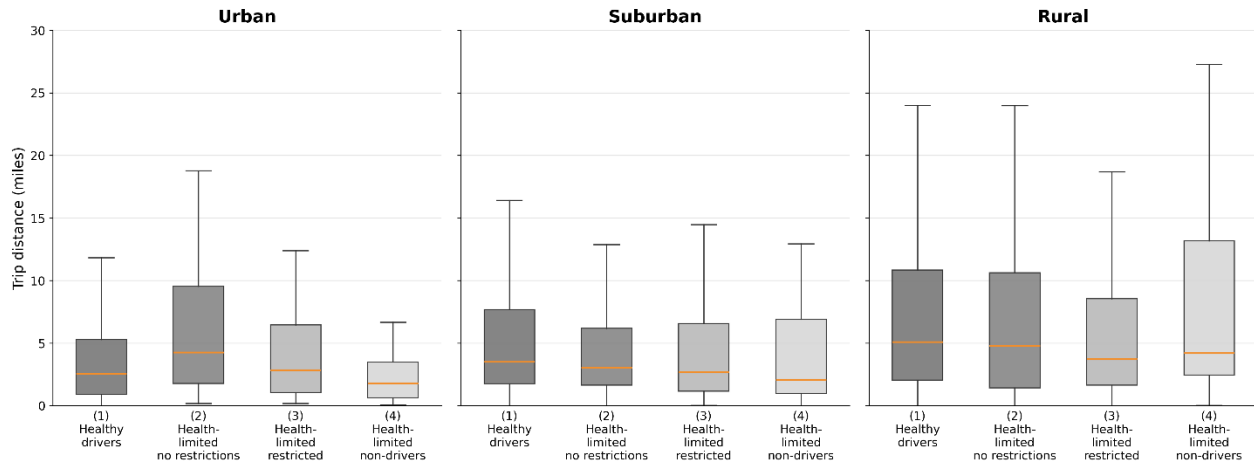


Figure 4-5: Trip Distance Distribution by Driver Status and Residential Location

Together, these descriptive results showed that differences across driver-status groups were reflected in both trip purpose composition and trip-distance patterns. (4) Health-limited non-drivers had fewer trips overall, while the two health-limited driver groups still showed observed travel activity, particularly for grocery and other daily purposes. The trip-distance results also showed that the (2) Health-limited, no restriction drivers maintained a relatively broad travel-distance range, providing descriptive context for the econometric model of driver-status classification in the following session.

4.1.4 Econometric Modeling Outcomes

This study conducted econometric modeling to examine how health status, residential context, and household characteristics were associated with travel behavior among adults aged 65 and older. Building on the descriptive findings, the models were used to move beyond group-level comparisons and assess whether key factors remain associated with travel outcomes after accounting for demographic and household-level characteristics.

The modeling framework focused on driver-status classification as the primary econometric outcome. Specifically, driver-status classification was modeled to examine characteristics associated with different health and driving-status groups. This model builds on the descriptive analysis of trip purpose, trip frequency, and trip-distance patterns by assessing whether demographic, socioeconomic, household, and residential characteristics are associated with driver-status classification. Together, the descriptive and econometric analyses provide evidence on how mobility patterns and driver-status classification vary by health limitation, residential context, and household resources in the NHTS sample.

i. Driver-Status Group Classification

The econometric model examined factors associated with driver-status group classification among adults aged 65 and older. The dependent variable consisted of four unordered categories: (1) Healthy drivers, (2) Health-limited, no restriction drivers, (3) Health-limited, restricted drivers, and (4) Health-limited non-drivers. Because the outcome had more than two unordered categories, a multinomial logistic regression model was estimated. (1) Healthy drivers were used as a reference category, and the remaining three groups were compared against this reference group.

This model was estimated using the urban-rural subsample to focus on contrasts between urban and rural residential contexts. Suburban respondents were therefore excluded from this model by design. This restriction provided a clearer comparison between the two most distinct residential contexts, while avoiding the ambiguity of treating suburban areas as an intermediate category with potentially mixed urban and rural characteristics. Health limitation was not included as an independent variable because it was part of the driver-status group definition. Driver count was also excluded because it overlaps conceptually with the non-driver classification. Race was included as a non-white indicator because some detailed race categories had sparse cell counts. Delivery frequency was also included to examine whether reliance on delivery services was associated with driver-status classification.

The model sample included 2,349 complete-case observations. The reference group, (1) Healthy drivers, included 1,820 respondents, while the comparison groups included 234 (2) Health-limited, no restriction drivers, 138 (3) Health-limited, restricted drivers, and 157 (4) Health-limited non-drivers. The model had a pseudo R^2 of 0.1734, indicating that the selected demographic, household, and residential variables provided meaningful but not exhaustive explanatory power for driver-status classification.

Table 4-7 presents the multinomial logit results. Coefficients are reported on the log-odds scale, and relative risk ratios (RRRs) are provided for interpretation. An RRR greater than 1 indicates a higher relative risk of being classified as the driver-status group rather than the reference group, while an RRR less than 1 indicates a lower relative risk, holding other variables constant.

Table 4-7: Multinomial Logit Results for Driver-Status Classification

Variable	Coeff.	Std. Err.	P-value	RRR
(2) Health-limited, no restriction drivers vs. (1) Healthy drivers				
Constant	-7.879	0.974	<0.001	0.000***
Age	0.088	0.012	<0.001	1.091***
Urban residence	0.373	0.242	0.123	1.452
Household vehicles	-0.083	0.085	0.329	0.920
Household size	0.064	0.111	0.561	1.066
Home block-group pop. density	-0.162	0.201	0.419	0.850
Male	-0.045	0.145	0.756	0.956
Household income	-0.091	0.037	0.015	0.913*
Low education	0.185	0.207	0.372	1.203
Middle education	0.335	0.170	0.049	1.398*
Non-white	0.237	0.282	0.401	1.268
Worker	-0.763	0.253	0.003	0.466**
Delivery frequency	0.090	0.063	0.151	1.094
(3) Health-limited, restricted drivers vs. (1) Healthy drivers				
Constant	-12.676	1.200	<0.001	0.000***
Age	0.150	0.014	<0.001	1.161***
Urban residence	0.310	0.310	0.317	1.364
Household vehicles	-0.260	0.124	0.037	0.771*
Household size	0.421	0.124	0.001	1.524***
Home block-group pop. density	-0.191	0.261	0.465	0.827
Male	-0.294	0.189	0.121	0.746
Household income	-0.199	0.049	<0.001	0.820***
Low education	0.026	0.258	0.920	1.026
Middle education	0.075	0.228	0.742	1.078
Non-white	0.604	0.327	0.065	1.829+
Worker	-0.742	0.366	0.042	0.476*
Delivery frequency	0.122	0.082	0.135	1.130
(4) Health-limited non-drivers vs. (1) Healthy drivers				
Constant	-13.382	1.245	<0.001	0.000***
Age	0.162	0.014	<0.001	1.176***
Urban residence	0.424	0.310	0.172	1.527
Household vehicles	-1.116	0.162	<0.001	0.328***
Household size	0.830	0.116	<0.001	2.294***
Home block-group pop. density	0.138	0.281	0.623	1.148
Male	-0.874	0.213	<0.001	0.417***
Household income	-0.175	0.053	0.001	0.840**
Low education	0.687	0.265	0.009	1.988**
Middle education	0.096	0.272	0.723	1.101
Non-white	0.631	0.326	0.053	1.879+
Worker	-2.895	1.032	0.005	0.055**
Delivery frequency	-0.150	0.093	0.107	0.860

Table 4-8: Model Fit Statistics for Driver-Status Classification

Statistic	Value
Base sample	2,428
Complete-case sample	2,349
(1) Healthy drivers	1,820
(2) Health-limited, no restriction drivers	234
(3) Health-limited, restricted drivers	138
(4) Health-limited non-drivers	157
Log-likelihood	-1,504.45
LL-null	-1,819.99
Pseudo R ²	0.1734
AIC	3,086.89
LLR p-value	<0.001

Note. Reference outcome: (1) Healthy drivers; RRR = relative risk ratio. Reference categories: rural residence, female, high income, and high education. suburban respondents were excluded in this urban-rural subsample. Health limitation was excluded because it was part of the driver-status group definition, and driver count was excluded because it overlaps with the non-driver classification. * $p < .05$, ** $p < .01$, *** $p < .001$.

As shown in Table 4-8, age was positively associated with classification into all three comparison groups relative to (1) Healthy drivers. The association was strongest for (4) Health-limited non-drivers, where each additional year of age was associated with a higher relative risk of being classified as a non-driver rather than a healthy driver (RRR = 1.176). Age was also positively associated with classification as (2) Health-limited, no restriction drivers (RRR = 1.091) and (3) Health-limited, restricted drivers (RRR = 1.161), indicating that older respondents were more likely to fall into health-limited or non-driver categories relative to healthy drivers.

Socioeconomic characteristics also differed across driver-status groups. Higher household income was associated with a lower risk of being classified into all three comparison groups. This association was observed for (2) Health-limited, no restriction drivers (RRR = 0.913), (3) Health-limited, restricted drivers (RRR = 0.820), and (4) Health-limited non-drivers (RRR = 0.840). Education was most clearly associated with the non-driver group: respondents with low education had a higher relative risk of being classified as (4) Health-limited non-drivers rather than (1) Healthy drivers (RRR = 1.988). Middle education was positively associated with classification as

(2) Health-limited, no restriction drivers ($RRR = 1.398$), relative to high educational attainment.

For the (2) Health-limited, no restriction drivers, the results suggest a distinct profile relative to (1) Healthy drivers. Older age, lower household income, middle education, and lower likelihood of being a worker were associated with this group. This group is substantively important because respondents reported health-related limitations but did not report modifying their driving behavior. This pattern may indicate a need for further research on how health limitations influence driving self-regulation, mobility needs, and access to transportation alternatives.

For (3) Health-limited, restricted drivers, age, lower household income, larger household size, fewer household vehicles, and lower likelihood of being a worker were associated with classification into this group. Non-white status was marginally associated at the 10% significance level, but this result should be interpreted cautiously. For (4) Health-limited non-drivers, the strongest patterns were older age, lower household income, low education, larger household size, fewer household vehicles, lower likelihood of being male, and lower likelihood of being a worker. Non-white status was also marginally associated at the 10% significance level.

Overall, this model suggests that driver-status classification was associated mainly with age, household income, education, household size, vehicle availability, and worker status. The patterns were most distinct for (4) Health-limited non-drivers, who differed from (1) Healthy drivers across several demographic, socioeconomic, and household characteristics. The result also indicates that the two health-limited driver groups were not identical in their demographic and household profiles.

Summary

Taken together, the NHTS findings indicate that differences across driver-status groups were reflected in both population characteristics and observed travel patterns. The descriptive results showed that (4) Health-limited non-drivers had lower weekly trip frequency and shorter median trip distances, while the two health-limited driver groups continued to show observed travel activity, particularly for grocery and other daily purposes. Trip distance patterns also showed that the (2) Health-limited, no restriction drivers maintained a relatively broad travel distance range, whereas the (3) Health-limited, restricted drivers generally showed a more compact distribution. The econometric results further showed that driver-status classification was associated with age, household income, education, household size, vehicle availability, gender, and worker status. These results suggest that mobility differences among older adults are related not only to health-related limitations, but also to broader household and residential conditions.

4.2 HRS Findings

The HRS analysis addresses two questions: who stops driving, and what happens to health and well-being afterward. Multilevel discrete-time survival models were estimated to identify predictors of driving cessation among adults aged 65 and older who were active drivers in 2006 (N = 7,442). Results are presented in Table 4-1. Older age was significantly associated with a higher likelihood of stopping driving: each additional year was associated with a 9% higher hazard of stopping driving (HR = 1.09, 95% CI: 1.08-1.11). Race and ethnicity were also significantly associated with stopping driving. Non-Hispanic Black older adults faced a 39% higher hazard than non-Hispanic White adults (HR = 1.39, 95% CI: 1.10-1.77), while Hispanic and non-Hispanic Other groups did not differ significantly from the non-Hispanic White adults. Higher household income was associated with a lower risk of driving cessation (HR = 0.96 per \$10,000 increase, 95% CI: 0.94-0.98).

Among the health-related predictors, poor self-rated health (HR = 1.44, 95% CI: 1.27-1.63), greater depressive symptoms (HR = 1.11 per unit increase, 95% CI: 1.07-1.14), and lower cognitive function (HR = 0.92 per point, 95% CI: 0.90-0.94) were all independently associated with higher cessation risk. In contrast, educational attainment, living arrangement, neighborhood socioeconomic status, and urbanicity were not significantly associated with cessation after accounting for the other covariates. The hazard also rose over time independent of individual characteristics (HR = 1.16, 95% CI: 1.14-1.17), consistent with the expectation that older adults face increasing cessation risk as they age through the observation window.

Table 4-9: Multilevel Discrete-Time Survival Model Estimates: Predictors of Driving Cessation

	HR	95% CI
Age	1.09***	1.08-1.11
Race and ethnicity		
NH White	reference	-
NH Black	1.39**	1.10-1.77
Hispanic	1.281	0.99-1.48
NH Other	1.18	0.61-2.70
Education		
< high school diploma	reference	-
High school diploma	1.05	0.89-1.24
> high school diploma	0.89	0.74-1.07
Household income (per \$10,000)	0.96**	0.94-0.98
Living alone	0.96	0.82-1.12

Poor health	1.44***	1.27-1.63
Depression	1.11***	1.07-1.14
Cognitive function	0.92***	0.90-0.94
Neighborhood socioeconomic status	1.01	0.93-1.10
Urbanicity		
Urban	reference	-
Suburban	0.93	0.79-1.10
Rural	0.83	0.69-1.01
Time	1.16***	1.14-1.17

Note. HR = hazard ratio. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

4.2.1 Wisconsin, Midwest, and National Comparison

To situate Wisconsin within a broader regional context, descriptive comparisons were made across Wisconsin residents, the 12-state Midwest sample, and the national U.S. sample. Tables 4-2 through 4-4 summarize demographic, health, and geographic characteristics by driving status within each stratum. Estimates for Wisconsin cells with fewer than 11 respondents are suppressed for confidentiality.

Across all three geographic strata, individuals who stopped driving were older, had lower household incomes, reported poorer health, and showed higher depressive symptom scores than those who continued driving. This pattern was consistent regardless of region. This suggests that the sociodemographic and health correlates of driving cessation are not specific to Wisconsin but reflect broader national trends.

Regional differences were more apparent when comparing continued drivers across strata. Midwest residents who continued driving were more likely to live in rural areas and had slightly lower neighborhood socioeconomic status scores compared to the national sample. Wisconsin residents who stopped driving tended to be older and had lower incomes than their counterparts in national samples, while health status and depressive symptoms were comparable across regions.

Table 4-10: Demographic Characteristics by Driving Status: Wisconsin, Midwest, and U.S. Residents

	Wisconsin Residents		Midwest 12		U.S.	
	Continued (n=108)	Stopped Driving (n=21)	Continued (n=1,504)	Stopped Driving (n=276)	Continued (n=6,089)	Stopped Driving (n=1,153)
Age	74.7±5.9	78.4±6.1	75.2±6.2	76.5±6.1	74.6±6.0	76.0±6.4
Gender						

Female	-	-	49.5%	31.3%	50.5%	33.0%
Male	-	-	50.6%	68.8%	49.5%	67.0%
Race and ethnicity						
NH White	-	-	92.1%	82.0%	84.2%	75.7%
Non-NH White	-	-	7.9%	18.0%	15.8%	24.3%
Education						
< high school diploma	-	-	20.0%	24.2%	22.4%	28.3%
High school diploma	-	-	59.0%	59.0%	51.6%	51.2%
> high school diploma	-	-	21.0%	16.8%	26.0%	20.6%
Household income (per \$10,000)	6.0±7.6	3.2±1.7	5.4±6.4	4.0±4.5	5.8±9.5	4.8±16.1
Living alone	-	-	27.3%	29.4%	24.5%	27.3%

Note. - = suppressed (n < 11 in each Census Tract). Continuous variables reported as mean ± SD.

Table 4-11: Health Characteristics by Driving Behavior: Wisconsin, Midwest, and U.S. Residents

	Wisconsin Residents		Midwest 12		U.S.	
	Continued (n=108)	Stopped Driving (n=21)	Continued (n=1,504)	Stopped Driving (n=276)	Continued (n=6,089)	Stopped Driving (n=1,153)
Age	74.7±5.9	78.4±6.1	75.2±6.2	76.5±6.1	74.6±6.0	76.0±6.4
General Health (range: 1 [poor] – 5 [excellent])	3.5±0.9	3.1±1.3	3.3±0.9	3.1±1.0	3.3±1.0	3.1±1.0
Poor health	-	-	54.9%	64.9%	55.5%	64.4%
Depression (range: 0-8)	0.9±1.5	1.2±1.7	1.0±1.6	1.3±1.6	1.1±1.7	1.5±1.9
Cognitive function (range: 0-27)	15.3±3.6	15.0±4.4	15.5±3.9	14.8±4.0	15.4±4.0	14.7±4.0
Social isolation (range: 0-5)	0.8±1.1	0.8±1.0	0.8±1.1	1.0±1.1	0.7±1.0	0.9±1.0
Neighborhood socioeconomic status	0.4±0.8	0.3±0.7	-0.1±0.7	-0.1±0.7	0.1±1.0	0.1±1.0

Table 4-12: Geographic Characteristics by Driving Status: Wisconsin, Midwest, and U.S. Residents

	Wisconsin Residents		Midwest 12		U.S.	
	Continued (n=108)	Stopped Driving (n=21)	Continued (n=1,504)	Stopped Driving (n=276)	Continued (n=6,089)	Stopped Driving (n=1,153)
Age	74.7±5.9	78.4±6.1	75.2±6.2	76.5±6.1	74.6±6.0	76.0±6.4
Urbanicity						

Urban	-	-	34.0%	40.6%	43.6%	47.6%
Suburban	-	-	34.4%	33.0%	32.5%	30.9%
Rural	-	-	31.6%	26.5%	23.9%	21.5%

4.2.2 Health and Well-Being after Driving Cessation

The second set of analyses followed participants from 2008 to 2022 to examine how health and well-being outcomes differed across four driving trajectory groups: gradual transitioners, abrupt transitioners, continuous drivers, and continuous non-drivers. We used several key questions to assess participants' driving status and patterns over time, for example, "Are you able to drive?", "Have you driven a car in the past month?" We also examined temporal trends in driving behavior across consecutive HRS waves, which are conducted every two years. Specifically, changes in driving status were tracked between the 2006 and 2008 waves, the 2008 and 2010 waves, and the 2010 and 2012 waves. This approach allowed for the assessment of changes in driving patterns over time. The study sample included adults aged 50 years and older who participated in at least two consecutive HRS waves. Participants were required to have valid driving information available for both waves and to report driving in two consecutive waves in order to be included in the analysis.

Participants were categorized into four groups based on their driving status transitions. The first group, Active Drivers (N = 467), consisted of participants who continued driving in two consecutive waves without transitioning out of driving. The second group, Gradual Transitioners (N = 1,059), included participants who reported driving only short distances in the earlier wave and then reported no driving two years later. This group represents individuals with a gradual reduction in driving before complete cessation. The third group, Abrupt Transitioners (N = 370), consisted of participants who drove without limitations in the earlier wave but reported not driving two years later. This pattern reflects a sudden transition from unrestricted driving to driving cessation. The final group, Continuous Non-Drivers (N = 4,667), included participants who did not drive in two consecutive waves, indicating persistent non-driving status over time. Participants were followed up for up to ten years (2008-2022). Gradual transitioners were on average the oldest group (78.6 years) and predominantly female (70.0%), while abrupt transitioners were somewhat younger (76.3 years) and more balanced by gender (44.9%). Continuous drivers had the highest household income (\$61,000 annually) and the lowest average age (71.5 years). Continuous non-drivers had the highest proportions of women (80.2%), racial and ethnic minority adults, and

respondents without a high school diploma (50.7%), reflecting well-documented disparities in older adult driving patterns.

Table 4-13: Baseline Sociodemographic Characteristics by Driver Status

Variables	Gradual transition to non-driving (n=1,059)	Abrupt transition to non-driving (n=370)	Drivers (n=4,667)	Non-drivers (n=1,534)
Age	78.6±7.3	76.3±7.0	71.5±6.1	77.9±8.6
Female	69.97%	44.86%	47.10%	80.18%
Race/Ethnicity				
White, non-Hispanic	77.43%	83.24%	83.61%	53.75%
Black, non-Hispanic	13.69%	8.92%	9.75%	25.64%
Hispanic	7.27%	7.03%	5.51%	18.79%
Other, non-Hispanic	1.61%	0.81%	1.14%	1.83%
< high school graduation	33.33%	27.57%	20.38%	50.72%
Annual household income	\$32,000	\$43,000	\$61,000	\$28,000
Urbanicity				
Urban	78.33%	78.53%	77.07%	82.27%
Suburban	10.03%	7.34%	10.02%	8.77%
Rural	11.64%	14.13%	12.71%	8.97%

i. Self-rated poor health

Compared with continuous drivers, both gradual and abrupt transitioners had significantly higher odds of reporting poor health. Gradual transitioners were more than twice as likely to report poor health (OR = 2.36, 95% CI: 1.87–2.98), and abrupt transitioners were three times as likely (OR = 3.02, 95% CI: 2.10–4.36). However, when compared with continuous non-drivers, these differences were not statistically significant, suggesting that the health status of transitioners resembles that of individuals who were already non-drivers.

Table 4-14: Odd Ratios for Self-Rated Poor Health: Gradual and Abrupt Transitions

	Odds Ratio	95% CI
Driving transition (reference = continuous drivers)		
Gradual transition	2.36***	1.87, 2.98
Abrupt transition	3.02***	2.10, 4.36
Driving transition (reference = continuous non-drivers)		
Gradual transition	0.98	0.74, 1.28
Abrupt transition	1.25	0.84, 1.87

ii. Number of chronic diseases

Driving cessation was associated with a greater number of chronic conditions. Relative to continuous drivers, both gradual (B = 0.23, 95% CI: 0.16–0.30) and abrupt transitioners (B = 0.22, 95% CI: 0.12–0.33) reported significantly more chronic diseases. No significant differences were observed when compared with continuous non-drivers.

Table 4-15: Unstandardized coefficients for Number of Chronic Diseases: Gradual and Abrupt Transitions

	Unstandardized Coefficient (B)	95% CI
Driving transition (reference = continuous drivers)		
Gradual transition	0.23***	0.16, 0.30
Abrupt transition	0.22***	0.12, 0.33
Driving transition (reference = continuous non-drivers)		
Gradual transition	0.68	-0.01, 0.14
Abrupt transition	0.06	-0.05, 0.17

iii. Depression

Both gradual and abrupt transitioners experienced higher levels of depressive symptoms than continuous drivers (gradual: B = 0.38, 95% CI: 0.26–0.50; abrupt: B = 0.49, 95% CI: 0.31–0.67). Similar to other outcomes, depressive symptom levels among transitioners did not differ significantly from those of continuous non-drivers.

Table 4-16: Unstandardized coefficients for Depression: Gradual and Abrupt Transitions

	Unstandardized Coefficient (B)	95% CI
Driving transition (reference = continuous drivers)		
Gradual transition	0.38***	0.26, 0.50
Abrupt transition	0.49***	0.31, 0.67
Driving transition (reference = continuous non-drivers)		
Gradual transition	-0.10	-0.25, 0.04
Abrupt transition	0.05	-0.20, 0.21

iv. Physical activity

Driving cessation was associated with substantial reductions in physical activity. Compared with continuous drivers, gradual (B = -2.11, 95% CI: -2.32 to -1.89) and abrupt transitioners (B = -2.20, 95% CI: -2.51 to -1.88) reported significantly lower levels of physical activity. When compared with continuous non-drivers, transitioners still exhibited modest but statistically

significant reductions in physical activity (gradual: $B = -0.56$, 95% CI: -0.78 to -0.33 ; abrupt: $B = -0.65$, 95% CI: -0.98 to -0.32).

Table 4-17: Unstandardized coefficients for Physical Activity: Gradual and Abrupt Transitions

	Unstandardized Coefficient (B)	95% CI
Driving transition (reference = continuous drivers)		
Gradual transition	-2.11***	-2.32, -1.89
Abrupt transition	-2.20***	-2.51, -1.88
Driving transition (reference = continuous non-drivers)		
Gradual transition	-0.56***	-0.78, -0.33
Abrupt transition	-0.65***	-0.98, -0.32

v. Social isolation

Social isolation was assessed as a composite index of structural social disconnection, including marital status, living arrangement, and frequency of contact with family, friends, and community organizations, which is distinct from the subjective, affective nature of the depressive symptom measure reported above. No statistically significant differences in social isolation were observed between either transitioner group and the two comparison groups. Confidence intervals were wide and crossed unity in all model specifications, indicating insufficient evidence to conclude that driving cessation independently predicts social isolation in this sample.

Table 4-18: Odd Ratios for Social Isolation: Gradual and Abrupt Transitions

	Odds Ratio	95% CI
Driving transition (reference = continuous drivers)		
Gradual transition	1.35	0.55, 3.33
Abrupt transition	0.28	0.05, 1.66
Driving transition (reference = continuous non-drivers)		
Gradual transition	0.21	0.70, 6.37
Abrupt transition	0.44	0.07, 2.87

Summary

Overall, the HRS findings point to a consistent pattern. Driving cessation is most strongly predicted by advancing age, poor physical health, cognitive decline, and depressive symptoms, with additional disparities by race and income. These predictors hold across geographic strata, though Wisconsin residents who stopped driving were somewhat older and had lower incomes than their Midwest and national counterparts. Regarding the health and well-being consequences after

driving cessation, we observed worse self-rated health, more chronic diseases, greater depressive symptoms, and lower physical activity compared with those who kept driving. Because our analytic design measured driving transition status prior to the assessment of subsequent health trajectories, these findings provide meaningful evidence that cessation precedes, and likely contributes to, later health decline, rather than simply reflecting reverse causation. At the same time, given that poor health is itself a strong predictor of cessation, we cannot fully exclude the possibility that health trajectories already underway before the transition contributed to the pattern observed afterward. The absence of significant differences relative to continuous non-drivers on most outcomes suggests that transitioners' health trajectories largely converge with the pre-existing non-driver population rather than representing a distinct post-cessation decline. The one exception is physical activity, where transitioners, regardless of whether cessation was gradual and abrupt, fared worse than both continuous drivers and continuous non-drivers, pointing to a specific mobility-related disruption that warrants policy attention.

5 Qualitative Analysis and Results

We interviewed 11 Wisconsin-based transportation professionals with expertise on non-driver transportation and driving transition between February 18 and April 14, 2026. Respondents were selected based on their experience and positions in order to provide variance across several key criteria for us to study. We focused on comparing perspectives from respondents with different organizational foci, target populations, and geographies (the breakdowns of which are depicted in the following table).

*Table 5-1: Respondent Categories**

Organizational Focus	Respondents	Target Population	Respondents	Geography	Respondents
Public Transit	5	Aging	3	Urban	3
Paratransit	5	Disability	2	Rural	2
Planning	1	-	-	-	-

*Categories from different columns are not mutually exclusive.

Interviews averaged 53.9 minutes and 8,366 words and were recorded, transcribed, and coded by multiple members of the research team in a two-stage process. First, we conducted an initial phase of coding based on our initial protocol and previous research tasks in order to verify content and refine our coding scheme. Next, we conducted a second round of coding on all interviews using the refined coding scheme. We then performed a summative analysis to identify major themes emerging from the data and outline major policy suggestions put forward by respondents. As seen in later summary tables, we categorize responses based on the strength of evidence they provide for each theme. Presence and strength of signal are both relevant in interpreting the degree to which respondents' perspectives provide evidence of a theme, so we summarize the level of evidence using the following constructs. "Strong evidence" (+++) indicates that the respondent provided robust validation of the indicated theme; this reflects multiple statements in support of the given theme or (less frequently) a single statement that is extremely emphatic. Statements here refer to expression of a single or complex concept and can range from a single sentence to an extended conversation all related to the same idea. "Strong evidence" is in most cases assigned as a result of the respondent talking about the theme at length and returning to it multiple times throughout the interview. However, emphatic support for a theme also merits "strong evidence" if the respondent makes a particularly assertive statement where their language and tone make it clear that they view the idea as particularly important. "Evidence" (+) indicates

that the respondent provided evidence of the theme, but that the strength of the signal was not notably large. A typical example of “evidence” is when a respondent clearly identifies and supports a theme but does not devote undue attention to it or return to it again during the interview. “Mixed evidence” (~) represents rare cases in which respondents provide evidence in support of a theme at one point in the interview but also make statements that appear to contradict it in others. “Evidence to the contrary” (-) indicates that the respondent talked about a theme but provided evidence against it. Finally, “no evidence” (X) represents instances in which the respondent provided no evidence in support or against, either because they did not answer the question or told the interviewers that they did not know enough to comment on it.

5.1 Validation of quantitative impacts

First, we triangulated the interview data with previous findings on the welfare impacts of non-driver status to reinforce our conclusions and validate whether those findings are reflective of circumstances in Wisconsin. The interviews produced strong themes reflecting the negative impacts transitioning away from driving has on Wisconsinites. Respondents uniformly reported welfare impacts across multiple categories, focusing on three main concepts.

5.1.1 Physical and Mental Health:

First, impacts on health: interview data overwhelmingly support the quantitative evidence that transitioning away from driving comes with increased health risks. Almost all of our respondents repeatedly emphasized these impacts, providing strong evidence that both are relevant factors for Wisconsinites. The primary mechanism affecting physical health that they described comes from individuals’ lack of mobility preventing them from accessing resources outside of their home – or at least outside of walking distance from it. Non-drivers who struggle to access transportation can find themselves unable to consistently visit the grocery store (lowering access to nutrition) and make it to medical appointments (lowering the quality of their healthcare), increasing the risk of harm to their physical health. Several respondents viewed these issues as intertwined with individuals’ social lives as well. According to them, physical health, mental health, and social engagement go hand in hand. Limiting access to community resources, from medical facilities to community events and opportunities to socialize, will have holistic negative impacts on non-drivers’ quality of life, affecting their physical health overall.

“When you provide them transportation, like I said, their health gets better. When they participate in their community, they live longer, they're happier, they see their family, they see their kids, they're included. They get fresh food. And so, a lot of times [their quality of life] will increase” (Respondent 2).

These effects are closely related to individuals' mental health as well. Respondents repeatedly emphasize the potential for non-driving to harm individuals' quality of life by undermining their mental health. Losing the ability to drive can cut people off from the world around them, creating the risk for mental health issues to develop for many. When people lose the ability to drive and do not have an alternative method of getting around, they can feel cut off from their families, friends, and communities. This can cause loneliness, depression, and a host of other emotional harms. While modern technology can help to keep people connected while physically apart (through virtual calls, social networking, etc.), these cannot replace face-to-face interpersonal interaction, especially for older generations who are less comfortable using new technologies.

“[the emotional fallout from non-driving] Has really become a bigger issue and the mental health issues that come with that. So, you know, transportation is really very tied to people's emotional health and their social connection. And while you can get a lot of that online, it's not the same” (Respondent 6).

5.1.2 Community Isolation:

While not demonstrated by our quantitative analysis, several respondents emphasized the possibility for non-drivers to become isolated from their communities, intensifying mental health issues. According to respondents, loss of transportation can prevent people from engaging with their network of friends outside of their own home, cutting them off from many of the social activities they derive value from. This can further increase isolation and loneliness, exacerbating the mental health risks previously described, as well as preventing them from accessing the community-based social support systems which they might otherwise benefit from. People derive psychological, relational, and physical benefits from engaging in their larger communities; in some cases, loss of access can deprive people of those social benefits and make them more vulnerable to other harms without community support, making

it even harder for them to access transportation systems where they are available.

“I think what we're worried about though is that without the ability to get out in your community, the social isolation, has really become a bigger issue and the mental health issues that come with that” (Respondent 6).

One respondent even noted that this kind of isolation can have self-perpetuating effects. In becoming isolated, non-drivers can find themselves unable to access social services which they might otherwise have benefited from. Some of these programs actively promote and disperse information about how to access non-driver transit, so isolated individuals (who are unable to attend them) might never learn about transit that might have otherwise helped them break out of that isolation.

“There are so many different senior centers and programs and different resources for older adults in the county. But if you can't get out of your home, then you can't use those. And its sort of a cycle where if you're not going to those programs, that might be how you would actually learn about the transportation” (Respondent 4).

It is important to note that this relationship is not statistically significant in our quantitative analysis, so we cannot confidently claim that non-driver status drives social isolation across the population. Adults do tend to become more socially isolated as they get older, and many individual non-drivers struggle with social isolation, but this appears to be a natural process of aging rather than a direct connection between these two characteristics. Nevertheless, interview responses indicate that social isolation is important to consider in the context of non-driving. While driver status does not cause isolation overall, in individual cases, it may intensify individuals' separation from their larger communities.

5.1.3 Independence and Workforce Constraints:

Finally, independence and employment opportunities: several respondents noted the larger losses of independence facing non-drivers. Without adequate transportation systems in place to substitute for driving, many people feel as though their status as an equal member of society has

been taken away from them. Some feel guilt at being a burden for the friends and family they rely on for transportation, while others withdraw from society; a lack of transportation can make people feel like second-hand citizens.

“You know that generation, the 80-year-olds, they're like, I don't want to have to call my daughter. She's working all day, right? I mean, she can't come and get me to take me to my doctor's appointment. And so, they feel like they're a burden on people when they lose their independence as well” (Respondent 21).

Additionally, for those who work, not being able to drive can cause them to lose their jobs and constrain their employment opportunities. This can impose obvious financial harm on those individuals. If they can't work, they can't generate the income they may need to survive, let alone lead fulfilled lives. It can also reinforce their image of themselves as burdens on society. Working and being a productive member of society are critical to many individuals' self-image. If they are not able to work, their self-worth can be damaged as well. The results are, therefore, two-fold; working non-drivers who cannot find accessible employment can lose the ability to provide for themselves and their families and (in the process of that happening) suffer a loss of independence and self-worth. Current transit options are not very flexible and/or expansive in many areas of Wisconsin, making consistent employment challenging for people in this group.

“People lose their jobs. One of the things we hear when we talk to our employer network is that they have had people who have been unable to maintain employment because they don't have reliable transportation” (Respondent 21).

5.1.4 Abrupt vs Gradual Transitions:

Interviews also highlighted two aspects of individuals' driving transitions that can exacerbate the deleterious impacts it has on their welfare. Impacts vary based on whether the individual transitions away from driving gradually or is forced to make the change all at once. Abrupt transitions often come with more severe problems stemming from non-driving. Again, this finding comports with our quantitative findings, but interviews provide additional depth to our understanding of why this is the case.

A widespread patchwork of transportation options is available to Wisconsin non-drivers. However, navigating that system can be difficult, especially for new participants who are not familiar with its complexity. Understanding how the many interconnected transportation programs work and interact with each other requires individuals to invest substantial time and energy in educating themselves. Most programs are regionally bound and carry restrictions on who is eligible to use the service. Consequently, it can be challenging for users to identify what options are available to them. New non-drivers are faced with a substantial amount of work before being able to start using alternative transit. First, they have to sift through the total number of programs to figure out which one(s) they are eligible for, and then they have to learn where they provide services for and how they can be accessed. These information costs act as a major barrier for new non-drivers; if you don't know a program exists (or don't know how it works), you're not going to be able to take advantage of it.

“Even though there are a number of different programs throughout Milwaukee County that are available, people just don't really know about those different programs” (Respondent 4).

These costs are the most challenging for people who have to face them all at once. Individuals who stop driving abruptly must acquire all the information on what is available and how to access it before effectively utilizing existing systems, creating substantial challenges for people who are already going through a large transitional period in their lives. Many become overwhelmed by it all. Additionally, abrupt transitioners often have little experience using public transit systems in general and may not know how they are intended to function or be used, increasing the burden on them to learn how to navigate these new environments in rapid succession. This can create fear or anger about using unfamiliar systems, further disincentivizing non-drivers from accessing existing transportation where it is available.

“There is a real sense of like nervousness or frankly just being scared of using public transportation because it's never something they've ever had to do” (Respondent 10).

On the other hand, people who had previous experience using public transit, or who saw the end of their driving career coming and started researching alternative transit early typically have an easier time. Transitioning gradually can help mitigate these problems because it allows users to slowly accumulate knowledge of available options (and knowledge about how to use them) piece by piece over time. If you can spread the information costs out over a longer period of time, they are not so overwhelming. Fortunately, one advantage of the severity of Wisconsin winters is that they encourage some aging drivers to utilize existing services early on, before an abrupt transition to non-driving is forced on them. Some individuals opt to utilize transportation services despite retaining the ability to drive themselves in order to avoid dangerous roads during bad weather in the winter months. This helps them acclimate to the systems they may later end up relying on fully more gracefully. However, this is not universally practiced and many Wisconsinites transition abruptly.

Unfortunately, many Wisconsinites currently become non-drivers without much, if any, experience with public transit or knowledge of non-driver programs, forcing them to transition abruptly. This is a shock for most, requires substantial investment in learning about how the programs available to them, and can delay (or sometimes entirely stymie) their ability to leave their homes after giving up their car keys. This can exacerbate many of the problems (e.g., health problems, loss of independence) that arise due to non-driving.

“If you go from being able to get around on your own and then all of a sudden you can't do that anymore, yeah, you are now no longer socializing. Your access to nutrition has decreased; your risk for depression increases significantly, which also then has negative effects on your physical health ... This access to transportation is really much broader than just like ‘can you get around’” (Respondent 4).

5.1.5 Urban vs Rural Locations:

Physical geography also impacts the intensity of non-driving impacts. While urbanicity was not itself a significant predictor of who stops driving in our quantitative models, interview data indicate that once cessation occurs, its impacts may be even more intense in Wisconsin's rural areas. Many areas of the state, particularly in the north, are very rural and difficult (if not impossible) to access

without a car. These difficulties are intensified even further during winter months when roads become difficult or dangerous to navigate. Consequently, many areas of the state are extremely isolated, leaving rural populations very vulnerable to losing access to transportation and the harms that come with it. The issues associated with non-driving are substantially worse for individuals living in rural areas.

In many rural areas, there is no public transit available, so driving is the only option. If there are no alternative programs available, non-drivers then have very few options. The only consistent options for many are asking friends or family for rides or walking (or cycling). However, walking (or cycling) is often infeasible due to the long distances between destinations in rural areas.

“It really does affect their life when there's no transportation available and [in a] rural area, it's a long way to walk to a neighbor or try to get a ride from someone. So, you might have to walk in one county that we're in. It's 65 miles from one house to maybe another farm, so it impacts their life big time” (Respondent 2).

These distances are made even more difficult to navigate in winter when the roads become hazardous. Winter conditions can make walking dangerous even where it is feasible in warmer months, as well as making roads risky to drive on or even impassible. In the far north, even traveling by car can be impossible during part of the year.

“In the winter it's almost impossible to get way up north. So, because of the weather, you could get stuck there. I don't travel up there” (Respondent 2).

Furthermore, rural non-drivers often require transportation over much broader areas, creating issues when transportation services are constrained to a specific service area. Transit services with small coverage areas are not big enough to cover all transportation needs across expansive rural regions. This can make it difficult for rural individuals to access distant destinations, even if they are important. According to one respondent (Respondent 12), medical services are moving further and further outside of population centers (Galewitz, 2015), creating the need for long-distance transportation for urban and rural non-drivers alike, although these issues are more severe for rural

populations (Rural Health Information Hub, 2025).

While we do not observe direct evidence of Wisconsin medical facilities becoming more rural, patients are sometimes referred to practices that are far away from where they live so the challenges expressed by this concern are legitimate for those in rural areas.

“What I am noticing is especially in the rural areas here medical providers are scheduling people's appointments more in different areas of the state. So, you'll go in to the doctor and they'll be like, oh, you need to follow up with a cardiologist, but instead of having a cardiologist here, they're an hour away” (Respondent 12).

This creates transportation needs that are very difficult to provide, especially when either the patient or the facility are in rural areas. Non-emergency medical transportation services help fill some of these needs, but they are not perfect (see section 5.2.2.3). While some community programs are available in some rural areas, the availability and coverage of these services are not always sufficient for local needs. Rural communities often have few transportation options available, in some places there are none at all. Furthermore, program eligibility criteria take away the only available option for non-drivers who are not eligible (but still require transportation).

“If you're not disabled and you're not elderly and you live in Milton, you live in Edgerton, you live in Evansville, there may not be any transportation” (Respondent 10).

Where transportation programs are not available (or insufficient to meet the needs of everyone), non-drivers may not have any options outside of asking friends and family for a ride. Demand-response transit options (e.g., Uber or cab services) are present in some areas, but their availability is extremely limited in most rural areas of the state; furthermore, they are often prohibitively costly for non-drivers due to long distances between rural destinations and high pricing stemming from low supply. These issues persist in many urban areas as well (particularly in small urban centers) where existing transit services are not always able to be provided at a desirable scope, but the issues are most extreme in rural areas. This makes all of the issues associated with non-driving (e.g., health problems, loss of independence) more severe in rural areas.

“People who live in rural areas, if they don't have access to transportation, the depression rate increases, the suicide rate increases. They are not healthy because they don't have access to, you know, medical care or fresh food or their neighbors or maybe even their kids. So, they're out there by themselves” (Respondent 2).

Overall, these results provide strong evidence that the quantitative results from our national study are broadly reflective of conditions in the state of Wisconsin, while also shedding light on areas that are unique within the state and helping us to understand how current program challenges, needs, and opportunities lie. Table 5-2 depicts interview evidence related to these findings. This table (and similar tables following subsequent sections) synthesizes the level of support for each theme from our interview respondents. Each summary table includes a footnote to remind the reader of the respective definitions for each level of evidence (as described in section 5).

Table 5-2: Interview Evidence on Non-driving Impacts

ID	Physical and Mental Health	Community Isolation	Workforce Constraints	Gradual vs Abrupt	Urban vs Rural
1	+++	+	X	+	+
2	+++	+++	+	+++	+++
3	+	+	+	X	+
4	+++	+++	X	+++	+
5	+++	+++	+	+	+++
6	+	+	X	+++	+
7	+	+	+	+++	+++
8	+	+	+	+	+++
9	+	X	X	+	X
10	X	X	X	X	X
11	+	+	+++	X	+++

* (++) represents strong evidence, (+) represents evidence, (~) represents mixed evidence, (-) represents evidence to the contrary, and (X) represents no evidence

5.2 Programmatic strategies

Interviews shed light on a variety of programmatic strategies designed to provide non-drivers with transportation in the state of Wisconsin. Data collection protocols were designed to explore respondents' perspectives both about which program areas were effective and which aspects

currently fail to meet the needs of non-drivers for their clients. Critically, they provide insight into common challenges facing these programs and help identify problems that deserve attention moving forward. We organize our examination by classifying extant programs as traditional public transit, alternative options, and accessibility support services as described below. Table 5-3 indicates the types of programs respondents spent the most time sharing their expertise on.

*Table 5-3: Primary Interview Perspectives for Different Program Types**

	Public Transit	Alternative options		Accessibility Support		
ID	Bus	DRT	Volunteer driving programs	Information & Education	Technical Solutions	Ad Hoc Education
1	+		+	+		+
2			+			+
3						
4			+	+		+
5			+	+	+	
6	+		+			
7	+	+		+		
8	+	+	+		+	+
9		+	+			+
10	+		+	+		
11		+		+		+

*Most respondents comment on all categories to some extent. Identified categories represent the areas they provided substantial amounts of evidence on. (i.e., had in-depth knowledge about a type of program and talked about it enough to inform our themes one way or the other).

5.2.1 Traditional Public Transit:

45.5% of our respondents shared extensive evidence of their perspectives on public transit systems in their area of operation. Their responses identify public transit systems as an integral part of the lattice-work of transportation systems across the state but shed light on areas where they are not able to meet the needs of non-drivers without support from supplementary modes of transportation. We focus our analysis on perspectives from individuals with experience working in organizations responsible for delivering public transit services themselves (n = 4).

5.2.1.1 Scope of Services:

According to our data, public transit systems tend to work well in the areas where they operate.

Local bus systems are effective at meeting much (though not all) of the mobility demands of individuals within their service areas, including non-drivers. However, respondents repeatedly noted limitations to the geographic and temporal scope at which those services are offered. Public transit systems are simply not available in most rural areas, leaving many communities unserved. Additionally, most providers – even those in large urban centers – lack the resources to extend public transit systems as far as would be ideal. This results in service gaps where areas with transit demands remain physically unconnected to the bus network.

“There are many other communities in Wisconsin that would say, ‘yeah, we’re a rural community and we would love to have public transit here’, [but] they either may not qualify, or they don’t have it in their budget to afford the service” (Respondent 21).

“Every day we have people calling asking, does the bus go to [town name], which is a little, little town, probably 10,000 people, 8 minutes away just down the highway. And the answer to that is no” (Respondent 10).

Additionally, there are temporal gaps where bussing services are stopped and do not run during time periods where there would otherwise be demand. Services cannot operate every hour of the day, leaving certain times unserved. Riders must wait for services to resume or find an alternative. This is not usually an issue if it coincides with periods of very low demand. However, some respondents note that increasing hours of service would be desirable for some users.

“They want our regional route to [town name] to operate on Saturdays. Currently that route’s only Monday through Friday. Some people would like earlier morning service to get to jobs that start before we do, and people would love like late night service for either getting off work or, you know, maybe having fun after work and getting home safely” (Respondent 3).

“We don’t have night and weekend availability ... so that’s a big gap in our service” (Respondent 12).

Lack of sufficient service lines can also create the need for inefficient routing in some areas. If routes are organized sub-optimally due to limitations in the number of buses running, it can result

in longer wait and ride times for passengers. One respondent reported a situation that due to the low number of overall lines, the city's transit system had to be organized around a central hub point. Rather than being able to get between bus stops on the periphery of the service area via a direct line, riders would have to take a bus from their location to the center of the city and then transfer to a second bus to get back out to a different area. This system is less efficient than a larger network of lines could be (although it is also less costly).

“The barrier here in [town name] is that once you get to a transit line – and I'm not saying it's a bad transit system whatsoever, I'm just saying what it is ... people have to go downtown and transfer and then transfer back out” (Respondent 3).

5.2.1.2 Financial Constraints

Public transit experts almost uniformly (all but one respondent) expressed the budgetary challenges they face (a perspective shared by respondents across all program types). Service providers across the state are being faced with pressure from multiple angles, making it difficult to effectively fund projects. As in other sectors, the cost of running public transit services has increased. Respondents repeatedly brought up how rising prices are squeezing their margins, creating challenges for maintaining quality services.

“The last couple years ... we're only focused on maintaining our existing services. Paying for staffing that has gotten more expensive, paying for health insurance that's gotten more expensive, paying for vehicles, gas, all of that stuff that has gone up. So now a bus is this last round of buses is \$100,000 more per bus than the last one that we got. So it kind of makes you go, OK, you know, we're kind of starting to hit a wall with that type of stuff” (Respondent 12).

Simultaneously, many of the funding streams available to fund these programs have either remained stagnant or decreased, squeezing providers even further. Most funding amounts have not been adjusted for rising costs and inflation in years; meanwhile, grant opportunities have become more competitive and continue to become harder for many local transit providers to consistently win. There is less funding to go around. This has imposed major budgetary issues on local service

providers.

“Our biggest issue right now is that our city is just overall in a bad budget scenario where we’re struggling to even meet the local match” (Respondent 9).

“With our limited state funding here, we have to leverage every opportunity we can to operate and keep up with our services” (Respondent 12).

The funding streams allocated to transportation have not kept up with rising costs. This has tightened the financial margins for public transit providers, eliminating the potential to expand in many areas and threatening the need to reduce the scope of services that are already being provided.

“We did have a regional route to [town name] and [town name] for a short period of time, but that never really took off and lost its funding and went away” (Respondent 10).

“So right now we’re focused on maintaining our services, but we would like to be focused more on expanding” (Respondent 12).

5.2.1.3 Inter-jurisdictional Coordination

Public transit experts also identified challenges in coordinating different transit systems across government jurisdictions. There are no regional transit authorities in the state of Wisconsin, so local governments are left on their own to link proximate transit systems. Furthermore, while individuals regularly need to travel across municipal and county lines, coordinating transit systems across these boundaries or linking existing systems in different jurisdictions together can be difficult to achieve.

Municipal and service area boundaries do not define transportation needs. Riders often need to travel between different cities and counties. This is particularly true in urban areas where single regions of urban development can be made up of multiple jurisdictions, where boundaries are unclear and are regularly traveled over by locals. Coordination is necessary to effectively meet these cross-boundary transit needs.

“One side of the street might be [in a different] township and it's like, well, no, we can't have a bus stop there, but then that doesn't mean there's not people there that wouldn't want to come” (Respondent 10).

This coordination is challenging due to the different needs, constraints and perspectives of different municipalities. Different local governments have different incentives, user demands, and available resources, making it challenging to find win-win opportunities for coordination in the absence of a central authority. Most governments don't want to enter a cooperative agreement in which they are paying more than their partners or subsidizing travel for constituents other than their own. The regional agreements in Wisconsin that are in place are often subject to constant reevaluation as cities, or other participating governments, rethink whether it is worth it for them to continue cooperating or not. This creates high levels of uncertainty and makes regional coordination more difficult to sustain.

“They [local governments] do a lot of regional transportation, but ... it's not set up to be consistent through a certain region or area. So, every year that municipal body – the Township, the city – they get to decide [whether they are] going to continue or not. So, it's a real negative. It's extremely inefficient” (Respondent 10).

In the absence of a central authority, local actors typically find it difficult to maintain collaborations over long periods of time. However, this does not mean coordination is impossible. Municipal governments can self-organize to coordinate from the bottom up (and some do), but this requires major effort to negotiate and organize. It can take substantial effort to communicate, bargain, and install sufficient oversight conditions to set up coordination with other participating governments, after which those agreements continue to take energy to maintain as they are subject to regular reconsideration by individual members.

“We do share and jointly operate one route. So, there'll be times where the [town name A] bus is in [town name B] and the [town name B] bus is in [town name A], and we accomplish that through an agreement with some funding partners, but it is not based [in] a taxing

authority and the contract is just that: only a contract. So, if any one of the sponsors of that route chooses not to participate, then the rest of those legs of the stool have to either pick up that the necessary funds for that portion or we have to reduce service and that's common throughout the state” (Respondent 10).

Overall, the lack of a central authority , makes it difficult to organize cross-border regional transit and to maintain them where they are established. While regional transit authorities answer this need in other states, providing a central hierarchy which can organize this type of interaction, the lack of similar institutions in Wisconsin makes coordination difficult.

“In Wisconsin, you have to know that regional transportation authorities are disallowed and that is a major barrier to providing quality, consistent service for all community members” (Respondent 10).

5.2.1.4 Public Awareness

Information dissemination and education challenges were also noted in relation to public transit systems. While public transit services (e.g., bus systems) are generally well recognized, many individuals who do not have extensive experience riding public transit lack understanding of how to use those systems. As described in section 4.1, many non-drivers who have had to stop driving abruptly, lack knowledge about what transit options are available and how they are implemented. Individuals who are unused to transit may not know where the nearest bus stop is, where it will take them, or how the schedule is set up. They may also lack understanding of how to use the system once they’ve figured out all their options.

“We hear a lot from people who are getting older and then needing to reach out to us to learn how to take the bus because they know that either their license is getting taken away or their eyesight is not good enough to continue driving” (Respondent 9)

Overall, public transit systems are reported to work well in our data where they are offered, but funding limitations and coordination challenges create issues. Consequently, public transit leaves some non-drivers unreached even in the more urbanized areas where they are set up, to say nothing

of the rural areas where such systems do not exist, requiring supplemental modes of transportation for non-drivers. Table 5-4 provides a summary of the interview evidence supporting these themes.

Table 5-4: Interview Evidence on Public Transit Issues

ID	Org Focus	Scope of Service	Financial Constraints	Coordination	Awareness
1	Support	+	+++	+	+
2	Paratransit	X	+++	+	+
3	Public Transit	+++	+	+++	+
4	Paratransit	+	+++	+	+++
5	Support	+	+	+	+
6	Public Transit	+++	+	+	+
7	Public Transit	+++	+++	+++	+++
8	Public Transit/ Paratransit	+++	+++	+	+
9	Paratransit	X	X	+	+
10	Public Transit	X	+	+	+
11	DRT	+	+	+	+

* (+++) represents strong evidence, (+) represents evidence, (~) represents mixed evidence, (-) represents evidence to the contrary, and (X) represents no evidence

5.2.2 Alternative options

Nearly all (90%) of our respondents discussed some form of alternative options – whether via Demand-response transit (DRT) type services or volunteer driving programs, demonstrating the critical role these services play across the state. While these can take a wide variety of different forms, they typically maintain core similarities allowing comparison across individual program iterations. They all allow eligible participants to schedule point-to-point rides on demand; most programs require rides to be scheduled days in advance and are restricted to a specific geographical area of service. However, key points of variance across programs include how early rides must be scheduled (and whether day-of requests are allowed), the size of the service area, vehicle type (e.g., cars, vans, buses, or wheelchair accessible vehicles), the mode of ridership (single only vs shared), and the status of drivers (employee vs volunteer).

Paratransit programs and available alternative options are very important in the state of Wisconsin. Many non-drivers rely on these systems for essential transportation services; without them their quality of life would greatly suffer. Paratransit is critical because it provides a bridge between different transit systems, supplements mobility services for eligible non-drivers in underserved

areas, and (in some areas) provides non-drivers with their only transportation option.

“A lot of older adults want to age in place, even if they live in an area that's not very accessible. Maybe they don't have access to fixed route transit; they're not in a walkable neighborhood, but they've lived there for 50 years; they don't want to leave their home. And so that is also a challenge for folks because ... there's a few parts of the county that don't have any fixed route [transit]. And we do have, I think, a higher level of specialized transit and paratransit users in those areas because it's just not feasible for them to get to fixed route transit on their own” (Respondent 4).

“In some cases, the volunteer driver program [paratransit] might be the only public transportation service in that county, and that might be the only connection to medical appointments, nutrition, whatever it might be, that might be their only connection” (Respondent 1).

These programs are essential for filling in gaps in the collective patchwork of Wisconsin transportation services, which non-drivers would otherwise face (and to some extent, do). Alternative options such as Volunteer Driver Programs are, therefore, critical throughout the state, but in particular for very rural areas where it is the only option available for non-driver transportation.

“We have volunteer driver programs because we need them to help support the system; to maximize our resources [and] provide transportation to as many people as possible, especially in rural counties in Wisconsin, especially in northern Wisconsin” (Respondent 1).

Nevertheless, interview respondents highlight several areas where these programs remain limited and can be improved.

5.2.2.1 Coverage and Demand:

Similar to traditional public transit systems, many paratransit and available alternative programs are limited by geographic and temporal scope constraints. They are much more flexible than traditional public transit and therefore do a good job of helping to fill gaps in service availability left by those systems, but they are not offered all of the time or across all geographic areas. This is potentially more impactful for non-drivers since alternative options such as volunteer driver programs are often the last option available, and if volunteer driver programs are unavailable, then nothing is available in many areas; however, limitations to service coverage are impossible to avoid. Existing paratransit programs and alternative options offer services within a pre-defined area of service, outside of which non-drivers may not have any access to transportation.

Similarly, these programs operate during pre-defined times of service, fixing the hours within which riders can use them. These schedules can leave individuals with atypical transportation needs – either very early or very late – without options. As a way of helping them meet transportation needs as efficiently as possible, most programs require users to schedule their rides days in advance. However, this leaves people with few options for meeting transportation needs that come up unexpectedly. Exceptions can, and are, made for critical medical needs by many programs, but programs’ capacities are limited and for most use cases, rides are not totally flexible.

“We prefer [users to schedule rides] three to four days ahead of time. However, hospitals call us last day because they're discharging people, so we will do that. We also do a lot of taking people up to Minneapolis to U of M for transplants, so those are at the last second” (Respondent 2).

Finally, most available alternative options are restricted based on user characteristics. Most programs are only available to eligible users (such as those qualifying for Medicare or individuals with disabilities). Non-drivers who do not qualify will not be able to use the service. While age and disability status are the most common causes, there are other reasons why adults are not able to drive. Under WisDOT’s definition, non-drivers include individuals without driving licenses, those who prefer not to drive, and those who do not have consistent access to a vehicle. These people may not qualify for programs designed specifically for aging adults or those with disabilities, but their needs are still important. Low-income individuals who cannot afford vehicles

and other groups of non-drivers falling outside of most programs' eligibility criteria can find themselves with even fewer options.

These restrictions create gaps in the coverage of paratransit and available alternative options programs provide. Non-drivers who are outside of their scope, whether because of geographic location, need for off-hours transportation, or eligibility characteristics, remain unserved. While paratransit or DRT offers much more flexible coverage than traditional public transit and helps to fill in the gaps left by those systems, they leave gaps – albeit smaller – that still impact non-drivers. Providers are cognizant of these gaps, but they often remain unable to expand coverage to those areas (most commonly as a result of financial limitations).

“We also don't have the funds to just exponentially grow the program. So, we would love to be able to serve every mobility challenge older adult in [county name]. We would run out of money after probably about two months if we were doing that and then we wouldn't have any money for the rest of the year. So, you know, so it's a balance of we really want to serve the folks who are the most at need, but we can't serve everyone. And so, you know, trying to balance the budget while also meeting the needs is a constant challenge”
(Respondent 4).

This is exacerbated by the fact that demand for these services is steadily increasing in the state. Many respondents report growing ridership and the need for more transportation for non-drivers. Our quantitative analysis showed that advancing age strongly predicts driving cessation, with each additional year associated with a 9% increase in the hazard of stopping driving. Wisconsin respondents who stopped driving were also older, on average, than those who continued driving. This perception is driven by respondents' personal observations but can be linked to current demographic shifts in Wisconsin. The state's population is getting proportionately older over time; the Wisconsin population is, on average, older than the rest of the country and is expected to become even more so in the future (WDHS, 2026). Since non-driving is closely associated with aging, non-driver populations should be expected to grow in the context of these trends, increasing demand for paratransit. However, constraints to providers' capacity create a tension between the need for rides (and the desire to provide them) and the feasibility of doing so. This has led some

providers to deliberately tamper with efforts at promoting their own programs. One respondent described how they deliberately restrict advertising their own paratransit program for fear of not being able to meet the demand for rides that doing so would create.

“With paratransit, we don't publicize it as much. We definitely connect people with the resource when they ask for it, but we're not, you know, shouting it from the rooftops that we have this service because if we did that our budget would be destroyed. But the people that need to take paratransit, they should know about it. So that's a kind of like ethical dilemma that we have is, like, we have this great service but ... we can't have everyone using it” (Respondent 9).

5.2.2.2 Constraints to Service Delivery:

Paratransit providers uniformly recognize the great need for their services and want to offer transportation to as many non-drivers as possible. However, many report having their hands tied by financial constraints. Similar to challenges in public transit, paratransit providers are finding it more challenging to consistently secure grant funding while simultaneously dealing with increased costs.

“Inflation in everything has increased so much ... cities are struggling to keep this service, so they know that it's essential for their community. They know that what's going to keep people in their community is having this service, but it is a constant budget struggle for them” (Respondent 21).

“Funding is not stable. This year we write grants ... everybody who wrote the grant in the state got a cut of 47% in operating, yet we're supposed to maintain the same amount of rides and it's very hard to do that” (Respondent 2).

Lack of coordination also causes issues with these services. The coverage area of most programs is fixed, but areas of overlap or unserved areas between different programs' service areas rarely see coordination between programs. Paratransit suffers from the same coordination issues as traditional modes of transit; without a central structure or authority to turn to, coordination must

be driven from the bottom up. This leaves local municipalities, or in the case of paratransit, service providers themselves responsible for making coordination happen. However, these providers are often small and have limited staff and resources to devote to this kind of initiative, leading to undercoordination across regional lines. Paratransit providers have the added barrier of competition. While they are public-facing, paratransit providers are often funded based on the amount of services they regularly provide, causing them to compete for the finite number of rides needed. This creates disincentives to coordinate.

“Even though everybody's not supposed to be competing, there is still some competition out there” (Respondent 1).

While all paratransit and volunteer driver program providers are primarily focused on the goal of providing transportation to non-drivers wherever needed, the realities of their funding streams require this competition. Where funding is allocated based on ridership, paratransit and volunteer driver programs, providers are incentivized to try to capture as many riders as possible, rather than trying to optimize efficiency by coordinating with other providers. This stymies coordination even where they are operating in different service areas.

“It was really hard to bring all these partners together. They say that they don't compete, but there still is a little bit of competitive mindset in there. If you think about that public transit, I mean, they get funding based on ridership and all that kind of stuff. So, they're always trying to get as much as they can” (Respondent 1).

This can result in inefficiencies where riders receive transportation from service providers who are not optimally positioned to reach them (e.g., paratransit providers sending a driver from miles away when a driver from a rival provider is present nearby). Providers incentivized to secure as many rides as possible to ensure they maintain funding may want to provide suboptimally routed services rather than coordinate and share with a rival who could offer the same service more efficiently.

“They were trying to bring in – [for] somebody that lives in town and they're going four

blocks to the hospital – they were bringing in a vehicle, you know, a contractor provider that [was] maybe is an hour and a half away to come do that trip. So, it was so inefficient” (Respondent 21).

5.2.2.3 Private Brokerage Issues:

Non-emergency medical transportation (NEMT) is an important form of paratransit designed to transport eligible non-drivers to and from medical appointments and services. The Wisconsin Department of Health Services (DHS) administers NEMT services across the state and has outsourced the responsibility to a number of different entities over the last twenty years. Starting in 2013, DHS has contracted a private vendor called MTM to broker NEMT services statewide. As a broker, MTM does not operate its own vehicles, but administers and coordinates millions of rides from smaller service providers it contracts with each year. This arrangement allows MTM to minimize costs by seeking out the service providers with the lowest cost, but can result in issues with quality (Legislative Audit Bureau, 2015). Non-driver experts revealed that there are many perceived issues with the services that MTM provides. According to our interview respondents, the quality of their paratransit services is reportedly low; they referenced numerous incidents of poor-quality rides being delivered (e.g., long wait times) or in some cases not being delivered to users, due to drivers not showing up at all.

“The people that they have had to get rides through [MTM] have been very unhappy” (Respondent 13).

For example, one respondent related an incident in which a non-driver with dementia was left waiting outside a medical facility after an appointment without their ride from MTM showing up. Incidents of this nature can be frustrating for anyone, but when they occur to individuals with serious mental or physical health conditions, they impose risks that should be taken seriously.

“MTM, even [did this] with a person with dementia, [he had] been left out of facility for over four hours. Hours, just waiting for the ride! That's not good” (Respondent 13).

These perspectives are shared by individuals across the range of programmatic areas that we

explore. Multiple respondents with paratransit and public transit specializations (most notably Respondents 1, 2, 6, 10, 13, and 21) reported problems with the broker. MTM reportedly received many complaints from users (which are often not accommodated well. While gathering primary data on MTM user experiences is beyond the scope of this study, evidence from public media and government reviews corroborates these perspectives. Issues with MTM have been problematic enough to attract local news coverage (e.g., Sachs, 2020) and instigated a government audit by the Wisconsin Legislative Audit Bureau in 2015 (Legislative Audit Bureau 2015). The report showed that between August of 2013 and June of 2014, MTM failed its contractual requirements that 99.7% of their 2,348,859 total rides be delivered complaint-free in all but three months, receiving 12,748 complaints during that span (Legislative Audit Bureau, 2015). MTM providers arrived late for 55,320 rides and failed to show up at all for an additional 4,154 rides during that period (Legislative Audit Bureau, 2015). While the state made recommendations and tasked MTM to make improvements at the time, our interview responses indicate that problems still persist. Several of our respondents believe that MTM continues to deliver poor-quality services and consistently fail to offer the same level of quality services as many local paratransit providers typically do.

“They people who ride with the broker, I’m sorry to say, but they don’t get the best customer service like we have here” (Respondent 13).

This undermines service quality for non-drivers in need of transportation but also places a larger burden on other paratransit providers who must help compensate for omissions or errors made by MTM if transportation services of local non-drivers are going to be met.

“They’re a broker for the state and they do rides. Well, they don’t show up. So then programs like mine have to go pick them up and we don’t get paid for it because they already got paid for it” (Respondent 2).

Our respondents also report other downsides of having services provided by a large-scale transportation broker for non-drivers. MTM does not provide the level of personalized care and local understanding that smaller providers could. As it is a large-scale company, MTM hosts its own scheduling services, which some users may not be familiar with or know how to navigate,

whereas in smaller systems they might be able to schedule rides over the phone with someone from their community whom they already have a relationship with, MTM requires navigation of a new – and potentially foreign – system.

“It makes the system more complex. Makes it harder for the clients. Now all of a sudden, instead of working with the county directly to set up their transportation, now they have to go through a portal or an app and work with MTM, someone that's not even from their local area. It makes things more complex” (Respondent 1).

Due to their scale and focus on minimizing prices, MTM is also not able to ensure that the providers they contract tailor paratransit services to the individual users requesting rides at the highest level of quality. Our respondents identified the ability to cater paratransit services to individual riders, especially in Volunteer Driver Programs, as a strength, but according to our respondents, MTM rides often do not provide this level of personalization.

“All of our people are used to the same driver taking them there and taking them home. I mean the majority of people, not all, but the majority of people that we transport on the volunteer driver side are elderly. They're mainly going through some, you know, tough times in their life, you know, cancer, dialysis, lots of things like that. So, like I said, that that's my biggest worry: that the personalization that we have given these people, you know, through the years here, they're not going to have that. And I think that's going to be rough for everybody to accept” (Respondent 13).

Each of these issues can act as a barrier to non-drivers using the service. Individuals who are unfamiliar with the service or are hesitant to utilize something that they do not have a personal connection to may fail to utilize the transportation offered by the broker.

“A lot of the people that we know closely don't use it because for all the reasons I said before, it's unfamiliar. It's, you know, a stranger providing a service. They've had a single bad experience or multiple bad experiences and they've just given up” (Respondent 6).

Local transportation specialists also report difficulties in coordinating with MTM for other service providers. While not expressed universally, many of our respondents report that working with MTM can be very challenging. For example, they cite inconsistent quality in how MTM fulfills its contractual obligations to providers; billing them and getting paid for rides that have already been delivered in a timely fashion can be a challenge. One of our respondents (Respondent 10) reported needing to divert a substantial portion of their administrative resources to working with the broker (e.g., providing explanations, correcting errors, and responding to last-minute requests) in order to get paid on time. Another (Respondent 13) reported that MTM never paid them at all for the services they delivered.

“We ended up doing a bunch of rides for them and then they said just go in and go in and put in an invoice and we’ll pay you. Well, we never got paid ... MTM never paid us” (Respondent 13).

According to our interviews, regular turnover and unclear communication processes at MTM challenge coordination. When MTM staff are replaced, they come in with little organizational knowledge and have to be trained how to engage with providers effectively – a burden that can sometimes fall on the providers themselves. Furthermore, MTM does not have a single point of authority which providers can contact to address their issues, making communication disorganized.

“Working with all of those agencies is kind of a nightmare” (Respondent 10).

The perceived inexperience of MTM staff adds an extra layer of complexity to local paratransit service provision as experts report needing to educate MTM staff on how to do their jobs during the process. Limitations in how well MTM staff understand paratransit needs and the systems that are in place make it difficult for providers to coordinate with them, while inconsistency in how well they follow through or fulfill their obligations to partners creates major disruptions in their partners’ expectations. Local partners often feel as though they have to train MTM staff on how to fulfill their paratransit responsibilities.

“Just a lot of education, a constant going over the same thing with all these different

companies ... my admin probably spends 20% of her job time dealing with the billing related to [the broker] and family care companies: the administration. The explanation, the corrections, the last-minute requests because [MTM Staff] didn't understand how it's done. And then the companies are constantly merging and then it's like you have to start all over again with somebody else who's somewhere else and doesn't know” (Respondent 10).

This generates a large amount of uncertainty which local providers have to deal with when coordinating with MTM, undermining trust in the company and their ability to effectively engage with them.

“The uncertainty of what we're going to be able to contract with MTM is a big concern at this point” (Respondent 13).

Respondents also comment on the perceived inflexibility and demanding nature of MTM as a business partner. MTM reportedly is difficult to work with and demands that partners work around its standards.

“They just expect transit systems to, you know, be humble or be beholden to them” (Respondent 10).

Finally, MTM’s organizational requirements sometimes make it difficult for them to coordinate with local actors. Eligibility requirements, whether due to state and federal funding requirements or from MTM’s organizational practices, place limitations on the types of organizations they can contract with. This prohibits them from working with some local agencies which do not meet organizational eligibility requirements, despite these agencies being involved in paratransit services. As reported by one Volunteer Driver Program leader (Respondent 21), this can prevent MTM from working with some local organizations who are well positioned to meet local needs.

“We cannot contract with MTM. But they kept on telling us, ‘we can't work with you unless

you are a contracted provider with us'. And so, there was this big barrier of them not utilizing us. Now, should they utilize us? Yes, because we're here. And we can provide that transportation for these residents that are in this rural community. But instead they're not. They weren't utilizing us because we weren't contracted" (Respondent 21).

This led one of our respondents to speculate that MTM would operate better if they had more oversight from WisDOT transportation specialists. According to our respondents, MTM appears to struggle with delivering high-quality paratransit services; ensuring that personnel with transportation experience and expertise have more interaction – and potentially control – over MTM operations might improve conditions.

"Part of the problem right now when it comes to the non-emergency medical transportation and that MTM service is it's housed under ... Department of Health and Human Services. It should be housed under transport. It should be housed under WisDOT transportation. A brokerage system like that should be managed by someone that knows transportation" (Respondent 1).

Respondents consistently pointed out MTM performance as an issue for Wisconsin paratransit. They cite a number of different reasons, but there is a general sense in our data that despite previous efforts to reform MTM in the state, there are still concerns about the broker's quality.

"Overall, MTM is understood to be an ineffective player in this area; it consistently provides substandard services for users, remains a difficult partner to coordinate with, and underutilizes existing local assets to the detriment of non-drivers" (Respondent 21).

5.2.2.4 Public Awareness:

Again, similar to public transit, use of paratransit systems and volunteer driver programs is capped by public awareness of existing programs. Some non-drivers do not take advantage of these services because they do not know they are available. The diversity of different paratransit services and volunteer driver programs can be complex to navigate; potential users must invest substantial search costs to identify which options are available in their area and which of these they are eligible

for. This can result in underutilization of existing services.

“There's a lot of education that needs to happen to make sure they know what they qualify for because all these different funding sources that I talked about come in to the state, to the different counties, to the tribes and they all have specific requirements on who they can serve” (Respondent 1).

5.2.2.5 Volunteer Driver Programs:

Many programs rely on volunteer drivers, where volunteers are recruited to work as drivers in the program. While Volunteer Driver Programs are a type of paratransit, we go into greater detail about them here. These programs are a very important method of service delivery in Wisconsin and have several unique characteristics which make them different from other forms of paratransit. Volunteers drive clients door-to-door (based on pre-scheduled rides) and are reimbursed for their mileage. The themes that emerged about Volunteer Driver Programs and Paratransit more broadly are very similar in our scope, in part because Volunteer Driver Programs make up the majority of paratransit programs (or demand-responsive programs) represented in our data. They are a very common mode of offering paratransit to non-drivers throughout the state.

Respondents indicate that these programs are highly effective and constitute a critical part of Wisconsin's portfolio of paratransit services. They allow providers to fill in the gaps in service area left by other transit systems and can offer more flexible, high-quality transportation to clients.

“Volunteer drivers are integral to transportation in Wisconsin. It helps support programs across the entire state, so it fills those gaps, right?” (Respondent 1).

Many of these programs are particularly cherished by providers – as well as, in respondents' opinions, the riders that use them – because of the quality of the services being offered through them. Respondents talked about the level of tailoring that Volunteer Driver Programs allow, ensuring that individual riders can have services catered to their specific needs and preferences. There are drawbacks as well; these programs are constrained by the availability, ability, and capacity of their volunteers. For example, one expert involved in running a Volunteer Driver Program (Respondent 4) noted that since volunteer drivers are using their own vehicles, few are

able to accommodate wheelchair users who need specialized vehicles to load or otherwise accommodate that equipment. However, as long as volunteer vehicles are sufficient for the job, non-drivers with specific preferences can have their unique needs met through these programs due to the level of flexibility they offer. Larger transit systems may not be able to provide that level of tailoring.

“We'll send the closest driver to them within 45 miles ... If I know that he's a veteran, we will pick another veteran to go out there with them so they have something in common right away. We try to keep women with women and men with men” (Respondent 2).

They are particularly critical in rural areas of the state where other alternatives are simply not available. The additional challenges imposed by rural geography preclude many other modes of transit from being effective there.

“In some cases, the volunteer driver program might be the only public transportation service in that county, and that might be the only connection to medical appointments, nutrition, whatever it might be, that might be their only connection” (Respondent 1).

Additionally, they allow providers to offer ride services at a lower cost than other transportation modalities. Since the drivers they employ are volunteering their time, they provide a cheaper alternative to providing other types of transportation.

“I'd say it's pretty cost effective. So we would really like to grow that program so that we could have as many people using that as possible. And then that would free up capacity in our more expensive OATS [Older Adults Transportation Service] program for folks who, you know, have mobility devices and need a wheelchair accessible vehicle or you know, a driver that is trained in a higher level of assistance” (Respondent 4).

Given the high, and rising, costs of transportation (USDOT, 2026), these programs are essential for the state. The price of delivering transportation to non-drivers is consistently increasing over time, but the funding that can be devoted to it hasn't kept up. Cost considerations have made

Volunteer Driving Programs an increasingly important part of the overall portfolio of transportation systems available across the state.

“Volunteer drivers support our network, but that just shows you how underfunded our entire transportation system is because we depend so heavily on these volunteer drivers out there” (Respondent 1).

However, Volunteer Driver Programs face some unique challenges in addition to the issues described above pertaining to paratransit more broadly. Like other transportation programs, Volunteer Driver Programs are currently seeing rising demand for their services. As the population ages, more and more non-drivers are in need of transportation. However, Volunteer Driver Programs are unique in that they are also faced with a diminishing supply of the volunteers they rely on.

“Whenever we work with areas and we talk to them about growing the program, it's just really a matter of just not having enough drivers to be able to do that” (Respondent 4).

Some respondents indicate that this is an effect of falling volunteerism overall. However, respondents more frequently attribute it to aging among the population of volunteers themselves. Volunteer drivers are generally older individuals – many are retirees who still have the ability to drive – but as economic conditions become tighter for people, fewer volunteers from this group are available. The number of retired individuals with the financial latitude to donate their time, as well as the costs of travel, is decreasing.

“People aren't able to retire at the same time, so now they're working longer. And then that means that folks who maybe at sixty-five would have become a volunteer. They're now not able to do that until 70, you know? So it's that has also been a big challenge” (Respondent 4).

Furthermore, as this group ages, many of those individuals have to stop driving themselves, increasing demand for services while also lowering the number of drivers available to provide

them. Currently volunteering individuals will eventually need to be served themselves. As Wisconsin's population becomes disproportionately older, demand will continue to increase and the number of available volunteers will correspondingly go down.

“Folks who were volunteer drivers are now reaching a point where they need to become riders” (Respondent 4).

“That's the most difficult thing is keeping volunteer drivers because they do age out or they get sick or their spouse gets sick and but most of them will stay until health issues” (Respondent 2).

Historical events have also influenced the number of volunteers willing to serve in these programs. There was a substantial drop in volunteer ability during the COVID-19 pandemic due to volunteers' precautions over contracting the virus. Many stopped volunteering during that time, and the numbers have not fully recovered since then.

“Because they're older, a lot of them stopped driving until it [the COVID-19 pandemic] was over because they didn't want to take it home to their partner” (Respondent 2).

However, the larger issue is the overall decline in the population of available volunteers. It's becoming harder and harder for program organizers to find people to work in these programs.

“Recruiting volunteer drivers and maintaining them has been a really big challenge. It's across all areas that utilize volunteers. It's been really challenging over the last few years” (Respondent 4).

Intertwined, and to some extent helping to drive this issue, is the perception that it is becoming harder for individuals to be able to volunteer. Increased state and federal funding for these programs could help mitigate these issues by offering volunteer drivers more compensation for their time, but that would not solve all of the cost issues. Some respondents indicate that volunteer programs (like other transportation systems) are chronically underfunded. However, there are

others who disagree with this claim, instead focusing on the impacts an insufficient pool of volunteers is having as the main threat to these programs.

“Funds are sufficient ..., the volunteer drivers are not” (Respondent 4).

There are many additional costs that accrue directly to the individual volunteers. Gas and driving costs have been steadily increasing (while mileage reimbursements have not kept up, which has led many would-be volunteers have had to reconsider how much they can afford to drive for the program.

“One of the major issues right now is that we have so many barriers when it comes to volunteer driving, right. We have the mileage reimbursement rate, which is something that's set at the at the federal level that's only \$0.14 per mile, right. To the business rate, which I think is what, 72 cents right now, \$0.14 is nothing and that hasn't been increased in 10 plus years, right? That's ridiculous, right? We need to be supporting our volunteer drivers” (Respondent 1).

“They're not making a lot of money, but so the cost of stuff can hurt your recruiting” (Respondent 2).

Volunteer drivers also face the prospect of higher insurance costs due to private auto insurance companies raising their premiums. Respondents emphasize that insurance companies frequently reclassify volunteer drivers as gig workers (similar to Uber or Lyft drivers) and increase their premiums accordingly.

“I have stories about county programs that that lost big chunks of the volunteer driver pool because the insurance companies will no longer cover those volunteer drivers under the personal policies” (Respondent 1).

Consequently, volunteers are charged the rates of working driving professionals. This forces many to either give up volunteering or change insurance providers, but the list of insurance companies

that do not charge these exorbitant rates is dwindling. Despite the fact they do not profit from volunteering and only drive part-time, these individuals are charged professional insurance rates, punishing them for their service. This creates a major disincentive for volunteering and prices out some of those who still want to volunteer.

“When you're a volunteer driver, your insurance company tries to put you in a bracket with Uber and Lyft drivers. And when that happens, your insurance goes so high you can't afford to drive for us” (Respondent 2).

“[That is] a huge barrier cause that increases their rates and in some cases they get coverage denied and they have to go search for volunteer driver's insurance just so they can be a volunteer driver. I mean we're asking these volunteers to give their time and their vehicle and now they have to worry about taxes. They have to worry about commercial insurance policies because they're accepting a mileage reimbursement rate of \$0.14 per mile. In some cases, even if they don't accept the mileage reimbursement rate, they are getting lumped into these different categories. And that's a huge barrier. We're having a hard time retaining our volunteers and recruiting volunteers because of these barriers” (Respondent 1).

Volunteer Driver Programs are essential for non-drivers in Wisconsin. Protecting and improving local organizations' ability to run them effectively is critical. However, current demands and marketplace pressures are making those needs harder to meet. Multiple respondents emphasized the need to protect these programs in particular due to the critical role they play in offering transportation to Wisconsin non-drivers.

“We need to support our volunteer drivers because if we don't, what's going to happen is these volunteer driver programs are going to go away, right? They're going to be able to serve less” (Respondent 1).

5.2.2.6 Service Provision on Native Lands

Many of these constraints are even more severe on lands governed by native tribes in Wisconsin.

All of the constraints and limitations identified by our respondents for paratransit more broadly apply in these settings. However, respondents with experience working with native leaders expressed how many issues are even more impactful on these groups. Many native lands are located in rural areas of the state, making it difficult, or impossible, for those communities to set up traditional public transit systems. According to one respondent familiar with tribal lands (Respondent 1), Volunteer Driver Programs are the only option available to many non-drivers in these areas. Tribes are diverse and operate Volunteer Driver Programs in a variety of ways according to their ability and need; there is no panacea that can or should be applied across these varying settings.

“Every tribe is different, just like every county is different. I mean, when they get these funding sources that come in [from] 85215 and 8521, they get to decide how they're going to spend that funding to support transportation for their older adults and individuals with disabilities. You know, sometimes it's a volunteer driver program, sometimes it's paid driver” (Respondent 1).

However, most find themselves extremely limited in what they can provide. Funding is in short supply for many of these communities. Funding constraints are a problem everywhere, but they are often most extreme for these communities. There are simply not a lot of financial resources available to them.

“Each tribe gets ... around \$39,500 for [their] transportation programs. [It's] really hard to put together a transportation program to serve their elders for that much money ... You can't even purchase a vehicle for that much” (Respondent 1).

“They're operating behind the absolute bare minimum to be able to try to piece meal a transportation program together” (Respondent 1).

Lack of funding lowers their ability to provide services and, in many cases, makes them much more dependent on volunteer drivers to operate paratransit. If funds are not available, the more costly kinds of transit system are impossible to develop. Expensive systems like fixed route

bussing, or purchase of government-owned fleets of transit vehicles are not feasible options. As the lowest-cost form of paratransit, Volunteer Driver Programs become even more central to non-driver transportation when funding conditions are most constrained.

*“So, what happens is a lot of times their programs are supported by volunteer drivers”
(Respondent 1).*

The need for non-driver transportation services is high in many of these communities. As the only option available, the volunteer driver program is critical for meeting that need. Many tribal leaders do operate successful transportation services for their communities, but funding is often very limited and over-reliance on Volunteer Driver Programs exposes them to additional risk of future reductions in service due to the pressures currently being placed on volunteers. Future efforts to maintain these services must find ways of supporting this type of program.

Overall, paratransit and alternative options such as volunteer driver programs are mission-critical for providing Wisconsin non-drivers with transportation. These programs are essential for filling in gaps in the diverse patchwork of transportation options for non-drivers who would go without any services in many areas without them. Volunteer Driver Program is the only real option available to non-drivers in many regions, particularly rural ones. The challenges facing these programs largely map onto those facing public transit, although the unique traits of these services create several additional issues – and opportunities – to be aware of. Table 5-5 depicts interview evidence related to these themes. Volunteer Driver Programs in particular are a critical form of paratransit in the state; ensuring they are able to function effectively is essential to providing non-drivers with transportation services at a feasible cost for the provider. Many local governments would not be able to afford paratransit services without those volunteer services remaining intact.

“Each program at the county [level], they get to decide how they're going to spend their funds. But if they don't have volunteer drivers supporting them, staff is going to have the infield or they're going to have to cut programs” (Respondent 1).

Table 5-5: Interview Evidence on Paratransit Issues

ID	Coverage Limitations	Financial Constraints	Coordination	Awareness	MTM	Volunteer Driver Issues
1	+	+++	+	+	+++	+++
2	+++	+++	+	+++	+	+++
3	X	+	+	X	X	X
4	+	+++	+++	+++	X	+++
5	+++	+	+	+	+++	+
6	+	+	+	+	X	+
7	+	+++	+++	+	+++	X
8	+++	+++	+	+++	X	+++
9	+	X	+++	+	+++	+
10	X	+	+	+	X	X
11	+++	+++	+	+	+++	X

* (++) represents strong evidence, (+) represents evidence, (~) represents mixed evidence, (-) represents evidence to the contrary, and (X) represents no evidence

5.2.3 Information Provision and Accessibility Services

Finally, our data provide insight into the information dissemination and accessibility support systems used by non-driver transportation programs. Respondents revealed that there is a widespread constellation of information sources for non-drivers. This has some benefits, in that it casts a wider net and can reach people through multiple modes of communication; however, it also adds complexity to the system that is already fairly complicated due to the number and variation of extant services. Non-drivers must navigate this complexity in order to acquire and then parse through all the relevant information. While current information dissemination efforts are useful, there may be opportunities to streamline and coordinate non-driver education more effectively.

The Wisconsin Department of Health Services provides Wisconsin residents with access to regional Aging and Disability Resource Centers (ADRC). These centers host a wealth of information for aging and disabled individuals, including non-drivers. Centers are organized by geographic region and provide information on a wide variety of topics, such as employment, housing, healthcare, and transportation options. Respondents note that ADRCs are a useful tool for non-drivers, signaling that they are effective at disseminating information to this population.

However, information gaps still exist, requiring supplementary information programs to be put in place. ADRCs provide huge volumes of information, but they can be challenging to parse through,

particularly for individuals who are not comfortable with using the internet. Additionally, different ADRCs provide different content and present information inconsistently, potentially adding to confusion for some users. Regardless of the cause, gaps still exist, leaving room for improvement.

Respondents consistently emphasize the need for education for non-drivers to understand, and be able to access, existing transportation resources. If they don't know about a system, they will not be able to use it. Information dissemination systems are critical to spread knowledge of the programs available.

“There's definitely a gap. I think there's a lot of people who could benefit from the program and they're simply not aware” (Respondent 4).

Additionally, once they know about the existing options, further education is needed to help non-drivers parse through which programs they are eligible for. Many programs are only available for eligible individuals, but the eligibility conditions they carry are not always clear. Prospective users have to first know that a program exists and then understand whether or not they are allowed to access it. A lack of understanding of either can raise a barrier to access.

“There's a lot of education that needs to happen to make sure they know what they qualify for because all these different funding sources that I talked about come in to the state, to the different counties, to the tribes and they all have specific requirements on who they can serve” (Respondent 1).

Some respondents note the need for education on how to engage with and use existing transit systems, particularly for public transit. They report that many non-drivers who have not become familiar with how public transit works before losing the ability to drive need help understanding and getting accustomed to these systems before they will be comfortable using them. Training programs on *how* to use transit, in addition to the education efforts to help them learn *of* them, are useful for overcoming these barriers.

“We have people call all the time, you know, my car broke down. ‘I've never rode the bus

before, but I think I can get to Walmart from here, right? ” (Respondent 10).

Technological solutions are also employed by some public transit operators to help inform riders of key information. Respondents managing public bus systems report installation of live tracking signage at stops and rollout of phone applications, providing riders with real time updates on vehicle locations.

These systems are primarily useful for informing riders about how to most effectively use public buses once they are already actively utilizing public transit, so they likely have little impact on the number of non-drivers accessing transportation. However, they can help increase knowledge about how to use transit, alleviating anxiety for new users and remain an important piece in the overall suite of information systems that can be used.

Another initiative that has reportedly been very successful in Wisconsin is the use of Mobility Managers; personnel who are available to assist non-drivers in navigating the complexities of meeting their transportation needs. These individuals operate as liaisons for non-drivers and can help them access, interpret, and understand the transportation options they have available. This initiative is perceived as being very successful by some respondents, as it can provide a level of information that may be difficult for non-drivers to access otherwise.

“Whenever we talk about mobility management, we always look at mobility managers that one stop shop where they can go to find everything” (Respondent 1).

On top of these efforts, respondents report engaging in a wide variety of different ad hoc initiatives to increase public awareness of the services being offered. Since non-drivers will not be able to access transportation if they don’t know about it, information dissemination is viewed as a critical task, and providers approach this in many different ways.

“Getting the word out there and it's like we talk to whoever we can talk to and get the information to whoever we can get to” (Respondent 12).

“We do get it out there on Facebook. We do get it in that news, that newsletter, but we just don't get a lot of people that take advantage of it” (Respondent 13).

However, there is little consistency in how these efforts are organized. Table 5-6 describes a selection of education initiatives discussed by our respondents.

Table 5-6: Ad Hoc Information Dissemination Activities

Activity	Description
Local Advertising	Posting monthly ads in local media
Vehicle Branding	Printing program names and information on the vehicles used to transport riders
Community Advertising	Posting informational flyers in public spaces (e.g., senior centers, public libraries, gas stations)
Medical Referrals	Medical facilities refer patients with upcoming appointments to programs
Mobility Managers	Travel liaisons to assist non-drivers in navigating available transportation options
ADRC Communication	Information provision by Aging and Disability Resource Centers
Program Websites	Information provision on program website
Newsletter	Publication of recurring newsletter disseminating program information
Service Guide	Inclusion of information about transportation programs in local public service guides
Outreach Events	Hosting public events within communities to explain and raise awareness of programs
Social Media	Using social media platforms (e.g. Facebook) to spread awareness
Word of Mouth	Leveraging local community networks to spread information

The variety of methods employed helps provide communication redundancy and more reach in some areas, but some respondents talk about the lack of consistency and coherence between these different activities. Several of our respondents emphasized a desire for more robust centralized information repositories that could allow users to access all available services in the same place. Despite the presence of mobility managers who can operate as a centralized avenue for potential users to access information about the plurality of options available to them, some respondents expressed a need for an additional easy-to-access location for non-drivers to access information about their programs.

“We've talked about it of having one location for everybody's information, but nothing ever became of it” (Respondent 2).

“My long term goal would really be to have like one spot that you can go to and you could not just have the information for each of the services, but you could say apply, you could apply to transit and to [program name] and to the volunteer driver program all in one place, because right now that's not an option. You have to contact each of them individually” (Respondent 4).

Wisconsin non-driver programs employ a wide variety of educational tools to raise awareness of their services. These are very useful but may suffer from a lack of consistency and coordination. Overall, despite the utility of many of these services, information gaps still exist, lowering non-driver accessibility and signaling the potential for further improvement.

5.3 Summary of Interview Themes

The interviews are a rich source of information and provide evidence of a wide array of themes and concepts. The analysis can, therefore, be difficult to quickly parse through. In this section, we summarize the main themes from the interview analysis and provide context on how they relate to non-driver transitions. While each theme is more thoroughly investigated earlier in Section 5, this summary can be used as a quick reference to our findings.

Impacts of Non-driver Status (Section 5.1)

Losing the ability to drive significantly alters individuals' lives. Interview evidence provides detail on the struggles non-driving status can create and provides robust support for the negative impacts found in our quantitative analysis. These include the degradation of both physical and mental health. Inability to access healthcare facilities and grocery stores to source nutritional food can undermine non-drivers' physical health. Losing the ability to drive can, likewise, cut individuals off from their wider communities, causing social isolation, loneliness, and emotional harm. Losing independence also undermines many non-drivers' sense of self-worth, compounding the mental health problems they are exposed to. Finally, for non-drivers who still want, or need, to work, the inability to drive can cause them to lose access to employment, taking resources away from them, and potentially exacerbating issues with their health. The risk and severity of these effects are greater for non-drivers who transition into non-driving status abruptly, without time to anticipate

and prepare for the shift, and for those who live in rural areas, where fewer transportation alternatives to driving exist. While not every individual transitioning into non-driving status will be impacted in the same way, many people suffer from these effects when they lose the ability to drive, reducing their quality of life.

Current Issues with Alternative Transportation Programs (Section 5.2)

Non-drivers' ability to overcome the challenges associated with their status depends on the extent to which alternative modes of transportation meet their needs. Non-driving status will only damage their quality of life to the extent to which the alternative transportation systems they access fail to provide as much mobility as driving gave them. If they were a perfect substitute, we would expect non-driving status to not matter at all. Consequently, it is important to understand the issues facing alternative programs that prevent them from acting as perfect substitutes. Section 5.2 describes the main limitations hindering different transportation programs – namely public transit, paratransit, and accessibility support programs – from meeting non-driver mobility needs.

Several issues are common to all of the programs we look at in the interview analysis. These apply to varying degrees across public transit, paratransit, and accessibility support systems:

Restrictions to scope of services:

Limitations to the scope of program services can be either spatial (geographic range) or temporal (hours of service). These place restrictions on when and where non-drivers can use a transit system to go, thus limiting mobility. While all transportation programs have a defined scope of service, finding ways to expand program range can help support non-driver mobility.

Financial constraints:

Many programs would like to expand their scope but cannot do so due to financial constraints. Many Wisconsin non-driver transportation programs are feeling squeezed by rising transportation costs without adequate compensatory rises in the amount of available funding. They are being forced to make each dollar go further in a time when funding is becoming increasingly difficult to consistently secure. These funding issues are pervasive and affect everything programs do.

Barriers to Coordination:

The transportation available to non-drivers in Wisconsin make up a constellation of separate, often overlapping programs. However, the programs themselves often fail to interconnect or coordinate with each other, creating gaps where services are either unavailable or inefficient. While bottom-

up coordination between programs in different jurisdictions is possible, the lack of a central authority to facilitate it makes such agreements difficult to set up and hard to maintain over time. This imposes challenges on non-drivers by lowering the scope and quality of available transportation services and making the network of systems more challenging to navigate. Efforts to increase coordination between programs could mitigate these challenges for riders, improving outcomes for non-drivers.

Limited public awareness:

Finally, public awareness remains incomplete for many programs. Transportation programs will only be used if prospective riders know they are available. If a non-driver never finds out about a program, it might as well never exist for them, and it will be totally ineffective at alleviating the negative impacts non-driving creates for them. Therefore, information dissemination is key. Education efforts that answer questions about what programs are available, who is eligible for them, and how they can most effectively be used are all important and are used by most programs. However, many of these efforts are not systematic and many information gaps still exist. These create barriers for some non-drivers taking advantage of existing services and can make meeting their mobility needs more challenging, especially for those who have transitioned abruptly.

We also describe unique issues faced by specific types of alternative transportation programs. Section 5.2.2.3 outlines quality and coordination concerns with MTM, Wisconsin's statewide broker for NEMT services. MTM administers millions of rides for non-drivers, but the quality of the services they provide to riders is often low. Furthermore, many respondents report that it is challenging for service providers to work with them as a result of organizational inexperience and low-quality administration at MTM. Addressing these challenges to improve MTM quality could result in improvements to non-driver service quality. Section 5.2.2.5 describes Volunteer Driver Programs and some of the unique challenges they face. Volunteer Driving Programs are extremely important to the state. Since they are low cost and highly flexible, they can be used to offer high-quality services in areas which otherwise might not be able to support non-driver transportation. However, in addition to the general challenges we describe, Volunteer Driver Programs face increasing demand for services alongside a corresponding decline in the number of available volunteers. Rising travel and insurance costs, combined with an aging volunteer population are shrinking the pool of individuals who are both willing and able to donate their time. Finding ways to incentivize volunteering is critical to supporting these essential programs in the state and

ensuring non-drivers can continue to benefit from them.

Many of the issues we describe in this section manifest at the organizational level, but they are all relevant to the quality of services non-drivers have access to and are thus extremely relevant to how transitioning to non-driver status will affect them. The impacts of transitioning will be much more severe if transportation substitutes do not offer high-quality alternatives to replace driving. Finding ways to mitigate the issues and limitations described here will support better non-driver service provision and make transitioning into non-driving less deleterious on peoples' lives.

6 Policy Recommendations

The proposed strategies are designed to address key barriers to the provision of transportation to non-drivers in Wisconsin. They were developed based on the project findings outlined in previous sections and are meant to reflect both the empirical patterns influencing non-driver outcomes across the U.S. and the opinions of non-driver experts within the state of Wisconsin. The quantitative findings provide an important empirical basis for these recommendations. The NHTS analysis showed that non-drivers make substantially fewer trips, have shorter travel distances, and are more likely to be older, lower-income, female, and have lower educational attainment. The HRS analysis further distinguished the predictors of driving cessation from its consequences. Older age, poorer self-rated health, more depressive symptoms, lower cognitive function, lower household income, and being non-Hispanic Black were each independently associated with a higher likelihood of stopping driving. After cessation, both gradual and abrupt transitioners reported worse self-rated health, more chronic conditions, more depressive symptoms, and substantially lower physical activity than continuous drivers; on most outcomes, their health resembled that of long-term non-drivers, but the reduction in physical activity remained significant even relative to continuous non-drivers, identifying it as a distinct, mobility-related disruption. These findings indicate that non-driver transportation policy should be understood not only as a service-delivery strategy, but also as a health, and aging-in-place issue.

The recommendations address both the process of transitioning from driving to non-driving and the transportation needs that arise after cessation. Increasing transportation access is not separate from transition support; it is a central mechanism for reducing health, mobility, and social disruption associated with losing the ability to drive. Some recommendations are intended to support individuals before or during the transition, such as early outreach, travel training, service information, and advance mobility planning. Other recommendations strengthen the transportation system that individuals must rely on after cessation, including regional coordination, volunteer-driver programs, non-emergency medical transportation, sustainable funding, and cross-jurisdictional service delivery. Together, these strategies are intended to make the transition more gradual, informed, and manageable while preserving access to healthcare, essential destinations, physical activity, and community participation after driving stops.

However, the recommendations represent the opinions of the project team and should not be attributed directly to any of our respondents. We categorize these ideas into 6 main categories,

reflecting the subject area of the policy recommendation. While we are sensitive to constraints on WisDOT authority and recognize feasibility as a critical aspect of what should be done to address non-driver outcomes, we present several recommendations that may be beyond the agency's direct control. Nevertheless, these suggestions were strongly emphasized in our data and remain important considerations for decision-makers to consider moving forward.

Overall, our findings suggest the need for further development of transportation resources for non-drivers in Wisconsin. Currently, there exists a diverse patchwork of resources available for them to utilize, but accessibility remains a challenge. The patchwork still has gaps that non-drivers can fall into; these gaps must be addressed to ensure universal access for the population of non-drivers in Wisconsin, all of whom are highly dependent on services to maintain quality of life. Wisconsin experts repeatedly emphasized the need to close these gaps and provided perspective on how doing so should be approached in the context of the state.

A set of broad goals emerged from our interview data and quantitative analysis, demonstrating widespread desire to improve service provision through expansion of current programs into larger service areas (to overcome gaps in geographic coverage), extension across wider hours of operation (to fill gaps in the times services are offered), and through better presentation and usability of program information (to overcome gaps left due to users not knowing about or understanding how to access programs). The quantitative findings help specify where these goals should be prioritized. For example, older adults with limited household vehicle access, lower-income households, and rural residents face especially higher mobility risks. In particular, rural residents traveled longer distances for essential needs, including groceries and health, indicating that rural service gaps may involve not only whether service exists, but also whether it can cover the distances and destinations required for everyday life. Our data also signal the need for investment in protecting the services that currently operate in the state. Many programs are coming under increased pressure, making continuing them at the same quality challenging. Action must be taken to help preserve the quality of services that are already in place.

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Table 6-1: Recommendation and Key Strategies

Recommendation	Strategy	How it supports transition	Key study findings
Strengthen regional coordination	Coordinate providers and cross-boundary trips.	Improves continuity of transportation	Rural residents travel farther, and services are fragmented across jurisdictions.
Protect volunteer-driver programs	Stabilize funding, insurance support, and volunteer recruitment.	Provides flexible, door-to-door mobility	Volunteer programs are critical in rural and tribal areas but face capacity and funding constraints.
Improve NEMT broker performance	Strengthen oversight, local coordination, and trip reliability.	Maintains healthcare access after abrupt driving cessation.	Respondents reported missed, delayed, and poorly coordinated medical trips.
Consolidate transportation information	Create a centralized source for services, eligibility, and scheduling.	Helps individuals plan before cessation and access alternatives immediately afterward.	Non-drivers struggle to identify and navigate available transportation options.
Increase and stabilize funding	Prioritize reliable service, especially in rural and tribal communities.	Ensures transportation alternatives remain available and dependable	Providers reported limited coverage, service hours, and unstable funding.
Institutionalize non-driver needs	Incorporate non-drivers into transportation planning and guidance.	Promotes proactive planning before residents experience transportation loss	Non-drivers make fewer trips, while older, lower-income, and vehicle-limited adults face greater mobility risks.

Tables 6-2 and 6-3 summarize the strategies and recommendations that are intended to help contribute to these larger goals and could improve non-driver access to transportation overall.

Table 6-2: Recommendations Requiring Interagency Coordination

Theme 3. Improving State Non-Emergency Medical Transportation Broker Performance		
Strategy 5: Exercise oversight of MTM activities to support delivery of high-quality transportation services.		
Rec 5.1: Assign transportation experts with experience in non-driver transportation as liaisons to MTM.	WisDOT liaisons could advise MTM on best practices and local non-driver context while providing oversight so performance can be monitored.	(see section 5.2.2.3).
Rec 5.2: Develop older-adult-relevant performance indicators for missed, delayed, and unresolved medical trips.	Track missed pickups, late arrivals, denied trips, and trips not scheduled within medically appropriate time windows; not just completed rides.	
Strategy 6: Ensure coordination between state brokers and local service providers.		
Rec 6.1: Identify ways to facilitate broker subcontracting with local transit providers.	WisDOT could help in negotiating the broker's internal sub-contracting eligibility requirements so that experienced local providers can be used where opportunities arise.	
Rec 6.2: Host recurring meetings between brokers and local service providers for better coordination.	WisDOT could create a standing forum for education on best practices, shared goals, networking, and identifying feasible coordination areas, keeping local providers' voices in the conversation.	
Theme 4. Consolidating Information Infrastructure		
Strategy 7: Update and consolidate information on non-driver programs.		
Rec 7.1: Update non-driver transportation program information on Wisconsin ADRC sites.	Standardize content and format across regional ADRC sites through a shared template; WisDOT could coordinate with DHS to ensure inclusion of all critical information from transportation perspective.	Section 5.2.2.4), (section 5.2.3)

Table 6-3: Recommendations Requiring Legislative Change

Theme 1. Encouraging Coordination		
Strategy 2: Create top-down institutional structures for coordination to flow through.		
Rec 2.1: Lobby state legislators to allow the formation of RTAs in Wisconsin.	Create a central authority to initiate and stabilize regional agreements, keep them fair and praise funds through taxing authority.	
Rec 2.2: Create regional transportation coordinating committees to fill the RTA role.	Regional bodies could organize provider interaction, invite jurisdictions to opt in, and lower transaction costs. No taxing authority, so pair with WisDOT financial incentives or grant prioritization under Trans 2.06(2)(a).	
Theme 2. Protecting Volunteer Driver Programs		
Strategy 3: Alleviate the pressures placed on drivers volunteering their time.		
Rec 3.1: Raise the volunteer driver reimbursement rate to the federal business mileage rate (72.5 cents/mile).	Shift from the federal charitable rate to the business rate so volunteers are not priced out by rising fuel and vehicle costs, and to signal that their time is valued.	(see section 5.2.2.5).
Rec 3.2: Lobby legislators to pass volunteer driver insurance protections.	Follow the example of seven states (FL, IL, ME, MD, NH, RI, VT) to pass legislation explicitly barring insurers from cancelling or raising rates on auto policies solely because the person is a volunteer driver.	
Theme 5. Increasing Funding		

Strategy 9: Improve funding outcomes for non-driver transportation.		
Rec 9.3: Lobby legislators to restructure state infrastructure funding.	Create state-level transit capital grants on the model of other states, and separate infrastructure funding into its own category so it no longer competes inside the general pool.	

Table 6-4: Recommendations Actionable Within WisDOT's Current Authority

Theme 1: Encouraging Coordination		
Strategy 1: Encourage more regional coordination between service providers, transportation planners, and non-driver support programs.		
Rec 1.1: Incentivize the use of transportation coordinating committees in every county.	Offer micro-grants for setup/administration; make an active committee a scoring criterion for Enhanced Mobility grants under Trans 2.06(2)(a)	(see section 5.2.1.3 and 4.2.2.2).
Strategy 2: Create top-down institutional structures for coordination to flow through		
Rec 2.3: Use quantitative mobility indicators to identify priority coordination corridors.	Target corridors using data on older-adult density, vehicle access, income, and rurality; follow travel patterns, not jurisdictional lines	
Theme 2. Protecting Volunteer Driver Programs		
Strategy 3: Alleviate the pressures placed on drivers volunteering their time.		
Rec 3.3: Educate volunteer drivers on their insurance options.	Distribute written materials and host workshops on insurance costs, offloading search costs from prospective volunteers	
Strategy 4: Consolidate volunteer driver lists to improve coordination across programs.		
Rec 4.1: Create a shared statewide registry enrolling all volunteer drivers in a single pool.	Single pool registry accessible to all programs; cuts long-distance pickups and supply/demand mismatches; enables targeted recruitment in at-risk areas	(see section 5.1)
Theme 4. Consolidating Information Infrastructure		
Strategy 7: Update and consolidate information on non-driver programs.		
Rec 7.2: Create a centralized repository for all non-driver program information.	Regional one-stop-shop with full program coverage, enrollment links, and phone numbers; complements mobility managers	(see section 5.2.1.4)
Rec 7.3: Create early intervention programs.	Reach older adults before full cessation, especially gradual transitioners; build a screening framework for outreach	
Strategy 8: Improve information resources for decision-makers planning for future non-driver transit.		
Rec 8.1: Develop the best practices manual for municipal planners.	Specify the phases, activities, and arenas where non-drivers must be accounted for, with concrete infrastructure and program guidance	
Theme 5. Increasing Funding		
Strategy 9: Improve funding outcomes for non-driver transportation.		
Rec 9.1: Increase the level of funding available to non-driver transportation programs.	Update state grant amounts for inflation and rising costs; fund longer rural trips at higher per-trip rates	(sections 5.2.1.2 and 5.2.2.2)
Rec 9.2: Divert more existing funds toward the most at-need areas.	Issue grant RFPs targeted at rural and tribal communities; earmark a share of TAP funds for non-drivers to guarantee a baseline	(see section 5.2.2.6).
6. Institutionalizing Non-Driver Needs in Future Plans		
Strategy 10: Require consideration of non-driver needs in future planning initiatives.		

Rec 10.1: Require non-driver considerations in all Bike and Pedestrian Plans and other transportation development reports.	Mandate a dedicated section in submitted plans/reports explaining how non-drivers fit into the overall plan, making them harder to overlook.	
Rec 10.2: Equip the Non-driver Advisory Committee with a commission to produce actionable recommendations more regularly.	Build a set number of annual action items into its mission, or form a subcommittee converting discussion into yearly recommendations	

Encouraging Coordination

Finding ways of improving coordination between the transportation systems already in place across Wisconsin was a repeated area of emphasis among our interview respondents. Lack of coordination between overlapping transportation systems delivering different modes of transit in the same area or between systems in different geographic areas (particularly if they are neighbors) can create barriers for non-driver mobility. These barriers can leave gaps in service coverage that do not need to exist (see sections 4.2.1.1 and 4.2.2.1). Increasing coordination could allow for more efficient use of existing resources by better integrating overlapping systems and connecting geographically proximate, but currently isolated, regions. This would be particularly helpful in rural areas, where quantitative data show non-drivers and health-limited drivers travel substantially farther for essential purposes than their urban counterparts, meaning geographic barriers compound with distance to restrict the options available to non-drivers. Non-drivers would find themselves less constrained by the service limitations of a single system, opening up opportunities for them to travel across jurisdictional lines. More integrations could also help alleviate issues related to the irregular transit needs of non-drivers that were noted by several respondents. While non-drivers require the most transportation to local locations (e.g., local grocery stores, banks, appointments), many individuals occasionally require transportation to locations that are far away. If those locations are outside of the service area of the transit or paratransit system they typically use and those programs do not have agreements with another system covering the destination, it may be difficult for non-drivers to navigate the trip. Uncommon types of medical specialist are often located far away from their clientele because not as many of them exist. Non-drivers in need of specialist appointments, therefore, often have to travel outside of their community, city, or even county to get there. Transportation across jurisdictional lines can be arranged under many programs, but it may not be as efficient as coordinating between systems used to operate in their respective areas would have been (see section 4.2.2.2). Increasing coordination could help decrease

the level of regional siloization and lead to greater integration between systems, capturing efficiencies that are currently not being leveraged.

Strategy 1: Encourage more regional coordination between service providers, transportation planners, and non-driver support programs.

Respondents repeatedly emphasized the importance of promoting coordination between systems and pointed out areas where current coordination efforts could be improved (see sections 4.2.1.3 and 4.2.2.2). Increasing the level of regional coordination would help identify areas where different transportation systems could easily connect with each other, point out service gaps – if and where they exist – between proximate programs’ different areas of service, and point out areas where system-wide efficiency could be increased by linking program networks. This could be accomplished by instituting requirements for eligibility or incentives attached to WisDOT grants or local assistance programs.

Recommendation 1.1: Incentivize the use of transportation coordinating committees in every county.

Transportation coordinating committees are charged with developing plans that effectively address local transportation needs, including those of non-drivers. The committees are focused on local subjects but should be cognizant of potential areas for coordinating with other nearby programs where it might be advantageous to do so. They operate as an institution through which coordination can be considered. Transportation coordinating committees are used in many counties (e.g., Fond du Lac, Rock), but the practice is not universal (for examples of counties that do not have them see Douglas, Juneau). Encouraging counties that do not already have a committee to develop and use one would position them to more actively consider useful areas for coordination, anticipate and apply for additional funding opportunities, and plan for more interconnected transportation for non-drivers. This could be achieved by offering counties financial assistance to set up and administer these bodies; WisDOT could offer micro-grants to counties to establish a new committee using Department discretionary funds. Alternatively, it could be achieved by integrating it into the evaluation criteria for awarding grants under the Enhanced Mobility for Seniors and Individuals with Disabilities program subject to Trans Ch. 2 of state code (Wisconsin State Legislature, 2025). Grant proposals are already required to be assessed on the extent of the proposed service coordination pursuant to section Trans 2.06(2)(a). Since the presence of a transportation coordinating committee should help local entities to find, and maintain,

opportunities for coordination, having an active committee could be explicitly integrated into these reviews. This would incentivize counties without a coordination committee or near equivalent who want to apply for this grant to create one.

Strategy 2: Create top-down institutional structures for coordination to flow through.

Numerous respondents talked about the lack of top-down institutions with authority to initiate coordination. While many other states can rely on Regional Transit Authorities (RTA) to organize this type of activity, they are non available options in the state of Wisconsin. The 2011-13 biennial budget (2011 Wisconsin Act 32) repealed s. 66.1039 of Wisconsin Statute which was the RTA enabling statute created by 2009 Act 28, and also dissolved the previously operating RTA inside the state. Subsequent bills to restore RTA authority, both regionally (2011 AB 298, Dane County) and statewide (2011 SB 418), have failed, leaving counties without a statutory vehicle for regional transit governance. Nevertheless, finding a way to implement the type of large-scale coordination they are capable of would benefit Wisconsin non-drivers.

Recommendation 2.1: Lobby Wisconsin state legislators to allow the formation of RTAs in the state.

Implementing RTAs in Wisconsin would do much to solve the issues caused by undercoordination. Creation of a central authority would create an institution through which coordination could flow. An RTA would fill this role and be able to facilitate creation of new agreements, while ensuring the stability of existing ones, by shifting their organization to a central actor. It would provide stable management of regional agreements and ensure that they remained fair for all participating members while still producing collective benefits. They could also be used to raise funds if granted legal taxing authority, providing regional systems with additional resources to devote to transportation. However, given the political landscape, this remains a challenging option.

Recommendation 2.2: Create regional transportation coordinating committees to fill the role taken by RTAs in other states.

While this type of substitute would not be as effective as an actual RTA could be, as it would not have taxing authority, regional committees could be employed to organize regional interaction between relevant transportation providers and facilitate coordination. They could be made responsible for initiating coordination by reaching out to jurisdictions within the region on their willingness to opt into the partnership, reducing the transaction costs involved in setting up this type of coordination. Lack of fundraising authority would mean that barriers surrounding the

financial incentives for local municipalities to become involved would not go away and involvement would still require voluntary buy-in from participating actors, but WisDOT could address this by providing financial incentives to actors who do opt in or by prioritizing transportation funds awarded through the Enhanced Mobility for Seniors and Individuals with Disabilities grant program to initiatives that are supported by the regional coordination committee due to their involvement in regional coordination pursuant to section Trans 2.06(2)(a) of the state code. Although the funding allocations for principal state-funded transit programs (Wis Stat. section 85.20 and section 85.21) are effectively fixed, WisDOT combines the section 5310 fund with section 85.22 state funds for small urban and rural apportionments. WisDOT flexibility exists more in the administrative layer where they determine the selection criteria, program management plans, technical assistance, and the sub-allocation of federal formula funds it receives as designated recipient, including section 5311 rural formula funds. Since WisDOT already requires 5310 applicants to link their project to a coordinated plan approved by a Transportation Coordinating Committee, WisDOT can increase the weighted importance of this criterion to identify it as a genuine selection preference. Many states have organizations that fill these roles, such as Metropolitan Planning Organizations (MPO) or Councils of Governments (COG); under any name, these organizations can be used to bring officials from different systems together to make coordinated plans for transportation provision. Virginia's Planning District Commissions coordinate human services transportation across county lines, North Carolina's Rural Planning Organizations extend MPO-style coordination into non-urbanized areas and serve as conduits for NCDOT's Community Transportation Program, and Ohio's mobility management committees develop the coordinated plans that govern its Section 5310 distribution. Wisconsin already has Regional Planning Commissions established under Wisconsin Statute section 66.0309 that include multi-county bodies and produce regional coordinated plans.

Recommendation 2.3: Use quantitative mobility indicators to identify priority coordination corridors.

WisDOT and regional partners could combine demographic, transportation, and accessibility data on older adult population concentration, vehicle availability, income, rurality, and distances to essential destinations to identify corridors where coordination is most needed. Relevant indicators may include the concentration of older adults and people with disabilities, driving-cessation risk factors, existing transit coverage, trip origins and destinations, trip frequency, and travel distances

to essential destinations such as hospitals, clinics, grocery stores, pharmacies, senior centers, and employment centers. Priority corridors would be used to guide where agencies should coordinate service schedules, align service boundaries, establish transfer points, expand volunteer-driver or demand-response coverage, and target funding or pilot programs. This would allow coordination decisions to be based on observed mobility needs and service gaps rather than only on jurisdictional boundaries.

Protecting Volunteer Driver Programs

Respondents in our dataset identified Volunteer Driver Programs as an essential method of paratransit for non-drivers, especially in rural areas. Volunteer drivers allow service providers to offer flexible transportation services at lower costs than other forms of paratransit. However, nearly all of our respondents reported increasing pressure on these programs (see section 4.2.2.5). Volunteer Driver Programs are being faced with increasing costs and a simultaneous decline in the volunteer population, threatening their ability to continue operating. Finding ways of protecting these programs is critical for Wisconsin's portfolio of non-driver transportation.

Strategy 3: Alleviate the pressures placed on drivers volunteering their time.

These programs are faced with falling volunteerism in part due to increasing transaction costs associated with volunteering. Volunteers stop participating because they feel unable to continue working under the high costs being incurred on them. Protecting volunteer capacity is especially important for rural communities, as our quantitative results showed longer average distances for essential trips. Longer trips place greater time, fuel, and vehicle-maintenance burdens on volunteer drivers, which may make rural volunteer driver programs more vulnerable to rising costs than programs operating in urban service areas.

Recommendation 3.1: Increase the reimbursement rate for volunteer drivers across Wisconsin. Changing the reimbursement rate would help drivers cover the cost of participating in volunteer programs. Under the current rate, volunteers find themselves paying more out of pocket just to be able to volunteer their own time. As the amount they are paying out of pocket steadily increases due to rising fuel and vehicle costs, more and more are being priced out of volunteering. Updating the reimbursement rate would alleviate some of this burden and signal to prospective volunteers that their investment of time and energy is valued. The ideal way to achieve this would be to secure legislative change at the federal level. Federal law would need to be changed to update the U.S.

charitable mileage reimbursement rate from the current rate of 14 cents per mile. The charitable rate has not been updated since 1997 despite rapidly increasing travel costs. Updating it to match the federal business mileage reimbursement rate of 72.5 cents per mile would more appropriately compensate volunteers. WisDOT should support legislative action that updates the charitable rate for all volunteers providing services using their own vehicles. However, federal legislation is extremely difficult to achieve, so WisDOT should also consider ways of promoting volunteer compensation at the state level.

While the effect would be smaller, WisDOT could encourage local service providers to begin reimbursing volunteers at the business rate of 72.5 cents per mile. It could do this by recommending this reimbursement practice and respecting business-rate reimbursements when evaluating proposals for Enhanced Mobility for Seniors and Individuals with Disabilities funds subject to Trans 2.06(2). However, increasing the rate in this way would subject volunteer drivers to paying taxes on reimbursements and expose them to higher insurance surcharges on their vehicles. While paying taxes on reimbursements is not ideal, the additional reimbursement would still help to compensate volunteers for their travel costs above the current level provided under the charitable rate. Increased insurance premiums are the larger issue. State-level legislation would be necessary to protect volunteer drivers from increased insurance rates (see recommendation 3.2). However, there is precedent for this type of legislation in other states. Minnesota defined "volunteer driver" in statute (Minn. Stat. section 65B.472, subd. 1(p)), which both excludes such drivers from the transportation network company and for-hire classifications that trigger insurance surcharges and establishes who qualifies for favorable tax treatment. Since the 14-cent federal charitable mileage rate cannot be changed by a state, Minnesota instead allows volunteer drivers a state income subtraction for reimbursement above that rate, up to the federal business rate (Minn. Stat. section 290.0132, subd. 30). These changes could greatly help alleviate the financial pressures currently being placed on volunteer drivers, expanding the reach of Volunteer Driver Programs and benefiting non-drivers.

Recommendation 3.2: Lobby for Wisconsin legislators to pass volunteer driver insurance protections.

Multiple respondents emphasized the impact insurance costs are having on drivers' ability to volunteer (see section 4.2.2.5). Allowing insurance companies to charge volunteers with commercial rates, or denying them coverage outright, prices many out of being able to afford

volunteering. Seven other states (Florida, Illinois, Maine, Maryland, New Hampshire, Rhode Island, and Vermont) have recognized this dilemma and passed legislation explicitly preventing insurers from refusing, cancelling, or increasing rates on auto policies solely because the individual is a volunteer driver. While legislative changes are difficult and time-consuming to enact, doing so in Wisconsin would greatly improve the ability of Volunteer Driver Programs to function.

Recommendation 3.3: Educate volunteer drivers on their insurance options.

In the absence of legislative change, or in the period before it becomes active, there are still ways WisDOT and its partners can help support volunteer drivers. Distributing written materials and hosting workshops to educate prospective volunteer drivers about the potential insurance costs that volunteering would incur under different auto insurance providers would help offload much of the search cost that prospective volunteers would otherwise have to expend themselves in shopping around for insurance. While not solving the problem, it can help alleviate the burden placed on volunteers in the short term and help those who are uncertain about how to volunteer find ways of doing so where possible.

Strategy 4: Consolidate volunteer driver lists to improve coordination across programs.

In addition to alleviating the costs placed on volunteers, Volunteer Driver Programs could be improved through greater coordination. Individual drivers typically volunteer for a specific program, but will commonly be dispatched from the location of their private residence. Program coordinators then assign them to pick up riders from various locations within their area of service. Because of the geographic dispersion of volunteers and the riders they pick up, instances can arise where volunteers drive long distances to pick up a rider when another program might have a volunteer (who is not registered as a driver for both) was already nearby. This results in inefficient rider pickup. Additionally, Volunteer Driver Programs may have inefficiencies arise due to mismatches between the number of volunteers available and the number of rides needed; cases like this can result in suboptimal use of resources as either needed rides cannot be provided (due to a lack of drivers) or available volunteers do not have anything to do (due to a lack of requested rides).

Recommendation 4.1: Create a shared registry system that enrolls all volunteer drivers in a single pool for all Volunteer Driver Programs to access.

Sharing a statewide registry of volunteers could help eliminate these inefficient use cases and more effectively employ the limited pool of volunteers across the state. This would require volunteers to

opt in to having their identities shared with program managers outside of the one they directly volunteered with. However, it is reasonable to expect a high opt-in rate from this population as volunteers are already engaging in public-facing work and the list would only be used to help them spend their volunteer hours more efficiently. Participating Volunteer Driver Programs could secure consent to share their names, contact information, and area where they are comfortable providing rides in and then send it on to WisDOT. WisDOT could then append all the information and then redistribute the list to participating programs. Program managers would then be able to look for areas to improve efficiency. Essentially, this would allow individuals to volunteer for all programs at once, not just an individual one. While the list would likely not be 100%, it would still be useful as long as the list was long enough to provide some overlap between programs. As this pool shrinks due to the issues previously discussed, this may become more important. While this recommendation would require more coordination between Volunteer Driver Programs (coordination which might be improved via the strategies in section 5.1), consolidating the volunteer list could improve performance overall. Moreover, by creating this list WisDOT could help providers target volunteer-driver recruitment, reimbursement support, and technical assistance toward at-risk communities with higher shares of older adults and low-income households, where volunteer driver programs are most essential and where program failure would likely have the greatest mobility and health consequences.

Improving State Non-Emergency Medical Transportation Broker Performance

Our interview data strongly emphasize performance issues with Wisconsin's NEMT broker, MTM. The HRS findings support the importance of reliable medical transportation because non-driving transition is strongly associated with negative health outcomes. This means that many individuals who stop driving are likely to have greater healthcare needs at the same time that they lose independent mobility. In particular, abrupt transitioners, who often experience cessation following acute health events, showed the highest odds of poor self-rated health (about three times that of continuous drivers), along with more chronic conditions and more depressive symptoms, suggesting that demand for reliable NEMT may intensify precisely when individuals lose the ability to drive. However, the interview respondents almost universally complained of challenges with MTM or pointed out areas where the quality of its services is low (see section 4.2.2.3). Given the size of this organization and the scale of transportation services it provides across the state,

these deficiencies are very impactful and are important to address.

MTM is a national company but is contracted by the DHS in Wisconsin. The DHS, therefore, has oversight of its operations within the state. While WisDOT cannot demand action from the DHS, there may be opportunities to coordinate with them to improve the quality of NEMT services. As of May 21, 2026, the DHS announced the notice of intent to move on from MTM and select a new company, Verida, Inc. as the NEMT provider for the state. While this may resolve some of the issues MTM was causing simply by bringing in a different company, negotiation of contracts with a new broker offers the opportunity to guard against the reemergence of problems. WisDOT should consult with the DHS on the potential for integrating safeguards for transportation quality into their collaboration with Verida. These could be either specified directly into the DHS contract or informally negotiated as part of their working relationship with the company.

Strategy 5: Work with DHS to exercise oversight of broker activities to support the delivery of high-quality transportation services.

According to our respondents, one reason for poor quality at MTM is a lack of understanding about how different transportation systems, or specific aspects of those transportation systems, work. Respondents discussed the lack of knowledge among MTM staff, stating that they needed to educate MTM about the intricacies of non-driver transportation. At least some of MTM's staff appear not to understand the complexities involved in transit or appreciate the differences non-emergency medical transportation can have from other types of transportation needs. This implies that additional input from transportation experts would help improve broker services. Since Verida may experience some of the same problems with turnover, inexperience, and contracting that MTM did, integrating additional oversight at the beginning of their working relationship with the state would be worthwhile. Broker services should be evaluated as a broader non-driving transition, post-cessation support system, particularly for people who stop driving due to acute medical events or rapid health decline, given that abrupt transitioners experienced worse physical and mental health outcomes.

Recommendation 5.1: Assign transportation experts with experience in non-driver transportation as liaisons to the broker.

Having transportation experts who understand non-driver issues inside and out available to advise them would benefit the state NEMT broker. It would ensure their decisions are informed by current

best practices and help them account for the local context of non-driver needs in different areas. WisDOT liaisons could act as functional advisors to help Verida operate more effectively, but their involvement would also provide oversight so that broker performance could be better monitored. Together, these impacts would help both Verida and its clients by promoting higher-quality services. These roles could be implemented in coordination with the DHS, where a liaison is formally set up and listed by the DHS as the communication point for Verida staff to reach out to on transportation issues. Alternatively, they could be set up within WisDOT as a resource for Verida staff and local transportation providers to contact when transportation questions or debates arise; they would therefore be available to answer questions, clarify issues for inexperienced staff, and facilitate better communication between Verida and providers.

Recommendation 5.2: Develop older adults' relevant performance indicators to track missed, delayed, and unresolved medical trips.

In addition to monitoring completed rides, the broker should track missed pickups, late arrivals, denied trips, and trips that could not be scheduled within medically appropriate time windows. If transportation failures prevent timely access to care, they may reinforce the same health vulnerabilities that make older adults more likely to become non-drivers in the first place. This requirement would be best achieved through the contract specifications under Verida's agreement with DHS. WisDOT should coordinate with DHS to ensure that these requirements are going to be made.

Strategy 6: Ensure coordination between state brokers and local service providers.

Several respondents discussed the lack of coordination between MTM and local transit providers. MTM has organizational constraints placed on it, both by its funders and through its internal policies, on who it can contract. Future brokers are likely to have the same constraints. However, the lack of coordination at MTM also appears to stem from its inflexibility and lack of understanding about how other providers could best work with them. Addressing these issues by hosting information and networking meetings for non-driver transportation providers and personnel from the new broker and helping to improve communication between those groups could help unlock further efficiency gains and improve service delivery.

Recommendation 6.1: Identify ways to facilitate broker subcontracting with local providers.

While funder requirements may be impossible to change and WisDOT does not control broker

contracts, facilitating communication between the NEMT broker and local providers could help them negotiate the brokers' internal eligibility requirements for subcontracting to ensure that local service providers can work with them where opportunities arise. It may not be possible for all providers to work with Verida at full capacity, but more engagement up front could help to identify areas where collaboration and sub-contracting can occur within the broker's funding restrictions. This could allow Verida to work with a wider set of groups and unlock further efficiencies through the utilization of local providers who are experienced with providing high-quality services tailored to their local communities. See recommendation 6.2 for more detail on how this can be facilitated.

Recommendation 6.2: Streamline coordination between the broker and local service providers by hosting recurring meetings for them to engage.

WisDOT could improve cooperation between these different groups by hosting meetings about non-driver transportation that bring them all into the same room. These meetings could be used to educate all organizations on current best practices and allow them to share strategies on how to meet non-driver needs effectively. Importantly, this would provide a forum at which service providers and staff from the broker can be updated on local needs, the latest issues that have arisen, and best practices for non-driver transportation. While attendance would be voluntary, the opportunity to learn about service provision, network with peers, and interact with WisDOT personnel should encourage attendees to come. WisDOT presentations could be paired with active discussions on program objectives, shared goals, and opportunities for collaboration in different organizations' areas of service. This would provide room for discussion, allowing state brokers and local groups to network, learn more about how each other works, and identify areas where coordination is feasible. Critically, it would also keep local groups' voices involved in the conversation, allowing them to continue providing a local touch for clients. This will allow them to demonstrate the ways in which they tailor services to their population of non-drivers and effectively ensure that local needs are understood.

Consolidating Information Infrastructure

Respondents consistently identified information gaps as a barrier to non-drivers (see sections 4.2.1.4 and 4.2.2.4). These gaps in non-driver knowledge can arise from their not knowing what options are available, not knowing which of them they are eligible for, or not knowing how to access them. There are currently a wide variety of information dissemination strategies being used

across the state, but they have not yet resolved these gaps in understanding, leaving room for improvement (section 4.2.3). The quantitative findings strengthen this recommendation by showing that non-driver status is associated with older age and lower educational attainment. This suggests that transportation information must be especially clear, accessible, and available through multiple formats, including non-digital channels.

Strategy 7: Update and consolidate information on non-driver programs.

Non-drivers are the primary users of information on these programs, yet they retain sizable information gaps. Efforts should be made to ensure information is being communicated to them sufficiently. Doing so would help to soften the transition between driving and non-driving by lowering the search and research costs associated with learning about non-driver transportation options. This would help alleviate the increased severity of challenges faced by non-drivers who transition away from driving abruptly.

Recommendation 7.1: Update non-driver transportation program information on Wisconsin ADRC sites.

ADRC websites have useful information, but the content and format in which it is presented are both inconsistent across regional sites. Reformatting these sites to present the same information and creating a standardized template to present it in would make the information easier for users to access and understand. While ADRCs are managed under the Department of Health Services, WisDOT could coordinate with the agency to help reformat the information, ensuring that the content being communicated incorporates all the critical information from the perspective of transportation experts.

Recommendation 7.2: Create a centralized repository for all non-driver program information.

Centralizing information on all of the available non-driver programs would create a one-stop-shop which could improve information clarity. This would allow visitors to avoid navigating multiple information sources and allow them to be more confident that they are aware of all existing programs. Providing consistent and coherent information could thus improve user knowledge and understanding. This repository would be best organized at the regional level to parse down the amount of relevant information for visitors and allow for a more detailed representation of program characteristics and needs that are locally relevant while still providing exhaustive coverage. This site would be a useful complement to the existing mobility manager program in the state. It could

also be used to host active links and phone numbers for enrollment, scheduling etc., in each program, making it the only site users would need to visit in order to access any relevant transportation service and greatly simplifying their access to information overall.

Recommendation 7.3: Create early intervention programs

Information should be targeted before complete driving cessation occurs. A meaningful group of older adults may be those who reported health limitations but continued driving without restrictions. This group is important from a policy perspective because it may represent an intermediate stage between full driving and eventual driving reduction or cessation. These individuals may still be mobile, but they may also be at elevated risk of future driving cessation, abrupt transition, or unsafe driving under certain conditions. Early intervention for this group could reduce the disruption associated with later non-driving. The HRS trajectory analysis reinforces this targeting: gradual transitioners, who first reduce to short-distance driving before stopping, offer a clear early window for travel training and service planning, whereas abrupt transitioners experience sudden, less predictable cessation that is harder to pre-empt, underscoring the value of reaching at-risk drivers before a health event forces the change. WisDOT could develop a screening framework to identify older adults who may be at elevated risk of mobility loss for targeted education. This screening could be designed based on the HRS predictors of driving cessation identified in this study (see section 4.2), including age, race, income, and self-rated health values and administered to individuals when they renew their driving licenses at the Department of Motor Vehicles. The purpose would not be to restrict eligibility, but to guide proactive outreach, travel training, and service planning toward populations most likely to experience transportation barriers.

Strategy 8: Improve information resources for decision-makers involved in planning for future non-driver transit.

While non-drivers themselves are the primary information audience, decision-makers need to understand who non-drivers are and where they are concentrated in order to plan for them accordingly—demographic, income, and geographic risk profiles that quantitative analyses already provide. Providing more information about non-drivers would improve the extent to which they are considered in long-term development.

Recommendation 8.1: Develop a best practices manual for municipal planners that specifies the phases, activities, and arenas in which non-drivers should be accounted for in development.

Wisconsin municipal planners currently have many different strategic plans that outline the importance of considering non-drivers, but few of these provide concrete, actionable advice on how to do so. A best practice manual would better formulate and standardize specific ways that non-driver transportation could be developed in the long term. This manual could include specific best practices on both infrastructure development and program design, outlining how transit and paratransit systems can be best utilized and integrated into overall mobility systems. Since WisDOT does not administer non-driver transportation itself, this guide should be prepared in consultation with local partners. Input from local experts who run successful non-driver programs and members of key non-driver related organizations, such as the Wisconsin Aging Advocacy Network, would be indispensable for this project; they should be engaged throughout the development process. However, WisDOT's institutional authority and reach make it the most relevant actor to coordinate and publish this type of guide. WisDOT would give the guide legitimacy, ensure that it is visible to all relevant actors, and improve the likelihood of it being consulted by providers across the state more uniformly.

Increasing Funding

Respondents universally voiced concern about diminishing availability of funding for non-driver transportation (see sections 4.2.1.2 and 4.2.2.2). While competition over funds has increased, the amount of funding available has not kept pace with the rapidly increasing cost of services and overall inflation. Program efficiency improvements can only go so far before these transportation programs have to start cutting back on the services they provide.

Strategy 9: Improve funding outcomes for non-driver transportation.

This overall strategy is as challenging as it is obvious; we are sensitive to the budget limitations that WisDOT, like all public organizations, is under. However, it is important to consider the need for funding for non-driver programs to function, so WisDOT should consider ways of increasing the financial resources available in this area, either through growing the amount of funding overall or by redirecting current funding to specific areas related to non-drivers.

Recommendation 9.1: Increase the level of funding available to non-driver transportation programs.

WisDOT could improve financial conditions for these programs by expanding the pot of money available to them, thus enabling them to provide quality services to more clients. The amount of

funds made available for these purposes in state grants could be updated to reflect inflation and rising costs of service provision. Funding increases should also recognize that the cost of serving non-drivers varies by geography. Rural essential trips are longer on average, meaning rural programs may require higher per-trip support to provide a comparable level of access.

Recommendation 9.2: Divert more existing funds toward the most at-need areas.

While raising fund levels can be challenging, non-driver transportation could also be improved by diverting existing funds toward more at-need areas of the state. Several of our respondents noted the extreme lack of funding in rural communities and on tribal lands (see section 4.2.2.6). Financing transportation for non-drivers in these areas is often insufficient to run adequate services. In particular, areas which are not populated enough to be eligible for state and federal grant opportunities have few options, creating gaps in accessible transportation. These targeting decisions are reinforced by the HRS equity patterns: non-Hispanic Black older adults faced a 39% higher hazard of driving cessation than non-Hispanic White adults, and higher household income was independently protective against cessation, so funding directed toward low-income and historically underserved communities reaches the populations at greater empirical risk of mobility loss. WisDOT could help mitigate these issues by offering grant RFPs specifically targeted at rural and tribal communities, giving them an opportunity to seek funding. Additionally, existing funding for alternative programming could be more explicitly dedicated to resolving non-driver issues. Earmarking funds for non-driver programs would guarantee a baseline level of funding for these programs and make it easier for areas with less capacity or experience writing grants to secure money for their non-drivers. WisDOT could explicitly dedicate a portion of Transportation Alternative Programs (TAP) funds to non-drivers by adding non-driver eligibility requirements to a portion of that pool.

Recommendation 9.3: Lobby Wisconsin legislators to restructure infrastructure funding at the state level.

State-level changes to funding could also greatly benefit non-driver transportation. Creating state-level transit capital grant opportunities on the model of other states that dedicate funds to these efforts would create opportunities for improving many transit systems and make more funds available to actors across the state. Additionally, restructuring state-level funding to allow for greater specificity of purpose would lead to more much-needed funding flowing to transportation, and through that, to non-driver support. Currently, state infrastructure funding is categorized in a

general funding pool, so it has to compete with other critical social services (e.g., education) for funding. Separation into its own funding category would refocus funding efforts and make it easier to secure necessary resources.

Institutionalizing Non-Driver Needs in Future Plans

Finally, ensuring non-drivers are adequately considered in future planning is critical to adequate provision of services for them in the long term. As infrastructure continues to be developed, it is critical that non-drivers are explicitly considered.

Strategy 10: Require consideration of non-driver needs in future planning initiatives.

While developing a best practices manual that communicates their needs and requirements to decision-makers (Recommendation 8.1) will help with this end, creating explicit requirements focused on non-drivers will improve outcomes further, particularly as the HRS survival analysis shows that cessation risk rises steadily with age and time, meaning the population requiring these accommodations will continue to grow. Planning around non-drivers rather than accommodating them after the fact is critical to ensuring that their transportation needs are met in full.

Recommendation 10.1: Require development of non-driver considerations in all Bike and Pedestrian Plans and other transportation development reports.

WisDOT can make efforts to integrate non-driver considerations into submission requirements. Requiring plans and reports submitted to the agency to include a section explicitly dedicated to understanding how non-drivers fit into the overall plan would institutionalize them as a key part of all reports and make them harder to overlook in future initiatives. This should result in their needs being more fully met when new infrastructure is developed. This could be approached in multiple ways. First, it could be achieved through legislated revisions to the administrative code guiding infrastructure project submissions – see Bicycle & Pedestrian State Statute 84.01 (35). Incorporating explicit language about non-drivers in the code would be necessary to ensure that all plans are required to have this content, but would be the most difficult to implement. Additionally, WisDOT could incorporate non-driver considerations into the transportation plans it publishes. These plans specify WisDOT’s long-term vision for transportation in the state and should influence the design of project proposals submitted to the agency. Adding non-driver needs to these plans would encourage their consideration in future submissions. Specifically, WisDOT could integrate non-driver considerations into the Wisconsin Active Transportation Plan 2050 (ATP) that is

currently being developed. This plan focuses on human-powered forms of travel, so some forms of non-driver transportation are not relevant. However, integrating discussion on how to effectively design active transportation infrastructure to account for non-driver needs would be useful. The plan could include content on the type of infrastructure non-drivers, many of whom are older or living with disabilities, need to safely engage in active transportation. Additionally, it could add consideration of how current non-driver transportation options link up with accessible active areas. The ATP is currently in the pre-draft plan phase so incorporating changes should be feasible. In future, non-driver considerations can also be added to other WisDOT long-range plans.

Recommendation 10.2: Equip the Non-driver Advisory Committee with a commission to produce actionable recommendations more regularly.

Respondents universally spoke highly of the Non-driver Advisory Committee, but some suggested that it could be utilized better. One respondent noted that the committee, while hosting very useful discussions and room for deliberation about non-driver issues, could take a more active role. The committee charter already outlines provision of recommendations as one of their objectives (Wisconsin Non-driver Advisory Committee, 2020), but this could be slightly modified to encourage more consistent dissemination of those recommendations. Committees are excellent tools for bringing together diverse perspectives and developing ideas, but sometimes large committees can struggle to put the ideas being discussed into action. Having a large number of people at the table can lead to overly-extended discussion where ideas are recirculated and recycled every meeting without becoming formal recommendations for long periods of time. While we are confident that the committee is working well as currently structured, based on some perspectives from the interviews, it could be fine-tuned to help it make an even bigger impact. The committee would benefit all service providers by providing more recommendations for concrete, actionable items for providers to pursue. One way of accomplishing this would be to integrate the provision of a specific number of action items each year into the committee's mission, explicitly tasking them with providing specific ideas that could be implemented across Wisconsin programs. Alternatively, the committee could form a dedicated subcommittee explicitly tasked with drawing up ideas that have previously been discussed into actionable items which could be disseminated to service providers around the state at the end of each year.

7 Conclusions

This study examined the transition from driver to non-driver status and its associated mobility and health outcomes among older adults and individuals with disabilities, with particular attention to the diverse geographic and transportation contexts present in Wisconsin. Using an integrated mixed-method framework, the research combined longitudinal analyses of the Health and Retirement Study (HRS), travel behavior analysis using the National Household Travel Survey (NHTS), and qualitative interviews with transportation professionals and mobility service providers across Wisconsin. Together, these approaches provided both population-level evidence and context-specific insights into the challenges faced by individuals who reduce or cease driving.

The NHTS analyses demonstrated that older adults who restricted or ceased driving exhibited shorter trip distances and fewer discretionary trips. Rural residents faced particularly long travel distances, highlighting the substantial geographic variances in mobility access across Wisconsin. These findings reinforce the importance of transportation availability not only for mobility itself, but also for maintaining access to healthcare, food, employment, and social participation.

The quantitative findings from HRS demonstrated that driving cessation is associated with negative health and mobility outcomes. Individuals transitioning from driving to non-driving status, whether gradually or abruptly, experienced poorer self-rated health, greater numbers of chronic conditions, lower physical activity, and higher levels of depressive symptoms compared with continuous drivers. Abrupt transitions were generally associated with stronger adverse outcomes, suggesting that sudden loss of driving independence may create greater disruption in daily life and reduce opportunities for adaptation. Although statistical analyses did not identify a significant direct relationship between driving cessation and social isolation, the broader patterns indicate that both aging and mobility loss contribute to reduced community engagement and increased vulnerability among older adults.

The qualitative findings provided important explanations for why transportation transitions are consequential. Interview respondents repeatedly emphasized that transportation is directly tied to independence, quality of life, and emotional well-being. The interviews also revealed substantial differences between urban and rural contexts. Urban areas generally provide more transportation

options, including fixed-route transit and paratransit services, though gaps in service coverage and accessibility remain. In contrast, rural communities often rely heavily on volunteer driver programs and demand-responsive transportation systems, which are frequently the only mobility options available to non-drivers. However, these systems face growing pressure due to funding instability, increasing operational costs, declining volunteer availability, and expanding demand from aging populations.

Based on these findings, this study recommends a coordinated policy approach focused on expanding transportation accessibility, strengthening interagency coordination, protecting volunteer driver programs, improving information infrastructure, and increasing long-term funding stability for non-driver transportation services. Investments in mobility management, centralized information systems, and regional coordination mechanisms may substantially improve non-drivers' ability to identify and access transportation options. Additionally, policies that support aging in place must recognize transportation access as a foundational component of health, safety, and independence.

Overall, this research demonstrates that the transition from driver to non-driver status is not solely an individual mobility issue, but rather a broader public health and community accessibility concern. As Wisconsin's population continues to age, the number of individuals facing driving reduction or cessation will continue to grow. Addressing the transportation needs of non-drivers through coordinated, accessible, and sustainable mobility systems will be essential to supporting healthy aging, maintaining community participation, and ensuring quality of life across both urban and rural communities in Wisconsin.

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9 APPENDIX

Interview Protocols

Respondent #: _____

Title: _____

Department: _____

Respondent Characteristics

1. Can you briefly describe your role and your experience with the driver to non-driver transition programs?

a. What is your position? And the normal duties this job entails?

b. What is your experience with driving transition programs?

c. Which programs/projects are you familiar with?

d. Have you worked with any of them directly?

2. How long have you been working in Wisconsin?

a. What parts of the state are you familiar with? (both urban and rural areas?)

Impacts of Driver Transitions

3. Can you describe driver to non-driver transitions for people in Wisconsin?

a. What different types of transitional driving have you encountered?

Active drivers

Occasional Drivers 1 (still drive, but do so less)

Occasional Drivers 2 (still drive, but only for short trips)

Occasional Drivers 3 (supplement driving with other modes)

Non-drivers

b. What challenges are they likely to face?

4. What other options might they use instead?

Public transit?

Private ride-sharing companies

Other modes (e.g., community-driven services, paratransit, etc)

5. What health and mobility implications are there?

Particularly for older and/or disabled individuals?

6. How might this impact their quality of life?

Are there any potential benefits?

7. Do the nature and/or extent of these implications change based on location?

a. Will they look the same in most urban areas?

b. What about in rural areas?

c. Are there any places in Wisconsin that are unique or might operate differently than usual?

8. Do they change based on the nature of their transition?

a. For people where the transition is gradual?

b. For people where the transition is abrupt?

9. Do they change based on the type of their transition?	
	For occasional 1/2/3/non-drivers?

Potential Solutions

10. FTA Section 5310 “Enhanced Mobility of Seniors & Individuals with Disabilities” Program

[Provide brief description of program if respondent is not already familiar]

	a. Has this program funding been successful for WisDOT?
	b. What issues has it had?
	c. How does it fit the various regional contexts in Wisconsin (urban/rural)?
	d. How could it be utilized better?

11. Older Americans Act (OAA) Title III-B Program Funding

[Provide brief description of program if respondent is not already familiar]

	a. Why has this program not been leveraged in Wisconsin?
	b. Would this program be likely to succeed?
	c. What issues might it have?
	d. How would it fit the various regional contexts in Wisconsin (urban/rural)?

12. Demand Response Transit (DRT)

[Provide brief description of program alternatives if respondent is not already familiar]

• State-subsidized rides on existing DRT services (Taxi/Uber/Lyft/etc.) • DRT services run by nonprofit community partners • DRT services run directly by local/state government • Volunteer driver programs run by state or nonprofit community partners • DRT bus services for suburban areas	
	a. Would this program be likely to succeed?
	b. What issues might it have?
	c. Would it scale easily?
	d. How would it help address people with abrupt vs gradual transitions?
	e. How would it fit the various regional contexts in Wisconsin (urban/rural)?
	f. How might this differ for people with different types of transitional driving?

13. Traditional Transit

[Provide brief description of program alternatives if respondent is not already familiar]

• Expanding existing transit systems (fleet size/geographical coverage/hourly coverage) • Provisions allowing applicable riders (e.g., seniors) to use existing transit for free • Provision of free community shuttles • Carpool/ridesharing coordination services	
	a. Would this program be likely to succeed?
	b. What issues might it have?
	c. Would it scale easily?
	d. How would it help address people with abrupt vs gradual transitions?

	e. How would it fit the various regional contexts in Wisconsin (urban/rural)?
	f. How might this differ for people with different types of transitional driving?
14. Transportation Accessibility Support Programs	
[Provide brief description of program alternatives if respondent is not already familiar]	
	• Installation of real-time, visual/audio display screens at transportation stops • Information dissemination services/training programs on available options • Hiring dedicated staff for service coordination and outreach (provide assistance identifying transportation options/help accessing services/personal assistance during transit) • One-on-one mobility assistance in key destinations (hospitals/clinics) • Program in charge of managing coordination between network of the various public, nonprofit, and community groups engaged in transportation provision • Establishing a central resource center to house access to all senior programs (including transportation options)
	a. Would this program be likely to succeed?
	b. What issues might it have?
	c. Would it scale easily?
	d. How would it help address people with abrupt vs gradual transitions?
	e. How would it fit the various regional contexts in Wisconsin (urban/rural)?
	f. How might this differ for people with different types of transitional driving?
	g. Need for more continuity between information systems across Wisconsin?
	h. AND do you have any concerns about centralizing systems? (would you lose anything that's important to retain about your local context?)

Final Thoughts	
	15. Do you have any other suggestions that might provide better options than the programs we discussed?
	Or potential improvements on them?
	16. Are there any general things that could be done across all programs that would help?
	To help mitigate harms, or increase benefits?
	17. Is there anything else you'd like to mention?

Appendix

Are driving transitions likely to influence the safety of individuals?	
	a. Will non-drivers be safer off the roads?
	b. Would transitions lower road safety risks?
Can these issues be mitigated for transitioning populations?	
	a. Can they be avoided?

	b. To what extent can they be offset?
	c. Would this be different for people with abrupt vs gradual transitions?
Which aspects/implications will be most feasible to mitigate?	
	a. Are there any ideas you are currently working on?
	b. Do you have any suggestions that might work? (no matter how feasible they might seem)