Issues Associated with Providing Customized, Client-Based Transportation Services

FINAL REPORT

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DISCLAIMER

Forward

[as per the procedural manual: “If a foreword is required, it will be written by the CRP Program Officer.” (p32)]

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SUMMARY

Issues Associated with Providing Customized, Client-Based Transportation Services

The purpose of this study was to examine issues impacting the delivery of client-based transportation service in rural and small urban areas to identify ways for state and federal agencies to support providers of transportation in these often-underserved geographies. For this study, client-based transportation was service that is oriented toward institutions or organizations with a defined client base. This could include, but are not limited, to the following:

- Employers
- Educational institutions
- Hospitals or other medical providers
- Nursing homes or other elder care
- Faith-based organizations
- Human service agencies

This topic is of particular interest due to the often-challenging operational conditions in rural and small-town settings. As many rural counties continue to lose population, transportation needs are increased due to the loss of regional service centers. After the closure of a grocery store or medical facility, people living in rural areas may have to travel even greater distances for life-critical trips to meet basic needs. Many times, providers of client-based transportation (e.g., non-emergency medical transportation for a regional hospital) may be among the only transportation services offered in these contexts. Therefore, understanding how these services operate, barriers the providers encounter, and ways to enhance the service for greater benefit is essential to maintaining a minimum quality of life for residents in rural and small urban settings.

To undertake this study, an extensive review of the literature was conducted on topics such as charter service, coordination and cost sharing, medical transportation, and veteran's transportation services. The review showed that while there is considerable work currently being undertaken generally on coordination (in particular through the Council on Coordination, Access, and Mobility), there is considerably less available research focusing on client-based transportation.

This was followed by a survey that focused on state agencies and distributed to state departments of transportation, Medicaid agencies, health and human service agencies, and other state agencies that interface with client-based transportation. The survey was also distributed to national and regional (multistate) associations. The survey found that:

- **Non-Emergency Medical Transportation (NEMT) and other Transportation Programs**: There appears to be less ownership by states of Medicaid transportation service as opposed to the state interest in DOT-funded transportation activities. There is also evidence of bifurcation in many states between NEMT and non-NEMT transportation activities.
- **Federal Regulations versus State Regulations**: States view regulations and policies primarily as an issue to resolve at the federal level rather than state-level policies or regulations. It should be noted, however, that some states still identified state-level policies and regulations as

an issue, though the diversity of how states administer, and fund transportation services probably results in variation from state to state.

- **Lack of Interaction with Some Local Organizations**: The survey revealed that while states have a high level of engagement with transit agencies, local governments, and nonprofit organizations, there is a very low level of engagement with businesses or business clusters, higher educational institutions, and medical centers. This indicates some opportunity for increasing integration of client-based transportation services with the broader suite of transportation services supported by the state.

Finally, a series of service provider interviews was conducted. Thirteen service provider representatives were interviewed. Interviews were chosen based on geographic spread, service provided to rural and small urban areas, diversity of services provided, and prior relationships with research team members. Primary findings included:

- **Separation of NEMT and other Transportation Services**: Respondents indicated that Medicaid-funded NEMT was a significant part of their overall transportation services, and that the lack of coordination between the agencies administering the two sources of funding is challenging.
- **Coordination and Technology**: Interviewees did not see the challenges as being particularly geared toward technology solutions, with the possible exception of better software for coordinating trips between different service providers. However, they noted that there is a lack of technical expertise and staff capacity at many of these smaller providers, which can make technology implementations difficult.
- **Funding Flexibility**: There was nearly unanimous agreement that providers in rural areas must be creative and flexible when serving the wide variety of life-critical trips that area residents need. The general lack of services in rural areas means that often all unserved trips fall to these local providers, and they struggle to serve them despite unavailable or inadequate funding.

In general, this project found that the topic of client-based transportation services in rural areas is understudied and in need of more exploration. The rural nature of these service providers means that a wide variety of trip types falls to a single provider covering a large service area, requiring creative and flexible use of resources to meet residents' needs. The number of funding pots and the lack of coordination among the administering state and federal agencies creates administrative burdens, as does the lack of funding for those trip types ineligible under typical funding pots. There is significant opportunity for state and federal partners to explore opportunities to encourage the creative and flexible use of existing resources to meet the growing transportation needs of people living in rural parts of the country.

CHAPTER 1

Introduction

Background

As the population in small-town America continues to age and critical services relocate to larger cities, the need for transportation services targeted at specific user groups is expected to increase. However, traditional public transportation faces considerable operational difficulties in serving these needs, especially in rural and small urban areas. There are a variety of reasons for this, but many have to do with real or perceived barriers in federal and/or state regulations, limitations in funding eligibility for the diverse transportation needs in these areas, and a lack of technical capacity at client-based transportation organizations. Overcoming these obstacles is a crucial challenge in the coming decades as the essential transportation needs for medical, employment, educational, and quality-of-life purposes grows in the nation's smaller communities.

The core issues facing rural and small urban communities are a combination of demographic shifts and geographic clustering. The impacts of these two trends are not limited to transportation, but the transportation needs in these communities are deeply influenced by these trends. In terms of demographic changes, small-town America has either a stagnant or declining population, and those who do live in these communities are, on average, getting older. The USDA Economic Research Service has explored this topic in detail and notes that rural counties make up nearly 85% of "older-age counties" – those with more than 20% of their population age 65 and over. At the same time, nonmetro areas showed for the first time in 2016 an overall loss of population (US Department of Agriculture 2018).

This has profound implications for transportation needs in these communities. Where the population is shrinking, it is common for essential services like medical care and grocery shopping to cluster more populous communities (Marre 2020). This geographic clustering of services away from rural and small urban areas and toward larger cities is a self-reinforcing trend. As jobs move into larger cities, it becomes increasingly difficult to retain younger working-age residents. As they leave, stores, medical services, and other jobs eventually leave with them in search of more robust markets in larger cities. This in turn makes these larger cities more attractive for those remaining in rural and small urban areas, prompting even more of them to leave for the city. Those who stay are typically older and lower income, making the needs of the residents, on average, even more pronounced in a context where services have attenuated.

In rural and small urban areas, fixed-route transit often is not feasible due to low demand densities and the cost of providing service. This makes door-to-door demand response service a typical mode of transportation, particularly among older residents. While demand for transportation service in rural and small urban areas is growing, the ability of transit agencies to provide effective transportation in these areas is diminishing. This is for multiple reasons.

The first is the cost of demand response service. The cost of providing a single demand response trip is relatively high due to the low rider productivity of the service. Demand response systems rarely see greater system efficiency than three or four trips per hour, as compared to ten times that for fixed

route bus systems. However, the operating cost per hour is roughly the same, meaning that fixed route or fixed guideway systems are vastly more cost efficient than demand response service.

While costs are growing, funding for transit agencies is not keeping pace. Historically, federal funding for transportation overall has not met the demand of our aging system, and transit is no exception (though the passage of the Infrastructure Investment and Jobs Act of 2021 is a major infusion of new funding to close that investment gap). Furthermore, many federal funding categories are restricted to certain populations or geographic areas. At the same time, state and local funding for transit has stagnated in many parts of the country. This leaves many transportation-burdened people with few options, particularly in rural and small urban regions.

Nonetheless, the public expects that a regional transit provider will be able to transport those who cannot otherwise transport themselves to key destinations. In these cases, a client-based organization may reach out to a transit operator and ask for special service to their facility (e.g., a group home). When these instances arise, the transit provider must not only determine if there are resources available to fulfill the request but must also make the determination as to whether the request is eligible under existing funding categories. They are also cognizant that each decision sets a precedent, potentially leading to more requests and greater strain on agency resources.

A key strategy for many jurisdictions to address the rising need and lack of resources is better coordination of the services that do exist in these rural areas. For example, a region or state may have a public transit system providing fixed route and demand response services layered on top of multiple client-specific services. These could include:

- Employer shuttles
- Senior Center vans
- Non-emergency medical transportation
- University shuttles
- Faith-based institution shuttles

Unfortunately, each of these services typically has a specialized funding source that serves a particular subsection of the population, making the operators of these services reluctant to engage in collaborations. For example, some Senior Center vans may be operated using Federal Transit Administration (FTA) Section 5310 funding, which is limited to serving seniors and people with disabilities. So there would be a problem entering into a joint-use agreement with, for example, an after-school program, since the passengers would not be in the funding-specific population.

The Federal Transit Administration, as well as state and local transportation providers, are increasingly aware of the need for better coordination. The Council on Coordinated Access and Mobility (CCAM) was established by the federal government with the goal of improving that coordination. CCAM acts as a clearing house of information and best practices for better coordination, such as cross-sector regional coalitions which meet regularly; technology solutions which help to marry unmet transportation needs with excess capacity; and best practices documents that address common concerns such as liability or scheduling coordination.

The issues of demographic changes, increased need for demand response services, and the challenges of a fragmented transportation landscape provide the motivation for this study. The Literature Review in Chapter 3 demonstrates that the topic of client-based transportation services in rural and small urban areas has not been targeted for study as a discreet area of analysis, making this report both timely and necessary.

Research Purpose and Overview

Lack of information and confusion among transportation providers is a key factor in why specialized transportation services are often underprovided. This research assesses the current state of the practice, outlines real and/or perceived obstacles to client-based service due to federal regulation, and creates a concise and cohesive Decision Tool for operators and federal partners that will aid them in finding solutions to fill this gap.

Organization of the Report

This report documents the research team's work and presents findings and recommendations. The approach taken to this research is summarized in Chapter 2. Findings from the review of literature are presented in Chapter 3. Analysis of the survey results and subsequent service provider interviews are discussed in Chapter 4. Chapter 5 summarizes key findings. The companion product of Task 82 is a Decision Tool for applying best practices. It can be found in Appendix A.

CHAPTER 2

Research Approach

The Research Team divided this project into the following elements:

1. Literature Review
2. Survey of State Agencies
3. Interviews with Service Providers

A brief description of each of these elements is provided below.

Literature Review

The Literature Review includes a review of issue areas related to client-based transportation service such as charter service, coordination and cost sharing, medical and non-emergency medical transportation, rural transportation, transportation for disadvantaged populations, and for active military and veterans. This review looks at Transit Cooperative Research Program (TCRP) Reports, white papers, academic research, case studies, and federal guidance.

Survey of State Agencies

To learn more how organizations fund their client-based transportation operations, identify innovative programs, practices and technology uses, and to understand barriers to innovation, a survey was created and distributed to state Department of Transportation (DOT) transit contacts, state Medicaid directors, state and regional transit associations, health associations, and national transportation organizations such as American Association of State Highway and Transportation Officials (AASHTO) and National Rural Transit Assistance Program (RTAP). The survey responses provided information from 33 state DOTs (36 responses in total, some state DOTs provided multiple responses) regarding how they conduct rural transit assessments. Additionally, the survey was completed by 16 NEMT/Medicaid/Public Health providers, two Regional or state non-profits, and 47 transit operators. survey was also used to identify best practices and solicit potential interviews.

Interviews with Service Providers

Possible interview candidates were identified from the survey results, referrals from industry members, and guidance from the oversight panel. The interviews further explored innovative practices and strategies for client-based transportation services. They were selected based on new and innovative ways to provide transportation, particularly when they have documented economic benefits. Of primary focus were healthcare and job access, with a secondary focus on school transportation, essential shopping, and quality of life transportation. Lastly, the interviews focus on profiling agencies with strong regional partnerships that include a variety of local, state, and federal officials; transportation service providers; human service providers; major employers; and other stakeholders.

CHAPTER 3

Literature Review

Introduction

Below is a review of issue areas related to client-based transportation service. This review includes Transit Cooperative Research Program (TCRP) Reports, white papers, academic research, case studies, and federal guidance, and is categorized under the following topics:

- Charter Service
- Coordination and Cost Sharing
- Medical and Non-emergency Medical Transportation
- Rural Transportation
- Transportation for Disadvantaged Populations
- Transportation for Active Military and Military Veterans

Charter Service

The Federal Transit Administration (FTA) has adopted regulations to prevent grant recipients from operating charter services. Charter service is defined in Code of Federal Regulations 604 (referred hereafter as The Charter Rule) as, "Transportation provided by a recipient at the request of a third party for the exclusive use of a bus or van for a negotiated price." (Federal Transit Administration 2008) The charter regulations ensure that federally subsidized transit agencies do not unfairly compete with privately owned bus companies. This rule is a foundational element to the discussion of client-based transportation services, as it informs the range of transportation options available to organizations in rural areas by federally subsidized transit agencies.

The Charter Rule explains the purpose and applicability of the charter service policies and includes definitions and exceptions. As a condition of receiving federal transit funds, the recipient enters into an agreement with the FTA to provide charter bus service in compliance with the regulations, if it is eligible to provide services at all. Consequences for violating the charter rule can include an FTA investigation and, if the complaint alleging violations is found to have merit, the withholding of federal funding or disqualification of the ability to receive future federal funds.

In general, transit agencies may not provide charter service as defined by The Charter Rule. Since service meeting the definition of "Charter Service" is not always clear, the regulations provide guidance on:

1. Circumstances when service meets the definition of charter service.
2. When the provision of service qualifies as charter service but is allowable as an exception; or
3. When the provision of service is considered charter service which would disqualify the provider from receiving federal funds.

It is important to note that providers in rural areas have more flexibility in providing charter-type service than those in urbanized areas. The Charter Rule provides an exception for charter-type

transportation in service of a Qualified Human Service Organization, which is defined as "an organization that serves persons who qualify for human service or transportation-related programs or services due to disability, income, or advanced age." (Federal Transit Administration 2008) However, the literature does not explore whether this exception is sufficient to meet all client-based transportation needs in rural areas, nor whether transportation operators in rural areas are aware of this exception.

Coordination and Cost Sharing

Transportation is often a secondary service for client-based transportation providers, and so cost control is often a key concern for service providers. The literature indicated that coordination among providers through vehicle sharing, cost sharing, or mobility management can potentially lead to enhanced services and cost savings. However, privacy restrictions under the Health Insurance Portability and Accountability Act (HIPPA) can complicate opportunities to coordinate services, as agencies may not be allowed to share critical information about a passenger's needs with another agency. Even when agencies determine transportation cost-sharing is advantageous and feasible, the process of allocating costs and establishing record keeping can be cumbersome. The literature review on coordination and cost sharing is outlined below.

TCRP Research Report 144, Volume 1: Sharing the Costs of Human Services Transportation (Burkhardt, et al. 2011)

TCRP Research Report 144, Volume 1 (hereafter referred to as TCRP Report 144) provides a detailed description of the components of a comprehensive Cost Sharing Model. This description leads the user through the process of setting up the necessary cost accounting system, identifying the data requirements and the measurement parameters, and describing procedures for applying the model. This volume concludes with instructions for using the actual Cost Sharing Model.

Data collection and performance assessment are key to establishing the cost sharing model. Once data has been collected and performance assessed, other aspects of cost sharing include identifying the types of transportation (community transportation, case management transportation, travel services for individuals, and managed care transportation), each of which may include client-based transportation.

The next step in developing a cost model, after having collected essential data, evaluating performance, and identifying the type of transportation, is to conduct a full cost accounting, followed by a cost allocation. The full cost allocation is important so that an agency can recognize that all costs must be paid—not just the out-of-pocket expenses. When the full costs are understood (fixed versus variable costs, capital versus operating costs, and direct versus shared costs), those which can be allocated to the provision of transportation services can be identified.

Federal Interagency Coordinating Council on Access and Mobility Vehicle Resource Sharing: Final Policy Statement (Federal Transit Administration 2006)**.**

The Federal Interagency Coordinating Council on Access and Mobility Vehicle Resource Sharing: Final Policy Statement (Policy Statement) was written to clarify misconceptions that federal funds for transportation can only be used by clients or beneficiaries of that same Federal program. These documents clarify that federally assisted grantees that have significant involvement in providing resources and engage in transportation should coordinate their resources to maximize accessibility and availability of transportation services.

Federal agencies are required to have consistent and uniform government-wide policies and procedures for management of Federal grants and cooperative agreements – i.e., a "Common Rule." Federal agencies are also required to follow uniform cost principles for determining allowable costs found in Office of Management and Budget (OMB) regulations. These regulations set forth the standard Federal cost principles for determining allowable costs.

Vehicles and transportation resources may be shared among multiple programs, if each program pays its allocated (fair) share of costs in accordance with relative benefits received. Importantly, while the sharing of costs across agencies is allowed, it is not clear whether rural transportation providers understand the policies and mechanisms for implementing such cost shares.

Inventory of Federal Programs Providing Transportation Services to the Transportation-Disadvantaged (Federal Transit Administration 2019)

This document provides information about Federal funding programs which include transportation as an eligible expense. There are approximately 130 different funding programs, and most are focused on transportation of specific program clients. This resource is available to assist transportation providers in identifying client-based transportation programs which could potentially be integrated into a coordinated transportation system.

Reference Manual for Planning and Design of a Travel Management Coordination Center (TMCC): FTA Report No. 0117 (ITS America 2017)

As it relates to client-based transportation:

Intelligent Transportation Systems (ITS) and other technologies can serve a valuable role in the coordination of mobility services for the transportation disadvantaged served by human service organizations and other agencies in rural areas. Specific requirements of programs for client-based transportation services frequently impede coordination and increased efficiencies in service delivery. These technologies are integrated through the concept of a Travel Management Coordination Center (TMCC), and this concept was developed and demonstrated through the U.S. DOT Mobility Services for All Americans (MSAA) Initiative. The objective of this reference manual is to build on the experience gained from the MSAA Initiative and provide guidance on how to plan and design a TMCC.

The manual identifies four major steps for the planning and design of a TMCC:

1. Assessment of barriers and key unmet needs.
2. Development of a vision of the desirable customer experience.
3. Development of a TMCC vision among stakeholders defining key organizational and technological choices across.
4. The conduct of an ITS Systems Engineering project process.

The manual also outlines key lessons learned from the MSAA Initiative as they relate to the institutional foundation needed to develop and sustain a TMCC and identifies many resources to assist those planning a TMCC.

Mobility for All – Strategic Plan 2019-2022 (Coordinating Council on Access and Mobility 2019)

The Coordinating Council on Access & Mobility (CCAM) is an interagency federal initiative that supports states and their localities in developing coordinated human service delivery systems. Among multiple responsibilities, CCAM offers guidance on coordination to transportation providers in documents such as its Mobility for All – Strategic Plan 2019-2022 (the Strategic Plan). The Strategic

Plan establishes a common mission and vision, defines priorities, and outlines four key strategic goals that enables CCAM to respond to Fixing America's Surface Transportation (FAST) Act requirements, build on past accomplishments, and deliver on its mission. The mission statement says that CCAM issues policy recommendations and implements activities that improve the availability, accessibility, and efficiency of transportation for targeted populations

The Strategic Plan is organized as a series of goals and objectives. The four goals are:

1. Goal 1: Improve Access to Community through Transportation.
2. Goal 2: Enhance Cost-Effectiveness of Coordinated Transportation.
3. Goal 3: Strengthen Interagency Partnerships and Collaboration with State, Local, and Industry Groups.
4. Goal 4: Demonstrate Innovative Coordinated Transportation.

The Strategic Plan outlines a mission, goals, and objectives for coordinated transportation, rather than concrete examples. This plan provides high-level guidance for national, multi-state, and state-level officials supporting the work of transportation agencies serving client-based organizations.

Medical and Non-Emergency Medical Transportation

Medical and non-emergency medical services are a primary trip type for client-based programs. Topics explored below include brokerages for medical transportation, the relationship between transportation and health, and the impact of Medicaid on transportation services.

TCRP Research Report 202: Handbook for Examining the Effects of Non-Emergency Medical Transportation Brokerages on Transportation Coordination (Cherrington, et al. 2018)

TCRP Research Report 202 (hereafter referred to as TCRP Report 202) was conducted to better understand what influences states to establish Non-Emergency Medical Transportation (NEMT) brokerages and the resulting impacts on customers, human services transportation, and public transportation. As described in the report, each state administers its own Medicaid program, including choices about how to deliver NEMT services. Medicaid policies for eligibility, services, and payment are complex and vary considerably from state to state. The models used include:

- **In-house management**—When a state Medicaid agency administers transportation for beneficiaries at a state, regional, or county level
- **Brokers**—A state Medicaid agency may contract with an NEMT broker to manage preauthorized NEMT services in a designated area.
- **Managed Care Organizations (MCO)**—Arranged through contracts with state Medicaid agencies, MCOs seek to improve health care for a population of Medicaid beneficiaries, often with chronic and complex conditions, while also managing the cost of that care.

Models may also be mixed. The models by state and case studies from Massachusetts, Texas, Florida, and Oregon are presented in TCRP Report 202. The most common NEMT model used is a statewide broker.

TCRP Report 202 goes on to describe opportunities and obstacles impeding coordination of human services transportation, which is influenced by the NEMT model. Chief obstacles include concern among program sponsors that their own participants might be negatively affected; program rules that limit use by other programs; real and perceived regulatory barriers; and limited guidance and information on coordination.

The common desired outcomes for coordination are A) to provide a better quality of NEMT service, and B) to maximize services delivered. Strategies to achieve the desired outcomes include:

1. Align goals and objectives to achieve common desired outcomes rather than on where there is disagreement among specific objectives, collaboration can be more effectively pursued.
2. Include NEMT stakeholders when preparing or updating a locally developed, coordinated human services transportation–public transportation plan.
3. Adopt common geographic boundaries for service areas.
4. Measure the contribution of transportation to better health outcomes and reduced health care costs.
5. Coordinate NEMT with public transportation to meet the unique requirements of Medicaid beneficiaries, particularly in rural areas.
6. Demonstrate and evaluate the value of a ridesourcing program for NEMT medical appointments.
7. Use technology to enhance NEMT program administration and verify medical trips.
8. Identify the key data required and establish standard procedures for data collection and reporting of NEMT performance.
9. Use fixed-route transit for appropriate NEMT trips at the lowest cost.
10. Coordinate shared-ride, demand-response NEMT with other transportation programs to reduce costs per trip.
11. Implement a transparent cost allocation methodology to show how shared-ride public transportation can lower the cost for an NEMT trip.
12. Establish a procedure to set a rate for NEMT trips on ADA paratransit that is consistent with Medicaid guidelines.
13. Negotiate operations practices and reimbursement rates for transportation providers to recover the direct costs of delivering NEMT service.
14. Adopt procedures and timelines for invoicing and payment for NEMT.

Social Determinants of Health Series: Transportation and the Role of Hospitals. (Health Research & Educational Trust, Chicago, IL,2017)

Transportation and the Role of Hospitals makes the argument that health is inextricably linked to the social and economic conditions in which people live, and poor social and economic conditions can result in a lack of access to transportation. This document is part of the Social Determinants of Health Series. The publication highlights hospitals and health systems that are successfully addressing transportation issues in their communities, then evaluates barriers to transportation, as well as strategies for improving access. The report provides a variety of strategies to address transportation issues ranging from education of staff to investing in community transportation services.

Hospitals are key destinations in rural areas, often anchoring the local economy of small urban areas and providing essential medical services to the region. While NEMT often provides the link to these medical institutions, this report brings additional context to the broader lens of client-based transportation.

The Hidden Risk of Cutting Medicaid NEMT: An Examination of Transportation Service Interdependency at the Community Level (Adelberg, Bogren and King 2020)

This White Paper examines the role of Medicaid NEMT in maintaining health and wellbeing in communities and examines case studies where states have been permitted to waive the NEMT benefit for their Medicaid expansion populations. Both Iowa and Indiana were granted waivers, and Kentucky is seeking to do so.

This paper illustrates the negative consequences of eliminating the NEMT benefit beyond Medicaid by documenting the interconnectedness of Medicaid and local transportation services. Eliminating NEMT will substantially reduce the funding and services of local transportation providers, particularly in rural and underserved communities that already lack transportation access. NEMT provides a substantial amount of the annual budget of local transportation organizations—often more than one-third. And this funding is, in two of three studied states, further leveraged for additional state transportation funds.

Opportunities to Improve Community Mobility through Community Health Needs Assessments (National Center for Mobility Management 2018)

Within the last decade, healthcare providers have expanded the lens through which they consider patient outcomes beyond just interactions within a hospital or clinic. One way this has been manifested is through a requirement in the Affordable Care Act that requires hospitals to perform Community Health Needs Assessments (CHNAs) every three years to identify the obstacles to improving community health. From that they create an action plan to address those obstacles. Many of these CHNAs have subsequently focused on mobility issues, which include access to transportation, safe biking and pedestrian facilities, and the ability to reach essential amenities, among other factors that inhibit or enable people to achieve better health outcomes.

This paper emphasizes addressing health needs through a holistic approach, with mobility being an integral part of health care strategies. Several case studies are highlighted. In the first case, Harvey County, Kansas coordinated with the Newton Medical Center to improve walkability to encourage physical exercise. In St. Mary's County, Maryland, local community partners reached out to the hospital to invite their participation. There is now a pilot program coordinating latent capacity among local human service agencies to utilize their vehicles when they are not transporting clients to get patients to their appointments. In a final case, the Stanford Medical Center Wheaton, Minnesota, used a three-pronged approach: first, they developed a directory of available resources and created a distribution plan to communicate the information to community members and to keep information up to date. Secondly, a shortage of volunteer drivers in the community led the CHNA implementation plan to identify the need to increase the local volunteer driver program. The plan identified existing community resources and services with volunteer driver programs that could be leveraged as potential partners. And finally, a strategy for addressing local transportation needs was to work with local law enforcement and social services to provide transportation for mental health patients.

Rural Transportation

Public Transit's Impact on Rural and Small Towns (American Public Transportation Association 2019)

This paper finds that public transportation helps rural communities become more efficient and equitable. The paper discusses the demographics most impacted (older Americans, people with disabilities, veterans, and adolescents), as well as public transit's impact on rural and small towns. Transit can address issues of rural poverty, safety, and security, maintaining active lifestyles, and economic development.

The study concludes that improving public transit service requires broad community support. The support should be through credible technical analyses about the benefits of transit, but also anecdotal material that vividly illustrates how public transit can benefit communities. Leaders must understand the role that public transit plays in small towns and rural communities, must undo biases against planning and funding practices, and must overcome underinvestment in public transit.

This study provides important broad context for the provision of client-based transportation services in rural areas. It underscores the demographic urgencies in resolving perceived or real barriers to providing transportation to the multitude of organizations that keep rural residents able to live in their homes.

Formula Grants for Rural Areas: Program Guidance and Application Instructions (Federal Transit Administration 2014)

Federal Circular 9040.1G (Formula Grants for Rural Areas: Program Guidance and Application Instructions) provides guidance to rural operators of public transportation on eligible projects, limitations, and other requirements associated with utilization of federal funding. The circular covers the following information relevant to the client-based transportation services:

1. *Program Development* – This section identifies how programs will be developed in terms of fair and equitable distribution, planning requirements, performance-based planning, intercity bus consultation requirement, program of projects, certifications and assurances, and grant award and project approval. Importantly, it also discusses considerations of charter bus service.
2. *Program Management and Administrative Requirements* – This section discusses program administrative requirements, equipment management, procurement, financial management, and other aspects of managing the grant programs.
3. *Rural Transportation Assistance Program* – This section discusses the program specifically as it applies to rural areas (under population 50,000).
4. *Public Transportation on Indian Reservations* – This section discusses the program specifically as it applies to public transportation on Indian Reservations (Tribal Transit programs).

Rural Transportation: Challenges and Opportunities (Henning-Smith, et al. 2017)

Rural Transportation: Challenges and Opportunities is a policy brief from the University of Minnesota Rural Health Research Center. Through 113 survey responses from across the US, the brief examines transportation as it relates to health and health care in rural communities. Topics explored include infrastructure, geography, funding, accessibility, and political support and public awareness.

The themes that dealt with client-based transportation considerations included the following:

1. **Funding** - Underlying many of the issues were problems with funding, both lack of public and private investment in transportation programs and household-level problems affording the transportation that is available.
2. **Accessibility** – Mobility impairments, group trips, and providers who only offer one-way transportation were identified as challenges to accessibility.
3. **Political Support and Public Awareness** – Barriers exist related to policies and public awareness. This can manifest as a lack of federal, state, and local political support for improving transportation and a lack of public awareness of available transportation options and challenges.
4. **Socio-demographics** – Surveyors identified challenges related to populations that are aging and have increasing difficulty driving themselves, those with high rates of poverty that struggle to afford transportation, and large rural populations spread over vast areas

As the median age of rural populations continues to increase, hospital consolidations continue to move a wider range of specialty services from local hospitals to tertiary care centers, and individual expectations for on-demand transportation become increasingly commonplace, transportation will become an even more pressing concern for rural areas.

Transportation: A barrier to successful employment outcomes among rural VR clients (Ipsen 2012)

This research paper examines how Vocational Rehabilitation (VR) clients have a lack of transportation resources available to them in rural areas and discusses strategies for assisting clients to overcome transportation barriers. Information was gathered from 28 respondents representing 21 agencies. Top recommendations from the findings include:

1. Integrate personal transportation planning into the counseling process.
2. Utilize natural supports, including family, friends, and co-workers as ride sources.
3. Provide reimbursement for rides.
4. Access public and private providers to meet client needs.
5. Allow counselors to provide rides in some situations.
6. Assist employers to develop sponsored rides or vanpools as a hiring strategy.
7. Support the acquisition of personal vehicles.
8. Coordinate with other state agencies to hire an interagency transportation coordinator.
9. Participate in the development or expansion of local transit options.
10. Participate in the development of a voucher model for rural transportation.

FMCSA Regulations as They Apply to FTA Section 5310/5311 Providers: A Handbook (National Academy of Sciences, Engineering, and Medicine 2006)

The Federal Motor Carrier Safety Administration (FMCSA) regulates interstate commerce, while the FTA regulates public transportation. In providing public transportation between states, the regulations of these two agencies overlap, which can cause confusion. This digest is intended as a reference guide for FTA 5310 and 5311 grantees when traveling interstate to assist in understanding the overlap in regulations and thereby avoiding unknowingly violating FMCSA regulations.

The digest is intended as a reference so that when a provider is determining how to comply with a particular regulation, they can look up the regulation in this digest and find a simple explanation of what is necessary.

Transportation for Disadvantaged Populations

Enhanced Mobility of Seniors and Individuals with Disabilities Program Guidance and Application Instructions (Federal Transit Administration 2014)

Federal Circular 9070.1G (Enhanced Mobility of Seniors and Individuals with Disabilities Program Guidance and Application Instructions) provides guidance on the administration of the transit assistance program for seniors and individuals with disabilities under 49 U.S.C. 5310, and guidance for the preparation of grant applications. Sections relevant to considerations of client-based transportation services include:

1. **General Program Information** – This section includes information about eligible projects, including programs that go above and beyond ADA requirements. This can have impacts on transportation provided to organizations in rural areas.
2. **Coordinated Planning** – This section describes the required "Coordinated Public Transit-Human Services Transportation Plan" which must be prepared for projects selected for funding under the Section 5310 program. This section discusses the development of the plan, participants, and the relationship to other planning efforts.
3. **Program Management and Administrative Requirements** – This section discusses program administrative requirements, capital reserve accounts, equipment management, leasing and titles

of vehicles, procurement, financial management, and other aspects of managing the grant programs, including accounting, and closing out grants.

Transportation Disadvantaged Populations: Federal Coordination Efforts Could Be Further Strengthened (Government Accountability Office 2014) and **Public Transportation: Enhanced Federal Information Sharing on Coordination Could Improve Rural Transit Services** (Government Accountability Office 2020)

The 2014 research paper by the Government Accountability Office (GAO) examines (1) federal programs that fund transportation services for the transportation disadvantaged; (2) federal coordination efforts undertaken since 2003; and (3) coordination at the state and local levels.

This paper notes that transportation is often funded through non-transportation programs. For example, while the Department of Transportation administers 7 programs that support public transportation, an additional 73 programs are administered by 7 other federal agencies and provide a variety of human services, such as job training, education, or medical care, which incorporate transportation as an eligible expense in support of program goals. Additionally, CCAM seeks to improve coordination but lacks a strategic plan.

This research seeks ways to improve coordination, and outlines recommendations for each Federal Department, as well as examining the status of recommendations. Key to these recommendations is that the secretaries work hand in hand to publish a strategic coordination plan and strive to implement the recommendations from prior planning processes. These recommendations are relevant to the needs of organizations operating in rural areas, which disproportionately stand to benefit from leveraging resources across agencies.

In 2020, the recommendations of the 2014 paper were reviewed and reiterated. The GAO recommends that FTA develop a communication plan that will effectively share information with state and local stakeholders on coordination opportunities in an accessible and informative way. FTA partially concurred with the recommendation.

Transportation for Older Adults: Measuring Results Could Help Determine If Coordination Efforts Improve Mobility (Government Accountability Office 2014)

This paper reviews GAO research into the federal programs that provide funding for transportation services for older adults and the extent to which the programs that fund these services are coordinated. Also reviewed is how state and local transportation agencies and aging network organizations in selected states coordinate transportation for older adults and the challenges they face in coordinating or providing these services.

GAO reviewed past work on programs for transportation-disadvantaged populations, reviewed federal program information, and conducted interviews with HHS, DOT, and VA, as well as state and local transportation agencies and aging organizations in selected states. Case studies include Florida, Oregon, Pennsylvania, and Texas.

Transportation for Active Military and Military Veterans

TCRP Report 164: Community Tools to Improve Transportation Options for Veterans, Military Service Members, and Their Families (Ellis, et al. 2013)

TCRP Report 164: Community Tools to Improve Transportation Options for Veterans, Military Service Members, and Their Families (hereafter referred to as TCRP Report 164) is a resource for

improving transportation options for veterans, military service members, and their families that builds on the concepts of transportation coordination and mobility management. The first chapters of TCRP Report 164 state the need for and status of transportation for this population. The report goes on to emphasize the importance of identifying and involving community leaders and gatekeepers—and from there, how to plan services. Most of the chapters conclude with "tools" appropriate to the chapter's topic as well as a list of additional resources, suggesting reports and websites that offer more information.

The report presents information on new transportation services that may help meet the transportation needs of veterans, service members, and families in one's community in addition to or as an extension of the recommendations for coordination and mobility management. Options focus on enhancing transportation services which may serve this group rather than developing client-specific services. The chapter outlines several options for doing this including:

1. Option 1: Develop "One-Call/One-Click" Transportation Information Center
2. Option 2: Implement New Public Transit Services
3. Option 3: Support Other Community Transportation Services
4. Option 4: Initiate Volunteer Driver Program
5. Option 5: Design and Operate a Voucher Program
6. Option 6: Support Private Vehicle Ownership

Meeting the Health Care Access Needs of Veterans (National Center for Mobility Management 2016)

This brief describes VA services designed to improve veteran's access to health care, shares success stories of mobility managers working within and outside of the VA system to expand access options for the veteran community and discusses opportunities for mobility managers to facilitate partnerships between community and veteran transportation providers.

Existing strategies for mobility for those receiving care include the following:

1. The VA's oldest transportation program, the Beneficiary Travel Program, reimburses eligible veterans or the family members who transport them for travel costs to a scheduled VA or VA-authorized health care appointment.
2. The Highly Rural Transportation Grant (HRTG) program, authorized by Congress in 2015, provides grant funding to qualified organizations (veteran service organizations and state veteran service agencies) that provide innovative transportation services to veterans who live in highly rural areas and have difficulty obtaining VA health care service due to their location.
3. Although not an official VA program, the Disabled American Veteran (DAV) transportation program is operated in close collaboration with VA Medical Centers (VAMCs). DAV donates purchased vehicles to VAMCs, which then coordinates use of the vehicles to transport veterans to their facilities.
4. Another component of the Veterans Transportation Service program is the growth of its cadre of mobility managers placed within each of its VAMCs. These individuals help veterans determine the most appropriate transportation service to transport them to medical services.

These programs are valuable for assisting veterans in finding the transportation they need. Most of these services are client-based and focus almost exclusively on service for veterans. At the same time, they do provide potential opportunities for coordination and collaboration to expand the overall mix of resources serving organizations in rural areas.

CHAPTER 4

Findings and Applications

In addition to the Literature Review, there were two main components of this research project: a state agency survey and a series of operator interviews. The findings of these two research efforts are summarized in this section. Additional research was then undertaken on the regulatory barriers identified in the survey responses and interview findings to confirm the details and identify best practices for minimizing these issues as burdens. A Decision Tool for applying what was learned through the survey, interviews and research can be found in Appendix A.

State Agency Survey

The survey of state agencies began with the development of a list of questions designed for state-level agencies that interface with client-based transportation services, such as Departments of Transportation, Medicaid offices, and Health and Human Service Agencies. Surveys were also sent to regional (multi-state) associations and nonprofits that include client-based or human services transportation in their missions. The list of questions can be found in Appendix B.

The survey was open from May 2020 through August of 2020. The survey was available both online through the SurveyMonkey platform and a fillable PDF. Email notifications to state agency representatives were sent out and followed up with phone calls.

Description of Survey Distribution

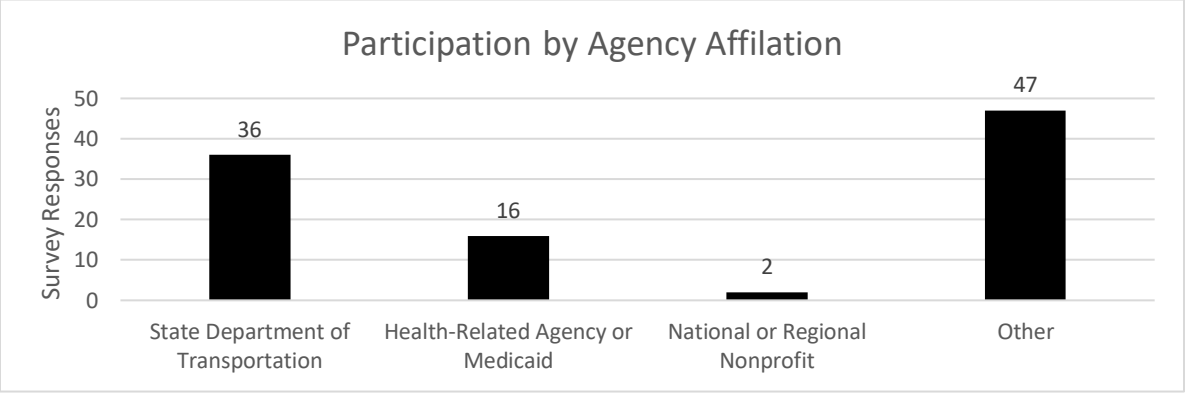
The survey target audience was state-level departments of transportation, health-related transportation agencies (e.g., state Medicaid office), and national or regional (multi-state) organizations or associations. After distribution of the survey, some recipients forwarded the survey to direct local service providers such as human service agencies or transit providers. While the focus of the overview presented below is the feedback from the state-level agencies, the responses of the local organizations are summarized at the end of the section.

Contact information for the state-level respondents was gathered from online sources and organizational partners, in addition to direct inquiries to the organizations by the researchers. The survey response period was May 2020 through August 2020 and responses were collected via the online survey application SurveyMonkey in addition to fillable PDF documents.

Summary of Participation by Agency Affiliation

Figure 1 shows the affiliation of survey respondents. In total 101 organizations responded to the survey.

Figure 1: Survey Responses by Agency Affiliation



n = 101

**Some states provided multiple responses*

Most respondents represented State Departments of Transportation, with 36 responses. Two responses came from representatives from national or regional nonprofits. Sixteen respondents were affiliated with health-related state agencies or Medicaid offices. The largest group of respondents represented other local agencies such as local transportation authorities, senior centers, county public transit, and state associations to list a few.

Figure 2: Map of Survey Responses by State and Agency Affiliation

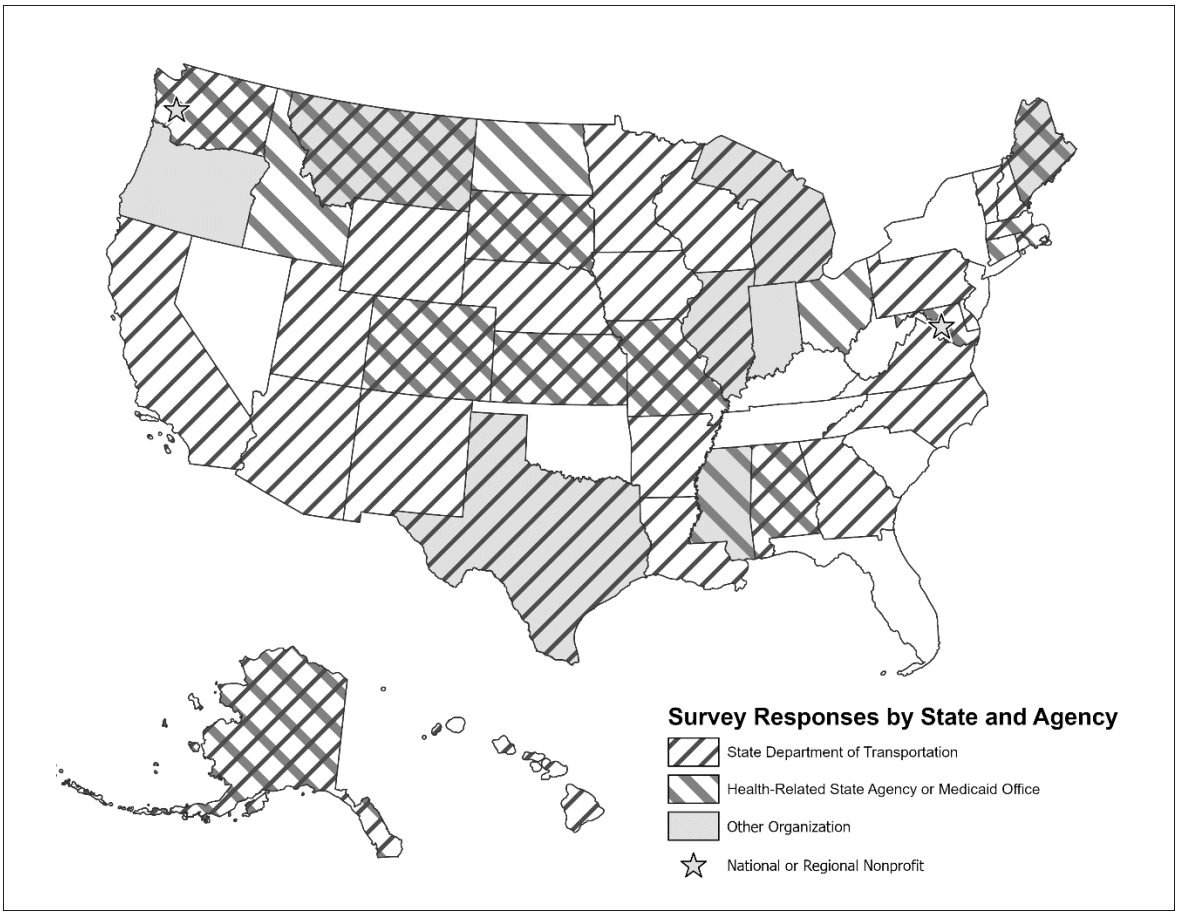


Figure 2 represents the distribution of survey answers by state of origin. The survey responses came from each of the nine Census-designated region and divisions of the country and included most State Departments of Transportation in the country.

Figure 3: Map of Total Survey Responses by State

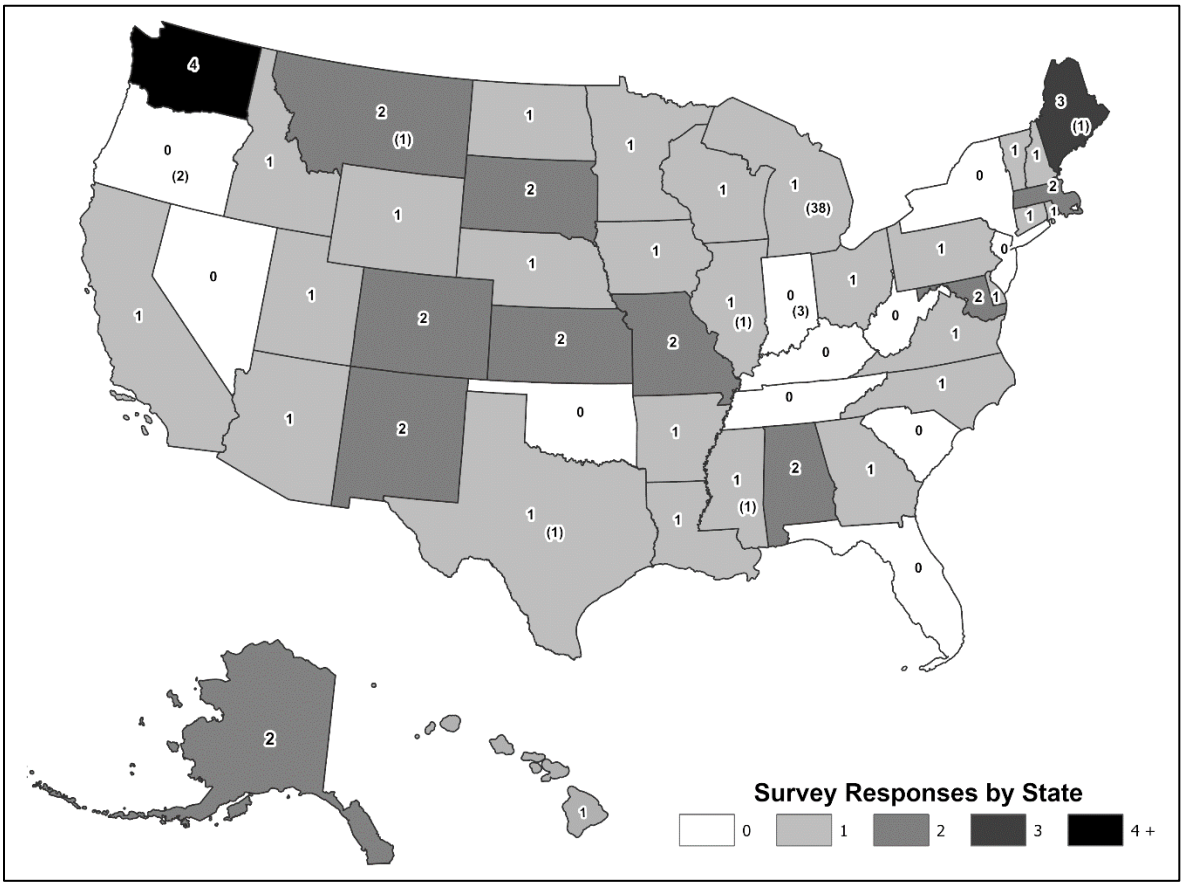


Figure 3 provides an overview of how many responses were received from each state. In parentheses is the number of local organizations that responded to the survey. Most states responded to the survey, though state agencies from 11 states did not respond to the survey.

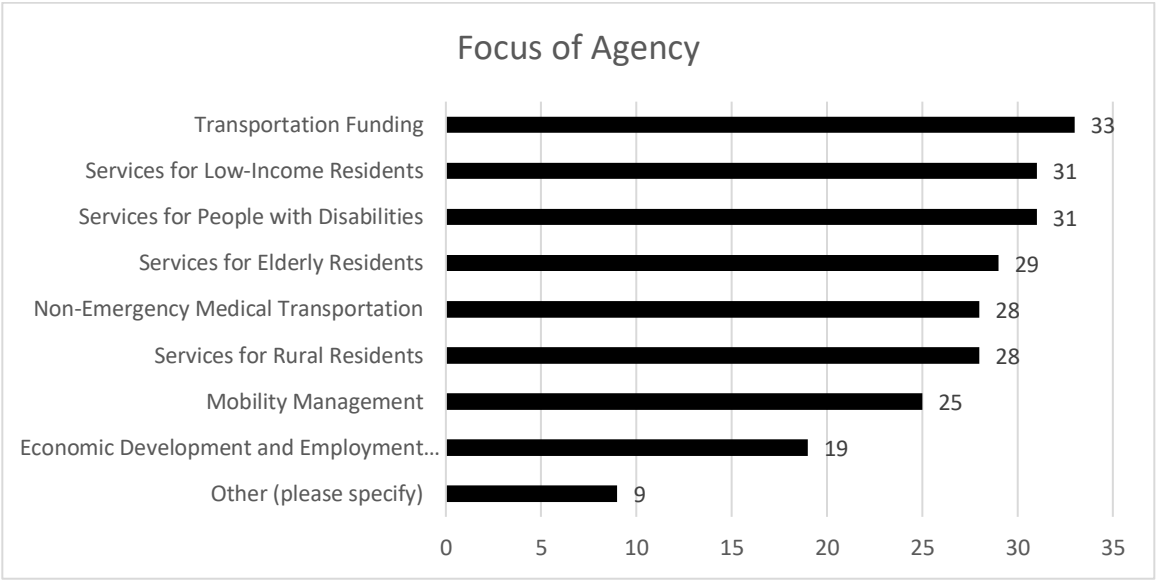
Trends and Summary

The purpose of the survey was to understand perceptions from state-level actors (in addition to multi-state or national organizations) regarding client-based transportation. As such, responses from direct service providers such as transit agencies, senior centers, etc., were screened out. A summary of responses from direct service providers is included at the end of this section.

Agency Focus

Respondents were asked to provide the focus of the organizations on behalf of which they were responding.

Figure 4: Focus of Agency of Survey Respondents



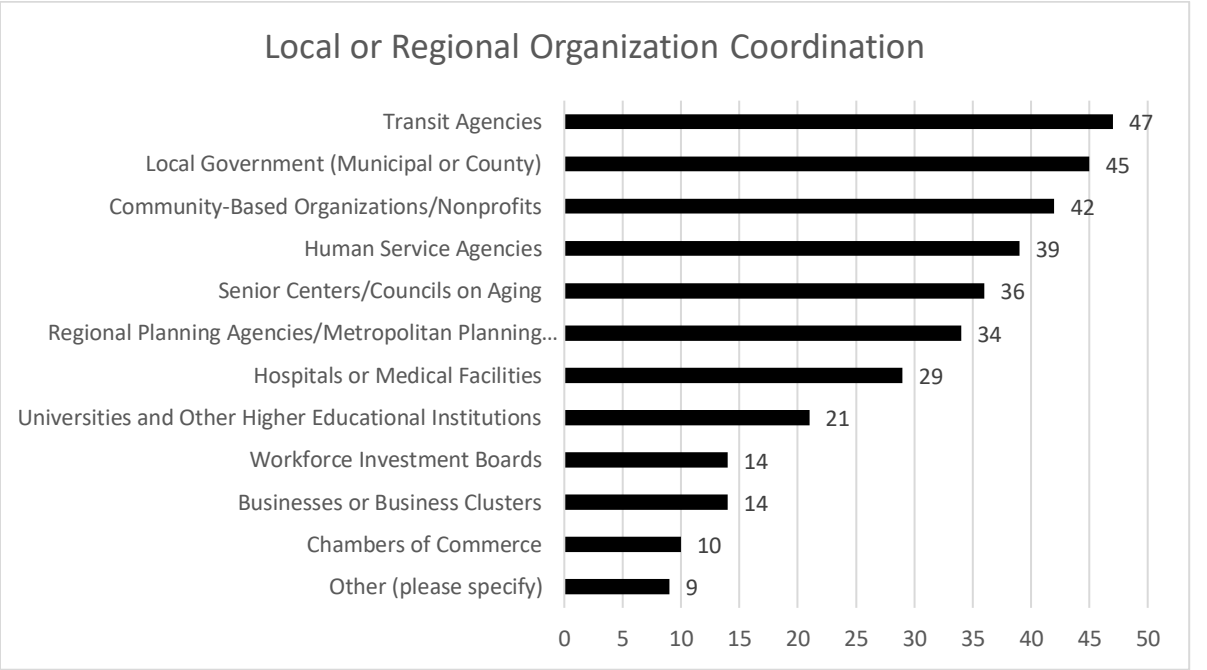
n = 53

Figure 4 presents the focus of the agencies represented in the survey. Respondents were able to select multiple answers. The top three most common responses were "Transportation Funding", "Services for Low-Income Residents", and "Services for People with Disabilities." Nine responded "Other", which primarily noted that they are pass-through entities for direct service providers.

Agency Affiliations

Figure 5 represents the results to the question of what organizations each agency works with or affiliates within order to serve transportation needs. Respondents were able to select multiple answers.

Figure 5: Local or Regional Organizations that Survey Participants Work with to Identify/Serve Transportation Needs



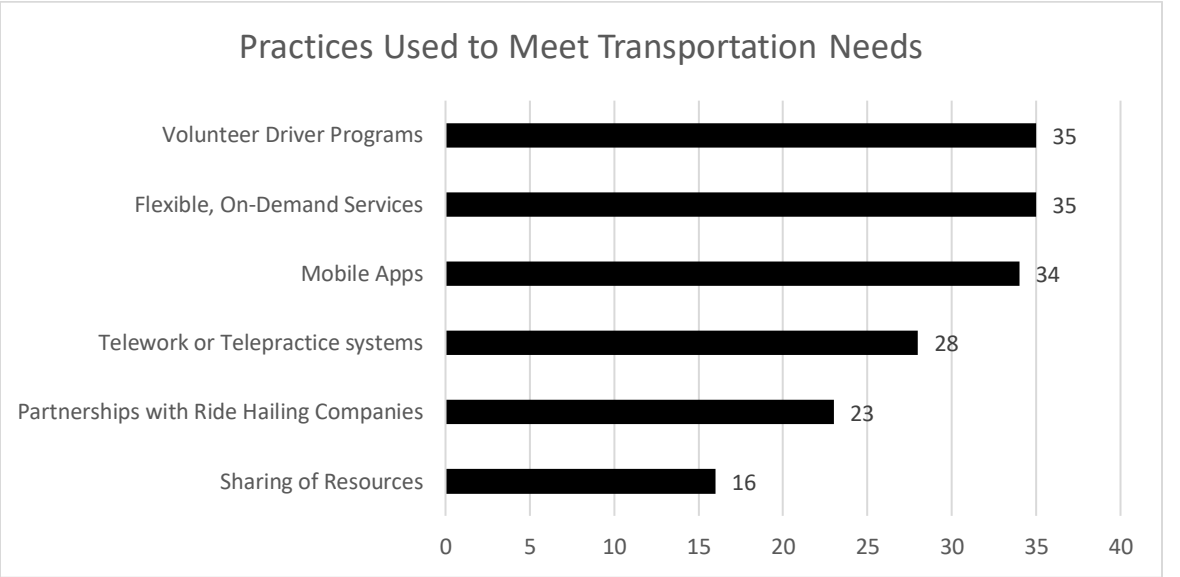
n = 53

The most common answer was "Transit Agencies" which had 47 responses, followed by "Local Government (Municipal or County)" at 45 responses and "Community-Based Organizations/Nonprofits" at 42 responses. Some of the responses for "Other" included mental health services and Medicaid transportation brokerages. The survey results show that majority of the state-level respondents are focused on public transportation, local government support, and human services organizations.

Agency Practices

Figure 6 shows practices identified by survey respondents that are being utilized to meet transportation needs. Respondents were able to select multiple answers.

Figure 6: Practices Identified by Survey Respondents that Local or Regional Organizations Are Using to Meet Transportation Needs



n = 48

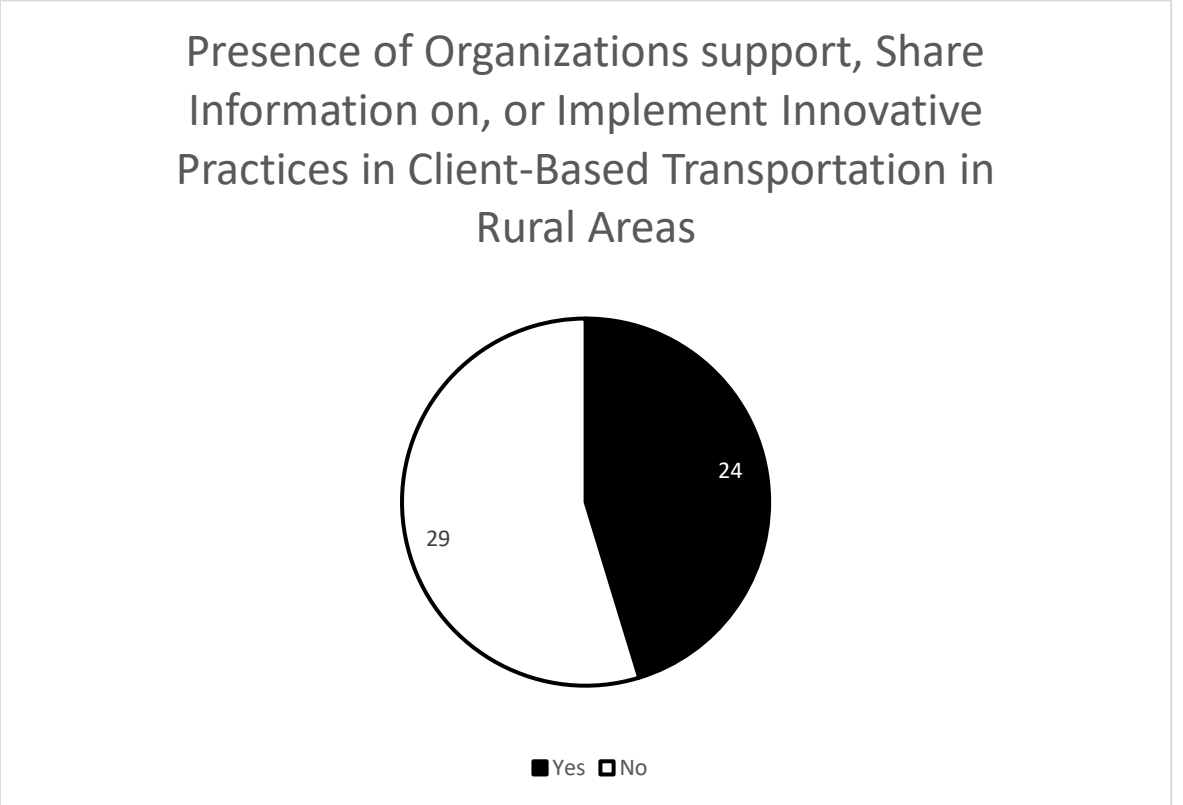
The most popular responses were "Volunteer Driver Programs" and "Flexible, On-Demand Services", both receiving 35 responses. The next most popular response was "Mobile Apps" at 34 responses. This suggests that local service providers are increasingly using new technologies to increase service efficiency and access.

It is important to note that the least common response was "Sharing of Resources." As indicated in the Literature Review, coordination of resources is a primary effort for better serving customers in need of demand response service. These responses suggest that resource sharing remains a less common strategy than other approaches.

Rural Transit Innovation

Figure 7 shows how many respondents work with or are aware of organizations that support, share information on, or implement innovative practices in client-based transportation in rural areas. The responses show that more organizations do not participate in these activities than do.

Figure 7: Survey Respondents Who Work with or Are Aware of Organizations that Implement, Support, or Share Information on Innovative Practices in their Region



n = 53

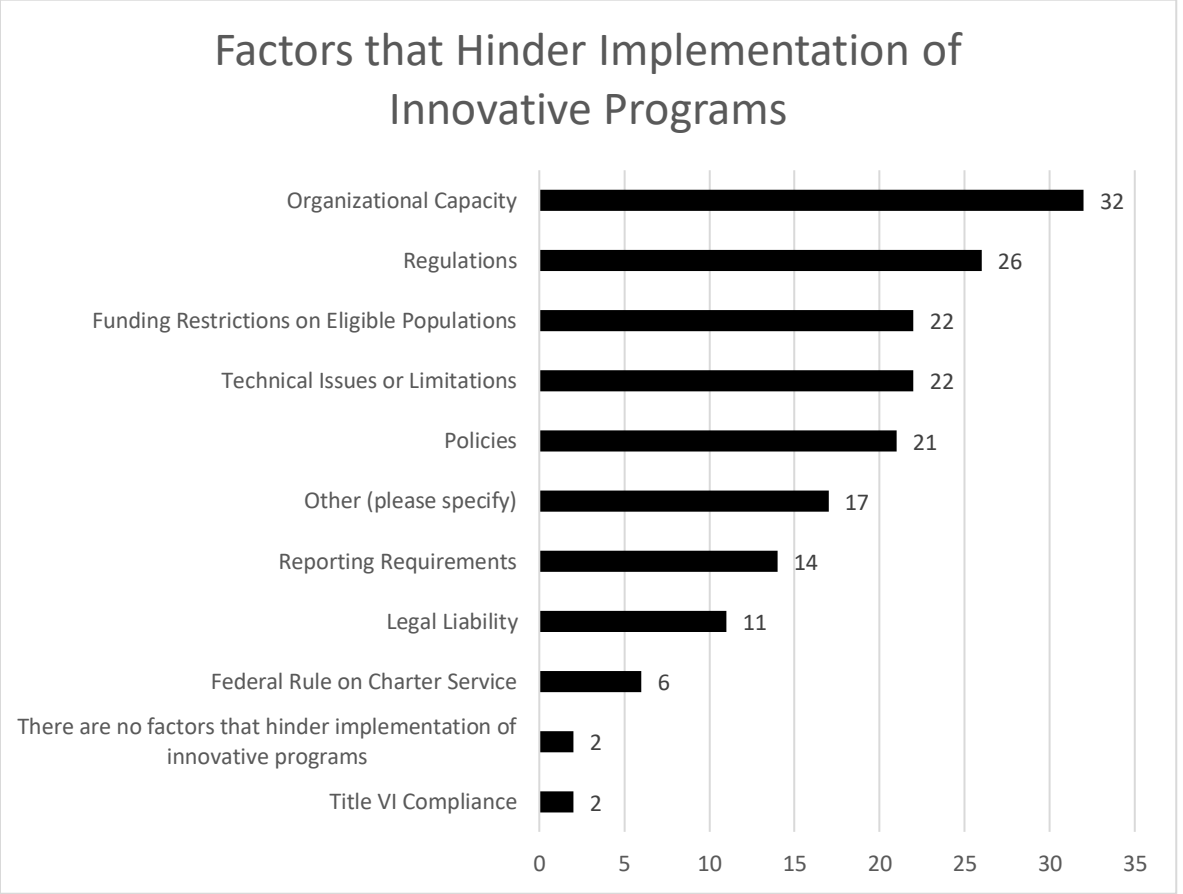
There were several reported examples of best practices for client-based transportation in rural areas:

- In Minnesota, within the state DOT exists Regional Transportation Coordination Councils, which is a partnership of various local and regional governments plus private for- and non-profit organizations.
- In Washington State, a program called Reserve-a-Ride is provided for people who do not qualify through other transportation programs. Life-critical trips such as medical, pharmacy, or grocery shopping are supported in addition to longer-distance medical appointments when needed.
- In New Hampshire, the state DOT is working toward creating a 2-1-1 centralized call center where callers can be referred to a single mobility manager that has an intimate knowledge of services provided within a given region.
- In Pennsylvania, rabbittransit has entered into an agreement with Geisinger Health Services to provide mobility management services to patients. This ensures better access to critical medical care.

Limitations of Innovative Transit Programs

Figure 8 shows factors that hinder implementation of innovative programs for the survey respondents. Respondents were able to select multiple answers.

Figure 8: Survey Respondents Identified Factors that Hinder the Implementation of Innovative Practices and Programs

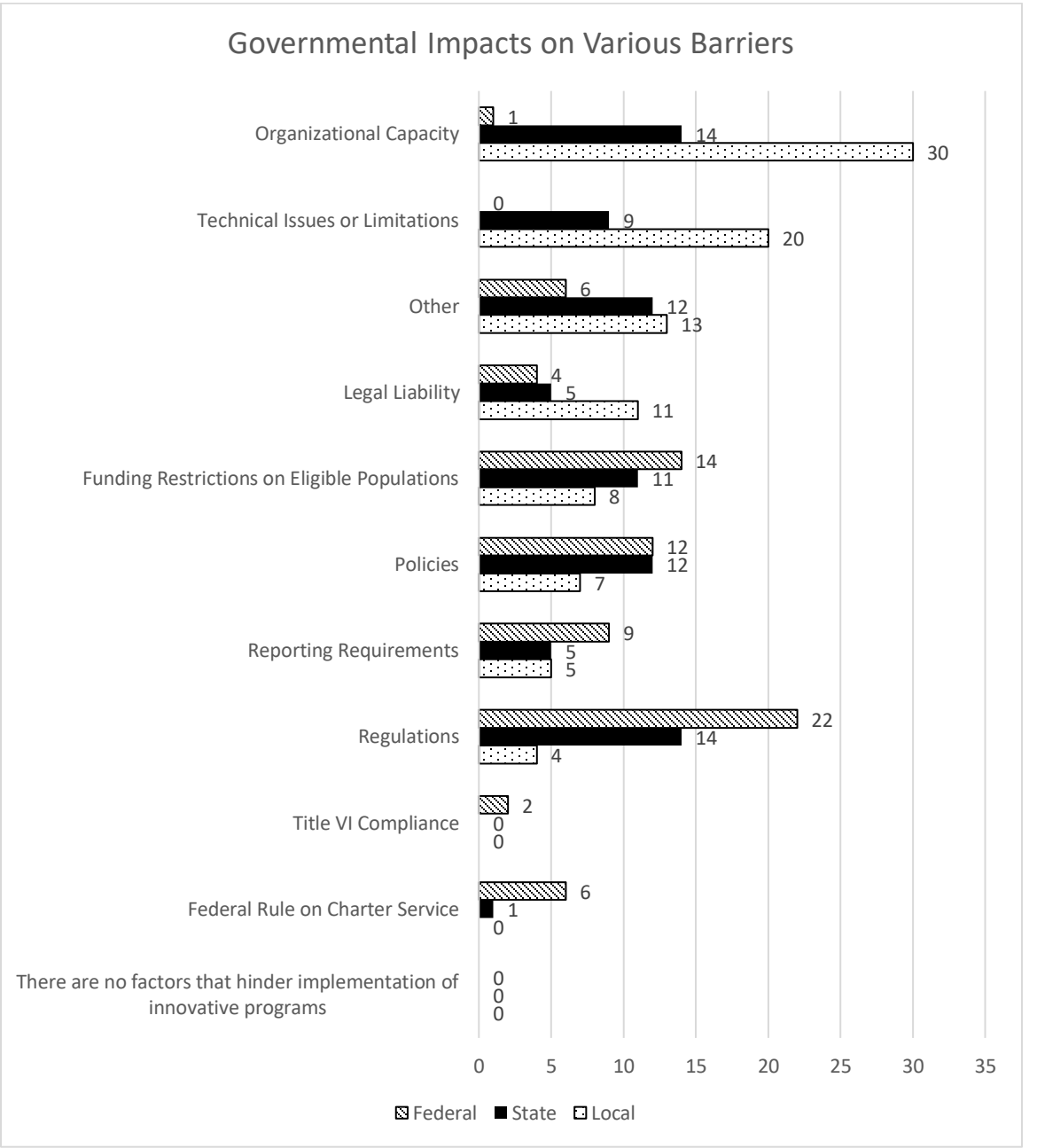


n = 52

The most common answer was "Organizational Capacity" at 32 responses, which may not be surprising given the fact that organizations operating in rural contexts tend to have relatively small staff sizes. The next two most common topics, regulations and funding restrictions likely relate to the fact that many of these agencies interact with service providers as funders and regulators. The most common hinderances that people indicated when answering "Other" focused on lack of funding, and especially the lack of matching funds for federal support. Familiarity with regulations and policy among local providers was also cited.

Out of the factors that were listed in Figure 8, the next survey question, presented in Figure 9, asked at which government level these barriers occur. Respondents were able to select multiple answers.

Figure 9: Survey Respondents Described the Government Levels for These Barriers



n = 50

Of the 10 factors that hinder implementation of innovative programs, the three most hindered at the federal level were regulations, funding restrictions on eligible populations, and policies. The top-three state-level barriers were regulations, organizational capacity, and policies. Top local barriers were organizational capacity, technical limitations, and legal liability.

These responses suggest that perceived barriers at the federal level have to do with regulations and funding restrictions, while the local level primarily has issues with organizational capacity. The differences in the number of responses at the state level were less pronounced, suggesting that some states may have a stronger policy and funding role in client-based transportation while others defer more to local and federal entities.

Summary of Local Organization Responses

Local service providers in some states were forwarded the survey by the state-level agencies and provided 47 responses. Of those, 37 were in the state of Michigan. Some of the key findings from these responses include:

- **Barriers to Implementing Innovative Programs**: Respondents indicated that organizational capacity, funding restrictions on eligible populations, and regulations are the biggest impediments to implementing innovative programs. One respondent noted that it is local interpretation of regulations that creates the barrier.
- **Governmental Impacts on Various Barriers**: In general, local organizations responded similarly to the level of government at which the barriers exist. Two notable differences were that local organizations saw funding restrictions as much more burdensome than the state-level respondents, though agreed that federal and state funding restrictions were more of an issue than local restrictions. Local organizations also saw local policies as a larger barrier than state-level respondents, who were more likely to cite federal and state policies.
- **General Comments**: The general comments centered primarily on the lack of funding for services in rural areas, though also noted that raising awareness about the existence of the services for potential customers is also a challenge.

Service Provider Interviews

The results of the state agency survey informed the development of an interview request list for transportation service providers (one of the survey questions was, “Is there an organization that your agency works with or is aware of that supports, shares information on, or implements innovative practices in client-based transportation in rural areas? If so, what is the name of that organization and contact information?”). Based on the survey responses as well as guidance from the NCHRP panel, 13 interviews were conducted with a variety of organization types (transit agencies, nonprofits, human service transportation providers, etc.). The questions for the interviews can be found in Appendix C.

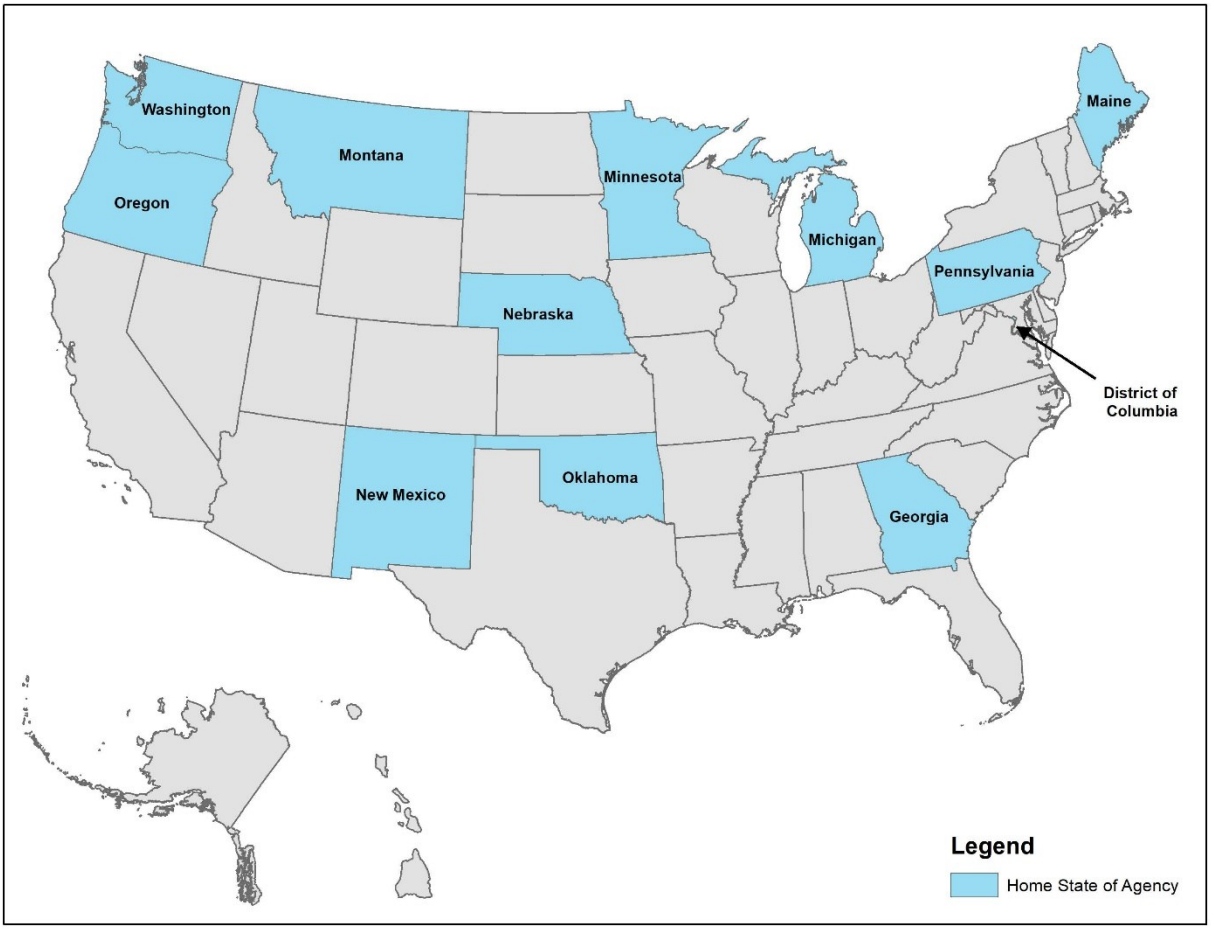
The survey distributed for this study asked respondents to identify service providers using innovative strategies or technologies to provide client-based transportation in rural or small urban contexts. Based on the survey responses from state agency and regional or national organization representatives (in addition to referrals from the project team), 13 service provider representatives were interviewed. Interviews were chosen based on geographic spread, service provided to rural and small urban areas, diversity of services provided, and recommendations from the survey. The interviews were undertaken between October 2020 and January 2021. The findings of those interviews are included in this summary. The list of agencies interviewed is found in

Table ***1*** and the location of the agencies interviewed is depicted in Figure ***10***.

Table 1. Service Providers Interviewed

State/Jurisdiction	Agency
Georgia	Statewide Independent Living Council of Georgia
Maine	Independent Transportation Network (ITN) America
Michigan	Livingston Essential Transportation Service (LETS)
Michigan	Mass Transportation Authority (MTA) Flint
Minnesota	United Community Action Partnership
Montana	Missoula Ravalli Transportation Management Association (MR TMA)
Nebraska	University of Omaha Center for Public Affairs
New Mexico	North Central Regional Transit District
Oregon	Klamath Tribes Transportation Service
Oklahoma	Ki-Bois Area Transit System
Pennsylvania	Rabbittransit
Washington	Human Services Council
Washington, D.C.	National Rural Transit Assistance Program (RTAP)

Figure 10. Home State of Interviewed Agencies



The agencies selected for interview all provide service to rural and/or small urban regions and operate a variety of modes. As shown in Table 2 (where statistics were available), there was a wide range in the size of the operations represented in the agencies interviewed. The largest was MTA in Flint, MI, at nearly 5 million unlinked passenger trips in 2019, and the smallest was Klamath Tribes at just over 15,000 trips. These statistics do not reflect the impacts of the COVID-19 pandemic which resulted in significant declines in ridership nationwide.

Table 2. Service Provider Interviewee 2019 Organizational Statistics

Agency	Ridership	Vehicles Operated in Maximum Service
MTA Flint	4,784,585	256
Rabbittransit	2,231,826	258
Ki-Bois Area Transit System	636,691	190
United Community Action Partnership	223,558	110
North Central Regional Transit District	294,823	36
Livingston Essential Transportation Service	148,448	23
Missoula Ravalli Transportation Management Association	28,091	19
Klamath Tribes Transportation Service	15,173	7

Source: National Transit Database

**Only includes direct reporters into the National Transit Database*

Federal Policy Requirements

Interviewees identified multiple aspects of federal policy that impacted their ability to deliver client-based services. While some of these federal requirements were general in nature, others more specifically impacted services provided to rural and small urban client-based organizations.

Audit/Compliance Requirements

Interviewees identified onerous federal oversight and audit requirements as a serious challenge in delivering service. Client-based transportation presents challenges in terms of planning and audit requirements because of the diversity of funders supporting the transportation services. Interviewees identified a variety of funding sources, including:

- Federal Transit Administration (direct recipient)
- State Department of Transportation (state funding and subrecipient of federal transit funding)
- Medicaid
- Other state contracts (e.g., Department of Developmental Services)
- Institutional contracts (e.g., local Councils on Aging or Senior Centers)
- Large employers
- Indian Tribes

Each funding source has different planning and reporting requirements associated with it, which at a minimum creates an administrative burden and sometimes impacts service delivery. One interviewee noted that a single passenger they transport can have multiple eligibilities under the sources of funding they use to provide service, creating a complex exercise to determine which program covers which rides.

More broadly, compliance requirements were seen as a burden by interviewees. As one interviewee said, "The state compliance reviews are more like audits than reviews. They are every three years and are just a lot of busy work. There's been a doubling of administrative burden with these reviews over the past few years." In the context of multiple funding sources, these compliance reviews can be time consuming, especially for smaller rural agencies with fewer staff resources.

Planning Requirements

A key document in the identification of client-based transportation needs is the Coordinated Public Transit-Human Services Transportation Plan. One interviewee noted that its state DOT schedule for updating this plan was a challenge. While most regional planning agencies update these plans every three to four years, its state DOT required an update annually. This annual planning requirement strained operators' limited resources.

"Small urban agencies are caught in the middle with federal requirements – subject to the same ones as large agencies, but without the staff to do it."

-NCHRP Task 82 Case Study Interviewee

This aligned with a broader issue of rural versus urban planning requirements. Another interviewee described the challenge of the transition from a rural-designated agency to small urban. While the agency staff remained the same, many regulations and compliance requirements increased. At the same time, they were no longer eligible for state DOT support given to rural agencies.

Out-of-State Travel

Two interviewees talked about difficulties associated with crossing state lines for client-based transportation. Both interviewees were being impacted by regulations from the Federal Motor Carrier Safety Administration (FMCSA). One interviewee operated a program where it would be faster to cross state lines to get their clients to the nearest medical provider. As this interviewee put it, "It's the difference between a 45-minute trip and a 4-hour trip." According to this interviewee, if the vehicle capacity serving the trip has 9 or more passengers, they are not allowed to cross state lines due to liability issues.

Another interviewee stated that a different FMCSA regulation required them to register routes (vehicles) to all the destinations that go across state lines— they are not allowed to provide ad hoc trips. Volunteer vehicles can provide a workaround to this policy, but there are challenges in getting volunteer drivers to make these long trips across state lines due to mileage reimbursement policies, described in the next section.

Volunteer Drivers and Deadhead Mileage

Several interviewees noted the importance of volunteer driver programs as an essential method for providing affordable client-based transportation in rural areas. One interviewee who operated a volunteer driver program expressed that per FTA regulation, they cannot reimburse mileage for deadhead miles. Deadhead miles are the miles driven when there is no passenger in the vehicle – the distance a volunteer driver covers to/from their own home location to pick up and drop off a passenger. This makes it challenging for programs in rural areas where there may be long distances for volunteer drivers just to pick up the customer and start the trip. As this interviewee said, "We have more demand for volunteer drivers than we can provide."

These challenges with volunteer driver programs can result in underutilization of that option; when one interviewee was asked whether they are familiar with volunteer driver programs, they responded that they have not considered implementing one because there are too many regulations.

Subrecipient Compliance

Multiple interviewees identified the importance of smaller operators in the provision of client-based transportation, such as local Senior Centers. They noted that it is challenging for small operators acting as subrecipients to comply with FTA regulations, specifically if they are operating under 5310 funding. One interviewee specifically noted drug and alcohol compliance as an issue, while another interviewee said that states should streamline requirements currently duplicated by the state health care authority and DOT. This reinforces the finding that organizations providing client-based services which draw on multiple funding sources are often burdened with numerous, overlapping regulatory requirements.

"I'm not getting vehicles that require commercial driver's licenses. I don't want to deal with drug and alcohol testing."

-NCHRP Task 82 Case Study Interviewee

Charter Rule

Transportation services which run as closed-door services to specific organizations (e.g., employer shuttles) generally may not be operated by recipients of federal transportation funding – referred to as "The Charter Rule." This prohibition was not a topic of concern for most providers. In one example of dealing with The Charter Rule, an interviewee running a reverse-commute employment transportation program said they had to be careful about how the service was managed and marketed. They referred to the bus routes for this program as "regional routes". Even though the program worked with companies, the buses were always open to the public to comply with federal rules.

Another interviewee operating in a rural context indicated that they stopped providing charter-type service due to The Charter Rule. Instead, on the occasional instances where there is a request for charter-type service (e.g., Senior Center trip to a local festival), they will simply run the service free of charge.

Another interviewee stated that they get numerous requests for charter-type service, but only provide this type of service to elected officials and government agencies, who are exempted from the rule. This interviewee would have liked for Charter Rule restrictions to loosen to garner more revenue.

"If the Charter Rule was a little looser, it would allow us to garner additional revenue."

-NCHRP Task 82 Case Study Interviewee

Other FTA Requirements

In general, interviewees commented on the administrative burden to comply with federal requirements, such as the relatively new requirements of PTASP (Rural transit agencies are not currently subject to PTASP requirements, though small urban are) and TAM Plan. One interviewee noted that support from state and university transportation centers can help operators reduce administrative burden and improve compliance.

Additionally, one interviewee cited FTA disposition regulations as a barrier to providing client-based service. This interviewee noted that FTA is entitled to an asset's value if greater than $5,000

after the useful life has been met. Due to this regulation, transit operators who can sell vehicles at the end of their useful lives for more than $5,000 per vehicle have an equivalent amount deducted from their next FTA grant. Because of the wide range of trip types served by these agencies (some of which are not eligible under common funding programs), funding from the disposition of end-of-life assets is a valuable funding stream – however, enforcement of FTA regulations compromises that source of revenue.

Finally, the interviewees did not see compliance as a major barrier to technological and operational innovation, although smaller operators could use additional federal support to successfully procure and implement new technologies. This is discussed more fully in the next section.

Technology and Innovation

Rural and small urban providers draw from multiple sources of funding directed at a variety of target demographics and trip purposes (many of which are client-based trips such as non-emergency medical transportation). Given this diversity of transportation needs and the growing need in rural and small urban areas, technology and innovation were explored to identify opportunities and barriers that state and federal policy present in adoption of national best practices.

Additional Technical Support

The interview findings show that larger providers tend to have more flexibility to experiment with different technologies than smaller ones. One interviewee from a larger system serving both urban and rural areas noted that having CEO support, dedicated funding, and sufficient staff resources are all necessary for successful technology innovation.

"Don't provide a grant if you're not going to continue supporting the resulting program, especially with smaller agencies."

-NCHRP Task 82 Case Study Interviewee

This presents a challenge for rural agencies. Multiple interviewees noted that rural and small-urban providers need more guidance and support on implementing new technologies. One interviewee stated there needs to be more up-front support from FTA for small providers using technology-related grant funding. This interviewee suggested FTA create small grant programs just to familiarize smaller operators on the technologies available and their benefits, preparing these agencies for successful grant applications and technology implementations.

This interviewee also suggested that FTA continue post-grant support to ensure successful utilization of the technology into the future. Smaller agencies need continued staff support to keep training up to date and the technology effectively maintained and utilized. One interviewee stated, "Trying to put new technologies on board of our vehicles just adds more work in terms of maintenance."

The Procurement Process

Another interviewee pointed out that RFP development assistance from FTA or states is needed at smaller agencies. There is no off-the-shelf management system that squarely fits an operator's needs. Client-based transportation providers organize their management and operation in various ways, depending on their clientele, funding partners, state policies, and other factors. The operators almost always must materially alter commercially available products or develop a new system for themselves.

That not only increases costs but also makes the procurement process more complicated. There were several issues identified with RFP development:

- **Lack of Technical Expertise**: Many of these operators do not have the technical expertise to develop the specifications and details for technology RFPs.
- **Lack of Peer Experience**: One interviewee noted that it was challenging to find agencies similar to their own who have used new technologies, increasing the risk of being on the "bleeding edge" of new technology in a rural setting.
- **Difficulty in Bid Solicitation**: Another interviewee described the difficulty of soliciting bids and recounted an instance where they sent RFPs to approximately 20 tech companies only to receive two proposals. As this interviewee said, "Being very rural, when we put out RFPs it's very hard to get the attention of tech companies."

Rural Broadband

Rural broadband access was also noted as a barrier to new technology adoption. One interviewee stated that without better broadband, any new technologies that are implemented, such as mobile apps or transit scheduling systems, will not work efficiently. This complements an observation of another interviewee, which is that rural areas require innovation in how service is provided due to lack of resources and other limitations ("necessity is the mother of invention"). This should be considered when exploring how to support rural and small urban transportation providers.

Coordinated Scheduling Systems

Interviewees noted that demand response client-based trips require an effective scheduling system, particularly when coordinated across multiple agencies and funding programs. Several interviewees noted the importance of having a coordinated scheduling system for running an efficient regional transportation system. One interviewee that served as the primary regional transportation provider recommended their unified scheduling system that enables them to group trips across multiple transportation programs and maintain an efficient system.

Another interviewee described a software system that was previously in place to share trips between multiple providers in the region. However, state policy was changed (the implementation of "lead agencies," described further in the next section) and made that kind of trip sharing infeasible. As this interviewee said, "With that change in state policy, the system is no longer used and there is no more coordination among providers."

Coordination of Services

Non-emergency medical transportation comprised a large portion of client-based transportation provided by interviewees. Coordination of services was raised generally in multiple interviews, particularly with Medicaid transportation. One interviewee spoke at length on the negative impacts that Medicaid brokerages have on operators' abilities to coordinate transportation services. This interviewee noted that their region, which does not have a brokerage, can group trips to maintain a surprisingly efficient system, even in a rural setting.

> *"The federal policy incentives for using a Medicaid brokerage are not conducive to a coordinated and robust service."*
>
> *-NCHRP Task 82 Case Study Interviewee*

This interviewee described the efficiency advantages of centralizing service into a single regional provider, allowing for

less deadhead, fuller vans, and a lower cost per trip. This allows the operator to contract with other organizations for client-based services at a competitive rate, which creates a virtuous cycle of yet more efficient trips.

On the other hand, another interviewee described the challenges of coordination created from certain federal funding incentives. This interviewee described a state policy of designating a "lead agency" for the region, consolidating non-emergency medical trips into one regional provider. The goal of this policy was to meet FTA criteria for being designated a Small Transit Intensive City, which generates additional transit funding for the region.

This interviewee, who runs an employer transportation program, had previously partnered with medical providers during the day (when the vehicles were idle) to provide non-emergency medical trips. After implementing a "lead agency," this kind of coordination was no longer feasible. Despite efforts at coordinating their employment transportation service with the "lead agency" for the region, there was no incentive to do so, and the vehicles are again sitting idle during the day.

Regulatory Barriers

Additional research was undertaken on the regulatory barriers identified in the survey responses and interview findings to confirm the details and identify best practices for minimizing these issues as burdens. The results of that research are presented in this section.

Federal Motor Carrier Safety Administration (FMCSA) Regulations

Responses to survey and interviews from small operators indicated that a recurring issue is compliance with FMCSA regulations, which, according to 49 U.S. Code § 13501, generally apply to service providers that operate vehicles crossing state lines. Complying with FMCSA regulations may be administratively burdensome or even prohibitively expensive for small operators. Therefore, FMCSA compliance has prevented at least one operator interviewed from offering service into a neighboring state, even when such service could have served a legitimate need more cost-effectively than alternatives (e.g., a medical facility in the neighboring state) which is much closer to a customer's residence than a similar in-state medical facility.

FMCSA requirements apply to vehicle operation across state lines even if an operator does not collect fare, receives no state subsidy, and relies on volunteer drivers only.

Transit operators may be exempted from FMCSA requirements depending on the number of people a vehicle is "designed or used" to transport. Vehicles designed or used to transport nine or more passengers (including the driver) are subject to FMCSA requirements. Only vehicles that are both designed for fewer than nine passengers AND transport fewer than nine passengers are not subject to FMCSA requirements. Meanwhile, local units of government that operate cross-state services are exempted from some FMCSA requirements.

For vehicles designed or used to carry nine passengers or more, the operator is subject to the following broad categories of requirements:

- Application for operational authority
- Safety fitness procedures
- Financial responsibilities
- General motor carrier rules
- Driver qualifications
- Hours of service

- Vehicle inspection, repair, and maintenance

For vehicles designed or used to carry sixteen passengers or more, the operator is subject to the following additional categories of requirements:

- Commercial Driver's License (Part 383) and
- Controlled Substances and Alcohol Testing (Part 382 and/or FTA requirements Part 655)

Government-operated transportation services, as opposed to those operated by private entities (e.g., non-profit organizations providing client-based transportation), are only subject to the following categories of requirements:

- Application for operational authority
- Financial responsibilities
- Requirement of Commercial Driver's License (CDL)
- Drug and alcohol testing

Some of those requirements overlap with FTA requirements (e.g., CDL and drug and alcohol testing) and therefore do not impose as much of an extra burden on 5310 or 5311 operators. However, other FMCSA requirements were identified as onerous for client-based transportation operators.

Insurance Requirement

As identified in the interviews, FMCSA requires that the operator maintains at least $1.5 million (if no vehicle is designed or used to carry 16 or more passengers) or as high as $5 million (if at least one vehicle is designed or used to carry 16 or more passengers) in insurance coverage. Alternatively, if the states in which the organization operates have insurance requirements, then the highest requirement among the states will suffice FMCSA insurance requirement. Self-insurance and pooled insurance may be acceptable subject to certain conditions and FMCSA approval. State pooled insurance may not cover out-of-state operations. Meeting this insurance requirement could be a significant financial burden for some small client-based operators.

Operating Authority

FMCSA also requires those providing interstate service complete an application of operating authority. FTA recipients and subrecipients qualify for a fee waiver. However, the application of operating authority and the fee waiver may be an administratively burdensome process for small operators. The application of operating authority and fee waiver requires filling out application form OP-1 online, verifying FTA funding status with FMCSA, coordinating with the organization's insurer to file evidence of insurance, filing the BOC-3 Designation of Process Agent form by obtaining the services of a process agent, obtaining a USDOT number, and applying for a CDL, among other required actions. Furthermore, maintenance of current operating authority requires maintaining insurance and periodic submission of paperwork.

Small client-based operators should check with state DOT, FMCSA, and FTA for the latest requirements for operating services across state borders.

Reimbursing Deadhead Miles for Volunteer Drivers

Reimbursement of deadhead miles was identified in the operator interviews as a barrier to providing client-based transportation services, with some operators indicating that it is not allowed. The Federal Circular 9070-1G (Enhanced Mobility of Seniors and Individuals with Disabilities Program Guidance and Application Instructions) which governs the Federal Section 5310 Program provides that

"Volunteer driver programs are eligible and include support for costs associated with the administration, management of driver recruitment, safety, background checks, scheduling, coordination with passengers, other related support functions, ***mileage reimbursement***, and insurance associated with volunteer driver programs." (Emphasis added). The Circular is silent on whether deadhead miles required for a volunteer driver to serve a passenger are reimbursable or not.

While the FTA Circular is silent on this issue, some other programs are not. Reimbursement for transportation funded by Medicaid for Nonemergency Medical Transportation (NEMT) prohibits reimbursement for deadhead mileage. Coordinated transportation systems may use other funding sources to reimburse volunteer drivers for deadhead mileage depending on trip purpose and available funding.

Disposition of Federally Funded Assets

Disposition of federally funded assets was raised as an issue during the provider interviews. The interviewee noted that the client-based organization depended on a variety of funding sources to provide support for a variety of trips types, not all of which are supported through typical FTA or NEMT funding. Disposition of assets beyond their useful lives can be an important unencumbered source of funding for trips not otherwise covered. The issue raised was that federal guidelines require that any sale of an asset netting more than $5,000 in proceeds must be counted against future federal funding awards, eliminating a valuable revenue source available for these small, rural operators.

Disposition of federally funded assets must comply with the requirements set out in 2 C.F.R. Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. For FTA recipients and subrecipients, the FTA Circular 5010.1E (Award Management Requirements) provides additional requirements.

Research confirmed that FTA retains its interest in the federally assisted property if its fair market value exceeds $5,000. Rolling stock and equipment with a current market value exceeding $5,000 per unit, or unused supplies with a total aggregate fair market value of more than $5,000, may be retained or sold. FTA is entitled to an amount calculated by multiplying the current market value, or proceeds from sale, by FTA's percentage of participation in the cost of the original purchase. The recipient may also sell its federally assisted property that no longer has any public transportation purposes and use the proceeds to reduce the gross project cost of other future FTA eligible capital transit Awards.

The burden or barrier for small rural client-based transportation provider may take one of two forms:

- **Lack of Capacity –** Understanding the nuances of procurement and disposition procedures may in itself be a burden for these small operators given that lack of capacity was a top concern identified by both the state survey and the operator interviews.
- **Need for Flexible Funding –** The need for funding (and especially funding that can be used flexibly) was identified by both the survey and in the interviews. Increasing the cap above $5,000 per asset or creating a special allowance for service outside of rural areas may be warranted given the diverse populations depending on scarce resources in these regions.

Medicaid Non-Emergency Medical Transportation (NEMT) Brokerage

Medicaid NEMT is a state-managed program that serves Medicaid customers who need transportation to get to non-emergency medical appointments. States have flexibility in designing and managing the NEMT program; they may contract directly with transportation providers, or with a state or regional broker that then subcontracts with transportation providers. The Medicaid NEMT

broker is responsible for managing customer eligibility information, scheduling trips, and purchasing transportation services from public, private, or non-profit transportation providers. The transportation providers could be FTA recipients or subrecipients. The result has been that NEMT is managed differently in each of the states with inconsistent policies for the transportation providers.

FTA recipients and subrecipients can use Medicaid NEMT contract revenue as a match to FTA grant awards. However, in practice, coordinating with Medicaid NEMT trips proves to be challenging. Many of Medicaid's program restrictions prevent trip coordination in a cost-effective way. Medicaid NEMT trips are strictly limited to medical purposes and must be for covered medical care. Transportation must be approved in advance, either through a brokerage or the local Medicaid system. Medicaid NEMT trips cannot serve multiple purposes for the customer even when the intermediate stops are along the same route as the medical trip.

Another challenge for FTA-funded service providers is that Medicaid is a payer of last resort and will only pay if there are no other legally liable payers. For public transportation, this means that Medicaid will pay no more than the standard fare. In coordinated systems there are exceptions to this rule, but states and brokerages may have extensive requirements that discourage public transit agencies from working with the Medicaid program. FTA-funded services are typically the lowest cost option if the fare for general public is regarded as their costs. However, fare is not the true cost of FTA-funded services, as they are heavily subsidized.

The complexity of cost sharing with Medicaid further disincentivizes transportation providers from coordinating with Medicaid NEMT. Medicaid will not pay directly for any unloaded or deadhead mileage or for any missed trips. In more rural areas, the unloaded mileage to pick up or drop off a passenger may be a significant cost. Similarly, missed trips may involve long travel distances with no reimbursement for the transportation provider. It is possible to incorporate deadhead mileage into overhead costs which are charged consistently among all funding programs, but this requires a cost allocation approach agreed upon by all funding programs. In effect, this means that Medicaid transportation is often subsidized by other programs including funds for general public transportation and state funds.

Finally, Medicaid will not pay for any additional costs arising from coordinated transportation services where travel distances are longer to pick up or drop off passengers in other programs. This adds to the complexity of determining the appropriate mileage charged to the Medicaid ride. In at least one case, the brokerage calculates the reimbursement mileage using the straight-line distance between the origin and the destination without regard to actual travel distance related to either the roadway network or other passengers to be served. While shared rides can reduce the cost of all individual rides, the NEMT programs are not always favorable to a shared ride approach.

Administrative Burden of Federal and State Compliance and Audits

As recipients and subrecipients of federal and, in some cases, state funds, transportation providers are subject to multiple federal and state audits. For small 5310 operators in particular, audits and compliance overall can be challenging due to limited available resources.

FTA performs the following audits on a regular basis:

- Triennial Reviews, including enhanced review modules for ADA compliance
- Procurement System Reviews
- Financial Management Oversight Reviews
- Drug and alcohol compliance audits
- State Safety Oversight audits

In addition to federal compliance audits, states have various compliance audit requirements. Client-based transportation providers may be going through federal and/or state audits. Operators interviewed noted that it could be a significant administrative burden to generate documents and demonstrate compliance during site visits. This is particularly challenging for small operators with limited staff, which are stretched thin simply operating service.

Other Potential Compliance Barriers

For small client-based transportation providers, complying with FTA requirements may be challenging given the limited resources available. Following are three additional compliance areas that may be burdensome to client-based transportation providers.

Charter Bus Service

The line between acceptable public transportation service and charter bus service can at times be challenging to identify. Under the charter service rules 49 CFR 604, local transit agencies are restricted from operating chartered services. It is up to FTA recipients, with the support of federal partners, to determine whether the transportation services they provide for a third party are charter service according to the rules.

Caveats and exceptions further complicate the policy landscape. Transportation provided for Qualified Human Service Organizations (QHSO) is exempted from the charter service rules. Upon request to provide transportation services for human services purposes, the recipients can check the QHSO list in Appendix A of 49 CFR 604 to determine whether the services they provide are eligible for exemption. The rules also allow for several other exceptions in particular situations. If no exceptions apply, the recipients must notify all charter service operators registered with the FTA in the same geographic area and determine no other private operators are able or willing to provide such services before the federally assisted operator can provide them.

Use of FTA-Funded Vehicles and Other Assets

The survey noted limited joint or shared use of resources among service providers in rural or small urban areas. The interviews reinforced the limited instances of shared use of resources among service providers.

In general, FTA and its state and local partners encourage shared use and incidental use of federally funded transportation resources for coordinated transportation services, including Medicaid NEMT. Shared use of resources generally means a pre-arranged situation with FTA approval where a third party occupies a portion of a facility or occasionally uses a federally funded resource in exchange for a pro-rata payment of construction, maintenance, or other operation as set forth in a negotiated joint-use agreement. Incidental use of a federally supported asset generally means occasional use of an asset by the grantee outside of the approved grant purpose. However, such use must not conflict with the approved purposes of the project and must not interfere with the intended transit uses of the asset.

The federal Interagency Transportation Coordinating Council on Access and Mobility's Final Policy Statement on vehicle resource sharing states that, "applicable cost principles enable grantees to share the use of their own vehicles if the cost of providing transportation to the community is also shared. This maximizes the use of all available transportation vehicles and facilitates access for persons with disabilities, persons with low income, children, and senior citizens to community and medical services, employment and training opportunities, and other necessary services."

NTD Reporting

Neither the survey nor the interviews singled out National Transit Database (NTD) reporting as a particularly burdensome activity. However, reporting and compliance generally was noted by service providers as a challenge for rural client-based service providers.

Generally speaking, the organization that directly operates transportation service reports either directly to the NTD or by way of the state DOT. Due to the number of services and funding sources a client-based agency may be interfacing with, this kind of data reporting can be complex. For instance, passenger trips of client-based transportation, including Medicaid NEMT, should be reported to NTD as unlinked passenger trips if the service is part of a coordinated public transit-human services plan. It can become even more complex when a service provider also acts as a broker and contracts with multiple other agencies to provide NEMT across a large service area spanning numerous urbanized areas. Given the identified lack of capacity, this is potentially a burden for organizations delivering these client-based services.

CHAPTER 6

Key Findings

To address the issues associated with providing customized, client-based transportation services, this chapter presents key findings. Specifically, key findings from the literature review, survey responses, and interviews are synthesized. The Decision Tool in Appendix A can provide resources and information that can aid client-based transportation providers in making decisions regarding best practices and how to overcome barriers and issues.

Literature Review Findings

The Literature Review revealed that there is a gap in understanding conditions for client-based transportation providers and their clients in rural and small urban areas. Many rural and small urban areas have declining population bases and correspondingly shrinking levels of basic services, such as grocery stores, medical care, and pharmaceuticals. This puts increasing pressure on transportation services to provide access for a variety of population groups in these regions, even where available funding resources may be limited.

The primary challenge with transportation in these areas is that there may be just one provider serving a wide variety of customers across numerous trip types, some of which are client-based (e.g., regional employers, medical centers, etc.) and others which are more typical Federal Section 5310 or 5311 trips. Additionally, there are some residents who do not fit into any transportation program, but still require services. This puts yet more pressure on these transportation providers to be creative, flexible, and entrepreneurial to find the resources to serve these trips.

The literature on coordination is relatively developed and growing, as are the general public transportation needs in rural areas. However, a close examination of how client-based travel fits into the ecosystem of rural transportation was not found. This study represents a significant contribution to the overall literature filling that gap.

Survey Findings

The survey of state agencies and national/regional organizations revealed that, unsurprisingly, funding, and organizational capacity are two key challenges to innovation in rural and small urban client-based transportation. Other findings from the survey include:

- **NEMT and other Transportation Programs**: The response rate among state agencies administering Non-Emergency Medical Transportation Programs and other health-related transportation was much lower than responses from state departments of transportation. During follow-up outreach to increase the response rate, several states noted that the statewide Medicaid broker should be contacted, but the researchers were unsuccessful in soliciting responses from them. This suggests two things. The first is that there appears to be less ownership by states of Medicaid transportation service as opposed to the state interest in DOT-funded transportation activities. The second is the existence of bifurcation in many states between NEMT and non-NEMT transportation activities.
- **Federal Regulations versus State Regulations**: States view regulations and policies primarily as an issue to resolve at the federal level rather than state-level policies or regulations. It should be noted, however, that some states still identified state-level policies and regulations as

an issue, though the diversity of how states administer, and fund transportation services probably results in variation from state to state.

- **Lack of Interaction with Some Local Organizations**: The survey revealed that while states have a high level of engagement with transit agencies, local governments, and nonprofit organizations, there is a very low level of engagement with businesses or business clusters, higher educational institutions, and medical centers. This indicates some opportunity for increasing integration of client-based transportation services with the broader suite of transportation services supported by the state.

Interview Findings

The interviews with local providers painted an on-the-ground picture of how service is provided and the obstacles they face in rural contexts. Primary findings included:

- **Separation of NEMT and other Transportation Services**: Respondents indicated that Medicaid-funded NEMT was a significant part of their overall transportation services, and that the lack of coordination between the agencies administering the two sources of funding is challenging. Some regulations are duplicative and require double reporting, such as the various safety regulations. Furthermore, some customers are eligible under multiple pots of funding for service, making billing complicated. And finally, rules around trip reimbursement rates can create challenges when agencies try to coordinate and group trips for greater efficiency. Better coordination between the administering agencies would help to streamline the process and make for a more effective overall transportation system in rural areas.
- **Coordination and Technology**: Interviewees did not see the challenges as being particularly geared toward technology solutions, except for better software for coordinating trips between different service providers. However, they noted that there is a lack of technical expertise and staff capacity at many of these smaller providers, which can make technology implementations difficult. A recommendation was to provide small grants to these providers just to introduce staff to new technology resources as a first step before applying for federal funding to procure and implement anything.
- **Funding Flexibility**: There was nearly unanimous agreement that providers in rural areas must be creative and flexible when serving the wide variety of life-critical trips that area residents need. The general lack of services in rural areas means that often all unserved trips fall to these local providers, and they struggle to serve them despite unavailable or inadequate funding. There were several opportunities identified, such as changes to rules around interstate transportation, disposition policy, and treatment of "incidental" trip purposes.

Suggested Research

Future research should include study of how to better integrate decisions and policies regarding Medicaid-administered transportation programs and DOT-administered transportation programs. The bifurcation between the two creates confusion, duplication, and inefficiencies identified by states and local service providers. This could take the form of joint rule makings, consolidated compliance reporting platforms, or shared offices and/or staff for program administration.

Another area of potential research is exploring barriers and opportunities to increase flexibility in how rural areas can use funding. Unlike urban areas, there are typically not niche organizations providing services on top of more typical DOT- or Medicaid-funded transportation services (e.g., neighborhood organization-based transportation service). That means that a wide variety of trip types falls to these general service providers, many of which are not eligible under existing funding. Volunteer driver programs are one option referenced, as are credit systems where drivers provide rides and earn points toward future rides they may need.

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Appendix A: Decision Tool

Client-Based Transportation Decision Support Tool

After months of research, surveys, and service provider interviews, the project team has identified multiple best practices for operators of client-based transportation in rural and small urban areas. A part of this project is to develop a decision support tool for state Departments of Transportation in order to facilitate improved operations for these providers. It is recommended that the decision support tool be a web-based drop-down interface with topics and related best practices found during the course of this project.

The dropdown menu could have an interactive interface similar to the National Center for Mobility Management's Grant Opportunities webpage[1]. There would be three levels of the online interface.

Level 1

⇒ **Compliance and Reporting**
⇒ **Operations**
⇒ **Funding**
⇒ **Agency Support**

Level 2

⇓ **Compliance and Reporting**
- → Coordination with your state's Medicaid Transportation Office
- → Human service agency Charter Rule exemption
- → Human Service Transportation-Coordinated Transportation Plan Updates

⇓ **Operations**
- → Agencies crossing state lines
- → Regional coordination of trip scheduling
- → Full cost recovery
- → Incidental Trips
- → Shared-Ride Trips

⇓ **Funding**
- → Use of multiple sources of federal funding
- → Deadhead mileage reimbursement
- → Human service agencies as Medicaid brokers
- → Funding diversity for rural, small urban, and tribal transportation providers
- → Donation of vehicles at end of useful life

[1] National Center for Mobility Management, Grant Opportunities, https://nationalcenterformobilitymanagement.org/ncmm-grants/

⇓ **Agency Support**

→ Operational support

→ Compliance and auditing support

Level 3

⇓ **Compliance and Reporting**

↓ Coordination with your state's Medicaid Transportation Office

- Consolidate compliance and reporting to multiple state agencies (e.g., DOT, Medicaid) into a single portal (e.g., for drug & alcohol testing, first aid, etc.)

↓ Human service agency Charter Rule exemption

- Make sure transportation providers understand that The Charter Rule has specific exemptions for providing service to human service agencies under contract

↓ Human Service Transportation-Coordinated Transportation Plan Updates

- If HST plans are updated more often than every 5 years, care should be taken to minimize the level of effort required of client-based organizations

⇓ **Operations**

↓ Agencies crossing state lines

- Encourage use of vehicles with < 9 passenger capacity for interstate travel to minimize insurance and other regulatory requirements under the Federal Motor Carrier Safety Administration

↓ Regional coordination of trip scheduling

- Encourage shared regional scheduling platforms for increased trip efficiency across multiple providers*

↓ Full cost recovery

- Encourage transportation service providers, brokerages, and state agencies to structure contracts so that they cover the full cost of trips. More can be found in the linked reports below (1, 2)

↓ Incidental Trips

- Encourage incidental trips on 5310-funded vehicles to increase efficiency

↓ Shared-Ride Trips

- Make sure that shared ride trips across multiple programs (e.g., Medicaid, 5310, 5311) are allowed and encouraged to increase efficiency

⇓ **Funding**

↓ Use of multiple sources of federal funding

- Be sure to promote the guide provided through CCAM on eligible federal funding that can be used to match FTA funding (see link on funding braiding below) (3)

↓ Deadhead mileage reimbursement

- Allow deadhead mileage reimbursement for volunteer drivers

↓ Human service agencies as Medicaid brokers

- Allow rural human service providers to act as Medicaid brokers in order to diversify their funding sources

↓ Funding diversity for rural, small urban, and tribal transportation providers

- Encourage a diversity of funding sources like Federal Section 5310, Federal Section 5311, veterans' transportation, non-emergency medical transportation, and open-door service to client-based organizations

↓ Donation of vehicles at end of useful life

- Encourage auction of assets rather than donation at the end of their useful lives to generate revenue for transportation programs**

⇓ **Agency Support**

↓ Operational support

- The state should provide comparable levels of support to client-based organizations as it does 5311-supported transit providers (e.g., procurement, technology, etc.)

↓ Compliance and auditing support

- The state should provide comparable levels of compliance and auditing support to client-based organizations as it does 5311-supported transit providers (e.g., NTD reporting, drug and alcohol testing, etc.)

*Medicaid reimbursement policy requires subtracting the non-Medicaid portion from shared trips when billing

**Note that auction proceeds > $1,500 for a vehicle are counted against future federal grant awards

1) Coordinating Council on Access and Mobility Cost-Sharing Policy Statement
2) Cost Allocation Technology for Non-Emergency Medical Transportation
3) CCAM Federal Fund Braiding Guide

The same content above is also included as an Excel file attached to this memorandum. This interface will allow the user to easily navigate each topic and find the best practice from the research conducted in this study. It is recommended that this interface could be hosted on the Coordinated Council for Access and Mobility website.

Appendix B: State Agency Survey Questions

Transportation for Client-Based Services in Rural and Small Urban Areas

The following survey solicits input on client-based transportation services that are provided in or applicable to rural (non-urbanized) areas. "Client-based transportation" is defined as transportation for agencies, businesses, or other organizations that is not necessarily open to the general public.

1. Agency Name
2. Which state is your agency associated with?
3. What is your name and title? (Optional)
4. What is your phone number? (Optional)
5. What is your email address? (Optional)
6. What kind of agency are you affiliated with?
    a. State Department of Transportation
    b. State Department of Public Health
    c. National or Regional Nonprofit
    d. Other
7. (If a Nonprofit) What is your focus demographic? (Check all that apply)
    a. Seniors
    b. People with Disabilities
    c. Low-Income Individuals
    d. Rural Residents
    e. Students
    f. Businesses and Business Associations
    g. Other
8. What is your focus at the agency? (Check all that apply)
    a. Mobility Management
    b. Services for Elderly Residents
    c. Services for Rural Residents
    d. Services for People with Disabilities
    e. Services for Low-Income Residents
    f. Economic Development and Employment Transportation
    g. Transportation Funding
    h. Non-Emergency Medical Transportation
    i. Other
9. What kinds of local or regional organizations do you typically work with to identify and/or serve transportation needs? (Check all that apply)
    a. Senior Centers/Councils on Aging
    b. Hospitals or Medical Facilities
    c. Businesses or Business Clusters (e.g., Innovation Districts)
    d. Chambers of Commerce
    e. Human Service Agencies (e.g., Adult Day Health Centers)
    f. Local Government (Municipal or County)
    g. Transit Agencies
    h. Regional Planning Agencies/Metropolitan Planning Organizations
    i. Universities and Other Higher Educational Institutions
    j. Community-Based Organizations/Nonprofits
    k. Other

10. Are any organizations in your state or region using any of the following practices to meet transportation needs that you are aware of?
    a. Mobile Apps
    b. Flexible, On-Demand Services (e.g., Micro-Transit)
    c. Volunteer Driver Programs
    d. Partnerships with Ride Hailing Companies (e.g., Uber/Lyft)
    e. Telework or Telepractice systems
    f. Sharing of Resources (e.g., vehicle sharing between two organizations)
11. Are there any other innovative programs or practices (e.g., Mobility as a Service) for client-based transportation in rural areas that your agency is using or aware of? Please provide a short description of the program or practice here.
12. Is there an organization that your agency works with or is aware of that supports, shares information on, or implements innovative practices in client-based transportation in rural areas? If so, what is the name of that organization and contact information?
13. Are there any factors that hinder implementation of these kinds of innovative programs? (Choose all that apply)
    a. Regulations
    b. Policies
    c. Organizational Capacity
    d. Technical Issues or Limitations
    e. Federal Rule on Charter Service
    f. Title VI Compliance
    g. ADA compliance
    h. Funding Restrictions on Eligible Populations
    i. Legal Liability (e.g., personal injuries, property damage, personal or payment data breach, etc.)
    j. Other
14. Do you have any additional comments on the related to opportunities or barriers with providing transportation services to organizations (e.g., Human Service Organizations) in rural areas?

Appendix C: Service Provider Interview Questions

1) **What is your role at your organization?**
2) **What services does your organization provide, including non-transportation services?**
3) **Do you provide transportation service in rural or small urban areas?**
4) **What sources of funding do you use to provide transportation services?** (e.g., Federal Section 5310, Medicaid NEMT Funding)
5) **Who are the target clients for your transportation program(s)?** (e.g., seniors, people with disabilities, low income)
6) **Do you provide transportation to human service agencies or other client-based organizations?** Examples could include:
   a) Adult Day Health Centers
   b) Employer-based transportation
   c) Educational institutions
   d) Senior Centers
   e) Assisted Housing Centers
   f) Addition recovery/treatment facilities
7) **How many trips do you provide annually, broken down by program?**
8) **What is the size of your fleet, broken down by program (if applicable)?**
9) **If you provide service in rural areas, what are the main challenges you face in providing service to client-based organizations in rural or other low-population-density areas? (Pre-COVID and present-day if there are any differences in the challenges.)** Examples could include:
   a) Long deadhead
   b) Funding availability
   c) Workforce availability issues, including volunteer drivers
10) **What are the main regulatory and administrative challenges you face in working with your funding agency or agencies, especially about these client-based services?** (e.g., EEO/DBE reporting, NTD reporting, funding restrictions like The Charter Rule)
11) **Have you engaged in any innovative partnerships to help deliver client-based service, or service more generally?** (e.g., shared use agreements, apprenticeship programs)
12) **What kinds of new technology have you implemented in the past few years?** Examples could include:
   a) Automatic Vehicle Locators
   b) Mobile Data Terminals
   c) Automatic Passenger Counters
   d) Online Trip Booking
   e) "Where's My Ride" Mobile Application
   f) Mobility-on-Demand Application
   g) Scheduling/Dispatch Software
13) **What barriers have you encountered when trying to engage in innovative service delivery, either through new technology, new partnerships, or some other new practice?** (e.g., liability issues, mixing funding sources for service delivery, training burden)
14) **What kinds of additional support would you like to see from state- and federal-level partners?** Examples could include:
   a) More staff support for new technology
   b) More webinars or other trainings
   c) Opportunities for greater coordination between providers
   d) More staff support for compliance and reporting

15) **Are there any customer needs that federal or state rules prevent your organization from meeting?** (e.g., The Charter Rule prevents service to regional organizations in need of transportation service)
16) **How familiar are you with the following concepts or technologies?**
    a) Mobile Apps
    b) Micro-Transit
    c) Volunteer Driver Programs
    d) Partnerships with Ride-Hailing Companies
    e) Telework or Telepractice Systems
    f) Sharing of Resources/Joint Use Agreements
    g) General Transit Feed Specification (GTFS)-Enabled Trip Planning
    h) Regional Transportation Coordinating Councils
    i) Ride Matching for Vanpools
17) **Do you have any additional comments?**