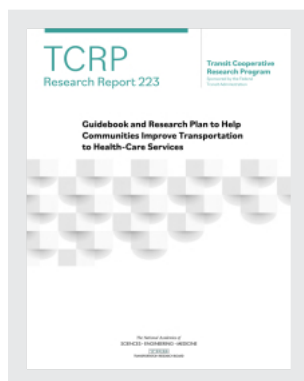


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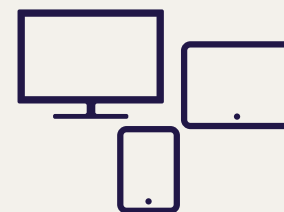
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TRANSIT COOPERATIVE RESEARCH PROGRAM

TCRP RESEARCH REPORT 223

**Guidebook and Research Plan to Help
Communities Improve Transportation
to Health-Care Services**

KFH GROUP, INCORPORATED
Austin, TX, and Bethesda, MD

IN ASSOCIATION WITH
NORC AT THE UNIVERSITY OF CHICAGO
Bethesda, MD

Subject Areas
Policy and Planning

Research sponsored by the Federal Transit Administration in cooperation with the Transit Development Corporation



2021

TRANSIT COOPERATIVE RESEARCH PROGRAM

The nation's growth and the need to meet mobility, environmental, and energy objectives place demands on public transit systems. Current systems, some of which are old and in need of upgrading, must expand service area, increase service frequency, and improve efficiency to serve these demands. Research is necessary to solve operating problems, adapt appropriate new technologies from other industries, and introduce innovations into the transit industry. The Transit Cooperative Research Program (TCRP) serves as one of the principal means by which the transit industry can develop innovative near-term solutions to meet demands placed on it.

The need for TCRP was originally identified in *TRB Special Report 213—Research for Public Transit: New Directions*, published in 1987 and based on a study sponsored by the Urban Mass Transportation Administration—now the Federal Transit Administration (FTA). A report by the American Public Transportation Association (APTA), *Transportation 2000*, also recognized the need for local, problem-solving research. TCRP, modeled after the successful National Cooperative Highway Research Program (NCHRP), undertakes research and other technical activities in response to the needs of transit service providers. The scope of TCRP includes various transit research fields including planning, service configuration, equipment, facilities, operations, human resources, maintenance, policy, and administrative practices.

TCRP was established under FTA sponsorship in July 1992. Proposed by the U.S. Department of Transportation, TCRP was authorized as part of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). On May 13, 1992, a memorandum agreement outlining TCRP operating procedures was executed by the three cooperating organizations: FTA; the National Academies of Sciences, Engineering, and Medicine, acting through the Transportation Research Board (TRB); and the Transit Development Corporation, Inc. (TDC), a nonprofit educational and research organization established by APTA. TDC is responsible for forming the independent governing board, designated as the TCRP Oversight and Project Selection (TOPS) Commission.

Research problem statements for TCRP are solicited periodically but may be submitted to TRB by anyone at any time. It is the responsibility of the TOPS Commission to formulate the research program by identifying the highest priority projects. As part of the evaluation, the TOPS Commission defines funding levels and expected products.

Once selected, each project is assigned to an expert panel appointed by TRB. The panels prepare project statements (requests for proposals), select contractors, and provide technical guidance and counsel throughout the life of the project. The process for developing research problem statements and selecting research agencies has been used by TRB in managing cooperative research programs since 1962. As in other TRB activities, TCRP project panels serve voluntarily without compensation.

Because research cannot have the desired effect if products fail to reach the intended audience, special emphasis is placed on disseminating TCRP results to the intended users of the research: transit agencies, service providers, and suppliers. TRB provides a series of research reports, syntheses of transit practice, and other supporting material developed by TCRP research. APTA will arrange for workshops, training aids, field visits, and other activities to ensure that results are implemented by urban and rural transit industry practitioners.

TCRP provides a forum where transit agencies can cooperatively address common operational problems. TCRP results support and complement other ongoing transit research and training programs.

TCRP RESEARCH REPORT 223

Project H-55

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FOREWORD

By **Dianne S. Schwager**

Staff Officer

Transportation Research Board

TCRP Research Report 223 provides a guidebook to help communities improve transportation to health care and a research plan to address the continuing need to understand how community partnerships between the health-care and transportation sectors develop and can be encouraged. The guidebook provides useful strategies and resources for three important audiences—health care, transportation, and other stakeholders—to build effective relationships to improve customer-focused mobility services to health-care services.

The availability of transportation influences the ability of individuals to access health care, whether in urban, suburban, or rural areas. Those lacking transportation often miss health-care appointments, resulting in delays in receiving medical interventions, which can then lead to poorer health outcomes. This in turn contributes to the rising cost of health care.

Research has found that access to reliable and affordable transportation is associated with increased utilization of health services and improved health outcomes; improved access to health care will provide for greater patient encounters and reduce no-show rates; and readily-available transportation can prevent extra stays in the hospital and generate overall cost-savings.

Successful collaborations to improve patient access to health-care services have emerged in communities across the United States. An understanding of these collaborations may benefit other communities interested in improving transportation access to health care. However, the complexities intrinsic to the transportation and health-care sectors make collaboration between the sectors challenging. To assist in overcoming these challenges, TCRP Project H-55, “Guidebook and Research Plan to Help Communities Improve Transportation to Health-Care Services” was conducted to develop 1) a guidebook that discusses the solutions that have integrated the health-care and transportation sectors and have helped improve transportation to health care, and 2) a research plan that outlines future research priorities.

KFH Group, Inc., in association with NORC at the University of Chicago, conducted a literature review followed by surveys of providers of transportation as well as of health care and social services to learn about their efforts to improve access to health care. This led to further research of transportation and health-care relationships. Successful programs and partnerships identified through the research were documented and described in the guidebook either as detailed case studies or as collaborative practices.

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S U M M A R Y

Guidebook and Research Plan to Help Communities Improve Transportation to Health-Care Services

The Relationship of Transportation and Health Care

Efforts to improve health in the United States increasingly recognize that it is not just the health-care system that is responsible. It is a range of factors that collectively affect health and health outcomes. These factors are known as the “social determinants of health,” and, significantly, they include transportation.

With available and reliable transportation, individuals can travel in their communities to access the medical appointments and services they need. Without that access, care is delayed or missed, which increases not only the potential for poor health outcomes but also the cost for health care. Particularly for those with chronic diseases, delays in care and missed appointments complicate disease management and may worsen patients’ health, which increases overall health-care expenditures.

The federal government, through an initiative of the Centers for Medicare and Medicaid Services (CMS), is encouraging partnerships between health-care providers and community services, including transportation, that are available and responsive to the needs of community residents.

But what does that mean for a community?

- What is responsive?
- What is effective transportation?
- How are partnerships initiated and developed?
- Are there examples of effective partnerships between the transportation and health-care sectors that can be highlighted as examples for other communities?

These are some of the questions raised by this research project. Its two objectives that attempt to answer those questions include: first, develop a guidebook to help communities improve transportation to health care and second, develop a research plan that outlines future research needs and priorities to further the understanding of the transportation and health-care relationship.

Why Should Communities Improve Access to Health Care?

Access to health care is critical for promoting and maintaining health, preventing and managing diseases, and working toward health equity for all Americans. And transportation has a significant role in that access (Exhibit i). It has been called fundamental to societal health.

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Exhibit i. The purpose of almost 10% of the ridership in this large rural system is to access health care. Photo courtesy of KFH Group.

Effective transportation ensures a connection to health-care services for residents in a community and improves access to other needed services and destinations. Local communities have a role to play in providing that transportation for their residents—not only improving health outcomes for their residents but also expanding access to a range of community services and places.

The Research Project: Process and Findings

The research began with a background literature review followed by surveys of providers of transportation as well as of health care and social services to learn about their efforts to improve access to health care. This work led to case study research of transportation and health-care relationships to try and understand how the arrangements began and what exactly was involved. The research efforts provided material for the guidebook, with suggestions on how to initiate a dialogue between transportation and health-care providers as well as subsequent actions and strategies for pursuing a partnership and implementing transportation solutions appropriate for patients. Successful programs and partnerships identified through the project were documented and described either as detailed case studies or as collaborative practices for the guidebook, providing ideas and resources for communities interested in improving transportation access to health care.

Summary of the Project's Background Research

The availability of transportation influences the ability of individuals to access health care, whether in urban, suburban, or rural areas. Those lacking appropriate or available transportation miss health-care appointments, resulting in delays in receiving medical interventions, which may then lead to poorer health outcomes. This in turn contributes to the rising cost of health care.

Research has found that access to reliable and affordable transportation is associated with increased utilization of health services and improved health outcomes; that improved access to health care will provide for greater patient encounters and reduced no-show rates; and

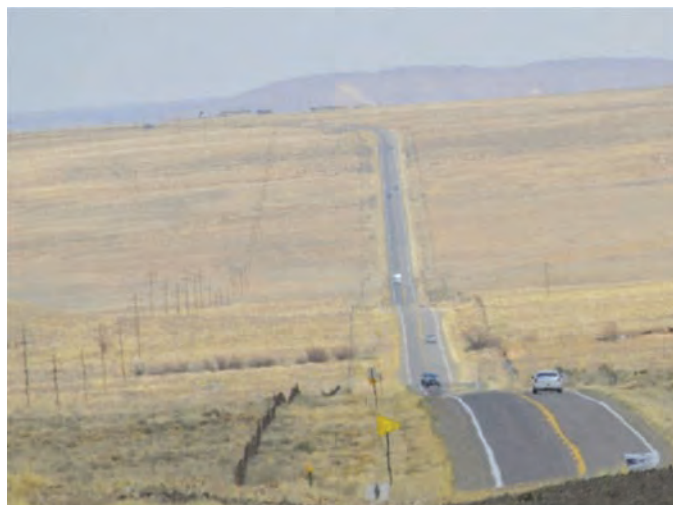


Exhibit ii. Few places are as isolated as the Navajo Nation. Photo courtesy of KFH Group.

that readily-available transportation can prevent extra stays in the hospital and generate overall cost savings.

Available data do not show exact numbers of patients affected by a lack of transportation. According to research, the range is as great as 10% to 50% of patients who report transportation as a barrier to accessing health care.

Certain population groups have been identified as more likely to have transportation needs impacting access to health care. These include the elderly, those with disabilities, individuals with lower incomes, those without their own transportation, veterans using the Department of Veteran Affairs' (VAs') medical system, patients with chronic diseases, and those living in isolated rural areas (Exhibit ii).

Barriers to improving transportation access to health care include transportation infrastructure issues—for example, limited, poorly designed or ineffective public transportation service; long travel distances to access health care; and limited communication, information sharing, and coordination between the health-care and transportation sectors that otherwise might work toward improving transportation access. Significantly, the research project has found that such barriers are not always unsurmountable.

Guidance for Pursuing a Health Care and Transportation Partnership

The guidebook addresses the various dimensions and elements of working toward a health-care and transportation partnership. These elements are not necessarily stepwise, and the development of a partnership may not include all the elements, but generally, the following dimensions provide a framework for pursuing a health-care and transportation partnership:

- **Understand Differing Motivations:** An important consideration at the beginning is the need to understand that the motivations for a partnership may differ between the health-care and transportation sectors.

On the health-care side, some organizations, such as non-profit hospitals, are responsible for investing in activities that address the needs of the communities they serve,

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which could include supporting transportation services. Health-care organizations are also interested in attracting new patients and offering competitive services. The CMS administers a five-star quality rating system to help measure Medicare beneficiaries' experiences. A health facility's rating has a major impact on its ability to attract new patients and stay competitive. Investing in services that increase patient satisfaction, such as transportation, may be one way health-care organizations remain competitive.

On the transportation side, the community's transportation providers are interested in generating ridership, which could include patients of local health-care organizations. The transportation provider can increase its standing in the community with new relationships established with local health-care organizations.

- **Identify Entities for the Partnership:** Another element for improving community transportation to health care involves identifying appropriate entities to engage for pursuing a partnership. Potential participants on the health-care side include not only primary and specialty care facilities and hospitals but also both public and private insurers. On the transportation side, a focus in the guidebook is the community's public transportation provider but not to the exclusion of other providers such as local non-profit agencies with vans and the new private mobility services available in many communities.
- **Identify Transportation Needs:** Identifying the specific needs for transportation improvement is a key dimension. Who are the community residents with needs? Why do they have needs? The guidebook identifies possible data sources to help qualify and quantify transportation needs for health-care access. These include community health needs assessments (CHNAs), a requirement for non-profit hospitals through the Patient Protection and Affordable Care Act (ACA). Another source is community health assessments (CHAs), which the Public Health Accreditation Board requires health departments to develop every 5 years.
- **Start a Dialogue:** With willing participants and identified needs, a dialogue between the health-care and transportation sectors is another element of developing a partnership. This communication may start from a random precipitating event or an unforeseen situation such as in Flint, Michigan where communication between the local health department and city's public transit agency began with Flint's drinking water crisis. Alternatively, communication may start in a deliberate way—perhaps initiated by a forward-thinking individual at the public transportation agency or a patient coordinator at a health-care provider. One of the interesting findings of the research project is that partnerships between health care and transportation arise from situations, environments, and factors that may be unique to the particular community. If there is a common thread, it is that health-care access is a critical need for those individuals who lack their own private transportation.
- **Share a Goal:** Effective communication can lead the participating health-care and transportation providers to develop a shared goal for improving transportation access. While not necessary for a viable partnership, it can be useful to memorialize the mission of a new transportation service in broad terms. Having an articulated goal may also be useful should the partnering health-care and transportation providers seek funding for the service beyond what the partners contribute.
- **Recognize and Address Barriers:** Moving toward a collaborative arrangement for improving transportation access to health care may face obstacles. For example, the health-care sector has concerns about protecting patient privacy. The transportation provider may question if a dedicated service for a health-care facility may be disallowed because of the Federal Transit Administration (FTA) Charter Rule. These possible barriers and their solutions are described.
- **Develop Transportation Solutions:** An important step is then to develop effective and appropriate transportation solutions to meet the defined needs for improving access

to health-care facilities. The guidebook explains key factors to consider and describes a variety of solutions and services that might be implemented to improve transportation access.

- **Sustain the Improved Transportation:** Assuming the partnership results in some type of transportation improvement, funding for the new service is needed to sustain its operation. Key to this effort is coordinating diverse funding sources that can be facilitated by building a strong coalition of stakeholders that support the service.

Need for More Research

Relationships between the health-care and transportation sectors are evolving with a greater understanding that transportation is a key social determinant of health. The research project found a range of successful relationships and collaborations between health-care and transportation providers, but more work is needed to better understand how the partnerships between the health-care and transportation sectors develop and how they might be encouraged. Research is also needed to better document the specific benefits of improved transportation access and to develop metrics that provide evidence that improved transportation access can, in fact, improve health-care outcomes. Toward these ends, a research plan was developed that outlines topics that might be pursued through subsequent research. This plan is provided in the appendix at the end of the guide.



CHAPTER 1

Introduction to the Guidebook



Efforts to improve health in the United States increasingly recognize that it is not just the health-care system that is responsible. It is a range of factors that collectively affect health and health outcomes. These factors are known as the “social determinants of health,” and significantly, they include transportation.

With available and reliable transportation, individuals can travel in their communities to access the medical appointments and services they need. Without that access, care is delayed or missed, which increases not only the potential for poor health outcomes but also the cost for health care. Particularly for those with chronic diseases, delays in care and missed appointments complicate disease management and may worsen patients’ health, which increases overall health-care expenditures.

The federal government, through the Accountable Health Communities Model [an initiative of the Centers for Medicare and Medicaid Services (CMS)], is encouraging partnerships between health-care providers and community services, including transportation, that are available and responsive to the needs of community residents.

But what does that mean for a community? What is responsive? And how are those partnerships initiated and developed? The answers to these questions vary from community to community and partnership to partnership. This was clear from the work conducted by the research team in preparing this guidebook. The research began with a literature review, followed by surveys, as a means to hear from providers of transportation as well as health care and social services. The work also included case study research and identification of collaborations between transportation and health care to try and understand how the arrangements began and what exactly was involved.

It Takes a Community

One thing is clear from that work—it does take a community to have an effective partnership. It takes the community’s transportation provider (and sometimes multiple providers) and a community health-care organization (and potentially more than one health-care organization) to coordinate planning and implementation to improve transportation access to health care. Sometimes the initiative comes from the health-care side and sometimes from the transportation side.

As just one example, one of the collaborative practices featured in this guidebook began on the health-care side. A large health-care system in Pennsylvania decided that improving transportation access might help reduce no-shows for primary care and ancillary appointments. The health-care system reached out and collaborated with the region’s public transit agency to plan

and implement a pilot service providing free trips from two selected areas to the health-care system's facilities.

On the other hand, the partnership may start on the transportation side. Two transit agencies in Central Texas—one urban and one rural—joined forces to develop a regional mobility manager to improve transportation options, recognizing that a key need was expanding transit service to support health-care access.

Objectives and Products of the Research Project

This TCRP research project had two objectives: first, to develop a guidebook to help communities improve transportation to health care and second, to develop a research plan that outlines future research needs and priorities.

The guidebook is the primary product of the research project. Its objective is to provide support, information, and examples that assist communities—with a focus on providers of transportation and health care—build relationships and services that improve transportation access to health-care services.

The second product is a research plan, which is included as an appendix to the guidebook. The panel that developed the problem statement for the TCRP project and guided the research during its conduct understood that the relationship between health care and transportation is evolving and that more work is needed. The research plan provides an outline for pursuing and funding additional research that quantifies and better qualifies the benefits of improving transportation access to health care.

What Is in the Guidebook?

The guidebook has the following components:

- **Chapter 1: Introduction to the Guidebook.** Readers of the guidebook may want to start here to identify which chapters of the guidebook may be of particular interest.
- **Chapter 2: Why Should Communities Improve Transportation to Health Care?** This chapter identifies research and evidence demonstrating the value of appropriate transportation to access health care and health-care-related needs. Local health-care and transportation providers can use this information to make the case for transportation to access health care.
- **Chapter 3: Working Toward a Partnership: Health Care and Transportation.** The transportation and health-care sectors must work together to provide appropriate solutions, but it starts with communication. Here, one can explore various approaches and examples of a community coming together to ensure transportation to access to health care.
- **Chapter 4: Develop Transportation Solutions.** There are a variety of solutions to a community's health-care access needs. In this chapter, a reader can find guidance on key transportation issues and developing and selecting the most appropriate transportation solutions for each rider. One size does not fit all.
- **Chapter 5: Case Studies.** Five case studies are detailed, describing relationships and partnerships created between transportation and health-care organizations. They demonstrate successful efforts that improve transportation access to medical and other wellness-related appointments and services. Understanding how these relationships came about and the services provided may benefit other communities as they seek to improve transportation access to health care.
- **Chapter 6: Collaborative Practices.** Sixteen examples of collaborative efforts between transportation and health-care organizations are described. These practices include those that are

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relatively straightforward—such as a free van service provided by a hospital—to technology-enabled solutions that improve access to health care. For those communities interested in and considering their own efforts to improve transportation access to health care, the collaborative practices provide ideas and possibly inspiration.

- **Appendix: Research Plan.** Research recognizes that transportation is just one of the social determinants of health, but it is increasingly recognized for its importance in promoting and maintaining health, preventing and managing diseases, and working toward health equity for all Americans.

Through the efforts of this TCRP research, the study team found a range of projects in communities across the country that have improved transportation access to health care, but more work is needed to better understand how the partnerships between the health-care and transportation sectors develop and how they might be encouraged. Research is also needed to better document the specific benefits of improved transportation access and to develop metrics that provide evidence. Finally, research is needed to engage more patients to use fixed-route bus services where feasible.

Toward these ends, the research plan outlines research topics that might be pursued through TRB and potentially TRB in cooperation with its sister division within the National Academies—the Health and Medicine Division. The plan also identifies other possible sponsors of the identified research topics, specifically public and philanthropic funders of health research.

How to Use the Guidebook

The guidebook is designed to support local-level health-care and transportation providers as they work together to support transportation access to health care. Depending on personal interest, a reader can start at any chapter and focus on specific issues or needs.

For those interested in getting started and needing to make the case for transportation access to health care, Chapter 2 is a good place to start. If the reader is forming a partnership between health-care and transportation provider(s), then focusing on Chapter 3 would be instructive. For those who have a partnership in place and want to initiate a transportation service or want to change that service, then Chapter 4 will provide guidance. Chapter 5 (Case Studies) and Chapter 6 (Collaborative Practices) provide the reader with a wide variety of ideas, from initiating collaborations to operating a diverse set of services using the latest technology. What is clear from the research and what is illustrated by the wide range of projects and services described in Chapters 5 and 6 is that there are many successful approaches to improving a community's access to health care.

CHAPTER 2

Why Should Communities Improve Transportation to Health Care?

Introduction

Access to health care is critical for promoting and maintaining health, preventing and managing diseases, and working toward health equity for all Americans (1).

Transportation has a significant role in that access and has been called fundamental to societal health (2). With available and timely transportation, individuals can travel in their communities to access the medical appointments and services they need. Without that access, care is delayed or missed, increasing not only the potential for poor health outcomes but also the cost for health care. Particularly for those with chronic diseases, delays in care and missed appointments complicate disease management and may worsen patients' health, which increases overall health-care expenditures.

Transportation: A Social Determinant of Health

For many years, efforts to improve health in the United States focused on the health-care system as the primary factor driving health and health outcomes. However, more recent research increasingly recognizes that it is not just the health-care system—it is a range of factors that drive health and health outcomes (3). These factors—the social determinants of health—are “the structural determinants and conditions in which people are born, grow, live, work and age” (3); see Exhibit 2-1.

These efforts include not only transportation but also such factors as economic stability, employment, housing, education, and social support networks. These are elements that help structure the communities where we live. Communities that recognize these factors and address deficiencies can help mitigate health disparities that often arise from social and economic disadvantages (4). Efforts to combat these disparities in health care typically focus on population groups that are impacted, including people with low incomes, older adults, individuals with disabilities, and those living in rural and inner-city areas (4).

What Is the Role of Transportation?

Remarks at a workshop on the intersection of health care and transportation speak to transportation's larger role in society and its role in health care (5):

Transportation does not exist to serve itself. Transportation really exists so that we can [try] to achieve other more important things in life and in society. Things like improving the economy; things like improving quality of life. And I think more and more we are starting to recognize that transportation has a role in terms of supporting public health as well.

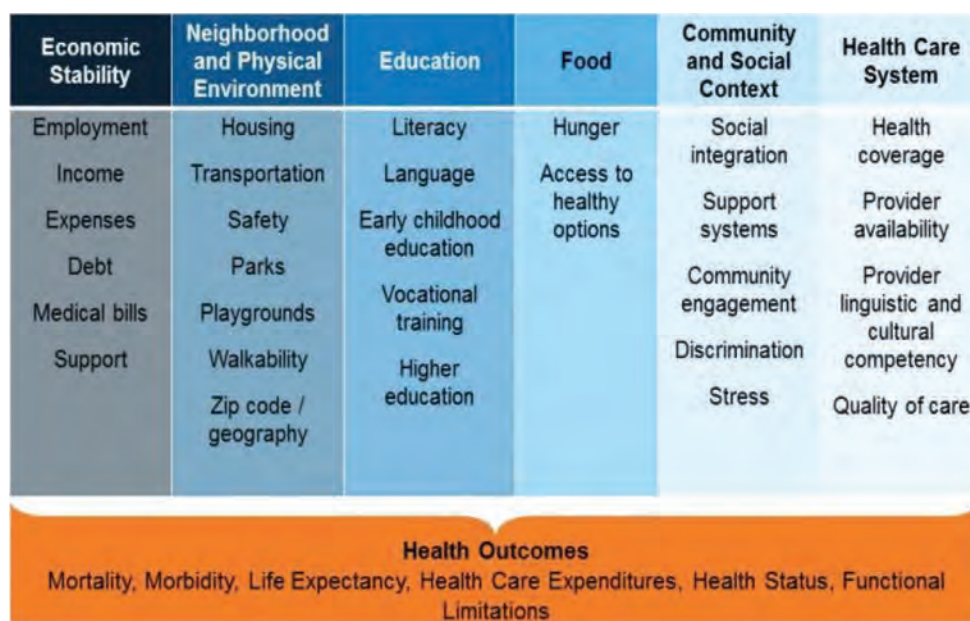


Exhibit 2-1. Social determinants of health (3).

Transportation ensures a community’s connection to health-care services, and a lack of transportation is often cited as a barrier to health-care access (6).

Little data exists on exact numbers of people who lack transportation access to health-care services. Data suggest a range as great as 10% to 50% of patients report transportation as a barrier to accessing health care (6). This wide variation in the data may be due to differing user groups or a lack of consistency in the measurement and defining of “transportation barriers,” which makes it difficult to determine the full impact that transportation barriers have on health outcomes (7).

Transportation issues in accessing health care are generally related to transportation costs, lack of access to a vehicle or public transit, distance and time-related burdens, disabilities that prohibit the use of public transit, safety and infrastructure issues, and adverse policies (8). These are depicted in Exhibit 2-2.

Vehicle access, such as owning a car or having access to a car via a friend or family member, has a positive relationship on the ability to access health care (6). Studies have found that vehicle access may lead to fewer missed appointments (9, 10).

Patients also cite the burden of travel distance and time as a barrier to accessing health care (11). Although rural geography may come to mind when considering long travel distances, even urban residents with access to public transit services still face barriers.

Urban and rural residents living in less centralized locations who use public transit may have to rely on limited transit service that requires them to make multiple connections or walk significant distances (11).

Transportation infrastructure and driver’s license issues may also place significant barriers on accessing health care. For example, inaccessible pathways, bus stops, or stations, limited routes or availability, and driver’s license laws can impact the ability to access health care (12, 13).



Source: Health Research & Educational Trust, 2017.

Exhibit 2-2. Transportation issues impacting health-care access (8).

The Need for Transportation to Health Care

A comprehensive review of the research on transportation's role in health-care access comes from a report on the Rides to Wellness Community Scan Project (14).

Findings include:

Lack of transportation can cause patients to miss medical appointments, disrupting the continuity of care and causing delays in the delivery of necessary health and wellness services. Research indicates that lack of transportation is a barrier to health care for various segments of patients, including rural veterans (Buza et al., 2011); low-income immigrants in suburban communities (Silver, Blustein, & Weitzman, 2012); patients with chronic disease (Guidry, Aday, Zhang, & Winn, 1997); poor and low-income adults (Ahmed, Lemkau, Nealeigh, & Mann, 2002); and children and families (Children's Health Fund, 2011). Access to reliable and affordable transportation is associated with increased utilization of health services, improved health outcomes, and greater likelihood of primary care visits by the pediatric population, adults living with HIV, and frequent users of emergency departments (Kim, Norton, & Stearns, 2009) (15).

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The Rides to Wellness Community Scan Project goes on to find:

- Rates of missed appointments vary widely across health-care sites.
- Demographic factors, such as race, ethnicity, and income status, are associated with missed appointments.
- Not having access to a car is independently associated with missing appointments.
- Transportation is frequently identified as a barrier to health-care utilization.
- Some populations are at higher risk of missing appointments due to transportation barriers.
- Costs associated with missed appointments due to transportation barriers have not been established in the empirical literature.

Research published in 2005 found that 3.6 million transportation-disadvantaged individuals miss at least one medical trip per year due to transportation barriers (16).

Transportation Barriers: A Factor Affecting Health-Care Disparities

Health-care disparities exist across many dimensions, including socioeconomic status, age, geography, disability status, rural locations, Medicaid, and needs of Native Americans and veterans.

Socioeconomic Status

Patients reporting a lower socioeconomic status typically report higher rates of transportation barriers that impact access to health care (6). Research has found that those patients who have problems with transportation to health care are poorer, older, and are more likely to be female and non-white compared to the U.S. population as a whole (16).

In a survey of an ambulatory children's health clinic serving mostly lower-income and Medicaid patients, 51% of parents stated that transportation barriers (no vehicle or access to a vehicle) were the reason for missing their child's scheduled appointment. The missed appointment rate was 34% (17).

Older Adults

The American population is aging; therefore, as the number of older adults increases, so too will the demand for transportation services (18). Age-related changes such as cognitive and physical declines may also lead to missed health-care appointments, ultimately affecting progression and management of disease (19).

Even when older adults have access to public transportation, using it may require some level of physical fitness, the ability to follow bus route directions, and the capability to navigate complex bus transfers (20).

Individuals with Disabilities and Mobility Limitations

People with disabilities face challenges in accessing transportation. Barriers may be related to the inability of the person to operate a vehicle, inability to access pathways or public transit, or because the public transit that is available does not fit their particular needs.

For fixed-route public transit, the pedestrian infrastructure is a barrier in many cases. If the bus stop and/or pedestrian pathways are inaccessible or unsafe, fixed-route public transit is not an option for individuals with disabilities.

Individuals with disabilities also experience higher rates of poverty than those without disabilities, compounding their difficulties in accessing health care. Data for the age group 18 to 64 show that those with disabilities experience a poverty rate that is more than twice that of people without a disability: 29% versus 12% (21).

Rural Populations

Transportation is frequently mentioned by rural residents as a major barrier in accessing health care (22). Characteristics such as low population density, long distances, and isolation that is typical of rural areas can affect how residents access services.

Public transportation may be available but can be inadequate in rural communities and towns, which may increase reliance on using a personal vehicle. Even when public transit exists in such areas, service is typically limited because of insufficient funding and often an ineffective service design.

In some cases, rural roads may be in disrepair or not easily traversed, and long distances to access health-care services require extended travel time (23). On a large Navajo reservation in rural Arizona, for example, one may travel over 200 miles round trip to get to a specialist or 100 miles round trip simply to access a health clinic or hospital (24).

Approximately 15% of rural residents have a disability (25). People with disabilities living in rural communities face additional barriers to accessing transportation, including a lack of accessible vehicles and safe access to pick-up and drop-off locations.

A critical issue for rural communities is the loss of rural hospitals. The number of rural hospital closures has increased significantly in recent years, and this trend is likely to continue, with impacts on residents' access to health-care services (26).

The Government Accountability Office (GAO) reports that 64 rural hospitals closed between 2013 and 2017, a rate that is more than twice the number of closures in the preceding 5-year period (27). Rural hospitals are closing due to factors that include a patient base that is aging, poor, and shrinking; high uninsured rates and a payer mix dominated by Medicare and Medicaid; economic challenges in the community; aging facilities; outdated payment and delivery system models; and business decisions by corporate owners/operators (26).

Patients served by these hospitals tend to have more complex health conditions. Research shows, for example, that 18% of people are age 65 and older in rural communities compared with 14% in urban areas, and 18% have limitations due to chronic conditions compared with 13% in urban communities. These patients require more services and more specialties than younger, healthier patients. As rural hospitals close, such residents of rural communities are more likely to delay health care or even forego needed care (26).

Medicaid Beneficiaries

Over 20% of Americans who live in low-income households or have disabilities are enrolled in Medicaid (28). As Medicaid beneficiaries, they may be eligible to obtain Medicaid non-emergency medical transportation (NEMT) for transportation to covered medical services with primary care and specialty health-care providers. TCRP research estimated that Medicaid NEMT provided close to 104 million trips in FY 2013 for a cost of \$2.9 billion (29).

Such transportation is critical for this population group: research based on National Health Interview Survey data has found that primary care access by Medicaid beneficiaries was disproportionately affected by limited transportation compared to those with private insurance (30).

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Reimbursement for Medicaid NEMT varies by state. Several states use prior approval processes or limit the number of trips allowed per month, while other states contract with local community agencies, vendors, individual drivers, or brokers to coordinate services. Some states use volunteers who are reimbursed for their mileage. States may pay taxicab companies or other commercial transportation firms on a mileage or trip basis.

The differing state parameters and approaches for Medicaid NEMT may create transportation barriers for the vulnerable population groups. Through the Affordable Care Act (ACA), at least three states—Iowa, Indiana, and Kentucky—have received federal waivers to cut Medicaid transportation services, and Massachusetts has a waiver pending. Other states are exploring waivers to reduce NEMT costs to their Medicaid programs.

According to a 2009 study conducted for the Texas Medicaid program, unmet need for transportation is rising and remains stubbornly high (31). The average number of recipients in the state's Medicaid program for children with unmet transportation needs showed steady increases during the study period in 2008 to 2009. By the end of 2009, those with unmet transportation needs remained well above 20%.

Native Americans

Native American transportation needs vary by geography and are far from homogenous. Some tribes, such as the Navajo and Hopi, live in very rural environments and often have trips of well over 50 to 75 miles each way to access health care, making transit service difficult to operate, with significant logistical issues and consequently with high operating costs (32). Other tribes or pueblos in close proximity to urban areas—for example, Tesuque and Pojoaque pueblos outside Santa Fe, New Mexico—require service similar to any other suburban or urban community, with less challenging logistical issues than in the more isolated areas.

Veterans

To a great extent, veterans have transportation needs similar to non-veterans. While many transportation needs of veterans overlap with those of the general public, there are some differences (33). Approximately 40% of veterans use the health-care services of the Department of Veterans Affairs (VA), and often this requires significant travel, particularly for those veterans living in rural areas (33).

A recent report commissioned by the VA evaluated the department's transportation program for veterans—the Veterans Transportation Service (VTS) established at certain VA medical centers. This report notes that the transportation needs of veterans may relate to the nature of active duty experiences that result in certain physical and mental conditions less common in civilian patients (34). For example, veterans with post-traumatic stress disorder (PTSD) may have difficulty traveling in crowded or noisy situations. Their conditions may require unique considerations for transportation (34).

Issues Facing Health-Care Providers in Improving Access to Health Care

Health-care providers have a role in improving transportation access to health care, but they first must understand the role of transportation and barriers that might confront their patients. The ACA has been a catalyst in helping the health-care industry understand the importance of transportation as one of the social determinants of health.

Health-care providers can also take action by sharing information about existing transportation programs available to their patients. A more direct approach is to actually provide or fund patient transportation, a strategy now explicitly allowed by 2016 revisions to federal law that governs regulations for health-care providers (35).

Communication with Patients About Transportation

Effective communication with patients to understand their health-related social needs can address transportation issues and improve access to health care. This involves recognition of the social determinants of health, and it can lead to transportation improvements.

Standardized Screening for Health-Related Social Needs

Screening patients for their social needs would help the health-care industry understand the important role that transportation plays in access to health-care services, but such screening is not yet standard clinical practice (36).

One of the ACA's new models of health care—the Accountable Health Communities Model—is addressing this gap between clinical care and patients' social needs by testing whether identifying and addressing health-related social needs improves patients' health and impacts health-care costs (37).

This model specifically attempts to support clinical and community partnerships. Hospitals, clinics, and other medical facilities serve as the entry point for the model by screening Medicare and Medicaid patients for their unmet social needs across what is defined as “five core domains.” Transportation is one of the five.

Exhibit 2-3 shows the questions for the transportation topic. The five domains were chosen for several key reasons, one of which is that the need can be met by community service providers.

There are currently 31 organizations testing the Accountable Health Communities Model. It remains to be seen if community service providers can actually respond and improve transportation to health care if transportation is identified as one of the core social needs.

Community Health Needs Assessments

Addressing the social determinants of health can be approached in a broader way— through an assessment of a community's social needs. This is another strategy of the ACA.

In addition to testing new models of health care, the ACA now requires certain hospitals to conduct what are known as “community health needs assessments (CHNAs)” every 3 years. The objective of these assessments is to identify the barriers to improving community health and then to develop an action plan to address those barriers. This requirement applies to private, non-profit hospitals, which comprise about 60% of all hospitals in the country (39).

Transportation Needs

5. In the past 12 months, has lack of transportation kept you from medical appointments, meetings, work, or from getting things needed for daily living? (Check all that apply)

- ☐ Yes, it has kept me from medical appointments or getting medications
- ☐ Yes, it has kept me from non-medical meetings, appointments, work, or getting things that I need
- ☐ No

Exhibit 2-3. Transportation-related questions of the accountable health communities core health-related social needs screening questions (38).

To conduct a CHNA, hospitals are required to (39):

- Identify the significant health needs of the community, prioritize those needs, and identify potential measures and resources available to address the needs.
- Include input from “persons representing the broad interests of the community.”
- Provide an implementation strategy addressing each significant health need identified.

Hospitals are encouraged to collaborate with other community organizations and facilities. The Association for Community Health Improvement has developed a nine-step process for developing a CHNA (40); see Exhibit 2-4.

Transportation has not been a key feature of CHNAs to date, with CHNAs focusing more on health conditions, behaviors, and clinical care (39). This may be due to perceptions that transportation and other social determinants of health are beyond the purview of a hospital. Those CHNAs that did address some of the social determinants of health often did not attempt to address them in their required implementation strategy, possibly because such issues are long-term problems.

The National Center for Mobility Management suggests that community-based mobility managers can work with hospitals in developing their CHNAs and help them address transportation needs and problems that may be identified.



Exhibit 2-4. Nine-step pathway for conducting a CHNA and developing implementation strategies (40).

Information About Available Transportation Options

Another information-sharing strategy involves marketing existing transportation programs to build ridership and community buy-in, especially for new transportation programs. Health-care providers and patients may not be aware of what transportation services are available or may not be fully educated on how to use those services. Information on eligibility, cost, hours, and other critical details should be widely disseminated so potential users may utilize the service.

Awareness-raising campaigns should be created in order to educate both community residents and providers on how to access available transportation (41). One of the case studies included in Chapter 5 of this report provides an effective example of how such information sharing benefits and improves access to health care. This is often a mobility management function as is typified by Capital Metro in Austin, Texas, and its rural partner, Children and Adults Rural Transportation Service (CARTS).

Patient Transportation

Revisions to federal law relating to prohibitions of “kickbacks” in the Medicare program specifically address the ability of health-care providers to provide transportation for patients with a ruling in December 2016—Revisions to the Safe Harbors Under the Anti-Kickback Statute and Civil Monetary Penalty Rules Regarding Beneficiary Inducements (35).

With the ruling, “eligible entities,” which include health-care providers such as hospitals and clinics (but excluding entities that primarily supply health-care items such as pharmacies), are allowed to fund local, non-emergency transportation for patients and shuttle services for patients and others to access medically necessary services and items within specific parameters. The transportation can be free or discounted. Health-care providers and unrelated businesses may contribute together to provide the transportation.

The ruling defines the details.

- What types of transportation can be provided? Transportation can be provided on a door-to-door basis as well as shuttle transportation service. Health-care providers can provide the transportation or use vouchers or other subsidy methods to provide transportation for patients.
- What does local mean? Local transportation is defined as up to 25 miles in urban areas and 50 miles in rural areas.
- Who can be served? Individualized transportation (door-to-door) is to be provided for “established patients” including anyone who has made their first appointment.

In various communities, health-care providers, including hospitals, have provided direct support for patient transportation before the 2016 ruling, through in-house van service, allowances, special arrangements, or waivers from the Anti-Kickback Statute. Now, however, the revisions to the statute clear the way for health-care providers to directly improve transportation for their patients.

The Business Case for Improving Transportation Access to Health Care

Making the business case for transportation is primarily targeted to health-care providers. For transportation providers, the currency is ridership, and new ways to generate ridership makes the case for itself. Public transit providers are always looking to generate more fixed-route ridership by selling passes and tickets to health-care providers. Private providers such as

transportation network companies (TNCs) and taxis understand this and actively pursue contracts and agreements with health-care providers. These and more examples will be discussed in detail in Chapters 4, 5, and 6.

The Business Case for Health-Care Providers

The business case for health-care providers is a little less straightforward. Most of the research finds that improved access to health care will provide for greater patient encounters. Research also indicates that improved access to transportation can contribute to reduced missed appointments. Research regarding transportation for veterans reported that, after a reimbursement rate increase, eligible veterans were 6.8% more likely to have an outpatient encounter, noting that the policy change was successful in increasing access to VA care for patients. The urban and rural changes were similar (42).

Other studies have demonstrated increased compliance with health-care visits after receiving taxicab vouchers (17, 43). Researchers have speculated that the corresponding improved rates of follow up may be related to the psychosocial impacts—receiving taxi vouchers or bus passes conveyed a sense of urgency for follow up or a sense of commitment from staff (43).

A recent study conducted among Medicaid patients had interesting results in an attempt to improve access and reduce missed appointments (44). The study's authors asked the question: What is the association between offering TNC-based transportation services (e.g., Uber, Lyft) as opposed to the existing Medicaid NEMT network and missed appointment rates for primary care patients? In other words, does the use of TNCs improve the missed appointment rate over the use of the existing Medicaid NEMT network? This clinical trial found that the missed appointment rate was not significantly different between patients offered TNC transportation services compared with those that received regular Medicaid NEMT. In essence, the use of TNCs produced similar results to the existing NEMT network that patients were using.

Transportation Is Cost Effective

Missed appointments and the related postponement of care costs the U.S. health-care system up to \$150 billion annually (45). Health-care providers lose revenue when patients miss appointments, and health-care costs may rise due to increased emergency department visits resulting from postponed care. In addition, patients and third-party payers (including commercial insurance, Medicare, and Medicaid) end up paying more when care is inappropriately sought in the emergency department.

In an effort to reduce expensive and ineffective care, new alternative health-care payment and delivery models are being implemented through changes in the health-care system implemented by the ACA. These changes shift health-care incentives from a volume-based system to a value-based system whereby providers are incentivized to provide cost-effective care.

Cost effectiveness is foundational to the ACA's new alternative health-care payment and delivery models, such as accountable care organizations (ACOs). An ACO is comprised of a group of physicians, hospitals, and health-care providers who join together to provide coordinated, high-quality care to the patients they serve (46).

Coordinated care is intended to support patients getting the right care at the right time. When an ACO is effective in delivering high-quality care and reducing costs, it will share in the savings it achieves for the payer (e.g., commercial insurance, Medicare, Medicaid).

Although ACOs are not paid to provide transportation, some ACOs are serving as a central hub to engage with community organizations to provide transportation for patients to access

health-care services (47). In a survey of ACOs, 84% of respondents indicated that transportation services were needed to improve the overall health of the communities they serve. In addition, one out of 10 ACO respondents indicated they are offering or planning to offer transportation services to increase access to health-care and social services. ACOs recognize the role that transportation plays in reducing health-care costs and improving patient outcomes.

In a study conducted by Florida State University, researchers found that if one out of every 100 trips prevented a 1-day stay in the hospital, the return on investment would be 1,108%, a payback of \$11.08 for every dollar invested by the state of Florida in funding medical mobility programs (48). While it may require policy-level or practice-level changes, addressing transportation issues in health care on a larger scale can be cost effective in certain situations (7).

A comprehensive study of the VA's VTS has found cost savings to the VA in several ways (34).

- Using its own in-house, VTS resources to provide trips avoided the VA's cost of using out-sourced services provided by third-party vendors.
- A decrease in missed medical appointments due to patient cancellations was shown in VA medical centers with a VTS program. Those centers showed a decrease in the percent of cancelled appointments of 3.5 times greater than medical centers without a VTS program.
- Timely discharges from in-patient hospital stays were possible where VA medical centers with a VTS program were able to transport patients who were discharged from the hospital but lacked transportation. Without transportation, such patients would otherwise require another (unjustified) hospital stay. One of the VA medical centers calculated a savings of almost \$500,000 in 6 months from the use of its VTS vehicles to take patients home at the time of discharge, avoiding the costs for additional days in the hospital.
- The number of emergency department visits by patients who used VTS services decreased by a greater share than comparable patients without transportation who did not use VTS services.

What Can Communities Do to Improve Transportation to Health Care?

Communities can—and have done so in various examples around the country—take an active role or become an involved participant in planning for improved transportation access to health care. This research project has recognized examples of strategies identified in the literature as well as through outreach and surveys conducted by the research team. A number of these strategies are listed below, with more information and discussion of examples provided in Chapters 5 and 6 of this guide.

- Coordinate community planning between public transportation and health-care providers to prioritize needs assessments and data about transportation barriers to health care (2). Transportation and health-care providers should engage early in the process.
- Support the role of mobility management to coordinate transportation options for community residents facing transportation problems in seeking health care (49).
- Design and provide effective and high-quality public transit for the community, which can reduce the need for more costly specialized transportation service.
- Work with the state's Medicaid agency to ensure that safe and accessible Medicaid NEMT is available with vetted and trained drivers and without undue restrictions for those beneficiaries who do not have reliable and affordable transportation access to health care.
- Explore available federal programs and grants that may support improved transportation to health care. One example is the Racial and Ethnic Approaches to Community Health (REACH) grants that support community-focused interventions to reduce specific neighborhood-based health-care disparities by engaging local leaders, building community partnerships, and creating sustainable programs (4).

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- Seek support from foundations that focus on improving access to health care for vulnerable population groups. There are a number of examples that depend on support from local hospitals or medical center foundations.
- Identify community and health-care organizations that understand that transportation is a barrier to health care and work toward cooperative arrangements with those organizations to plan transportation solutions.
- In rural areas, reduce costs for transportation to health care by channeling ridership to a set schedule to the extent possible, as opposed to providing more personalized one-on-one trips that are more costly.

Summary

The availability of transportation influences the ability of individuals to access health care, whether in urban, suburban, or rural areas. Those lacking appropriate or available transportation miss health-care appointments, resulting in delays in receiving medical interventions, which may then lead to poorer health outcomes. This in turn contributes to the rising cost of health care.

Research has found that access to reliable and affordable transportation is associated with increased utilization of health services and improved health outcomes; that improved access to health care will provide for greater patient encounters and reduced no-show rates; and that readily-available transportation can prevent extra stays in the hospital and generate overall cost savings.

Available data do not show exact numbers of patients affected by a lack of transportation; according to research, the range is as great as 10% to 50% of patients who report transportation as a barrier to accessing health care.

Certain population groups have been identified as more likely to have transportation needs impacting access to health care. These include the elderly, those with disabilities, individuals with lower incomes, veterans using the VA's medical system, Native Americans, patients with chronic diseases, and those living in isolated rural areas.

Barriers to improving transportation access to health care include transportation infrastructure issues—for example, limited or ineffective public transportation service; travel distances to access health care that are related to the location of health-care facilities in relation to the location of their patient population; and limited dialogue, information sharing, and coordination between the health-care and transportation sectors that otherwise might work toward improving transportation access.

While such barriers are often real, through surveys and outreach, the research project identified examples of arrangements and partnerships between transportation and health-care organizations that have improved transportation access to health care. These are described in Chapters 5 and 6 of this report.

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CHAPTER 3

Working Toward a Partnership: Health Care and Transportation

Introduction

Improving the role of transportation for health-care access requires that the transportation and health-care sectors communicate so that each understands the perspectives of the other and the actions needed to improve access. Effective communication can lead to collaboration and a partnership so that the two sectors work together to address not only each sector's objective—transportation in serving its passengers and health care in serving its patients—but also a shared objective of improving access to health care.

But how does the communication start? What does a health-care facility do when it realizes it needs to address patient transportation comprehensively rather than periodically providing a taxi voucher? Does the health-care facility know that its community's public transportation provider may be a viable option for improving patient access?

On the other side, what does the community's public transportation provider do when a rider survey finds that passengers ask for service to a hospital beyond its service area? Does the community transportation provider know who to contact at the hospital to explore a possible solution for its passengers?

Initiating the Process

This chapter explores communication between health-care entities and community transportation providers and how that communication might develop into coordination, collaboration, and a possible partnership between the organizations that improves access to health care. A focus in this chapter is the community's public transportation provider but not to the exclusion of other providers, such as local non-profit agencies with vans and the new mobility services available in many communities that are also options for improving transportation access to health care.

This chapter, from communication to coordination, sets the stage for the collaboration needed to develop the transportation solutions that follow in Chapter 4.

The chapter begins with an overview of common factors affecting transportation to health care and then addresses the various dimensions of working toward a health-care—transportation partnership:

Why Should the Health Care and Transportation Sectors Communicate and Collaborate?

Who are Potential Health-Care and Transportation Participants?

What Are the Specific Transportation Needs?

Start the Dialogue

Develop a Shared Goal

Possible Barriers to Collaboration

Resources for Addressing Potential Barriers

Support from the Public Health Sector

It is important to recognize that the public health sector also understands the importance of community transportation. Health care and public health are related as two components of the overall health sector. Health care focuses on services for individuals while public health focuses on protecting the health of a community at large, but, significantly, both components benefit from supporting community transportation. The Centers for Disease Control and Prevention (CDC) makes this case with a new action guide:

https://www.cdcfoundation.org/sites/default/files/files/HI5_TransportationGuide.pdf

The guide promotes increasing support of public transportation systems, finding that adequate access to public transportation is associated with various positive health outcomes for the community overall, such as more physical activity and better air quality. While the focus of the public health differs from that for health care, the CDC guide highlights opportunities for public health to partner with public transportation, aligning with objectives of this TCRP guidebook to improve access to transportation through collaborations and partnerships with health-care organizations.

Common Factors Affecting Transportation to Health Care

Individuals with limited access to health-care-related transportation often experience challenges related to geography, complex health-care needs, and costs.

Geography and rurality. Urban and rural communities may face different barriers to accessing transportation to health care. Rural residents often travel long distances to access medical care. In 2018, rural residents lived an average of 10.5 miles away from the closest hospital, compared to an average of 4.4 miles for urban residents (1). Rural transportation concerns often include lack of infrastructure, low population density, and long travel distances to access medical services; many areas in the West see trip distances that exceed 50 miles on a routine basis (Exhibit 3-1). When communities are sparsely populated and spread out over large expanses of land, local transportation providers may lack the resources and ridership to support fixed-route public transit. Low population densities can also pose challenges to sustaining taxi service or TNCs.

In urban areas, some riders may have difficulty navigating complex transit systems or lack a direct route between their home and their health-care provider. Even when fixed-route systems are available to urban residents, patients who are elderly or have complex health conditions



Exhibit 3-1. This community in Arizona is over 50 miles from specialty care. Photo courtesy of KFH Group.

may not have the capacity to wait at a stop or navigate a transfer among routes. Americans with Disabilities Act (ADA) paratransit can be an option for some. Lack of comfort or familiarity with technology can also create challenges to using applications to arrange rides with technology-based, on-demand mobility services or looking up transit schedules online.

Considerations for people with complex needs. Passengers may have needs or conditions that affect their ability to identify a driver, board a vehicle, or sit for long distances.

- People with mobility limitations may need assistance getting to and from their home to the vehicle, with stepping in and out of vehicles, and with navigating stairs. In addition, people who use wheelchairs often need wheelchair-accessible vehicles with special design features including ramps or lifts.
- Some passengers may need assistance lifting or moving medical equipment such as oxygen tanks.
- Other passengers may need to travel with a caretaker or a service animal.
- People with visual impairments may need accommodations to schedule rides (e.g., using a phone number instead of a phone application). People with visual impairments may need assistance with identifying the driver and navigating from the vehicle to their destination.
- People with certain mental health conditions may have difficulties riding in a vehicle with other passengers or navigating large crowds of people.

Cost. Many passengers, especially those with fixed or limited incomes, may be unable to afford transportation to access health-care services. While some insurance programs cover the cost of NEMT, many patients do not qualify for transportation assistance and cannot pay for the ride out of pocket.

Lack of familiarity with transportation systems. Patients may need additional support to use existing transportation services and resources. Some transportation programs offer travel training to help certain populations, such as older adults or people with disabilities, learn how to use public transit and navigate to their destination. Other programs also provide assistance to populations with limited English proficiency.

Rio Grande Valley Health Alliance: An ACO Focused on the Social Determinants of Health

Rio Grande Valley Health Alliance (RGVHA) is an Accountable Care Organization (ACO) located in McAllen, Texas, part of an urban area with a population of 900,000 on the southern border of the United States. RGVHA uses TNC “companies Lyft and Uber to improve access to NEMT for its patients. RGVHA funds transportation to and from hospitals, clinics, dialysis centers, and other health centers. For some patients who were “prescribed” exercise by their physician, RGVHA also arranges for transportation to and from the gym. Offering transportation services helps set RGVHA apart from other Medicare programs in the region.

Why Should the Health-Care and Transportation Sectors Communicate and Collaborate?

Perhaps the most straightforward answer is that communication can lead to collaboration and then a partnership to improve transportation access to health care, benefiting both an individual’s and societal health. However, health care and transportation are two distinct sectors, and the reason why they might want to connect and coordinate are not necessarily the same.

Understanding the different motivations of each side and establishing a common vision may be critical to planning a successful partnership to improve transportation access.

Health Care Organizations’ Perspective

Receiving timely health-care services is essential to preventing disease, maintaining good health, and diagnosing and treating illnesses. Health-care providers are invested in ensuring that their patients can safely and reliably access the care they need. Justifications for getting involved in transportation to health care can include:

- **Improving health-care outcomes.** In *Transportation to Healthcare Destinations: How a Lifeline for Patients Impacts the Bottom Line for Healthcare Providers*, the National Center for Mobility Manage-

ment describes the benefits of health-care transportation and the costs of missed appointments (2). Missed appointments are also missed opportunities to identify and treat health conditions before they worsen. No-shows represent loss of potential revenue for the health-care provider.

- **Promoting an organization’s mission and vision.** Collaborations that improve health outcomes may strongly align with the stated values of health-care organizations. Increasingly, health-care organizations are focusing on the root causes of health and the social factors that contribute to well-being. Transportation is a key social determinant of health.
- **Fulfilling commitments to community health.** Some organizations, such as non-profit hospitals, are responsible for investing in activities that benefit their local communities. Some hospitals address transportation to health care as part of their “community benefits” program, either through offering their own transportation program or by subsidizing bus passes or taxi vouchers.
 - Non-profit hospitals must provide “community benefits” to address the needs of the communities they serve. Hospitals can engage in community health improvement or community building activities as part of their community benefits, which can include investing in transportation assistance and services.
 - Non-profit hospitals must conduct CHNAs periodically. Through the CHNA process, hospitals identify and describe the major health needs of their community and service area and develop plans to address key health issues. CHNAs can help inform priority areas for community benefits.
 - Health departments must periodically develop community health assessments (CHAs) as part of their accreditation process, which involves identifying major health needs for the community. Health departments often articulate strategies to act on the findings of CHAs through community health improvement plans (CHIPs).

- **Addressing the social determinants of health.** Health-care providers, insurers, and stakeholders are increasingly moving toward addressing the social determinants of health. The availability and accessibility of public transportation affect a community's health-care access and may in turn affect a person's health status. Organizations investing in these social determinants may be interested in working with their community transportation providers to improve health outcomes among community members.
- **Improving quality by preventing exacerbations of existing conditions.** Consequences of missed medical appointments may include avoidable use of emergency services and hospitalizations. As policymakers and insurers become increasingly focused on quality of care, health-care providers are emphasizing the importance of prevention. Health-care providers may have substantial incentives to ensure that patients reliably attend scheduled appointments.
- **Attracting new patients and offering competitive services.** The CMS administers a five-star quality rating system to help measure the Medicare beneficiaries' experiences with their Medicare Advantage plans and with nursing homes. A health facility's rating has a major impact on its ability to attract new patients and sustain operations in a competitive field. For example, some insurers determine eligibility for in-network services based on quality ratings. In order to remain competitive, health-care systems may invest in services that increase patient satisfaction with care, including transportation services.
- **Offering information about existing resources to patients.** Health-care providers are often well aware of their patients' challenges with navigating public transportation, including lack of awareness of available routes and schedules. Some providers work with public transportation agencies to publicize existing transportation opportunities, including available bus routes and stops.

Rides Plus: Increased Rural Ridership in Southern Illinois

Rides Plus is a call center funded by Rides Mass Transit District, a federally funded public transportation agency that serves 17 counties in Southern Illinois. Rides Plus works with transportation agencies and health-care providers throughout the service area to help increase access to NEMT. Health-care providers contact Rides Plus to schedule rides to appointments for their patients. Rides Mass Transit District originally participated in a pilot project that preceded Rides Plus. The pilot demonstrated substantial increases in ridership after using the call center and mobility management services. Increased ridership led Rides Mass Transit to invest in Rides Plus.

Community Transportation Provider's Perspective

Coordination and collaboration with health-care organizations can support the mission and service of the community's public transportation provider by:

- **Identifying the specific transportation needs** of health-care organizations' patients to help the public transportation provider better plan its services.
- **Justifying possible implementation of new services** that improve health-care access, expanding the footprint of the public transportation provider.
- **Generating ridership** with new trips taken by patients of local health-care organizations.
- **Increasing the standing of the public transportation provider** in the broader community with new relationships established with local health-care organizations.
- **Enlisting support from local health-care organizations** to advocate for increased local funding for public transportation, building on new relationships with the community's health-care organizations.
- **Promoting coordination** of local transportation services through planning efforts that identify the role that local non-profit agencies and other community transportation providers might play in supporting improved access to health-care facilities.
- **Adopting technology and innovation** through collaborations with health-care providers as new technologies and applications are introduced to the health-care industry. For example, by participating in applications such as Kaizen Health, the public transportation provider can allow patients/riders to schedule trips through an integrated mobility management platform.

- **Promoting healthy communities** by actively increasing access to health care while improving local mobility.
- **Providing financial support by sponsoring public transportation service** through a partnership with a health-care provider. This strategy is seen more often in urban areas, but rural areas such as Paris, Texas, have enlisted health-care providers as sponsors of the community's public transportation provider with benefits commensurate with their sponsorship level.

Considerations when Pursuing Collaborations with Health Care Organizations

A public transportation provider should consider a number of issues when considering collaborations with health-care organizations:

- Highlight strengths of the public transportation provider: fully-trained drivers who receive comprehensive background checks prior to hiring; agencywide and extensive safety program; well-maintained vehicle fleet; wheelchair-accessible vehicles.
- Propose transportation services that can realistically be provided. If the health-care organization requires same-day service, ensure operational capacity and capabilities to provide that level of service.
- Obtain support from the public transportation provider's executive director and board of directors to pursue formal health-care collaborations.
- Prepare to answer questions regarding the Federal Transit Administration (FTA) Charter Bus rules if there is payment involved or if the service is not open to all ("open door" service).
- Prepare to answer questions about patient privacy that govern HIPAA (Health Insurance Portability and Accountability Act), which establishes standards regarding the protection of patients' medical records and personal information.
- Ensure the health-care organization's familiarity with the rulemaking by the U.S. Department of Health and Human Services (HHS) and the updating of the "safe harbor" regulations that now allow health-care providers to fund or provide local non-emergency patient transportation with some limits.

Who Are Potential Health-Care and Transportation Participants?

Potential participants that might connect, communicate, and work toward improving transportation access to health care include a range of health-care and transportation organizations.

Questions to Ask

What are the health-care providers in the community?

What are the transportation providers in the community?

What organizations are involved in advocating for the needs of the target population?

Are there existing community collaborations in place related to transportation or increasing access to care?



Health Care: Identifying Stakeholders and Collaborators

Primary and Specialty Care Facilities and Hospitals

Primary and specialty care facilities and hospitals are all health-care organizations that may have a direct interest in promoting transportation access for patients (Exhibit 3-2).

Primary care facilities may include different kinds of practices and health centers that provide non-urgent care for common medical concerns. Patients may need transportation to receive care for issues before they become urgent.

Specialty care may include facilities that focus on a special health condition, such as dialysis clinics, or that provide specialized services, such as ambulatory surgical centers. Hospitals may be interested in coordinating efficient transportation home for patients who have been recently discharged.

Transportation providers interested in getting involved in health-care transportation may need to reach out to the following staff at health-care organizations:

- **Community relations teams.** Some health-care organizations may have staff dedicated to building relationships with community partners. Some hospitals may also have community benefit programs that focus on funding investments in community health and well-being.
- **Case managers and care coordinators.** Many health-care organizations use care coordinators or case managers to help address the physical and social needs of patients. Case managers and care coordinators are often well-aware of their clients' transportation difficulties and could be important collaborators for transportation providers. These staff often set up informal relationships with local transportation providers.

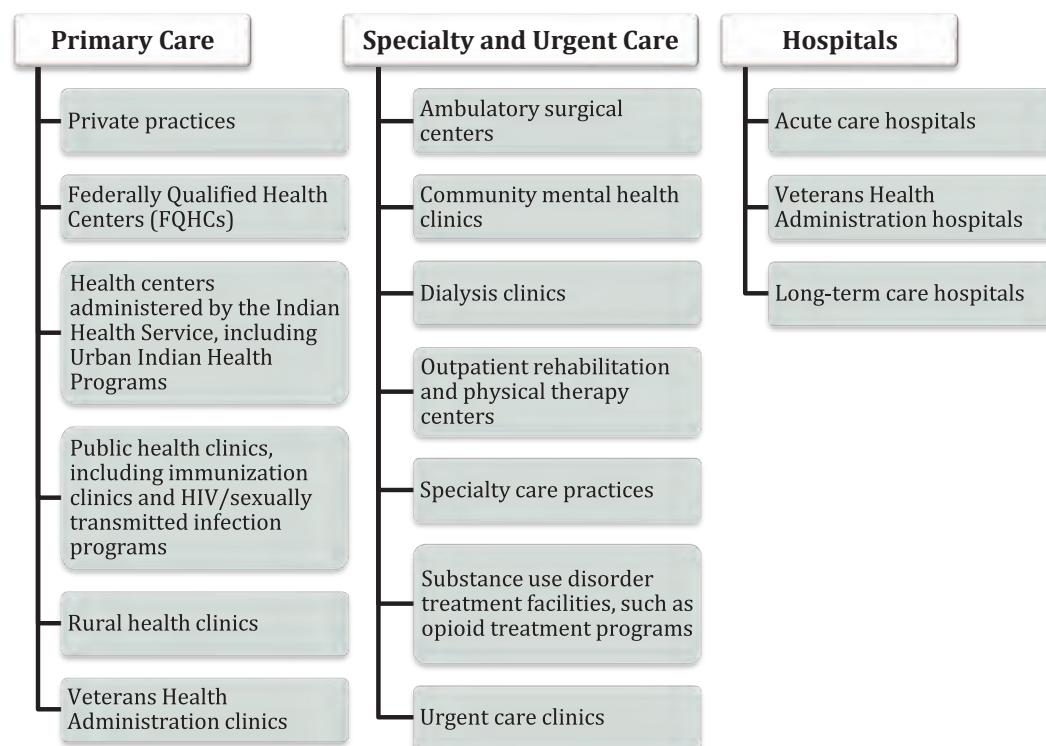


Exhibit 3-2. Different care facilities by type.

- **Health-care providers.** In individual practices, health-care providers often serve as champions for organizational change. Health-care providers can bring different types of health-care stakeholders together, including leadership and frontline staff, to advocate for change.
- **Leadership.** New partnerships with outside entities may require sign-off by the leadership of an organization, such as a chief executive officer, president, or board of directors.

Insurance Providers

Insurers are critical partners for transportation providers interested in offering health-care transportation. Insurers are often interested in the cost benefit of providing coverage for services. Insurers may be interested in working with transportation providers if they can see evidence that initial investments in transportation will prevent future exacerbations of chronic health conditions or avoid costly emergency department visits or hospitalizations. Special health-care management organizations, such as ACOs, are tasked with managing a wide range of services for members in exchange for participation in shared savings. Many of these organizations acknowledge the role that transportation plays in health. Exhibit 3-3 lists a range of insurance providers.

Insurers that provide Medicare Advantage plans may be particularly interested in a collaboration with the community’s public transportation provider given a new CMS ruling in 2019. This ruling gives Medicare Advantage plans more latitude to provide patients with supplemental services supporting the social determinants of health that previously were not covered by Medicare. CMS had previously required allowable supplemental benefits to be “primarily health related.”

According to CMS, Medicare Advantage plans can now provide transportation for those with chronic diseases to meet non-medical needs, such as grocery shopping. For patients with heart disease, this might include delivery of healthy food and produce. For patients with diabetes, this might include trips to a diabetes education program or to see a nutritionist. These are opportunities for local transportation providers (3).

Leveraging Health Insurance Resources to Cover the Cost of Transportation

Receiving early, prompt, and consistent health care can help individuals identify and treat health issues and manage their chronic conditions. People who have a usual and ongoing source of care are often able to avoid preventable health complications, visits to the emergency

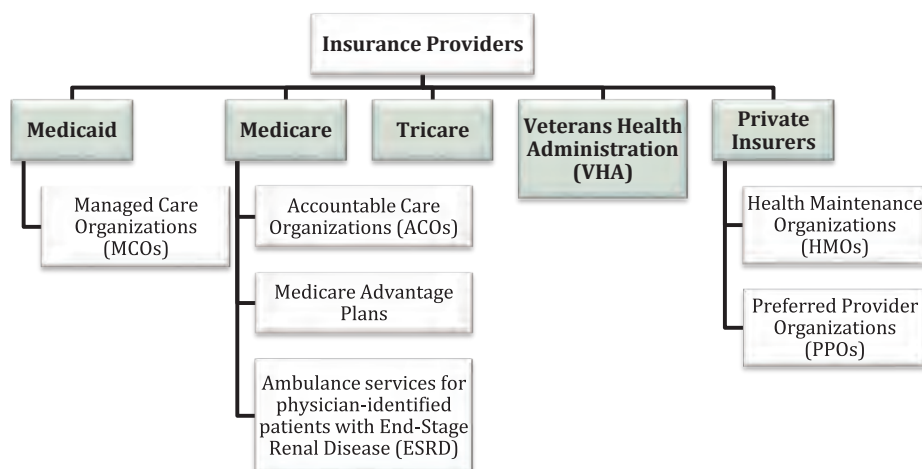


Exhibit 3-3. Range of insurance providers.

department, and hospitalizations. As health insurers are motivated to decrease costly emergency and hospital services, they often invest in transportation services to help ensure that enrollees can access the care they need. Health insurance programs are listed in Table 3-1.

Connections to Transportation

Transportation providers should consider what types of health-care organizations are within their service area and what types of transportation services they might be able to provide. A health-care organization may be part of a larger health-care network. For example, ACOs and managed care organizations (MCOs) are often made up of groups of hospitals and providers who agree to coordinate care for the population of patients. Transportation providers may reach out to individual physician's groups within an ACO/MCO or may determine

Table 3-1. Health insurance programs.

MEDICAID	Medicaid is a public insurance program that serves people with low or limited incomes. Medicaid is jointly funded by the federal government and states and is administered at the state level. Each state establishes eligibility requirements, which are typically based on annual income relative to the federal poverty level, household size, and other qualifying factors (e.g., age, disability, and medical needs). Most Medicaid programs offer Medicaid NEMT services to enrollees who need transportation assistance. States use a range of options to provide Medicaid NEMT, including third-party brokerage firms, direct delivery of services (contracted), and vouchers, passes, or tickets for public transportation.
MEDICARE	Medicare is a public insurance program that serves people when they reach 65 years of age and people who are under 65 years of age with disabilities, amyotrophic lateral sclerosis (ALS), or end-stage renal disease (ESRD). Traditional Medicare hospital and health insurance plans do not cover NEMT. However, the CMS has also approved some special Medicare plans and models that are seeking to improve health outcomes, increase quality of health care, and decrease costs of care. Some of these models are also involved in providing transportation assistance:
	Medicare Advantage Medicare Advantage are health insurance plans offered by private companies that cover all Medicare services. CMS pays these private insurers a fixed amount of money per member per month. Medicare enrollees can select their own Medicare Advantage plan, which creates competition among private companies to attract beneficiaries to their services. Transportation assistance is one among the many benefits that a Medicare Advantage plan may offer to enrollees. The type of transportation covered (e.g., taxi vouchers, Lyft) depends on the plan.
	Accountable Care Organizations (ACOs) ACOs are groups of health-care providers and hospitals that voluntarily form networks and partnerships to coordinate care for Medicare patients. ACOs are accountable for the quality and cost of the care they provide and receive financial incentives from CMS for reaching target quality and spending metrics. ACOs are motivated to ensure their patients receive timely care, so they often invest in different transportation assistance. Like with Medicare Advantage plans, transportation benefits vary by ACO.

(continued on next page)

Table 3-1. (Continued).

<i>There are two key health-care programs for veterans, active members of the military, and their families:</i>	
VETERANS HEALTH ADMINISTRATION (VHA)	The VHA , part of the Department of Veterans Affairs (VA), directly provides health-care benefits to eligible service-connected veterans. These veterans receive care at a network of VA medical centers, outpatient clinics, and nursing homes. Veterans who receive care through VA benefits can access the Veterans Transportation Program at little or no cost.
TRICARE	TRICARE serves active and retired Uniformed Service and National Guard/Reserve members and their families. TRICARE offers several different health plans with different eligibility requirements, including service status, age, and relationship to the sponsor. TRICARE reimburses qualifying beneficiaries for certain kinds of approved, non-emergency, medically necessary transportation to specialty care that is located more than 100 miles from their primary care provider's office. Beneficiaries make their own travel arrangements, receive TRICARE authorization, and direct reimbursement from TRICARE after submitting itemized receipts.
PRIVATE INSURERS	Most of the insured population in the United States receives health coverage from private insurers. The large majority of people with private health insurance plans are covered through an employer or union, and a small percent purchase coverage directly from a private company. Private insurers may choose to offer transportation assistance to achieve long-term cost savings from reduced emergency department visits, hospitalizations, and exacerbations of chronic conditions. Private insurers may offer a range of transportation options, including contracting with private transportation providers and offering vouchers for existing transportation services.

whether the health-care organization has a department that focuses on building community relations and addressing the social determinants of health.



Transportation: Identifying Stakeholders and Collaborators

On the transportation side, a key participant is the community's public transportation provider. Communities typically have transportation providers that should be invited to participate including non-profit organizations such as human service agencies with vans that serve their clients and private companies ranging from taxis to medical van companies to new on-demand mobility providers such as Uber and Lyft.

Other community organizations and stakeholders may also be possible participants, depending on the particular transportation problems to be addressed and the design of the process established to work toward solutions. For example, in a large urban area, a representative of the organization responsible for administering FTA Section 5310 program funds may be helpful in identifying transportation needs of seniors and people with disabilities. In a more rural area, the local community action agency or another local agency that focuses on the needs of low-income individuals, may be a potential stakeholder with helpful input for the process. Table 3-2 lists various types of community transportation providers and how to contact them.

Table 3-2. Community transportation providers—who and how to contact.

Community Transportation Providers	Who/How to Contact
Public Transportation Provider	Executive director Mobility manager Planning director/manager
	Information on public transit agencies by state is available through APTA (American Public Transportation Association) at www.apta.com. Use the “Transit links by state” at the top of the website. Information on a state’s rural public transit agencies can be requested from each state’s Rural Transit Assistance Program (RTAP) Manager, with information through the National RTAP website (www.nationalrtap.org) under the link “State RTAP.”
Human Service Agencies	The community’s 211 service can identify human service agencies that have transportation service. “211” is a toll-free number available in many communities with information on human services including agencies that provide client transportation.
Volunteer Services	The community’s 211 service should be able to identify volunteer transportation programs.
Taxi Companies	Taxi company owner or manager A list of licensed companies may be available through the community’s business licensing department or Chamber of Commerce.
Transportation Network Companies (TNCs) and Other On-Demand Mobility Providers	Two widely known TNCs are Uber and Lyft. Both companies have services designed to support health-care providers.
	Uber Health: https://www.uberhealth.com/ Lyft and its Lyft Concierge service: https://www.lyftbusiness.com/industries/healthcare Other on-demand mobility providers include UZURV, Via, and zTrip. Other smaller providers have started service and are expanding, such as SendaRide based in Oklahoma. https://www.sendaride.com/

Other Potential Stakeholders and Collaborators

Health-care and transportation organizations are the primary participants for improving transportation access to health care. However, other community organizations and individuals may also play a role supporting efforts to improve access to health care:

- Local non-profit agencies providing services for low-income individuals and families, seniors, and people with disabilities.
- Local department of health.
- Organization administering FTA Section 5310 program funds.
- Metropolitan planning organizations (MPO) and councils of government.
- Local governments.
- Riders/patients. A survey of the public transportation provider's riders can identify access problems to health care. Questions directed to patients about possible transportation problems can elicit useful information about transportation access problems.
- Caregivers and families. Many individuals require or benefit from the assistance of caregivers or family members to travel to appointments. Caregivers can provide additional context about transportation access and mobility needs.
- Frontline staff at health-care organizations.
- Funders. Many successful transportation programs consider issues of funding and sustainability from the outset of collaboration. Funding availability from federal agencies, state agencies, local government, insurers, philanthropies, and multiple other sources often determines the size and scope of a program. For example, a program may be designed to show a return on investment or improved outcomes among a target population. Understanding the priorities and interests of different funders can help ensure long-term sustainability.
- Other stakeholders. Other organizations and individuals that work with the target population may contribute knowledge and resources for planning a transportation program. Social workers, case managers, care coordinators, and other stakeholders often have valuable insight into the barriers and facilitators to transportation access.

There may also be existing collaborations or community forums addressing community needs, including health care. Coordination with such groups may support or strengthen efforts to improve transportation access to health care.

Other Organizations That Affect the Social Determinants of Health

Access to health care represents only one facet of health and well-being. Individuals also have other physical, social, psychological, and economic needs that must be met in order to lead healthy lives. Transportation providers may consider reaching out to community organizations that help the community's residents meet these other needs that promote health and well-being. Such organizations include grocery stores and farmers' markets offering fresh foods, recreational facilities, and social services programs such as Women, Infants and Children (WIC) programs. Public transit providers may offer routes or services to many of these destinations as part of their network and that could be highlighted by the transit provider through marketing outreach efforts and mobility management activities.

Identifying Existing Collaborations

Community advisory boards at local health care organizations in transit areas

Local consortia focused on social determinants of health

Advocacy groups focused on populations with limited transportation access, including older adults, people with disabilities, and people with chronic health conditions

What Are the Specific Transportation Needs?

The issues and problems of transportation access to health care may be obvious to those who witness the problems first-hand. The patient appointment scheduler who repeatedly hears patients cancelling

appointments because they cannot get a ride understands there is a problem. However, effectively addressing a transportation problem requires data.

Data that qualify and quantify the transportation problem will facilitate development of possible solutions that target the problem.

Questions to Ask

Who is most likely to miss appointments because of lack of transportation?

What programs are already in place to serve this target population?

What are the resources available to fund transportation services, and what are the eligibility criteria for that funding?

Identifying and Defining Needs

An early step is to identify the category of individuals who have transportation needs related to health care and define their specific needs.

Who Are the Individuals with Needs?

It may be low-income families without reliable private transportation who miss routine medical appointments. It may be dialysis patients with disabilities who lack accessible service to reach their three-times-per-week treatments, or it may be non-English-speaking residents who have difficulty navigating public transportation. It is important to define the target group that needs improved access.

In some cases, the target group may not be known. If a health-care clinic is experiencing high rates of no-shows on Saturdays, for example, research is needed to identify the individuals who are missing appointments. It could be transportation access issues or there could be other factors at play.

Identifying the specific category of individuals can be important for planning improvements as some transportation programs and their funding parameters designate intended beneficiaries. For example, some transportation programs are available to all members of a community, while others are tailored to defined population groups such as seniors and people with disabilities. Transportation programs provided by the VA are designed for military service veterans and generally are not open to others.

What Are Their Transportation Needs?

Identifying the specific transportation needs of the defined category of individuals needing improved health-care access is necessary to consider the options or types of transportation service to meet their needs.

Collecting and Interpreting Data

The next step is to obtain and interpret data about the transportation access issue so that possible solutions can be considered.

To understand the scope of lack of access to transportation to health care, transportation providers may need to have and interpret data about community needs. It is paramount that

Key Questions

What is the target population?

What is the insurance status of the target population?

What is the health status of the target population?

What transportation options are available to patients?

Why are patients not able or willing to use existing transportation options?

transportation providers understand the barriers to health-care access in order to successfully address objectives of health-care providers, such as decreasing no-show rates and missed appointments. In addition, funders often require applicants to describe the scope of the issue in order to determine eligibility for grants.

Community Needs Assessments

Needs assessments may help health-care providers and transportation agencies understand the unmet needs and priorities of community members. Needs assessments typically include a review of key demographic information for local populations, such as the number of households with reported income below the federal poverty level, the distribution of ages, and other key characteristics.

CHNAs: One type of needs assessments are CHNAs—community health needs assessments—which specifically focus on the health needs of community members. CHNAs typically describe health outcomes (e.g., prevalence of chronic conditions), health disparities, and local health resources. The Patient Protection and Affordable Care Act (ACA) requires non-profit hospitals to conduct CHNAs every 3 years. Hospitals must collect information from “persons representing the broad interests of the community” as part of CHNA, including public health department and underserved populations.

CHAs/CHIPs: The Public Health Accreditation Board requires health departments to develop community health assessments (CHAs) every five years. To develop a CHA, health departments identify stakeholders and partners for the planning process, create a shared community vision, collect data, and use data to identify priority issues for the community. CHA collaboratives often outline specific strategies to address priority issues and achieve desired health outcomes through a community health improvement plan (CHIP).

Transit needs plans: Public transit agencies may conduct needs assessments on a periodic basis as part of the ongoing planning function. These plans identify unmet transit needs and highlight potential service improvements and expansions. Developing the plans should include specific attention to access to health-care facilities.

Transportation providers may choose to get involved in existing needs assessment efforts facilitated by the health-care sector to share the perspective of the transportation sector and identify opportunities for collaboration. Hospitals and health departments often convene multi-sector advisory councils to carry out needs assessments. For example, the DC Health Matters Collaborative, which includes health systems, hospitals, and social services agencies, developed the 2019 CHNA for the District of Columbia that identified transportation as a priority health need. The collaborative reached out to the DC Department of Transportation to interview stakeholders for the CHNA process.

Transportation providers may choose to use needs assessment tools to capture existing data about their service area and community needs. For example, the University of Missouri Extension's Center for Applied Research and Engagement Systems (CARES) Engagement Network tool allows program planners to identify information about demographics, social and economic factors, the physical environment, clinical care, health behaviors, and health outcomes. The Robert Wood Johnson Foundation's County Health Rankings help communities compare a range of health and access measures across counties and states.

For example, CARES allows the user to compare information for counties, states, and national averages. Data visualizations can help convey disparities in health and transportation use. The example below (Exhibit 3-4) shows information about Medicaid rates, public transit use for work, and preventable hospital rates among Medicare enrollees in rural Marion County, Illinois.

In another example, the CARES tool allows users to create maps with community data. In this example, a map of Washington, D.C. is overlaid with rates of Medicaid coverage, rail transit stations, and rail transit lines in the metropolitan area (Exhibit 3-5). Transportation providers could use similar maps to understand how access to transportation services may differ among socioeconomic groups or other key indicators (6).

The final example, County Health Rankings, created by the University of Wisconsin Population Health Institute with support from the Robert Wood Johnson Foundation, provides key health indicators by county. The example below (Exhibit 3-6) shows information about uninsured rates, health-care workforce availability, and preventable hospital stays among residents of rural Marion County, Illinois.

Transportation Providers and CHNAs

The National Center for Mobility Management developed a report, *Opportunities to Improve Community Mobility through Community Health Needs Assessments*, to describe the CHNA process and highlight examples of mobility considerations in the CHNA process (4). The authors suggest that transportation providers use the *Transportation to Healthcare Destinations: Resource Guide for Conversations Between Transportation Professionals and Healthcare Professionals* to initiate a conversation with hospitals about CHNAs (5).

Primary Data Collection

Conducting a needs assessment may involve collecting data directly from consumers and stakeholders. Transportation programs may consider conducting focus groups or interviews to

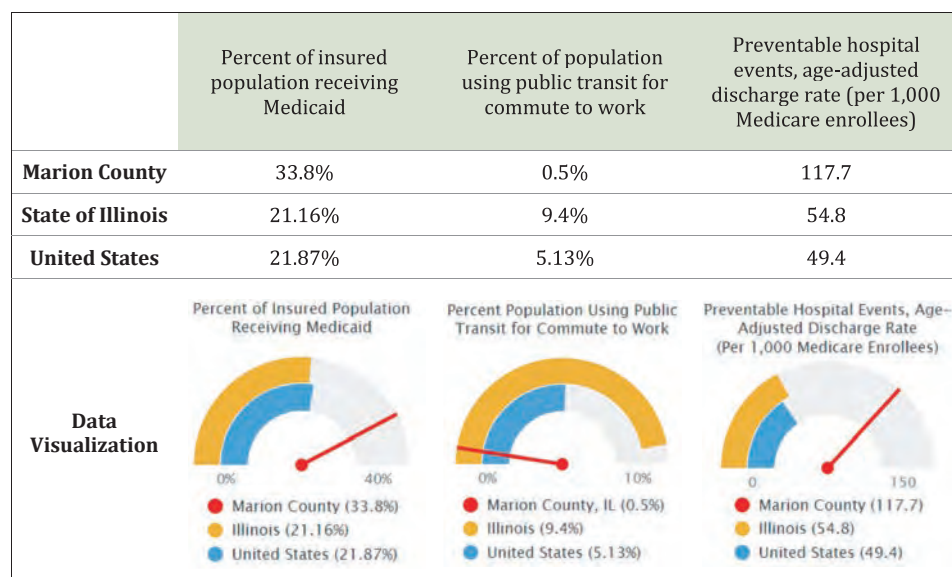


Exhibit 3-4. Medicaid rates, public transit use for work, and preventable hospital rates among Medicare enrollees in rural Marion County, Illinois.

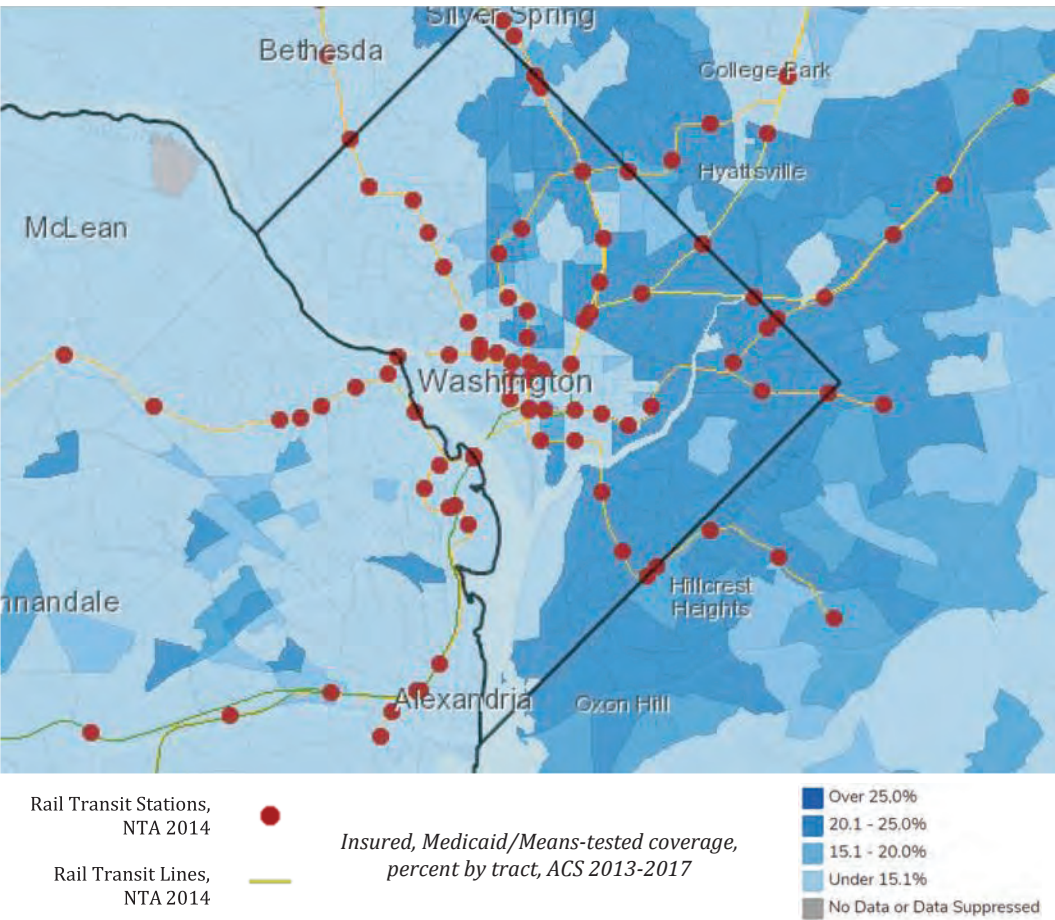


Exhibit 3-5. Medicaid coverage and access to transportation services in Washington, D.C. (6).

	Marion County	Trend	Error Margin	Top U.S. Performers	Illinois	Rank (of 102)
Clinical Care						74
Uninsured	6%		5-6%	6%	7%	
Primary care physicians	2,380:1			1,050:1	1,230:1	
Dentists	2,530:1			1,260:1	1,310:1	
Mental health providers	450:1			310:1	480:1	
Preventable hospital stays	7,277			2,765	4,980	
Mammography screening	42%			49%	42%	
Flu vaccinations	46%			52%	45%	

Exhibit 3-6. Key health indicators by county.

collect in-depth information from a select group of people. For example, a focus group with older adults could provide information about specific health-care needs and accommodations for that population.

Transportation providers can also use surveys to obtain information about health-care access. A community-wide survey can ask specific questions related to access to local health-care facilities and unmet needs. Open-ended questions about “other transportation needs” are another source of information. Potential topics for primary data collection may include:

- What kinds of transportation modes do you use?
- Have you in the past or do you currently use public transportation?
- Do you have any special needs affecting use of public transportation?
- Do you have reliable transportation to health-care appointments?
- Do you miss health-care appointments because of lack of transportation? How often?

Start the Dialogue

Dialogue between the health-care sector and the community’s public transportation provider may start from a random, precipitating event or an unforeseen situation such as in Flint, Michigan, with the city’s drinking water crisis.

Communication may also start in a deliberate way. Perhaps it is initiated by a forward-thinking individual at the public transportation agency or a patient coordinator at a health-care organization. Or a local community group or task force may identify transportation problems for a certain segment of the community’s residents and champion improvements that would include better access to health care.

For example, the collaboration between Lane Transit District (LTD) and health-care organizations in Oregon was started by a visionary individual at LTD who realized that coordinating the transit agency’s services with other transportation providers in the community, including Medicaid NEMT and veterans transportation programs, was the best way to improve transportation. The resulting service—RideSource—schedules health-care trips directly with hospital social workers and with the region’s entity that coordinates health care.

Communication Strategies

While the first communication step may be straightforward—perhaps a telephone call or email from the community’s public transportation agency to a health-care organization to discuss an issue with the transportation service—additional communication between the two sectors may be needed to coordinate efforts toward a solution. This might be:

- Scheduled in-person meetings attended by key representatives of the two sectors.
- A workshop with follow-up coordination activities that are defined.
- A panel discussion to discuss needs and solutions.
- A one-time event, such as a summit, held in conjunction with a particular day or week designated for a particular health-care issue. For example, National Child Health Day is the first Monday every October; National Public Health Week is the first week in April.

Survey the Community to Ask About Access Needs to Health Care

A community-wide survey, conducted as part of a plan for the public transportation provider in rural Dorchester County, Maryland, identified residents’ concerns about the pending loss of the local hospital. Most of the hospital’s services were moving to a larger hospital in the neighboring county. Survey information provided support for increased frequency and funding for the transit provider’s route that served the larger hospital.

Flint’s Drinking Water Crisis Results in Partnership Between Public Transit and Health Department

The partnership in Flint, Michigan, between the Mass Transit Authority (MTA) and the state Health Department began with the city’s water crisis. The Health Department approached the transit agency in crisis mode, asking the transit agency to provide trips for those city residents without adequate transportation to access bottled water, water filters, and medical services necessitated by the crisis.

Once the MTA in Flint, Michigan, had implemented its technology-based, same-day service for health-care trips, “Rides to Wellness,” it approached the community’s large hospital and asked if the hospital would like to join the collaboration. It took the hospital a year of observing Flint’s Rides to Wellness service in the community to decide that “yes,” it could trust the transit agency to provide non-emergency trips for its patients.

Addressing the identified transportation access issue may be accomplished with direct coordination and collaboration between one transportation provider and one health-care organization. Other issues may be more complicated and need attention from multiple community partners, stretch across county lines, and/or require regular ongoing contact among stakeholders. In such cases, formation of a task force, committee, advisory group, or other ongoing mechanism to facilitate ongoing communication and coordination will be needed.

Key Questions to Ask

After the transportation needs have been identified, defined, and quantified to the extent possible, the stakeholders should consider a number of key questions:

- What level of service is needed to address the transportation needs?
- What level of service is the health-care provider willing to accept?
- Are there regulatory issues, such as the ADA or Title VI of the Civil Rights Act of 1964?
- Is the health-care organization able to provide funding?
- Is the public transportation provider a feasible option to provide the service?
 - If not, what other transportation providers in the community might be feasible options?
- When is improved access needed? During defined time periods? Ongoing need?
- Are there patients with special needs?

Chapter 4 provides specific guidance for identifying appropriate transportation services to match the transportation needs of a health-care organization. This is an important step in furthering the dialogue toward a collaboration between a health-care provider and transportation provider.

The Mobility Management Office in Central Texas was involved in developing the Community Health Improvement Plan (7) for the region that included a specific objective targeting transportation:

“By 2021, decrease no-shows for health care appointments at safety-net health care providers by 10%.”

“Work with transportation partners to expand and enhance transportation options for members of the community who have difficulty reliably traveling to healthcare appointments.”

“Connect health navigators with Mobility Management services so they can refer people to the right transportation resources for their needs.”

Understanding Different Conditions of Collaboration

Communication and coordination between the health-care and transportation sectors requires that each side understands the conditions and issues that the other may have in order to move forward with a transportation service that improves health-care access. See Exhibit 3-7.

Develop a Shared Goal

Communication and collaboration should lead the participating health-care and transportation providers to develop a shared goal for improving transportation access. While this is not necessary for a viable partnership, it can be useful to memorialize the mission of the transportation service in broad terms.

Having an articulated goal may also be useful should the partnering health-care and transportation providers seek funding beyond what the partners contribute.

For example, the FTA has a new competitive funding program that is designed to enhance mobility and access to community services, specifically including health care, for older adults, individuals with disabilities,

Health Care Provider	Public Transportation Provider
How can we ensure that patients will safely travel to and from their appointments?	Do we have sufficient interest/ridership to implement and sustain the service?
Is there any additional liability for our facility for trips that originate or end at our doorstep?	Are there any additional liability concerns for our transportation agency? Is our current insurance adequate?
What staff will take the lead for implementing the project? For ongoing efforts?	Would the health care provider accept a pilot service to determine feasibility?
Who will be responsible for coordinating requests for appointments with the transportation provider?	Can we accommodate the needs of all those needing transportation?
How can we ensure patient privacy concerns? What about HIPAA?	Do we have the equipment and staffing needed to implement service?
How is the transportation service funded?	Do our drivers need additional training for the service?
What is our financial obligation?	What funds are necessary to implement, operate, and sustain the service?

Exhibit 3-7. Different concerns for health-care and transportation providers.

and people with low incomes. An application that documents a partnership between a transportation provider and health-care organization and showcases a shared-goal statement to improve access to health-care services would strengthen a grant application.

The responsibilities and tasks for working toward the goal are then needed to plan and implement the transportation service. Determining the type of transportation service and its parameters are the topic of the next chapter.

Possible Barriers to Collaboration

Moving toward a collaborative arrangement for improving transportation access to health care may face issues that the participants raise as possible obstacles to continuation. Experience shows that many of these can be addressed and overcome, see Table 3-3.

Resources for Addressing Potential Barriers

This chapter concludes with brief summaries of resources that may help transportation and health-care organizations address some of the potential barriers that could be encountered when working toward a collaboration. These include summary information on:

- FTA Charter Rule.
- Revisions to the Safe Harbors Under the Anti-Kickback Statute and Civil Monetary Penalty Rules Regarding Beneficiary Inducements.
- HIPAA.
- Possible funding sources for transportation and health-care collaboration.

42 Guidebook and Research Plan to Help Communities Improve Transportation to Health-Care Services

Table 3-3. Potential barriers and their solutions.

Potential Barrier	Issue/Rationale	Solution	Potential Solutions Found in the Guidebook
Bridging gaps and building understanding and relationships between the health-care and transportation sectors.	Health-care and transportation providers may have different priorities, limited time and resources, and lack necessary capacity to formalize a transportation collaboration.	Setting a shared vision and goals can help multi-sector collaborators build mutual understanding. Clearly articulating shared benefits, including financial advantages, can create incentives for collaboration. Informal collaborations can be sought.	Examples include all of the case studies and many of the collaborative practices found in Chapters 5 and 6.
Health-care providers may need to demonstrate improved health outcomes to justify investment in transportation services.	Health-care providers often need to prioritize limited resources on strategies that will yield a return on investment, such as better quality measures (e.g., fewer readmissions after discharge).	During the transportation program planning process, health-care providers may need to assess their capacity to collect data about missed appointments and health-care usage. Program planners may need to involve funders, such as insurers, from outside of the program design to understand outcomes of interest and strategies for demonstrating results.	Kaizen Health, a collaborative practice, is an example. The research in Chapter 2 also discusses this issue.
Lack of funding for transportation services.	Transportation providers may lack funds for capital investments (such as new vehicles), ongoing maintenance, or staffing. Health-care providers may lack funds to spend on non-medical initiatives.	Transportation program planners can consider multiple sources of funding for health-care collaborations. Sponsorships and partnerships can generate revenue for the program. Health-care organizations participating in value-based payments may be willing to invest in transportation services to increase quality of care and patient satisfaction. One-time grant applications may be able to help with large capital investments in transportation infrastructure.	TRAX in Paris, Texas, is an example of sponsorships. Change of service design can reduce costs. CARTS in Texas and Rutherford County Transit in North Carolina are examples of reducing costs while increasing ridership.
Funding silos.	States are increasingly looking to private Medicaid NEMT brokers that may not coordinate service with public transportation agencies and share in the Medicaid funding stream. One result: In rural areas, loss of Medicaid NEMT service weakens rural public transit and its ability to use Medicaid NEMT as matching funds (leverage).	Further improvements in coordination between state Medicaid agencies and public transportation agencies are needed. Clear guidance could facilitate improved coordination between Medicaid NEMT and public transportation service and funding. There is a current outstanding Government Accountability Office (GAO) recommendation from 2016 for Federal Medicaid guidance (https://www.gao.gov/products/GAO-16-238).	LTD, a case study, is an example of breaking down silos in urban areas. HealthTran in Missouri is an example of reducing silos in rural areas.
Health providers may be concerned about adhering to requirements of the Health Insurance Portability and Accountability Act (HIPAA).	HIPAA describes requirements for privacy of personal health information. Health providers may be concerned that sharing information about accessibility needs, trip destinations, and full names of passengers may violate HIPAA requirements.	Program planners may need to take additional measures to maintain the privacy of passengers' information. For example, some ride scheduling software uses only patients' first names or the software generates a unique ride number.	Kaizen Health has software that ensures appropriate privacy. Further, this issue has been overcome by most transportation providers.

Table 3-3. (Continued).

Potential Barrier	Issue/Rationale	Solution	Potential Solutions Found in the Guidebook
Special needs that in some cases can be inappropriate for fixed-route and even ADA paratransit.	Some patients may have complex health conditions, medical equipment, mobility limitations, and other needs that make it difficult to use traditional public transportation.	Program planners may need to conduct a needs assessment to understand potential accommodations for passengers and the capacity of transportation services to meet those needs.	The brokerages highlighted in the case studies and collaborative practices use specialized providers to transport special needs. The Aron Henry center in Mississippi (a collaborative practice), is a health-care entity that formed a rural public transit system in part to meet these special needs.
Public transportation agencies have concerns that a partnership with dedicated service for a health-care facility may be disallowed because of the FTA Charter Rule.	FTA Charter Rule is intended to ensure that transit agencies subsidized with federal money do not unfairly compete with privately-owned bus companies. Public transit agencies may fear that a transit service funded by and implemented to serve a particular health-care facility could be interpreted as charter service and therefore not allowed.	If concerned, a public transit agency should consult with its legal counsel as the ruling is specific as to what is and what is not charter service. The Charter Rule does not apply to demand response service and generally not to fixed-route service that is open to the general public.	This has been overcome by all of the case studies and collaborative practices. Contracting for demand response service and providing bus tickets for others as part of the general public ensures compliance.
Health-care providers cannot fund transportation services due to the federal Anti-Kickback legislation.	Health-care providers are concerned that the federal Anti-Kickback Statute prevents them from funding or operating transportation services for their patients.	A December 2016 ruling from the HHS Office of the Inspector General updated the Anti-Kickback Statute, now allowing for health-care providers to fund or provide local transportation for patients and other defined groups within specific parameters defined in the updated statute.	This barrier has been eliminated and there are many examples of health-care funded transportation service throughout Chapters 4, 5, and 6.
Enhancing transportation access to variety of services in rural areas.	Rural communities may face challenges with limited transportation infrastructure, low ridership, and long travel distances to health-care facilities.	Transportation providers may need to look beyond traditional fixed-route/demand response service to create sustainable transportation solutions for low-density areas. Fixed-schedule service with a designated time in each community or subscription service may be alternative options.	This becomes an issue of adjusting the service design to the unique variety of rural needs.

FTA Charter Rule (Charter Rule write-up being reviewed by FTA; draft provided 4/9/2020)

The purpose of the FTA Charter Rule is to protect private bus operators from unfair competition from public transit agencies that have access to federal and state funds for purchasing buses and federal funds for their operation.

Plans for a public transportation and health-care collaboration need to consider the type of transportation—whether the service is fixed route or demand response. The Charter Rule treats these differently.

Background on the Rule

Information on the FTA Charter Rule is available through this link: <https://www.transit.dot.gov/regulations-and-guidance/access/charter-bus-service/charter-bus-service-regulations-0>.

According to the FTA, “charter service” means, but does not include demand response service to individuals:

- 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. The following features may be characteristic of charter service:
 - A third party pays the transit provider a negotiated price for the group;
 - Any fares charged to individual members of the group are collected by a third party;
 - The service is not part of the transit provider’s regularly scheduled service, or is offered for a limited period of time; or
 - A third party determines the origin and destination of the trip as well as scheduling.
- Transportation provided by a recipient to the public for events or functions that occur on an irregular basis or for a limited duration, and:
 - A premium fare is charged that is greater than the usual or customary fixed-route fare, or
 - The service is paid for in whole or in part by a third party.

Charter Rule Exceptions

- There are limited exceptions when an FTA grantee may provide charter service, including:
 - For official government business;
 - To Qualified Human Service Organizations (QHSO) serving the elderly population, persons with disabilities, and low-income individuals;
 - When no registered charter provider responds to a notice sent by a recipient;
 - Leasing (must exhaust all available vehicles first);
 - By agreement with all registered charter providers; and
 - Petitions to the Administrator: Events of regional or national significance, or hardship.

The term “Qualified Human Service Organization” deserves additional attention. What exactly is a QHSO? How old is “elderly”? And which organizations are qualified?

To provide guidance, FTA Charter Rule Appendix A was published on January 14, 2008, providing a list of GAO-identified federal human service transportation programs and states: “(a) A recipient may provide charter service to a QHSO for the purpose of serving persons: (1) With mobility limitations related to advanced age; (2) With disabilities; or (3) With low-income. (b) If an organization serving persons described in paragraph (a) of this section receives funding, directly or indirectly, from the programs listed in Appendix A of this part, the QHSO shall not be required to register on the FTA charter registration Web site.”

However, if an organization serving individuals described above does not receive funding from a program listed in Appendix A, that organization can still register as a QHSO on FTA’s website (<https://www.transit.dot.gov/regulations-and-guidance/access/charter-bus-service/charter-bus-service-registration>). It is not complicated, but it is an additional step should an FTA-funded public transit agency wish to provide transportation for that organization.

Considerations for Public Transit Agency and Health Care Partnerships

If a transit agency considers some type of demand response service to help meet transportation needs for a particular health-care facility, the FTA Charter Rule specifically excludes services that are demand response. The FTA definition of demand response can be compared to its definition for charter service (8):

- **Charter service is exclusive, whereas demand response service is shared ride.** If the transit provider may mix passengers from a trip sponsor with other demand response passengers on the same trip, then the trip is shared-ride service.

- **Charter service is service to a group, whereas demand response service is service to individuals.** Service to individuals can be identified by a vehicle trip that includes multiple origins, multiple destinations, or both, even when the clients have exclusive use of the vehicle. Some demand response sponsored trips carried out as part of a Coordinated Human Services Transportation Plan, such as trips for Head Start, assisted living centers, or sheltered workshops, may be provided on an exclusive basis, but are provided to service multiple origins to a single destination, a single origin to multiple destinations, or even multiple origins to multiple destinations.
- **Charter service is for a specific event or function, whereas demand response service is regular and continuing.** Some demand response sponsored trips carried out as part of a Coordinated Human Services Transportation Plan may be exclusive, and may be for a group from a single origin to a single destination, but may occur on a frequently reoccurring basis, such as daily, weekly, biweekly, or monthly.
- **Demand response service may also include certain trips that are exclusive for a group from a single origin to a single destination and that reoccur on a less frequent basis than once per month so long as these trips are arranged and operated under the same terms and conditions as the demand response system for individuals.** These terms and conditions include advance notice requirements, service windows for pick up and drop off, and price. Service carried out by the demand response units of transit providers that are exclusive for a group from a single origin to a single destination for a single event *and not under the usual terms and conditions of the demand response system for individuals should be considered to be charter service.* Transit providers should report these services to the charter registration web site.

Should a transit agency consider some type of fixed-route service to help meet transportation needs for a particular health-care facility, one important key to ensuring that the service is not charter service is to ensure the route is open to the general public, not just patients traveling to and from the health-care facility, and publish the route with the transit agency's regular fixed-route schedule.

The FTA Charter Rule's Appendix A Needs an Update

The FTA Charter Rule's Appendix A, which lists 64 automatically approved QHSOs that an FTA grantee can serve without a requirement to register with the FTA website, needs an update. This update would provide the new names of currently listed federal human service transportation programs whose names or sponsoring federal agencies have been revised and include 66 new federal human service transportation programs that should be on the list.

There are examples where the outdated Appendix A has been an issue. These include several coordination efforts between a CDC program and rural public transit agencies that are FTA Section 5311 grantees. More specifically, the CDC's High Obesity Program (HOP) funds land-grant universities. Two of these universities have been actively trying to partner with their local rural transit provider to gain access to healthy food and recreation for the low-income rural residents in CDC's HOP programs.

However, the FTA Charter Rule emerged as the number one barrier for the coordination effort between these two CDC/university programs and rural public transportation. That is because a university does not qualify as a QHSO in the current Appendix A. If the Charter Appendix A was updated to include CDC's transportation-eligible programs (as well as the other programs that should be included) this would not be an issue.

Despite the FTA Charter Rule issue in this example with the CDC's HOP program, assistance through the National Rural Transit Assistance Program found solutions that allowed the coordination efforts to proceed.

Revisions to the Safe Harbors Under the Anti-Kickback Statute and Civil Monetary Penalty Rules Regarding Beneficiary Inducements

The U.S. Department of Health and Human Service issued a ruling in December 2016 that revised previous restrictions on the ability of health-care providers to provide patient transportation. The law allows health-care providers such as hospitals and clinics (but excludes entities that primarily supply health-care items such as pharmacies) to fund local non-emergency transportation for patients.

The ruling also allows health-care providers to fund shuttle services for patients and others to access medically necessary services and items within specific parameters. The transportation can be free or discounted. Health-care providers and unrelated businesses may contribute together to provide the transportation.

The ruling can be found here: <https://www.federalregister.gov/documents/2016/12/07/2016-28297/medicare-and-state-health-care-programs-fraud-and-abuse-revisions-to-the-safe-harbors-under-the>

As background, the Anti-Kickback Statute provides criminal penalties for individuals or entities that knowingly and willfully offer, pay, solicit, or receive remuneration in order to induce or reward the referral of business reimbursable under federal health-care programs. Because of the broad reach of the statute, there was concern that some relatively innocuous commercial arrangements were covered by the statute and therefore not allowed.

With the ruling, “eligible entities,” which include health-care providers such as hospitals and clinics (but excluding entities that primarily supply health-care items such as pharmacies), are allowed to fund local non-emergency transportation for patients and shuttle services for patients and others to access medically necessary services and items within specific parameters. The transportation can be free or discounted. Health-care providers and unrelated businesses may contribute together to provide the transportation.

The ruling defines the following details:

- **Types of transportation:** Transportation can be provided on a door-to-door basis. And it can be various modes—buses, taxis, community vans, volunteers, etc. Transportation can also be provided via shuttle transportation, using buses, vans or other vehicles that operate along a fixed route with a fixed schedule. Health-care providers can provide the transportation or use vouchers or other subsidy methods to provide transportation for patients.
- **What does “local” mean?** Local transportation is defined at up to 25 miles in urban areas and 50 miles in rural areas. Mileage is measured “as the crow flies.”
- **Who can be served?** Individualized transportation (door-to-door) is to be provided for “established patients.” This means patients who have been served by the health-care provider, which includes per the ruling, a patient who has made his or her first appointment. The intent of this provision is to offer flexibility to improve patient care but to limit the risk of transportation being used as a recruiting tool or to bring patients in for unnecessary services. However, for shuttle service, transportation can be provided not only to patients but also family, friends, and even employees of the health-care provider. Restrictions on marketing the shuttle service limit the risk that the shuttle would be used to recruit new patients.

Other details include:

- The transportation service cannot be advertised or marketed to patients. The ruling emphasizes this: transportation cannot be used as a recruiting tool. Information about shuttle service, however, can be made available by the health-care provider with a posting of the schedule and stops.

- The health-care provider is to establish a set policy regarding the availability of free or discounted transportation and must apply that policy uniformly and consistently. However, the Department of Health and Human Service's Office of Inspector General's revisions to the statute do not mandate specific parameters for such policy other than mandating that it cannot be based on the type of patients' insurance.
- Payment cannot be made on a per-patient basis. If transportation is available through a private company or driver hired by the health-care provider, payment is made on a distance/mileage basis. If transportation is provided by public transit or taxi, the transportation would be paid for or reimbursed to individual patients, for example, by taxi vouchers or bus fare.
- Costs for the transportation must be borne by the health-care provider and not shifted to Medicare, a state health-care program, other payers, or individuals.

The Health Insurance Portability and Accountability Act (HIPAA)

What Is HIPAA?

HIPAA was instrumental in establishing safeguards for the privacy and confidentiality of “individually identifiable health information,” also known as protected health information (PHI). HIPAA states that PHI is created or received by a health-care provider, health plan, or health-care clearing house. PHI describes the health or condition of an individual, the health care the individual receives, or payment for health care that can be used to identify the individual (9).

There are two key aspects of HIPAA. The HIPAA Security Rule describes the standards that must be used to safeguard electronic PHI (10). This rule focuses on the requirements for protecting electronic PHI, such as passwords, employee training, and other policies and procedures. The HIPAA Privacy Rule describes protections for the use and disclosure of PHI in all formats (11). This rule focuses on the rights of the individual and how their information is used.

What Are the HITECH Act and the HHS Omnibus Rule of 2013?

The Health Information Technology for Economic and Clinical Health (HITECH) Act, enacted in 2009, sought to increase the use of health information technology, including electronic health records (EHRs). Part of the HITECH Act focuses on the privacy and security of PHI created or shared by EHRs, which involved building upon and strengthening certain aspects of HIPAA. For example, the HITECH Act made business associates of covered entities directly liable for complying with some HIPAA requirements, including the Security Rule (12). Business associates are people or entities whose work involves the use or disclosure of PHI on behalf of a covered entity.

The HHS Office for Civil Rights implemented a final Omnibus HIPAA Rule in 2013 to implement provisions in the HITECH Act and to further strengthen privacy and security safeguards in HIPAA (13). The Omnibus rule extended parts of the HIPAA Privacy Rule to business associates of covered entities.

How Does HIPAA Affect Transportation Providers?

Laws surrounding the disclosure of health information are complex and fragmented. While HIPAA is a federal law that applies to all states, some states also have additional rules

Key Resource

The TCRP developed a key resource for transportation providers that has access to riders' health information:

Legal Research Digest 46: How the Health Insurance Portability and Accountability Act (HIPAA) and Other Privacy Laws Affect Public Transportation Operations (2014).

This report provides a comprehensive overview of HIPAA, its applicability to subcontractors and business associates, examples from several transit agencies, and more.

and regulations that govern privacy of health information. While transportation providers and brokers are not considered covered entities, some states may consider transit agencies to meet HIPAA's definitions of a business associate or subcontractor. For example, Washington State considers NEMT brokers to be HIPAA business associates of the state Health Care Authority. In addition, some health-care providers may put certain protections in place to ensure that they are in compliance with HIPAA requirements when working with transportation partners.

Transportation providers should familiarize themselves with the TCRP's *Legal Research Digest 46: How the Health Insurance Portability and Accountability Act (HIPAA) and Other Privacy Laws Affect Public Transportation Operations*, which provides a legal analysis of how HIPAA applies to transportation providers. Transportation providers should also consult state laws and work with their health-care partners to better understand the extent of their responsibilities to safeguard the privacy of their patients' PHI.

How Might HIPAA Affect Partnerships Between Health Care and Transportation Providers?

Health-care providers and health plans are covered entities and must abide by HIPAA regulations. Some health-care providers and health plans may not consider transportation providers to be business associates. Others may ask or require transportation providers to implement certain policies and procedures to comply with HIPAA rules.

Health-care providers/plans may ask transportation providers to implement certain safeguards because of the potential need to disclose PHI related to a passenger's health services. For example, transportation providers might have access to an individual's full name, Medicaid identification number, medical certifications, health-care destinations, and purpose for medical transportation. Some strategies to enforce HIPAA compliance from the transportation provider's perspective may include:

- Only allowing transportation providers/drivers to see first names for passengers.
- Requiring drivers/scheduling staff to undergo training sessions on HIPAA rules and regulations.
- Establishing security procedures such as keeping paperwork with PHI in a locked filing cabinet or password-protecting electronic files.

Possible Grant Funding Options for Transportation and Health Care Collaborations

Listed below are several possible grant programs that could support a transportation and health-care collaboration. However, do not be constrained by this list. There are likely other options such as foundations or other organizations at the local level that might support collaborations that improve transportation access to health care.

Federal Transit Administration (FTA)

Access and Mobility Partnership Grants. Access and Mobility Partnership Grants seek to improve access to public transportation by building partnerships among health, transportation, and other service providers. This program provides competitive funding to support innovative projects for the transportation-disadvantaged that will improve the coordination of transportation services and NEMT services.

There are two distinct grant programs:

- The Innovative Coordinated Access and Mobility (ICAM) Pilot Program.
- Human Services Coordination Research grants.

Eligibility. Eligible applicants are organizations that are eligible to be recipients and sub-recipients of the Enhanced Mobility for Seniors and Individuals with Disabilities Program, (defined under FTA’s Section 5310 program): designated recipients, states and local governmental authorities.

<https://www.transit.dot.gov/funding/grants/grant-programs/access-and-mobility-partnership-grants>

Helping to Obtain Prosperity for Everyone (HOPE) Program

HOPE supports planning, engineering and technical studies, or financial planning to improve transit services in areas experiencing long-term economic distress. It will also support coordinated human service transportation planning to improve transit service or provide new services such as rides to opioid abuse recovery and treatment.

Eligibility. The HOPE Program provides funds to eligible applicants defined as eligible recipients or subrecipients under 49 U.S.C. 5307, 49 U.S.C. 5310, or 49 U.S.C. 5311 that are in areas of persistent poverty. Applicants are encouraged to work with non-profits or other entities of their choosing to develop an eligible project.

<https://www.transit.dot.gov/HOPE>

AARP

Community Challenge Grants. The AARP Community Challenge provides small grants to fund “quick-action” projects that can help communities become more livable for people of all ages. Applications are accepted for projects to improve housing, transportation, public space, technology (“smart cities”), civic engagement, and more.

Eligibility. The program is open to the following types of programs:

- 501(C)(3), 501(C)(4), and 501(c)(6) non-profits.
- Government entities.
- Other types of organizations will be considered on a case-by-case basis.

<https://www.aarp.org/livable-communities/community-challenge/info-2020/2020-challenge.html>

National Center for Mobility Management

Health Care Transportation Access “Ready-to-Launch” Implementation Grants. These grants, supported by the FTA, support communities in taking concrete steps toward implementing transportation solutions to address health-care access.

<https://nationalcenterformobilitymanagement.org/grants/2019-health-care-transportation-access-ready-to-launch-grants/>

Eligibility. Eligible applicants are designated or direct recipients for funds under 49 U.S.C. Sections 5307, 5310, or 5311, or an eligible subrecipient of these funds. Eligible subrecipients under FTA programs include state or local government authorities, non-profit organizations, and operators of public transportation.

National Aging and Disability Transportation Center

Innovations in Accessible Mobility Grant. The National Aging and Disability Transportation Center is funding up to 10 communities for projects designed to increase accessible

transportation options for older adults and people with disabilities, including projects related to coronavirus response. Grants of up to \$30,000 each will be awarded. Recent grantees include: INCOG Area Agency on Aging (Tulsa, Oklahoma) and its Creating Access to Nutrition Program.

<https://www.nadtc.org/grants-funding/nadtc-grant-opportunities/current-nadtc-funding-opportunities/>

Eligibility. Local and regional private non-profit or government organizations that directly provide transportation services may apply for this funding opportunity.

Centers for Disease Control and Prevention (CDC)

The CDC is one of the major operating components of HHS. Its mission is:

to protect America from health, safety and security threats, both foreign and in the U.S. Whether diseases start at home or abroad, are chronic or acute, curable or preventable, human error or deliberate attack, CDC fights disease and supports communities and citizens to do the same.

Possible Support from Local and State Health Departments. As part of its mission is to support communities in addressing public health, the CDC provides funding to state and local health departments for various projects. These departments should be contacted as possible funding sources for a community-based transportation and health-care collaboration. Funding might be possible through CDC's REACH program (see below) or other options.

REACH. REACH is a national program administered by the CDC to reduce racial and ethnic health disparities.

https://www.cdc.gov/nccdphp/dnpao/state-local-programs/reach/current_programs/index.html

Through REACH, recipients plan and carry out local, culturally appropriate programs to address a wide range of health issues among African Americans, American Indians, Hispanics/Latinos, Asian Americans, Alaska Natives, and Pacific Islanders.

Eligibility. REACH gives funds to state and local health departments, tribes, universities, and community-based organizations. Recipients use these funds to build strong partnerships to guide and support the program's work. Along with funding, CDC provides expert support to REACH recipients.

- Eligible Applicants
 - City or township governments
 - County governments
 - Independent school districts
 - Native American tribal governments (federally recognized)
 - Native American tribal organizations (other than federally recognized tribal governments)
 - State governments
 - Non-profits having a 501(c)(3) status with the Internal Revenue Service other than institutions of higher education
 - Non-profits that do not have a 501(c)(3) status with the Internal Revenue Service (IRS), other than institutions of higher education
 - Private institutions of higher education
 - Public and state-controlled institutions of higher education

- Public housing authorities/Indian housing authorities
- Small businesses
- Special district governments

Rural Health Information Hub (RHIhub)

RHIhub, formerly the Rural Assistance Center, is funded by the Federal Office of Rural Health Policy to be a national clearinghouse on rural health issues, with resources that support health care and population health in rural communities.

Additional support is provided by the Health Resources and Services Administration of HHS.

The RHIhub is a guide to improving health for rural residents and providing access to current and reliable resources and tools to help users learn about rural health needs and work to address them.

Information is provided about a wide range of funding sources, including grants that include transportation.

<https://www.ruralhealthinfo.org/funding/topics/transportation>

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CHAPTER 4

Develop Transportation Solutions

Introduction

Once a dialogue has been established between health-care and transportation providers, as well as mobility managers and local leaders as appropriate, it is time to discuss the matching of patient transportation needs with appropriate transportation solutions. The term “appropriate” in this context means that the patients are willing and able to use the service and that the cost for the service is reasonable. In many cases, this chapter provides references to the case studies and collaborative practices in Chapters 5 and 6, respectively. In addition, Tables 6-1 through 6-9 in Chapter 6 allow a reader to identify practices and collaborations by type.

Purpose of this Chapter

The purpose of this chapter is to provide guidance to mobility managers and health care and transportation providers in developing and selecting the most appropriate transportation service to meet the identified health-care access needs.

The development of transportation solutions is supported by the research in Chapter 2 that describes the need for transportation to health care and the activities undertaken as described in Chapter 3 that help initiate the discussion. Developing solutions also builds upon the case study research documented in Chapter 5 and the collaborative practices described in Chapter 6.

Organization of the Chapter

The development and selection of appropriate transportation solutions for the identified needs should include a series of steps. As discussed in this chapter, the steps are:

- **Understanding the Basics of Transportation: What Health Care Providers Need to Know**—Health-care providers should understand the basics of transportation, economies of scale, and how decisions influence cost and quality of the transportation service.
- **Understanding Mobility Limitations of Riders: One Patient at a Time**—Transportation providers should understand the limitations of individuals who need access to health care. In some cases, these individuals are similar to the general transit-riding public, but there are significant differences for segments of the riders. Transportation providers need to understand those differences.
- **Transportation Solutions and Services Design: One Size Does Not Fit All**—Based on the wide range of patient transportation needs, appropriate solutions should, where possible, include a range of services to appropriately meet each need.
- **Sustainability: Building a Strong Transportation Support Network**—Sustainability includes funding and support. Cost efficiency (doing things right) and effectiveness (doing

the right things) are essential. Working toward sustainability often requires building a strong coalition of stakeholders.

Understanding the Basics of Transportation: What Health-Care Providers Need to Know

Passenger transportation is influenced by many factors. While transportation officials understand the factors, ensuring that health-care providers have a basic understanding will ensure the decision-making process is sound. There are various considerations and options for providing the service, and some are more appropriate than others.

Transporting passengers to access health care can be done in different ways. An overriding objective is to strike the right balance of efficiency (doing things right) and effectiveness (doing the right things). In other words, providing the most appropriate service for each person at a reasonable cost.

The following basics of transportation are discussed:

- Economies of scale.
- Collaboration and coordination efforts: reducing silos.
- Grouping trips: What is productivity and why is it important?
- Service design: Diversity is good.
- Safe and professional services.



Economies of Scale

Passenger transportation is strongly influenced by economies of scale. Economies of scale become most apparent in rural and small urban areas where three systems are often doing the work of one: rural public transit, Medicaid NEMT, and veterans transportation. The inefficiencies of three transportation providers serving the same community result in the loss of economies of scale (among other issues, such as loss of local matching funds used to secure federal grants). Gaining economies of scale can be addressed through collaboration and grouping trips, which are discussed below.

Spreading the fixed costs for transportation (e.g., cost of the garage, cost of the executive director, etc.) over a larger number of vehicles, miles, or hours will lower the cost per trip, cost per mile, and cost per hour as those fixed costs are then spread over a larger number of vehicles, miles, and hours.



Collaboration and Coordination Efforts: Reducing Silos

For over 40 years, many studies have expounded the virtues of collaboration, coordination, or consolidation, beginning with the landmark GAO study in 1977 (1) and confirmed in the GAO's 1999 study (2).

In 1999, the GAO noted that: “Transportation coordination can reduce federal transportation program costs by clustering passengers, utilizing fewer one-way trips, and sharing the use of transportation personnel, equipment, and facilities. In addition, people in need of transportation often benefit from the greater and higher quality transportation services available when transportation providers coordinate their operations.” (2)

What the GAO report is saying (starting in 1979), essentially, is the elimination of transportation funding and program silos will gain economies of scale: management, facilities, and administration can be reduced, and all drivers and staff will be properly vetted, monitored, and trained.

By definition, siloed transportation limits economies of scale. For example, with siloed veterans’ transportation and Medicaid NEMT, alongside public transit, there are three managers, three facilities, and three sets of virtually everything related to transit. Moreover, it is unclear if all three will have properly vetted and trained drivers.

Collaboration and coordination take place when the health-care community and transportation community come together, as is evident in the case studies and collaborative practices presented in Chapters 5 and 6, respectively.

There has been an increase in siloed transportation for a variety of reasons. Two of the largest health-care transportation programs have, for the most part, chosen to operate separate services or brokerages:

- **VA**—A federal agency, the VA often sets up its own transportation programs to serve only its beneficiaries (3).
- **Medicaid NEMT**—This state-managed program gives states flexibility to design and manage their programs. Medicaid NEMT is far and away the largest passenger transportation program outside of the FTA. Many states have chosen to provide the transportation with a capitated brokerage, which typically does not employ public transit systems in a significant way (4).

Coordinating the Silos

Coordinating siloed transportation can be a difficult and typically a political or cultural process. Often the process involves federal and state agencies, insurance companies, MCOs, and local governments. While not easy, LTD in Oregon and two of Arkansas’ rural transit providers show that under the right conditions, silos can be broken down and that, in turn, can help improve the community’s access to health care through cooperative efforts.

Lane Transit District (LTD) is an example of eliminating silos and improving the quality of the transportation. The transit district has taken on the role of broker with a diverse set of programs, funding sources, and providers, allowing LTD to provide the best “fit” for each rider and funding source. This includes demand response and their network of fixed-route services (Exhibit 4-1), Medicaid NEMT, dialysis centers, and veterans transportation provided by LTD, and when combined with LTD’s ADA service and other health-care and human service transportation, there are notable economies of scale and professionalism.



Exhibit 4-1. LTD provides a wide range of services.
Photo courtesy of KFH Group.

Two rural transit operators in Arkansas, **Central Arkansas Development Council and Southeast Arkansas Transit**, eliminate silos by brokering Medicaid NEMT with its public transportation. This allows these operators to maintain a robust network of services for the general public and in particular access to health care as the public rides with Medicaid NEMT riders in many cases.

Communication

Sometimes simple communication is a valuable form of collaboration. This could be as informal as a dispatcher talking or emailing a health-care office manager, case manager, or lead nurse, for example. It is important for field-level staff to communicate and work together; communication can minimize surprises. One approach is to schedule and hold regular face-to-face meetings at staff level for the transportation and health-care providers. Southeast Vermont Transit works closely with community health teams to assess and fill each need. Jasper County Community Services in Indiana calls the local nursing home prior to the vehicle's arrival so that the staff will have the patient ready for the trip, reducing wait time significantly. In New Hampshire, Transport Central provides information and training to ever-changing health-care staff to ensure they are all working together.

Health Care Facility Location

Prior to settling on a site for a new clinic, hospital, or other health-care facility, those evaluating the site should consider the access to public and private transportation services. This is particularly important when the facility considers a move beyond the transit agency's jurisdiction or at a distance where a trip by taxi or TNC such as Uber or Lyft becomes expensive. Conversations with local public and private transportation providers should take place prior to the review of potential sites.



Grouping Trips: What Is Productivity and Why Is It Important?

More than anything else in the transportation world, productivity drives the cost per trip. Productivity is measured as one-way trips per

Table 4-1. Typical productivity for service types.

Service Type	Productivity
Countywide Paratransit	1–2 trips per hour
Urban Paratransit	1–6 trips per hour
Microtransit	2–6 trips per hour
Fixed Schedule: Rural	4–8 trips per hour
Fixed Route	Vehicle Capacity

Source: KFH Group. Rural Transit Service Design - Matching Service to Meet Needs: An Introduction. Presented at the National Conference on Rural Public and Intercity Bus Transportation, Breckenridge, Colorado, October 2018.

vehicle hour. Productivity, which must be balanced with providing a safe (social distancing is critical at the time of this report given the worldwide pandemic), timely, and comfortable service, is critical to cost control.

Why is productivity important?

Productivity: One-way passenger trips per vehicle hour.

- In this example, it costs a transit agency \$50 per hour to provide service:
 - Productivity of 1.5 trips per hour will yield a cost of \$33.33 per trip.
 - Three one-way trips per hour brings the cost to \$16.67 per trip.
 - Ten trips per hour, \$5 per trip.
 - Twenty-five trips per hour, \$2 per trip.

One of the best ways to lower transportation costs is through productivity improvements. The end result? That will depend on different modes or types of service which will yield different productivities (and costs per trip); see Table 4-1.

Clearly, based on the productivities shown above, fixed-route service has the highest potential productivity and will provide the lowest cost per trip. But fixed-route service does not work everywhere, and many patients cannot use that service. This does not mean it should be ruled out as an option. For other service types, opportunities exist to improve productivity through revisions or a change of service design.

Following are two examples of the power of productivity in reducing cost per trip and total costs.

Grouping Trips: Rutherford County Transit (RCT)

RCT is an example of modifying service to improve productivity. Prior to the modification, transportation to Charlotte (30 miles away) for major medical services was provided with paratransit service, with most vehicle trips having one rider on board. At that time, RCT had an operating cost of about \$50 per hour with an average productivity of 1.5 one-way passenger trips per hour or \$33.33 per trip. There was no attempt to group passengers' trips.



Exhibit 4-2. RCT vehicles are attractive and easily recognized in the county. Photo courtesy of KFH Group.

Service was changed to a fixed-schedule model (discussed in detail later in this chapter) using attractive vehicles (Exhibit 4-2) that can travel narrow country lanes, common in Western North Carolina. With this model, the vehicle operates on a set schedule (service is designated for specific days and times), but not on a fixed route. Rather, the vehicle picks up passengers at their door. Individuals who need access to Charlotte for health care or other purposes plan their trips according to the posted schedule. The manager of this transit agency states that most trips now include five or more people, yielding a productivity of 3.3 one-way trips per hour and cost per trip of \$15, reducing costs by 55% with a reduction in mileage and other costs and the ability to serve more passengers overall; see Exhibit 4-3.

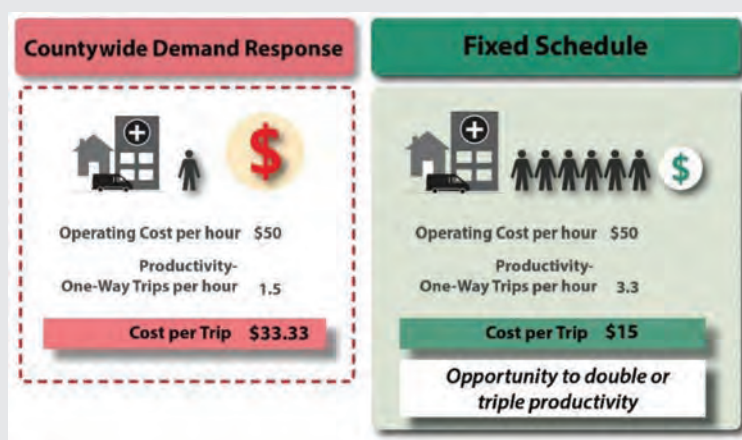


Exhibit 4-3. Modifying service to improve productivity.

Grouping Trips: Lane Transit District

When dialysis clinics, patients, and transportation providers work cooperatively to group trips, each entity wins. Some transit agencies and brokers, both urban and rural, work closely with their dialysis clinics to ensure the best productivity in a safe and comfortable environment. This is particularly important as the need and level of service required for dialysis patients are expanding and often considered a driver of costs (5). Lane Transit District in Oregon, for example, has been able to coordinate patient transportation with some of the dialysis clinics it serves, coordinating service with other transportation programs including Medicaid NEMT.

Summary: Grouping Trips

Grouping passenger trips provides cost advantages. However, it should be understood that grouping trips is not necessarily a matter of placing seven or eight people on the small demand response bus when this is not appropriate. However, if the trips have common destinations, it could result in an increase in one passenger trip per service hour to two trips in that hour, which cuts the passenger trip cost in half.

The bottom line: use the grouping of trips judiciously. Passenger safety, timely service, ride time, and a comfortable trip must be factored in when grouping trips. Performance indicators should also be considered, such as maximum ride times that should be determined and agreed upon by the collaborating partners.

**Service Design: A Variety of Options Is Good**

With an understanding of the importance of productivity, the next step is to look at service design. The objective is to apply the most appropriate service design(s) for the transportation needs.

Various service designs can be considered, depending on whether the community has urban or rural areas, the type of riders to be served, and their specific needs. (Note transportation services that require medical support on board are not addressed in this research.). These include:

1. **Fixed route**—Virtually every urban area and many rural areas and smaller cities have fixed-route service.
2. **Hybrid services**—Flex-route and fixed-schedule type services.
3. **Demand response shared ride.**
4. **Demand response single ride.**

Fixed Route

Description: Fixed-route service operates on a schedule along a prescribed route. Fixed-route transports the most people at the highest passenger productivity and the lowest cost per trip in urban areas as well as many smaller cities and towns. Transit service with attractive and accessible stops with electronic signs that tell the rider when the bus arrives can make it easy for many to ride (Exhibit 4-4).



Exhibit 4-4. Low floor buses and attractive stops can help riders use the service.

Applicability: Fixed-route transit service can be a viable option for many riders to use for health-care-related trips. Many brokers and health-care providers routinely distribute tickets and passes to riders to use the community’s fixed-route system to get to and from their medical appointment. However, it is not the right service in all situations. Those who cannot either use the service or get to a bus stop because of a disability require a more specialized mode with door-to-door service.

Fixed Route and Health Care: Fixed route is the dominant mode of bus transit in the country. While commuting is the most prevalent trip purpose, health care as a trip purpose remains important. A review of sampled rider surveys from 2015 to 2020 show that trips for health care comprise from 4% to 48% of total trips; see Table 4-2.

According to the sampled surveys, on average, health-care trips comprise the following percentages on fixed-route buses by type of community:

- Urban areas: 12% of trips were for health care.
- Small urban areas: 15% of trips were for health care.
- Rural areas: 18% of trips were for health care.
- Small urban and rural combined: 14% of trips were for health care.

Table 4-2. Percentage range of transit trips for health-care purposes.

Service Area	Percentage Range of Health Care Trips
Urban	5%–48%
Small Urban	4%–18.6%
Rural	5.16%–34.55%
Small Urban and Rural Combined	5%–25%
Urban and Rural Combined	19%–23%

North Central Regional Transportation District (NCRTD): In New Mexico, a large rural system shows how small changes to fixed routes at no cost can make a significant difference to all potential riders. NCRTD operates predominantly fixed routes in very rural and remote areas as well as commuter service into more urbanized Santa Fe. One-way trips routinely exceed 80 miles. A recent survey indicated that 9% of NCRTD trips are to access health care. That is the equivalent of 25,000 one-way health access trips annually or 100 trips every weekday.

In 2015, NCRTD refined and adjusted the start time of many of its routes to allow residents to travel for health care, shopping, or other needs in the morning and return midday instead of waiting until the end of day—eight hours later—to return. The new start and end times of the routes allowed for greater connectivity to transfer seamlessly (Exhibit 4-5) resulting in options for early and late appointments and to still serve commuters at the same time. These changes, among other low-cost route adjustments, helped NCRTD increase ridership by 50% in 1 year and 100% in 4 years. The service design changes virtually doubled health-care access transportation trips from 50 to 100 daily.



Exhibit 4-5. NCRTD riders can seamlessly transfer at the Española Transit Center. Photo courtesy of KFH Group.

Manchester, New Hampshire: A downtown fixed-route circulator which had initially failed was reintroduced with new partners, including a regional medical center. The route was redesigned, and ridership increased dramatically. Anecdotal evidence from medical center and transit staff suggests that much of that increase comes from the involvement of the medical center. This route change was all done at virtually no additional operating cost.

Fixed-Route Service Design: Effective public transportation does much to improve access to health care across the country. The effectiveness of a fixed route, however, is strongly related to how the routes are designed, and this is borne out by two of many examples across the country.

An example of two communities, each with a population of 30,000, illustrates this point. The rural transit system in one community with a mid-sized university (and no university

transit service) operates two separate one-way 1.5-hour loops so that virtually all round trips are at least 1.5 hours, and 3 hours if a transfer is required (Exhibit 4-6). In this scenario it may take a rider 10 minutes to get to the drug store by bus, but the return would take an hour and 20 minutes. Productivity is under three one-way trips per vehicle hour, a low level of performance.

The second system in Paris, Texas, operates a traditional route structure where there is two-way service (Exhibit 4-7). In this case, the return from that 10-minute ride to the drug store is also a 10-minute trip. This service operates at eight one-way trips per hour without a university at close to one-third the cost per trip of the first example. The result: the second system provides far more health-care related trips on public transit at a very low cost.

Hybrid Services

Description: Hybrid transit services are more flexible than fixed route but still follow a schedule to ensure a higher productivity than traditional demand response. They are typically a cross between fixed route and paratransit and have become common in some areas. The two forms of hybrid services presented include fixed-schedule service, briefly discussed in the previous section on productivity, and flex-route service (also referred to as route deviation), used more commonly in smaller cities and towns but also appropriate for long-distance routes. Fixed-schedule service can be relatively productive in remote rural areas where all the rules change due to the terrain and demographics, as can be seen in Exhibit 4-8. Fixed schedule can be used to serve an entire county and replace demand response service with a more productive service.

Fixed-Schedule Service Applicability: Fixed-schedule service is most appropriate in remote rural areas. The vehicle follows a schedule but not a specific route. Those who want to use the service must follow the schedule; however, the vehicle will pick up passengers at their homes or a designated (limited number) stop.



Exhibit 4-6. *Fixed route with loop design.*

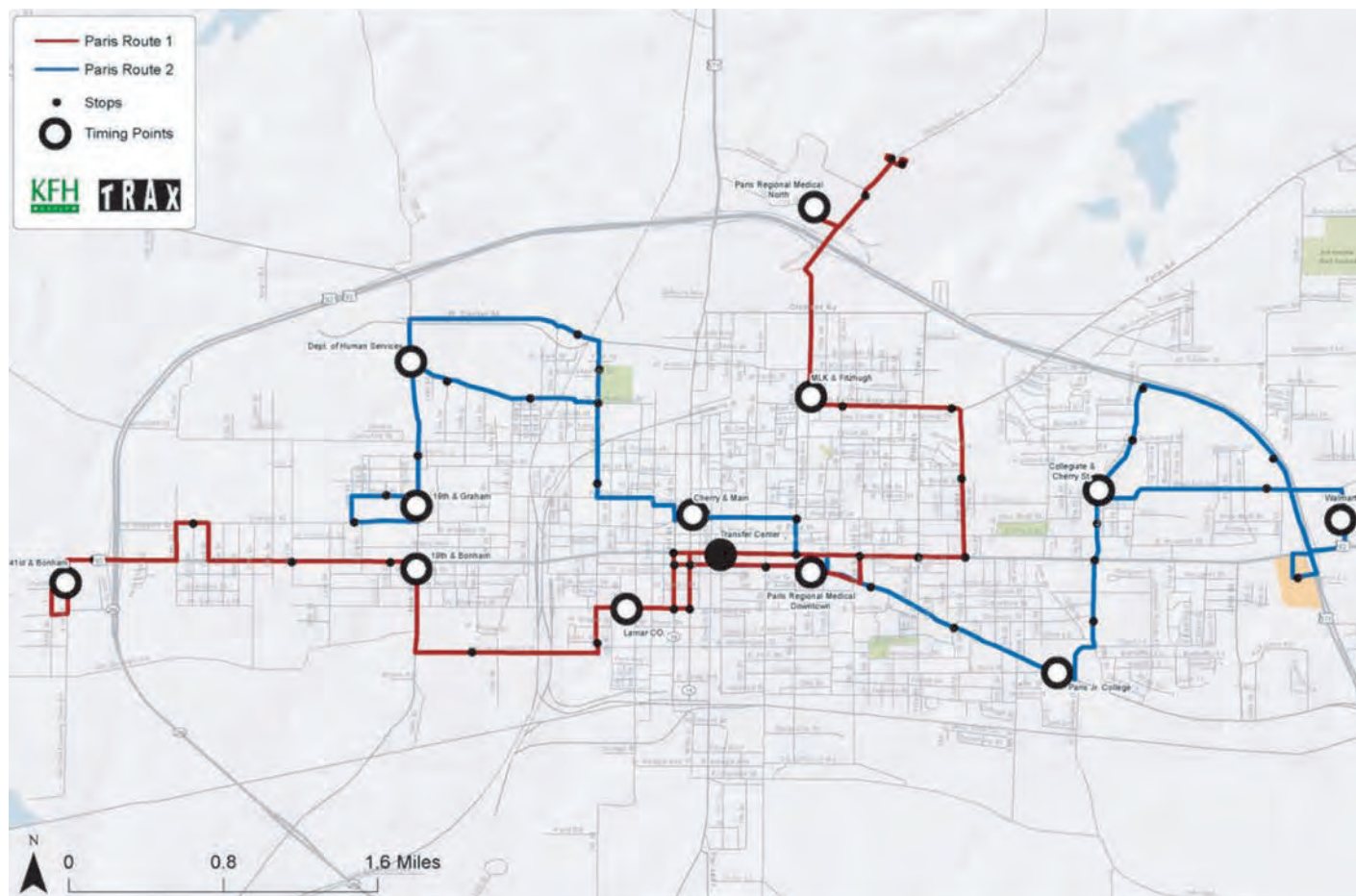


Exhibit 4-7. Paris, Texas, metro route map.

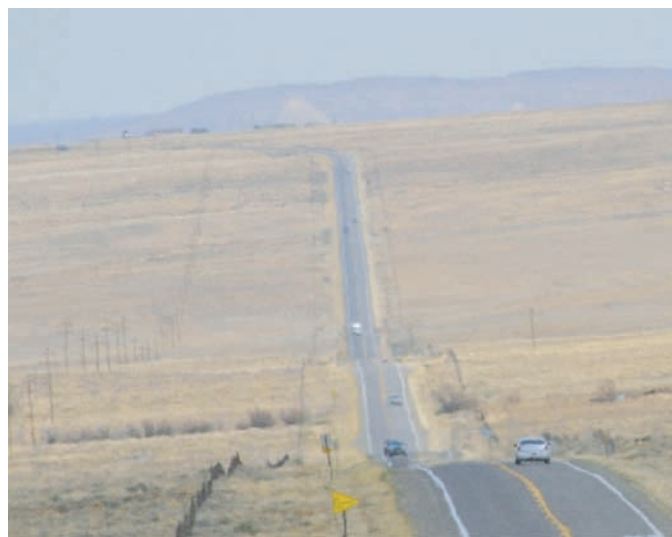


Exhibit 4-8. Great distances in remote rural areas require a different set of service design rules. Photo courtesy of KFH Group.

An example of a network of fixed-scheduled services, CARTS, is based in Central Texas. CARTS operates in eight rural counties and provides countywide service on a fixed schedule. Exhibit 4-9 is a county schedule that details the information needed by the rider. The fixed-schedule services connect to a variety of other public transit services.

Flex-Route Service Applicability: Flex-route service would be most appropriate for rural routes of longer distance where paratransit service would be inappropriate.

Flex route, also referred to as route deviation, is a fixed route with time built in for the bus to go off route for a limited distance to pick up passengers at their door or closest intersection. This flex service can be limited to persons with disabilities, meeting all of the requirements for ADA paratransit, or it can be open to the general public, in which case riders with disabilities are subject to the same policies as all riders, including increased fares, limits on distance (which may be less than three-quarters of a mile), and capacity constraints. It should be noted that flex-route service that flexes for all riders means that individuals with disabilities who cannot get to the bus stop to use the service are subject to possible trip denials as many of these services are on a first come, first serve basis.

Demand Response Shared Ride

Description: Demand response shared-ride service covers a wide range of services including new microtransit options. These services are found in urban areas in the form of ADA paratransit (Exhibit 4-10) and microtransit (including dial-a-ride). In rural areas, they could be microtransit and dial-a-ride or countywide demand response. Some of these services require one-day advance notice to schedule a trip, while the newer services that use smartphone apps require as little as 15 minutes notice for a trip.

Applicability: For health-care access, shared-ride demand response can be appropriate for patients unable to use the fixed route or when it is not available to them.

ADA paratransit is a viable option where available. Transit agencies require individuals to apply for the service and be deemed eligible prior to use. Various forms of shared-ride demand response service exist in many communities. Experience has shown that some individuals who could use fixed-route use the demand response service because they want the convenience of door-to-door service or they do not know how to ride the bus. It is important to understand riders' capabilities and to provide transit training when this would benefit riders. Those patients who refuse to ride fixed route, when deemed capable, should be reviewed on a case-by-case basis by the health-care provider.

Rural areas often use demand response service in both rural areas and small towns and cities. Rural demand response service is typically low productivity and costly on a per trip basis. The fixed-schedule solution will improve productivity without interfering with patient access to services.

Demand Response Single Ride

Description: Demand response service is used by a solo passenger with no attempt to group rides. Taxis and TNCs are the most common type of single-ride demand response service.

Applicability: This type of service is most appropriate for an individual patient who should ride either alone, with a caretaker, or with an attendant for medical or safety reasons.

The need for this type of service is typically best determined by the health-care provider. Due to its low productivity, it can also be an expensive trip. Often this type of service is offered

Effective date January 4, 2016

CARTS

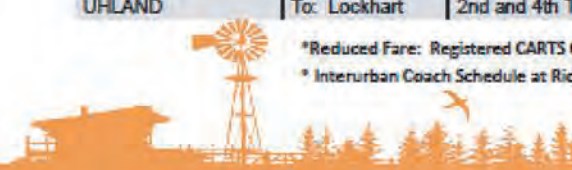
CARTS RIDE LINE 1-512-456-RIDE (7433)

CALDWELL COUNTY

RIDES ARE SCHEDULED MONDAY-FRIDAY FROM 8:00 AM TO 4:00 PM / 24 HOURS ADVANCE NOTICE RECOMMENDED LOCAL
VEHICLES SERVE NEIGHBORING TOWNS SO LOCAL RIDE TIMES MAY VARY

Community Served	Destination	Route Day	Departure	Return	One-Way Fare	Reduced Fare*
DALE	To: San Marcos	Monday & Friday	7:30a	12:00p	\$6.00	\$3.00
	To: Lockhart	Monday & Friday	7:30a	12:00p	\$4.00	\$2.00
FENTRESS	To: San Marcos	Thursday	9:00a	12:00p	\$6.00	\$3.00
	To: Lockhart	Monday	9:00a	1:00p	\$4.00	\$2.00
	To: Luling	Friday	9:00a	12:00p	\$4.00	\$2.00
LOCKHART	Local Service	Monday thru Friday	8:00a to 4:30p		\$2.00	\$1.00
	To: Austin	On the Interurban Coach *	Mon, Wed. and Fri.		\$6.00 All Day Pass	
	To: San Marcos	Monday, Wednesday & Friday	8:00a & 2:00p	12:00a & 3:00p	\$6.00	\$3.00
	To: Luling	Tuesday & Thursday	9:00a	1:00p	\$4.00	\$3.00
LULING	Local Service	Monday thru Friday	8:00a to 4:30p		\$2.00	\$1.00
	To: Austin	On the Interurban Coach *	Mon, Wed. and Fri.		\$6.00 All Day Pass	
	To: Lockhart	Tuesday & Thursday	8:00a	2:00p	\$4.00	\$2.00
	To: San Marcos	Thursday	9:00a	12:00p	\$6.00	\$3.00
	To: Seguin	Wednesday	9:00a	12:00p	\$6.00	\$3.00
LYTTON SPRINGS	To: Lockhart	2nd & 4th Thursday	8:45a	1:00p	\$4.00	\$2.00
MARTINDALE	To: Austin	Monday & Wednesday	8:15a	2:00p	\$6.00	\$3.00
	To: San Marcos	Monday, Wednesday & Friday	9:15a	3:00p	\$6.00	\$3.00
	To: Lockhart	Wednesday	11:30a	2:00a	\$4.00	\$2.00
MAXWELL	To: Austin	Tuesday & Thursday	8:30a	2:00p	\$6.00	\$3.00
	To: San Marcos	Monday, Wednesday & Friday	9:30a	3:00p	\$6.00	\$3.00
	To: Lockhart	Wednesday	11:30a	2:00p	\$4.00	\$2.00
McMAHAN	To: Lockhart	1st and 3rd Monday	8:45a	12:00p	\$4.00	\$2.00
McNEIL	To: Lockhart	Monday	9:00a	12:00p	\$4.00	\$2.00
	To: Luling	Friday	9:00a	12:00p	\$4.00	\$2.00
MENDOZA	To: Lockhart	2nd & 4th Thursday	8:30a	1:00p	\$4.00	\$2.00
NEIDERLAND	To: San Marcos	Tuesday & Thursday	9:00a	12:00p	\$6.00	\$3.00
	To: Lockhart	2nd & 4th Thursday	8:30a	1:00p	\$4.00	\$2.00
PRAIRIE LEA	To: Luling	Friday	9:00a	12:00p	\$4.00	\$2.00
	To: San Marcos	Thursday	9:00a	12:00p	\$6.00	\$3.00
REEDVILLE	To: San Marcos	Monday, Wednesday & Friday	8:30a	12:00p	\$6.00	\$3.00
	To: Austin	Monday & Wednesday	8:00a	2:00p	\$6.00	\$3.00
STAIRTOWN	To: Luling	Friday	9:00a	12:00p	\$4.00	\$2.00
	To: San Marcos	Thursday	9:00a	12:00p	\$6.00	\$3.00
UHLAND	To: Lockhart	2nd and 4th Tuesday	8:30a	1:00p	\$4.00	\$2.00

*Reduced Fare: Registered CARTS Customers, Seniors 65 and older, Persons with Disabilities, and Children Under 12
* Interurban Coach Schedule at RideCARTS.com






RideCARTS.com

Exhibit 4-9. Fixed-schedule public transit.



Exhibit 4-10. ADA complementary paratransit vehicle.

by the VA, human service agencies, and health-care providers. It is important for after-hours discharges from a hospital or other medical facility when public transit and shared-ride services are not operating.

These single-ride services have traditionally been provided by taxis and are now often provided by TNCs as well.



Safe and Professional Services

Patients are entitled to a safe and accessible trip. However, one vehicle driver is not the same as the next, and one vehicle is not the same as the next. Effective transportation service will ideally be provided by trained staff with safe vehicles—in other words, professional transportation service, which is particularly important for vulnerable populations.

Professional Standards for Vehicles and Drivers

Appropriately vetted and trained drivers are essential as many trips are one-on-one with a vulnerable patient. Exhibit 4-11 details basic requirements for drivers and vehicles. All health-care providers should ensure that their transportation providers and drivers are properly vetted and trained to work with vulnerable patients. Efforts to improve driver professionalism enhance safety as well as customer service.

Rio Grande Valley Transit Driver Academy is a pilot program designed to train new drivers to work at public transit agencies in the Lower Rio Grande Valley. The transit partners include the city of Brownsville, Brownsville Metro; city of McAllen, Metro McAllen; town of South Padre Island, Island Metro; and Lower Rio Grande Valley Development Council, Valley Metro. The training is provided by South Texas College and Texas State Technical College (6). Through economies of scale, each system receives professional training at a reduced cost.

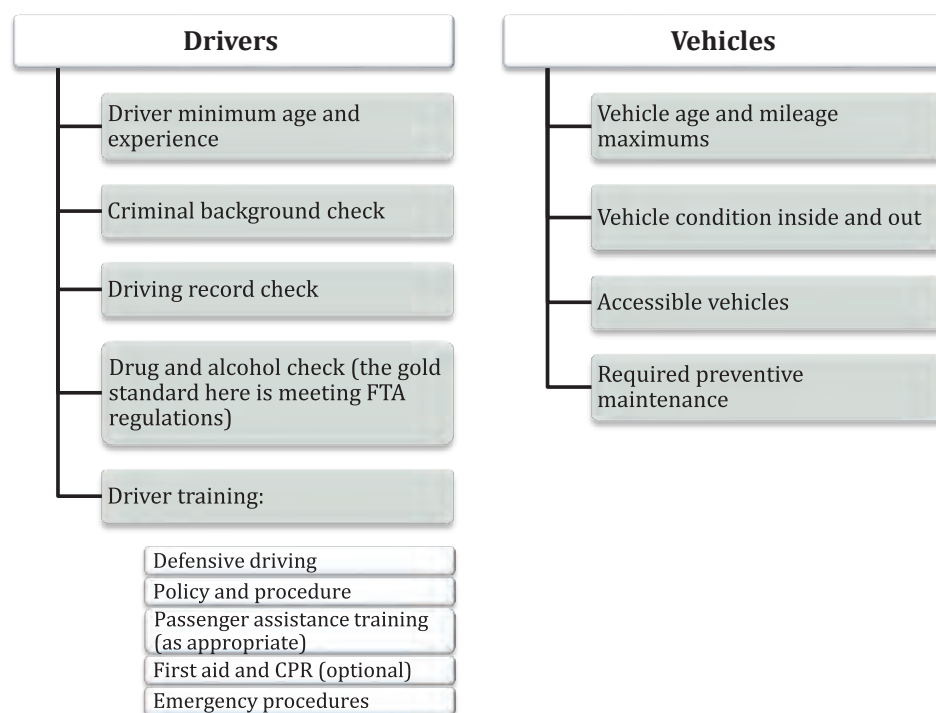


Exhibit 4-11. Minimum standards for drivers and vehicles.

Vehicles should be professionally maintained to stringent standards, including standards that address the age and condition of vehicles.

Depending on the type of transportation service, health-care providers may consider the following minimum standards noted in Exhibit 4-11.

Ideally, health-care and transportation providers collaborate to set the minimum standards for vehicles and drivers.

Monitoring Drivers

The transportation providers ideally have policies and practices in place to monitor their drivers to ensure adherence to standards and policies. Does the transportation solution being considered ensure that the transportation provider monitors the driver and that the entity in charge knows exactly who is driving? This requires the ability and exercise of real-time contact. Uber and Lyft apps, for example, allow the user (with a smartphone) to identify the driver. Without this assurance it is impossible to tell who is actually driving and what vehicle is being driven.

The Result: Safe Service

Placing vulnerable patients into a stranger's hands for transportation can be a leap of faith. However, a leap of faith is not desired when transporting vulnerable patients. Improving transportation access to health care should include efforts to ensure the transportation provider has safe and professional drivers and vehicles. As one example, Medicaid NEMT and TNCs typically involve the use of drivers' personal vehicles. Health-care providers purchasing these services should have assurances that the vehicles used to transport their patients are appropriate and safe.

Understanding Mobility Limitations of Riders One Patient at a Time

Articulating Service Needs of Riders (Patients) and Matching with Solutions

The riders (patients) seeking access to health care cover a very wide range of people. Many are ambulatory and can negotiate a public transit network. Others may need a door-to-door ride and still others may require an attendant.

Transit agencies are adept at determining if people can use a fixed route or require more specialized service, one that should be relied on by health-care providers where available. For purposes of developing transportation solutions to improve access to health care, it is useful to consider types of riders by their abilities to use transportation and the appropriate types of transportation service. The following four categories group riders by type of transportation service that is appropriate:

1. Ambulatory and independent riders are able and willing to use fixed-route service or other public transit mode. This would be the first option where appropriate. It is clearly the lowest cost option and requires no additional effort from public transit. These riders would also be able to ride on microtransit options that require persons to walk to a nearby intersection.
2. Riders in need of shared-ride door-to-door service are able to use a service such as public transit's ADA paratransit, general public dial-a-ride, or microtransit (where door-to-door service is available) if they are unable to use or get to a fixed route or if in a rural area without fixed-route service.
3. Riders in need of single-ride door-to-door require a non-shared, door-to-door ride, which is generally beyond the capabilities for public transit agencies. These riders will need a direct, non-shared service and may require assistance into or out of a building. After-hours discharges often require a single-ride service such as taxi or TNC.
4. Highly specialized needs might be needed for a patient who must travel supine or with special medical equipment. The transportation service would require a trained professional driver or an appropriate attendant to assist the rider and may need a specific type of vehicle.

The First Step: What Are the Riders' Capabilities?

The first step in determining the appropriate transportation service is to assess the riders' capabilities. Virtually all fixed-route transit agencies in the country (almost all urban areas and many small urban and rural areas) have an eligibility determination process for ADA complementary paratransit that assesses the type of transportation service required by an individual. Some of these determination processes are rigorous, requiring interviews, testing, and pathway assessments, while others simply require a doctor's signature. The objective is to determine if the rider can ride a fixed route for all trips, for some trips (conditional eligibility), or if the rider needs ADA paratransit for all trips (unconditional eligibility).

Using the ADA Eligibility Determination Process

While an ADA eligibility determination process can be an effective way to determine if a person is capable of using a fixed route, it may not give the health-care professional the entire picture. For example, it may be that a patient is capable of riding a fixed route, but the health-care provider knows that, given that option, the patient in question would not use it and as a result would miss the scheduled medical appointment. In such cases, the health-care provider would be justified in selecting a door-to-door service for that patient.

Using the Eligibility Process for More than Public Transit Service

A formal process for determining eligibility for different types of transportation service can be used for more than public transit. For example, LTD, which brokers a range of transportation services both within an ADA service area as well as beyond, uses an eligibility determination process not just for its ADA paratransit service, but for its full array of services. This process is unique in that all applicants are subject to a home visit from an eligibility specialist.

Summary: Mobility Limitations

For purposes of determining the appropriate transportation services for improving access to health care, it is useful to consider the four basic categories of riders. These broad categories capture the transportation abilities of patients and allow the collaborating health-care and transportation providers to evaluate the types of transportation services that fit.

Transportation Solutions and Service Design: One Size Does Not Fit All

Depending on the transportation needs of patients articulated by the health-care provider, the transportation community can come up with solutions to meet most, if not all, needs. The previous sections of this chapter provide the basics of transportation, which include a review of the different service designs and a discussion of mobility needs for moving forward with the appropriate transportation solutions to improve access to health care. The next step is developing the appropriate transportation solution. This involves, for example, decisions about how to operate the service, contract for service or use a broker, or perhaps the health-care provider wants to operate the transportation service directly. Consequently, it involves decisions about the type of service to provide.

When finding a transportation solution, what matters most is the functional needs of the riders. Is it a matter of simply providing bus passes or does the rider require specialized care or a door-to-door, shared-ride service? Transportation solutions should recognize that the needs typically represent a continuum, from riders who are able to use fixed-route services all the time to those who can never use a fixed route and need some type of more specialized transportation service.

One size does not fit all. It would be inappropriate to expect a person using an electric wheelchair to ride in an inaccessible taxi, as it would be inappropriate to place a person able and willing to ride the local fixed route on a far more expensive specialized service.

Management and Operation of Service

When the collaborating health-care and transportation providers are prepared to develop the transportation service, there are a number of operational and management decisions to be made:

- Should the health-care provider contract for service or should they operate it themselves?
- Should the health-care provider form a brokerage and, if so, what type?
- What are the most appropriate solutions for the community?

Contracting for Service

When a health-care provider or consortium of providers initiate transportation service, the solution is often to contract the service either with local existing taxi companies and/or TNCs. At the same time, the health-care provider may purchase fixed-route bus tickets to distribute as appropriate. There are many examples of this type of arrangement, often less formal than contractual.

Rather than work with the local Tribal Transit System, Indian Health Services in Winslow, Arizona, operates two vans to serve the same area as the transit system, albeit less productively (7).

Taylor Hospital in Kentucky saw no alternative to operating in-house. Other health-care providers have taken it a step further and now operate public transit in their communities including the Aaron E. Henry Clinic in Mississippi and Spartanburg Hospital in South Carolina. These organizations did so in order to fill a vacuum because there were no transportation providers in their community.

Operate In-House

Many human service agencies and health-care providers operate small numbers of vans for their patients or clients. For example, senior center vans typically take a group of seniors to health-care facilities from the senior center on select days, often grouping up to six or eight passengers. There are a number of examples of transit agencies providing retired vans (in good condition) to non-profit organizations for passenger transportation. These non-profit organizations often need to address driver training and vehicle maintenance, functions that they may not have in-house.

Brokerage: Many Variants

In many cases, communities may use a brokerage for transportation service, an option that is designed to meet the trip need with an appropriate transportation service at a reasonable cost. There are two types of brokerages that are intended to do different things:

- **Traditional Coordinated Broker**—These services typically offer the best fit for riders: cost, service, or both. There are many variations of this model as the transportation brokerage can be managed by non-profit agencies, transit systems, health-care facilities, or for-profit companies. Technology to allow for the most efficient use of vehicles is now the norm. These services typically serve a diverse population, including the general public, with multiple funding sources.
- **Capitated Broker**—A capitated brokerage for health-care transportation pays the broker a flat fee for each patient in the health plan. The risk of fluctuation in use of transportation and costs for transportation lies with the broker. This is a method used by many states for their Medicaid NEMT programs, which allows the state to stabilize costs. Typically, only Medicaid NEMT uses this model.

Capitated brokerages have been discussed in detail in *TCRP Research Report 202: Handbook for Examining the Effects of Non-Emergency Medical Transportation Brokerages on Transportation Coordination* (8) and are typically not used for non-Medicaid NEMT trips. This discussion will instead focus on a variety of coordinated brokerages and the technology that they use.

The value of the broker comes in its ability to deploy a diverse set of transportation providers to meet the varying needs of patients. The brokers reviewed for this study did just that—used multiple funding sources to serve multiple groups of riders while using a number of different providers, including public transit (for example, LTD and Denver Health). The transportation broker has the ability to fit each trip to the most appropriate mode and provider based on passenger need and cost.

Following are three examples of coordinated brokerages, each operated by different types of entities; all attempt to provide the best fit for each rider.

Public Transit Brokers

Public transit systems such as LTD have, at times, assumed the role of transportation broker for not just its ADA service but also for Medicaid NEMT, senior programs, and a number of

other organizations. Some rural public transit systems also act as broker-providers including Central Arkansas Development Council and Southeast Arkansas Transit. Vermont uses the state transit association to broker Medicaid NEMT trips to transit systems.

Health-Care-Based Brokerages

In Denver, a regional hospital has taken on the role of transportation broker funded through its foundation. Denver Health has developed a network of providers and uses brokerage software and accompanying technology to broker trips to their facilities as well as network partners.

Informal Broker

Informal brokering is typical across the country as hospital and health-care provider staff routinely make arrangements for patient travel. This could include using an app to call a taxi or TNC, distributing bus tickets, or dispatching a volunteer. This is a good solution if services are available and the demand is not excessive.

Selecting an Approach for Managing and Operating Transportation Service

Decisions regarding how to manage and operate a transportation service for improving access to health care should first determine what options are available. There are advantages and disadvantages to each approach.

Transportation Solutions—Matching Needs to the Right Services

There is a continuum of transportation solutions that can each be matched to a particular transportation need. Based on cost and convenience, a health-care provider can attempt to maximize the use of fixed-route service (where available). After that, there are a number of options.

Tables 4-3 matches patients with transportation solutions in urban areas. Table 4-4 matches patients with solutions in rural areas. Rural areas are distinguished from urban areas in the modes available. These tables depict matrices of services and needs and can serve as a guide in determining the type(s) of service to meet the individual needs in both urban and rural areas.

Table 4-3. Matching patients with transportation solutions: Urban.

Patient Types	Fixed Route	ADA Paratransit/ Microtransit	Taxi, TNC	Specialized or Volunteer
Willing and able to use fixed route (accessible)				
Able to use shared-ride door-to-door service (accessible)				
Requires single-ride door-to-door service (accessible as needed)				
Requires more specialized service (trained driver, volunteer) (accessible as needed)				
After-hours needs (accessible as needed)				

Table 4-4. Matching patients with transportation solutions: Rural.

Patient Types	Fixed Route (where available)	ADA Paratransit (where available)	Rural Fixed Schedule (shared ride)	Rural Paratransit (shared ride)	Taxi, TNC	Specialized or Volunteer
Willing and able to use fixed route (accessible)						
Able to use shared-ride door-to-door service (accessible)						
Requires single-ride door-to-door service (accessible as needed)						
Requires more specialized service (trained driver, volunteer) (accessible as needed)						
After-hours needs (accessible as needed)						

The matrices define groups of patients by their transportation abilities or needs. The groups do not specify age or disability, since some people can use fixed-route transit and others cannot.

Exhibit 4-12 shows a flow chart depicting the continuum of transportation service annotated by the types of patient needs. The chart assumes that the options in the continuum of services are available, but that may not always be the case.



First Stop: Fixed Route

The first option, where available and appropriate, should be fixed-route or general public transit service such as microtransit. Fixed route is the least expensive mode and, while not for all riders, many needs can be met through the use of bus passes. Trips typically cost \$1–\$2. The cost of monthly passes for an unlimited number of rides is about the same as one or two single rides on paratransit. LTD in Oregon, Capital Metro in Texas, and Denver Health are all examples of using bus passes for health-care needs. These three systems demonstrate an effective use of low-cost bus passes to provide patient access to health care.

Critical to successful fixed routes are bus stops. These stops should be accessible and safe in order to attract riders of all kinds. Exhibits 4-13 and 4-14 depict attractive stops.

Rural and Urban Issues: Fixed Route

Many urban areas have effective public transit, and many health-care facilities are on bus routes. Smaller cities and towns may have less public transit, and some may have service designs

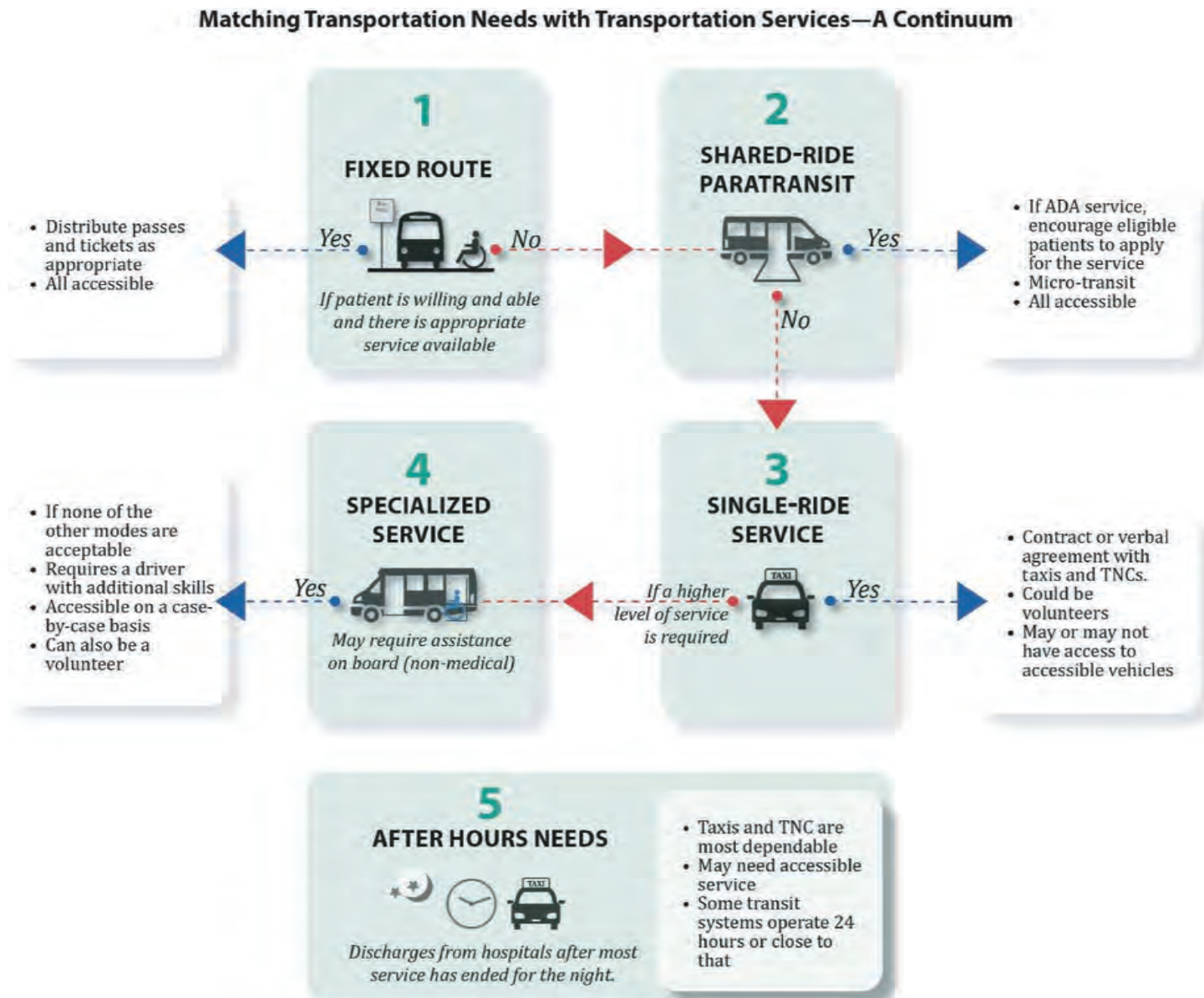


Exhibit 4-12. Matching transportation needs with transportation services—a continuum.

74 Guidebook and Research Plan to Help Communities Improve Transportation to Health-Care Services

Exhibit 4-13. *This fixed route bus stop has no barriers.*

that less effectively serve health-care facilities. Two examples of local fixed-route systems are depicted in Exhibits 4-15 and 4-16.

Many rural systems operate longer-distance intercounty services. These are most prevalent in the West where there are many multi-county transit systems with some services extending over 200 miles. For example, Navajo Transit operates over 200 miles from one end to the other. NCRTD has a service that spans over 250 miles, from east of Albuquerque to Farmington. These are discussed in greater detail in Chapter 6.

Hybrid Services

Over the past 15 to 20 years, a variety of hybrid services have been developed—a cross between fixed route and paratransit. Two examples of this are demonstrated by Rutherford County Transit in North Carolina and CARTS in Texas (Exhibit 4-17). Both of these examples show how fixed-scheduled services allow for the grouping of trips and reduction of costs. The fixed-schedule service model has the most potential for a positive impact on ridership and service in rural areas.



Exhibit 4-14. *A small town bus stop is very attractive.*



Exhibit 4-15. Local fixed route in Los Alamos, New Mexico. Photo courtesy of KFH Group.



Exhibit 4-16. Small urban fixed route in Coeur d'Alene, Idaho. Photo courtesy of KFH Group.



Exhibit 4-17. CARTS country bus provides fixed-schedule services. Photo courtesy of KFH Group.



Second Stop: Demand Response Shared-Ride Door-to-Door Service

The next group of potential solutions are all demand response-based, typically with door-to-door service. Shared-ride demand response or dial-a-ride is an appropriate service for many who cannot use fixed route. These typically take one of four forms:

- ADA complementary paratransit.
- General public dial-a-ride (microtransit).
- Rural demand response service.
- Human service or health-care transportation services.

ADA Complementary Paratransit

Every transit agency in the country with fixed-route service is required to provide ADA paratransit for individuals with disabilities who cannot use fixed route because of a disability.

- Each transit agency has a process to determine eligibility for paratransit service.
- Eligibility for paratransit takes two basic forms: unconditional eligibility where a person is declared eligible for paratransit for all trips and conditional eligibility where riders can use fixed route for some trips and paratransit for others.
- Once determined unconditionally eligible, paratransit can be used for any purpose provided one calls the day prior to service.
- Service is available a minimum of three-quarters of a mile from fixed route on the same days and at the same times.
- Many transit systems extend beyond the minimum and some include seniors.
- Paratransit fares can be no more than twice the fixed-route base fare.
- Paratransit services typically generate between one and three one-way trips per vehicle hour.
- These services can use transit system vans or buses, taxis, TNCs, and other third-party transportation providers.

Health-care providers are encouraged to visit the website of their local public transit agency and open a dialogue with the transit managers to discuss how they could work together.

General Public Dial-a-Ride (Microtransit)

Dial-a-ride (microtransit) and similar flexible on-demand services have been around for over 40 years, but it was not until recently that this form of transit service began to expand, driven in large part by new technology. Microtransit has been enhanced by the variety of apps that are capable of using small vehicles (Exhibit 4-18), efficiently and effectively scheduling and routing trips. Site visits to various microtransit services reveal that productivity can get as high as six one-way trips per hour in suburban and moderate density communities in urban, suburban, and rural areas.

Rural Demand Response Service

Some rural transit systems continue to operate shared-ride demand response service, sometimes countywide, operating at very low productivities of one trip per vehicle hour. This can result in trip denials due to the low-capacity service. These services are common in a number of states—for example, Arkansas, North Carolina, and Texas.

Human Service or Health-Care Transportation Services

There are many examples of human service or health-care agencies transporting patients using staff to drive their own vans that are sometimes donations. In addition, the use of FTA funds for seniors and persons with disabilities (FTA Section 5310) to purchase vans



Exhibit 4-18. A small microtransit bus. Photo courtesy of KFH Group.

is a common practice across the country. In some cases, the transit agency (e.g., COAST in Washington State) turns over its well-maintained yet retired vans to these agencies. With low out-of-pocket costs (no paid driver), these organizations can be encouraged to continue providing their service.



Third Stop: Single-Ride Demand Response

Some patients will need one-on-one service due to their specific needs. In other cases, one-on-one service is based on the nature of the trip. For example, after-hours discharges from a hospital will almost always be a solo trip by virtue of the low level of demand at that time, combined with the often last-minute nature of the trip. Transportation providers for these trips may include, but are not limited to:

- Taxi
- TNC
- Volunteer
- Private provider or individual contractor driver

Most of these services are for ambulatory riders; however, very often private providers and some taxi companies have wheelchair-accessible vehicles (Exhibit 4-19).

The issue of after-hours transportation service can be a difficult one especially in rural areas or where the discharge is far from the patient's home. For example, Rutherford County, North Carolina, has an agreement with a Charlotte, North Carolina, taxi service for after-hours service. There are numerous examples of agreements with TNCs and taxi companies for single-ride demand response service (See Denver Health and LTD case studies in Chapter 5).



Fourth Stop: Specialized Demand Response

Specialized demand response transportation service is for individuals with unique transportation needs. Often it is necessary to have a highly trained driver or an attendant to support the driver. Riders often have physical or mental health issues and



Exhibit 4-19. An accessible taxi. Photo courtesy of KFH Group.

require assistance in route. This assistance would be non-medical and would not require an ambulance and EMT.



Fifth Stop: After-Hours Service

For those anticipating after-hours discharges, in particular from hospitals, this service is essentially a taxi or TNC provider. In remote rural areas where there may not be a taxi or TNC, it may be possible to organize a volunteer transportation network or staff on-call. Another option for health-care providers would be to avoid after-hours discharges when the patient depends on the public service.

Summary: All Stops

Having a range of options for service provision is a strength when it comes to transporting people to health care. Transportation needs often range from those fully capable of riding fixed route to those who will always need specialized assistance on board.

For those health-care providers that have only one or two of these passenger needs, then the range of options is not an issue.

Sustainability: Building a Strong Transportation Support Network

Transportation and health-care collaborations and partnerships often begin as pilots. If the effort is successful and improves transportation access to health care, funding is needed to move the service beyond pilot status and to sustain its operation. However, sustainability is more than just identifying funding support. It is first important to ensure the transportation service is cost efficient, with the appropriate service provided for the identified needs. Second, funding sources are needed to continue the service over the longer term. This second part of sustainability is discussed below.

- A Diverse Funding Base
- Public Transit Funding
- Health-Care Providers
- Public-Private Sponsorships and Partnerships
- Maintaining Multiple Health-Care Funding Sources—the Search for Funding

A Diverse Funding Base

Once a transportation service is successfully operating, the focus should be on sustainability. One approach to sustainability is to find and maintain diverse funding streams. Coordination and collaboration are important elements in this effort.

Maintaining a diverse base of funding and revenue can take many forms, and the collaborating partners should be engaged to support a continuation of those diverse funds. Those sources of funds include but are not limited to:

- FTA public transit funding.
- Federal health-care funds such as Medicaid and VA.
- Health-care providers (many local health-care providers support transit).
- Private sector sponsorships and partnerships. Health-care providers, retailers, and others have found benefits of sponsorship.

Following are examples of funding sources and approaches to sustainability. Table 4-5 is a matrix of funding sources among many that are used in the collaborative practices. Note the range of sources among these examples.

Public Transit Funding

FTA has a variety of funding programs for use by transit agencies to support transit. For additional information regarding FTA programs, it is best to start with the website: <https://www.transit.dot.gov/funding/grants/grant-programs>. The key programs are:

- **Section 5307** program for operations funding for urban systems (under 250,000 population). This includes capital funding at an 80% federal match and operating assistance at a 50% match (for smaller urban systems only). It should be noted that large urban systems do not receive operating funds from FTA because that is a local, and in many cases a state, responsibility.
- **Section 5311** program for operating (50% federal match) and capital (80%) assistance for rural transit systems.
- **Other funding sources** for capital and facilities (most notably Section 5339) where transit systems can receive an 80% federal match.

The Rural Public Transit Advantage Federal Funding—Unique to rural transit, FTA treats rural transit systems differently than urban areas. This is particularly important in the rules established for matching funds. Rural transit systems have the ability to use other federal funds (such as Medicaid NEMT and veterans funds) as local match. Coordination and collaboration between public transit and health-care providers allow rural transit agencies to leverage these federal funds and reduce the need for local match, which is often difficult in rural areas. With the proper collaboration, transit expands and benefits all.

Health-Care Providers

Health-care providers have approached the funding of transportation in a number of different ways.

- Some health-care providers choose to operate or fund the service themselves; in many cases, there are no other viable options:
 - Arron E. Henry Health Clinic, Mississippi, and Spartanburg Transit, South Carolina, are two examples of health-care providers operating public transit. These systems then take advantage of the FTA Section 5311 program and can use other federal sources for match.

Table 4-5. Matrix of funding sources.

Organization/Location	Transit Providers	Health-Care Providers	Federal/State/Local Governments	Sponsorships/ Private Sector	Non-Profits/ Human Service
Aaron E. Henry Community Health Services Center, Inc.	Delta Area Rural Transit System (DARTS)	Local health-care providers	• Federal FTA Section 5311 • State Mississippi Department of Transportation, Mississippi Department of Human Services-Medicaid, Area Agency on Aging • Local county governments		Area Agency on Aging, North Delta Planning and Development District
Capital Metro Transportation Authority and Capital Area Rural Transportation System	Capital Metro	City/county health departments	• Federal FTA Sections 5307 and 5310 • Local Travis County, cities of Round Rock and Georgetown	15–20 partners, both governmental and non-profit	Georgetown Health Foundation, United Way
CareMore		CareMore, an insurer, funds 100% of service		CareMore	
Children and Adults Rural Transportation Service (CARTS) New York		Local hospitals and health-care facilities	• State Medicaid NEMT • Local Columbia County, several county agencies	Donations from non-Medicaid enrollees	Foundation for Community Health, Connecticut
CountyRide in Baltimore County, Maryland	CountyRide (County Department on Aging)	Annual financial support from 15 medical facilities in city and county	• Federal FTA grants • State Medicaid NEMT • State grants • Local county funds		
Denver Health Medical Center		Denver Health and Hospital Authority	• State Medicaid NEMT		Denver Health Foundation
Flint MTA's Rides to Wellness	MTA (initial funding)	McLaren Health Care System and partners pay by the trip	• Federal FTA Rides to Wellness Grant Program, Sections 5307 and 5339 • State Michigan Department of Health and Human Services, Medicaid • Local Genesee County Department of Veterans Services		American Cancer Society
Geisinger Health System partnership with rabbittransit, Pennsylvania	rabbittransit	Geisinger			
Healthy Hop by PSTA	PSTA	AdventHealth North Pinellas	• Local city of Tarpon Springs		

LTD RideSource	LTD	A number of participating health-care providers	- Federal FTA Sections 5310 and 5311; Medicaid NEMT, Older American Act; Developmental Disabilities Services Department of Veterans Affairs - State transit funding and human service health-care-related funding - Local cities		A number of non-profit and health-care organizations
Missouri Rural Health Association's HealthTran	Five transit systems	Eight health-care provider/members	- Federal National Center for Mobility Management (initial grant) - State Missouri Department of Transportation (initial grant)	United Healthcare (initial grant)	Licking Bridge Builders Senior Center Missouri Foundation for Health (initial grant)
NCRTD	NCRTD		- Federal FTA Sections 5311 and 5339 - Local gross receipts tax in the four counties - Local governments pay for service beyond jurisdiction	Multiple ski resorts provide funding for service	
Paris, Texas	TRAX Rural Transit District	Paris Hospital	- Federal FTA Section 5311 - Local city of Paris	Local hospital, oncology center, business	United Way
Rides Plus, Illinois	Rides Mass Transit District	Providers and insurers	State Medicaid NEMT	Private insurance companies	
Rio Grande Valley Health Alliance, Texas		Rio Grande Valley Health Alliance (RGVHA) funds through Medicare shared savings			
Rutherford County Transit	RCT		- Federal FTA Section 5311, Medicaid NEMT - County provides local match		
Taylor Regional Hospital		Taylor Regional Hospital		Private donations/sponsors (14 total): banks, businesses	
Vermont Public Transportation Association	Local transit systems		State Medicaid NEMT		

- Taylor Regional Hospital in Kentucky, citing a lack of available transportation, chose to develop a service for its patients and fund it directly with support from other health-care providers.
- In Southeast Missouri, the Missouri Rural Health Association’s (MRHA) HealthTran program, members pay an assortment of fees such as annual membership fees and monthly subscriptions. Initiation and booking fees are imposed on health-care providers in order to be part of the network and ensure sustainability.
- Indian Health Services in Winslow, Arizona, operates its own vehicles in service to the Winslow clinic.
- Denver Health Medical Center (funded by the Center’s foundation) is an example of a health-care-funded brokerage.
- Other health-care providers collaborate with and fund transit:
 - Capital Metro and its partner CARTS, a rural system in Texas, work closely with a health-care foundation to provide service in a small city beyond Capital Metro’s jurisdiction and collaborate with the city/county health department to provide bus passes to persons in need.
 - Two coordinated rural transit operators competed for and were selected to operate Medicaid NEMT brokerages in Arkansas. This funding can then be used to match FTA funds.
 - LTD receives funding from a number of human service agencies and health-care providers. This includes both Veterans and Medicaid NEMT.

Public-Private Sponsorships and Partnerships

Private sector participation in support of transit is not new. Various forms of partnerships and sponsorships have been in place for over 100 years. Advertising on transit was in use since the turn of the last century with advertisers tying banners to the sides of trolleys. Transit and the private sector each have much to gain. The private sector can advertise, promote their organizations, and support their community, while the transit system generates flexible local revenue for the service. Paris, Texas, is an example of a sponsorship program with participating sponsors that include the local medical center, an oncology center, the city, and retailers. The public transit operator, TRAX, which is part of the Ark-Tex Council of Governments, generated \$150,000 in revenue and in-kind facilities for the operation of the fixed-route system.

Maintaining Multiple Health-Care Funding Sources—the Search for Funding

There are a number of examples of services funded by a hospital or medical center’s foundation. In some instances, insurance companies (CareMost, for example) fund their own transportation service as well. Unless an organization or collaborative partner is willing and able to self-fund their transportation, it is best to generate partners willing to fund or support the program. Using public transit as a partner can ensure the program is leveraging the federal funds available to the community. This is particularly important in rural areas when transit systems can use other federal funds as a local match.

The collaborative partners should embrace new organizations to support the transportation service and continually seek out new sources of funds to ensure sustainability. The case studies and collaborative practices documented in Chapters 5 and 6 of this guidebook provide many examples that demonstrate funding possibilities.

Chapter Notes

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CHAPTER 5

Case Studies



Introduction

This chapter presents five case studies, set in communities from Lane County, Oregon, on the West Coast, to the Denver metropolitan region, to 10 rural counties in South Central Missouri. These case studies describe relationships and partnerships created between transportation and health-care organizations, demonstrating efforts to improve transportation access to medical and other wellness-related appointments and services; see the map in Exhibit 5-1.

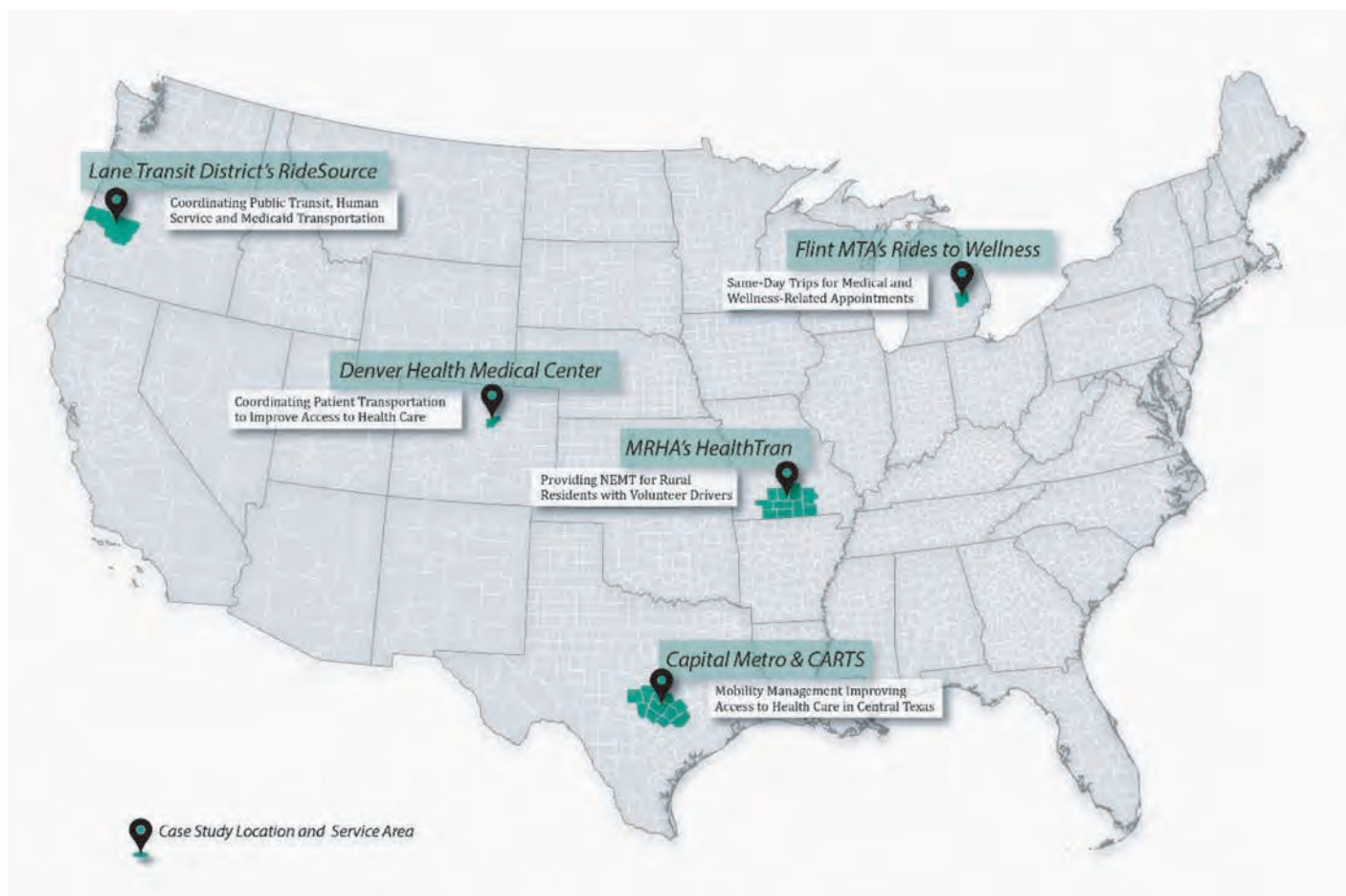


Exhibit 5-1. Locations of the case studies.

For those communities interested in and considering their own efforts to improve transportation access to health care, the examples described in the case studies (as well as the collaborative practices presented in Chapter 6) provide ideas and possibly inspiration. One good place to start when considering transportation improvements to health care, as some communities and health-care organizations have found, is the community's public transit agency. The local transit agency—with trained staff, a fleet of maintained vehicles and, importantly, operating experience in the community—is an existing resource that may be a willing partner for improving access to health.

Beyond the community's public transit agency, there are other transportation providers (as described in Chapter 3) that can be effective resources for improving access to health care. Taxis, for example, have been a resource for many years, and in just the past several years, new private mobility providers have entered the health-care market with options providing on-demand transportation.

Additionally, technology solutions are increasingly available that facilitate the steps involved in providing transportation for patients—from trip booking to trip payment—with safeguards for patient privacy. The case studies in this chapter and collaborative practice described in the following chapter showcase a wide variety of transportation services and providers involved in improving access to health care.

Case Studies

The five case studies in this chapter include:

1. Two transit agencies in Central Texas—Austin's urban public transportation authority and the transit agency serving rural counties surrounding Austin—partnered to develop a regional mobility manager to improve transportation options. A key issue has been expanding transit service to support health-care access.
2. Denver Health, a large medical system that includes a network of community health centers, coordinates a range of transportation services to meet patients' needs in the Denver metropolitan region. Services include more traditional options such as the provision of bus passes for public transit use (including vouchers to ride the state's intercity bus service) and use of Lyft for on-demand trips to serve hospital discharges and outpatient appointments.
3. Flint, Michigan's, public transit authority developed the well-regarded "Rides to Wellness" program, providing mobility management, door-to-door service, and same-day trips for riders going to medical or other health- and wellness-related appointments. Using a ride-hailing-like model and cutting-edge technology, Rides to Wellness is provided through agreements with local agencies and medical providers that fund the transportation.
4. LTD in Western Oregon, developed *RideSource* that brokers and coordinates a range of transportation services, including Medicaid NEMT, ADA paratransit, contracted human service agency client transportation, health-care transportation, and general public service. Health-care trips, for example, are coordinated directly with hospital social workers and local coordinated care organizations (CCOs), entities established by the state's Medicaid agency.
5. Missouri Rural Health Association's *HealthTran* program provides NEMT for rural residents in 10 counties in South Central Missouri who have no other means of accessing transportation to health-care facilities. Initiated as a pilot with grant funding, HealthTran is now supported through subscriptions from participating health-care providers.





OFFICE OF
MOBILITY
MANAGEMENT

CENTRAL TEXAS

Mobility Management—Improving Access to Health Care in Central Texas: Capital Metro Transportation Authority and Capital Area Rural Transportation System

Snapshot of Collaboration

Two transit agencies in Central Texas—the Capital Metropolitan Transportation Authority (Capital Metro) and the Capital Area Rural Transportation System (CARTS)—partnered to develop a regional mobility manager charged with expanding transit for those in need in the nine-county Capital region surrounding Austin. The resulting Office of Mobility Management (OMM) has coordinated funding and services with numerous health-care providers in:

- Capital Metro’s service area of Austin and some close-in suburbs
- Rural parts of nine counties surrounding Austin, six of which are entirely rural

Additionally, the OMM helped build a number of transportation services in the geographic area between the two transit agencies’ service areas that previously had no service.

One of the key issues in development of the OMM was determining how to expand transit service to support health-care access. OMM’s response: the office strives to integrate the region’s network of transit services to help connect people to needed goods and services in the Capital region.

The coordinated efforts of Capital Metro, an urban transit agency, and CARTS, a rural agency, now provide access to almost 30 community partners through the OMM, which is dedicated to meeting the transportation needs of seniors, people with disabilities, veterans and others in need. This collaborative effort has increased fixed-route and specialized transportation, improving access to health care through the expansion of public transit service in formerly underserved and unserved areas.

How Did the Collaboration Start?

Rapid growth brought changes to Central Texas. Areas previously served by CARTS had become urbanized and were no longer eligible for CARTS service. These newly urbanized areas were also not in Capital Metro’s service area, leaving them in a transit desert with no service.

The collaboration was initiated by CARTS and Capital Metro in response to this loss of service and new unmet needs. The two organizations formed the OMM, which is hosted and funded predominantly by Capital Metro. The OMM was charged with building transit services in areas of high needs. Soon, Travis County joined forces and ultimately service was coordinated with the Transit Empowerment Fund. Texas’s capital area region is illustrated in Exhibit 5-2.

Initiating the Effort

Two important factors facilitated development of the OMM. One was the establishment of the Transit Empowerment Fund and its resulting funding support. The second was the close working relationship between Capital Metro and CARTS that helped the establishment of the OMM and with efforts supporting its work.

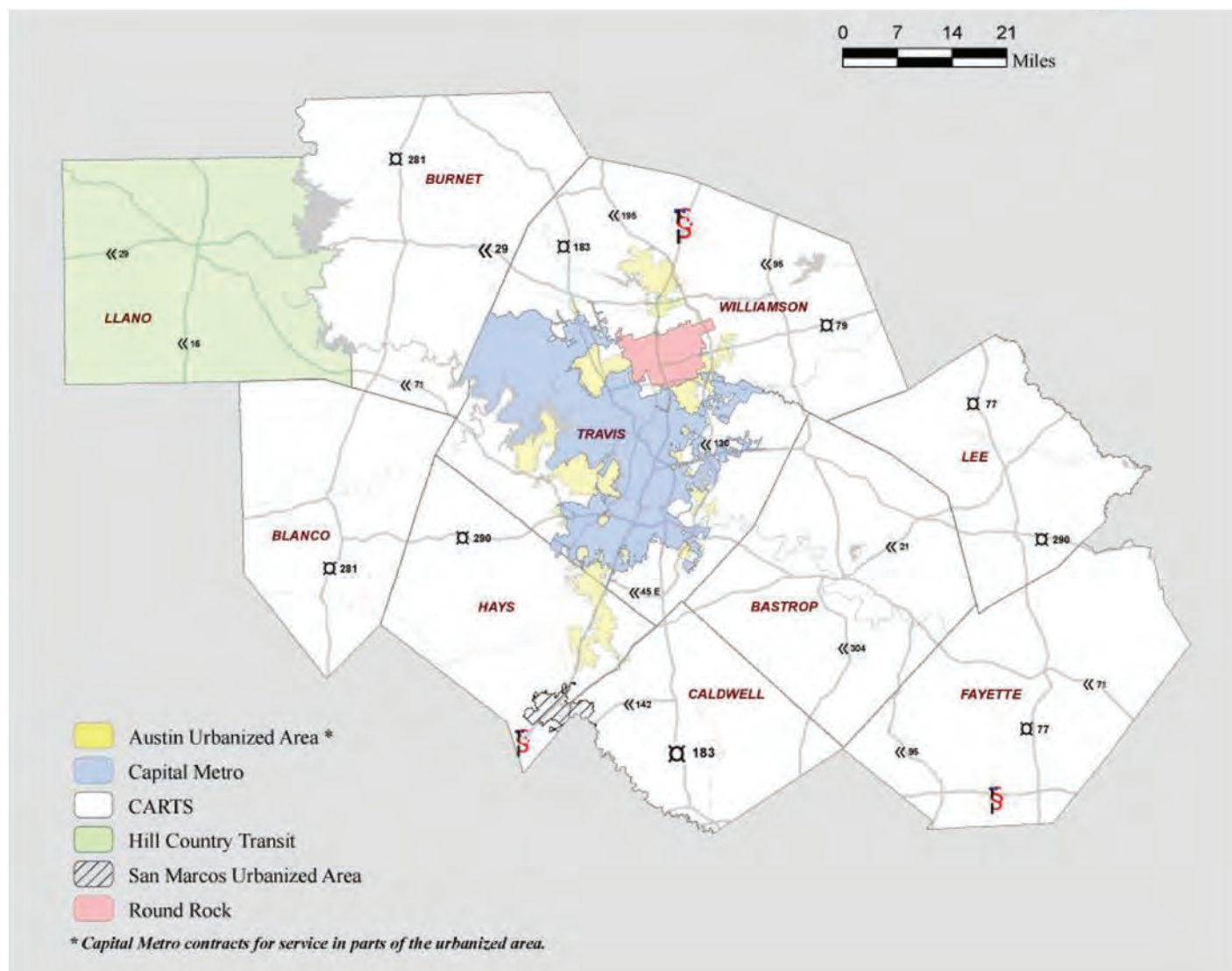


Exhibit 5-2. Texas' capital area region.

The Transit Empowerment Fund

The Transit Empowerment Fund was established in 2011 through a partnership between Capital Metro, Austin's public transportation provider, and One Voice Central Texas, a coalition of more than 100 health and human service non-profit organizations. The goal was to address the effect of rising public transit fares on low-income individuals.

Capital Metro contributed \$250,000 in seed funding in 2012, and in 2013, the transit agency increased its annual contribution to \$350,000. An independent volunteer board representing non-profit health-care and human service agencies, the business community, and Capital Metro oversees the work of the Transit Empowerment Fund.

Since 2012, the Transit Empowerment Fund has distributed thousands of Capital Metro transit passes to local non-profits for use by their clients. Recipients of the transit passes must have low income, reside in the Capital Metro service area, and use public transportation.

The Transit Empowerment Fund Board's target populations are adults over the age of 65, people with disabilities, youth under the age of 18, low-income workers or those enrolled in

job training programs, refugees, people experiencing homelessness, Medicare card holders, Medicaid recipients, and veterans. The goal of the program is to promote self-sufficiency by providing transportation for employment, health care, education, and social services.

Additionally, the Transit Empowerment Fund Board has funded the following demonstration projects to expand transit services in underserved areas in the Central Texas region:

- In 2013, the Transit Empowerment Fund invested in a demonstration project that provided transportation to a non-profit organization's clients who lived in designated areas to access the organization's parent-child education programs.
- In 2014, the Transit Empowerment Fund partnered with AGE of Central Texas, a non-profit serving older adults, to identify transportation gaps and resources and to create a plan to address identified transportation needs of older adults in the Austin area. The plan was completed in February 2015 and is guiding the future work of the Board to expand transportation access for seniors in the Austin community.
- In 2017, the Transit Empowerment Fund provided a grant to "Ride Austin," a local app-based, on-demand transportation service. This grant allowed the non-profit ride-sourcing organization to partner with a collaboration of Central Health and a regional hospital for a pilot program in which those without the means to pay for health-care transportation were able to request no-cost rides to health-care appointments or pharmacies within the collaborative's network.
- Also in 2017, the Transit Empowerment Fund awarded the Housing Authority of the City of Austin funds intended to expand and enhance the impact of its "Smart Work, Learn, Play" mobility equity program.

Development

Capital Metro and CARTS developed the OMM in 2013 to address findings of studies and local stakeholder concerns about gaps in transportation services arising from the growing urban area and shrinking rural area. Transportation needs were appearing in suburban, exurban, and smaller communities with populations between 10,000 and 120,000 that were not served by either the urban transit agency, Capital Metro, or the rural provider, CARTS.

Since its initiation in 2013, the OMM has been funded and sustained primarily by Capital Metro, with additional funding from FTA Section 5310 grants. Critical to the development of the office was ensuring that all participants understood the needs, constraints, and capabilities of each type of participating organization. The approach of this mobility manager is that fixed route should always be the first choice of service for an individual when such service is appropriate and feasible.

The low transit fares, subsidized through Capital Metro, help the mobility manager accommodate many of the health-care transportation needs very cost effectively. Approximately 50% of the trip purposes associated with the bus pass program is for health-care access.

Description

The OMM conducts a wide array of services and activities in support of expanded access to destinations throughout the region: These services include:

- Conduct planning efforts.
 - Planning efforts have focused on unserved and underserved areas in the large region, with plans completed for multiple small cities ranging in size from 10,000 to 120,000 population. So far, two of the small cities have implemented transportation service as a result of the planning efforts.

- Pursue funding and sustainability.
 - Pursue grant funding through the Georgetown Health Foundation, which has provided \$200,000 annually to the city of Georgetown for transit for three years.
 - Obtain funding from Travis County,
 1. Secured funding from the county and United Way for “Access to Health Care,” a program serving lower-income areas that were unserved outside of both Capital Metro and CARTS service areas.
 2. Secured funding of low-cost bus passes (one-quarter fare).
 - Arranged Capital Metro funding for portions of service in Georgetown and Round Rock.
 - Coordinated funding with the Transit Empowerment Fund and Travis County.
- Build new public service where none existed.
 - Travis County expanded transit service in unserved exurbs and suburbs, a crucial service driven by health-care needs.
 - Round Rock and Georgetown both initiated fixed-route service through the efforts of the OMM, expanding access to health-care and other needed services.
 - The city of Manor, through the OMM, initiated a loop-route shuttle that had very low ridership. This service was revised to an app-based, on-demand service provided by Via and ridership increased, with many of the trips providing access to health care.
- Engage with the Community Health Impact Plan.
- Provide a Trip Planner with 90% of trip planning for access to health care.
- Develop information such as the “Greater Austin Transportation Services and Senior Ride Guide,” a comprehensive rider’s guide of transportation services in the region.
- Administer FTA Section 5310 funding, ensuring coordination of services.

The Need for Transportation

While Capital Metro and CARTS provide well-regarded transit service, there are still gaps as identified in a recent coordinated plan (1). These areas are not eligible for federal transit funds as is typical for parts of an urban area that are outside of the transit system’s service coverage. Over 200,000 people live outside of Capital Metro’s service area, yet they are still in the urban area.

Exhibit 5-3 depicts gaps in service in Central Texas in 2016. Since that time, two of the cities, where the OMM conducted transportation plans, have implemented some transit service. In addition, the OMM has teamed with Travis County to provide service in the unincorporated areas of eastern Travis County that are not in the Capital Metro or CARTS service area.

Filling Transportation Gaps

Many transportation needs can be met through fixed-route service, unless the individual cannot get to the service due to distance or mobility limitations or where there is no fixed-route service. For those who cannot use a fixed route, other services will be needed. OMM has worked hard to fill these gaps with appropriate service through its partnership arrangements. Exhibit 5-4 depicts one of Capital Metro’s microtransit vehicles serving a local community in Austin.

Partners and Participating Organizations

The greatest strength of the OMM is its ability to build services through partnerships with a diverse group of organizations, including:

- Local governments
- Transportation providers
- Health-care organizations
- Human service agencies

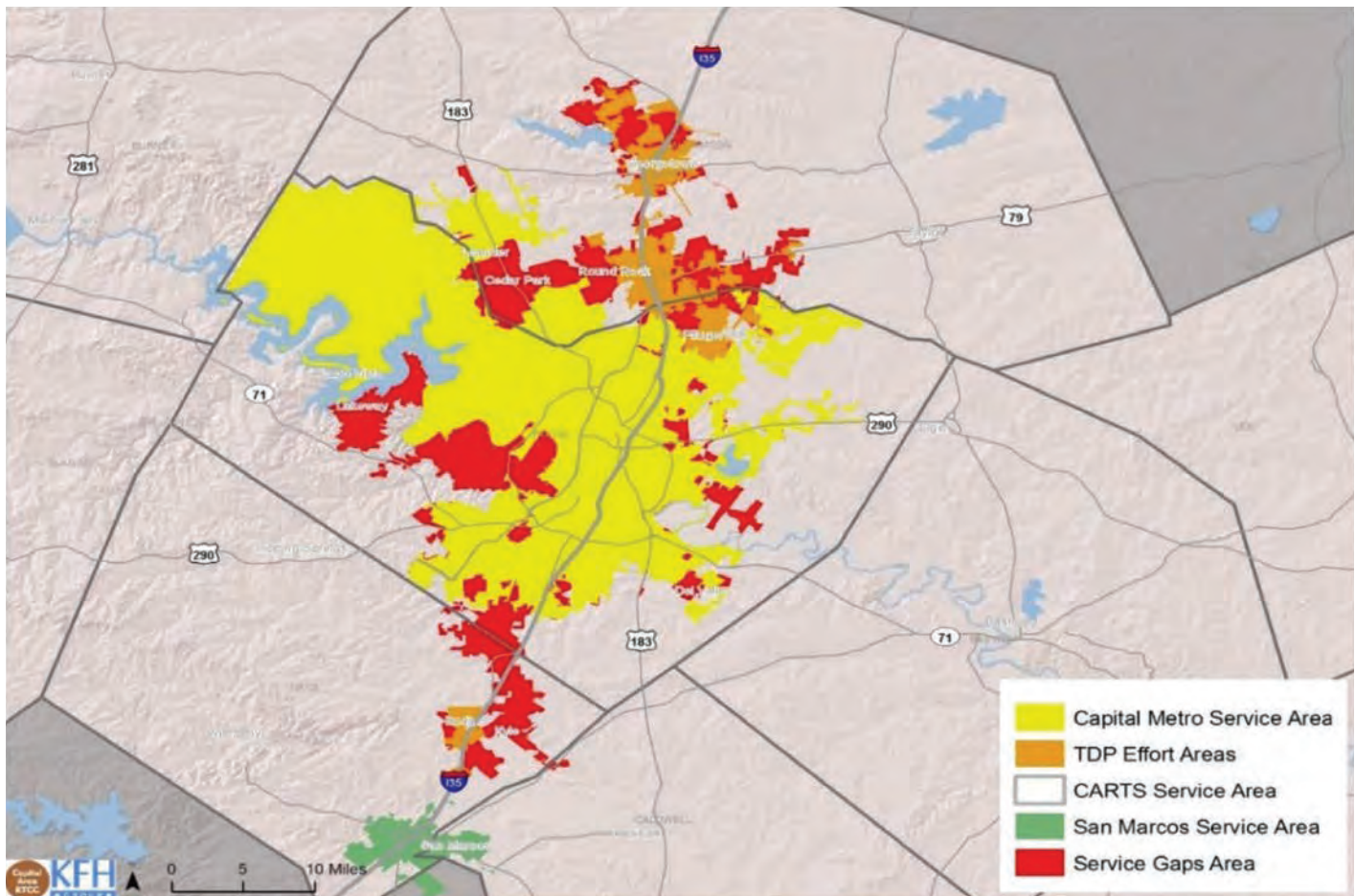


Exhibit 5-3. 2017 service gaps in Central Texas.



Exhibit 5-4. Pick up by Capital Metro, a microtransit option. Photo courtesy of KFH Group.

The OMM has close to 30 partners, most of whom provide support. These are depicted in Attachment 1 to the case study and are summarized as follows.

Health-Care and Human Service Agencies

Numerous health-care providers serve as partners. As noted above, the OMM has succeeded in securing funding from various health-care entities, the United Way, and human service agencies. The Georgetown Health Foundation has contributed over \$200,000 to Georgetown's new transit service.

The OMM has been active in the development of the *Community Health Improvement Plan: Austin/Travis County Texas, Year 1 Action Plan (2)*. This plan sets forward a wide range of goals to improve health care. The goals pertaining to transit are in Attachment 2 to the case study.

Local Governments

Travis County provides funding on a per-trip basis, and the Austin—Travis County health service, known as Central Health, has been actively involved in transportation and mobility management activities. This organization has been working actively with the OMM to implement health-care transportation for isolated, lower-income communities beyond the Capital Metro and CARTS service areas.

The cities of Round Rock and Georgetown implemented some fixed-route services to support those accessing health care, jobs, and other needs. These services were planned and supported by the OMM, CARTS, and Capital Metro.

Technology and Innovation

CARTS, in partnership with Capital Metro and Travis County, recently planned a service change in the city of Manor, which is a rapidly expanding suburb of Austin (9,200 population as of 2017). The service is now microtransit and an app-based, on-demand service that has proven to be very successful. Ridership has gone from an average of 40 one-way trips per month before the change to currently 100 per day in peak times (3).

CARTS and Capital Metro use fare payment cards, paratransit software, and supporting technologies in their paratransit systems.

Facilitators of Success

The initiative started with a partnership between CARTS and Capital Metro. These two organizations continue to lead and facilitate new service development through the OMM. Strong leadership and collaborative skills of OMM, CARTS, and Capital Metro management continue to facilitate success. The funding provided by Capital Metro continues to ensure the sustainability of these services.

Barriers, Constraints, and Challenges

The OMM staff reported early challenges in gathering the coalition together and working with local governments to fund local transit service. Yet, because the transportation needs were so evident, the OMM found most of the organizations willing to participate and support the improvement of transportation services.

Funding and Sustainability

There have been four primary sources of funding for transportation services in the Capital region. First and foremost, the funding provided by Capital Metro to support the OMM

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(in conjunction with CARTS) and the Transit Empowerment Fund is critical to both. Capital Metro has also provided FTA Section 5307 funding to Travis County as well as the cities of Round Rock and Georgetown, both outside the Capital Metro’s service area.

Second, the Transit Empowerment Fund has been extremely supportive of the entire process of improving transportation services in Austin/Travis County. The fund provides a number of options for funding in concert with the OMM, including:

- Micro grants that provide additional opportunities to meet the Transit Empowerment Fund mission of enhancing access to transportation for low-income, transit-dependent individuals in the Austin area.
- Free and deeply discounted transit passes provided to non-profit health-care and human service organizations and governmental entities in Central Texas to help meet the transportation needs of low-income clients.

Third, local governments have been supportive of new transit services in Travis County and the cities of Round Rock and Georgetown. Without such local support, the transit services in these jurisdictions would be non-existent.

Fourth is funding from health-care and human service organizations that provides matching funds for bus passes and other services in support of their programs. The Health Foundation of Georgetown in particular, provided \$200,000 per year for 3 years for public transit in Georgetown.

Overall, the OMM has been able to secure funding to implement much-needed services. The staff believes that, if the project is worthy, the funding will come. This echoes comments of transit managers leading innovative agencies that were reported in earlier TCRP research:

“(Innovative) Managers do not let funding issues get in their way. They realize that if the service has merit, someone will pay for it” (4).

Lessons Learned

OMM staff cited the following steps that have led to their successful activities and efforts in providing mobility management in the Capital region of Texas:

- Get engaged early in the process when transportation needs become evident and understand the stakeholders’ needs.
- Make sure “the right people are at the table”—decision makers and people with influence in the community.
- Seek funding from a variety of sources.
- Offer an array of services.
- Be resourceful and relentless in the pursuit of opportunities to provide transportation.

Transferability

Mobility management functions and activities are diverse. The OMM has chosen to focus on building transportation services and providing information to those who need it. These functions can be adopted by other agencies or organizations that pursue mobility management.

Advocating for individuals in the community who are transit dependent includes:

- Provide information on transportation resources as well as trip planning services.
- Identify and secure a variety of sources of funding to help ensure transit sustainability.
- Be resourceful in the pursuit of the mobility management objectives.

Contact Information

Office of Mobility Management
Austin, Texas
<http://mytxride.com/>

Attachments to Case Study of Capital Metro and CARTS Office of Mobility Management for Central Texas

Attachment 1: Partnering Organizations

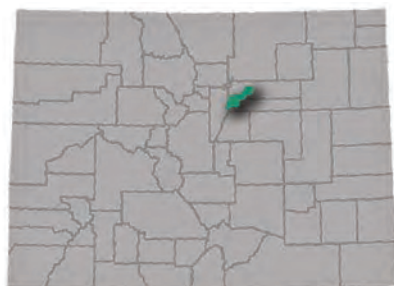
- Transportation Providers
 - CARTS
 - Capital Metro
 - City of Round Rock–Transit
 - The HOP
 - Burnet County Vet-Rides
 - Drive a Senior–Health Care
- Health Care Organizations
 - Austin - Travis County Integral Care
 - Central Health, Austin - Travis County
 - La Grange VA Outreach Clinic
 - Easter Seals of Central Texas
 - Hays County Veteran Medical Transportation Services
 - Health Foundation of Georgetown
 - Hill County Mental Health and Developmental Disability Center
 - Road to Recovery–American Cancer Society
 - Medicaid Transportation
 - Multiple health-care providers
- Agencies Supporting the Social Determinants of Health
 - Age of Central Texas
 - ARCIL, Inc.
 - Area Agency on Aging
 - Austin Parks and Recreation Department
 - Bastrop County Emergency Food Pantry & Support Center
 - Bluebonnet Trails Community Services
 - Community Action, Inc. of Central Texas
 - Hutto Community Resource Center
 - Mary Lee Foundation
- Others
 - Commute Solutions
 - Regional Transportation Coordination Council
 - United for the People

Attachment 2: Community Health Improvement Plan Austin - Travis County

Objective 1.3: By 2021, decrease no-shows for health-care appointments at safety-net health-care providers by 10%.

- 1.3.1 Work with transportation partners to expand and enhance transportation options (e.g., number of accessible vehicles in the region, variety of transportation options to health care) for members of the community who have difficulty reliably traveling to health-care appointments.

- 1.3.2 Advocate to expand care delivery in under-resourced areas via options such as co-locating, building new facilities, and use of telemedicine.
- 1.3.6 Promote awareness of existing transportation resources, including Capital Metro's Mobility Management program, through a variety of communication avenues.
- 1.3.7 Explore options for making Capital Metro's Mobility Management program more robust (e.g., centralizing, tech/software solutions).
- 1.3.8 Connect health navigators with Mobility Management services so they can refer people to the right transportation resources for their need



Coordinating Patient Transportation to Improve Access to Health Care: Denver Health Medical Center

Snapshot of Collaboration

Denver Health Medical Center (Denver Health) is a safety-net hospital with a Level I Trauma Center, multiple outpatient clinics, and a wide network of community health centers. Denver Health coordinates several types of transportation options to meet the needs of its patient population, with the goal of increasing access to preventive health-care appointments, improving health outcomes after discharge from the hospital, and decreasing preventable hospitalizations and emergency department visits. The transportation program includes the following components:

- **Medicaid NEMT.** Denver Health case managers and patient navigators can arrange NEMT transportation for patients enrolled in Medicaid. However, patients have reported long wait times and difficulties in scheduling NEMT rides. Transportation options under NEMT include wheelchair-accessible vans, bus vouchers, and taxis, among others.
- **Bus services.** Patients can receive passes to ride Denver's bus system or vouchers for Bustang, Colorado's intercity express bus service. Bustang can transport patients to major cities outside of the Denver metropolitan area, such as Colorado Springs and Fort Collins.
- **Taxis and Lyft.** In November 2016, Denver Health partnered with Lyft to leverage the TNC's large network of on-demand drivers in an effort to increase transportation options after discharge and to and from appointments at outpatient clinics. Prior to partnering with Lyft, Denver Health frequently provided taxi vouchers to help patients travel back to their homes.
- **Private car.** The health system maintains one private car to transport patients to and from appointments, with an emphasis on patients with complex health needs who have no other means of accessing transportation. The private car service is staffed by three volunteer drivers, retired community members with clean driving records. Oprah Winfrey donated the car to Denver Health to help patients with limited resources.

How Did the Collaboration Start?

Denver Health has long acknowledged the importance of transportation in accessing health care and returning home safely after discharge. Prior to 2016, the hospital had heavily

relied on taxis and NEMT services to provide transportation to people who were unable to use public transportation. However, challenges with existing transportation options often resulted in hours-long waits for patients after discharge. For example, due to high demand, the broker could not always provide immediate transportation assistance for patients. In addition, Denver has a relatively small taxi fleet, which also often contributed to long wait times.

A Clear Need for Transportation Assistance

Denver Health consistently serves several populations that needed additional assistance with transportation, including:

- **Patients with limited resources**—Denver Health serves many patients with limited resources that face challenges with accessing reliable transportation options, including a large population of Medicaid patients. Patients may lack access to a personal vehicle and may be unable to afford a taxi service or bus fare. Some patients rely on friends and family members for transportation.
- **Patients with limited English proficiency**—Case managers report that some patients with limited English proficiency have experienced difficulties with navigating Denver’s public transportation system.
- **Patients with complex health needs and limited mobility**—While Denver has extensive public transit services, many patients have complex needs beyond the capabilities of transit. For example, some patients cannot wait at a bus stop that leaves them exposed to the elements.

A Turning Point in the Transportation Program

In 2016, emergency department staff reported that one patient had waited in the hospital lobby for 7 hours after multiple failed attempts to secure a ride home, including an inability to connect with family members and existing taxi and NEMT services. The patient’s experience was a pivotal moment for Denver Health leadership and highlighted the fragmented nature of transportation assistance available to patients with limited resources.

Partnering with Lyft

At the same time that Denver Health was searching for a better transportation solution, TNCs such as Uber and Lyft had begun gaining popularity in Denver. The Chief Experience Officer at Denver Health reached out to Lyft to inquire about the possibility of establishing a partnership to coordinate rides for patients. Denver Health chose to partner with Lyft because the company’s community-oriented policies aligned well with Denver Health’s mission and values. For example, Lyft’s “Round Up & Donate” program provides riders with an option to donate to Lyft’s charitable partners.

Development

The Chief Experience Officer was quickly able to connect with Lyft, receive information about potential costs, and request funding from the Denver Health Foundation, the fundraising arm for the Denver Health and Hospital Authority. As soon as Denver Health established the partnership with Lyft, they received access to the Application Programming Interface (API). The API is the browser-based application that allows case managers and patient navigators to simply log in, input their patient’s address, and schedule the requested ride. As many of the ride coordinators had previously used a TNC application on their phones, they were familiar with the technology and required little training to begin scheduling rides.

Description

Case managers at the hospital and patient navigators in outpatient clinics work with patients to identify their transportation needs, provide information about public transit options, and schedule rides. For example, patient navigators have provided recent immigrants with education about navigating the public transportation system. Case managers and patient navigators work to secure appropriate transportation for patients who need additional assistance, such as a wheelchair-accessible van provided by Medicaid NEMT or a wheelchair-accessible Lyft. Outpatient clinics in the Denver metropolitan area include nine family health centers and three urgent care centers.

Facilitators for Success

Denver Health worked closely with Lyft to improve patient's experiences during drop off and pick up. For example, the physical address of the main hospital does not correspond to the locations where patients exit or enter the building. Denver Health identified the most appropriate drop-off and pick-up locations for patients, which Lyft mapped, or "geo-mapped," onto the application. The geo-mapping process greatly improved the ability of patients to quickly connect with their driver.

Barriers, Constraints, and Challenges

Case managers and patient navigators had to adjust to the rapid nature of on-demand TNC services. As Lyft drivers only wait for a brief period after arriving at their destination, patients who were not immediately ready to leave the hospital missed their rides. In addition, some patients had never used TNCs and expressed confusion about entering an unmarked car. Staff educated patients on how to identify their driver, which helped improve the ability of drivers and patients to connect. Some systemic challenges remain, such as a driver unexpectedly cancelling a trip or a patient deciding to leave the hospital before their ride arrived.

Funding

The transportation program is funded by Denver Health Foundation. The foundation is dedicated to supporting Denver Health in its mission of improving the health and well-being of the region and frequently funds the hospital's transportation programs.

While the state has yet to enforce a policy that allows Medicaid to reimburse NEMT through TNCs, Denver Health anticipates that the health system will be able to partially finance TNC transportation through Medicaid reimbursements in the future.

Denver Health's Chief Experience Officer also worked closely with state policymakers to pass legislation that would allow Medicaid to reimburse for Medicaid NEMT provided through TNCs. The bill, *HB18-1321: Efficient Administration Medicaid Transportation*, was signed into law in May 2018 and directs the Colorado Department of Health Care Policy and Financing to "create and implement a method for meeting urgent transportation needs within the existing NEMT benefit under the medical assistance program." The Chief Experience Officer also testified in support of the bill, emphasizing the cost savings of TNCs over traditional taxi services and the efficiency of on-demand transportation in avoiding unnecessary visits to the emergency department.

Lessons Learned

Denver Health created strict guidelines for rides provided through Lyft to address liability concerns. Patients may only be transported within 25 miles of the hospital, cannot make additional stops on route to their destination, must be ambulatory, and must acknowledge that they are receiving a ride from a third-party vendor. Denver Health also worked with case managers and patient navigators to ensure that they preserved HIPAA while arranging transportation. For example, coordinators only enter the patient's first name into the Lyft platform when they call for a ride.

Similar to other safety-net hospitals, Denver Health relies heavily on the fundraising ability of their associated foundation to fund investments in addressing the social determinants of health. The Chief Experience Officer's strong existing relationship with the Denver Health Foundation helped the hospital secure funding for the transportation program. When making the case for the program to the foundation board, she focused on highlighting the successes of the transportation program, including the human impact of transportation access and stories from patients who had received help.

In the future, Denver Health hopes to integrate Lyft into their EHR system, Epic, instead of requiring case managers and patient navigators to log into a separate system. Ideally, providers could place orders for transportation in Epic, and the ride coordinators could fulfill the order in the same system.

Transferability

Hospitals and medical facilities around the country have begun to use TNCs to support patient transportation. The two dominant TNCs—Uber and Lyft—have developed formal programs to serve the health-care industry.

Contact Information

Denver Health Medical Center
Denver, Colorado
<https://www.denverhealth.org/>



Same-Day Trips for Medical and Wellness-Related Appointments: Flint MTA's Rides to Wellness

Snapshot of Collaboration

The Flint, Michigan, Mass Transportation Authority (MTA) operates a comprehensive NEMT program called Rides to Wellness. The program provides mobility management, door-to-door service, and same-day trips for riders going to medical or other health and wellness-related appointments. Using a ride-hailing-like model and cutting-edge technology, Rides to Wellness is provided through agreements with local agencies and medical providers that fund the transportation.



How Did the Collaboration Start?

Flint's MTA points to two seminal events that catalyzed the transit agency's well-known Rides to Wellness program:



- Genesee County Department of Health and Human Services' agreement to pay for a higher level of transportation service for the MTA dialysis riders, which acknowledged that prescheduled, shared-ride ADA paratransit service was not effective for dialysis riders who needed a more specialized service, and
- Flint's water crisis that resulted in dangerous levels of lead in the water at residents' homes.

Dialysis Transportation Provided by ADA Paratransit

By 2015, the MTA realized that its ADA paratransit service for dialysis riders was not effectively meeting the riders' needs, which are more specialized than those of most ADA riders. Dialysis riders are often not ready for their prescheduled pick up after treatment due to medical issues. Also, they are weak and depleted after treatment and often require extra assistance getting to and from the vehicle.

ADA paratransit is prescheduled; the driver cannot wait until the dialysis rider is ready for the trip home. Not only does the driver have other passengers on board and a manifest to follow, ADA regulations prohibit any trip prioritization, so dialysis riders cannot be given special treatment. The MTA would then have to find another vehicle to return later for the rider, but that often meant a long wait for the second vehicle and the trip home.

ADA paratransit is also shared ride, which means riders do not go directly from their origin to their destination. The extra time spent on the vehicle because of shared riding is difficult for dialysis riders due to their fatigue and weakness after treatment. When this is added to a long wait for a second vehicle to arrive for the trip home, dialysis riders are not well-served by ADA paratransit.

Recognizing that dialysis riders need a service more specialized than ADA paratransit could provide, the MTA met with the county's Department of Health and Human Services (DHHS) and proposed that the transit agency could offer a more personalized and specialized service for the dialysis riders—more flexible scheduling, including some same-day transportation so that trips would be scheduled when the rider is ready after treatment and a direct ride home with no shared riding. The MTA also offered to provide a bus attendant on board who could provide the extra door-to-door assistance for dialysis riders. However, the MTA said the service would require a higher cost—\$14 per trip, not the ADA fare of \$3.50.

The county's DHHS realized that this specialized service would benefit dialysis patients whom they covered through Medicaid and other assistance programs. Moreover, DHHS did not see the higher fare of \$14.00 per trip as unreasonable; the department found it sometimes had to pay a private medivan service \$40 or \$50 to get a patient home when the patient needed a higher level of care than ADA paratransit could provide.

If the MTA could reliably provide same-day, non-shared-ride service for the dialysis patients at \$14 per trip, the DHHS decided it was a good arrangement. This was the early start of MTA's Rides to Wellness service.

Flint Water Crisis

Flint's water crisis that began in 2015 was the second catalyst for the MTA Rides to Wellness service. This crisis, which became national news, began when the city's drinking water became contaminated, exposing more than 100,000 Flint residents to elevated lead levels. Residents

were told to use only bottled or filtered water for drinking, cooking, bathing, and cleaning. A federal state of emergency was declared in January 2016.

The crisis required that residents had a way to obtain bottled water and address other consequences of the tainted water, including access to medical clinics to check on rashes caused by the water. The state DHHS approached the MTA in crisis-level response mode, asking the transit agency if it could provide transportation for those Flint residents without adequate transportation so that they could get bottled water, water filters, and get to medical services necessitated by the water crisis. The state DHHS also wanted the MTA to help those residents get to full-service grocery stores so residents could obtain fresh fruits and vegetables, which are known to help mitigate lead exposure.

The MTA said, “Yes, we can provide this transportation,” thinking that it would build on the same-day service model that had just begun for dialysis riders.

Development

While the same-day specialized service for dialysis riders had been successfully underway for some months, the MTA realized that providing trips for Flint residents to address the water crisis required a service more nimble and with higher capacity than that for dialysis riders. Such a service, the MTA realized, was something like that provided by a TNC, such as Uber or Lyft, with the ability to respond quickly and ramp up capacity rapidly.

2016

The transportation service for the state’s DHHS began in September 2016, purposefully slowly. The MTA branded the service under its existing Rides to Wellness umbrella. Starting the new service required the MTA to lease cars and recruit drivers. Advertisements for drivers offered part-time, flexible work hours. Unlike a traditional TNC, the MTA provided the vehicle for the drivers, a bonus for recruitment efforts.

Scheduling the trips for the Flint residents to deal with the water crisis initially relied on the transit agency’s paratransit scheduling/dispatch software, but this software was not designed for TNC-type service, so the MTA went out to bid to find a technology company that would develop software with real-time scheduling.

Within only 4 months—by December 2016—a local technology company had been selected for the work and had the new software up and running. By then, the MTA was providing about 1,000 trips per month to address the water crisis. These were trips for Flint residents eligible through the state’s DHHS for Medicaid program or some other state or federal assistance program. The state was paying \$15.00 per trip.

The MTA was also providing about 1,000 trips per month for the same-day dialysis service.

2017 and 2018

By 2017, agencies providing health-care services were taking notice of MTA’s Rides to Wellness branded vehicles (Exhibit 5-5) traveling throughout Flint and surrounding Genesee County, providing trips for dialysis patients and residents impacted by the water crisis. Some of these agencies contacted the MTA and asked if they, too, could benefit from the new transportation service.

The MTA had meetings with the interested agencies and organizations, explaining that the service was not ADA paratransit at \$3.50 a trip but a premium service, with same-day service, door-to-door assistance for riders, and without shared riding. As a premium service, the MTA



Exhibit 5-5. Branded vehicles helped develop the service

was clear that the cost was higher—\$15 per trip. According to the MTA, none of the agencies “blinked an eye at the cost” during these meetings. These were agencies very much in need of reliable transportation for their patients or clients and saw MTA’s Rides to Wellness as their answer.

Engaging a Large Hospital System as a Partner

The MTA’s experience in partnering with the community’s large hospital system, the McLaren Health Care System, provides insights into how Rides to Wellness has grown.

In 2017, the MTA approached the hospital, thinking it might be interested in joining Rides to Wellness and gave them what amounted to a sales pitch. The hospital was non-committal—“We’ll think about it.” Hospital management was skeptical that the transit agency could provide effective service when it had experienced problems with other community transportation providers, such as taxis.

By 2018, the hospital was ready for the MTA’s help. McLaren indicated it was interested in turning over its non-emergency transportation to the MTA Rides to Wellness service. Apparently, the hospital had determined by that time that it could trust the MTA.

However, the hospital had requirements. The key requirement was that it wanted its own online portal so that its trips were kept separate from other Rides to Wellness trips. The MTA went back to the local company that had built the Rides to Wellness software to create the online portal.

The new portal was installed on computers throughout the hospital, allowing nurses and patient navigators to book rides for their patients. Initially, most of the trips were discharges from the emergency room, but now they include a variety of trips, including to and from out-patient services.

The number and types of trips for the hospital continue to grow. During one month in 2019, Rides to Wellness provided approximately 400 trips for McLaren, which pays the MTA \$15.00 for each trip.



Description

By 2019, the MTA had 13 agency-partners in the Rides to Wellness program. Several of these are listed on the MTA website, including the Genesee Health Plan, which offers free rides to health and wellness destinations for their Spanish-speaking clients, and the American Cancer Society, which supports trips for patients in its Road to Recovery program. Other partners indicated that they do not wish to be listed on the MTA website, preferring to keep the information within their own organizations.

MTA's information about Rides to Wellness makes clear that the service is intended for and limited to individuals who are eligible for or connected to one of the Rides to Wellness partner agencies.

The MTA has approximately 80 vehicles in use for the Rides to Wellness program. By mid-2019, the program was providing over 11,000 trips a month as shown in Exhibit 5-6. On a monthly basis, ridership more than doubled from 2017 to 2019.

Revenue generated from the trips also grew. Based on annual data, revenue from the Rides to Wellness program increased from \$114,925 in 2017 to more than \$280,000 in 2019.

Trips can be booked by calling an MTA mobility navigator as well as electronically via smartphone, tablet, or computer. Drivers have a tablet for receiving and documenting trips. Response time averages about 30 minutes.

Given FTA funding support, the service complies with FTA requirements. Drivers, for example, are included in MTA's drug and alcohol testing program, and trip and other operational data are included in the transit agency's National Transit Data (NTD) reports.

Facilitators for Success

According to the MTA, a key factor that facilitated success for Rides to Wellness was the branded vehicles out on the street. Community agencies and organizations kept seeing the white sedans and minivans (Exhibit 5-7) with the red and blue lettering traversing streets throughout Flint and Genesee County. The branded vehicles served, in effect, as rolling advertisements.

The familiarity of seeing the vehicles led a number of organizations to contact the MTA and inquire about joining Rides to Wellness. The MTA concludes that the community was very

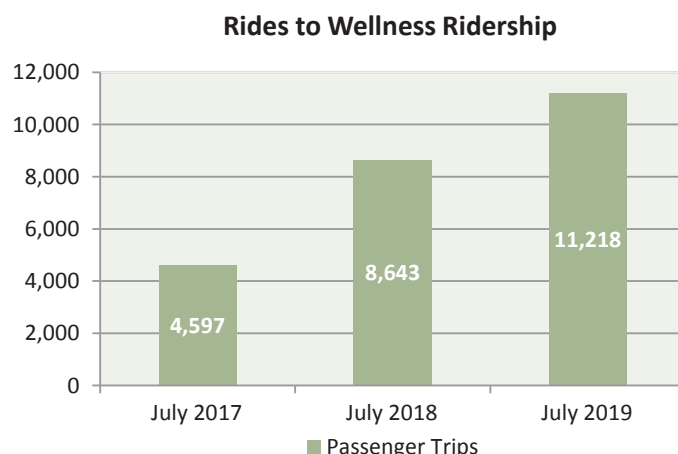


Exhibit 5-6. Rides to Wellness ridership.



Exhibit 5-7. Attractive Rides to Wellness vehicles were noticed. Photo courtesy of Flint MTA.



Serving Genesee County Veterans through MTA's Rides to Wellness

The MTA is particularly proud of its service for veterans and their spouses through a partnership with the Genesee County Veterans Services Office. With this arrangement, veterans honorably discharged from military service and a resident of Genesee County can book free trips to medical appointments, the pharmacy, grocery stores, farmers' markets, and other community resources with MTA's Rides to Wellness. Genesee

eager to find a reliable and reasonably priced transportation service that could take people to and from health-care services.

Barriers, Constraints, and Challenges

At the start, one of the MTA's major challenges to its Rides to Wellness service was teaching the agency's staff that this new service was not traditional ADA paratransit. Unlike paratransit, the focus is not getting the vehicle from point A to point B on a predetermined schedule nor is it ensuring that drivers follow a manifest. This new service focuses on the individual rider and their needs. The service also does not use manifests. Once the purpose-built software was up and running, trip requests were sent in real time to the drivers.

A second challenge was getting the community to trust that the transit agency could deliver a high-quality service that improves access to health-care and related services. The transit agency, like so many across the country, had periodic issues providing ADA paratransit, and the community was not convinced that the MTA had the ability to provide a same-day, high-quality service.

What was important for the MTA was to get one community organization to sign on as a partner for the Rides to Wellness service and then prove that it could deliver effective and reliable same-day service for that organization's patients or clients. With the first success, the building of trust could begin.

The MTA's current challenges include the need to hire more drivers given the demand for service and the accompanying need for more vehicles to meet demand.

Funding

The original funding to support the initial Rides to Wellness service, which provided the specialized service for dialysis riders, came

from the higher fares charged for the trips and MTA's local operating money. The MTA then received a grant of \$310,000 from FTA's **Rides to Wellness** grant program in 2016. (This grant has since been re-named the Transit and Health Access Initiative.) The grant allowed the MTA to hire staff for the service (called mobility navigators), purchase 10 vehicles, and pay for the new software. As the program has grown, the transit agency has continued to rely on federal grants for capital purchases and to receive funds to support operations from its participating partners.

To ensure the program is operationally sustainable, the MTA was careful to calculate the actual operating cost of providing the Rides to Wellness trips. Taking into account driver salaries (\$11 per hour), vehicle operating costs, and productivity (three passenger trips per hour), the transit agency determined that each one-way trip cost the MTA \$14.98 to operate. This was rounded up to \$15, and that is what each partner agency pays for the trips it sponsors.

Capital costs, which are primarily the cost of the vehicles, come from several different federal grant programs, including the FTA Transit and Health Access Initiative as well as FTA Section 5307 (Urbanized Area Formula Grants) and Section 5339 (Grants for Bus and Bus Facilities).

The vehicles purchased for the service are primarily sedans. However, to accommodate riders using wheelchairs and other mobility devices, the MTA also purchased ramp-equipped minivans.

County's Veterans Services Office has provided an annual \$50,000 grant that funds up to four free round trips monthly per eligible veteran and spouse. Given the success of the program, the annual grant was increased recently to \$75,000, giving veterans and their spouses five free round trips per month.

One notable result of this partnership is new support and recognition of the MTA from local veterans groups and other community service groups. Before the partnership, such organizations had little awareness of the transit agency. The MTA's arrangement with the county's Veterans Services Office has brought new recognition and standing for the transit agency in the community.

Lessons Learned

The Flint MTA reports that it is critical to prove to the community that a transit agency can provide a reliable and effective same-day, on-demand service. This is the cornerstone of developing collaborations with health-care organizations to improve transportation access to health care.

A second lesson is to price the transportation service fairly and accurately. The MTA was quite clear on this, stressing, "Do not underprice yourself." If the transit agency is going to provide same-day, real-time, door-to-door service to improve access to health care, then it should charge for that higher quality of service.

A third lesson for building partnerships is to identify and target community organizations that understand that transportation is a barrier to health care. The MTA stresses the importance of this advice—find the organizations in the community that realize patient transportation is a problem, because they might be interested in a partnership to improve transportation.

For those transit agencies interested in developing collaborations with community partners to improve transportation access to health care, the MTA suggests seeking help and advice from other transit agencies that have developed successful collaborations in their own community to improve such transportation. These agencies have been through the growing pains and can share their experiences that can help guide another agency in another community. Assistance is also available through national associations such as the National Center for Mobility Management.

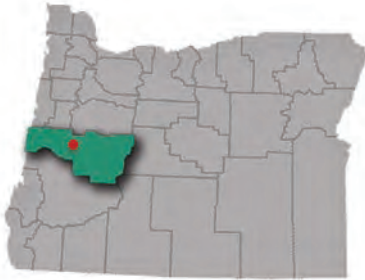
Transferability

Flint MTA's Rides to Wellness service has already been the inspiration for similar services in neighboring jurisdictions. Three other transit agencies in Michigan have implemented Rides to

Wellness services (they even use MTA Rides to Wellness logo): Greater Lapeer Transit Agency, Shiawassee Area Transit Agency, and Saginaw STARS.

Contact Information

Mass Transportation Authority (MTA)
Flint, Michigan
<https://www.mtaflint.org>



Coordinating Public Transit, Human Service, and Medicaid Transportation: Lane Transit District's RideSource

Snapshot of Collaboration

Lane Transit District (LTD) is the public transportation agency in Lane County, Oregon. Based in Eugene, Oregon, LTD provides fixed-route bus service, bus rapid transit, and demand response transportation for a service area population of about 375,000.

LTD, through its RideSource program, brokers and coordinates a range of transportation services including Medicaid NEMT, ADA paratransit, contracted human service agency client transportation, health-care transportation, and general public service. Health-care trips are coordinated directly with hospital social workers and the local CCO. RideSource providers include LTD through its ADA paratransit service, private providers that involve taxis and TNCs, and human service agencies.

How Did the Collaboration Start?

The origins of RideSource date to the late 1990s with one visionary individual who was the accessible services coordinator with the Lane Council of Governments (LCOG). LCOG is involved in passenger transportation as the region's MPO. LCOG also serves as the Area Agency on Aging through its Senior and Disability Services (S&DS) division and provides funding for senior transportation needs.

According to the most recent Lane Coordinated Public Transit Plan, "a growing body of evidence supports the connection between successful health outcomes and access to affordable and appropriate transportation options resulting in synergy between health and transportation availability."

Lane Coordinated Public Transportation Plan, 2019 Update, pg. 7.

As an employee of LCOG, this visionary actively sought out ways to work with LTD. In 2000, she was then hired by LTD to coordinate service with other organizations and actively worked with human service and health-care organizations to build the RideSource program. The program more than doubled in 2008 when RideSource became the Medicaid NEMT broker for the county. This allowed RideSource to take on services of additional agencies and needs as the program continued to expand.

Initiating the Effort

LTD's journey toward coordinated paratransit came about through a combination of circumstances. Clearly the vision of one individual was important, but more to the point it became the vision of LTD and its partners.

Breaking Down the Funding Silos

Through a series of local and state decisions in Oregon, historical transportation funding silos were broken down at a time when many states were building silos. In Lane County, Medicaid NEMT and veterans' transportation programs were combined with transit and other programs, addressing needs for health-care and human services.

Rather than operate small, separate siloed services, the various programs decided to take advantage of an already established professional transit service—LTD—and the economies of scale offered by forming a consortium. In this way, the programs pooled their resources and used LTD's dial-a-ride service through RideSource. This was a positive development.

The individual agencies no longer had to purchase and maintain their own vehicles, employ and fully train driving staff, or obtain insurance. The foundation of that enterprise is present today in the RideSource program that includes multiple relationships, contracts, and understandings that represent 25 years of coordination between public transportation and human service agencies in Lane County.

The Spark: Seizing the Moment

In 1990, Oregon began coordinating Medicaid NEMT through transportation brokerages, managed by transit agencies. TriMet, the Portland area public transit agency, became the first Medicaid NEMT broker in the state, and gradually other regions in Oregon followed suit. LTD first became a Medicaid NEMT broker in 2008.

In 2012, the Oregon Health Plan (OHP) began to transform into a coordinated care model, under which all health-supportive services (physical health, mental health, substance abuse treatment, and dental care) are provided through an umbrella entity/network. Each CCO is responsible for a specific geographic area. Lane County was one of the first two areas in the state to adopt this model. The CCO Trillium Community Health Plan approached LTD (as the existing broker), and in 2013 they began a formal relationship.

The CCO conducts stringent oversight of LTD. LTD, in turn, conducts rigorous oversight of its service providers, ensuring that they have the required training, meet insurance minimums, conduct driver background and license checks, and have the required safety equipment on vehicles.

At the beginning, LTD and Trillium had to work through the growing pains with their partnership. But now, LTD finds Trillium cooperative and responsive, reporting that the health-care organization completely understands the importance of transportation for improving health outcomes.

According to LTD, the objective is: "Focus on the benefit. Money will be part of the conversation, but we want to know what we can do. We need to spend to save" (5). The model chosen is to expand public transit access to all. As stated in a recent National Rural and Intercity Bus Conference workshop, and also applicable in urban as well as rural areas:

"The best way to coordinate human service transportation is to provide excellent public transportation that most people can use" (6).

Simply put, as public transit fixed-route and paratransit services improve and expand, more people have access to safe transportation for trips to health care as well as other trips that address the social determinants of health. Further, as costs are reduced through the use of fixed routes, the savings can be used for patients who cannot appropriately use a fixed route.

Development and Description

Starting almost 20 years ago, LTD developed and perfected the concept of a fully integrated human service, health-care access, and public ADA transportation program operated by an urban transit system with multiple contracted providers through RideSource. Since its start, RideSource has expanded to serve a wide variety of human service and health-care agencies and providers. Currently, all requests for specialized transportation services in the county including for Medicaid NEMT, ADA paratransit, senior transportation, employment transportation for individuals with developmental disabilities, and related trip requests are handled by the RideSource Call Center (RSCC).

RideSource determines the most appropriate and cost-effective transportation service for each trip request and schedules the ride as needed. RideSource uses its own fleet as well as the services of more than 30 providers in its coordinated network:

- Private taxis.
- Transportation networking companies.
- Other specialized private for-profit and non-profit providers.
- Volunteers coordinated through the Area Agency on Aging.
- Reimbursement of clients for their own mileage.

When fixed-route bus travel is possible, RideSource provides the individual with a bus pass. For trips from remote areas of the county into the LTD fixed-route service area, RideSource may provide a demand response trip into town, and then the passenger can use the fixed-route service for in-town travel needs.

RideSource brokers trips for the general public as well as trips funded under numerous human service and health-care programs, including Medicaid. Service is provided on a shared-ride basis so that passengers of different programs are commingled when feasible. In addition to ongoing program-sponsored travel needs, RideSource can meet short-term “critical connections” needs often by matching a rider with a volunteer driver.

RideSource has used TripSpark Novus technology since July 2017. This product was customized for the LTD brokerage and is now available off-the-shelf for other organizations. Through TripSpark Novus, RideSource can send actual trip assignments to external providers and those providers can bill back directly for trips they serve. For requests for longer trips, Ride Source’s providers are invited to bid their cost, helping to ensure cost-effective service. RideSource also manages bus passes, mileage reimbursement, volunteers, and external providers.

The Early Years

LCOG and LTD worked together to coordinate multiple transportation programs in developing RideSource. LCOG managed the senior services program through S&DS, which provided senior transportation. LCOG was also responsible for FTA Section 5310 funding for seniors and persons with disabilities. Further, as the host for the MPO, LCOG has had a stake in transit. LTD has a dedicated tax base and a philosophy of serving the community.

Key Elements and Steps in Forming RideSource

- A visionary individual and a willing organization.
- A reduction in funding among transit, human service, and health-care providers led to the decision to coordinate or consolidate. Multiple agencies participated.
- In 2008, LTD became the state Medicaid NEMT broker for the region, more than doubling its service.
- RideSource continued to grow and expand services to a wider audience, including veterans.

LTD’s Mission Statement:

We believe in providing people with the independence to achieve their goals, creating a more vibrant, sustainable, and equitable community.

See Attachment 1 to the Case Study for LTD’s Mission Objectives.

LTD and LCOG together were able to recruit other partners and, most importantly, Medicaid NEMT. Including Medicaid transportation in the coordinated mix changed the dynamics of RideSource in a positive way.

Local governments that supported rural and small city shuttles and services into Eugene also facilitated the growth of LTD's commitment to rural parts of the county.

The State Structure for Medicaid NEMT Facilitated Coordination

The Oregon Health Authority's (OHA) approach to Medicaid NEMT brokerages—those that use professional public transit providers and employ safeguards (well-trained drivers, properly maintained vehicles, full control over the driver force)—has put the state in the role of facilitator of integrated transportation.

The OHA determines the structure for the state's Medicaid NEMT program, which is a major funder of transportation to health care. Its decision to coordinate services through transit districts enhances the ability of the transit agencies to coordinate or consolidate transportation services. This has been accomplished typically through a brokerage model, where the transit agencies are paid on a per-trip basis, unlike the capitated model used by many states.

As more states turn to managed care for their Medicaid programs, this approach to Medicaid NEMT is relevant for addressing transportation access to health care. Attachment 2 to the case study details the evolution of the Medicaid NEMT program in Oregon and its coordination with public transit.

Under the previous payment model utilized by OHA, the RSCC functioned as a gatekeeper to transportation services by ensuring the Medicaid-eligible individual was receiving services only when all other resources had been exhausted. With the focus of the CCOs on health outcomes for members, many (including Trillium) are working to enhance access to transportation. In effect, RideSource is evolving into a service to enhance access to health-care services for all in need. This is a major shift from the capitated for-profit brokerages, where the less service provided, the more money the broker makes.

Partners: Participating Funding Organizations

A major strength of RideSource has been its ability to break down funding silos through collaboration, most notably with Medicaid NEMT (facilitated with the state's structure for its Medicaid program) and the VA transportation. The Medicaid NEMT service is discussed above. The other agencies and funding streams coordinated through or working with RideSource are listed below.

- **Transportation for Lane County veterans**—RideSource coordinates with the Lane County Veterans Services Office, providing transportation to and from VA medical and Lane County Veterans Services appointments. During the calendar year 2018, 197 veterans made 2,314 one-way trips, a 400% increase in 8 years.
- **Community health improvement plan**—In 2016, four agencies—Lane County Public Health, PeaceHealth Oregon West, Trillium CCO, and the United Way of Lane County—developed a community health improvement plan. This plan identified strategies for improving health outcomes of county residents.
- **Funding for developmental disabilities transportation**—In the early 2000s, the state provided developmental disabilities funding for transportation to employment training.
- **Mental health transportation**—White Bird Clinic is a crisis intervention, mental health counseling, and information and referral center. The counseling program serves adults on the OHP (Medicaid). The clinic arranges transportation primarily to mental health treatment and other activities.

- **RideSource ADA**—This is LTD’s origin-to-destination ADA paratransit service within the metropolitan area for people unable to use regular bus service (some or all of the time) because of a disabling condition. RideSource ADA meets ADA requirements.
- **Eligibility evaluation**—Transportation coordinators from Alternative Work Concepts, S&DS, and White Bird Clinic perform in-person evaluations to determine eligibility for all riders that RideSource serves.
- **Volunteer Escort**—This is a door-through-door service for people who need a high level of assistance and do not have other transportation options. Medical Transportation Management, S&DS, and the Senior Companion Program participate to support the volunteers.
- **Immediate (non-emergency) needs**—Crucial Connections is an organization that provides transportation to relieve an immediate (non-emergency) or evolving situation when no other transportation option can be identified. The service offers quick relief to allow time to formulate a long-term resolution. Crucial Connections pays for a limited number of trips that are situation specific.
- **South Lane**—The non-profit agency, South Lane Wheels, is supported by the city of Cottage Grove and the Rural General Public Program for areas with a population less than 50,000. South Lane Wheels provides local dial-a-ride services and a metro shuttle to take people to Eugene and Springfield for health care, shopping, and other needs.
- **West Lane**—The Rhody Express is a local shuttle service within the city of Florence that is operated by River Cities Taxi for health care, shopping, and other needs. The shuttle is supported by Florence and the federal Rural General Public Program for areas with a population less than 50,000.
- **East Lane**—Service for the community of Oakridge includes demand response service and an intercity shuttle called the Diamond Express, both operated by Pacific Crest Bus Lines for health care, shopping, and other needs. It is supported by Oakridge and the state’s Intercity Passenger Program that connects communities with a population of 2,500 to the next larger market economy and to other transportation services.
- **Medical and community non-medical transportation under Medicaid**—The RSCC administers three Medicaid NEMT programs: (1) NEMT for the OHA; (2) NEMT for Trillium Community Health Plan; and (3) community non-medical transportation.

Eligibility Assessments: A Unique Approach

LTD assesses the individual transportation needs of all the riders it serves (including, among others, riders for Medicaid NEMT and ADA paratransit) through an in-person functional assessment process. LTD contracts with three different contractors that make a home visit to the vast majority (estimated 99%) of applicants and conduct a comprehensive assessment of the applicant’s needs and transportation resources available to the applicant. The assessors can then determine the most appropriate service for applicants’ travel needs (Medicaid NEMT or otherwise) and connect them with other types of services they may need that are beyond transportation. Documentation and reporting for the assessments are electronic and paperless.

As an integrated process with a holistic approach to each applicant, the specific travel needs of the applicants—for any trip purpose—are addressed through RideSource. The assessors are able to identify other social service needs that applicants may have beyond transportation.

Embracing Technology and Innovation

In addition to the comprehensive eligibility certification program that incorporates home visits for virtually all applicants, LTD and its partners have embraced other innovations and effective strategies.

In July 2017, new software was implemented at RideSource that consolidates different databases and functions. The software—TripSpark—incorporated the function of four databases

and 17 different applications and processes that previously managed all of the services at RideSource, from call intake to service delivery and billing. The TripSpark software now provides all of these features in a single database.

In January 2018, LTD changed the design of the half-fare and “honored” (senior) rider cards. The new cards are easier to read, and the larger font expiration date allows transportation operators to inform the riders when they need to get their card renewed. During the 2018 calendar year, nearly 6,000 riders received or renewed half-fare and “honored” rider cards.

Also in January 2018, LTD began an innovative new service animal pilot project. The intention of this voluntary program is to streamline the boarding process for riders who have service animals. LTD now provides the option to include a “paw print” endorsement on riders’ identification cards. This informs drivers that the individual has had a conversation with LTD accessible services staff to assess the need for the service animal and discuss with the rider the transit agency’s expectations.

LTD, through RideSource and in conjunction with the Oregon Department of Transportation’s Department of Rail and Public Transit, assisted in the development of a pilot transportation service between two communities on the Pacific Coast, Yachats (85 miles from Eugene), and Florence (60 miles from Eugene). The Florence/Yachats Connector runs four times a day, Monday through Friday, and began service in September 2018. The service is operated by River Cities Taxi, the organization also responsible for operating the Rhody Express fixed-route service in Florence. At the time of this writing, this pilot appears to be successful, and riders are accessing the service daily for health care and other needs.

LTD Accessible and Customer Services

Accessible fixed route is a key element to the RideSource program. Those persons able to use a fixed route are given incentives for riding a fixed route. Co-location of LTD-accessible services and customer services staff has led to an improvement in the quality of service to LTD customers, with better coordination of services for older adults, people with disabilities, and persons of low income.

LTD has two discounted fare programs aimed at providing lower-cost, fixed-route public transportation: half fare for customers with disabilities and free fare for persons over the age 65. Clients of partnering private non-profit agencies also pay half fare.

Facilitators of Success

Various factors have facilitated the success of RideSource. LTD’s holistic mission statement along with the range of funding sources have been important. Support from the LCOG and S&DS was crucial in the beginning and helped pull other participants to the consortium to share costs.

Oregon’s structure for Medicaid NEMT, not typical among states, is another key factor—coordinating Medicaid transportation through transit agencies. This allowed LTD to bring Medicaid NEMT into the RideSource fold, along with Medicaid funding. Having Medicaid transportation coordinated with public transportation allows the Medicaid service to gain from economies of scale and the professionalism provided by public transit agencies.

Barriers, Constraints, and Challenges

LTD did not identify many barriers in developing RideSource. The agency was able to work cooperatively with most of the relevant organizations that plan, fund, or use transportation for clients or patients.

LTD reported that procuring a new call center contractor at the same time as implementation of new software in 2017 was a challenge. The outgoing contractor had developed its own software, and the transition to the new contractor and software was not easy.

RideSource has also found that meeting certain transportation needs can be challenging, including:

- **Hospital discharges**—LTD is considering using transportation network companies, which currently serve the Eugene metropolitan area, to meet these trip needs.
- **Dialysis transportation**—The demand is growing. RideSource can often place dialysis patients on fixed-route service when traveling to the appointment, but provides demand response service for the return trip. LTD is currently in discussions with several dialysis centers to coordinate its service with patients' treatment schedules for more efficient transportation.
- **Affordable options**—Reasonably affordable, accessible specialized service when ADA paratransit is unavailable is needed. Accessible taxi service is limited, and other private providers are expensive.
- **Access issues**—Particularly in rural areas of the county, providing transportation can be challenging.

Funding and Sustainability

RideSource brokers about 500,000 trips per year across a wide range of funding streams. An estimated 68% of these trips are for Medicaid NEMT. RideSource also provides approximately 2,500 bus passes a month for Medicaid NEMT, the majority of which appear to be related to counseling and methadone treatments. In addition, it is estimated that, among the non-Medicaid NEMT riders, about 30% of their trips are to health-care services.

LTD provides about 15% of the overall system costs, which include Medicaid NEMT. Taking Medicaid NEMT out of the equation, LTD is paying about 46% of the non-Medicaid NEMT service through its dedicated funding source (payroll tax). Local agencies pay the bulk of the remainder of the funding. The state provides both transit funding and human service health-care-related funding. These sources are depicted in Attachment 3 to the case study, which details RideSource's diverse funding.

The diversity of funding sources is in part what makes RideSource successful. While LTD and Medicaid NEMT funding are dominant, a number of local and state funding streams contribute to the funding mix.

Lessons Learned

LTD shared a number of lessons learned from its experience in developing the highly coordinated RideSource program:

- Maximize the use of accessible fixed routes to provide transportation.
- Seek a diversity of funding sources.
- Ask organizations: What do you need transportation to do? How can we help you meet your transportation needs?
- Seek out Medicaid insurance providers and then work closely with them on transportation issues.
- Ensure adequate time and attention when contracting for broker and technology support.
- Try not to do too much at the same time when working toward coordination and consolidation.

Transferability

Can any urban transit agency with a service area population of 500,000 develop a highly coordinated service to meet the transportation needs of their community's seniors, persons with disabilities, and others in need, either fully or in steps? The answer may be yes, if at least the following are addressed:

- **A transit agency willing to make a commitment in funding and staff**—LTD has committed to serving the mobility needs of seniors, persons with disabilities, and persons with a low income and has expressed that in its mission statement (Attachment 1, Lane Transit District Mission and Attachment 4, Long Range Plan).
- **Human service agencies and health-care providers that understand the benefits of coordinated transportation**—Organizations involved in the program are required to pay a portion of the service costs and gain the benefit of a transit agency subsidy with the support of professional staff and trained drivers.
- **Willing local governments**—Some of the services developed by RideSource are focused on rural areas, and local governments are expected to pay for a portion of the service.
- **State funding availability**—A state Medicaid agency that understands what public transit can do for Medicaid NEMT.
- **Patience**—Coordination of service takes time, often years. Experience indicates that it is best to start with the willing participants, and soon others will want to be part of the collaboration

Contact Information

Lane Transit District
Eugene, Oregon
<https://www.ltd.org>

Attachments to Case Study of Lane Transit District's RideSource

Attachment 1: Lane Transit District Mission

At Lane Transit District, we asked our community why we do what we do. What we heard is summarized like this:

We believe in providing people with the independence to achieve their goals, creating a more vibrant, sustainable, and equitable community.

How we do it:

- We serve the community with respect.
- We continuously question if there's a better way.
- We collaborate internally and externally.
- We care for our employees, customers, and business partners.
- We plan for a sustainable future.

What we do:

- We provide reliable transit services that address the needs of the community.
- We provide a viable alternative to the automobile through high-quality transportation options, programs, and services.
- We provide leadership in the development of the region's transportation system.
- We practice safety and maintain safe and accessible vehicles, services, and facilities.
- We practice sound fiscal and sustainability management.

Attachment 2: Medicaid NEMT—Managed Care

Oregon began changing how it provides health-care services for people who receive health-care coverage under the OHP (Medicaid) by creating CCOs in 2012. This is not unusual as many states are starting to turn to the managed care model. As described by the Oregon Health Authority (OHA), CCOs are:

- Replacing MCOs, mental health organizations, and dental care organizations for OHP members. The CCOs will focus on improved wellness, prevention, and integration of behavioral and physical health care. These local health entities will deliver health care and coverage for people eligible for the OHP (Medicaid), including those also covered by Medicare. CCOs are a new way of doing business for the OHA. They will be the umbrella organizations that govern and administer care for OHP members in their local communities.
- CCOs must be accountable for health outcomes of the populations they serve. They will have one budget that grows at a fixed rate for mental, physical, and, ultimately, dental care. CCOs will bring forward new models of care that are patient centered and team focused. They will have flexibility within the budget to deliver defined outcomes. They will be governed by a partnership among health-care providers, community members, and stakeholders in the health systems that have financial responsibility and risk.

The RSCC is one of eight regional call centers within Oregon that handles transportation services for Medicaid recipients through an agreement with the OHA. Unique to the RSCC are features that offer a comprehensive approach to coordinating local transportation services:

- Approved cost allocation methodology.
- Cost sharing and integration of human service transportation.
- Personal in-the-home interviews by trained transportation coordinators from S&DS and Alternative Work Concepts.
- Interagency collaboration with case managers.
- Innovative program development using a community care model.
- Sophisticated application of technology and software.

Attachment 3: Funding Sources

Tables 5-1, 5-2, and 5-3 depict the wide range of funding sources that are critical to LTD's success.

Table 5-1. Accessible services fund: 2-year revenue budget FY18 and FY19.

Revenue	FY18 Actual	FY19 Budget
Older American Act	\$ 10,200.00	\$ 10,200.00
\$5310 Enhanced Mobility	\$ 938,651.32	\$ 1,090,669.00
\$5311 Formula Grants for Rural Areas	\$ 77,168.00	\$ 78,328.00
\$5311(f) Intercity Transit	\$ 123,049.00	\$ 88,128.00
Developmental Disabilities Services	\$ 888,514.00	\$ 1,188,000.00
Special Transportation Fund (STF)	\$ 785,770.23	\$ 959,150.00
Fares	\$ 310,125.85	\$ 379,290.00
Small City (Cottage Grove/Florence/Oakridge)	\$ 44,000.00	\$ 63,121.00
Agency—Pearl Buck Center	\$ 66,640.00	\$ 67,000.00
Discretionary 5310/STF Grant	\$ -	\$ 185,050.00
LTD General Fund	\$ 3,135,748.72	\$ 3,646,638.00
TOTAL	\$ 6,379,867.12	\$ 7,755,574.00

Table 5-2. Medicaid fund: 2-year revenue budget FY18 and FY19.

Revenue	FY18 Actual	FY19 Budget
Oregon Health Authority NEMT	\$ 327,600.00	\$ 527,175.00
Medicaid Waivered Non-Medical	\$ 1,030,760.00	\$ 1,195,000.00
Trillium CHP NEMT	\$ 8,393,560.69	\$ 10,252,600.00
TOTAL	\$ 9,751,920.69	\$ 11,974,775.00

Table 5-3. Medicaid fund: 2-year project budget FY18 and FY19.

Project	FY18 Actual	FY19 Budget
Oregon Health Authority NEMT	\$ 521,831.29	\$ 527,175.00
Medicaid Waivered Non-Medical	\$ 1,071,621.92	\$ 1,063,000.00
Trillium CHP NEMT	\$ 9,974,533.97	\$ 10,252,000.00
TOTAL	\$ 11,567,987.18	\$ 11,842,175.00

Attachment 4: Excerpt from LTD Long Range Plan (7)

GOAL 3: Ensure Equitable and Accessible Transit Service Throughout LTD's Service Area

Transit is an essential community service that provides personal mobility and freedom for people of every walk of life. The role of transit is to create connections and serve people efficiently, affordably, and safely. Persons with limited transportation options who depend on public transit have the greatest need for linkages to jobs, essential goods and services, and will be given special consideration in transit planning.

POLICY 3.1: The allocation of resources for accessible service should consider the following priorities: 1) maintain a sustainable level of service for people who depend on public transportation; 2) respond to pressures of growth and demand within the limits of resource availability; and 3) optimize the resources to accommodate emerging community needs.

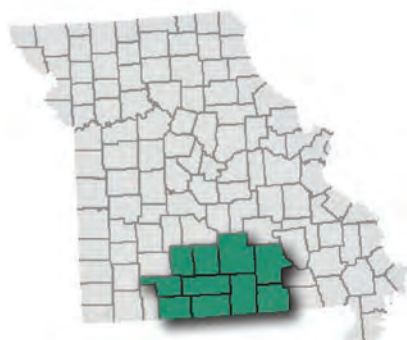
DEFINITION AND INTENT: The provision of transit service should consider future capacity needs as the local population increases and ages over time. Increasing frequency and span of service has direct impacts on fleet capacity, which is especially important in terms of the limited space for mobility devices on a bus.

Strategy 3.1.A: Collaborate early with Eugene and Springfield to gain understanding about the relationship with economic development, multi-family housing, and other community services within proximity of transit routes, with priority within Frequent Transit Network (FTN) corridors.

Strategy 3.1.B: Strengthen with rural areas and small cities connectivity of medical transportation services through coordination of the RideSource Call Center and health-care providers [bold added].

Strategy 3.1.C: Maximize ridesharing and grouped ride services to address non-medical transportation needs.

Strategy 3.1.D: Develop strategies to provide cost-effective and equitable human services transportation beyond the District through coordination.



Building Transportation Options and Solutions for Rural Missourians: Missouri Rural Health Association's HealthTran

Snapshot of Collaboration

The Missouri Rural Health Association (MRHA)'s HealthTran program provides mobility management coordination and services through technology, education, and support. Unique in approaching transportation barriers through a community approach, the program offers MRHA members a one-stop scheduling platform with local, public, commercial, rideshare, and volunteer transport. The original HealthTran model began as a pilot program that connected rural residents to health-care facilities using existing public transit services. In 2016, HealthTran transitioned from the grant-funded pilot program to a subscription-based model where transportation is generally provided through volunteer drivers. The 2020 program continues as a membership model and has expanded the community approach and addresses transportation solutions through assessments, education, technical assistance, non-traditional transportation, and technology.

More Details

Participating transportation providers load their availability, cost, and services onto the cloud-based system. Ride schedulers select service type (i.e., volunteer, rideshare), mobility need, and ride details. Rider profiles provide retained data and take less than 5 minutes to enter. Data collected provides statewide aggregate data and can be customized to address specific member requirements.

In expanding transportation options, HealthTran staff work with local non-traditional organizations to increase access. These may include FTA Section 5310 subrecipients, nursing homes, ambulance districts, churches, volunteer programs, and others with a desire to improve access in their communities. The HealthTran Transportation Manager provides technical assistance to get more vehicles on the road and on the platform. An example of a non-traditional provider is Delta Area Economic Opportunity Corporation in the Missouri bootheel, which is a community action agency currently working with HealthTran to support community transportation with 32 Head Start vans. As a trusted organization in the area, individuals will be more likely to use the transportation service. The delta region is one of the poorest areas of Missouri and faces multiple social determinants of health barriers.

The MRHA volunteer driver program's manager is building a statewide driver program and offering the technical assistance to local volunteer programs as well as individual drivers to improve sustainability and improve relationships in the communities served. A technology program tracks rides, driver profiles, vehicle requirements (insurance, inspections, driver's license), and training. The program allows collection of statewide volunteer data to show the value of volunteerism.

An 18-month FTA ICAM grant is supporting a Regional Mobility Coordinator (RMC) approach in four areas across Missouri. RMCs receive training and support in bringing Mobility Management Coordination and Service to local communities and they act as champions in addressing barriers to care.

The original HealthTran model began as a pilot program that connected rural residents to health-care facilities using existing public transit services. The pilot program hired local community members as HealthTran Coordinators (HTCs) who served as single points of contact for the patient and provider. In 2016, HealthTran transitioned from the grant-funded pilot program to a subscription-based model where transportation is generally provided through volunteer drivers. The 2020 program continues as a membership model and has expanded the community approach, and addresses transportation solutions through assessments, education, technical assistance, non-traditional transportation, and technology. Each community is unique and can use components of MRHA's HealthTran program to meet their needs. The annual 2020 membership dues are \$250 for a non-profit agency and \$500 for a for-profit/vendor.

In the subscription-based model, a health-care provider (MRHA member) agrees to participate in HealthTran and invests a one-time start-up fee of \$1,500 per location. A minimum of two locations is needed to begin the process within a community.

The HealthTran monthly subscription cost of \$37.50 per month has unlimited usage and logins and provides ongoing technical support, expansion, and mobility management education. Members pay a \$4 booking fee and the transportation cost is determined by the transportation provider. The MRHA volunteer program offers rides at \$1.10 per loaded mile with "loaded" meaning when the rider is in the vehicle. The 2019 average ride distance was 11.1 miles, and the average cost of transportation was \$1.10 per mile for an estimated total of \$12.20.

HealthTran continues to serve as a "last resort" transportation option for patients who have no other way of traveling to health-care facilities. Patients who can access NEMT through Medicaid are asked to use the state-funded program. When a Medicaid patient does not meet NEMT eligibility, the member has the flexibility to provide transportation through HealthTran.

How Did the Collaboration Start?

Health-care providers have long identified transportation as a major barrier to accessing care in rural Missouri. MRHA identified a gap in transportation access for patients who were not eligible to receive free or subsidized NEMT but did not have access to a personal vehicle. Many of these patients live in rural areas without adequate public transit infrastructure. In 2013, HealthTran reported that lack of access to transportation was a leading cause of missed appointments, which contributed to substantial loss of revenue for rural health-care providers. Lack of access to primary care led to poor patient outcomes, overuse of emergency services, and avoidable hospitalizations.

Securing Funds for the Pilot Program

In 2013, Community Asset Builders, LLC, a non-profit with a long history of work in grant writing and health-care consulting, helped facilitate a panel discussion at the Missouri Public Transit Association (MPTA) to discuss solutions to NEMT in rural South Central Missouri with other key stakeholders. After the panel discussion, Community Asset Builders, MPTA, and MRHA worked together to develop the HealthTran concept. MRHA presented HealthTran to the Missouri Foundation for Health in 2013 and received a 3-year grant from the foundation to pilot the program. MRHA administered the grant with support from MPTA and Community Asset Builders.

Setting Policy Objectives

At the outset of the pilot program, HealthTran established three policy objectives:

- To gather data to test the hypothesis that connecting people to transportation leads to cost savings and improves health outcomes.

- To create a sustainable program model.
- To document the development and implementation of HealthTran to promote replication at the state level and across different communities.

Building Relationships and Identifying Partners

The original model of HealthTran focused on improving connections between health-care providers and local transit agencies. To bring partners to the table, MRHA acknowledged the limited funding of rural transit agencies and scheduling difficulties for rural providers. MRHA emphasized the ability of HTC's to remove the burden of arranging transportation from health-care staff, transit agencies, and patients. MRHA also highlighted the benefits of increased transportation access: improved outcomes for patients, decreased missed appointments for providers, and increased ridership for public transit services.

To formalize collaborations among partners, MRHA and MPTA established the HealthTran Consortium with participating health-care and transit providers. Consortium partners all signed an MOA (Memorandum of Agreement) that described three goals for Consortium members (8):

- Strengthen HealthTran Consortium infrastructure and governance to effectively reduce transportation barriers to health care through development of a new service delivery model.
- Obtain data to support increased long-term, dedicated state and federal funding for public transportation.
- Improve patient outcomes for individuals enrolled in HealthTran.

The MOA also established six objectives (9):

1. By August 31, 2014, a service delivery model will be developed and ready to implement as a pilot within the region.
2. By December 1, 2014, pilot will be ready to be implemented across the nine-county region.
3. By November 30, 2016, 10% or less of HealthTran participants will use the hospital emergency room for non-emergent conditions.
4. By November 30, 2016, 10% or less of HealthTran participants will experience a hospital readmission within 30 days.
5. By November 30, 2016, 80% of HealthTran participants will adhere to scheduled appointments.
6. By November 30, 2016, 80% of HealthTran participants will report 90% or greater satisfaction with service coordination services.

HealthTran received 3 years of support (2018–2020) from UnitedHealthcare to support the MRHA and HealthTran mission. Additional funding through the Missouri Department of Transportation, using FTA Section 5310 Mobility Management funds, was received. In 2019, MRHA was awarded an FTA ICAM grant and will continue to expand mobility management coordination and education through the Coordinating Council on Access and Mobility grant. The FTA funding supports the following:

1. The Missouri Mobility Management Certificate program focused on health, community, and transportation designed to assist community health-care workers and case managers who are working in rural areas to break down and address transportation barriers.
2. Development of Regional Mobility Managers to become community champions and provide leadership and assistance.
3. Development of a one-stop scheduling system.
4. Expansion of the volunteer driver program.
5. Placement of MRHA as the Missouri Mobility Management technical assistance lead.

Development

In the pilot, HealthTran worked with local health-care providers to understand their hours and typical patient needs. HealthTran then connected with ambulance districts and public transportation providers to expand times and routes to better meet the needs of providers and patients. The service started small with a handful of staff and providers (Exhibit 5-8). HealthTran staff traveled to providers' offices to share information about the program and asked providers to share information with patients who could benefit from transportation assistance. The knowledge gained has been the impetus for the program designed today.

MRHA is contacted by interested health and wellness providers, and an initial discussion helps define the need and service areas. Information is gathered, such as a community assessment and transportation data, to determine what aspects of HealthTran may be useful. When a community or member is ready, HealthTran connects transportation providers to the scheduling system and provides technical assistance and support to the transportation programs to ensure they can be appropriately placed in the transportation network. Volunteer programs, such as senior centers, RSVP programs, and veteran organizations, are introduced to the program, and volunteer drivers are recruited. In many rural areas, volunteers enjoy helping neighbors and they receive mileage reimbursement that offsets the cost of volunteering. The simple mobile system allows for volunteers to select rides that meet their availability and manage their time.

Description

During the pilot phase, HealthTran could help health-care providers cover specialized transportation services. MRHA partnered with a number of both transit and health-care providers to successfully implement the pilot program as shown in Exhibit 5-9.

In the pilot, a manual access program and email connected members and HTC's. The system worked well during the pilot but would not work for state expansion. The current platform teams two technology companies, a scheduling platform designed for hospital transport with HIPAA and PHI security, and a volunteer driver program to track volunteer rides. The programs are linked and share only required information to ensure ride completion. The data collection and report capabilities have been developed for HealthTran and provide customized information to help drive access for all.



Exhibit 5-8. *HealthTran HTC's and partners on the first day of services in 2014.*

Transit Providers	Health-Care Providers
Southeast Missouri Transportation Service (SMTS)	Ozarks Medical Center & Clinics
OATS, Inc.	Southern Missouri Community Health Center
City of West Plains Transit System (WPTS)	Missouri Ozarks Community Health
South Howell County Ambulance	Jordan Valley Community Health Center
South Howell County Transit, West Plains	Burton Creek Rural Clinic
Preventative Health Transport (Ozarks County Ambulance District)	Cox Health System
Licking Bridge Builders Senior Center	Texas County Memorial Hospital
Texas County Memorial Hospital Medivan Services	St. Joseph's Northwest Health Services
Houston City Transit	

Exhibit 5-9. MRHA partners: Transit and health-care providers.

The volunteer technology tracks hours of service, miles driven, training records, and awards. Alerts are given to the Volunteer Manager when vehicle documentation is due (inspection, insurance). Drivers are vetted through a nationally approved background screening program and drug testing.

Two Missouri Regional Planning Commissions, Boonslick and Meramec, have developed a statewide referral system to help individuals find a ride. MO Rides, piloted in 2014, provides ride coordination and transportation provider contact information. Working on collaboration with HealthTran, MO Rides may soon be able to offer scheduled, self-pay rides.

Facilitators for Success

Clearly articulating the business case for investing in transportation access helped HealthTran establish partnerships with funders and providers. At the provider level, missed appointments required increased time spent on rescheduling, lower productivity, and revenue losses. At the patient level, missed appointments can lead to costly emergency department visits, hospitalizations, and exacerbation of chronic conditions.

Making the Business Case

HealthTran developed a case study on a patient who required several treatments to avoid a limb amputation. While HealthTran spent about \$6,000 on transportation services for the patient, local providers were able to bill for over 60 visits and the U.S. Department of Veterans Affairs may have avoided more than \$1 million in costs for a surgery, hospitalization, prosthetics, and associated follow-up care.

HealthTran is building the case for reducing employee absences, addressing social determinants of health related to medicine and nutrition, and attendee-required meetings, such as with educators regarding an Individualized Education Program (IEP). “I do not see any boundaries where transportation and HealthTran can go” stated the HealthTran Director. “HealthTran will continue to grow and adjust to meeting the needs of our rural communities.”

Barriers, Constraints, and Challenges

Rural health-care providers, and especially critical access hospitals, may have difficulties paying membership and subscription fees. While providers may acknowledge that upstream investments in health lead to downstream savings in avoidable hospitalizations, they may not

be able to justify allocating funding to transportation when they are operating in the red. Community partners, including local public health departments or federally qualified health clinics, may be able to help rural providers offset transportation costs.

HealthTran's rural service area often lacks access to high-speed broadband internet. Mobility managers allocate substantial time to communicating with patients, providers, and volunteers via telephone.

Funding

The Missouri Foundation for Health funded the HealthTran pilot with a 3-year grant that totaled \$499,906. HealthTran also received pilot funding from the National Center for Mobility Management, the Missouri Department of Transportation, and UnitedHealthcare.

After the initial grant, the program shifted to a subscriber model that focuses on building transportation options. HealthTran services include:

1. Technology scheduling system linking public, commercial, rideshare, and the MRHA volunteer program. Scheduling a ride takes under 2 minutes, and setting up a rider profile takes less than 5 minutes.
2. Statewide volunteer program building and linking both individual drivers and volunteer programs. Drivers accept rides that meet their availability and location, and programs manage the volunteers that are dual enrolled. HealthTran offers a subscription to the Volunteer Management program or supports the program as needed. Volunteers receive mileage reimbursement that makes volunteering affordable and sustainable.
3. Community assessments and transportation gap analysis, technical assistance, and mobility coordination training.
4. Non-traditional transportation technical assistance for improving community transportation options and sustainability. An example is in the bootheel of Missouri where the Delta Area Economic Opportunity Corporation is working to bring 32 Head Start vans under the HealthTran umbrella and provide community transportation when the vans are not transporting children.
5. Development of a Missouri Mobility Management Certificate program focused on health and community. The certificate will be expanded to a certification program by 2024. The certificate training will be offered online through the University of Missouri Extension program.
6. Training RMCs through regional planning commissions and community action agencies to address local access needs. The RMCs will work independently and collaboratively on bringing resources, knowledge, and technical assistance to rural communities.

Lessons Learned

The MRHA and Community Asset Builders were able to leverage long-standing relationships with funders, community partners, legislators, and other key entities to ensure the success of the pilot program and continued investment in the current self-sustaining model. Program leaders suggest that partnering with local businesses and leveraging resources from collaborators can be critical to gaining buy-in and maintaining services throughout changes in funding.

Similar programs should seek funding for a large initial investment in program infrastructure, including training ride coordinators and arranging logistics for drivers. MRHA and Community Asset Builders recommend including funding for investments in transportation planning in grant applications.

Once established, the subscription-based service can require different kinds of resources to remain sustainable. Similar programs should consider whether there is sufficient local interest

among community members and providers to establish a system of volunteer drivers and enroll in a subscription service for transportation.

Providers reported very high levels of satisfaction with the program. Providers also offered some suggestions that could benefit similar programs. For example, almost all providers suggested developing a flag in the patient's EHR to record transportation needs and remind staff to contact HealthTran. One provider also recommended creating signage for clinic waiting rooms to prompt patients to ask about HealthTran. HealthTran listened, and the new scheduling platform has the capability to link directly with medical record systems, and national health measures are being explored for 2021 reporting. The data gathered through the scheduling system offers customizable reports from collected data including funding buckets and payor source.

Transferability

HealthTran successfully transitioned from a grant-based model to a subscriber-based model. Other programs could consider a similar trajectory: 1) using grant funding to make large capital investments in infrastructure, establish partners, and document the success of the program and 2) using a subscriber-based model to continue to provide NEMT with volunteer drivers.

Contact

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Chapter Notes

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CHAPTER 6

Collaborative Practices

Introduction

This chapter presents 16 examples that describe a wide range of collaborative efforts that improve transportation access to health care, with examples from across the country. See Exhibit 6-1.

The examples were selected from more than 50 collaborative practices that were identified early in the research project and that are briefly outlined at the end of this chapter in Exhibit 6-9.

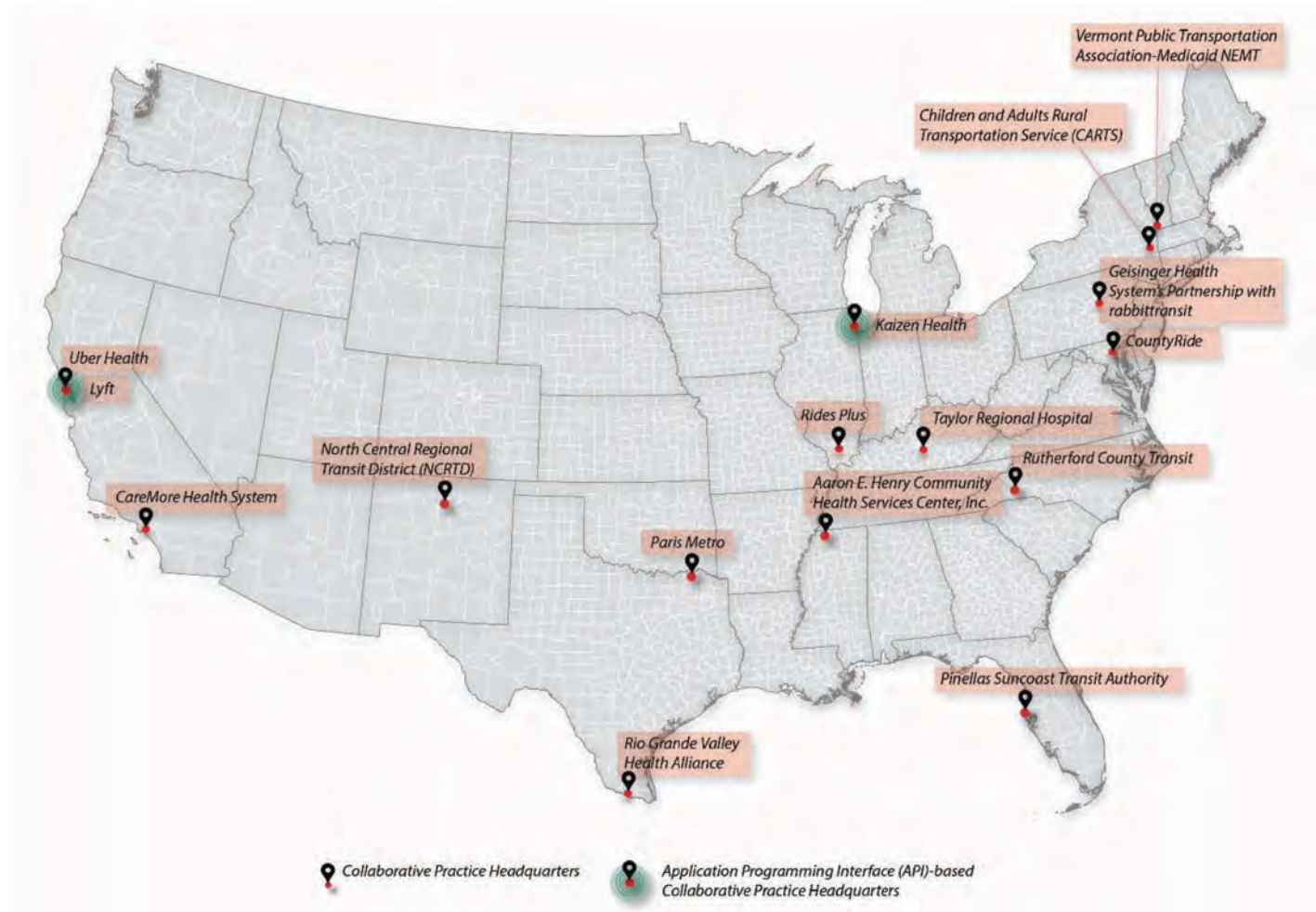


Exhibit 6-1. Location of the collaborative practices.

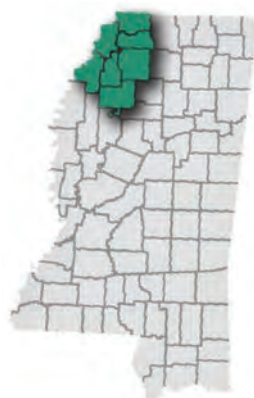
This exhibit groups the practices into nine categories, ranging from Innovative Funding and Reimbursement to Mobility Management to Brokerage Technology.

Collaborative Practices

The 16 collaborative practices described in this chapter include relatively straightforward examples such as the hospital in Campbellsville, Kentucky, with a free van service for patients in its surrounding counties. The examples also include a call center in southern Illinois that coordinates transportation between several health-care and transportation providers, facilitating not just health-care trips but also trips supporting wellness such as trips to grocery stores.

Technology also plays a role in transportation improvements to health care. One of the examples profiled—Kaizen Health—provides a logistics hub that aggregates multiple NEMT providers in one place.

Readers of the collaborative practices in the chapter will see that close to half address transportation in rural areas. This is not a surprise given that rural communities lack the transportation infrastructure typical of urban areas. Rural areas also lack the range of health-care facilities seen in urban areas, exacerbated by the closing of rural hospitals as discussed in Chapter 2. The result is that many health-care trips in rural areas, especially for more specialized care, may require long trips across county borders that require extra coordination and collaboration.



Health-Care Provider Operates Rural Public Transit to Improve Patient Access in Rural Mississippi: Aaron E. Henry Community Health Services Center, Inc.

Description of Practice

The Aaron E. Henry Community Health Services Center, Inc. (AEH) is a Federally Qualified Health Center (FQHC) that provides integrated, comprehensive care to people in the Mississippi Delta. AEH not only focuses on increasing access to primary and preventive care but also on promoting community economic development through access to transportation.

AEH offers commuter public transportation, dial-a-ride services, and curb-to-curb services to passengers in seven rural Mississippi counties through the Delta Area Rural Transit System (DARTS). DARTS originally provided medical transportation to AEH patients but has since expanded to offer public transportation to the general public. DARTS offers commuter route buses that connect riders to local employers, medical facilities, and other key community locations. Most DARTS riders use the program to access their jobs at local industries and casinos, but on-demand stops can also include shopping centers and human services agencies. DARTS currently operates more than 40 multi-passenger vans (1).

In addition, DARTS provides on-demand, dial-a-ride services for elderly patients in the seven-county region with funding from the Area Agency on Aging. Eligible riders must call DARTS to make a 24-hour advance reservation. Older adults and individuals with disabilities are also eligible for low-cost, curb-to-curb van service in certain service areas. AEH provides Medicaid NEMT transportation. Medicaid beneficiaries call the Medicaid transportation number, and the Medicaid broker sets up payment with AEH.

DARTS also participates Delta Rides, a network of private transit providers, other non-profit transportation providers, and social service agencies in the Mississippi Delta region.

Together, the Delta Rides network provides transportation services to 21 counties in the Mississippi Delta region. Community members seeking to travel between counties can contact a Delta Rides mobility manager, who will coordinate between agencies to schedule their ride. Delta Rides' representatives participate in monthly meetings to share lessons learned and discuss resources.

AEH provides approximately 139,000 rides each year. About 70% of rides are for special populations (the elderly and individuals with disabilities) and the other 30% are for the general public. The number of AEH rides have generally remained steady, with minor changes in ridership that correspond to increased or decreased community demand (e.g., the closure of a local casino).

Needs

In 2018, AEH served a total of 15,182 patients (2). Approximately 89% of patients were at or below 200% of the federal poverty level. In addition, 22% of patients were uninsured, 36% were enrolled in Medicaid, and 14% were enrolled in Medicare. AEH also reports that their patient population has high rates of certain chronic health conditions. For example, in 2018, 45% of patients had hypertension and 23% had diabetes. AEH reports that DARTS has grown in tandem with the “expansion of the regional job market and the increased need for affordable employment transportation.”

How Did the Collaboration Start?

In 1990, AEH identified a major need for transportation among patients in their rural Mississippi service area. The founder of the FQHC, Aaron E. Henry, was transporting patients in a personal van to help ensure they could attend critical appointments. AEH staff decided to develop the DARTS program to better meet patient needs for transportation to subspecialty care. At the same time that AEH began providing transportation to patients, some Mississippi Delta counties began experiencing new economic development after the passage of the Mississippi Gaming Control Act. The legislation restricted casino gambling to counties along the Mississippi River and the Gulf Coast. Local residents who gained employment at the new casinos needed reliable transportation to and from work.

In 1993, AEH used a grant from the Mississippi Department of Transportation (MDOT) to expand services to the general public in recognition of unmet needs for transportation to employment opportunities. To decide on the most appropriate stops for the commuter routes, AEH reached out to local businesses, social services, and employment agencies to solicit suggestions. AEH prioritizes stops that provide access to places of employment. Other key stops include employment agencies, social services, health-care facilities, and recreational sites.

DARTS began with two minivans with a 15-person capacity and has since expanded to 46 multi-passenger vehicles. Most DARTS riders now use the program to access jobs and human services. As of 2019, DARTS provides public transit services in Coahoma, Desoto, Panola, Quitman, Tallahatchie, Tate, and Tunica counties.

Funding/Sustainability

Fees for DARTS vary by age, residency, insurance status, and travel distance of the rider. Transportation fees for some senior riders are covered by the Area Agency on Aging, Medicaid, or Medicare. Some county governments in the DARTS service region also offer transportation subsidies.

In addition, AEH receives federal funding from the U.S. Department of Transportation (USDOT) Formula Grants for Rural Areas (Section 5311), which is administered by the MDOT. In 2018–2019, AEH’s transportation budget was \$2.5 million, with \$1.1 million from MDOT. AEH also holds a purchase-of-services contract from the North Delta Planning and Development District to provide transportation services for the elderly and for individuals with disabilities. In addition, DARTS funded a Regional Transportation and Maintenance Center with grant funding from the U.S. Department of Agriculture, the USDOT’s FTA, Community Transportation Association of America, and the Mississippi Development Authority’s Energy and Natural Resources Division.

Lessons Learned

Stigma associated with public transportation presented challenges to encouraging use of DARTS services. Use of buses is associated with older, low-income, and ill individuals. Rural residents are still highly reliant on personal vehicles and unfamiliar with navigating public transportation. AEH is taking steps to encourage the use of public transportation among people of working age and younger adults. AEH conducted community outreach about transportation options and worked with the drivers to create a standard branded look for the vehicle fleet. Drivers wear uniforms and adhere to standards for clean vehicles.

AEH leveraged one-time funding opportunities for capital investments in the service fleet. For example, AEH used American Recovery and Reinvestment Act funding to purchase new vehicles for DARTS and to renovate the vehicle maintenance shop. Capital investments are critical for implementing new services and maintaining vehicles.

A key lesson learned for communities seeking to implement a similar program is to understand the needs of the targeted population. Programs need to understand how much community members are willing to pay, where they want to go, and how long they are willing to travel. In rural areas, patients may need to travel for hours for medical care. Programs also need to understand how to accommodate their target population, including their physical and social needs.

Resources

- AEH’s website provides additional information about Delta Rides and AEH public transportation services: <https://www.aehchc.org/darts/delta-rides/>



The Takeaways

- AEH leveraged several sources of funding to not only offer transportation to and from medical facilities but also to support local economic development and employment opportunities.
- Periodic capital investments in infrastructure are critical to maintaining the integrity of a vehicle fleet.
- Rural programs may need to conduct outreach or implement strategic marketing and branding to help address stigma related to public transportation services.

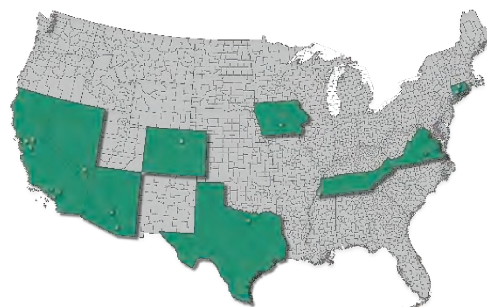


Health Care Insurer Offers Free NEMT Transportation: CareMore Health System

Description of Practice

CareMore Health is a physician-founded, physician-led integrated health insurer and care delivery system. CareMore's focus is on chronically ill patients and developing holistic solutions. For many patients enrolled in its Medicare plans, CareMore provides a diverse range of NEMT services free of charge. Most ambulatory riders can use Uber and Lyft. Patients that require extra assistance or specialized transport have access to door-to-door service and accessible vehicles. CareMore has established a call center that takes all requests for service and monitors that service.

All patients (or clinic staff) in need of transportation contact the call center. The call center then determines the most appropriate mode of service. The call center either contacts the TNC or CareMore's transportation broker who will then assign the appropriate level of service for each patient. Exhibit 6-2 depicts the key steps.



CareMore's focus on holistic solutions had to include transportation for those in need—estimated to be about 18% of their patients. CareMore determined that transportation was an essential need. Their previous service had a number of issues that needed to be addressed. A service was designed to match need and service with the help of Lyft and American Logistics Company (ALC). Technology was an integral part of the solution (Interview with CareMore by Ken Hosen, December 2019).

Needs

In 2016, CareMore Health, a physician-founded, physician-led care delivery system serving more than 150,000 patients in nine states and the District of Columbia, began a pilot program to offer its most chronically ill patients more reliable NEMT.



Exhibit 6-2. Key steps. Image used with permission from CareMore.

CareMore had provided patients with wheelchair vans and other specialized transport for years, but after receiving numerous complaints from patients that the services were inadequate, CareMore sought out a solution to improve the transportation program. The pilot was so successful that after just a few months CareMore expanded the program systemwide.

The problems to be resolved revolved around the following issues:

- **Driver education**—With the high-needs service typical of CareMore patients, many of the typical TNC drivers were not equipped and did not know how to properly transport chronically ill patients.
- **Poor service**—On-time performance was poor, resulting in patients being late or missing their appointment.
- **Lack of appropriate service availability**—Rural areas pose a particular challenge where trips are longer, costs are higher, and often no service is available.
- **Needs of patients**—Most new technologies require the use of a smartphone. CareMore worked with TNCs to eliminate the need for a smartphone through calling the CareMore call-taking function.
- **Full access**—Some benefits did not include access to certain destinations.

How Did the Collaboration Start?

Realizing that the needs of CareMore patients were not being adequately addressed, management determined that the solution included a number of key innovations. In 2015, CareMore established its call center and entered into a collaborative relationship with Lyft (a TNC) and American Logistics Company (ALC) acting as a broker for non-Lyft trips. ALC soon developed the software needed by CareMore to assure a level of control over the service. The key elements of the collaboration were as follows:

- **Collaboration**—Having the right partners is critical to CareMore's mission. CareMore first chose Lyft and later included Uber for ambulatory patients. ALC is the service broker for trips not appropriate for a TNC.
- **Service design and innovation**—CareMore is able to match need to the most appropriate service. Their call center allows full control over the service.
- **Technology**—Optimizing and grouping trips where feasible, unlike many brokers, CareMore transportation and clinical staff can identify the actual location and on-time status of all patients on board a vehicle. This is a valuable tool for clinic staff in addition to being another tool to ensure safety of patients.

Coordination of Services

As all trip requests come into the CareMore call center, all coordination is accomplished through CareMore. CareMore determines the mode and then dispatches one of its contractors, either a TNC or schedules through the broker. Important for safety and on-time performance, the call center, broker, and clinic staff are able to track each trip using automatic vehicle locators. See Exhibit 6-3.

Funding/Sustainability

Funding for this service comes from CareMore. CareMore believes that the investment in transportation (in general) pays off in reduced health-care costs (e.g., reduced visits to the emergency room, illness, and missed trips, which are very costly).

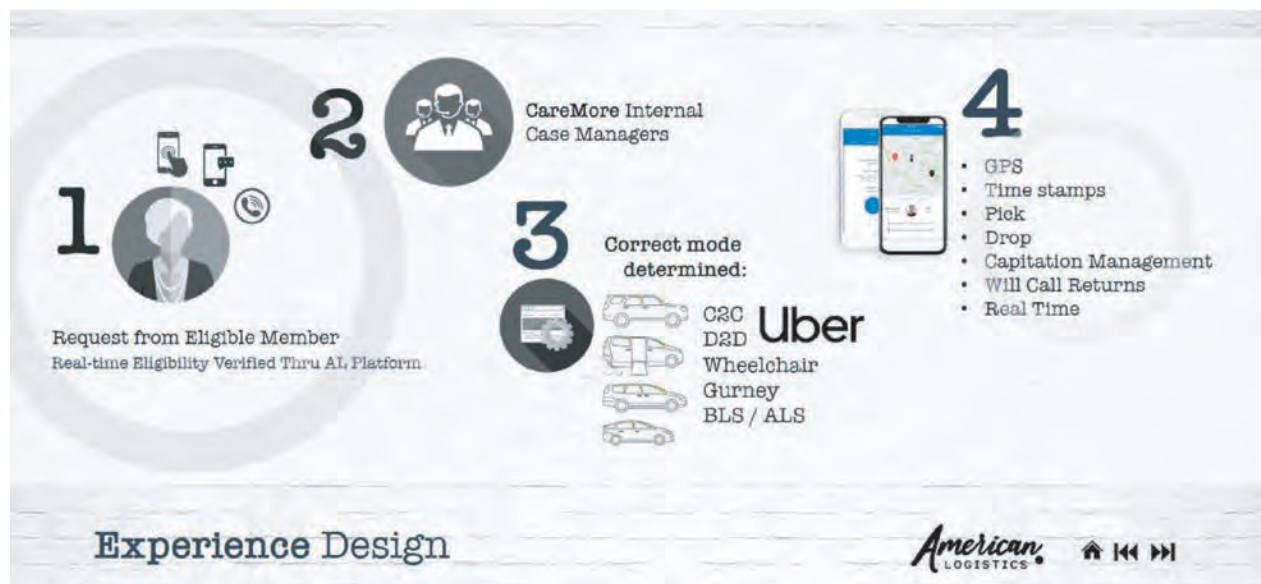


Exhibit 6-3. My Ride Manager (MRM) 2.0 (ALC and Uber Health Technology). Diagram used with permission from CareMore (C2C, D2D, BLS/ALS = passenger codes).

This is one more example of the for-profit private sector understanding the necessity of transportation and how important it is to appropriate health care.

Lessons Learned

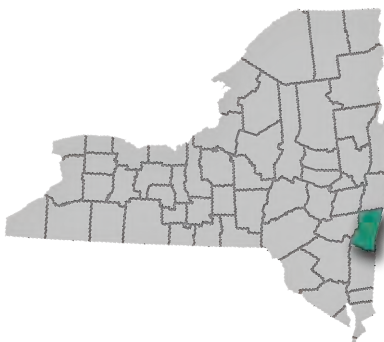
Transportation access is crucial to health. CareMore reports that, through the use of TNCs and the revised model, missed trips are down as much as 12%, though that has yet to be verified. In addition, based on their over 3 million trips completed using this new model, CareMore has seen:

- 32% cost reduction from previous model.
- 30% shorter wait times.
- 97% member satisfaction.



The Takeaways

- Transportation is a key to holistic health-care solutions.
- CareMore believes that this service is a worthwhile investment that reduces costs and missed trips (more research is needed on this, however).
- Use the most appropriate service to meet the needs—one size does not fit all.
- Invest in technology that can track every trip in real time.



NEMT Provided by a Health Care Consortium in Columbia County, New York: Children and Adults Rural Transportation Service (CARTS)

Description of Practice

The Children and Adults Rural Transportation Service (CARTS) provides free NEMT to residents of Columbia County, New York. While all trips originate in Columbia County, CARTS transports passengers to multiple counties in New York State and bordering areas in western Connecticut and Massachusetts for care.

CARTS is a program of the Columbia County Community Healthcare Consortium, Inc. (the Healthcare Consortium), a non-profit, community-based organization that brings together multidisciplinary stakeholders to improve the health and well-being of residents in Columbia and Greene counties.

CARTS receives reimbursement from Medicaid to transport enrollees and uses funds from a range of other sources to cover the cost of rides for non-Medicaid patients. CARTS also works with local hospitals and health and human services providers to provide transportation for outpatient services and court-related appointments. The New York State Medicaid Transportation Program contracts with CARTS to provide transportation to individuals in Personalized Recovery Oriented Services (PROS), which supports the rehabilitation and treatment of people with serious mental health conditions.

CARTS operates Monday through Friday from 8 am to 4 pm, though drivers often begin driving earlier to pick up passengers and end later to drop passengers off at their final destination. On an annual basis, CARTS provides more than 16,000 trips to over 500 people.

Clients enrolled in Medicaid call the regional transportation broker to confirm their eligibility and receive prior authorization for transportation services. Due to the state's Medicaid freedom of choice provision, passengers can request CARTS when they reach out to the Medicaid broker. Clients who are not enrolled in Medicaid call CARTS directly to schedule a ride.

Due to limited resources and the rural geography of the region, the CARTS model requires substantial advance planning. Passengers need to book their trips at least 2 days in advance for in-county rides and more than 2 weeks in advance for out-of-county rides.

CARTS is supported by two staff members, a Transportation Program Director and a Transportation Program Coordinator. These staff work with the state Medicaid broker, individual passengers, and other clients (e.g., the local community hospital) to schedule rides. CARTS also employs 11 to 13 drivers at any time, generally at or slightly higher than minimum wage. Drivers are typically civically minded retirees who formally worked for local fire, police, or corrections departments. All drivers must have a clean driving record and pass a physical exam and a road test prior to hire.

Needs

Columbia County has a large aging, rural population. In 2018, an estimated 23.8% of Columbia County's population was age 65 years or older. Many older CARTS clients are receiving health treatments that make it difficult for them to drive themselves to appointments,

including dialysis or chemotherapy/radiation. Many older clients lack a social support system or family who can help provide transportation to health care or feel hesitant about driving in larger cities.

CARTS makes several special accommodations to meet the needs of PROS program participants. For example, CARTS dispatches several vehicles simultaneously to pick passengers up at each group home and drop them off at PROS facilities. This prevents passengers from spending long periods of time in the vehicle, which could cause stress and exacerbate an existing condition.

CARTS also holds a contract with the local community hospital to transport psychiatric patients to and from court appointments. Before they approached CARTS to arrange special transportation, the hospital reported that patients would often leave and not return while they were waiting for a taxi to attend court, therefore discontinuing critical mental health treatment. To better meet the needs of these patients, CARTS dedicates a car and driver solely for transporting patients between the hospital and court. The CARTS driver waits for the patient outside the hospital and the court building to ensure patients arrive safely to and from their destinations.

Drivers also provide substantial personal assistance to riders with special needs, such as helping them into the vehicles and maneuvering equipment (e.g., canes or walkers). CARTS also educates drivers about transporting dialysis patients and keeps blood pathogen kits in every vehicle in case a rider has an issue with a port.

In addition, CARTS tries to consider the experience of all passengers when scheduling rides. For example, some patients with behavioral health conditions prefer to ride alone. If necessary, CARTS will schedule fewer people than the maximum capacity of the vehicle to ensure that all passengers have a comfortable ride.

How Did the Collaboration Start?

The Healthcare Consortium was established in 1998 with the mission of increasing access to health care by promoting collaboration among health and human service providers in Columbia County. Representatives from county government, county departments and agencies, health-care providers, local business, faith-based organizations, and members of the community all serve on the Consortium's Board of Directors.

Lack of transportation to and from medical appointments was one of the first issues identified by the Healthcare Consortium in 1998. Rural Columbia County lacks accessible and comprehensive public transportation options, and patients are often required to travel long distances to receive care. The Consortium began CARTS in 1999 to meet the transportation needs of community members.

Funding/Sustainability

CARTS receives substantial funding and in-kind support from Columbia County, which is critical to the continued success and sustainability of the program:

- The Healthcare Consortium operates out of an office space in a county-owned building at no cost.
- The county allows CARTS to purchase tax-free fuel from the county pump.
- In previous years, CARTS has leased vehicles directly from the county at below market rate.

130 Guidebook and Research Plan to Help Communities Improve Transportation to Health-Care Services

- CARTS uses the county garage for repairs and parks their vehicles in the City of Hudson-owned lot.
- The Columbia County Board of Supervisors includes a small amount of funding for CARTS in the county budget each year.
- Several county agencies, including the Columbia County Office for the Aging and the Columbia County Department of Health, commit small amounts of funding to the Health-care Consortium each year.

CARTS also receives reimbursement from Medicaid for providing NEMT for enrollees. Non-Medicaid enrollees often support CARTS with donations. In addition, the Foundation for Community Health, a private foundation in Connecticut, provides CARTS with a small amount of funding to help support local community members.

Lessons Learned

In a rural community with limited resources, collaboration is essential to the sustained success of a transportation program. CARTS receives in-kind and budgetary support from many community agencies, local government, and other key partners who understand the value of transportation in promoting health and well-being.

CARTS also leverages partnerships to continue to adapt to changes in transportation management. For example, several local health-care providers have started using Circulation, a web-based platform, to request rides for patients. Since CARTS works at capacity, mobility managers originally had to refuse last-minute trip requests. CARTS leadership reached out to partners at providers' offices to find a way that CARTS could continue to serve patients in their service area. Case managers now call CARTS directly to first schedule the patient at a time that CARTS can accommodate before placing the request in the web-based system.

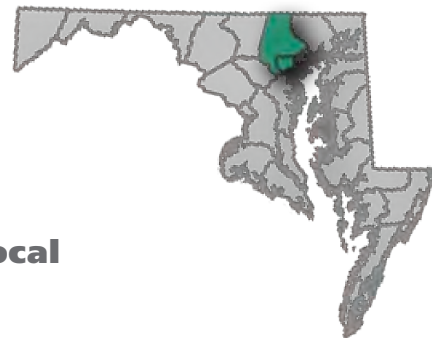
Resources

- The CARTS website is available at: <https://www.columbiahealthnet.org/programs/medical-transportation/>



The Takeaways

- The Healthcare Consortium works closely with partners and the county government to leverage resources and in-kind support for long-term sustainability.
- CARTS also works closely with partners to better understand and meet the needs of patients with a range of health conditions.
- CARTS directly employs drivers instead of using a volunteer model. Drivers are typically long-time community members with a strong commitment to civic participation.



County Demand Response Program Partners with Local Hospitals for Funding Support in Baltimore County, Maryland: CountyRide

Description of Practice

Baltimore County, Maryland, provides a demand response public transit system known as CountyRide (Exhibit 6-4). The service is operated by the county's Department of Aging, with transportation provided for seniors and people with disabilities in the urbanized portion of the county and for the general public in the non-urbanized northern portion. This distinction reflects the funding sources received from the state, including FTA and state transit funds.

Through a long-standing public-private partnership, CountyRide receives annual financial support directly from hospitals and medical facilities in Baltimore County and Baltimore City. This funding supplements CountyRide's federal and state grants as well as passenger revenue.

CountyRide recognizes the support from the medical facilities in several ways:

- Extending its service into Baltimore City specifically to serve participating medical facilities located within the city limits. Except for those specific destinations, CountyRide does not serve Baltimore City.
- Providing priority scheduling for riders traveling to medical appointments, including those at the partnership facilities.
- Recognizing medical facilities through CountyRide's online and printed informational material.



Exhibit 6-4. CountyRide vehicle. Photo courtesy of KFH Group.

Needs

Transportation access to hospitals and medical facilities in the Baltimore region is difficult for many seniors and people with disabilities without access to private transportation. Baltimore County saw rising demand for trips into Baltimore City for medical appointments but limited funding to expand service.

How Did the Collaboration Start?

CountyRide's public-private partnership program began more than 25 years ago, initiated because of growing demand from seniors and people with disabilities for medical trips and shrinking local funds to support the transportation service. A number of hospitals and medical facilities in both Baltimore City and Baltimore County stepped up to help support CountyRide, recognizing that the door-to-door service was critical for many of their patients to access appointments at their facilities.

There are currently 15 medical facilities (shown in Exhibit 6-5) that contribute funding to CountyRide to support transportation access to their facilities.

Baltimore County Medical Facilities

Franklin Square Hospital Center

Greater Baltimore Medical Center

The James Lawrence Kernan Hospital

Northwest Hospital

University of Maryland Saint Joseph Medical Center

Baltimore City Medical Facilities

Good Samaritan Hospital

Johns Hopkins Bayview Medical Center

Johns Hopkins Hospital

Kennedy Krieger Spine Center

Mercy Medical Center

St. Agnes Healthcare

Sinai Hospital of Baltimore

The Union Memorial Hospital

University of Maryland Medical System

League for People with Disabilities

Exhibit 6-5. Partnership hospitals.

Funding/Sustainability

CountyRide's partnerships with medical facilities are informal and the amounts provided by individual hospitals and health-care organizations may vary year to year. Nevertheless, the funds are an important contribution supporting CountyRide's operations. In FY 2017, the partnership funding made up 13% of all fare revenues.

Lessons Learned

Coordination and collaboration between a county-based specialized transportation service and the hospitals and health-care organizations which it serves can lead to funding support for the transportation provider. Recognition of that support furthers the partnership.



The Takeaways

- Community transportation programs can establish relationships with medical facilities they serve that include financial support.
- The transportation program should emphasize that many riders travel to medical facilities, and the program provides access for these individuals to needed health-care appointments (and avoids missed appointments).
- The transportation program should recognize the support of the medical facilities through its own resources and in the broader community.



Transportation Pilot in Central Pennsylvania to Improve Patient Access to Health Care and Reduce No-Shows: Geisinger Health System's Partnership with rabbittransit

Description of Practice

Geisinger Health System, a large integrated health-care system in central Pennsylvania, is piloting non-emergency transportation service for its patients in two different areas to improve their access to medical and other health-related appointments and to address patient no-shows. Geisinger is partnering with rabbittransit, a regional transportation authority serving 10 counties in central and southcentral Pennsylvania, to provide the service.

Two pilot services were planned and initiated in April 2018. One serves patients in an urban area—those living within a 25-mile radius of the city of Scranton. The second serves rural patients—those living within 50 miles of the town of Danville.

rabbittransit serves as the coordinator of transportation service for the pilot. In addition to providing trips within its own service area, rabbittransit coordinates with neighboring public transit providers to deliver/perform trips within their respective service areas. If a patient's trip needs cannot be met by one of the public transit providers in the coordinated network, the trip is scheduled to a taxi, TNC, or other private provider.

Needs

Geisinger was experiencing high rates of appointment no-shows—particularly for primary care appointments but also for ancillary appointments, such as for diagnostic services. Data from 2016 saw almost 324,000 no-shows for medical appointments and close to 88,000 no-shows for ancillary appointments.

How Did the Collaboration Start?

Geisinger determined that the rate of no-shows had to be addressed. Geisinger understood that providing a transportation service may not be the easy fix to missed medical appointments, but it decided nonetheless to try and improve patients' access, particularly for those living in rural areas (3).

Through community relationships, Geisinger was familiar with rabbittransit, the regional public transit provider. The two entities worked together to plan and implement the pilot.

According to plans for the pilot, a referral from staff begins the process for scheduling a patient's trip. The referral is reviewed, and the patient is screened. The health system then sends a transportation request to rabbittransit to schedule the patient's trip.

Geisinger's plans also recognized the need to extend transportation service through the pilot for non-clinical but health-related activities—for example, access to pharmacies to get medications and transportation to grocery stores for fresh food.

Funding/Sustainability

Geisinger provides the patients' trip without charge, funding the cost through its health-care plan. Transition from pilot status to ongoing status will be determined once the pilots are formally evaluated to assess their effectiveness in addressing patient no-shows and improving transportation for other health-related needs.

The pilot has connected those patients who were unaware of public transportation options to their local transit providers. This allows patients to have transportation for other purposes, and many have transitioned from the pilot program to traditional transit programs.

Lessons Learned

Data provided in 2019 with ridership figures for the pilots' initial 9-month period showed 3,900 trips were provided for 1,459 patients. The average trip distance was 27 miles. Eighty-five percent of the trips were for medical purposes. Of the remaining, 13% were for food-related needs and 2% were for pharmacy needs and social service (4).



The Takeaways

- Health-care organizations understand that lack of transportation is not the only factor impacting appointment no-shows.
- Yet, providing free transportation to medical and health-related appointments improves patient access and helps reduce no-shows.
- Patients living in rural areas, where public transportation options are limited, have greater needs for transportation assistance to access health care.



Logistics Platform Connecting Transportation and Health Care: Kaizen Health

Description of Practice

Kaizen Health offers a platform that aggregates diverse types of transportation in one place. Kaizen Health aims to accommodate the needs of everyone, including people with limited mobility and children. Depending on the network area, Kaizen can partner with:

- Rideshare companies, including Uber and Lyft,
- Traditional NEMT fleets,
- Taxi companies,
- Wheelchair-accessible vehicles,
- Small buses,
- Non-emergency ambulances,
- Medicars/stretchers vehicles, and
- Courier services (for example, to deliver medication to patients at home).

Multiple types of health-care organizations and stakeholders utilize Kaizen Health's platform to arrange transportation for patients. Kaizen Health works with health-care providers (e.g., FQHCs, large health systems, academic medical centers, and safety-net hospitals), Medicaid, Medicare Advantage, clinical trial research coordinators, senior centers, municipalities, and non-profit agencies.

Kaizen Health's clients can use the platform to arrange NEMT transportation for any kind of medical services, from discharge from the emergency department, to routine transportation to dialysis clinics, or to follow-up primary care appointments.

The Kaizen Health platform is available through a web browser or can be integrated with different case management or EHR platforms (Exhibit 6-6). Staff helping to arrange transportation can browse the options available for their client and select the vehicle that best meets their needs. The passenger can select their preferred communication method (text/voice call/mobile app)



WILLIAMS, ALEXANDER
 937 West Belle Plaine Avenue
 Chicago, IL 60613
 PHONE (preferred)
 (312) 555-8888
 MRN#
 0000-000000
 INSURANCE PLAN
 Blue Cross HMO Illinois
 ASSISTANCE NEEDED
 No
 PREFERRED VEHICLE TYPE
 Standard Sedan

UPCOMING RIDES

ID	DATE	ETD	ETA	APPT LOCATION	DIRECTION
15131	8/2/2018	3:00 PM	3:30 PM	2817 North Clark Street...	Incoming

PAST RIDES

CANCELED

ADDRESSES

SCHEDULE NEW RIDE

EMERGENCY CONTACT

NOTES
 Patient uses a cane

Exhibit 6-6. Example of Kaizen Health application with patient's scheduled ride and mobility needs. Image used with permission from Kaizen Health.

and language of choice to receive updates about the ride. Passengers receive communication with the details about their upcoming rides. A typical ride arranged through Kaizen Health includes the following steps:

1. A patient is ready to be discharged from the emergency department or hospital.
2. A care coordinator assesses their transportation need and requests a ride through Kaizen Health to get the patient home. The care coordinator also sets up transportation in advance for a follow-up medical appointment.
3. On the day before the follow-up appointment, the patient receives automated communication with a reminder about the ride.
4. Minutes before pick up, the patient receives communication with details about the driver and vehicle.
5. The driver picks up the patient and drops them off at their medical appointment. The care coordinator can track the progress of the ride on the Kaizen Health platform.

If the patient cancels the ride for any reason, Kaizen Health notifies the care coordinator who made the appointment to facilitate rescheduling.

Needs

Kaizen Health offers transportation options that meet a range of mobility needs. In addition to curb-to-curb services, Kaizen Health also arranges door-to-door, door-through-door, and bed-to-bed transport. The Kaizen Health platform includes decision-making support to help the user, typically a care coordinator or social worker, select the vehicle that best accommodates the patient's needs. For example, if the user chooses a wheelchair-accessible vehicle, the system asks them whether the patient is able to ambulate or to choose the type of wheelchair that the patient is in so that a standard wheelchair vehicle is not sent for a patient that is in a motorized wheelchair.

Many of Kaizen Health clients are arranging transportation for patients who have complex health conditions and are enrolled in Medicaid. Those whose transportation is not covered by Medicaid often struggle to pay out-of-pocket transportation costs. Patients who live in rural areas may also have unmet transportation needs due to a smaller pool of drivers. Other

transportation barriers include lack of access to personal cars, limited public transit options, and lack of technology to arrange their own transportation.

How Did the Collaboration Start?

The inspiration for starting Kaizen Health was due to problems that their own family faced. When investigating the NEMT landscape to solve those family problems, they found that health systems often lacked the resources and space to manage their own fleet, including funding for drivers, gas, and maintenance. They also found that providers were interested in rideshare platforms, but hesitant about HIPAA limitations and the ability of drivers to help patients with limited mobility.

Kaizen Health sought to address these issues by building a HIPAA/Health Information Trust (HITRUST)/SOC 2 (System and Organization Controls 2)-compliant platform that removed the burden of arranging transportation partners from providers. Kaizen Health mobilizes existing transportation providers under one platform to simplify the process of finding and requesting the most appropriate ride.

When a client reaches out to Kaizen Health to inquire about using the platform, they are often interested in testing a proof of concept or piloting the program. For example, in 2017, the University of Illinois Hospital and Health Sciences System (UI Health) worked with Kaizen to implement the pilot **PRO**gram for **Non-emergency TranspOrtation**—or PRONTO to investigate whether Lyft could help patients get home more quickly after discharge. The 3-month pilot program was highly successful; patients were typically transported home 1 hour after the social worker assessed their transportation needs (5).

Funding/Sustainability

Kaizen Health bills clients on a monthly basis. For pilot programs, Kaizen typically charges on a per-ride basis. Once the partner contracts with Kaizen Health for full services, the company also charges a per-ride administration fee or a licensing fee, depending on the preferences of the client. Kaizen Health also charges for other services, such as licensing fees for EHR integration.

Resources

- Kaizen Health’s website provides additional details about the platform: <http://kaizenhealth.org/>
- Kaizen Health presented a demonstration of their platform for the Center for Care Innovations: <https://www.careinnovations.org/resources/tech-demo-connecting-patients-to-transportation-with-kaizen-health/>



The Takeaways

- Kaizen aggregates multiple NEMT providers in one place, allowing clients to pick the form of transportation that best meets the needs of potential passengers.
- Small-scale pilot programs can help clients establish a business case or rationale for investing in NEMT.



Health Care Transportation and Ride Hailing: Lyft

Description of Practice

Lyft is a ride-hailing company that offers health-care providers and payers access to NEMT through its network of over one million drivers.

Coordinators can either schedule rides directly on the Lyft Concierge platform or integrate Lyft's Application Programming Interface (API) into their existing health technology tools. A wide range of individual providers, hospitals, health plans, technology platforms, and other entities use Lyft as part of their health-care transportation solutions. Coordinators can schedule rides on demand or in advance and track the vehicle.

Needs

While some Lyft drivers offer wheelchair-accessible vehicles, Lyft rides are typically most appropriate for ambulatory patients without mobility limitations. Typically, clients use Lyft to provide easily accessible, on-demand transportation and partner with a different transportation provider to arrange for specialized services such as ambulances and paratransit vehicles. For example, the National MedTrans Network uses Lyft's API to coordinate curb-to-curb pick up for patients who can exit and enter a vehicle without assistance.

How Did the Collaboration Start?

Prior to the launch of Lyft's official health-care platform, third-party transportation providers were already using Lyft to address gaps in NEMT. In 2016, Lyft detected unusual usage patterns in New York City, where several customers were taking rides that had been booked from Salt Lake City. The Lyft team discovered that an NEMT, National MedTrans Network, was using Lyft to book rides for ACO patients when their scheduled transportation ride fell through. The Lyft team reached out to National MedTrans and began identifying other issues related to medical transportation, including no-show rates and the costs of avoidable expenses. Lyft saw an opportunity to leverage its driver network to increase access to on-demand transportation and reduce the administrative burden of arranging transportation.

Coordination

From the outset of the program, Lyft acknowledged that partnerships would be necessary to provide the full spectrum of health-care transportation. The National MedTrans Network became one of Lyft's first partners, and Lyft has since partnered with the nine other top NEMT brokers. These brokers can integrate Lyft's API into their systems, allowing a coordinator to schedule Lyft rides for patients.

Funding/Sustainability

Pricing for Lyft rides is based on rates at the time the ride is booked. Costs can vary by type of Lyft service, geography, driver availability, time of day, and other factors. Clients are charged directly for Lyft transportation through a business account.

The Centers for Medicare and Medicaid Services (CMS) has provided more opportunity for Lyft and other TNCs to provide health-care transportation with a 2019 ruling allowing for greater use of supplemental benefits in Medicare Advantage plans, which include transportation.

Lyft was approved as an enrolled Medicaid provider in Arizona in 2019. It is the first such agreement between a state Medicaid program and a national ride-hailing company.

Performance Measures

Lyft's 2019 annual economic impact report found that 29% of clients used the application for health-care trips. The report, which includes results from a survey of 30,000 Lyft users, also found that over one-third of riders who use Lyft to travel to health-care services reported decreased urgent care visits since using Lyft. Lyft also reports that the service contributes to decreased no-show rates, increased revenue, and improved patient satisfaction.

Lyft's clients report high demand and customer satisfaction. For example, Lyft partnered with major Medicare Advantage provider Cigna-HealthSpring in May 2017 to provide transportation to doctor's appointments and pharmacies in Alabama, Georgia, Maryland, North Carolina, Pennsylvania, Tennessee, Texas, and the District of Columbia. Cigna-HealthSpring reported that by November 2017, patients had completed 14,500 rides. In satisfaction surveys, 92% of customers indicated that Lyft was their preferred NEMT option.

Lessons Learned

Patients may need additional assistance with identifying the location of their appointment on large medical campuses. Lyft uses venue mapping to allow clients to designate custom pick-up and drop-off zones for their medical facilities.

Lyft's on-demand transportation has proven popular with a range of health-care providers and their patients.



The Takeaways

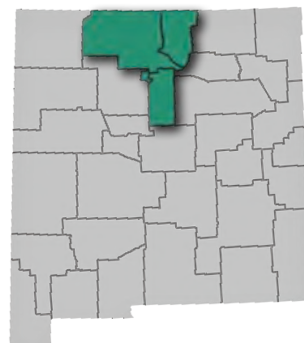
- Ride-hailing companies have expanded their business lines, with an increasing presence in the health-care transportation space.
- Ride-hailing trips tend to be more effective for ambulatory patients. Wheelchair-accessible service is limited.



Service Design Matters: North Central Regional Transit District, New Mexico

Description of Practice

North Central Regional Transit District (NCRTD) is a large, four-county rural transit system that spans over 250 miles of service. NCRTD serves four very different counties, seven cities and



towns, and six pueblos. In 2013, NCRTD was a low ridership service with difficult-to-follow routes and schedules. Many routes did not connect, and the service was difficult to use for work, shopping, or health care.

In 2013, new management initiated a 5-year plan with extended outreach to the health-care and human service sectors. Routes were revised to make them usable to most riders and included:

- Reduced meandering and elimination of loop routes;
- Re-timing of routes, which was critical to meet work schedules and provide midday service for health care, shopping, and personal needs; and
- Better connections internally, with five connecting buses and trains.

Through modifications to the routes and with no increase in service levels or costs, the existing routes increased ridership by 45% in 1 year. When new routes were added to the mix, ridership doubled in 4 years (6).

A 2020 survey conducted for NCRTD indicated that 9% of trips were for health-care services (7). This generates about 100 one-way trips for health care on a daily basis, doubling the previous level of service to health care. Management continues to make improvements, enhance bus stops and shelters, and make connections simple.

Needs

The NCRTD service area is quite diverse. Two counties have high poverty rates, while two have well above average incomes, and one county has one of the highest per-capita incomes in the nation.

The distances people travel for work, health care, and college often extend 50 miles or more one way. Language barriers exist in many cases, and winter travel through the mountains can be challenging at best.

At the same time, there is a major commuter network into Santa Fe with rail connections to Albuquerque. NCRTD connects with five other transit systems, including a commuter rail system. Visitors make up a large part of the potential users as well, with service geared for ski basins and communities on the Santa Fe to Taos corridor.

Lastly, the needs identified in the agency's 5-year plan became evident once new service was implemented with an over 40% increase in ridership in 1 year (8). Health-care access was dramatically improved as well.

How Did the Collaboration Start?

When new management came to NCRTD, it found a low-ridership system with poorly designed routes and timing that did not allow for commuter use or health-care access. NCRTD's new management initiated a 5-year plan with extensive outreach to the community: health-care providers, human service agencies, visitors, and schools. There were over 20 meetings and focus groups as well as a variety of other outreach methods, including a focus group representing the health-care field.

The new service network featured improved access to the region's health-care facilities in Taos, Española, and Santa Fe, with an emphasis on needs in remote areas often well over 75 miles away. The improvements included allowing same-day return access to specialists in Santa Fe.

Funding/Sustainability

The service changes that resulted in the increased ridership were implemented at no additional costs. Funding and sustainability, however, is no longer an issue for NCRTD as it has taken advantage of a New Mexico law that allows for the forming of a district with a dedicated sales tax (Gross Receipts Tax). In 2018, voters approved continuance of the tax with elimination of the sunset provisions. NCRTD uses FTA funds, and some Tribal Transit Funds are used as well.

Lessons Learned

Outreach efforts make a difference. In addition, NCRTD's board includes representation from seven cities and towns, six pueblos, and four counties, which allows for both internal and external collaboration.

- Outreach: Focus groups, if attendees are chosen properly, can produce meaningful results. The health-care representatives in the focus groups and through interviews provided meaningful input.
- Simple adjustments to schedules, connectivity improvements, and a variety of service design improvements helped boost ridership dramatically at no additional cost.



The Takeaways

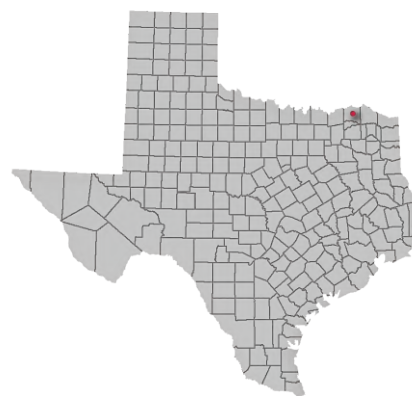
- Service design has a major impact on service at very low cost. If a 20-minute round trip by auto becomes a 2-hour bus trip on poorly designed loop routes, then only the desperate will use it. Minor adjustments to routes can have a considerable impact:
 - Connectivity—a timed meet.
 - Less meandering.
 - Timing routes for commuters (full 8 hours, plus) and shopping, health-care, and other trips (often one-half day).



Transit Sponsorship—A New Sustainability Model in Paris, Texas: Paris Metro

Description of Practice

TRAX, a nine-county rural transit system, part of the Ark-Tex Council of Governments, implemented a fixed-route service in Paris, Texas, a small city of 25,000 residents in northeast Texas. The fixed-route system (Paris Metro) supplanted demand response service in 2016.



Ridership increased over 400% as the fixed route generated a highly successful service for a city of its size. Management believed that coordinated transportation provides better public transportation.

The primary focus of this collaboration is the innovative sponsorship program implemented by the transit manager. Prior to implementation, the transit manager used a sponsorship plan developed by consultants. Since traditional sources of funding had disappeared over the years, TRAX sought a new coordination/sponsorship model. This sponsorship program was designed to generate revenue for the service and in return allow advertising, promotional incentives, and other benefits. United Way immediately responded, and working with TRAX quickly added the Paris Regional Medical Center (PRMC) and Texas Oncology as partners. The city of Paris and the junior college also joined with the health-care-oriented sponsors.

A secondary focus is the route design, which was pivotal in generating eight one-way trips per vehicle hour, higher than virtually every other rural city of a comparable population (about 25,000).

Demand response service in Paris was never able to go over one to three one-way trips per hour, making service quite costly on a per trip basis. It was estimated that, for each fixed-route bus in service, the system could reduce demand response service by two vehicles. This was proven correct as now only ADA paratransit-eligible riders need demand service.

Management estimated that at least 10% of the ridership is for health-care-related services. Annual ridership is 60,000 one-way trips or about 240 per day. Of that amount it is estimated that between 20 and 30 daily trips are for health-care access, which is a significant number for a small community.

Needs

The study that initiated this system identified transit-dependent persons, including seniors, persons with disabilities, youths, low income, and the limited English proficiency cohort. This was borne out by the actual ridership.

TRAX worked with its sponsors and others (holding meetings at PRMC) to develop the service. Management states that the system transports many difficult-to-serve residents and increased travel training to encourage fixed route. Riders include:

- Persons with opioid/substance use disorders,
- Veterans to the VA clinic,
- Cancer patients traveling to Texas Oncology where patients leave a light on when they need the bus to stop in the parking lot,
- Older adults,
- Persons with disabilities,
- Students, and
- Commuters to major manufacturers.

How Did this Collaboration Start?

In 2015, the new manager of TRAX, armed with a transit and sponsorship plan for the city, initiated a sponsorship program with private and public organizations. In return for funding

and support, there would be advertising and promotional benefits for the sponsors. The manager stated that she went to the United Way first, and they agreed to support the project. United Way arranged the initial meeting with local businesses. What came out of that meeting in a matter of weeks were agreements with:

- The PRMC allowed the use of office space as a transfer center, a \$25,000 in-kind contribution for the facilities, plus additional funding in return for advertising and promotional benefits as well as having both buses transfer at the center.
- The Texas Oncology provided funding.
- The United Way provided funding.
- The city of Paris provided in-kind support and funding.
- The local high school gave support for transition/travel training for persons with disabilities.

Once the plan was in place with the management, fully-trained drivers and vehicles were all in place, and the plan was within weeks of securing agreements and funding, the implementation efforts began. Service began within months of securing the agreements. Ongoing leadership comes from TRAX and PRMC, while trust and commitment continue after 4 years.

Coordination of Services: A New Model

TRAX has been operating in Paris since the 1980s, initially coordinating Medicaid NEMT, Head Start, Administration on Aging Title 3 funds, and other local sources. Over the next 20 years, those funds were either eliminated or diverted to other organizations or needs. TRAX continued to provide service for seniors and other riders previously funded, but the funding and coordination ended.

The new coordinated model employed by TRAX looked at other sources of funding and different types of organizations to work with. In particular, the health-care entities in Paris were called upon to support the system. These entities realized that public transit enhanced their patient's access to health care. In essence, these new supporters took the place of the traditional coordination model of support and added to the credibility of transit through these new "sponsors."

Funding/Sustainability

Sustainability has been greatly enhanced through the sponsorship program and the change in service design. First, implementing service has reduced the number of vehicles needed in Paris. Second, generating local match in rural areas can be difficult. The sponsorship program in this case not only generated additional revenue to match federal dollars, but it also gave the system an air of legitimacy among all residents of Paris.

The implementation of fixed route allowed for a reduction in total vehicles in service as one fixed-route vehicle can transport (in this case) three to four times the ridership per vehicle. There were previously five vehicles serving Paris in demand response mode; there are now two fixed-route buses and two ADA paratransit vehicles with far greater ridership for health-care and other purposes.

Using private and local funding and support allows TRAX to leverage FTA Section 5311 rural transit funding for 50% of the net deficit. The other 50% can come from local, state, other federal and private sources. The key for TRAX is the sponsorship revenue that allows TRAX to generate the all-important local match.

Lessons Learned

There were a number of lessons learned. Clearly, a change of service design from low productivity demand response to fixed route made a major difference in ridership and credibility.

- Initial collaboration—Management states that getting the United Way on board at the beginning made the difference.
- Building support—With United Way on board, others joined.
- Funding—It is important to tell the system's story and secure stakeholders to communicate that story.
- Find niches—In addition to trips for health care, high school and junior college students use the service.
- Outreach—With aggressive management, there were regular visits with case workers and health-care professionals to ensure needs were being met.
- In-kind support works—The city gave assistance, providing in-kind support for shelters, facilities, and their installation.



The Takeaways

- You must ask if you want to receive.
- Be prepared to tell your story. Have local leaders (business, community, and elected officials) tell the story.
- It usually takes a lot of time. TRAX was lucky as the federal funding, staff, and vehicles were already in place.
- Operate, promote, and market like a business: grand openings, bus dedications, meal delivery during a crisis for example.



Healthy Hop: Pinellas Suncoast Transit Authority

Description of Practice

Pinellas Suncoast Transit Authority (PSTA) is partnering with AdventHealth North Pinellas and the city of Tarpon Springs to provide free transportation to medical services for low-income seniors in the Tarpon Springs community. This service is called Healthy Hop.

Through the partnership, low-income seniors age 65 and older can receive two round trips or four one-way trips per month to medical services within Tarpon Springs. Seniors and medical facilities are able to call or use an app to access PSTA's Goin software and book a ride for immediate service or up to 2 weeks in advance. Providers include Lyft, United Taxi, and Wheelchair Transport for transportation based on the rider's needs.

“PSTA’s mission is to safely connect people to places,” said Brad Miller, CEO of PSTA. “We pride ourselves on being innovative leaders in mobility, and partnering with Florida Hospital North Pinellas and the city of Tarpon Springs has allowed us to provide this on-demand medical transportation service (one of the first of its kind) to safely connect the most vulnerable in our community to receiving proper healthcare.”

Needs

Tarpon Springs, a part of the Tampa Bay region, is a city of 25,000. Tarpon Springs is a retirement community with 25% of the population age 65 and older. This is considerably higher than the Florida average of 20% or the national average of about 15%. In addition, the partners all believed through anecdotal evidence that a service was needed to support seniors in gaining access to health care.

How Did the Collaboration Start?

The collaboration was initiated by the mayor of Tarpon Springs in response to a concern from residents that some seniors were not getting to essential health-care appointments. The mayor collaborated with PSTA’s chief executive officer, and they brought in AdventHealth North Pinellas, the major medical center for the city. PSTA then deployed Goin software to broker trips with an app or by phone.

Coordination of Services

At the macro scale, service is coordinated through the partners. At the operational level, all trip requests come into the PSTA Goin app, and all coordination is accomplished through PSTA.

Funding and Sustainability

Funding for this service is shared by the city, PSTA, and AdventHealth, a public-private partnership.

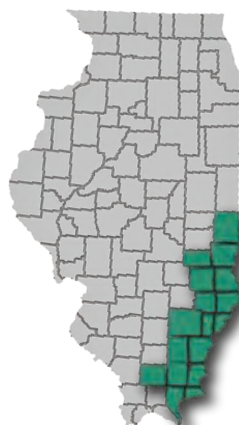
Lessons Learned

The service has been in operation for 1 year. This small-scale service combined a number of transportation providers and brokered service based on need, using Goin software. The program, a 1-year pilot, was recently extended.



The Takeaways

- Transportation is a key to holistic health-care solutions.
- The combination of a transit authority, the health-care community, and local political and community leaders makes for a strong coalition.
- Use the most appropriate service to meet the needs—one size does not fit all.
- Invest in the right technology.



A Call Center Increasing Access to Health Care in Southern Illinois: Rides Plus

Description of Practice

Rides Plus is a call center funded by the Rides Mass Transit District, a federally funded public transportation system that serves 17 counties in southern Illinois. Rides Plus works with transportation agencies and health-care providers throughout the service area to help increase access to NEMT. Health-care providers contact Rides Plus to schedule rides to appointments for their patients.

Much of the infrastructure for the Rides Plus call center and coordination model was developed by the Rural Medical Transportation Network (RMTN). The Center for Rural Health and Social Service Development at Southern Illinois University (SIU) Carbondale developed RMTN using grant funding with a goal of improving access to both emergency medical and NEMT transportation in southern Illinois. After the end of the grant period, RMTN no longer had sufficient funding to operate. Rides Mass Transit District had experienced substantial increases in ridership after participating in RMTN and offered to continue funding the call center (now called Rides Plus). In addition to continuing to work with health-care providers, Rides Plus also helps coordinate other types of appointments for Rides Mass Transit District clients, including visits to the grocery store and recreational facilities.

Rides Plus works with several health-care and transportation providers to coordinate transportation services. Rides Plus also received a contract from the local Medicaid MCO to help arrange NEMT for their enrollees. First, the health-care provider or MCO will contact the Rides Plus call center with a request to set up a ride for a patient with at least 24 hours advance notice. Rides Plus then reaches out to the appropriate transportation provider to confirm whether they can schedule the ride. If the transportation provider cannot offer the trip, Rides Plus serves as a liaison between the providers and patient to find a new time that works for all parties.

A major success of Rides Plus has been fostering collaboration among different transportation providers. Providers were originally hesitant to participate in the project due to fears of loss of revenue. Rides Plus emphasized the opportunities for increased ridership from coordination. Before working with Rides Plus, transportation providers would have to decline requests for rides beyond their service area. With the help of the Rides Plus coordinator, the transportation provider can accept the ride and simply transfer the rider at a drop-off point when they reach the end of their service area. The Rides Plus coordinator takes on the responsibility of scheduling the ride between the two transportation agencies and arranging the transfer.

In FY 2018, Rides Plus provided 12,589 rides to residents of southern Illinois, a 20% increase over FY 2017. Rides Plus reports that ridership has been steadily increasing every year. Rides Plus has not been able to collect data from health-care providers on other performance measures such as changes in no-show rates. However, health-care providers have provided feedback that suggests that patients are missing fewer appointments due to transportation barriers.

Needs

Southern Illinois has a large rural population with limited access to transportation. Many residents are uninsured and live below the federal poverty level. Rides Plus typically helps coordinate demand response rides for rural residents with very limited access to fixed-route transit systems. Rides Plus also provides transportation for several patients receiving mental

health services. Rides Plus takes additional steps to accommodate the needs of some of these patients, such as ensuring that they do not have to share a vehicle with another passenger. In addition, many patients have complex health conditions and require additional accommodations to ensure their safety. For example, Rides Plus arranges transfers for some medically fragile patients at the Rides Mass Transit offices instead of a public location such as Walmart.

To assess needs, Rides Plus mobility managers use a checklist of potential accommodations. For example, the manager asks about their need for assistance and whether they can navigate stairs. The managers note any special needs in the scheduling system to alert the driver ahead of the ride.

How Did the Collaboration Start?

The SIU Center for Rural Health and Social Service Development conducted a study of local health-care providers and found that missed appointments were contributing to avoidable emergency department visits and hospitalizations. The SIU team developed RMTN to foster collaboration among health-care providers, emergency medical services, and mass transit agencies. To obtain buy-in from transportation providers, RMTN sought to establish a common understanding of transportation gaps in southern Illinois and costs associated with missed appointments and non-urgent use of emergency medical transportation. The Center for Rural Health and Social Service Development organized public forums that included legislators, hospital administrators, transportation representatives, and other key partners.

After the end of the grant period, RMTN attempted to transition to a sustainability model in which health-care providers would help fund the call center through annual contributions. However, health-care providers ultimately did not have the capacity to sustain the center. Instead, Rides Mass Transit District extended an offer to continue funding a new iteration of the call center. Rides Mass Transit District had experienced a substantial increase in ridership by participating in RMTN, which provided justification for investing in coordination services.

Funding/Sustainability

The original RMTN call center was primarily funded with the support of grant programs. Rides arranged through the RMTN call center were reimbursed by Medicaid, private insurance companies, and, in some cases, individual health systems or providers. Rides Mass Transit District currently funds costs for the Rides Plus call center. The call center has approximately 11 full-time employees and operates six days a week, from 6 am to 8 pm.

Medicaid enrollees account for approximately 85% of rides that the program arranges. Rides Plus takes care of the process of seeking authorization for Medicaid reimbursement for eligible riders to minimize the burden on the health-care and transportation providers. Other clients pay for their rides out of pocket.

Lessons Learned

Rides Plus staff attended many community meetings and conducted outreach to health-care providers to increase awareness of their services. Rides Plus staff invest substantial amounts of time in maintaining relationships with frontline staff who make referrals for their patients. Rides Plus has identified a point of contact at each major facility and makes repeated visits due to high staff turnover in many offices. Mobility managers also attend regional transportation meetings with stakeholders to identify concerns and share lessons learned with transportation partners.

Attending community events and meetings also provides opportunities to address stigma associated with public transportation. In rural communities without traditional fixed-route

bus systems, residents may associate public transit vans with services for older adults or people with disabilities. Rides Plus staff anticipate that direct outreach will help community members become more comfortable with taking public transportation.

Rides Plus recommends that communities seeking to implement similar programs should involve transportation providers from the very beginning of the planning phase. Bringing transportation providers to the table will help staff address early concerns and promote buy-in.

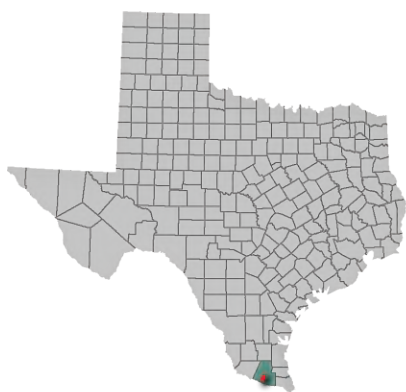
Resources

- RMTN developed a NEMT Resource Guide to help increase health-care providers' understanding of how to contact individual mass transit dispatch offices to schedule NEMT rides: <https://www.hsidn.org/transportation-resources>



The Takeaways

- The Rides Plus call center helps to both increase access to health care and improve use of public transit services in rural southern Illinois.
- The original RMTN call center model provided critical infrastructure for Rides Plus. While the RMTN funding model was not sustainable, the pilot helped Rides Mass Transit District understand the value of mobility coordinators and eventually invest in Rides Plus.
- Rides Plus staff allocate substantial amounts of time to building and maintaining relationships with health-care providers, transportation agencies, and other community stakeholders.



Accountable Care Organization in the Rio Grande Valley, Texas: Rio Grande Valley Health Alliance

Description of Practice

Rio Grande Valley Health Alliance (RGVHA) is an ACO located in McAllen, Texas, a mid-size city that is part of a large urban area with over 800,000 residents on the southern border of the United States. RGVHA uses rides-hail companies Lyft and Uber to increase access to NEMT for their patients. RGVHA funds transportation to and from hospitals, clinics, dialysis centers, and other health centers. For some patients who are “prescribed” exercise by their physician, RGVHA also arranges for transportation to and from the gym.

RGVHA case coordinators are responsible for arranging transportation for patients. In some cases, patients call directly and ask for a ride to an appointment. In others, case coordinators identify patients with multiple hospitalizations or emergency department visits and work with nephrologists and dialysis centers to identify barriers to care. If case coordinators determine that a patient could benefit from transportation assistance, they reach out to inform the patient

about their options. Depending on the patient's preferences or needs, the case coordinator can also offer vouchers for public transit or call Medicaid NEMT to arrange transportation. Case coordinators contact patients to inform them of their scheduled ride.

RGVHA is currently assessing data to determine outcomes associated with the program. Staff will identify trends in hospitalizations, emergency department visits, and no-shows among patients who regularly receive transportation assistance.

Needs

Many RGVHA patients have unmet transportation needs. The Rio Grande region is sprawling with a mix of rural, suburban, and urban communities. While local government is starting to invest in transportation infrastructure, public transit options are limited and not frequently used. In addition, many bus stops are not sheltered from the elements, which can pose safety concerns for older adults as they wait for transportation when temperatures are warm.

RGVHA serves many patients who need reliable transportation to travel to dialysis clinics several times a week. Physicians and care coordinators were aware that patients were skipping appointments because of transportation limitations. Common issues included lack of a personal vehicle, mobility concerns, and the inability of family members to miss work to transport patients to and from the clinic.

How Did the Collaboration Start?

RGVHA providers recognized that transportation was a key unmet need among their patient population and agreed to invest funds to address the issue. As an ACO, RGVHA receives incentives in the form of shared savings for improving the quality of care and decreasing the cost of care. The ACO uses shared savings to invest in a social determinants of health fund in an effort to continue to improve patient outcomes. RGVHA uses the social determinants of health fund to cover transportation costs.

In 2017, RGVHA staff began discussing potential opportunities for improving transportation to health-care visits. Relying on public transit would be insufficient due to concerns about long wait times in high temperatures and infrequent bus stops. Traditional Medicaid NEMT was also inadequate. Case coordinators reported that NEMT wait times were long and required scheduling days or weeks in advance. RGVHA staff also considered the option of purchasing a private van but concerns about liability and limited rider capacity outweighed potential benefits.

In 2018, the RGVHA Program Administrator attended a conference and learned about collaborations between rideshare companies and health systems. RGVHA contacted Uber and Lyft to learn more information about using the platforms to coordinate rides for patients. RGVHA identified several benefits from using rideshare platforms for patient transportation, including the ability to schedule rides on demand and on short notice. In spring of 2018, RGVHA began arranging transportation for patients with Uber and Lyft. RGVHA partnered with both rideshare companies to increase the number of ride options as some drivers only participate in one platform.

Funding/Sustainability

RGVHA funds the transportation program through Medicare shared savings. RGVHA considers several factors in making the business case for continued investment in transportation resources. For example, the ACO serves many patients with diabetes and end-stage renal disease who need frequent treatment. RGVHA is hypothesizing that, when patients can reliably attend check-ups and dialysis appointments, they are less likely to experience expensive hospitalizations and emergency department visits. In addition, RGVHA competes with other Medicare

programs, including Medicare Advantage. The ACO wants to offer competitive benefits to potential members, and transportation assistance is a key factor for many patients.

Lessons Learned

RGVHA partnered with Uber and Lyft to maximize the number of available drivers for their patients. Similar programs could benefit from exploring existing rideshare providers and platforms to assess their geographic coverage and pricing.

RGVHA can offer transportation assistance to any member, but care coordinators focus on high-need dialysis patients. Organizations seeking to implement a similar program could also benefit from identifying a small subset of patients who have a high need for transportation assistance and a high risk for health complications associated with missed appointments.

RGVHA is currently identifying transportation solutions for patients who are not ambulatory and require additional assistance. RGVHA emphasizes the importance of identifying approaches that meet the needs of patients with limited mobility from the outset of the program. Programs should plan to reach out to local transportation companies to establish partnerships and identify opportunities to serve patients with complex needs.

Resources

- The RGVHA Program Administrator wrote a blog post that describes cost savings associated with a population health approach (including transportation services): <https://hitconsultant.net/2019/03/20/texas-aco-medicare-population-health/#.Xgu7K0dKiUk>



The Takeaways

- RGVHA uses ACO funding dedicated to social determinants of health to provide NEMT for patients.
- RGVHA prioritized patients with complex medical needs for transportation services and, in particular, patients receiving dialysis services. Similar programs could assess which patients are in particular need of transportation.
- Partnering with more than one TNC helped maximize the number of available drivers to provide NEMT.



Fixed-Schedule Service Improves Access to Health Care in Western North Carolina: Rutherford County Transit

Description of Practice

Rutherford County Transit (RCT) operates in the remote mountains of Western North Carolina. This area has a predominance of back roads with few through roads. RCT provides

general public service (Exhibit 6-7), as well as Medicaid NEMT, which is coordinated with the general public service. Rutherford County is rural yet small-town centered and home to many retirees. Parts of the service area are close to Greenville/Spartanburg, and parts are close to Asheville. Many medical needs are filled in those larger communities. In addition, there are also many needs for specialized care in Charlotte.

Almost 10 years ago, the transit agency was taking people one-on-one to these cities, often three to four times a day, according to the system manager. This one-on-one service reduced RCT's ability to meet not only health-care needs but other important needs as well.

RCT changed its service design to what is known as fixed-schedule service. While the schedule is fixed (often by community or section of the county), the vehicle will make curb-to-curb stops on demand. RCT examined existing travel patterns and worked with health-care providers to develop an appropriate schedule. Most passengers adhere to the schedule, but sometimes exceptions are made and, in these cases, RCT will dispatch a taxi.

While no determination has been made as to the impact this service has on health care, RCT has dramatically reduced per trip costs due to the power of productivity. This in turn allowed RCT to provide far more trips to regional health-care centers than the agency otherwise could. This includes access to non-medical yet health-related transportation.

Needs

Rutherford County is a rural, mountainous county that has major medical needs in three cities in three different directions. Additional needs include some passengers have to stay beyond the scheduled return time and some may be discharged after hours. These needs were once overwhelming the transit agency and reduced its ability to provide service for other basic needs. Nine years ago, the new manager felt they needed to do something to rein in the costs of providing one-on-one service to three cities. Cooperation of health-care providers was requested and accepted by many of the providers.



Exhibit 6-7. RCT vehicles are important in the remote parts of the county. Photo courtesy of KFH Group.

The greatest recurring medical need was and is kidney dialysis transportation. In addition, the bulk of the passengers are frail seniors. Some dialysis clinics cooperate with RCT while others less so. Those that do, cooperate work with RCT to schedule patients based on geography so that RCT can group trips where possible.

How Did the Collaboration Start?

The effort was initiated in 2010 when a new manager started. The transit agency was overwhelmed with out-of-town needs, and they were not able to meet other basic transportation needs such as shopping and personal business. The manager set out to work informally with a wide variety of health-care providers locally and in the three target cities. Most of the health-care providers worked with RCT, though some did not cooperate.

Most health-care providers collaborate and work with the schedule developed by RCT in coordination with health-care providers. Making the transportation schedule work well requires constant education due to staff turnover and as new providers serve the community.

Coordination of Services

RCT led the coordination effort. The transit agency already operated Medicaid NEMT, which was taking up considerable capacity for the system. Medicaid NEMT is operated in a fully coordinated manner. The long-distance trips to major medical facilities operate with both general public and Medicaid NEMT passengers at the same time. RCT also coordinates with a local taxi company that handles the after-hours trip needs (on a case-by-case basis).

Those dialysis clinics that collaborate give RCT the required arrival time, treatment time, and return time to ensure that patients have enough time at the clinic.

Funding/Sustainability

Funding for this service comes from FTA Section 5311 rural transit funding (for capital). Medicaid NEMT funds trips, and RCT contracts with local human service programs. The county provides the rest of the local match for the service.

The program sustainability is now in question as the state of North Carolina has decided to use a large Medicaid NEMT broker to manage NEMT across the entire state. RCT is concerned that Medicaid NEMT funds will be diverted to individual drivers at a very low cost with the broker's capitated payment structure. If this is the case, RCT will need to reexamine its service levels.

Performance Measures

RCT's performance measures center on the all-important productivity measure. When the program started, productivity for the out-of-county service was about one passenger trip per vehicle trip. Management reports that ridership on the fixed-schedule service is now about five one-way trips per vehicle trip. Exhibit 6-8 shows RCT's schedule for the out-of-town service.

All out-of-town medical visits should be made between 9:00 am and 12:00 pm.
Transit goes to the cities listed below only on the following days.

Shelby:	•Monday, Tuesday, Wednesday, Thursday
Asheville, Hendersonville, and Columbus:	•Monday and Thursday
Charlotte:	•Tuesday and Wednesday
Gastonia:	•Tuesday and Wednesday
Mooresville:	•Tuesday
Kings Mountain:	•Wednesday
Spartanburg:	•Wednesday
Hickory/Morganton:	•Monday
Winston-Salem:	•Tuesday
Durham/Chapel Hill:	•Thursday

Transit must be informed if an additional passenger is required due to a limited number of seats available. Additional passengers must be approved prior to the trip. Requests for transportation on a non-standard day will be reviewed on a case-by-case basis.

Exhibit 6-8. RCT's out-of-county transportation shuttle schedule. Source: Rutherford County Transit website.

The second performance measure, cost per one-way trip, is directly related to productivity. Taking a service from one to five one-way trips per vehicle hour reduces the cost by a factor of five and frees up service for other needs.

Lessons Learned

RCT stressed the need to:

- Do your homework. RCT was already doing much of this service, so a wealth of data was available to identify the best days to go to each city to meet the transportation needs for health care. Using the data, RCT designed schedules and provided them to health-care providers for comment.
- Educate and communicate. There is a constant need to educate and communicate with support staff, nurses, doctors, and management. RCT stated that turnover among health-care staff and management is often high, requiring education for new staff. RCT stated that it is critical to stay ahead of this and immediately educate new staff.
- Have fall-back taxicabs to help ensure success. The flexibility of taxi service is a valuable asset. The transit agency stated that it is fortunate to have a backup taxi company that meets the agency's requirements for safety and quality.
- Have active dispatch and health provider staff. It often comes down to the ability of the transportation provider and the health-care provider to communicate on a daily basis. For example, sometimes RCT must intervene (with support from the passenger) to reschedule a trip to meet the transit schedule.



The Takeaways

- Present a transportation solution to a transportation problem.
- Make a plan that is simple to implement.
- Remember that higher productivity always yields lower cost per trip.
- Collaborate with health-care providers continually.
- Encourage cooperation between front line staff.
- Offer flexibility for trips that cannot meet the schedule.



Free Van Service Operated by a Hospital in Central Kentucky: Taylor Regional Hospital

Description of Practice

Taylor Regional Hospital in rural Campbellsville, Kentucky, provides a free private van service to residents of Taylor, Green, Marion, and Adair counties (9). The service includes two vans that provide daily transportation services from patients' homes to several different health-care facilities, including clinics that are not owned by the hospital. In addition to providing transportation to the hospital and centers for dialysis, cancer, and drug rehabilitation, the van service also delivers prescriptions (10).

Taylor Regional Hospital did not partner with other transportation providers, because Campbellsville does not have public transportation infrastructure or taxi services. To schedule transportation assistance, patients call the van service to speak to a ride coordinator. The hospital conducted outreach to local health departments, home health agencies, community organizations, and community-based organizations to encourage providers to refer community members to the van service.

Usage of van services has increased steadily since the inception of the program in 2007. From 2007 to 2016, total distance traveled by the van service increased from 18,481 miles to 104,972 miles per year. Over 25,000 people have used the service. Program staff report high patient satisfaction with the service and describe anecdotal evidence of decreased no-shows for medical appointments.

Needs

Taylor Regional Hospital regularly conducts community needs assessments to identify priority issues affecting the health of local residents (11). In 2007, results from the needs assessment indicated that lack of transportation was a major barrier to accessing timely health-care services. Staff from the hospital's cancer center confirmed these findings and reported that cancer patients were missing medical appointments and radiation treatments due to lack of transportation. While Medicaid covered NEMT for enrollees, other community members who were uninsured or covered by Medicare or private insurance had limited transportation options. The van service seeks to fill gaps in existing transportation services; therefore, eligible

patients cannot be enrolled in Medicaid and cannot have access to another means of transportation. Eligible patients must be ambulatory as the vans are not wheelchair accessible.

How Did the Collaboration Start?

Hospital leadership consulted with providers and analyzed data that showed high rates of missed appointments. Leadership acknowledged the importance of transportation in promoting the delivery of high-quality care and approved the initial investment in a van service in 2007. The hospital was unable to leverage existing transportation infrastructure because the closest taxi services and public transportation stops are located an hour away from Campbellsville. Instead, leadership chose to invest in a hospitality van service that would provide sufficient flexibility to meet the needs of patients across the four rural counties served by Taylor Regional Hospital.

Funding/Sustainability

Taylor Regional Hospital budgets for the van service each year, which includes maintenance costs and funding for drivers. Gas costs for the program are funded through monthly private donations of \$80 from sponsoring organizations. Sponsors include Community Trust Bank, Citizens Bank & Trust, Taylor County Bank, TRH Auxiliary Volunteers, Don Franklin Campbellsville, HealthSouth Rehabilitation Hospital, James Medical Services, Columbia Medical Services, Wehr Constructors, Anthem, and Fort Knox Federal Credit Union. The hospital also holds annual fundraisers to cover the cost of purchasing new vans.

Lessons Learned

Taylor Regional Hospital staff have emphasized the importance of seeking buy-in from diverse stakeholders, including hospital leadership and city and county government officials. Collaborations with local community-based organizations have been critical to successfully securing resources for the program. Similar programs should consider building in maintenance costs to yearly budgets to fund potential repairs to vehicles.

Resources

- The Taylor Regional Hospital website provides additional information about the hospitality van service: <http://www.trhosp.org/getpage.php?name=hospvan&sub=Patient%20Resources>
- The American Hospital Association prepared a case study of Taylor Regional Hospital van service, *Case Study: Taylor Regional Hospital's Van Program Increases Access to Care for Patients*: <https://www.aha.org/news/insights-and-analysis/2018-01-18-case-study-taylor-regional-hospitals-van-program-increases>



The Takeaways

- Taylor Regional Hospital provides a van service that offers NEMT to patients, including those receiving care for end-stage renal disease, cancer, and substance use disorder.
- Program leaders budget not only for gas and mileage, but also for regular maintenance and repairs. Large capital investments are necessary to purchase new vans periodically.
- Multiple community partners provide small amounts of funds to the program on a monthly basis that help support day-to-day operations.



UBER Health

Health Care Transportation and Ride Hailing: Uber Health

Description of Practice

In March 2018, ride-hailing company Uber launched Uber Health, a dashboard that allows health-care providers to schedule rides for patients, and an Uber Health Application Programming Interface (API), a tool that enables integration of Uber into existing health-care products and information technology systems.

A key feature of Uber Health is flexible ride scheduling that allows coordinators to use a single platform to arrange rides for multiple patients. Coordinators can order rides for immediate pick up or schedule transportation up to 30 days in advance.

Needs

Uber Health acknowledges that transportation barriers are greatest for vulnerable populations, such as those with complex chronic conditions. The company has created partnerships to improve the ability of health-care providers to arrange transportation for people with special considerations.

How Did the Collaboration Start?

Uber Health identified substantial unmet needs related to NEMT, including millions of missed appointments and high no-show rates across the country. The company created the Uber Health platform to ensure that third parties would be able to easily schedule rides for patients, taking advantage of Uber drivers.

Coordination

To increase the population served by Uber Health, the platform partners with other transportation companies. Through a partnership with MV Transportation, a national transportation provider, Uber Health can offer access to wheelchair-accessible vehicles.

Another Uber partner, Ambulnz, provides on-demand ambulance services. Health-care providers who are already using these transportation companies can use Uber Health's API to integrate Uber Health as an additional option. For example, UCHHealth, a non-profit health-care system in Colorado, streamlined transportation services by integrating Uber Health into their Ambulnz platform. Case managers can assess their patient's need and select a car or an ambulance accordingly.

Funding/Sustainability

Uber Health bills health-care organizations on a monthly basis. Costs are based on standard Uber rates when rides are booked. Clients do not pay fees to use the Uber Health platform. Uber Health reports that most of their clients pay for rides from their own budgets after calculating upstream returns on investment. Uber rides are typically less costly than other private transportation options such as metered taxis.

Uber has reported it has about 1,000 partnerships across the health-care landscape, including hospitals like BayCare Health System, Boston Medical Center, MedStar Health, and the Cleveland Clinic (12).

Lessons Learned

Uber Health service is best suited for ambulatory patients who can complete curb-to-curb trips without additional assistance. Uber Health is also more effective for on-demand trips when patients are ready for their trips.



The Takeaways

- Ride-hailing companies have expanded their business lines with an increasing presence in the health-care transportation space.
- Ride-hailing trips tend to be more effective for ambulatory patients. Wheelchair-accessible service is limited.



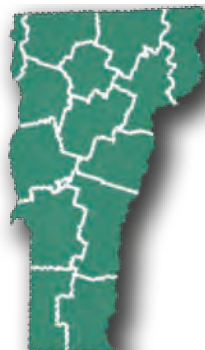
Brokering Medicaid NEMT: Vermont Public Transportation Association

Description of Practice

The 10 transit agencies in Vermont had for many years been operating the Medicaid NEMT program in Vermont through the Department of Vermont Health Access (DVHA). These transit agencies managed the entire program: they accepted trip requests, approved trips and passenger eligibility, and provided trips, typically using an array of providers. Volunteer drivers were often used to provide the Medicaid trips, and transit agencies and other providers were also used.

DVHA decided to change its model to a capitated brokerage. This new model required a broker to do all of the intake and eligibility functions that the transit agencies were already doing. Based on experiences in neighboring states, the transit agencies felt that the capitated model was not conducive to the use of public transit. Moreover, without Medicaid NEMT, the transit agencies would lose critical funding that would impact all of their services, much of which was access to health care.

The transit agencies through the Vermont Public Transportation Association (VPTA) formed a consortium to submit a proposal to manage and operate the Medicaid NEMT brokerage.



The VPTA brokerage is a unique and innovative approach to providing safe and quality Medicaid transportation at a low cost, in part by avoiding use of a middleman broker in a small state. This “Vermont Approach” is innovative in how it utilizes the best of all NEMT models, minimizing overhead and at the same time adhering to many tried and true transit solutions that are proven to keep costs reasonable (13).

Needs

For decades, the public transit agencies in Vermont integrated Medicaid NEMT into their overall operations. Meeting transportation needs for accessing health care has always been an important service of the agencies, particularly in the more rural parts of the state.

How Did the Collaboration Start?

Vermont's transit operators had been operating coordinated service for decades, mixing general public transit, senior transportation programs, Medicaid NEMT, and other specialized transportation programs. When the state decided to change its approach to Medicaid transportation and go out to bid for a private broker, the transit agencies banded together to develop and submit a proposal to function as the broker. Their proposal was successful.

The Current System Works

- Trips must use the most suitable and cost-effective mode, which may be via a public transportation bus route, volunteer driver, or cab.
- Transit providers combine riders from Medicaid along with other health-care transportation programs, such as the Elderly and Disabled, and the general public, to maximize coordination of trips paid for by various funding programs to be more efficient and lower costs for each program.
- State law supports this coordinated delivery system (see 24 VSA § 5090).

Dismantling Will Lead to Degradation of Service and Financial Risk

- Contracting with an out-of-state for-profit broker will result in a separation of Medicaid from the Elderly and Disabled and the general public that could lead to a shifting of costs and degradation of service to Vermonters.
- Financial impact on the overall system will be affected; riders and transit providers may take a couple of years to develop, but they will develop.
- Other states' experiences bear this out. Maine and Rhode Island are two recent examples.

Coordination of Services

Vermont's transit agencies coordinated transportation for many years. The state's approach to moving toward a capitated broker threatened to destroy the coordinated model. Research showed that states that introduced capitated brokers typically did not involve public transit (14).

Funding/Sustainability

The Vermont transit agencies had long before integrated transit with Medicaid NEMT and built a sustainable model that supported all Vermonters.

Lessons Learned

The service has been in operation for 3 years. Operators want to continue.



The Takeaways

- Two separate systems—public transit and Medicaid NEMT—are coordinated. Coordinated transportation is essential to the economic and health-care vitality of the state.
- This ensures long-term sustainability.

Types of Practice

Tables 6-1 through 6-9 group health-care and transportation collaborative practices according to the following nine types:

- Communication and Education
- Coordination of Service
- Innovative Funding, Payment, and Reimbursement
- Health-Care Organization as Operator
- Mobility Management
- Service Design and Productivity
- Brokerage Technology
- NEMT—Broker or Provider
- Collaborations Initiated Through Public Transit, TNCs, and Taxis



The icons displayed in Exhibit 6-9 denote the service area for each provider in the tables.

Service Area			
			
Metropolitan and large urbanized area (over 200,000 population)	Small urbanized area (50,000 to 200,000 population)	Rural with small city/town (5,000 to 50,000 population)	Rural, isolated with city/town (under 5,000 population)

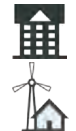
Exhibit 6-9. Icons used to denote populations served in Tables 6-1 through 6-9.

Table 6-1. Communication and Education.

#	Description	Transportation Organization(s)	Health-Care Organization(s)	City/ Counties	State	Service Area(s)	Remarks
1	Southeast Vermont Transit (SEVT) is a small transit system in rural Vermont. Representative of many of the systems in Vermont, the agency works closely with local community health teams to assess a need then tries to support it with transit.	"The Current" bus service, SEVT, Inc.	Adult day health activities centers, health-care providers, VA, Area Agencies on Aging	Windham and Southern Windsor County	Vermont		
2	rabbittransit has built collaborative partnerships with health-care providers. Staff spent time getting to know the challenges within the health-care arena, educating health-care providers of the challenges experienced within the transportation industry, working collaboratively to identify barriers for the clients and then to brainstorm resources and solutions, and working systematically to make positive changes for both the transportation and health-care sectors.	Central Pennsylvania Transportation Authority	Local health-care providers	10 counties in South Central Pennsylvania	Pennsylvania		
3	West Texas Opportunities operates a transit system with a service area that stretches 300 miles, regular communication with dialysis clinics and other health-care facilities is critical. Great distances magnify mistakes and no-shows. WTO also coordinates service with an NEMT contract.	WTO	Dialysis clinics, NEMT	22 counties from the Midland area to the Mexican Border	Texas		Very rural and isolated; Fifty-mile trips for routine needs are common. Coordination with NEMT enhances service for all needs.
4	In order to stay on time and for the convenience of nursing home patients, Jasper County Community Services calls the nursing home shortly before the vehicle arrives to give staff time to get the patient ready for the trip. Previously, the vehicle often had to wait for the patient to get ready.	Jasper County Community Services, Inc.	Community health centers, local hospital, individual doctors' offices, nursing homes	Jasper County	Indiana		A simple but effective approach to improving productivity and lowering costs.

5	Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA) attends monthly Access to Care meetings with health-care providers, county staff, and emergency responders to discuss challenges with accessing health-care facilities. Challenges include transportation, financial, and informational barriers.	NAIPTA	Behavioral health clinic, local hospital, regional hospital, human service agencies, Indian health services facility	Flagstaff	Arizona		
6	Washington County Transit (WCT) staff has developed an effective and cooperative relationship with two of the dialysis centers it serves. The largest dialysis center has a staff person assigned to coordinate transportation, and WCT staff works directly with this person to ensure patients reliant on public transportation get to their treatment.	WCT	Dialysis clinics	Washington County	Maryland		Dialysis center is providing staff support.
7	Transport Central uses personal contacts, brochures, and meetings to ensure that ever-changing health-care staff understand how this volunteer organization works and its capabilities.	Transport Central	All local health-care providers	Plymouth and 18 surrounding towns, Grafton	New Hampshire		Transport Central is a non-profit, established to develop and deliver transportation services for residents of the region of Central New Hampshire.
8	Lake Community Transit, a coordinated public transit operator, works closely with its transportation advisory committee, medical facilities, pharmacies, and senior living facilities to encourage referrals for those facing independence issues due to lack of personal transportation.	Lake County Council on Aging	Rehabilitation facilities, health-care, pharmacies	Lake County as far as Missoula and Kalispell	Montana		Very mountainous and difficult to serve. The human service agency coordinates a variety of services.

Table 6-2. Coordination of service.

#	Description	Transportation Organization(s)	Health-Care Organization(s)	City/ Counties	State	Service Area(s)	Remarks
1	Denver Health Medical Center in Denver, Colorado, helps patients with transportation (e.g., free bus passes, taxi vouchers). The hospital has added Lyft to its transportation services, with hospital staff booking rides on Lyft for patients needing transportation. Lyft trips are for patients being discharged from the hospital or needing access to and from outpatient clinical appointments. Funding for the trips comes from the Denver Health Foundation.	Denver Health	Denver Health	Denver metropolitan area	Colorado		A variety of options are brokered by hospital staff.
2	Delaware Transit partners with Easterseals and other non-profits in a program where agency clients are transitioned from ADA paratransit to agency-provided transportation. This reduces the need for ADA service and improves customer service to the client. The clients have shorter rides and are with friends and agency drivers with whom they are familiar.	Delaware Transit Corporation	Easterseals and adult day health activities	All three Delaware counties	Delaware		This is an innovation that can benefit all. Can be combined with vehicle donation program.
3	West Texas Opportunities (WTO) coordinates service with NEMT to build a stronger network of services for all. By taking on NEMT as a provider, the agency can reach the most isolated areas of the region.	WTO	Dialysis clinics, NEMT	22 counties from the Midland area to the Mexican Border	Texas		Very rural and isolated. Fifty-mile trips for routine needs are common. Coordination with NEMT enhances service for all needs.

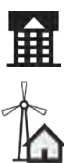
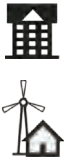
4	Community Action Program (CAP) of Belknap - Merrimack Counties operates a wide variety of senior programs including rural and urban transit for seniors, ADA service, and general public transit.	CAP of Belknap-Merrimack Counties	Rural transit system, other (volunteer driver program)	Belknap-Merrimack Counties	New Hampshire		CAP provides an array of senior services, child development, health/nutrition programs, and other programs. Multiple transit programs are operated as well.
5	CHEER coordinates with a co-located rural non-profit health-care provider in some of CHEER's senior activity centers. CHEER operates a fleet of accessible vehicles and volunteers for one-on-one needs.	CHEER, Inc.	Non-profit health-care provider	Sussex County	Delaware		CHEER is a non-profit senior organization that is both a health-care provider and transportation program.
6	The non-profit Disability in Action (DIA) has a partnership with a local health-care agency that provides health care to those who do not qualify for Medicaid. DIA accessible bus is provided to this medical non-profit through a cost-sharing arrangement between the health-care agency, DIA, and the rider.	DIA	Local health-care non-profit	Six counties including and surrounding Abilene	Texas		Open to all based on income, 4 days per week.

Table 6-3. Innovative funding, payment, and reimbursement.

#	Description	Transportation Organization(s)	Health-Care Organization(s)	City/ Counties	State	Service Area(s)	Remarks
1	The rural transit system TRAX and the Texarkana Urban Transit District, both operated through the council of governments, have partnered with the hospitals in both Paris, Texas, and Texarkana, Texas. This has involved financial support as sponsors dedicated to public transportation to meet the medical needs of the residents. Additionally, the agencies have created partnerships that involve the use of vacant medical offices for an intermodal transit center in Paris, Texas.	TRAX and Texarkana Urban Transit District	Wide variety of health-care providers	Cities of Paris and Texarkana	Texas		This is a sponsorship program.
2	The local hospital pays a monthly stipend to Fulton County Transit for providing transportation to any of their facilities for medical appointments not covered by Medicaid.	Fulton County Transportation	Local hospital	Fulton County	Indiana		
3	Northern Transit Interlocal has a number of health-care providers that are financial supporters of the system.	Northern Transit Interlocal	Local health-care providers	Communities surrounding Glacier National Park	Montana		In addition, staff have regular meetings to keep providers informed of the services provided and changes before they occur.
4	The Central Texas Office of Mobility Management has been working to coordinate medical providers and transit service to medical facilities. Efforts include providing discounted and free bus passes to human service agencies for clients; partnering with human service agencies to provide demonstration grants and pilot projects for access to health care; assisting with some medical transportation; and securing funding for the Georgetown fixed-route service for Georgetown Health (\$600,000 over 3 years), and Capital Metro.	Office of Mobility Management — Capital Metro and Children and Adults Rural Transportation Service (CARTS)	Wide variety of health-care providers	10 counties surrounding Austin	Texas		Office of Mobility Management is a collaborative effort of the urban and rural transit systems in the 10-county region.

5	CountyRide's public-private partnership program began many years ago out of necessity. A number of hospitals and medical facilities in both Baltimore City and County stepped up to help support CountyRide, recognizing that the door-to-door service was critical for many of their patients to access appointments at their facilities. While there are no formal arrangements and the funds may vary year to year, the partnerships with the medical facilities continue to provide important funding to help support CountyRide.	Baltimore County - CountyRide	Hospitals and medical facilities in Baltimore City and Baltimore County	Baltimore County	Maryland		Transit agencies can approach medical facilities that they serve through their day-to-day operation and seek funding support.
6	SCM Elderbus partnered with local health-care providers to offer transit services to area health-care facilities for those without readily-available transportation.	SCM Elderbus, Inc.	Wide variety of health-care providers	21 communities located in central Massachusetts	Massachusetts		The service area includes suburban areas.
7	Lee County Transit establishes a contract rate and official contract for transportation services with a variety of providers of health care and NEMT.	County of Lee Transit System	Local hospital, dialysis clinic, and other providers	Lee County	North Carolina		Lee Transit System establishes contracts with health-care providers and provides NEMT in the county (no broker).
8	HealthTran members such as private providers, health-care centers, and hospitals support transportation service through membership fees of \$5,000 or more depending upon the needs of their community.	Missouri Rural Health Association	Local health-care providers	10 counties of South Central Missouri	Missouri		This is a Rides to Wellness project. HealthTran has demonstrated that the membership fee more than pays for itself in Medicare reimbursements.

Table 6-4. Health-care organization as operator.

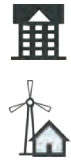
#	Description	Transportation Organization(s)	Health-Care Organization(s)	City/COUNTIES	State	Service Area(s)	Remarks
1	The Spartanburg Regional Healthcare System (SRHS) is the public transit provider for rural Spartanburg County, South Carolina. The only public hospital in the nation to be an FTA grantee, SRHS provides coordinated transportation to rural and urban areas with demand response service. SRHS provides access to a variety of health-care services. Clients using Medicaid NEMT schedule their appointment through LogistiCare.	SRHS	SRHS	Spartanburg, Cherokee, and Union counties in South Carolina, and Polk and Rutherford counties in North Carolina	South Carolina		Spartanburg Transit received the Administrator's Award for Outstanding Public Transportation Service in Rural Public Transportation during the biannual National Conference on Rural and Intercity Bus Transportation in Breckenridge, Colorado
2	Aaron E. Henry Community Health Services Center (AEH) is a major operator of rural public transportation in the Mississippi Delta servicing multiple counties. AEH has held strategy planning sessions with local hospitals and other health-care providers, patients, transit riders, public transit partners, and others to design strategies to provide transportation to access health care.	Aaron E. Henry Community Health Services Center	Local health-care providers	Coahoma, Tate, Tallahatchie, Tunica, DeSoto, Quitman, and Panola Counties	Mississippi		Health-care provider providing RPT

Table 6-5. Mobility management.

#	Description	Transportation Organization(s)	Health-Care Organization(s)	City/ Counties	State	Service Area(s)	Remarks
1	The Central Texas Office of Mobility Management has been working to coordinate medical providers and transit service to medical facilities. Efforts include working with the Aging Services Council to combine ride guides, developing the Trip Planning Specialist position to coordinate medical trips for transit customers as well as providing information on how to locate a health-care facility accessible by transit.	Office of Mobility Management (OMM)—Capital Metro and CARTS	Wide variety of health-care providers	10 counties surrounding Austin	Texas	 	Most of these discussions and activities started through the federally required coordinated planning process.
2	The Foothills Area Mobility System (FAMS) started in 2016 as a Rides to Wellness pilot program to understand and address transportation challenges to health care. FAMS has been working with three free clinics, in Culpeper, Fauquier, and Rappahannock counties, to provide mobility management services to their clients. Assistance is provided for accessing transportation through information, referral, help with scheduling, travel training, and taxi vouchers or gas cards as a last resort.	FAMS	Three free clinics	Culpeper, Orange, Fauquier, Madison, and Rappahannock Counties	Virginia		Rides to Wellness grant
3	“Move Together” is a regional transportation initiative focused on improving regional transportation across jurisdictions, with an emphasis on rural areas to improve health and employment outcomes. The initiative promotes collaboration and innovation, with partners in 14 counties that include a range of stakeholder groups.	Cornell Cooperative Extension of Tompkins County	Social service agencies, economic development, county planning, chambers of commerce, non-profit organizations supporting people with disabilities, and rural health organizations	13 counties in central New York	New York		Move Together New York’s primary goal is to improve transportation access to health care and employment, particularly in rural areas where cross-county travel is required.

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Table 6.5. (Continued.) Mobility management.

#	Description	Transportation Organization(s)	Health-Care Organization(s)	City/ Counties	State	Service Area(s)	Remarks
4	Rural Economic Assistance League, Inc. (REAL) has developed a working model called the Transportation for Rural Integrated Health Partnership (TRIP) for Salud and Vida. It is a multi-year, research-based program, funded by Methodist Health-Care Ministries. The model was developed to evaluate if transportation and self-empowerment improve integrated behavioral health outcomes and no-show rates to primary and behavioral health appointments.	REAL public transit	Adult day health activities centers, behavioral health clinic, community health centers, dialysis clinics, human service agencies	Brooks, Duval, Jim Wells, Kleberg, Kenedy Counties	Texas		
5	Flint MTA has created a mobility management and NEMT program called YourRide Plus. The transit system has used its mobility management function to help individuals find appropriate transportation options from among the array of transportation resources in the community. It can be a valuable tool for a transit agency, whether the option is accessible fixed route, ADA paratransit, or some other specialized transportation service. The transit system works closely with dialysis center social workers to improve MTA's service for the centers' dialysis patients.	Flint MTA	Local health-care facilities	Flint, Genesee County	Michigan		The Rides to Wellness grant allows the MTA to enhance its services supporting dialysis riders as well as others with NEMT needs.
6	Ride Connection has a network of agencies and providers who serve a wide variety of people in need as well as general public services. Services include: (1) information and referrals for transportation options (Travel Options Counselor), (2) public transit travel training: RideWise, (3) door-to-door rides for any purpose, (4) community connector deviated route service (free service open to public), (5) medical shuttle pilot program partnered with Providence Health, and (6) pilot called Dahlia: Dialysis transportation. Ride Connection uses volunteer and paid drivers to provide frequent rides for dialysis treatments in addition to educating the community and health-care providers about dialysis transportation.	Ride Connection	Various health-care organizations including Providence Health and dialysis centers.	Clackamas, Multnomah, and Washington Counties	Oregon		As a non-profit agency without an ADA paratransit obligation, Ride Connection is able to provide transportation more specialized than what a transit agency can provide with ADA paratransit. Several of the tested strategies might be considered by a public transit agency while keeping within ADA requirements.

7	HealthTran is led by the Missouri Rural Health Association (MRHA). HeathTran has been described as “a cross between a medical care coordinator and transportation mobility manager.” HealthTran Coordinators match eligible patients referred by health-care providers to appropriate public and private transportation options. Eligibility is limited to patients without supplementary transportation funding from Medicaid or veterans’ services. Partnerships with local health-care and community organizations help fund the program through memberships.	Missouri Rural Health Association	Local health-care providers	10 counties of South Central Missouri	Missouri		Rides to Wellness grant
8	The Rural Medical Transportation Network (RMTN) in southern Illinois has created a transportation resource guide and provides transportation education to health-care providers and emergency medical technicians in order to build awareness of transit opportunities. The RMTN is led by the Illinois DOT and Southern Illinois University Center for Rural Health and Social Service Development. It is designed to improve access to mental health services in rural areas, by funding a one-call/one-click center.	Rural Medical Transportation Network	EMS, local, and regional hospitals	More than 50 counties in the state	Illinois		As a Rides to Wellness project, it collaborates with a wide variety of hospitals and health-care services.
9	Focused on low-income, high-risk pregnant women, Go Buffalo Mom provides personalized trip planning and education on access to transit services, ride-sourcing, and taxi services. Go Buffalo Mom trains transportation navigators and stations them in waiting rooms at obstetrics clinics to meet with pregnant women and assess their transportation needs. The navigator develops an individualized plan for each client. Go Buffalo Mom also developed the Ride and Save program. Each active participant receives a free bus pass.	United Way of Buffalo and the Greater Buffalo Niagara Regional Transportation Council	Obstetrics clinics	Buffalo	New York		

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Table 6.5. (Continued.) Mobility management.

#	Description	Transportation Organization(s)	Health-Care Organization(s)	City/ Counties	State	Service Area(s)	Remarks
10	OmniTrans' Travel Training program provides one-on-one or group assistance to seniors (age 62+) and individuals with disabilities. The objective is to place as many people on fixed route as possible.	OmniTrans	All health-care providers in the service area	San Bernardino Valley: 15 cities and portions of the unincorporated areas of San Bernardino County	California		The transit system also provides a new RIDE Taxi & Lyft Program for seniors (age 62+) and individuals with disabilities and a volunteer driver program.
11	Rock Region Metro offers Metro Transit 101—free transit training open to all, to teach riders everything they need to know to have worry-free rides on the Metro system. The training class helps attendees learn to read system maps and schedules, as well as use the transit system's new digital tools.	Rock Region Metro	Local health-care providers	Little Rock	Arkansas		A strong transit system is an essential element of health-care transportation.
12	COAST has a history of providing retired vehicles to non-profit agencies for a variety of needs. The agency also provides maintenance support and insurance as needed for the donated vehicles. At the present time, most of the transportation provided by the agency is for human service agencies, including health-care trips.	COAST Public Transportation	Area Agencies on Aging, dialysis clinics, local hospital, regional hospital, human service agencies, individual doctors' offices, medical group clinic, pharmacy, rural health clinics, VA clinics, VA hospital	Four counties in Northern Idaho and four in Washington State	Idaho, Washington		COAST has been very innovative over the past 20 years.

Table 6-6. Service design and productivity.

#	Description	Transportation Organization(s)	Health-Care Organization(s)	City/ Counties	State	Service Area(s)	Remarks
1	SEVT (Southeast Vermont Transit) provides low-cost volunteer transportation to agencies that pay for the service, such as the VA. SEVT also has available a pool of volunteer drivers that can be accessed by health-care organizations.	The Current bus service, SEVT, Inc.	Adult day health activities centers, health-care providers, VA, Area Agencies on Aging	Windham and Southern Windsor County	Vermont		Loaning out volunteers to health-care entities is innovative.
2	Rutherford County Transit has developed a service design to improve productivity and reduce costs. While the transit system provides demand response service to health-care providers, it also operates fixed-schedule service with a set out-of-town schedule each week to access specialists in the metro areas of Charlotte, Asheville, and Spartanburg, North Carolina.	Rutherford County Transit	Out-of-county health-care specialists	Rutherford County	North Carolina		Maximize productivity with fixed-schedule service.
3	Manchester Transit Authority developed a free downtown circulator that was aimed at easing parking congestion downtown. This was coordinated with the Manchester Community Health Center to provide direct access to the health-care facility as it treats many low-income and refugee members of the community. The circulator is free, and it has become one of the anchor locations on the whole route with strong ridership.	Manchester Transit Authority	Community health centers, dialysis clinics, local hospital, human services agencies	Cities of Manchester, Goffstown, Bedford, Hooksett, Concord, Nashua, Londonderry	New Hampshire		
4	Big Dry Transit (BDT) provides the local health-care providers with a monthly calendar of its out-of-town trips to Miles City and Billings. If a patient needs to go on days not scheduled, BDT advertises the trip to the community so others who may need a trip can also be served.	BDT	Local health-care providers	Garfield County	Montana		Flexible and innovative.
5	Whidbey Island Veterans Resource Center provides scheduled service to the mainland. The agency works closely with clients and providers to schedule appointments on Tuesdays when the van goes to the mainland. There is flexibility to go other days as the need may arise.	Whidbey Veterans Resource Center	VA and local medical facilities	Island, Skagit, Snohomish, and King Counties	Washington		Non-profit operating service directly.

Table 6-7. Brokerage technology.

#	Description	Transportation Organization(s)	Health-Care Organization(s)	City/ Counties	State	Service Area(s)	Remarks
1	This project was funded by a grant from the National Center for Mobility Management. Led by the Worcester Regional Transit Authority and the Central Massachusetts Regional Planning Committee, the “Smart Transit for Healthcare” project is developing scheduling software to streamline the scheduling of patient appointments and to coordinate with transportation services. The objective is to have the health-care provider book the most appropriate transportation for the individual patient; the medical appointment is made using new software designed for mobility management. Another objective is to reduce the patient no-show rate.	Jacksonville Transportation Authority	Local health-care providers	City of Jacksonville	Florida		National Center for Mobility Management Grant
2	Pinellas Suncoast Transit Authority (PSTA) has partnered with a local hospital to provide paratransit service to a variety of locations in Tarpon Springs. The hospital pays for its trips, and PSTA uses software to determine the most appropriate provider.	PSTA	Local hospital and other health-care providers	Tarpon Springs	Florida		This technology can access a variety of modes and companies to ensure the best ride for the need. Service area includes suburban areas.

Table 6-8. NEMT—Broker or provider.

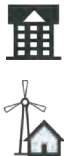
#	Description	Transportation Organization(s)	Health-Care Organization(s)	City/Countries	State	Service Area(s)	Remarks
1	Two coordinated rural public transit systems in Arkansas are NEMT brokers and providers of service. Most of the service is provided by the transit systems who also screen trips, determine eligibility, and authorize service. The state transit association has provided support.	Central Arkansas Development Council	Wide variety of health-care providers	Two rural regions of Arkansas	Arkansas		Arkansas allows broker-providers in their regions. The rural transit system acts as the broker.
2	Lane Transit connects directly with hospital social workers and has a direct connection to the local CCO to provide NEMT services as their transportation broker.	Lane Transit District	Wide variety of health-care providers	City of Eugene, Springfield and Lane Counties	Oregon		This small urban system acts as the NEMT broker for two counties.
3	Michigan Connect is an NEMT broker that was formed by the Michigan Public Transit Association. The objective was to coordinate and broker NEMT services to transit wherever possible.	Michigan Connect	Dialysis clinics, local hospital, regional hospital, other (DHHS)	Four counties and Regions 5 and 6	Michigan		
4	The Vermont Public Transit Association (VPTA) serves as the statewide broker of NEMT services. VPTA has contracted with public transit systems across the state and provides free, fixed-route public transportation, volunteer driver trips (may be shared rides), taxi trips (may be shared rides), and demand response service (may be shared rides). "Personal Choice Driver" is an option only upon prior approval from the Department of Vermont Health Access. Eligible individuals who live within three-quarters of a mile of a bus route are required to utilize that mode of transportation and must schedule their medical appointments to coincide with bus schedules.	VPTA	Wide variety of health-care providers	Statewide	Vermont		NEMT extensive use of fixed route.
5	SEN-HAN Transit is a regional, coordinated and consolidated transportation system designed to offer specialized transportation services to elderly and disabled passengers. SEN-HAN provides NEMT (door-to-door rides) to doctors' offices, hospitals, and other medical facilities.	Senior Citizens United Community Services	Wide variety of health-care providers	Camden and Burlington Counties	New Jersey		The only non-profit agency operating the Casino Revenue program combining with NEMT. Service area includes suburban areas.

Table 6-9. Collaborations initiated through public transit, TNCs, and taxis.

#	Description	Transportation Organization(s)	Health-Care Organization(s)	City/ Counties	State	Service Area(s)	Remarks
1	In Toledo, Ohio, a taxi company has contracts with Mercy Health, a statewide, privately-owned hospital chain, as well as Primedica, a managed care organization that manages health maintenance organizations (HMO) Medicaid patients in Ohio. Both contracts are unique because there is neither direct government involvement nor brokers. One provider serves all of a hospital's needs.	Taxi company	Local hospital and managed care organization	Toledo	Ohio		
2	Pinellas Suncoast Transit Authority (PSTA) has partnered with a local hospital to provide paratransit service to a variety of locations in Tarpon Springs. The hospital provides funding for the program. A wide variety of transportation providers can be accessed, such as TNCs, traditional taxis, and ADA paratransit.	PSTA	Local hospital and other health-care providers	Tarpon Springs	Florida		PSTA has applied microtransit service to a number of suburban markets catering to persons with disabilities and seniors.
3	St. Vincent Charity Medical Center offers free Uber or Lyft transportation for addiction patients participating in Rosary Hall's Intensive Outpatient Program (IOP) (treatment for addiction, including opioid and alcohol). This program removes the major transportation obstacle that causes patients to drop out of recovery programs. In 2018, attendance rates for IOP sessions for clients utilizing the transportation program was nearly 90%.	Uber and Lyft	St. Vincent Charity Medical Center	Cleveland	Ohio		First hospital in nation to use technology for addiction program— partnership with Circulation (digital transportation platform that integrates health systems with Uber or Lyft's driver network for non-emergency transportation)
4	A collaboration between MedStar and Uber, the MedStarHealth.org website prominently displays a "Ride with Uber" button. MedStar patients can find out the wait time and approximate cost of a ride and then request one. They can also set a ride reminder to automatically notify them an hour before their appointment and keep them on schedule.	Uber	MedStar, a non-profit health-care system with 10 hospitals, hundreds of outpatient locations and urgent cares	Washington D.C., Baltimore, all cities and counties in Southern Maryland, Northern Virginia	Maryland, Washington D.C., Virginia		

5	Rio Grande Valley Health Alliance (RGVHA) partners with TNCs for patient transportation that has many benefits, including the ability to schedule rides on demand and on short notice. Depending on the patient's needs, the case coordinator can offer a TNC or tickets for fixed-route public transit service. RGVHA can offer transportation assistance to any member, but care coordinators focus on high-need dialysis patients. RGVHA funds transportation to and from hospitals, clinics, dialysis centers, and other health centers.	Ride-sourcing companies; TNCs Lyft and Uber	RGVHA, an ACO	McAllen, Hidalgo County	Texas	
6	Circulation is an on-demand health-care transportation application that integrates diverse forms of transportation into one platform. Circulation partners with Uber, Lyft, ambulance services, wheelchair-accessible vehicle fleets, and other transportation providers to ensure that clients have multiple options that address the needs of their patient population. Circulation reports that many providers use the platform to arrange transportation for populations who are at particularly high risk for complications resulting from missed appointments, including patients with end-stage renal disease who need to take frequent trips to dialysis clinics, people with substance use disorders who need reliable rides to and from treatment facilities, and cancer patients who need to attend chemotherapy sessions.	Various transportation providers: Uber, Lyft, ambulance services, wheelchair-accessible vehicle fleets, and non-emergency ambulance	Various health-care organizations—Boston Children's Hospital, Massachusetts; Mercy Health System's acute care hospitals; Programs of All-Inclusive Care for the Elderly (PACE) in Pennsylvania; and Nemours Children's Health System in Delaware	48 states in the United States		  

Chapter Notes

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APPENDIX

Research Plan

Introduction

TCRP Research Report 223, Guidebook and Research Plan to Help Communities Improve Transportation to Health-Care Services has two objectives. The first is to develop a guidebook to help communities improve transportation access to health care. The second objective of the project—the research plan—is to develop a plan that outlines future research needs and priorities.

Future research is needed to further the understanding of the transportation and health-care relationship and to identify actions and strategies to strengthen and develop that relationship. Building on the research project's Request for Proposal, this plan was developed based on the project team's task work over the project period—both through the early literature review and on the research on existing collaborative arrangements between health-care and transportation providers that were identified.

Research Plan

The research plan is presented below in four components.

1. Vision

The overarching vision of the research plan is to provide a blueprint for pursuing and funding additional research that quantifies and better qualifies the benefits of improving transportation access to health care and how best to accomplish that vision.

2. Rationale

Research conducted to develop the guidebook found that access to health care is impacted by various factors. Lack of adequate transportation is one barrier among others.

Financial issues are another barrier and critical—specifically, a lack of health insurance prevents some from seeking health care. Lack of motivation can also be a barrier, particularly for those with chronic diseases and ongoing needs to access health care.

Given sponsorship of the project by TRB, this research plan focuses on transportation and the extent to which it poses a barrier as compared to other barriers. There is agreement that access improvements to health care are needed, but questions remain. What are the most effective strategies for pursuing improved access? How do the strategies vary by type of community

(urban, suburban, and rural) and type of health-care issue (e.g., chronic diseases versus one-time medical appointments)? How can technology improve access? How can communities access and coordinate the different funding streams—those targeted to transportation and those dedicated to health care—to improve transportation access to health care?

3. Research Goals

The goals of the research plan include:

- To outline research topics for possible funding through TRB and potentially TRB in cooperation with its sister division within the National Academies—the Health and Medicine Division.
- To outline research topics that might be pursued through other organizations with funding for research, specifically public and philanthropic funders of health research. A small sample of these organizations includes:
 - Howard Hughes Medical Institute
 - Bill & Melinda Gates Foundation
 - Rockefeller Foundation
 - AARP
 - Universities with public health graduate departments
- To stimulate research to better understand the role of transportation in health-care access, distinguished from other access issues and from other social determinants of health.
- To document the importance of quantifying the contribution of adequate transportation access to improving health-care outcomes.
- To encourage peer-reviewed research that estimates the savings in national health-care costs with improved transportation access to health-care services.

4. Research Framework Priorities

The need for further research on transportation access to health care was clear from the work performed for the guidebook. More significantly, the need for improved access to health care has become startlingly clear with the health-care disparities shown in the country with the coronavirus pandemic in 2020. People living in communities with poor air quality and those in minority population groups seem to be more at risk for the disease caused by the virus—COVID-19. Is access to health care a factor contributing to the disparities? Does transportation access contribute to those disparities?

The identified research needs are listed below (not necessarily in order of importance):

- Develop a better understanding of the specific aspects of transportation that render it a potential barrier or success to health-care access and how those aspects play out in different types of communities. A better understanding will allow more focused attention on the key factors. What is the relative role of the following?
 - Cost of transportation
 - Distance to health-care facilities
 - Effective service designs—examining the types of transportation services available (fixed route, flexible route, curb to curb, door to door, etc.) and how those services are currently used
 - How to maximize the use of fixed-route services in rural and small urban areas
 - Geographic boundaries/service area constraints of available transportation services
 - Service span of available transportation resources

- Accessibility of transportation (e.g., vehicles)
- Transportation's role in the health disparities revealed by the pandemic in 2020 caused by the coronavirus
- Identify the specific population groups with the greatest need for improved access to health care and determine, by population group, why the needs exist. Are the needs related to the following?
 - Language barriers
 - Cultural aspects (e.g., suspicions of Western medicine)
 - Cost
 - Availability of appropriate transportation
 - Other reasons
- Develop an estimate of the medical and ancillary appointments missed due specifically to a lack of transportation.
 - Missed and delayed medical and related appointments stem from various reasons. To evaluate the benefit of improved transportation access, it is important to understand the degree to which missed and delayed appointments result specifically from transportation access issues.
 - Define an effective and measurable metric to measure the specific role of transportation access in evaluating the causes of missed appointments.
- Estimate the direct costs of the missed medical and ancillary appointments to the health-care industry.
 - Cost of health-care providers' time and cost of lost use of health-care resources (e.g., scheduling the appointment, time set aside for the appointment if not reused for medical purposes that could be billed, costly medical equipment not used, etc.).
- Estimate the longer term, indirect costs to society for the missed medical and related appointments due to transportation access issues.
 - Longer-term costs are related to increased hospitalization and costs for treatment due to worsened medical conditions. This is particularly true for those with chronic diseases.
- Assess practices currently used in the health-care industry to better understand the role of transportation access to health care.
 - Document effective practice as well as deficiencies.
- Research the role of technology as a strategy to improve access to health care. Technology is rapidly changing the transportation landscape with private mobility services as well as improving the practice of telehealth.
 - What is the role of the new private mobility services in access improvement? How can those services be harnessed to improve access to health care? What has been the experience in selected states (e.g., Georgia, Tennessee) that have included a TNC as an allowed provider of Medicaid NEMT?
 - What is the role of telehealth and to what extent does it substitute for the need for transportation to a health-care facility?
 - What is the role of telehealth in helping to establish a foundation for health-care access in times of a nationwide pandemic when actual transportation to non-urgent health-care services is limited?
 - What is the role of autonomous vehicles (AVs) in improving access to health care? How would AVs serve those with specialized needs (e.g., those traveling with larger mobility devices, those with cognitive disabilities)?
- Define the steps that could be taken to better coordinate federal and state funding for health-care transportation, including funding for Medicaid NEMT.
 - Coordinating funding for transportation has been a topic since the 1970s. What are the specific barriers to improved coordination? What specific steps are needed to eliminate

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the barriers? What is the role of the federal and state governments in addressing those barriers?

- Examine the safety of various approaches to NEMT and the importance of properly vetted drivers, vehicles, and performance standards.
- Disseminate the research plan to organizations that conduct health-care research and track the extent to which the research is funded, conducted, and shared within both the health-care and transportation industries.

Abbreviations and acronyms used without definitions in TRB publications:

A4A	Airlines for America
AAAE	American Association of Airport Executives
AASHO	American Association of State Highway Officials
AASHTO	American Association of State Highway and Transportation Officials
ACI-NA	Airports Council International-North America
ACRP	Airport Cooperative Research Program
ADA	Americans with Disabilities Act
APTA	American Public Transportation Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ATA	American Trucking Associations
CTAA	Community Transportation Association of America
CTBSSP	Commercial Truck and Bus Safety Synthesis Program
DHS	Department of Homeland Security
DOE	Department of Energy
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FAST	Fixing America's Surface Transportation Act (2015)
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
HMCRP	Hazardous Materials Cooperative Research Program
IEEE	Institute of Electrical and Electronics Engineers
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Institute of Transportation Engineers
MAP-21	Moving Ahead for Progress in the 21st Century Act (2012)
NASA	National Aeronautics and Space Administration
NASAO	National Association of State Aviation Officials
NCFRP	National Cooperative Freight Research Program
NCHRP	National Cooperative Highway Research Program
NHTSA	National Highway Traffic Safety Administration
NTSB	National Transportation Safety Board
PHMSA	Pipeline and Hazardous Materials Safety Administration
RITA	Research and Innovative Technology Administration
SAE	Society of Automotive Engineers
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (2005)
TCRP	Transit Cooperative Research Program
TDC	Transit Development Corporation
TEA-21	Transportation Equity Act for the 21st Century (1998)
TRB	Transportation Research Board
TSA	Transportation Security Administration
U.S. DOT	United States Department of Transportation

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