



Cross Sector Collaborations:

Addressing Health Inequities in Access to Care Through Public Health and Transportation Partnerships

Report Summary: This report addresses how state and territorial health agencies can develop and sustain partnerships to address community transportation needs to support access to care. ASTHO, in partnership with the University of Washington, researched four state-level case examples that demonstrate how cross-sector collaborations can support transportation initiatives through flexible funding strategies, formalized partnerships, and policy support.

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Introduction

The social determinants of health—the social, economic, and built environments in which people live, learn, work, and play – have significant impacts on health outcomes, particularly chronic conditions such as diabetes, hypertension, and cardiovascular disease.^{1,2} Lack of transportation, for example, can result in missed healthcare appointments, increased health-related expenditures, and ultimately worse health outcomes.³ The interplay between transportation and health highlights how important it is for state health agencies to work together to address the nonmedical drivers of health.^{4,5}

The Intersection of Public Health and Transportation

One of the [tenets of public health](#) is ensuring equitable access to healthcare.⁶ In 2018, 29% of Americans reported delaying medical care due to increased cost.⁷ Unfortunately, these numbers have only deepened in the years since due to the COVID-19 pandemic, with a 22-year high of 38% of Americans self-reporting delaying medical care in 2022.⁸ Inadequate transportation has long been cited as a major barrier to accessing healthcare, leading to late or missed appointments and delayed or missed medication use, which all contribute to worsening health outcomes.^{9,10} These barriers disproportionately impact households that are below the federal poverty level and communities that have been marginalized, who report higher rates of transportation barriers to healthcare access than patients with higher socioeconomic status.^{11,12}

One area in which public health and transportation can collaborate to improve health is increasing transportation options and availability of healthcare services. As funding from the American Rescue Plan Act is set to end in 2024, states can begin braiding and layering their funding, using multiple funding streams to support a common initiative to sustain or establish innovative strategies to address the social determinants of health and health inequities. Cross-sector layering and braiding of funds is one opportunity for funding collaborations that require public health alliances with transportation agencies to achieve mutual objectives.

Both public health and transportation agencies (e.g., state departments of public health, state transit authorities, and state transportation commissions) have a shared objective to serve the public, and often both sectors are responding to overlapping community needs. Specific areas of potential partnerships include safety and injury prevention, active transportation, air quality, connectivity and access, evacuation and emergency response, and equity.¹³ With a shared goal of increasing connectivity and equity of access to healthcare and other services, transportation and public health agencies can collaborate to improve health outcomes in their communities. This report explores four case studies highlighting unique funding streams and programs that address social determinants of health and proposes recommendations for program planning and management. While flexible funding and cross-sector collaborations between public health and transportation are still evolving, these case studies provide a picture of what the future can hold as state health agencies continue to look for ways to address transportation barriers their communities face. The case studies highlight:

1. Oregon’s memorandum of understanding between its state health and transportation departments, which demonstrates an active commitment to preserving staff time and in-kind support for cross-

agency information-sharing and collaborative strategic planning, such as around traffic safety, active transportation, access to healthcare and other resources, and emergency preparedness.

2. Vermont’s pilot programs supported by the Vermont Agency of Transportation, which demonstrate a transportation department’s awareness of its role in improving access to health services.
3. Arizona’s hospital patient transfer program, which utilizes braided funds provided by the Arizona Department of Health Services and includes active collaborations with private sector and academic partners.
4. North Carolina’s electronic coordinated care network and implementation of the Healthy Opportunities Pilots via a Medicaid 1115 demonstration waiver to address beneficiaries’ health-related social needs, including transportation.

Action Steps for State, Local, and Territorial Health Departments

State, local, and territorial health departments can explore the use of federal funds in combination with state, local, or territorial funds and money from community-based or philanthropic organizations to address community needs related to transportation or access to care. However, braiding funds and working effectively with different sectors can be difficult in practice. Federal funders may ease some administrative challenges by ensuring that funding opportunity announcements requiring cross-sector partnerships include sufficient funding to support the level of effort required to initiate, maintain, and maximize the impact of these partnerships. In addition, state, local, and territorial health departments can use the strategies below to improve their ability to respond to new funding opportunities and work effectively across sectors:¹⁴

- **Develop a culture of collaboration and make use of interagency councils, memoranda of understanding, and data use agreements to share information vital to managing funds.** This paper explores MOUs from Oregon and Vermont, which demonstrate their collaborative cultures and how they maintain productivity across priority areas, strategize on overlapping priorities, and promote communication across agencies. As the case studies about Oregon and Vermont show, leadership from state government or an interagency council can also promote sustainable program infrastructure, equitable participation, and financial backing. Additionally, data-sharing can also serve as a concrete benefit of a cross-agency partnership or to encourage participation or support from partners external to the health department. For example, the Arizona case example shows how a health department-led initiative was able to provide quick and efficient data on hospital bed availability within the state, which cross-sector partners can use to support hospital patient transfers in a public health emergency. In Arizona, data collected across agencies showed the collective impact of cross-sector investments addressing social determinants of health that are critical to program evaluation and securing additional funding opportunities.
- **Consider allowing an intermediary agency and/or an independent local institution to coordinate budgets and planning.** State governments may report administrative difficulties in budgeting and

coordinating funding across agencies, since programs may operate on different time horizons or receive appropriations through different legislative committees. A potential strategy could be working with an independent local institution or intermediary agency to coordinate the financial planning for programs.

- **Apply for grants that make specifications within requests for proposals that allow for funding flexibility in project budgets.** Since securing sustainable funding can make program efficiency and planning more difficult, target states, localities, or territories could look for specific federal grants that allow for funding flexibility by amending the grant or application budget, including CDC’s Public Health Infrastructure Grant, which allow states the flexibility to allocate funding according to the most pressing needs, and CDC’s Preventive Health and Health Services Block Grants, which allow recipients to prioritize the public health needs of their jurisdictions.^{15, 16}
- **Include a robust evaluation of cross-sector initiatives to support future braiding and layering opportunities.** As the case study on North Carolina shows, thoughtful and well-rounded program evaluations provide an opportunity for quality improvement on program effectiveness and lay the groundwork for future funding of the program, demonstrating impact across sectors.

Case Studies

Oregon Health and Transportation Agencies—Making the Connection

The Oregon Department of Transportation (ODOT) and the Oregon Health Authority’s Public Health Division (OHA) have formalized a commitment to jointly “identify, develop, and promote connections between public health and transportation” through a memorandum of understanding (MOU) that has been in place for over a decade.¹⁷ In 2012, Gov. John Kitzhaber called for the Oregon Transportation Commission—which establishes the state’s transportation policy and releases a statewide transportation improvement plan every three years (like a state health improvement plan)—to consider the impact of transportation on the health of Oregonians. An Oregon Transportation Commission member with a public health background then initiated the creation of an inter-departmental MOU, signed in 2013 and reconfirmed in 2018, which provided structure to the partnership and serves as a reference point for both agencies’ planning efforts.¹⁸

The MOU outlines four broad objectives for cross-agency collaboration: 1) Coordinate policy and planning; 2) Foster alignment of health, transportation, and equity goals at state and local levels; 3) Collaborate on research and data analysis; and 4) Support organizational diversity, equity and inclusion practices and policies. The formal, written strategy specifies goals to improve traffic safety, increase active transportation options, reduce exposure to air pollution, improve equitable access to healthcare and other resources, and improve emergency preparedness.¹⁹

Oregon Innovation: Integrating State Health Improvement and Transportation Improvement Plans

Oregon’s MOU has fostered inclusion of specific health goals in a variety of statewide ODOT plans, as well as active ODOT Planning Section participation in OHA’s state health assessment and state health improvement plan processes.²⁰ In recognition of Oregon’s transportation priorities, the state has invested in data systems and data sharing, particularly for emergency medical services and trauma systems. Data are available at the census track level regarding bike/pedestrian injuries and crashes and can be mapped against emergency

medical services data to reveal equity concerns and considerations to support neighborhood level policy and program changes. These resources and tools inform transportation and public health practitioners interested in working together. While there is nothing formalized in the MOU regarding performance measures or reporting processes to track outcomes on the collaboration, OHA is developing a matrix of priorities that can support long-term strategic planning at a higher organizational level than day-to-day operations.

The success of this relationship and shared commitment to policy and planning has led OHA to work across all state departments to promote a greater understanding of social determinants of health, ensure initiatives are aligned to improve health equity, and deepen approaches to community engagement. For example, OHA can align plans with the Oregon Department of Human Services to provide wraparound services and with the Oregon Department of Environmental Quality to reduce the average gross household income spent on energy costs (energy burden) and communities' exposure to toxic materials.

There is no dedicated funding to support the partnership activities named within the MOU, nor do the two agencies collaborate on budgeting, since different state legislative committees oversee each budget. There is a perception recognized by ODOT that state transportation budgets appear larger than many other agencies' budgets, but in reality, very little of ODOT funding is discretionary or available to support maintenance and operations. However, ODOT uses existing funding streams from federal resources to support its own programming for healthcare-related transportation, active transportation funding, and a joint ODOT and Department of Land Conservation and Development program, *Transportation Growth Management Program*.²¹ OHA funds the creation of the state health improvement plan through its Preventive Health and Health Services Block Grant. Both OHA and ODOT also provide in-kind support, including staff time spent serving on agency boards and committees, which helps the agencies align priorities and share funding opportunity information.

The MOU ensures that ongoing collaboration between departments remains top-of-mind for agency leadership, especially when no executive-level directive—such as the 2012 directive from former Gov. Kitzhaber—currently exists. If public health or another agency is not named as a required partner, it may be left out of other state initiatives with a direct health impact. In lieu of a formal MOU, commitment from an executive sponsor from within a state health agency to participate in planning and implementation of transportation initiatives—such as those relating to healthy community design, active transportation, access to healthcare and other resources, or emergency preparedness—could help maintain strategic cross-agency partnerships.

Vermont Agency of Transportation and Vermont Department of Health Best Practices—Recovery and Job Access Rides

The Vermont Agency of Human Services (AHS), the super-agency that houses the state health department and the state Medicaid agency, has developed several pilot programs in partnership with Vermont Agency of Transportation (Vtrans). One pilot, Recovery and Job Access Rides, offers to reduce barriers to transportation for those suffering from substance use disorder.²² While the state public health agency is not directly involved in the operations of this program, staff from the Vermont Department of Health's Alcohol and Drug Abuse Program provide in-kind support through their involvement on the Governor's Opioid Coordination Council and provide feedback on existing gaps identified by the Vermont Department of Health. The Recovery and Job Access Rides budget is \$400,000, which is comprised of 50% Section 5311 funds, 25% Vtrans funds, and 25%

AHS funds to transport eligible residents to job interviews, job training, and commutes to and from employment for one month.

In 2023, the Vermont General Assembly charged Vtrans to collaborate with the Department of Health Access (the state Medicaid program) and the Vermont Public Transportation Association to perform a risk and benefit assessment of the braided service model.²³ This assessment also includes an analysis of other state public transit models and proposes recommendations to ensure all available federal funding is maximized.²⁴ The findings of this assessment highlight that the braided service model yields a high quality of service, including on-time arrival, ease of booking and information accessibility, and effective coordination among health and human services programs. The recommendations outlined in this report include establishing a multi-agency transportation council for assistance and collaboration and assessing the financial feasibility and impact of regular reimbursement rates and/or frameworks that would share budget surplus and losses across the transportation provider and administrative agency.²⁵

Further demonstrating their commitment to integrating health and transportation programming, Vtrans launched the Rides to Wellness Project as a pilot program in 2018 to reduce barriers to transportation and ensure that a lack of available transportation options does not hinder residents' access to healthcare. While AHS does not have direct involvement in the initiative, the transportation sector is clearly prioritizing access to care within its own programming. Rides to Wellness aims to minimize use of emergency services among people who are unable to access preventive or routine care; enhance health centers, hospitals, and payers' financial performance by reducing the volume of missed appointments; and improve health outcomes for populations that have been marginalized who use community health centers.²⁶

Vermont Innovation: Health in All Policies Approach

These pilots stem from a culture that promotes cross-sectoral collaboration for health promotion.²⁷ Vermont's Health in All Policies approach engages numerous sectors and branches of government that work toward addressing the social determinants of health.^{28, 29} Leadership recognizes that when there is a "safety net" for populations that have been marginalized and equitable access to healthcare, this can positively impact all residents in the state.

Program leaders also acknowledge key lessons learned. It can take time for all parties to vet and finalize MOUs. Additionally, differences in agency priorities can cause a misalignment in program objectives (e.g., one agency may be invested in the number of trips offered while another is focused on reducing costs). Communication, early and often, is necessary to avoid this misalignment. Finally, state legislation requiring this level of coordination could ensure the sustainability of this kind of cross-agency collaboration.

Despite challenges, developing cross-sectoral collaborations allows staff who serve in meetings and on councils for other departments to form relationships and provide input from their areas of expertise. For example, the MOU administrators allowed AHS to include representatives on the Public Transit Advisory Council, which meets quarterly and shares pertinent transportation-related information. Additionally, once a program can demonstrate positive outcomes, it becomes easier to build on services and scale the project.

Arizona Resource, Equity, and Access Coordination Hub Program

The Arizona Resource Equity and Access Coordination Hub (AZ REACH) program is a 24/7 service that coordinates medical transfers across Arizona for Indian Health Service (IHS) and critical access hospitals.³⁰ AZ REACH's predecessor, The Arizona Surge Line was launched during 2020, with the goal of load-leveling hospitals during the COVID-19 pandemic so no hospitals became overwhelmed. The Arizona Department of Health Services (ADHS) organized the Surge Line, with protocols set by a steering committee of hospital and medical leaders. The Surge Line used the Central Logic platform through an existing state contract vehicle and worked with Health Current, the health information exchange, to show hospital bed availability and support patient transfers at a cost of approximately \$2 million per year. The governor issued an executive order in 2020 to require all 130 total public and private hospitals to participate in the Surge Line, which ultimately grew to include over 230 hospitals in seven states and transferred over 10,000 patients.

In December 2022, ADHS transitioned the Surge Line into AZ REACH to continue centralizing transfers and load-leveling indefinitely.³¹ AZ REACH program operates through the University of Arizona, is administered by Blackbox Healthcare Solutions, and is funded by ADHS and federal grants.³² The hospitals that participate in this program are based in all of Arizona's fifteen counties and include private nonprofit, private for-profit, critical access, IHS, public nonprofit, and tribally operated hospitals.³³ Because Arizona has distinct urban and rural regions with varying populations and hospital capacities, this centralized system has helped to lower barriers to transferring patients, saved practitioners' time in coordinating patient care, and provided real time data for the state on the health of the health system.^{34, 35}

Arizona Innovation: Health Systems Coordination

Although AZ REACH does not include participation by the state department of transportation or transit authority, the program's success hinged on the collaboration of multiple funding streams and agencies and supports patient mobility. ADHS provided support for the program to ensure necessary health-related policy changes were implemented and adequate staffing was in place. Healthcare system collaboration was also key, as hospital data transparency not only improved the program's ability to operate, but also gave way to an alliance among these healthcare systems toward a common objective: enhancing access to care.³⁶

As the COVID-19 pandemic began to wind down in 2022, many organizations and healthcare networks in the state expressed concern that the Arizona Surge Line would no longer be available beyond the public health emergency. Data from the Surge Line showed that there was a subset of IHS, PL-638, and critical access hospitals that relied heavily on it for transfer support due to geographic and capacity challenges. This was the impetus to obtain funding through ADHS and the University of Arizona to transform the temporary Arizona Surge Line into AZ REACH, a permanent program. AZ REACH was specifically designed to assist these rural hospitals with their daily patient transfers while also retaining the infrastructure needed to easily reactivate the Arizona Surge Line during future public health emergencies. AZ REACH was officially established in December 2022. By September 2023, AZ REACH had already assisted in approximately 4,000 transfers and provided the public health system of Arizona with real-time surveillance of the health and healthcare system. Although AZ REACH is currently funded for two years through braiding multiple grants—including HHS' Hospital Preparedness Program, CDC 2103 funds, American Rescue Plan Act Funds, and CDC Public Health Crisis Response Funds—the funding sources may shift. For instance, initial data indicates that many patients transferred through the program are coming from IHS facilities, which could suggest a future partnership. Additionally, many patients served through AZ REACH are Medicaid patients, so there may be opportunities to work with Arizona Healthcare Cost Containment System, the state's Medicaid program, to ensure funding and collaboration in the future. The goal is to ultimately source funding for AZ REACH through multiple sources;

however, ADHS acknowledges that braiding and layering funds for any project can be resource-intensive to manage.

Currently, AZ REACH benefits from collaboration across multiple organizations and networks. Although the University of Arizona facilitates the program, AZ REACH requires strategic collaboration with ADHS, local health departments, and hospital networks, as well as private organizations that work with on-the-ground logistics. The University of Arizona contracts with Blackbox Healthcare Solutions, which contributes four full-time leaders that work closely with public health and hospital participants to administer the program. The University of Arizona has hired 12 full-time clinical resource equity coordinators to answer phone calls and directly coordinate the transfers.

Program leadership at AZ REACH expressed that the collaboration across public health, the hospital networks, and private organizations has succeeded in building trust, adapting to change, and providing transparency through data sharing. This example of cross-agency collaboration is a replicable demonstration of ways to utilize existing partnerships or build connections across public and private networks to accomplish access to care-related goals. Other states could establish similar programs with champions leading the efforts at state health departments. One way to ramp up these services in the future would be to introduce regional transfers that cross state lines. If other states implemented similar projects to AZ REACH, they could facilitate regional and cross-state transfers to substantially improve patient health outcomes in rural areas.

North Carolina Innovations to Address Social Determinants of Health

North Carolina implemented two initiatives—NCCARE360, an electronic coordinated care network, and Healthy Opportunities Pilots, which was funded via a Medicaid 1115 demonstration waiver—to address beneficiaries' health-related social needs, including transportation.³⁷

NCCARE360 Electronic Coordinated Care Network

NCCARE360 is a community referral network that connects North Carolinians with resources that address nonmedical social needs, such as access to food, safe housing, and adequate transportation. This platform addresses transportation by providing closed-loop referrals that allow patients and providers to identify and access vendors who can assist patients with complex needs in arriving at medical and non-medical appointments.

The North Carolina Department of Health and Human Services (NCDHHS) developed the platform through a public-private partnership with the Foundation for Health Leadership and Innovation.³⁸ The Foundation awarded the contract to develop the platform to UnitedWay, who subcontracted with UniteUs. This structure of NCCARE360 intentionally allowed use of the software to be free for independent providers, tribal clinics, community health centers, mental health centers, and community-based organizations (CBOs) to increase the reach of the program. The costs of the licensing fees are currently covered primarily (75%) by Medicaid via managed care funding, with the remainder covered by private health plans. Additionally, the state Medicaid program ensured health plans would use the system by including it as a requirement in the managed care organization contracts. As a Medicaid managed care state, NCDHHS required its managed care organization health plans to utilize the software as part of their contracts. With representation from the majority of prominent health systems in the state, this requirement ensures comprehensive buy-in from North Carolina payers.

Although this platform is primarily funded by NCDHHS's Division of Health Benefits (Medicaid), NCDHHS' Division of Public Health had a critical role in the development and implementation process. The platform collects a wide range of referral and CBO services data on both Medicaid and non-Medicaid patients. Although public health has played a critical role in this program, this has not translated to widespread uptake across health agency levels. Local health departments in North Carolina have not signed onto the platform in large numbers due to use of a pre-existing referral platform called Virtual Health. For states considering implementing a similar program, special early attention can be made to partner with local health departments and increase participation.

This model also highlighted the critical role of network leads who can advocate for organizations when technology and/or reporting challenges delay reimbursement for services. Some organizations experienced these reimbursement challenges due to problems integrating technology and the demands of increased referral volume, which can disproportionately impact smaller CBOs that may not have the infrastructure to support delayed payments. Other challenges include lack of a shared language between health plans and CBOs and conflicting approaches to business operations.

These lessons learned and the critical role of all stakeholders in the development of this platform has led to thousands of North Carolinians being connected with social support services. Specifically, the COVID-19 Support Services Program leveraged the NCCARE360 platform to deliver meals and groceries, COVID-related supplies, and transportation to medical or vaccine appointments to patients in 29 counties. Additionally, NCCARE360 was the foundation of COVID-19 recovery programs that connected over 25,681 households to 120,000 services, including transportation.³⁹

North Carolina's Healthy Opportunities Pilot

In 2018, North Carolina received federal approval for a Medicaid 1115 waiver, which is an opportunity for a state to establish experimental or pilot projects to better serve Medicaid patients by addressing population-specific needs. The North Carolina waiver included the provision of health-related social needs services, including housing, food, interpersonal safety needs, and transportation through the North Carolina Healthy Opportunities Pilot (HOP). This was the nation's first program to offer financial interventions for non-medical health services. The pilot program was launched in 2022 and operates in three regions of the state with three organizations serving as leads: Access East, Inc., Community Care of the Lower Cape Fear, and Impact Health. The program offers vouchers and cost-based reimbursement for health-related transportation services up to \$267 per month. For eligible Medicaid enrollees, this included public or private transportation to various locations, including farmer's markets, grocery stores, parks, medical centers, gymnasiums, workplaces or job interviews, and locations where other approved pilot services are delivered.⁴⁰

In addition to HOP, North Carolina's current 1115 waiver aims to transform the state's Medicaid program from fee-for-service to managed care.⁴¹ This transformation is complemented by NCDHHS' focus on value-based payments via incentive payments to standardize screenings of health-related social needs to identify patients with unmet needs.⁴² Through these four initiatives, North Carolina aimed to create a comprehensive approach to promote whole-person health.⁴³ In total, NCDHHS reported providing 29 interventions through \$650 million in state and federal funds, \$100 million of which are used for capacity building among health service organizations, community-based organizations (CBOs), and network leads.⁴⁴

HOP can provide lessons learned for other states interested in pursuing a similar program. First, it is critical to include a robust evaluation component when negotiating the Medicaid waiver. North Carolina utilized a Sequential Multiple Assignment Randomized Trial design to measure outcomes. Program leaders also suggest investing early in model contracts and beginning with smaller projects (e.g., developing a screening tool) that does not require a large amount of funding. From there, the program can grow into a more comprehensive network. Most importantly, program leaders emphasize that health equity considerations must be built into pilot design, with accountability enforced through contracts. Lastly, building partnerships, planning ongoing training for service care managers, and seeking regular feedback from all stakeholders is essential for continual program awareness and adaptation.

Public health agencies can play an important role in advocating to include transportation services, utilizing 1115 waiver authority. Additionally, North Carolina's inclusion of transportation in its HOP program sets a precedent for other states to replicate. Once Medicaid approves an 1115 waiver, state health agencies can serve as a conduit to facilitate connections with the state Medicaid program, CBOs, and local health departments, thus ensuring representation throughout program planning and implementation. These programs and partnerships to address transportation can advance health equity and reduce chronic disease disparities.

Conclusion

Transportation is a critical social determinant of health, and lack of adequate transportation can lead to population health inequities. State, local, and territorial health departments play an important role in developing and building relationships with transportation partners to address these inequities. Innovative solutions for coordinating public health and transportation initiatives are needed to enhance these efforts, and methods for promoting successful, sustainable collaborations are essential in ensuring efficient use of funds to promote this work.

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