KEY FINDINGS

• Access to transportation is a social determinant of health that influences health outcomes, affects access to health care, and intersects with other social determinants.

• Transportation barriers disproportionately affect low-income, vulnerable communities, contributing to health disparities.

• Essential hospitals are implementing efforts to reduce transportation barriers for their patients and communities.

• States offer eligible patients reliable transportation to and from health care appointments as a mandatory Medicaid benefit and have invested in transportation infrastructure to promote access to care and healthier lifestyles.

• Leveraging state resources to provide transportation for eligible patients can enable essential hospitals to target resources upstream, reducing transportation barriers at the community level.

INTRODUCTION

Access to affordable, reliable transportation has a deep connection to whether individuals can live healthy lives. This vital need can determine whether a doctor appointment is missed, prescriptions are filled, and conditions are treated before they develop into more costly and complex issues. Communities served by essential hospitals—those dedicated to high-quality care for all, including the vulnerable—experience a disproportionate prevalence of transportation barriers, creating a substantial clinical and financial burden. But this challenge also creates an opportunity for essential hospitals, in conjunction with state policy levers and essential hospital efforts can improve access to transportation and foster better health for patients and communities.

TRANSPORTATION AS A HEALTH ISSUE

Research has demonstrated health is attributed 20 percent to clinical medical care and 50 percent to social and economic factors and the physical

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Through the Program for Non-emergency Transportation (PRONTO), UI Health, in Chicago, partners with local health-access startup Kaizen Health to offer no-cost transportation from ride-hailing service Lyft to patients transitioning out of medical-surgical and critical care units. In addition to improving patient and staff satisfaction, PRONTO mitigates the slow bed turnover and decreased hospital throughput associated with patient transportation barriers. With PRONTO, social workers assess a patient’s transportation needs and, if necessary, arrange for transportation home in a Lyft vehicle at an average cost to the hospital of $20. The service, which became permanent in May 2017, is available Monday through Friday for ambulatory adult patients living in Chicago.
Denver Health Medical Center–Lyft Partnership and Vouchers

Denver Health formed a partnership with Lyft to provide no-cost rides to recently discharged patients or those in need of transportation to and from outpatient clinic appointments. The program began in the ED and expanded after three months to include inpatient and outpatient clinics. Hospital staff request and track Lyft rides once patients are discharged, and the Denver Health Foundation funds the service at an average cost of $7.40 per ride, with a 25-mile limit. In its first three months, the program provided more than 200 rides. Denver Health also offers no-cost bus tickets, cab vouchers, and a private car service using a vehicle donated by Oprah Winfrey. The “Oprah” car is staffed by local retired community residents on a volunteer basis.

By contrast, communities built to support walking, biking, and public transportation allow people to incorporate physical activity into their daily routines as they commute to school, work, and other activities.

IMPACT ON HEALTH CARE

Transportation barriers can directly affect one’s access to health care. By causing individuals to miss or delay health care appointments, transportation barriers can increase health expenditures and contribute to poorer health outcomes overall. Annualy, transportation barriers prevent 3.6 million people in the United States from obtaining medical care, studies show. Other research had found that regardless of insurance status, 4 percent of children nationally (approximately 3 million) missed medical appointments due to unreliable or unavailable transportation.

Commonly cited transportation barriers include outdated or nonexistent infrastructure; inadequate or lack of access to a vehicle or public transportation; costs associated with transportation; and the need to travel long distances to access services.

In addition to its impact on lifestyles and quality of life, unreliable transportation poses an economic burden to hospitals and health systems. Common transportation barriers negatively impact health outcomes and lead to higher health costs through missed medical appointments, delayed and unscheduled appointments, and inability to fill necessary prescriptions. Missed health care appointments can create a significant financial burden for hospitals and health systems by reducing clinical efficiency and cost revenue. This includes the costs of unused physician time; time spent

environment (the remaining 30% is attributed to health behaviors). These social and economic factors, or social determinants of health, encompass the conditions in which we are born, grow, work, play, and age that affect a wide variety of health risks and outcomes. Lack of reliable transportation—a social factor and at times a physical one—can significantly affect health and lifestyle, including by hindering access to health care, education, a steady and well-paying job, and healthful foods.

Affordable, reliable transportation services are essential to a healthy community. Transportation and other social determinants of health are interconnected and influence a person’s health and well-being. For example, by making it difficult for populations in food deserts to reach grocery stores, a lack of transportation can contribute to food insecurity. Transportation also connects people to their employment, education, and family and social supports, each of which has a documented impact on health behaviors and outcomes. The challenge of traveling long distances with unreliable transportation worsens the effects of social determinants of health.

Transportation infrastructure and other aspects of the built environment (which comprises all human-made structures, open spaces, sidewalks, etc.) also can directly influence the amount of physical activity populations complete. Excessive inactivity affects health outcomes and increases the chances of obesity, contributing to cardiovascular disease, Type 2 diabetes, certain types of cancer, and other health risks. “Auto-oriented” neighborhoods—those optimized for cars—are a prominent factor in excessive inactivity. These communities generally are marked by longer distances between destinations (between homes and stores, for example), a lack of reliable public transportation, and an absence of consistent and safe walking and biking paths. These features lead to higher rates of physical inactivity, obesity, and chronic diseases. A disproportionate share of impoverished neighborhoods are auto-oriented communities.

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contacting patients and rescheduling appointments; increased wait times for other patients; cost attributed to an interrupted care plan; and loss of anticipated earned income. Each year, up to 30 percent of medical appointments nationwide result in a no-show. Considering the average non-used or no-show appointment cost of $200, missed medical appointments cost $150 billion annually. Along with the system costs associated with missed, delayed, or unscheduled appointments, delaying care can pose subsequent financial risks to patients, as well as hospitals and health systems. Delaying needed care can exacerbate health conditions and increase rates of emergency department (ED) use.

Access to transportation can also affect a patient’s ability to fill necessary prescriptions. A study at Grady Memorial Hospital, in Atlanta, examined the causes of admissions for patients with diabetic ketoacidosis. Researchers found that 67 percent of admissions were due to patients not taking insulin. Of those, half said a lack of money or transportation prevented them from taking insulin. Separately, a National Community Pharmacists Association study found that three of four Americans do not take prescriptions as directed, with 31 percent unable to fill the medicine prescribed due to financial, transportation, or other barriers. The health consequences of those unfilled prescriptions are estimated to cost the United States $290 billion annually.

Role of Transportation in Health Equity
Transportation, as a social determinant of health, disproportionately affects vulnerable populations, including ethnic minorities, older patients, children, individuals with disabilities, and low-income groups. A study examining 161,350 patients in hospitals that serve a safety-net role found Latinos and American Indians were twice as likely to miss appointments, and African Americans were 1.8 times more likely, compared with white non-Hispanic patients. This clear disparity reveals a host of social, economic, and environmental drivers that make transportation and its associated health outcomes a pressing health equity issue in the United States.

The relationship between socioeconomic status and transportation barriers has been well established. Low-income neighborhoods often lack access to reliable public transportation, leaving low-income households without a vehicle unable to meet their daily transportation needs. Transportation barriers, and their resultant consequences for health, disparately affect low-income communities in urban, rural, and suburban neighborhoods. Auto-oriented neighborhoods make it even more difficult for low-income households to access goods, services, and medical care.

Transportation and Essential Hospitals
Essential hospitals care for underserved patients and communities—those most affected by transportation barriers. Due to this mission, they also shoulder a disproportionate level of uncompensated care, leaving them with operating margins about half that of other U.S. hospitals. These issues compound each another: The higher costs associated with transportation barriers weigh heaviest on the hospitals least able to cushion that impact.

Recognizing the impact of transportation on health and health care costs, some essential hospitals have taken steps to reduce transportation barriers for their patients and communities. The program summaries within this brief represent a sampling of such efforts.

Opportunities for Improvement
Hospitals can implement strategies to overcome transportation barriers on a patient, system, or community level, avoiding unnecessary health care costs and improving overall health. Some hospitals use screening tools

The Metrohealth System—The Metrohealth Line
The MetroHealth System, in Cleveland, acquired the former West 25th Street bus route, now rebranded as the MetroHealth Line, connecting the hospital and clinics to the surrounding neighborhoods. MetroHealth, in partnership with the Regional Transit Authority (RTA), added 20 new buses, 400 new stops, and 37 bus shelters to the route in fall 2017. The $4 million investment provides residents with 24/7 access to the main hospital campus, various clinics, and other neighborhood assets. The MetroHealth Line has become the most-used bus route in Cleveland. RTA plans to apply for federal funding to enhance the line by adding larger buses, traffic signal coordination, and bus-only lanes during rush hours.
Medstar-Uber Partnership

In January 2016, MedStar Health, the largest nonprofit health care system in Maryland, collaborated with ride-hailing service Uber to offer patients a new option to get to necessary appointments. The “Ride with Uber” program is available at all 10 hospitals within the health system’s Maryland/Washington, D.C. service area, including Washington Hospital Center. MedStar prominently displays information about the service on its website, allowing patients to quickly find wait times, estimate ride cost, and request a ride. For patients with demonstrated medical and financial need (about 30 percent of those who use the program), MedStar will cover the cost. When booking through the website, a reminder is automatically set for one hour before the appointment, to keep rides on time. Hospital staff coordinate rides at an average of $18 round-trip. By offering transportation assistance through Uber, rather than taxis, the health system reduced costs by 40 percent; it uses the savings to offer more rides. Since the program started, patients have taken more than 1,500 rides to medical appointments.

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...to understand the complex social needs patients regularly face and to identify opportunities for referral or other intervention. Many practices can train existing staff to incorporate a social needs screening tool into the current workflow. Screening allows clinicians to modify and personalize medical care and treatment options and to connect patients with needed resources. Specifically, screening for transportation might offer insight into other social determinants of health affected by transportation as a barrier (e.g., access to food). On essentialcommunities.org, the America’s Essential Hospitals website devoted to supporting essential hospitals and their partners in advancing population health, a resource library includes tools for social needs screening.

Some essential hospitals provide transportation for patients or subsidize the cost of transportation to and from medical appointments to reduce costs, no-show rates, and emergency visits. Some provide bus tickets or vouchers when patients have ready access to public transportation. Others provide taxi vouchers or cover the cost of rideshare services, such as Uber and Lyft, to directly provide rides for patients in need or for recently discharged patients. However, a recent clinical trial found that offering a no-cost Lyft ride to Medicaid patients did not reduce the primary care no-show rate. These findings emphasize the need to examine transportation barriers in the broader context of social determinants of health. Hospitals should carefully design and implement programs to counteract transportation barriers, making sure to consider the patients most in need and what social determinants might be at play.

Hospitals also can ease travel burden on patients by investing in programming and infrastructure, such as mobile health, telehealth, and mail-order prescription services. Providing vulnerable communities care through mobile health options, periodically locating some hospital staff and services at more readily accessible community sites, or telehealth can offer patients access to regular primary and preventative care services they might otherwise lack. Mail-order prescription services increase the likelihood patients will fill prescriptions and follow prescribing instructions. These alternatives to traditional care and prescription fulfillment could lower costs for patients, as well as hospitals.

Last, hospitals can help improve transportation access by investing in infrastructure that supports healthy lifestyles and safe transportation, such as dedicated biking and walking lanes and a safe path to access public transportation. Investing in public transportation itself, such as a bus line, can directly improve access to the hospital, clinics, and surrounding neighborhoods.

STATE ACTION TO IMPROVE PATIENT ACCESS TO TRANSPORTATION

Many essential hospitals, like those highlighted above, invest their own resources in providing disadvantaged patients transportation to and from health care appointments, including formal program infrastructure and wrap-around supports. In addition, providers may also leverage their state Medicaid programs to cover some of these programs’ costs as it relates to non-emergency medical transportation (NEMT).

States employ publicly funded programs, primarily Medicaid, to improve transportation to health care for disadvantaged patients. According to federal Medicaid rules, all states must provide NEMT to...
and from health care appointments as a Medicaid benefit, including all associated transportation expenses. Research shows that providing NEMT services can generate savings for state Medicaid programs by enabling patients to regularly see a health care provider and manage their conditions, ultimately reducing the total cost of their care. For example, a recent study found that the state of Florida saved an estimated $11 for every $1 it invested in NEMT; a study of the state of Arkansas produced similar findings.

Additionally, states have enacted legislation for large-scale initiatives to improve inadequate transportation infrastructure and increase access to public transit for people facing transportation barriers. Increasingly, states are working to reduce health inequity by considering social determinants of health in transportation planning efforts. Whether through Medicaid or other state programs and initiatives, states can benefit from efforts to ensure vulnerable populations have reliable transportation to routine health care, preventing costly and unnecessary ED visits and hospitalizations.

TRANSPORTATION AS A MEDICAID BENEFIT

NEMT has been a critical feature of the Medicaid program since its inception, ensuring the nation’s most disadvantaged patients have reliable transportation to access health care. By law, a state Medicaid agency or its designated managed care organizations (MCOs) must ensure necessary transportation to and from health care appointments. Medicaid covers NEMT costs for beneficiaries, including by taxi, public transit, or mileage reimbursement. The mode of transportation Medicaid covers depends on which one the patient’s provider identifies as the most efficient and appropriate. While every state Medicaid program must administer NEMT services, the benefit varies by state due to Medicaid program flexibility. For example, some states require a Medicaid beneficiary to demonstrate an unmet transportation need to qualify for NEMT services, such as not having a valid driver’s license or vehicle; being unable to travel or wait for services alone; or having a physical, cognitive, mental, or developmental limitation. Most states also impose restrictions, including copayments, prior authorization requirements, and limitations on NEMT services (e.g., number of trips allowed each month). Today, 28 states require beneficiaries to pay a nominal fee to access NEMT and five states (Florida, Indiana, Missouri, Pennsylvania, and Wisconsin) require them to obtain prior authorization from their health care provider before they can receive transportation assistance.

States can deliver Medicaid NEMT services by three different avenues: a transportation broker for fee-for-service Medicaid patients; transportation as a managed care benefit; and non-preauthorized contractor. Under the fee-for-service model, local and regional state-run Medicaid agencies determine eligibility and authorize and arrange travel for beneficiaries. While most states deliver NEMT through NEMT-focused brokers, some depend on state government entities, such as their department of transportation, or contract predominately with private taxi companies. MCOs are responsible for delivering transportation services as part of their capitated payments per beneficiary from the state, and states can further direct MCOs in administering the benefit, such as requiring MCOs to coordinate beneficiaries’ trips. MCOs can contract with private transportation companies, such as Lyft and Uber. Additionally, some states have policies to provide transportation to subpopulations within Medicaid to address specific health disparities. For example, five states (California, Florida, Georgia, Illinois, and South Carolina) provide transportation for high-risk mothers and babies to pre- and post-natal health care services.

Despite evidence that NEMT benefits improve health outcomes and reduce costs, several states have limited the benefit to cut costs. States must submit a Section 1115 waiver to waive the NEMT benefit requirement.
Although most states to date chose to automatically maintain the NEMT benefit when expanding Medicaid, three states (Iowa, Indiana, and Kentucky) received approval to waive the NEMT benefit for expansion populations. Kentucky received approval to waive the NEMT benefit for methadone services for beneficiaries in its non-expansion population. Massachusetts is awaiting Centers for Medicare & Medicaid Services (CMS) approval of its Section 1115 waiver to not enforce the NEMT benefit for its Medicaid expansion population, except for individuals in substance use disorder treatment.

While states primarily rely on Medicaid to fund NEMT services, they also coordinate with other state agencies to make these services available to individuals who are ineligible for Medicaid. Additionally, some states’ departments of mental health offer NEMT to connect people in need to substance use disorder treatment. All states receive funds from the federal departments of Agriculture, Education, Health and Human Services, Housing and Urban Development, Transportation, or Veterans Affairs to provide NEMT for health care services. 26

**LEVERAGING STATE TRANSPORTATION PROGRAMS AS AN ESSENTIAL HOSPITAL**

State programs can serve as resources for disadvantaged patients, like those served by essential hospitals, by ensuring transportation for patients to get to their necessary health care appointments and enabling high-risk patients to regularly check-in with their health care providers and receive preventive care. By leveraging these programs, essential hospitals can lower preventable hospitalizations and other costly services, thereby generating savings. Finally, by leveraging state resources to provide eligible patients transportation related to medical care, essential hospitals could free up and direct resources to community transportation infrastructure improvements, thereby helping to mitigate transportation barriers that affect people’s lives and health across the spectrum of social determinants.

**IMPROVING HEALTH THROUGH LARGE-SCALE STATE TRANSPORTATION EFFORTS**

Several states have invested in large-scale infrastructure improvement initiatives to increase access to transportation for underserved populations. For example, in Massachusetts and Minnesota, policymakers have established comprehensive approaches to building transportation infrastructure that promotes healthy living through legislation and leveraging interagency partnerships. These large-scale projects are another avenue by which states seek to address population health through transportation beyond patient-by-patient NEMT services.

**Minnesota: Health And Transportation—Partners For Change**

In 1997, Minnesota’s first “Populations of Color: Health Status Report” brought attention to wide gaps in health equity in the state. To reduce health disparities and advance health equity, Minnesota’s departments of transportation and health began collaborating on projects to improve public health through transportation planning and policy. Such initiatives include health impact assessments and “Minnesota Walks”—one of the first statewide frameworks that recognizes health and walking as transportation planning priorities—and walking and biking path expansions. Other states can mirror Minnesota’s efforts using the U.S. Department of Transportation’s Transportation and Health Tool. 27

**Massachusetts: Health Transportation Compact**

In 2009, then-Gov. Deval Patrick (D) signed a transportation reform law that included the Healthy Transportation Compact, which established approaches to evaluate the impact of transportation projects on public health and vulnerable populations. The state’s department of transportation (MassDOT) primarily pays for the initiative. Under the law, the compact promotes interagency cooperation with MassDOT to implement state policies and programs that support “healthy transportation” using a “complete streets” approach. This approach requires the state to plan and maintain streets to enable safe and convenient travel and access for users of all ages and abilities regardless of their mode of transportation (e.g., walking, cycling, driving, and riding public transit).
Notes


14 The Medicaid NEMT benefit is authorized under the Social Security Act s. 1902(a)(70) and 42 CFR § 440.170.


