

A photograph of a man with a beard and short dark hair, wearing a light blue zip-up hoodie over a white t-shirt and dark jeans. He is sitting on a bus, looking out the window to his left. He is wearing white over-ear headphones and holding a black smartphone in his hands. The bus interior features yellow triangular handrails hanging from a metal bar. The background shows a blurred view of the street outside the bus window.

**Eno**

Center for  
Transportation

Increasing access to  
essential health functions

# THE ROLE OF TRANSPORTATION IN IMPROVING AMERICA'S HEALTH

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## About the Author

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## About the Eno Center for Transportation

The Eno Center for Transportation is an independent, nonpartisan think tank whose vision is for a transportation system that fosters economic vitality, advances social equity, and improves the quality of life for all. The mission of Eno is to shape public debate on critical multimodal transportation issues and build an innovative network of transportation professionals.

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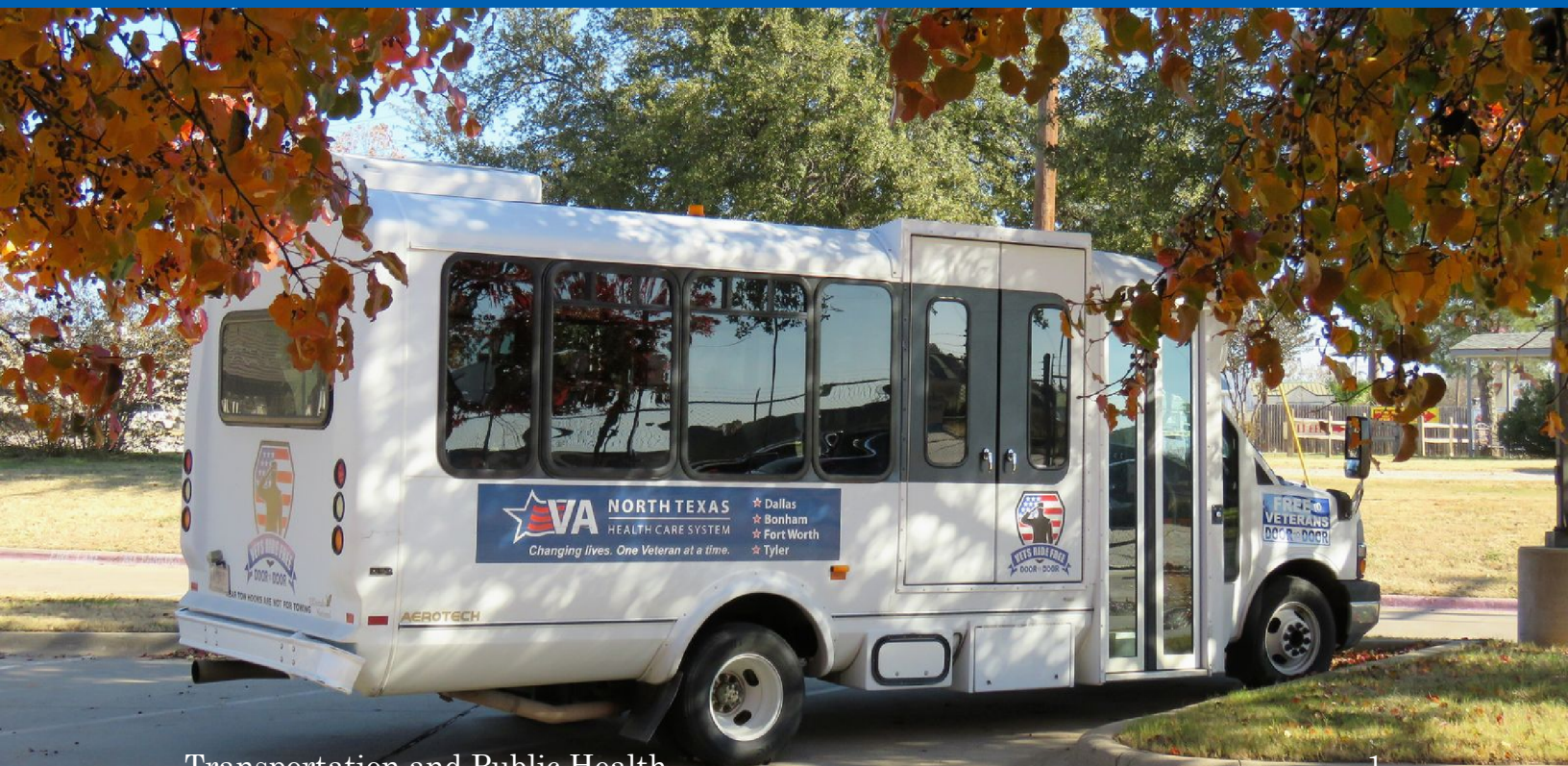


# EXECUTIVE SUMMARY

The purpose of government is to provide for the health, safety, and welfare of all its residents. This purpose is supported through interwoven policies and actions at many agencies and at many levels of government that exist to protect the fundamental rights of all and ensure the availability of safety net services for those in need. The United States is currently challenged by the emergence of the COVID-19 pandemic, and almost every function of government is working to support the effort to mitigate the damage it is causing. Transportation access to essential services, including health services, plays a role in the immediate health-related response. In addition, public scrutiny of the response to COVID-19 has led to greater exposure of some of the other ways in which access to essential services is inextricably linked to people's ability to live a healthy life.

The foundation of every public agency includes health, and therefore, a "Health in All Policies" framework should be applied in order to identify opportunities to improve policies and programs to reduce barriers for Americans to live full and healthy lives. In addition, policies and programs in transportation or other agencies may have negative externalities that affect health and cause significant downstream costs in the health sector, where the costs have been unsustainably increasing for years.

This paper describes the ways in which transportation, health, and healthcare are interrelated. Policy and regulatory decisions made at every level of government can have significant positive or negative externalities on other agencies, as well as on the citizens they serve. The recommendations describe pragmatic changes to policies and regulations at federal, state, and local agencies, as well as at private health insurers, who play a significant role in the administration of publicly funded Medicaid and Medicare. At the state and federal level in particular, there are a number of ways in which policy and regulatory changes may have beneficial effects on health outcomes and reduce long-term financial costs.



## Introduction

Transportation access is one of the fundamental objectives of the public sector as a means to provide access to jobs, services, recreation, and all other elements of the movement of people and goods. It is also one of the most important ways government can enable residents to live healthy, productive lives. Departments of transportation (DOTs) and other public agencies set policy agendas and a regulatory framework that can promote safe, convenient, and equitably distributed infrastructure and services within a community, state, and the nation. DOTs help shape the built environment that we live in, and that environment has significant effects on the country's economy and the health and quality of life of its residents. Negative externalities that stem from transportation to health can be significant, particularly since the United States currently spends twice as much money on healthcare as it does on transportation: in 2015, the Gross Domestic Product included 18 percent in healthcare costs and 9 percent for transportation.<sup>1</sup>

There are a number of ways in which public sector agencies can work together to improve both policy and programming to provide a better, more equitable environment. They can also spend scarce resources in a way that is more economically sustainable in the long term, as well as contributing to better health outcomes and a higher quality of life. Achieving those goals is likely to be even more important in the future as the United States faces historic levels of unemployment and uncertainty about the total health and economic health effects of COVID-19. State agencies in particular may benefit from the application of recommendations, as they have a requirement to balance their budgets. Annually, states spend 17 percent of their budgets on Medicaid and children's health insurance compared to 6 percent on transportation.<sup>2</sup>

## 1. Background

There are a number of reasons why enabling equitable and widespread access to essential services, such as health care, is a challenging problem. These include existing infrastructure and built environment constraints, funding prioritization methodologies, and personal travel behavior choices. Cost is a major factor that influences each of these challenges and brings inequities into the problem.

Transportation is the second largest cost in the average American family's budget, largely because of the cost of car ownership.<sup>3</sup> People who do not or cannot drive are often left with options that are slower, less convenient, or more expensive, if they are available at all. For low-income Americans, the high cost of car ownership means less money is available for housing, food, healthcare, or other things that improve health and quality of life. At the same time, many low-income Americans pay to own and operate a vehicle because of the lack of jobs available within a reasonable walking, biking, or transit commute time. The transportation barriers that non-drivers face have been further exposed by the emergence of COVID-19 and reducing those barriers to access should be a focus of both transportation and health practitioners.

## 1.1 Health-Related Context

Public health and healthcare are also relevant to discussions about transportation access. The emergence of COVID-19 exposed some of the challenges of the U.S. healthcare system, which is currently about 18 percent of annual Gross Domestic Product.<sup>4</sup> Despite paying more for healthcare, the United States ranks at or near the bottom on most major indicators of health such as life expectancy, access, administrative efficiency, and equity.<sup>5</sup> Part of the reason is that healthcare is usually provided using a *fee for service* model in which doctors are paid for individual tests or visits. In 2017, 86 percent to 95 percent of all healthcare providers were paid using this method.<sup>6</sup> By comparison, a *value-based system* incentivizes providers based on health outcomes and rewards quality of care rather than quantity, which incentivizes coordination across individual providers.<sup>7</sup> When a payor is responsible for managing health outcomes and the system of care, access to care is more clearly a part of the healthcare process than it may be in fee for service.

Although healthcare is often the first thing people think of when it comes to health, it only drives about 10-20 percent of health outcomes.<sup>8</sup> A greater impact on health are "social determinants of health (SDOH)." SDOH are widespread and systemic conditions that enable or inhibit access to healthcare, quality of life, and economic advancement. They include socioeconomic status, education, and access to jobs, food, social supports, and healthcare. There are significant disparities in SDOH based on demographic characteristics such as race and income. Negative outcomes caused in part by social determinants lead to health disparities that range from food insecurity and social isolation to higher rates of chronic diseases and shorter life spans.<sup>9</sup>

Reducing barriers related to SDOH is difficult but important work. When people struggle to meet daily needs such as shelter and food, they have less ability to focus on finding or keeping a job or their long-term physical or mental health.<sup>10</sup> Unfortunately, there are a significant number of Americans without the resources to meet their basic needs, and in 2018 the Federal Reserve found that almost 40 percent of American adults could not afford to pay \$400 if they had an emergency.<sup>11</sup> Successful ways to improve SDOH include policies and regulations that reduce inequities in access to education, jobs, or safe housing. They also include social safety net services such as public housing, Temporary Assistance for Needy Families (TANF, also called welfare), and food benefits such as Supplemental Nutrition Assistance Program (SNAP, also called food stamps). They also include public health interventions, which often save more money than they cost because they prevent negative health outcomes.<sup>12</sup> In fact, most of the increase in life expectancy in the United States has been due to advances in public health.<sup>13</sup> However, the U.S. currently spends three cents on public health for every dollar spent on health overall.<sup>14</sup>



## 1.2 Health in All Policies

One promising practice that a number of public agencies have implemented to reduce the burden of social determinants is called "Health in All Policies" (HiAP). The idea behind HiAP is that health considerations should be interwoven into policies collaboratively and proactively across all sectors. According to the Centers for Disease Control and Prevention, applying HiAP helps government identify areas of opportunity within its existing policy goals to better integrate health-supporting approaches.<sup>15</sup> The Association of State and Territorial Health Officials profiled nine states doing this work in a 2018 review, and the National Association of County and City Health Officials has an interactive map of resolutions, ordinances, task force reports, and executive orders that have been passed in 13 states.<sup>16</sup> Table 1 includes a list of the 18 states that have a local or state-level HiAP program.

Several long-standing transportation and health initiatives are reasonably well-known, including safety and injury prevention; air quality; active travel modes; and integrated planning approaches.<sup>17</sup> The benefit of applying HiAP across an entire agency, even one that may already be doing some work in health, is that it is a systematic approach to examine policies and practices. For transportation, applying the HiAP method can identify new opportunities to improve access to health-supporting modes or destinations, particularly for populations that may be disproportionately affected by systemic barriers.

**Table 1: States with Local-Level or State-Level Health in All Policies Programs, Resolutions, or Ordinances**

State	State-level HiAP	Local-level HiAP
California	2010	2015
Connecticut	2015	
Florida		2018
Illinois	2020	2017
Massachusetts	2009	
Michigan		2016
Minnesota	2010	
New York	2018	
North Carolina	2006	2017
Ohio		2016
Oklahoma	2013	
Oregon	2012	
Tennessee	2016	2016
Vermont	2011	
Virginia		2014
Washington	2006	2016
Washington, DC		2013
Wisconsin		2018

*Source: Association of State and Territorial Health Officials, "The State of Health in All Policies," 2018; National Association of County and City Health Officials, "Health in All Policies," retrieved June 8, 2020.*

### 1.3 Importance of Transportation Access to Health

Health practitioners see transportation access as one of the most significant social determinants of health.<sup>18</sup> It is related both to income and to numerous other social determinants. In fact, landmark research of more than five million children over a 15-year period identified parents' commute time as the single strongest factor in upward economic advancement.<sup>19</sup> Health outcomes are also linked to income: every step up the income ladder is associated with better health outcomes and ease of healthcare access.<sup>20</sup> Access to other SDOH such as healthcare, food, and social connections may be improved or inhibited depending on an individual's ability to travel to them.

Lack of access to healthcare can be particularly damaging because it can exacerbate health conditions and cause more serious issues over time. A systematic literature review of 61 studies identified some of the negative effects of isolation from health services.<sup>21</sup> The cost of missed healthcare appointments was estimated to be \$150 billion in 2019, with an average cost of \$200 per appointment that the provider loses



in potential revenue.<sup>22</sup> That estimate does not include the cost to patient health of missing a diagnosis or treatment update, and the loss of continuity of care. Older adults are both more likely to miss appointments and more likely to have one or more chronic conditions that require ongoing management, increasing the risk of potential long-term consequences.<sup>23</sup> As an example, dialysis transportation is known to be particularly challenging because most patients must receive treatment every couple of days for the rest of their lives unless they are able to get a kidney transplant. One nephrologist stated, "When I tell a patient they need dialysis, the first question I ask them is where they live. I know that the distance they have to travel to a dialysis center will be one of the most important factors in their ongoing health."<sup>24</sup>

#### **1.4 Barriers to Access**

The United States has benefited from increasing life expectancy in the past few decades, and people are able to live longer with chronic conditions or disabilities because of advances in medical care. However, an unintended consequence of extended life expectancy is that transportation access can become a long-term, persistent barrier. As the proportion of older adults increases, that challenge will increase, since on average people outlive their ability to drive by up to 10 years.<sup>25</sup> That challenge is also intensified because older adults are also more likely to live in low-density suburbs and rural areas;<sup>26</sup> only a small percentage actually relocate to walkable urban places. Barriers to travel also exist for 25.5 million of the 61 million Americans with disabilities.<sup>27</sup> People who lose their ability to drive often become reliant on family or friends or they stay home.

A number of factors have also pushed lower-income people further from transit-accessible and walkable in-town neighborhoods. In recent years, cities became more desirable locations for middle and upper class people and housing prices rose faster than incomes.<sup>28</sup> A number of working class, urban homeowners who signed predatory loans lost their homes in the Great Recession. People living in poverty have increasingly moved further from the center into places that have cheaper rents but also often have fewer transportation options and social services.<sup>29</sup> People who live in rural areas are also disproportionately older and poorer than those in cities and have longer travel times to services if they exist. This means that a larger proportion of people who do not or cannot drive are living in places without transportation options beyond streets that may lack sidewalks or crosswalks.<sup>30</sup>

In general, people will prioritize essential trips that help them meet their most basic needs: food, medical care, and commuting to work if they have a job. The harder it is to access transportation options or to travel, the more likely people are to forego trips that are less essential, or to prolong the time between trips. Traveling can present barriers that include the burden of time, and people with disabilities may encounter barriers that make it difficult to leave the house, travel, or shop or carry groceries.<sup>31</sup> For example, on average, people go to the grocery 1.6

times per week and spend 43 minutes in the store.<sup>32</sup> However, the time spent traveling to make that trip may increase substantially for people who take transit or travel via a shared human services transportation provider. There are other time-related burdens that are disproportionately borne by low-income Americans. For instance, commute times vary widely by region, but in general, low-income Americans who work spend more time commuting, possibly including the 8 percent of workers who have more than one job and may not control their hours or work when transit is most frequent.<sup>33</sup> Low-income people are also much more likely to be unpaid caregivers for a family member: more than 1 in 6 working Americans provide some unpaid caregiving, and the less money a person earns, the more likely they are to be a caregiver, spending an average of 24 hours per week on it.<sup>34</sup> The most common tasks are transportation (78 percent) and grocery or other shopping (76 percent).<sup>35</sup>

In addition to the burden of travel time, people with chronic health conditions, including chronic pain, may benefit from eliminating the need to physically travel to meet routine needs. The demand for some trips could be eliminated in two ways. First, delivery services could bring groceries, medicine, or other supplies to the person's home. Second, some medical visits, when appropriate for the patient, could be managed at home through the use of telehealth appointments or smart medical devices to monitor chronic conditions and share data with an electronic health record. It is important to note the possible consequences this could have on social isolation and loneliness, another SDOH.<sup>36</sup> Reducing the burden of travel for essential services could enable people to travel to meet social needs instead, but there is also a risk that someone loses opportunities for face-to-face engagement which they cannot meet in other ways.

## **2. Current State of Health-Related Transportation Services**

The United States currently has 130 federally-subsidized transportation programs which provide services primarily for users who are low-income, 60 or older, have a disability, or are veterans.<sup>37</sup> This patchwork of programs developed over decades and spans multiple agencies, from the Department of the Interior to the Department of Agriculture (USDA). A 2019 inventory of these programs, cataloged by the Coordinating Council on Access and Mobility, shows that most of them include transportation as a tertiary part of a larger program, such as the Residential Substance Abuse Treatment Program, Special Education Preschool Grants, and Community Development Block Grants.

Comparison between programs is challenging. The total funding amount for transportation services and the total number of people served is unknown, perhaps because of a range of reporting requirements across agencies. However, it is clear that the dominant funder is the Department of Health & Human Services (HHS).<sup>38</sup> This is because HHS funds Medicaid non-emergency medical transportation (NEMT), which spends about \$3 billion a year out of a total Medicaid budget of \$597

billion in 2018.<sup>39</sup> The two other agencies with the largest amount of funding for services are the U.S. Department of Veterans Affairs (VA) and the U.S. Department of Transportation (USDOT). The VA's transportation program spent an estimated \$950 million out of the total VA budget of \$187 billion in 2018.<sup>40</sup> USDOT spends more on capital programs than operations, and within USDOT, the Federal Transit Administration provides funds to operate transportation services. FTA had a total budget of \$13 billion in 2018, of which some portion of some funds could be used to fund services.<sup>41</sup> The programs run by these three agencies fund a variety of transportation modes, including fixed route and complementary paratransit, demand-response trips in shared ride vehicles, and occasionally mileage reimbursement programs. Individually and as a patchwork of services, these 130 programs provide some level of access to many vulnerable users who might otherwise be unable to reach medical appointments, jobs, and other essential services.

## **2.1 Benefits Created by Landmark Federal Legislation**

There are several landmark federal laws passed over a generation that created the foundation of transportation policy or safety net services that provide access for transportation disadvantaged populations.

### **2.1.1 Civil Rights Act**

The Civil Rights Act, passed in 1964, was the first federal law regarding transportation access for disadvantaged populations. This expansive law outlawed discrimination based on race, color, religion, sex, or national origin, and it touches everything from education to voting rights to hiring practices to public programs and transportation.<sup>42</sup> Title VI within the Civil Rights Act prevents discrimination by agencies that receive Federal financial assistance.<sup>43</sup> Thus it applies to HHS, USDOT, and VA funded programs, including Medicare and Medicaid. In fact, a lawsuit against segregation in a local hospital helped shape Title VI.<sup>44</sup> Title VI was an important step towards equity of access, but its design was to limit additional harm rather than to proactively advance access.<sup>45</sup>

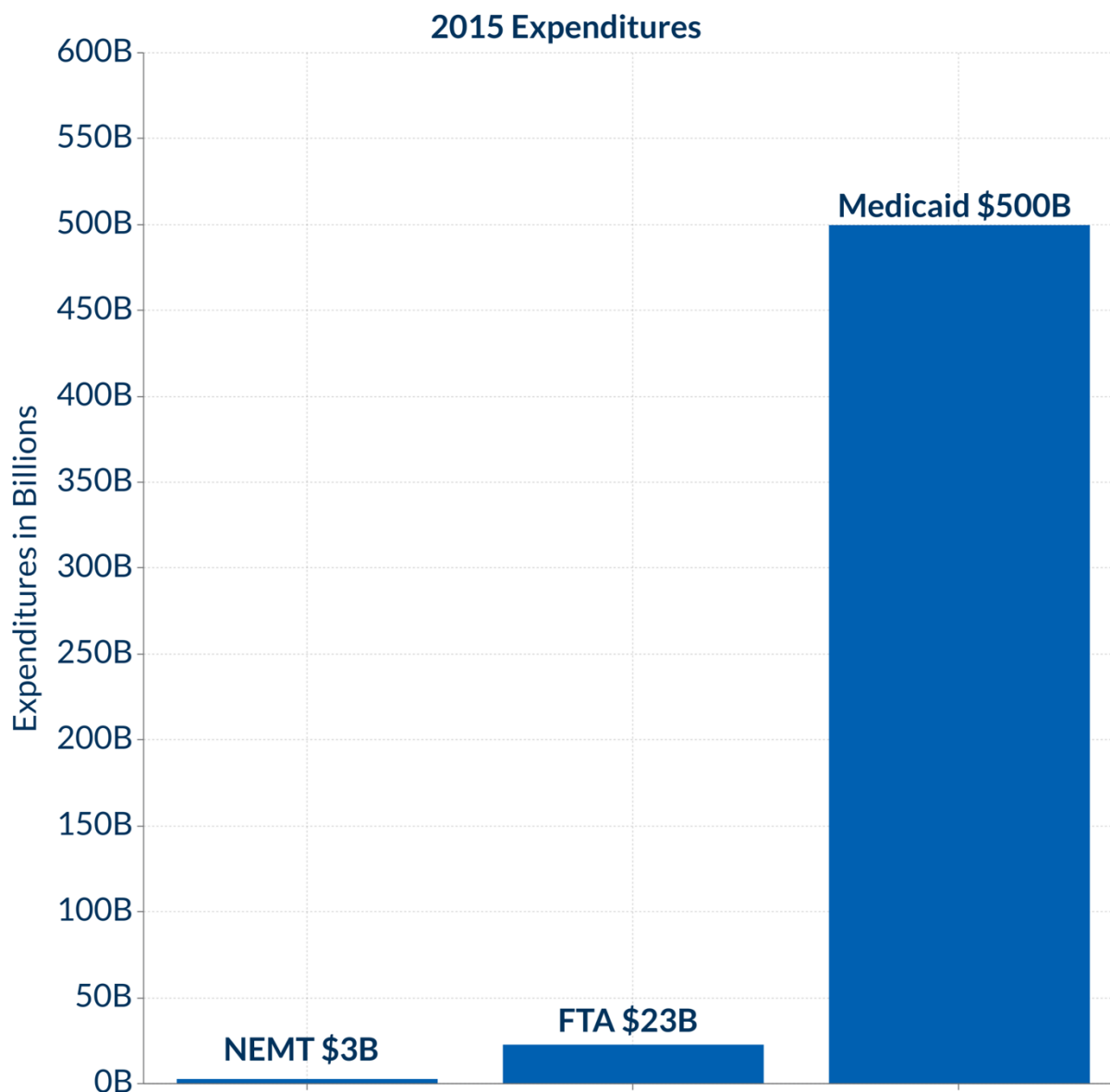
### **2.1.2 Public Healthcare**

The second piece of federal legislation that provided some transportation access was the passage of Medicaid and Medicare as part of the Social Security Act amendments in 1965.<sup>46</sup> Medicare covers Americans 65 and older as well as people with disabilities who qualify for Social Security Disability Insurance (SSDI). Medicaid was originally eligible only for people receiving cash assistance, but the program expanded over time to cover insurance for people who are pregnant or have disabilities, low-incomes, or long-term care needs. It is now the dominant payor for institutional and long-term services and supports for people with disabilities who need assistance for daily self-care. Its role in assisting people with disabilities to live longer and more independently is likely to increase in the future because of new assistive and medical technology as well as the increase in an aging population.<sup>47</sup>

Transportation access is not explicitly included in the law. However, the Medicaid enabling legislation has consistently been interpreted to "ensure necessary transportation to and from providers" by "ambulance, taxicab, common carrier, or other appropriate means," which led to the creation of NEMT.<sup>48</sup> NEMT is the second largest publicly funded transportation program after public transit. Medicaid NEMT costs were estimated at \$3 billion in 2014, which are less than 1 percent of total Medicaid costs, but equal to about 25 percent of total federal transit expenditures (See Figure 1).<sup>49</sup> Within HHS, the Centers for Medicare & Medicaid (CMS) oversees Medicaid state agencies, which have significant ability to manage their own programs. These state agencies may manage the NEMT benefit directly or they may allow it to be managed by the private health insurers that administer Medicaid on their behalf. NEMT is typically run as a brokerage, and the movement toward brokerages increased after the Deficit Reduction Act of 2005 provided a higher federal matching rate for NEMT expenses incurred via a broker.<sup>50</sup> Transportation services usually include transit passes and vehicle trips but may also cover non-emergency ambulance service and, in remote areas, helicopter or plane trips. NEMT has become politicized in some areas, and thus some states have lobbied to make NEMT optional by utilizing the waiver process.<sup>51</sup>



**Figure 1: Federal Investment in Transportation: Medicaid's Outsized Role  
2015 Expenditures**



*Source: MaryBeth Musumeci and Robin Rudowitz, "Medicaid Non-Emergency Medical Transportation: Overview and Key Issues in Medicaid Expansion Waivers," Kaiser Family Foundation, February 2016; National Academies of Sciences, Engineering, and Medicine, "Handbook for Examining the Effects of Non-Emergency Medical Transportation Brokerages on Transportation Coordination," 2018.*

### **2.1.3 Americans with Disabilities Act**

The final landmark piece of legislation, and the one that has had the broadest impact to reduce transportation barriers for a significant number of people, is the Americans with Disabilities Act (ADA). Passed in 1990, this civil rights law prohibits discrimination against people with disabilities in all areas of public life,

from education to work to all publicly and privately-owned spaces that are open to the general public. The ADA is intended to guarantee equal opportunity for individuals with disabilities.<sup>52</sup> The ADA has profoundly shaped public transit in the United States, including ensuring lifts on buses and a more integrated system. The ADA prohibits discrimination against an individual with a disability in connection with the provision of transportation service, including public transit. If riders with disabilities cannot access the fixed route system, transit agencies must provide complementary paratransit within a certain distance of a fixed route. Unlike NEMT, paratransit can be used for any purpose, reducing transportation barriers not only to healthcare but to other health-supporting trips such as work, school, food, or social connections. In addition, the mandate has forced innovation in vehicle design and transit operations because agencies have a strong incentive to make fixed route service as accessible as possible. However, the ADA is not only limited to federally funded or regulated projects. The ADA has also been used to mandate the development of accessible sidewalk infrastructure by local DOTs. It also requires accessible means of travel on private property and accessible entrances, bathrooms, and spaces in privately owned restaurants, offices, and groceries. When implemented, these infrastructure changes provide an environment that people with disabilities can use to meet their daily needs themselves, traveling in the community, rather than being prevented from leaving home by an inaccessible environment.

### 3. Challenges in the Current System of Services

Federal transportation policy sometimes calls for human services and public transportation to be coordinated in order to reduce duplication and improve cost savings across the 130 federal services.

This is a challenging guideline to address, primarily because programs that provide services often have state and sometimes local-level requirements which are often not aligned. Smaller programs provided limited dollars to services may not be coordinating with other

These reasons likely contribute to the range of reports that have been written over the years by the U.S. Government Accountability Office (GAO), which has identified a number of challenges in the coordination of services across agencies and gaps in care.

A recent catalog of GAO reports that identify challenges in human services transportation:

- Transportation Disadvantaged Populations: Coordination Efforts are Underway, but Challenges Continue, GAO-14-154T, 2013.
- ADA Paratransit Services: Demand has Increased, but Little is Known about Compliance, GAO-13-17, 2012.
- Transportation Disadvantaged Populations: Federal Coordination Efforts Could be Further Strengthened, GAO-12-647, 2012.

- Opportunities to Reduce Potential Duplication in Government Programs, Save Tax Dollars, and Enhance Revenue, GAO-11-318SP, 2011.
- Transportation Disadvantaged Seniors: Efforts to Enhance Senior Mobility Could Benefit from Additional Guidance and Information, GAO-04-971, 2004.

### 3.1 Medicaid NEMT

The largest program, Medicaid NEMT, also has an outsize ability to impact and influence the performance of the entire subsidized transportation ecosystem. Although its \$3 billion annual cost is less than 1 percent of all Medicaid expenditures, it is equal to about 25 percent of the annual federal transit appropriation (Figure 1). States' abilities to make policy decisions around how to administer Medicaid means there is wide variation in program implementation: there are currently seven different models in use. In some states, there has been significant progress coordinating NEMT with public transit and other federally funded programs.<sup>53</sup> However, other states have separated existing coordination with those providers in favor of a brokerage model at a statewide or regional level. Making the switch to a brokerage was incentivized by the Deficit Reduction Act of 2005, which provided a higher federal matching rate for NEMT expenses and removed the need to apply for a waiver every few years to use a broker.<sup>54</sup> Some states and Medicaid experts believe brokerages help contain costs and reduce administrative burden, although it may also be hindering agencies' ability to adhere to federal coordination guidance.<sup>55</sup> See Table 2.

**Table 2: Summary of NEMT Models by States**

NEMT Model	Number of States	States
In-house management	8	Alabama, Maryland, Minnesota, North Carolina, North Dakota, Ohio, South Dakota, Wyoming
MCO	10	Arizona, Florida, Hawaii, Illinois, Indiana, Iowa, Kansas, New Mexico, Oregon, Tennessee
Statewide broker	13	Alaska, Connecticut, Delaware, Idaho, Mississippi, Nebraska, Nevada, New Jersey, Rhode Island, Utah, Vermont, West Virginia, Wisconsin
Regional broker	7	Arkansas, Georgia, Kentucky, Maine, Massachusetts, South Carolina, Washington
In-house management and MCO	4	California, Montana, New Hampshire, New York
In-house management and regional broker	4	Colorado, Michigan, Pennsylvania, Texas
MCO and regional broker	5	District of Columbia, Louisiana, Missouri, Oklahoma, Virginia

*Source: National Academies of Sciences, Engineering, and Medicine, "Handbook for Examining the Effects of Non-Emergency Medical Transportation Brokerages on Transportation Coordination," 2018.*

Despite being less than one percent of total costs, NEMT is often subject to scrutiny when CMS or states try to cut costs.<sup>56</sup> The language of the Deficit Reduction Act contributes to this goal by using a low-bid model whereby the primary deciding factor in choosing a transportation provider is the cost.<sup>57</sup> As a result, cost containment tends to be the most significant metric for performance of a NEMT program. NEMT tends to be considered separately from other healthcare considerations, instead of being viewed as a tool by which an insurer or healthcare provider can ensure that appointments are kept and care is delivered to patients. This separation is even more clear in states where NEMT is a 'carve out' from the health plan: it is contracted out, administered, and evaluated completely separately from individual healthcare plans, who have no oversight or ability to develop and implement improvements. This means that private insurers that are attempting to provide a coordinated, "value-based care" model of healthcare delivery have less ability and incentive to include transportation as part of their comprehensive services and evaluate the value of transportation access when they measure their program effectiveness.

### **3.2 Need for Coordination**

A second issue with existing transportation programs is that they cross a wide variety of agencies which have uncoordinated and even conflicting regulations and compliance requirements, which severely inhibits the ability of providers or public sector agencies to combine programs to improve operational efficiency and reduce costs. As an example, the four largest subsidized transportation programs in the state of Georgia are public transit, Medicaid NEMT, VA transportation, and human services transportation (HST), which functions similarly to paratransit. Public transit is funded and administered by the Georgia DOT, NEMT through the Department of Community Health, VA by regional medical centers, and HST through the Department of Human Services. As is the case with programs at the national level, it is difficult even to compare each to the other because the readily available statistics on each program differ: transit typically measures unlinked passenger trips; NEMT and Human Services Transportation measure the number of people served; VA performance measures do not appear to be publicly available.<sup>58</sup> Each of these state agencies has its own requirements for vehicle inspection, driver training, contractual obligations, and reporting. The VA program manages its program requirements at the medical center level. The author was told directly by a major NEMT provider that its company had considered responding to contracts outside of NEMT but realized it was too difficult to comply with the other requirements. The end result is vehicles on the road with fewer passengers, loss of opportunity to share trips within a closer geographic area, and increased cost to manage individual programs.

### **3.3 Cost of Adhering to Regulations**

A third challenge in managing two of the largest programs, paratransit and NEMT, is the requirement that they must provide service and cannot refuse trips to



qualified riders. This is why the benefit is so valuable to riders. Paratransit is intended to provide a level of service on par with fixed route transit, and NEMT is intended to guarantee that every Medicaid beneficiary without their own transportation resources can access necessary healthcare. However, these requirements also add significant cost to the providers because they must have the capacity to meet demand at all times or face consequences. Additional costs include having wheelchair-accessible vehicles, frequently employing drivers as employees with benefits rather than independent contractors, training drivers to serve clients, and, in the case of NEMT providers, having HIPAA-compliant processes and software. The VA does not appear to offer a guarantee of service.

### **3.4 Funding for Capital Projects Over Operations**

A significant challenge for transit operators is that paratransit is required because of ADA but federal transportation policy prioritizes funding for capital expenditures over maintenance and operations. In practice, it means that transit agencies are spending an ever-increasing proportion of their operating budget on the service. Medicaid NEMT is an expense shared by the federal and state budgets: most costs are split 50/50, although the 2010 Affordable Care Act funded Medicaid expansion at 90/10 federal/state.<sup>59</sup> Yet a similar pool of matching federal dollars is not available for transit agencies' operational costs. Transit agencies have also been hurt in states where the NEMT model has switched to a brokerage, because they lose the ability to claim NEMT revenue as local match for FTA funding programs.<sup>60</sup> As the proportion of older adults and people with disabilities continues to grow, those costs are anticipated to continue to grow, and in fact they have been outpacing fixed route costs for years. This creates serious pressure on individual transit agencies to manage costs, which may lead to reduced quality of service, poor customer satisfaction, and trips that are not taken either because of a service failure or the customer deciding the travel is too burdensome to make the trip worth the effort.

## **4. Recent Promising Innovations**

There are a number of recent innovations in both the healthcare and transportation space that have reduced transportation access barriers for vulnerable Americans. CMS made recent new interpretations of existing regulations, which have opened up new opportunities for healthcare providers to pay for transportation access in addition to the legacy Medicaid NEMT benefit. Transportation network companies' (TNC) disruption in the transportation industry has benefited some riders with disabilities and in some cases has expanded the amount of data available to understand some travel behavior and performance metrics.

### **4.1 CMS Innovations**

CMS recently enacted a number of transportation-related innovations across both Medicare and Medicaid programs. A number of private health insurers are involved in these efforts as well, particularly in their implementation of value-based care, in

which they have some autonomy to interpret regulations and design benefit programs to compete with each other in the market. Useful data and reporting on these programs is not yet widely available. As information becomes available, there is likely to be significant opportunity to evaluate new evidence of the effectiveness of transportation as a factor in accessing healthcare and improving health outcomes.

#### **4.1.1 Section 1115 Waivers and the "Healthy Opportunities Pilots"**

Most federal agencies have the power to waive certain requirements if they provide competitive or discretionary funds, rather than formula funds. CMS uses this capability to allow states to pilot new approaches and also avoid adhering to some regulations.<sup>61</sup> They also granted waivers to states that allow them to waive most Medicaid requirements,<sup>62</sup> including, sometimes, NEMT. Waivers can vary widely by state and they often reflect state and presidential policy priorities. For instance, CMS has approved waivers to create work requirements to receive Medicaid for the first time in its history. Other waivers range from eligibility and enrollment process changes to behavioral health-related waivers that allow states to respond to the opioid crisis.<sup>63</sup>

A significant investment related to transportation and other social determinants of health was made when CMS approved \$650 million in funding through a Section 1115 waiver for a program in North Carolina, "Healthy Opportunities Pilots." The state proposes to reimburse evidence-based non-medical services to address specific social needs, including transportation insecurity as well as funds for housing, food, and interpersonal safety.<sup>64</sup> The state will establish and evaluate a systemic approach to integrating and financing the services in its three pilot sites so that effective components can be replicated across the state. However, the state announced in May 2020 that the evaluation process to select the pilot sites was temporarily suspended due all available resources being diverted to respond to COVID-19.<sup>65</sup>

#### **4.1.2 Accountable Health Communities**

In 2016 CMS launched the "Accountable Health Communities" initiative to attempt to close gaps in social needs for both Medicare and Medicaid recipients. The program awarded 32 grants across 22 states for a five-year program, and awardees have two focus areas. One set of awardees is providing navigation services to assist high-risk patients access community-based social services. The others will encourage partner alignment to ensure that local social services such as transportation, housing, or food access are available and responsive.<sup>66</sup> This model is similar to the work that regional Area Agencies on Aging have been pursuing since 2003 for older adults and people with disabilities, known as Aging and Disability Resource Centers.<sup>67</sup>

There are two challenges with this model, however. The first is that it does not include funding to pay for the social services. The second is that it may lead people in the healthcare industry to believe that transportation and other social services are available, and it's just a matter of developing the screening tools, patient assessments, and recommendation processes to match the patient with the service. The reality is that virtually all human services transportation programs have more demand than supply. Because there are not uniform data standards across the many existing subsidized programs, there is also no data on the gap in supply relative to demand, but people who work in the field know there is a shortage. People who cannot walk, bike, or access transit are very unlikely to find other transportation options available through existing community programs.

#### **4.1.3 Medicare Advantage Innovations**

CMS has also introduced additional innovations to Medicare Advantage, a Medicare option that uses a value-based care model. Medicare Advantage is administered by private healthcare insurers, and they are allowed to offer additional benefits to customers, such as fitness benefits and dental coverage. Of the four parts of Medicare, Advantage is the fastest-growing. In 2019, one-third of all Medicare beneficiaries were enrolled in Advantage, and it is anticipated to be almost one-half of all enrollees by 2029.<sup>68</sup>

First, in 2017 they made a rule change allowing some Medicare Advantage healthcare providers to pay for transportation to their facility. The Anti-Kickback Statute (one of several HHS regulations that intends to prevent fraud, waste, and abuse in federally funded healthcare programs) had historically prohibited healthcare providers from paying for transportation to and from their facilities because of a perceived conflict of interest. Since the new ruling went into effect, a number of healthcare providers and facilities have seen a clear financial benefit to pay for transportation and avoid the cost of a missed healthcare visit and possible prevention of a more serious and expensive health outcome.<sup>69</sup> This has led to many partnerships with Uber, Lyft, and other providers. However, few reports have been published yet on how widespread the practice has become or what its impact is on accessing care or health outcomes.

Second, in 2018 CMS announced that Medicare Advantage would be allowed to offer reimbursable benefits that are designed to improve social determinants of health, including transportation, even if they are not provided by a healthcare provider.<sup>70</sup> They reinterpreted the definition of a supplemental benefit to include any of four new criteria: the benefit diagnoses, prevents, or treats an illness or injury; it compensates for physical limitations; acts to ameliorate a functional or psychological impact of an injury or condition; or reduces avoidable care.<sup>71</sup> CMS has also expanded its definition of other coverable benefits to include transportation for both preventative or wellness services as well as non-health-related purposes such as trips to the grocery.<sup>72</sup>

## 4.2 Disruption by Transportation Start-Ups

TNCs sometimes partner with NEMT providers and are sometimes seen as direct competitors. One TNC startup developed explicitly to serve NEMT clients is Veyo, which, like Uber and Lyft, has a business model that combines data collection, technology applications, and fleet sharing. Veyo has NEMT contracts in six states and has completed over 28 million trips at time of writing.<sup>73</sup> One benefit to a public sector partnership with a TNC is that they have sophisticated technology capabilities to gather data. When that data is shared with the public agency, it can help provide real-time and historic information on service performance and help address possible fraud, waste, and abuse cases.<sup>74</sup>

Research in 2019 estimated that modernizing NEMT with TNCs would lead to cost savings of \$537 million within the program and \$4 billion in annual net savings, and that modernizing the service could improve patients' experience.<sup>75</sup> Boston Medical Center reported \$500,000 in transportation savings after contracting with Uber, and insurer CareMore Health System, which manages Medicare Advantage and Medicaid programs in multiple states, reported over \$1 million in savings in a single year of its partnership with Lyft.<sup>76</sup> In general, wait times are shorter, costs are lower, and patient satisfaction is higher. However, challenges persist, including employment protections for drivers, a lack of background checks, and some variation in liability insurance.<sup>77</sup> Costs may also rise as TNCs lose venture capital money. The companies are innovating and updating their services rapidly in order to continue competing in this market in a compliant way. Uber Health has a HIPAA-secure scheduling and invoicing platform that integrates directly with the Cerner electronic health record (EHR).<sup>78</sup> Lyft is currently providing NEMT service in 10 states and the District of Columbia.<sup>79</sup>

In addition to facing compliance barriers, TNCs have also been criticized for lacking accessibility. Although a number of people with disabilities use their services regularly, including deaf and blind passengers, they have been slow to provide wheelchair-accessible vehicles (WAV) and have received complaints from riders with service animals who were denied a trip.<sup>80</sup> To date, Lyft includes an "Access Mode" in some markets that will request a WAV in their local fleet or provide information on local resources, which may not serve on-demand requests. Uber has WAV in seven U.S. markets.<sup>81</sup> Other challenges include neither company accepting cash payments, although they do accept at least some prepaid cards. Lyft requires online access unless a customer works through a partner that can schedule via phone. Uber Health recently rolled out a new feature that allows scheduling for landline users, although other customers must have online access or work with a partner to schedule.<sup>82</sup>

## 4.3 Expanding Food Benefits to Allow Delivery or Curbside Pick-Up

The final example of recent innovation is the decision to allow some subsidized food benefits to be used for grocery delivery or curbside pick-up (benefits do not pay for



fees). This can eliminate some or all of the time burden to travel or shop in stores as well as the physical burden which grocery shopping may have for people with disabilities. The food benefit available to low-income households is one of the most valuable components of the U.S. safety net, in part because, unlike unemployment and TANF, there is no lifetime limit for people who are eligible. One in four Americans benefit from a nutrition program managed by the USDA, including the 42 million Americans who, even before COVID-19, were receiving SNAP, also known as food stamps.<sup>83</sup>

Delivery or curbside pick-up using SNAP benefits was first piloted in New York state in 2019. By early April 2020, six states were participating and a few more were scheduled to begin later in the year. However, in order to help Americans affected by COVID-19, USDA and state agencies worked at an incredible pace to scale up the program. In just two months, the program grew from 6 to 36 states. Three more states are expected to launch their programs soon, which will mean over 90% of Americans will have access to online purchasing—an incredible achievement in a very short period of time.<sup>84</sup> Another innovation that was legislated in the most recent law that governs USDA, the 2014 Agricultural Act, expanded the definition of qualified eligible retailers to include government agencies and non-profits that purchase and deliver food to older adults and people with disabilities.<sup>85</sup>

## 5. Recommendations

The complexity of the challenge of improving access to essential services is illustrated in this recommendations section. They span all levels of the public sector as well as privately-managed healthcare companies, and the agencies include transportation, health, and social services.

These recommendations focus on pragmatic changes to policy or regulations that agencies or public authorities can handle administratively without passing new legislation. This includes more widespread adoption and implementation of a HiAP-type approach for transportation, discussed in Section 3.2 and detailed below.

### 5.1 Federal Agencies

As the primary agency tasked with setting transportation policy, USDOT can play a role in several ways. First, **USDOT should adopt a HiAP framework to identify areas of opportunity within its existing policy goals to better integrate health-supporting approaches.** Reducing transportation barriers with a transportation network that has more safe and convenient walking, biking, and transit options will have long-term health, economic, and environmental benefits. Second, **USDOT, through its leadership in the Coordinating Council on Access and Mobility, should use its inventory of 130 existing programs subsidizing transportation to assess and then streamline programs and funding sources.** It can work across agencies to create a federal set of requirements for programs that provide a shared ride in a vehicle, or,

if a federal standard is infeasible, it can support state-level work to streamline program requirements across state agencies.

**USDOT should work effectively with VA and identify whether any coordination or integration is feasible.** The VA transportation program has a significant budget—\$950 million in 2018—but has less publicly available information about its services and coverage.<sup>86</sup> This may be because it is managed at the regional level and has many fewer destinations served than Medicaid NEMT, which would make coordination with other services difficult and of little benefit.

As an agency focused on healthcare service delivery for many of the most vulnerable Americans, CMS also has an interest in ensuring that its recipients have access to healthcare and supports to live a healthy life. It is also currently involved in numerous innovations in partnership with state agencies and private insurers to innovate healthcare delivery and health-supporting initiatives that may lead to solutions that can be scaled up and have significant positive effects on health, quality of life, and reducing healthcare costs. Data and reports from these initiatives are likely to begin being published in the near future, providing a valuable evidence base to identify promising practices that should be scaled up. If CMS finds that improved health outcomes from initiatives that provide transportation to healthcare or other essential services, or delivery, **the agency should make similar expenses eligible for Medicaid.**

**CMS should consider making a regulatory change to the Medicare benefit to improve access to beneficiaries with disabilities in their ability to access mobility devices such as manual and power wheelchairs as well as power operated vehicles or "scooters."**

As the nation's largest health care program, these changes would have a ripple effect across all health care policies and programs. When Medicare was first enacted, the regulations were written to separately reimburse mobility devices provided outside of hospitals and other institutions, like when provided in a patient's home (referred to as the so-called "in the home" requirement). Over time, this regulation was read narrowly, permitting coverage only for mobility devices that are medically necessary for use within the four walls of a person's home. Consequently, mobility devices that allow beneficiaries access to the community were not covered by Medicare, even to this day. There are times when the lack of a power wheelchair or scooter, or other mobility device, means that persons with mobility limitations are unable to move safely in their neighborhood or community and must rely on vehicle trips to meet their daily needs. The Medicare "in the home" regulations for DME coverage should be updated to recognize that independent living includes being able to perform activities of daily living through access to community activities and services, and coverage of mobility devices should reflect this reality.

Finally, **USDA should continue its work to scale up delivery and curbside pickup eligibility in every state.** USDA and its state partners have an opportunity to reduce barriers to health by making its food benefit easier to use for delivery. The SNAP food benefit is one of the most valuable social safety net programs for food insecure, low-income Americans.

**USDA should work with state agencies to ensure that all states permit eligible SNAP recipients to use their benefits to purchase food online and have it delivered or available for curbside pickup. USDA should also expand the program to include WIC and other subsidized programs.** The skill and flexibility they have demonstrated in their response to COVID-19 may also make them a valuable mentor to other agencies who want to adapt their administrative policies or programs.

## 5.2 State Agencies

States have clear economic and health motivations to enact policy and regulatory changes to reduce transportation barriers as a way to improve health. At least nine states are already in the process of implementing HiAP frameworks, providing a number of examples to others that want to launch their own programs to improve health across transportation and other agencies.<sup>87</sup>

There are several ways that state DOTs could amend policies to capture additional operating revenues or reduce future costs in their own or other state budgets. First, **states that have not yet adapted rural transit regulations to adhere to Medicaid NEMT should do so.** This would allow them to provide Medicaid NEMT trips, benefit from scarce operating revenue, and use available capacity in rural transit vehicles. Combining human services transportation with grocery delivery would provide additional operating expenses and would be particularly valuable in rural areas, which have a disproportionate number of older adults, nine million adults with disabilities, and are likely outside a grocery delivery area.<sup>88</sup> This promising practice has begun as a temporary effort by some agencies. For instance, in March 2020, the Regional Transportation Commission of South Nevada, the agency that manages transit for the Las Vegas region, began partnering with a local food bank to deliver groceries to people sheltering in place. They took advantage of Silver STAR, an existing specialty transit service used to connect senior living facilities with essential services such as groceries and banks.<sup>89</sup>

**State Medicaid agencies should make improvements to Medicaid NEMT.** States might consider the model of Oregon's Section 1115 waiver, which provides the "cost effective, most appropriate" services, rather than "lowest-cost," the standard requirement.<sup>90</sup> This allows NEMT to be assessed based on quality metrics as well as cost, which could include crash rates, years of driver experience, staff turnover rates, or customer satisfaction surveys. It also allows incentives to increase access to the lowest cost forms of transportation, including fixed route transit and mileage-

reimbursement programs for family and friends to drive the Medicaid recipient. For instance, there are cases when the low-bid model has led an NEMT broker to require a Medicaid recipient who uses transit to make one in-person trip per month to an office, where the recipient picks up in person all the tickets they will need for scheduled medical visits for the month. A ticket to get to the office is mailed to the recipient. In addition to the time and administrative burden placed on the recipient and the need to schedule appointments with several weeks' notice, it may also lead a recipient to delay or put off seeking care for a medical issue that may arise suddenly.

**State Medicaid agencies should also adopt the "carve-in" model where NEMT is overseen by the healthcare insurer.** This is important because the insurer, which is responsible for managing overall health of their clients, has the greatest incentive to ensure that NEMT service delivery and quality is high. Including NEMT providers as part of the insurer's portfolio of responsibilities gives the opportunity for NEMT to be managed as part of the healthcare experience and more clearly tied to quality and other care measures that insurers use to provide value-based care. Managing NEMT directly will also give insurers greater ability to manage the change from fee-for-service to value-based care, and to focus on reducing barriers to social determinants of health. Insurers will have the flexibility to innovate by testing new models and partnerships. As part of this, **states should continue to work with transit and provide valuable revenue to transit agencies.**

States have administrative control over several existing federal reimbursement programs that could fund the cost of food delivery for the most vulnerable populations. These include the Home-Delivered Nutrition Services program for frail, homebound, or isolated older adults and people with disabilities, funded by the HHS Administration for Community Living.<sup>91</sup> Another source is the Social Services Block Grant program, administered by the HHS Office of Community Services. This is a noncompetitive, formula grant that offers flexible funding to States and Territories to create social service programs that best fit the needs of their populations, and has an explicit goal of helping people who need supports in order to continue living in their homes.<sup>92</sup>

### 5.3 Local and Regional Agencies

**At the regional or local level, stakeholders should apply a HiAP lens across planning, transportation, and economic development departments.** Most land use decisions are made at the local level, and plans and development codes that allow mixed uses in neighborhoods and prioritize walking, biking, and transit access would all benefit residents who could meet their daily needs without a car. **Local agencies should expand access to food with "food hub" programs that sell fresh produce at publicly owned assets such as schools, libraries, or fire or transit stations.** They can also



combine human services transportation with grocery delivery, leveraging existing vehicle capacity and providing operating expenses.

One effective method to implement HiAP is to update funding priorities. After the Nashville Metropolitan Planning Organization incorporated health-based scoring criteria into their transportation prioritization formula, funded projects that included cycling or pedestrian elements increased from 2% to 70%.<sup>93</sup> As part of its HiAP initiative, the Boston Public Health Commission partnered with the Public Works Department on its StreetCaster program, an innovative and equitable approach to capital resource allocation. The program's focus on sidewalk repair and replacement prioritizes neighborhoods that have historically initiated fewer requests.<sup>94</sup>

#### 5.4 Private Healthcare Insurers

Private insurers are an important part of the administration of publicly-funded health insurance. They have a strong financial interest in helping their members manage their health, including not only their healthcare but also health-supporting benefits such as food access. Enabling members to manage part of their healthcare needs from home also reduces the travel burden on members and potentially saves time and costs for the provider. **Insurers, therefore, should ensure that their members enroll in any eligible programs that will help them manage their health.** The first such program is the Lifeline phone program, which has been providing discounted or free phone service to low-income Americans since 1985.<sup>95</sup> Benefits may vary depending on the provider, but participants are able to access a free smartphone as well as a limited amount of free data and minutes, and in some cases unlimited texting.<sup>96</sup> These tools are useful for chronic disease self-management, and they are particularly valuable for people with disabilities. Phones provide members the ability to access telehealth, but many healthcare visits are likely to include data collection for patient vital records, such as temperature and blood pressure. This is certainly true for chronic disease management, which half of all American adults have.<sup>97</sup> Smartphones have a number of embedded sensors such as microphones and image, ambient, and motion sensors. These components make it possible for people to use their phones to measure physiological and health data, as well as get reminders to take medication, eat, or exercise.<sup>98</sup> Other non-invasive, at-home data collection tools include internet-connected smart thermometers, blood pressure monitors, pulse oximeters, and wearables such as FitBits.<sup>99</sup>

## CONCLUSION

Systemic barriers to essential services are created over time and in a variety of ways, and they cannot be fixed with one-size-fits-all solutions. Many of the barriers and gaps in our social safety net have received greater public attention due to the emergence of COVID-19. The country is likely to be dealing with continuing high rates of infection and the aftermath of this virus, from a health and an economic standpoint, for years. As people work to rebuild and improve the country during this time, there are many ways in which agencies and systems can be changed in ways to reduce those barriers and gaps, and create a future with fewer disparities.

Lack of transportation access can have significant impacts at an individual, community, state, and federal level. The negative health externalities of transportation access barriers can cause poor health outcomes and high healthcare costs which are covered by existing safety net programs, Medicare and Medicaid. Implementing a Health in All Policies framework will help identify policy and program improvements across many facets of government. All public agencies have a responsibility to provide for the health of the people they serve. The recommendations in this paper describe some of the ways they can improve upon their fulfillment of that important mission.



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