Health Transportation Shortages: A Barrier to Health Care for Georgians

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By Georgians for a Healthy Future and the Arc Georgia

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As part of the Georgians in the Driver's Seat initiative

The *Georgians in the Driver's Seat* initiative, launched as a collaboration of Georgians for a Healthy Future and The Arc Georgia, aims to ensure transportation is eliminated as a barrier to health care for all Georgians. The project focuses on people with disabilities.

Summary

Georgians must often travel outside their homes and immediate neighborhoods to receive medical care. This is especially true for people with disabilities or other complex health needs who require specialty care and more frequent care. Understanding that Georgians need safe and reliable ways to get to health services, Georgians for a Healthy Future (GHF) and The Arc Georgia conducted a county-by-county study of health transportation shortage areas (HTSAs).

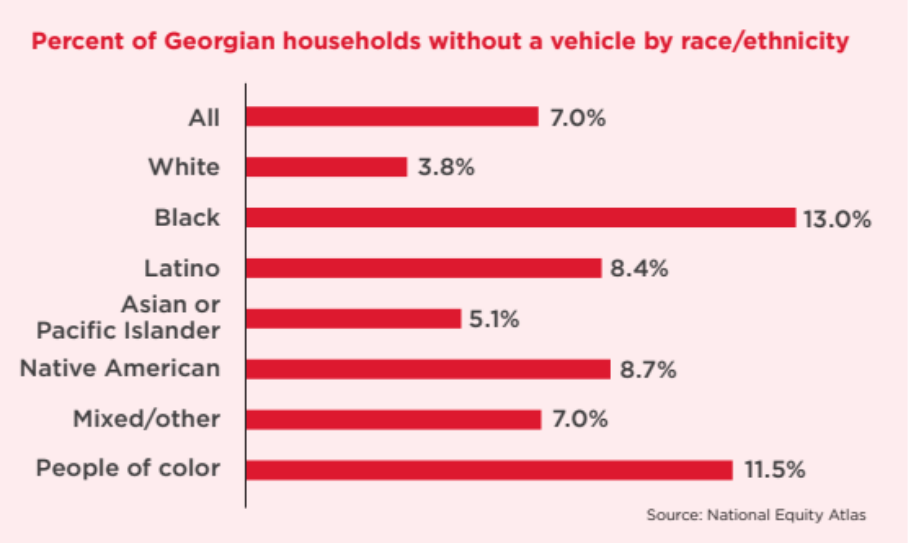
Using a validated tool called the Health Transportation Shortage Index, our team examined each county's population, household poverty rate, public transportation availability, health provider shortages, and the location of federally qualified health centers (FQHCs) to determine which counties could be considered HTSAs.[i] The results reveal that three out of four Georgia counties are health transportation shortage areas, and smaller zip-code level shortage areas almost certainly exist. The analysis suggests Georgians in most counties face some transportation-related barrier to health care. These barriers vary greatly by region and by community.

When the results of this analysis are considered along with input from Georgia consumers and health care providers, a number of potential policy solutions become clear. These recommendations touch on Medicaid's non-emergency medical transportation program, the difficulties of traveling across county lines for services, coordination between demand-response transportation systems and other transportation resources, co-location of services, and telemedicine. Applied together, and with the collaborative work of policy makers, community leaders, health and transportation advocates, and concerned Georgians, these recommendations would meaningfully move Georgia towards the elimination of transportation as a barrier to health care services.

Transportation as a barrier to health care services

Each year 3.6 million Americans miss or delay health care because they do not have a way to get to there.[ii] Georgians need safe and reliable ways to get to their health care appointments. Without it, people miss health visits, go without their medicine, or find unsafe or costly ways to get to their visits. This can lead to poor health.

Some people have fewer options for getting around than others. In Georgia, people of color are three times less likely to own a car than white people.[iii] Those who live in rural areas often have to make long trips to their health care visits, and have little or no access to public transportation services.



Percent of Georgia households without a vehicle by race/ethnicity

Mapping Georgia's health transportation shortage areas

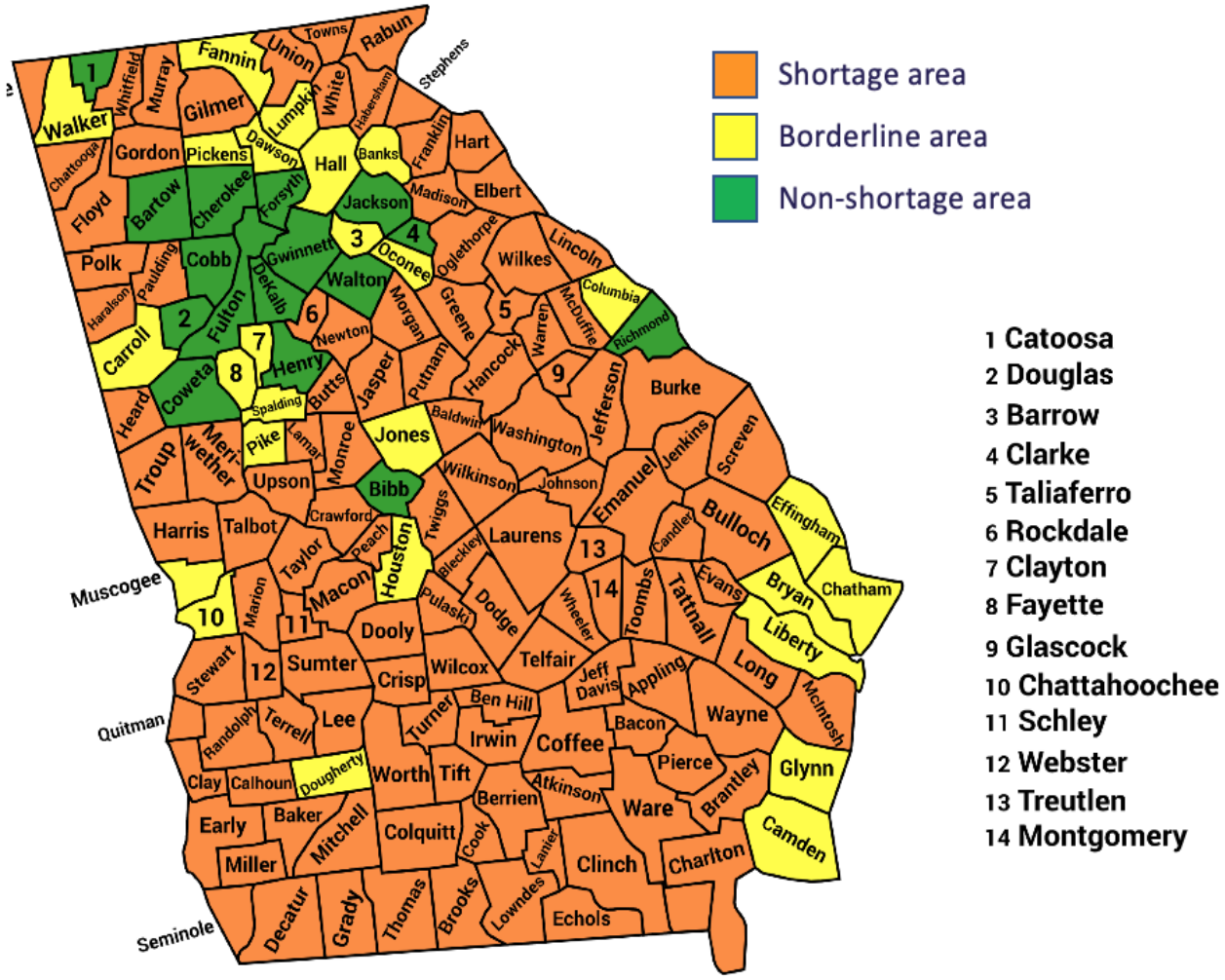
Understanding that Georgians need safe and reliable ways to get to their medical appointments, GHF studied the health transportation barriers in Georgia counties using a validated tool called the Health Transportation Shortage Index (HTSI). The index uses five factors to estimate if transportation is a barrier to care for people living in a specific area:

1. Type of area— based on population size, each county is defined as rural, small town, small city, urban area, or metropolitan area.
2. Household poverty rate
3. Public transportation availability—each county's public transportation system was defined as fixed-route mass transit systems, fixed-route transit systems with limited coverage, demand-response paratransit systems, or none.
4. Health Professional Shortage Area designation—whether or not each Georgia county had been labeled a "Health Professional Shortage Area" by the Health Resources & Services Administration

5. Locations of Federally Qualified Health Centers (FQHCs)—the number of FQHCs (sometimes called “community health centers”) located in each county

After gathering the data for all five measures, the results for all 159 Georgia counties were analyzed using the HTSI tool and protocol. (A detailed methodology and list of sources can be found in Appendix C.)

The final scores represent transportation-related barriers to health care access. A score of 6 or higher identifies a county as a health transportation shortage area (HTSA). GHF categorized scores of 4-5 as “borderline areas” because those counties could easily become shortage areas with a shift in one of the five index measures. The results are presented here as a map. The complete data set and results by county and region are available in Appendix A and B.



Map of Georgia health transportation shortage areas

Results

Higher HTSI scores point to greater barriers to health transportation. In our analysis, rural counties with limited or no public transit, places with high poverty rates, and areas with fewer health care providers are most likely to be labeled health transportation shortage areas (HTSA).

Of Georgia's 159 counties, 117 (74%) received HTSI scores that qualified them as HTSAs. Twenty-seven percent (27%) of the state's population lives in these shortage areas. Twenty-six counties (16%), representing 22 percent of Georgia's population, were categorized as borderline shortage areas. Only 16 counties (10%) met the threshold for non-shortage areas; just over half (51.4%) of Georgia's population lives in these 16 counties.

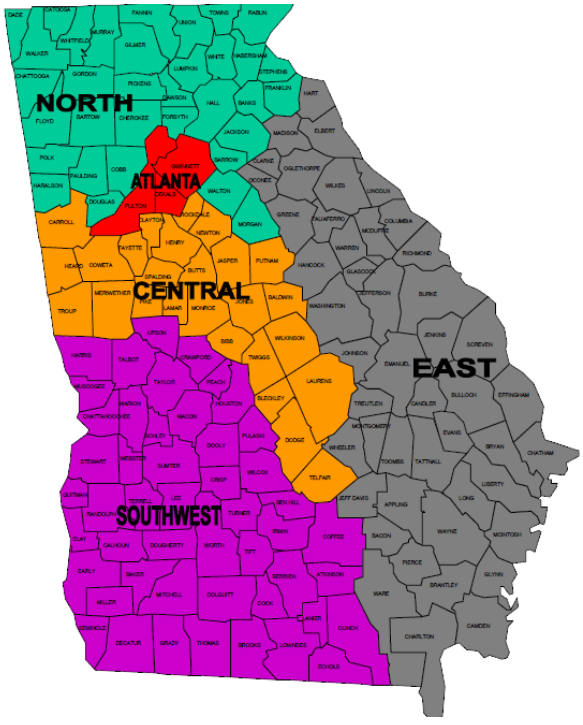
The non-shortage area counties (those with scores of 3 or less) are primarily clustered in the metro-Atlanta region. The exceptions are home to other cities (Macon in Bibb Co. and Augusta in Richmond Co.). Catoosa county, an outlier in this group, is immediately adjacent to Chattanooga's metropolitan area.

Counties in the borderline shortage area category are generally suburban or ex-urban counties with some density of development and relatively easy access to public transit and health care providers.

Results by region

GHF examined the HTSI analysis results by region according to the Georgia Department of Community Health's non-emergency medical transportation program. DCH operates the state's Medicaid program, and Medicaid provides a service called "non-emergency medical transportation (NEMT)".

This program gives free rides to health visits for Medicaid members who do not have their own way to get there. For these rides, NEMT uses van services and ride share options, like Uber and Lyft. NEMT also uses pre-loaded public transit cards and other modes based on the needs of the Medicaid member. NEMT is especially important for people with disabilities, seniors, people of color, and those who live in rural places.



Map of transportation regions for the Georgia Department of Community Health's non-emergency transportation program

DCH divides Georgia into five regions for the purposes of the non-emergency medical transportation program: North, Atlanta, Central, East, and Southwest.

Perhaps expectedly, the Southwest region had the most troubling results. Nine out of ten counties (94%) are health transportation shortage areas. The counties with the highest scores and starkest shortages include Clay, Echols, and Marion (scores: 13), followed by Quitman and Webster (scores: 12). Only four counties (8%) in the region qualify as borderline shortage areas and none meet the criteria for non-shortage areas. The region's bleak HTSI results are driven by high poverty rates, the sparse availability of health care providers, and limited or no public transit.

The Atlanta region had the most positive results when examined at the county level. Dekalb, Fulton, and Gwinnett counties have HTSI index scores of 3, 2, and 0 respectively. While these county-level results should be examined more closely (as discussed below), they primarily result from the relatively widely available public transportation system, the density of health care providers located in the metro area, and county poverty rates that are on par with the U.S. poverty rate.

Of the 34 counties in the North region, eight (23%) had HTSI scores of three (3) or less, suggesting those locations are non-shortage areas. Cobb and Cherokee counties had the lowest HTSI scores of 0 and 1 respectively. An equal number of counties, including Hall county, were designated borderline shortage areas. The remaining counties (18 counties, 53%) were considered transportation shortage areas. The highest HTSI scores were earned by Clay and Echols counties (HTSI score: 13), as well as Atkins and Crawford counties (score: 11).

In the Central region, Bibb, Coweta, and Henry counties received HTSI scores of three (3). These three counties represent 12 percent of the Central region. Six counties (23%), including Carroll and Clayton, are borderline areas. The remaining two-thirds of Central region counties are health transportation shortage areas. The counties with health transportation shortages ranged from Baldwin, Heard, Monroe, and Rockdale counties with scores of 6 to Jasper county with a score of 12.

The mostly rural East region is the second largest DCH transportation region. Our analysis revealed more than three out of four counties (79%) in the region are health transportation shortage areas. The only two counties not considered non-shortage areas are Clarke and Richmond counties, home to Athens and Augusta respectively. Seven counties (15%), all bordering the Athens, Augusta, and Savannah areas, received borderline shortage area designations. The remaining thirty-seven counties in the East region scored above 6 and are considered health transportation shortage areas. The counties with the most severe shortages, according to their HTSI scores, were Jeff Davis, Johnson, Taliaferro, Treutlen, and Wheeler counties (scores: 12).

A grain of salt

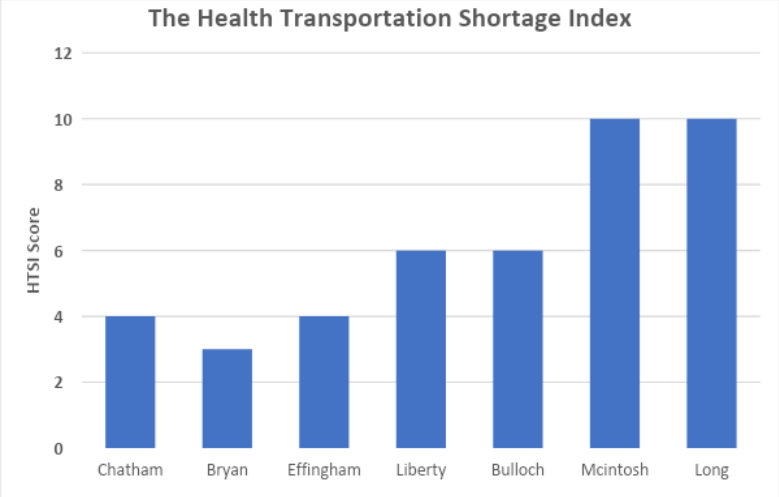
While our analysis concluded that 13 metro-Atlanta counties are non-shortage areas, this result should be examined more closely. There are great variations across metropolitan counties with respect to residents' proximity to public transportation and where public transportation travels relative to health care facilities.

In Fulton County, for example, the county is served by a relatively robust public transportation system (MARTA) but many neighborhoods in the southern part of the county are bypassed by MARTA train or bus lines. At the same time, some health facilities are very difficult to reach by public transportation because they are not served by a train or bus line.

These kinds of intra-county variations are most apparent in the metro-Atlanta area but they are likely present to some extent in other counties as well. It would be beneficial to complete this analysis by zip code to examine how local officials and communities, especially those in metropolitan areas, can best address health transportation shortages that are specific to certain communities or neighborhoods.

A Close Look at Coastal Georgia

After completing the HTSI analysis, we took a more detailed look at seven counties in coastal Georgia to understand how well our results reflected the reality in communities. This case study focused on Chatham, Bryan, Effingham, Liberty, Bulloch, Long, and Mcintosh counties.



2. Health transportation shortage index scores for seven coastal Georgia counties

Long and McIntosh Counties: Extreme health transportation shortage areas

Mcintosh and Long counties are both categorized as small cities with 14,340 and 18,998 residents, respectively. Of the families with children under 18 residing in Mcintosh county, 35 percent live in poverty, compared to 26 percent of families in Long county. Neither county provides a public transportation service to their residents, and both are health provider shortage areas for the entire county. Each with an HTSI score

of 10, Mcintosh and Long county could be considered extreme HTSAs, a reality that is reflected on the ground. When we spoke with consumers and partner organizations in the area, they told stories of consumers having to pay large taxi costs or taking entire days off of work to get to Vidalia, Savannah, or Statesboro for care. Even transportation to and from the county's single pharmacy posed a challenge for some. The consistent data and anecdotes from Long and McIntosh spotlight that their residents are among those in greatest need for accessible transportation in the coastal region.

Bulloch and Liberty Counties

Liberty and Bullock counties are both categorized as metropolitan areas with 61,497 and 77,296 residents respectively. Despite Bullock county having sufficient health providers in the area, transportation services are limited.

Unlike Bullock county, Liberty county residents receive transportation services through the Liberty County Transit agency. However, this transit service is limited, which means that the system does not run full time and the routes do not cover all areas of the county. Since Liberty county is a health provider shortage area, more robust transportation options are needed to help the residents reach health services, particularly specialists who may be located further away. When we spoke with residents in these areas, we heard that access to substance use and mental health specialists was especially difficult, due in part to transportation difficulties.

Chatham, Bryan and Effingham Counties: Transportation barriers remain

Chatham county is home to Georgia's 3rd largest city, Savannah. Of the 289,195 residents in the metropolitan county, 24.2 percent families live in poverty. While Chatham county does have public transit provided by the Chatham Area Transit, there is still a partial heath provider shortage within the county. Based on GHF's conversations with consumers and partner organizations, the areas of Chatham county that have limited access to providers are primarily communities of color. The residents of these neighborhoods often have difficulties finding a safe and efficient way to get to health visits, although efforts have been made by the local community health centers and other health agencies to address this barrier to care.

Effingham county is also considered a metro area with 62,190 residents, of whom 12.9 percent live in poverty. Like Chatham county, Effingham county has a partial health provider shortage, which is especially clear when residents need specialty health services. Despite the relatively low portion of families in poverty, those who are low-income say that vehicle ownership and the need to travel to Savannah for some services are barriers to care.

Bryan county is the only urban county in the coastal Georgia region, with a population of about 38,109 residents. Unlike the metropolitan counties, Bryan county does not have a health provider shortage and has the lowest HTSI score among its regional neighbors.

Transportation does not seem to be a top barrier to health access for Bryan county residents but input from residents would be valuable for identifying where room for improvement exists.

Recommendations

Medicaid's non-emergency medical transportation program

Medicaid is the primary health insurer for almost 2 million Georgians. For Georgia Medicaid members with limited or no transportation options to health services, the non-emergency medical transportation program is important for improving their access to care. Unfortunately, too few Medicaid members know about the benefit, so they continue to pay unaffordable ride share/taxi fees, find unsafe ways to get to appointments, or go without care.

Even when members are aware of NEMT, the program falls short often enough that some avoid it. NEMT has picked up people late going to or coming from a doctor's visit. In the worst cases, they are never picked up at all. People who use wheelchairs have been picked up by vans that do not have room for or the right gear for their chair. Some parents who need to take one child to see the doctor can't take their sibling.

GHF and The Arc Georgia recommend that the Georgia Department of Community Health (DCH) **meaningfully and deeply** engage Medicaid members, patient and consumer advocacy groups, and other stakeholders to improve the NEMT program and ensure it meets the health needs of Georgians. This engagement should take place ahead of and directly inform DCH's expected 2021 request for proposals from new NEMT brokers (companies which operate NEMT services on behalf of DCH).

Demand-Response

Of Georgia's 159 counties, 117 have demand-response transportation systems, sometimes called "paratransit". Paratransit systems usually require the rider to request a pick-up and are generally available for seniors and people with disabilities. Paratransit differs from public transportation because it usually does not run at all times of the day or every day of the week. Though these services are in place to increase access to care, scheduling restrictions and fixed routes or hours can create new challenges for residents traveling to and from health appointments.

Connecting paratransit to other local services (like Medicaid's NEMT program or transport offered by local non-profit agencies or health clinics) can help maximize access to care and increase the use of paratransit services. Paratransit planners should ensure that routes travel by the area's health care providers, especially those that serve low-income populations, seniors, and communities of color, as well as pharmacies, groceries, social service agencies, and government offices so that riders have access to all needed health and wellness supports.

Coordination of services

In our analysis and conversations with consumers and partner groups about transportation barriers to care, we repeatedly heard about the benefits of co-locating services for consumers. Medicaid members, health care providers, social service agencies, and other stakeholders overwhelmingly expressed that co-location was convenient, desirable, and effective. An example of such co-location can be found in Savannah at The Front Porch.

Community leaders outside of the Front Porch. Source: The Front Porch Facebook Page

The Front Porch is a "multi-agency resource center" that offers education support, mental health services, assistance to families enrolling in safety net programs, and other services all in one place. The non-profit was founded through a collaboration of the local court system, government leaders, and health and social service non-profits, all of whom contribute resources to The Front Porch's efforts.

Co-locating services helps to overcome transportation barriers because consumers or families only need to reach one location to access multiple services. Co-location requires a deep commitment to cooperation by many stakeholders, including a dedication by community leaders to listen to those who need the services and allow them to lead the process. Co-location of services is made easier by funding from multiple levels of government (local and state, plus federal when possible). Co-location is a promising strategy that should be considered and implemented by advocates, community members, and elected officials.

Traveling across county lines

With 159 counties, Georgians regularly need to travel to another county for health services, particularly specialty services. Unfortunately, with few exceptions (like MARTA), public transit services are operated by their home county and, therefore services are restricted to the county itself. When residents who don't own a vehicle need to travel across county lines but cannot get there via public transportation they often resort to the same unsafe or unaffordable options as without public transport.

We saw this play out in our case study of coastal Georgia. Parents of children in need of mental health services and behavioral health providers told stories of having to pay extra fees to cross from a neighboring county into Chatham county in taxis or non-

emergency medical transport vehicles. (This practice is disallowed by Medicaid's NEMT program but appears to take place regardless.)

To overcome this barrier, counties should be incentivized to coordinate transportation services with neighboring counties. Rather than operating independent transportation services, residents would be better served by counties' working together to operate services across a group of counties. This would allow residents easier access to a wider breadth of health care providers and other health-related services.

Telemedicine

Telemedicine, also called telehealth, is the ability for consumers to receive health services over the phone or by video. The use of telemedicine has increased dramatically during the COVID-19 pandemic and has been pointed to as a possible solution for provider shortages, transportation challenges, and other barriers to care. Consumers can "see" their health providers from their home, a local telemedicine clinic site, or other convenient locations.

When speaking with consumers, they have expressed to the GHF team that they enjoy the convenience of telehealth appointments for routine check-ups and similar services. They say the virtual visits are easy and they like that they do not have to drive across the city or county for a 15-minute visit. They balance that convenience by saying that they are looking forward to being able to visit in person for certain services like physical or occupational therapy and, less frequently, for mental health or substance use services where privacy and a close relationship with the provider are vital.

While telemedicine holds a lot of promise for reducing barriers to care, it is not a panacea. Aside from services that cannot be delivered virtually (e.g. dentistry, surgery, etc.), some health services are more effectively delivered in person or patients are more comfortable in person. Additionally, telemedicine visits often are delivered over high-speed internet connections, a utility that not all Georgians have easy or affordable access to. Rural Georgians and communities of color—the same groups with the highest transportation barriers—are most likely to have slow or no internet connectivity at home. (Georgians for a Healthy Future and The Arc Georgia will take a closer look at the relationship between transportation and internet access is a future report.)

While telemedicine does not solve all transportation problems, it is still a valuable tool in our state's toolbox for increasing access to care. Georgia policymakers should make permanent the telehealth flexibilities granted to providers and consumers during the COVID-19 pandemic. These flexibilities should be available to consumers with private or public coverage. State leaders should also invest in closing the gaps in internet access across the state, starting with rural communities of color.

Conclusion

Georgians, especially those with disabilities and complex care needs, require safe, adequate, and reliable transportation to get to health services. Our analysis suggests that transportation is at least a minor barrier to care for a significant proportion of Georgia's population, although this varies significantly by region and community. The breadth of this problem across Georgia communities demands attention and must be addressed for Georgians to have equitable opportunities for health.

To eliminate transportation as a barrier to health care, Georgia policy makers, community leaders, health and transportation advocates, and community members will need to work together to adopt policies that give counties and communities a solid foundation on which to build community-driven, locally tailored transportation solutions. Community members who experience the most transportation-related difficulties must be at the front of these efforts in order to reach effective, equitable solutions.

Appendix A.
The Health Transportation Shortage Index
Georgia
Summary Table by County

County Estimates - 2017/2018

			Population			Poverty Rate				Public Transportation		Health Provider Shortage Area		Federally Qualified Health Centers			
#	County Name	Non-emergency medical transportation region	Population	Type of area	HSTI value	Poverty Rate, All Ages (US = 12.3%)	Poverty Rate, Families* (US = 17.1%)	Relative to US rate (US=17.1)	Poverty Rate, HTSI value	Public Transp.	Public transport, HTSI value	HPSA	HPSA, HTSI value	FQHC #	FQHC, HTSI value	HTSI Score	HTSI designation
1	Appling	East	18,507	Small City	2	22.2	31.0%	1.8	3	Demand-Response	2	No	0	1	1	8	Shortage area
2	Atkinson	Southwest	8,297	Small Town	3	24.2	33.0%	1.9	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
3	Bacon	East	11,185	Small City	2	28.2	27.0%	1.6	3	Demand-Response	2	No	0	1	1	8	Shortage area
4	Baker	Southwest	3,092	Rural	4	24.6	17.4%	1.0	1	Demand-Response	2	No	0	1	1	8	Shortage area
5	Baldwin	Central	44,823	Urban Area	1	25.2	29.9%	1.7	3	Demand-Response	2	No	0	3	0	6	Shortage area
6	Banks	North	18,988	Small City	2		15.9%	0.9	0	Demand-Response	2	No	0	1	1	5	Borderline
7	Barrow	North	80,809	Metro	0		14.0%	0.8	0	None	3	No	0	1	1	4	Borderline
8	Bartow	North	106,408	Metro	0		14.5%	0.8	0	Demand-Response	2	No	0	1	1	3	Non-shortage area
9	Ben Hill	Southwest	16,787	Small City	2	24.5	34.6%	2.0	3	Demand-Response	2	No	0	1	1	8	Shortage area
10	Berrien	Southwest	19,252	Small City	2	18.6	29.8%	1.7	3	Demand-Response	2	Entire	2	1	1	10	Shortage area
11	Bibb	Central	153,095	Metro	0	25.0	35.6%	2.1	3	Yes	0	No	0	5	0	3	Non-shortage area
12	Bleckley	Central	12,838	Small City	2	20.3	26.7%	1.6	3	Demand-Response	2	Entire	2	1	1	10	Shortage area
13	Brantley	East	18,897	Small City	2	19.0	19.4%	1.1	2	Demand-Response	2	Entire	2	1	1	9	Shortage area
14	Brooks	Southwest	15,513	Small City	2	23.7	34.9%	2.0	3	Demand-Response	2	Entire	2	1	1	10	Shortage area
15	Bryan	East	38,109	Urban	1	10.4	16.0%	0.9	0	Demand-Response	2	No	0	1	1	4	Borderline
16	Bulloch	East	77,296	Metro	0	24.6	27.9%	1.6	3	Demand-Response	2	No	0	1	1	6	Shortage area
17	Burke	East	22,423	Urban	1	23.1	36.6%	2.1	3	Demand-Response	2	Entire	2	1	1	9	Shortage area
18	Butts	Central	24,193	Urban Area	1	18.3	30.5%	1.8	3	None	3	No	0	1	1	8	Shortage area
19	Calhoun	Southwest	6,352	Small Town	3	35.1	39.7%	2.3	3	Demand-Response	2	No	0	1	1	9	Shortage area
20	Camden	East	53,677	Metro	0	12.5	18.6%	1.1	2	Demand-Response	2	No	0	1	1	5	Borderline
21	Candler	East	10,836	Small City	2	24.7	43.7%	2.6	3	None	3	No	0	1	1	9	Shortage area
22	Carroll	Central	118,121	Metro	0	17.2	21.3%	1.2	2	Demand-Response	2	No	0	1	1	5	Borderline
23	Catoosa	North	67,420	Metro	0		12.3%	0.7	0	Demand-Response	2	No	0	2	0	2	Non-shortage area
24	Charlton	East	12,968	Small City	2	25.6	22.1%	1.3	3	None	3	Entire	2	1	1	11	Shortage area
25	Chatham	East	289,195	Metro	0	16.3	21.5%	1.3	3	Yes	0	Partial	1	10	0	4	Borderline
26	Chattahoochee	Southwest	10,684	Small City	2	19.6	13.6%	0.8	0	Demand-Response	2	No	0	1	1	5	Borderline
27	Chattooga	North	24,790	Urban Area	1		23.7%	1.4	3	Demand-Response	2	No	0	1	1	7	Shortage area
28	Cherokee	North	254,149	Metro	0		10.2%	0.6	0	Yes	0	No	0	1	1	1	Non-shortage area
29	Clarke	East	127,330	Metro	0	26.6	32.3%	1.9	3	Yes	0	No	0	2	0	3	Non-shortage area
30	Clay	Southwest	2,887	Rural	4	33.1	57.8%	3.4	3	Demand-Response	2	Entire	2	0	2	13	Shortage area
31	Clayton	Central	289,615	Metro	0	16.3	26.1%	1.5	3	Limited	1	No	0	6	0	4	Borderline
32	Clinch	Southwest	6,648	Small Town	3	27.6	43.7%	2.6	3	Demand-Response	2	No	0	0	2	10	Shortage area
33	Cobb	North	756,865	Metro	0		11.1%	0.6	0	Yes	0	No	0	3	0	0	Non-shortage area
34	Coffee	Southwest	43,093	Urban Area	1	24.9	31.7%	1.9	3	Demand-Response	2	No	0	3	0	6	Shortage area
35	Colquitt	Southwest	45,592	Urban Area	1	25.6	30.6%	1.8	3	Demand-Response	2	Entire	2	2	0	8	Shortage area
36	Columbia	East	154,291	Metro	0	6.6	8.8%	0.5	0	Demand-Response	2	No	0	0	2	4	Borderline
37	Cook	Southwest	17,162	Small City	2	21.3	27.5%	1.6	3	Demand-Response	2	No	0	1	1	8	Shortage area
38	Coweta	Central	145,864	Metro	0	10.4	14.9%	0.9	0	Demand-Response	2	No	0	1	1	3	Non-shortage area
39	Crawford	Southwest	12,318	Small City	2	17.6	22.1%	1.3	3	Demand-Response	2	Entire	2	0	2	11	Shortage area
40	Crisp	Southwest	22,601	Urban Area	1	29.7	40.2%	2.4	3	Demand-Response	2	No	0	6	0	6	Shortage area
41	Dade	North	16,226	Small City	2		20.4%	1.2	2	Demand-Response	2	Entire	2	1	1	9	Shortage area
42	Dawson	North	25,083	Urban Area	1		15.1%	0.9	0	Demand-Response	2	No	0	1	1	4	Borderline
43	Decatur	Southwest	26,575	Urban Area	1	21.9	32.0%	1.9	3	Demand-Response	2	No	0	1	1	7	Shortage area
44	DeKalb	Atlanta	756,558	Metro	0	15.3	19.6%	1.1	2	Yes	0	Partial	1	10+	0	3	Non-shortage area
45	Dodge	Central	20,705	Urban Area	1	21.8	28.6%	1.7	3	Demand-Response	2	No	0	1	1	7	Shortage area
46	Dooly	Southwest	13,706	Small City	2	27.6	30.6%	1.8	3	Demand-Response	2	Entire	2	1	1	10	Shortage area
47	Dougherty	Southwest	91,243	Metro	0	28.2	37.6%	2.2	3	Demand-Response	2	No	0	8	0	5	Borderline
48	Douglas	North	145,331	Metro	0		16.7%	1.0	0	Demand-Response	2	No	0	1	1	3	Non-shortage area
49	Early	Southwest	10,247	Small City	2	26.7	33.4%	2.0	3	Demand-Response	2	Entire	2	1	1	10	Shortage area

50	Echols	Southwest	4,000	Rural	4	26.5	26.9%	1.6	3	Demand-Response	2	Entire	2	0	2	13	Shortage area
51	Effingham	East	62,190	Metro	0	9.8	10.5%	0.6	0	Demand-Response	2	Partial	1	0	2	5	Borderline
52	Elbert	East	19,120	Small City	2	22.9	32.0%	1.9	3	Demand-Response	2	No	0	1	1	8	Shortage area
53	Emanuel	East	22,612	Urban	1	27.6	31.4%	1.8	3	None	3	Entire	2	1	1	10	Shortage area
54	Evans	East	10,721	Small City	2	28.0	31.2%	1.8	3	None	3	No	0	1	1	9	Shortage area
55	Fannin	North	25,964	Urban Area	1		15.6%	0.9	0	Demand-Response	2	No	0	1	1	4	Borderline
56	Fayette	Central	113,459	Metro	0	5.7	8.9%	0.5	0	None	3	No	0	0	2	5	Borderline
57	Floyd	North	97,927	Metro	0		22.8%	1.3	3	Limited	1	No	0	0	2	6	Shortage area
58	Forsyth	North	236,612	Metro	0		5.8%	0.3	0	Demand-Response	2	No	0	2	0	2	Non-shortage area
59	Franklin	North	23,023	Urban Area	1		26.9%	1.6	3	None	3	No	0	1	1	8	Shortage area
60	Fulton	Atlanta	1,050,114	Metro	0	14.8	17.2%	1.0	1	Yes	0	Partial	1	10+	0	2	Non-shortage area
61	Gilmer	North	30,816	Urban Area	1		25.3%	1.5	3	Demand-Response	2	No	0	2	0	6	Shortage area
62	Glascock	East	2,995	Rural	4	17.3	6.9%	0.4	0	Demand-Response	2	Entire	2	1	1	9	Shortage area
63	Glynn	East	85,219	Metro	0	17.0	26.0%	1.5	3	Demand-Response	2	No	0	2	0	5	Non-shortage area
64	Gordon	North	57,685	Metro	0		23.4%	1.4	3	Demand-Response	2	No	0	0	2	7	Shortage area
65	Grady	Southwest	24,748	Urban Area	1	20.3	30.9%	1.8	3	Demand-Response	2	No	0	0	2	8	Shortage area
66	Greene	East	17,698	Small City	2	17.0	31.0%	1.8	3	Demand-Response	2	No	0	3	0	7	Shortage area
67	Gwinnett	Atlanta	927,781	Metro	0	10.7	14.0%	0.8	0	Yes	0	No	0	4	0	0	Non-shortage area
68	Habersham	North	45,388	Urban Area	1		18.1%	1.1	2	Demand-Response	2	No	0	1	1	6	Shortage area
69	Hall	North	202,148	Metro	0		19.4%	1.1	2	Demand-Response	2	No	0	1	1	5	Borderline
70	Hancock	East	8,348	Small Town	3	30.3	50.0%	2.9	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
71	Haralson	North	29,533	Urban Area	1		21.3%	1.2	2	Demand-Response	2	No	0	0	2	7	Shortage area
72	Harris	Southwest	34,475	Urban Area	1	8.3	7.6%	0.4	0	None	3	Entire	2	1	1	7	Shortage area
73	Hart	East	26,099	Urban	1	18.9	25.0%	1.5	3	Demand-Response	2	Entire	2	1	1	9	Shortage area
74	Heard	Central	11,879	Small City	2	18.9	20.5%	1.2	0	Demand-Response	2	No	0	0	2	6	Shortage area
75	Henry	Central	230,220	Metro	0	9.8	14.0%	0.8	0	Limited	1	No	0	0	2	3	Non-shortage area
76	Houston	Southwest	155,469	Metro	0	13.0	20.1%	1.2	2	Demand-Response	2	No	0	4	0	4	Borderline
77	Irwin	Southwest	9,398	Small Town	3	22.0	28.9%	1.7	3	Demand-Response	2	No	0	2	0	8	Shortage area
78	Jackson	North	60,485	Metro	0		11.4%	0.7	0	Demand-Response	2	No	0	2	0	2	Non-shortage area
79	Jasper	Central	14,040	Small City	2	17.6	22.8%	1.3	3	None	3	Entire	2	0	2	12	Shortage area
80	Jeff Davis	East	15,029	Small City	2	21.2	26.5%	1.5	3	None	3	Entire	2	0	2	12	Shortage area
81	Jefferson	East	15,430	Small City	2	24.0	35.0%	2.0	3	Demand-Response	2	Entire	2	2	0	9	Shortage area
82	Jenkins	East	8,683	Small Town	3	32.8	32.8%	1.9	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
83	Johnson	East	9,708	Small Town	3	29.0	27.0%	1.6	3	None	3	Entire	2	1	1	12	Shortage area
84	Jones	Central	28,616	Urban Area	1	12.9	16.1%	0.9	0	Demand-Response	2	No	0	1	1	4	Borderline
85	Lamar	Central	19,000	Small City	2	16.5	26.7%	1.6	3	Demand-Response	2	No	0	1	1	8	Shortage area
86	Lanier	Southwest	10,340	Small City	2	20.5	27.8%	1.6	3	Demand-Response	2	Entire	2	0	2	11	Shortage area
87	Laurens	Central	47,325	Urban Area	1	22.6	31.8%	1.9	3	None	3	No	0	1	1	8	Shortage area
88	Lee	Southwest	29,764	Urban Area	1	10.9	12.2%	0.7	0	Demand-Response	2	Entire	2	1	1	6	Shortage area
89	Liberty	East	61,497	Metro	0	16.8	18.6%	1.1	2	Limited	1	Entire	2	2	0	5	Borderline
90	Lincoln	East	7,915	Small Town	3	18.1	35.3%	2.1	3	Demand-Response	2	Entire	2	0	2	12	Shortage area
91	Long	East	18,998	Small City	2	19.1	18.7%	1.1	2	Demand-Response	2	Entire	2	1	1	9	Shortage area
92	Lowndes	Southwest	116,321	Metro	0	25.3	26.8%	1.6	3	Demand-Response	2	No	0	1	1	6	Shortage area
93	Lumpkin	North	32,955	Urban Area	1		15.0%	0.9	0	Demand-Response	2	No	0	1	1	4	Borderline
94	Macon	Southwest	13,143	Small City	2	29.6	37.5%	2.2	3	Demand-Response	2	Entire	2	2	0	9	Shortage area
95	Madison	East	29,650	Urban	1	15.9	19.7%	1.2	2	None	3	No	0	1	1	7	Shortage area
96	Marion	Southwest	8,351	Small Town	3	23.9	27.7%	1.6	3	None	3	Entire	2	0	2	13	Shortage area
97	McDuffie	East	21,531	Urban	1	21.2	33.7%	2.0	3	Demand-Response	2	No	0	0	2	8	Shortage area
98	Mcintosh	East	14,340	Small City	2	19.5	21.4%	1.3	3	Demand-Response	2	Entire	2	1	1	10	Shortage area
99	Meriwether	Central	21,068	Urban Area	1	19.9	25.6%	1.5	3	Demand-Response	2	Entire	2	2	0	8	Shortage area
100	Miller	Southwest	5,686	Small Town	3	23.8	38.0%	2.2	3	Demand-Response	2	No	0	0	2	10	Shortage area
101	Mitchell	Southwest	22,192	Urban Area	1	27.5	31.9%	1.9	3	Demand-Response	2	Entire	2	0	2	10	Shortage area
102	Monroe	Central	27,520	Urban Area	1	13.3	11.9%	0.7	0	None	3	No	0	0	2	6	Shortage area
103	Montgomery	East	9,193	Small Town	3	20.5	22.5%	1.3	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
104	Morgan	North	18,853	Small City	2		17.1%	1.0	1	Demand-Response	2	Entire	2	0	2	9	Shortage area
105	Murray	North	39,921	Urban Area	1		19.1%	1.1	2	Demand-Response	2	No	0	1	1	6	Shortage area
106	Muscogee	Southwest	194,160	Metro	0	22.6	24.6%	1.4	3	Limited	1	No	0	1	1	5	Borderline
107	Newton	Central	109,541	Metro	0	13.4	19.7%	1.2	2	None	3	No	0	0	2	7	Shortage area
108	Oconee	East	39,272	Urban	1	6.5	8.00%	0.5	0	Limited	1	No	0	0	2	4	Borderline
109	Oglethorpe	East	15,054	Small City	2	13.4	28.6%	1.7	3	Demand-Response	2	No	0	1	1	8	Shortage area
110	Paulding	North	164,044	Metro	0		10.3%	0.6	0	Demand-Response	2	Entire	2	0	2	6	Shortage area
111	Peach	Southwest	27,297	Urban Area	1	19.6	21.1%	1.2	2	None	3	Entire	2	1	1	9	Shortage area
112	Pickens	North	31,980	Urban Area	1		8.4%	0.5	0	Demand-Response	2	No	0	1	1	4	Borderline
113	Pierce	East	19,389	Small City	2	19.4	25.9%	1.5	3	Demand-Response	2	No	0	0	2	9	Shortage area

114	Pike	Central	18,634	Small City	2	10.7	14.2%	0.8	0	Demand-Response	2	No	0	1	1	5	Borderline
115	Polk	North	42,470	Urban Area	1	19.0	27.7%	1.6	3	Demand-Response	2	No	0	1	1	7	Shortage area
116	Pulaski	Southwest	11,069	Small City	2	22.5	27.9%	1.6	3	Demand-Response	2	No	0	1	1	8	Shortage area
117	Putnam	Central	21,809	Urban Area	1	17.2	18.9%	1.1	2	Demand-Response	2	No	0	1	1	6	Shortage area
118	Quitman	Southwest	2,279	Rural	4	26.1	46.3%	2.7	3	Demand-Response	2	Entire	2	1	1	12	Shortage area
119	Rabun	North	16,867	Small City	2	17.8	26.2%	1.5	3	Demand-Response	2	No	0	2	0	7	Shortage area
120	Randolph	Southwest	6,833	Small Town	3	33.6	57.0%	3.3	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
121	Richmond	East	201,554	Metro	0	23.7	32.0%	1.9	3	Yes	0	No	0	5	0	3	Non-shortage area
122	Rockdale	Central	90,594	Metro	0	14.1	20.6%	1.2	2	None	3	No	0	1	1	6	Shortage area
123	Schley	Southwest	5,236	Small Town	3	18.0	28.5%	1.7	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
124	Screven	East	13,938	Small City	2	20.5	30.2%	1.8	3	Demand-Response	2	Entire	2	0	2	11	Shortage area
125	Seminole	Southwest	8,315	Small Town	3	29.2	40.2%	2.4	3	Demand-Response	2	No	0	0	2	10	Shortage area
126	Spalding	Central	66,100	Metro	0	19.9	29.2%	1.7	3	Demand-Response	2	No	0	2	0	5	Borderline
127	Stephens	North	26,035	Urban Area	1	18.7	20.1%	1.2	2	None	3	No	0	0	2	8	Shortage area
128	Stewart	Southwest	6,199	Small Town	3	36.2	48.7%	2.8	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
129	Sumter	Southwest	29,733	Urban Area	1	25.5	43.6%	2.5	3	Demand-Response	2	No	0	5	0	6	Shortage area
130	Talbot	Southwest	6,272	Small Town	3	22.2	21.1%	1.2	2	Demand-Response	2	Entire	2	1	1	10	Shortage area
131	Taliaferro	East	1,608	Rural	4	26.5	38.9%	2.3	3	Demand-Response	2	Entire	2	1	1	12	Shortage area
132	Tattnall	East	25,391	Urban	1	27.3	31.1%	1.8	3	None	3	No	0	1	1	8	Shortage area
133	Taylor	Southwest	8,039	Small Town	3	23.7	32.2%	1.9	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
134	Telfair	Central	15,876	Small City	2	34.6	35.4%	2.1	3	Demand-Response	2	No	0	1	1	8	Shortage area
135	Terrell	Southwest	8,611	Small Town	3	33.0	47.3%	2.8	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
136	Thomas	Southwest	44,448	Urban Area	1	17.9	24.2%	1.4	3	Demand-Response	2	No	0	3	0	6	Shortage area
137	Tift	Southwest	40,571	Urban Area	1	21.7	30.1%	1.8	3	Demand-Response	2	No	0	2	0	6	Shortage area
138	Toombs	East	26,887	Urban	1	22.3	24.5%	1.4	3	None	3	No	0	1	1	8	Shortage area
139	Towns	North	11,852	Small City	2	13.8	22.6%	1.3	3	Demand-Response	2	No	0	0	2	9	Shortage area
140	Treutlen	East	6,809	Small Town	3	27.4	24.8%	1.5	3	None	3	Entire	2	1	1	12	Shortage area
141	Troup	Central	70,034	Metro	0	21.6	26.0%	1.5	3	Demand-Response	2	No	0	0	2	7	Shortage area
142	Turner	Southwest	7,912	Small Town	3	27.6	38.1%	2.2	3	Demand-Response	2	No	0	1	1	9	Shortage area
143	Twiggs	Central	8,188	Small Town	3	22.2	20.1%	1.2	2	Demand-Response	2	Entire	2	1	1	10	Shortage area
144	Union	North	24,001	Urban Area	1	15.4	23.0%	1.3	3	Demand-Response	2	No	0	0	2	8	Shortage area
145	Upson	Southwest	26,215	Urban Area	1	20.5	29.5%	1.7	3	Demand-Response	2	No	0	1	1	7	Shortage area
146	Walker	North	69,410	Metro	0	15.6	19.9%	1.2	2	Demand-Response	2	No	0	1	1	5	Borderline
147	Walton	North	93,503	Metro	0	12.3	14.3%	0.8	0	Demand-Response	2	No	0	1	1	3	Non-shortage area
148	Ware	East	35,680	Urban	1	22.0	30.4%	1.8	3	Demand-Response	2	No	0	1	1	7	Shortage area
149	Warren	East	5,251	Small Town	3	27.9	36.9%	2.2	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
150	Washington	East	20,386	Urban	1	26.7	34.5%	2.0	3	None	3	No	0	2	0	7	Shortage area
151	Wayne	East	29,808	Urban	1	20.2	20.7%	1.2	2	Demand-Response	2	No	0	1	1	6	Shortage area
152	Webster	Southwest	2,611	Rural	4	20.0	20.8%	1.2	2	None	3	Entire	2	1	1	12	Shortage area
153	Wheeler	East	7,879	Small Town	3	37.4	43.9%	2.6	3	None	3	Entire	2	1	1	12	Shortage area
154	White	North	29,970	Urban Area	1	13.3	21.9%	1.3	3	Demand-Response	2	No	0	1	1	7	Shortage area
155	Whitfield	North	104,062	Metro	0	16.5	21.5%	1.3	3	Demand-Response	2	No	0	1	1	6	Shortage area
156	Wilcox	Southwest	8,812	Small Town	3	30.7	24.8%	1.5	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
157	Wilkes	East	9,876	Small Town	3	22.8	39.2%	2.3	3	Demand-Response	2	No	0	0	2	10	Shortage area
158	Wilkinson	Central	9,036	Small Town	3	23.5	30.0%	1.8	3	None	3	No	0	1	1	10	Shortage area
159	Worth	Southwest	20,299	Urban Area	1	21.6	31.2%	1.8	3	Demand-Response	2	No	0	0	2	8	Shortage area

** Families with related children under 18*

Number of counties, Non-shortage ar	16	10.1%
Number of counties, Borderline	26	16.4%
Number of counties, Shortage areas	117	73.6%

The Health Transportation Shortage Index
Georgia
Summary Table

County Estimates - 2017/2018

			Population			Poverty Rate				Public Transportation		Health Provider Shortage Area		Federally Qualified Health Centers			
#	County Name	Non-emergency medical transportation region	Population	Type of area	HSTI value	Poverty Rate, All Ages (US = 12.3%)	Poverty Rate, Families* (US = 17.1%)	Relative to US rate (US=17.1)	Poverty Rate, HTSI value	Public Transp.	Public transport, HTSI value	HPSA	HPSA, HTSI value	FQHC #	FQHC, HTSI value	**HTSI Score**	**HTSI designation**
157	Fulton	Atlanta	1,050,114	Metro	0	14.8	17.2%	1.0	1	Yes	0	Partial	1	10+	0	**2**	Non-shortage area
158	DeKalb	Atlanta	756,558	Metro	0	15.3	19.6%	1.1	2	Yes	0	Partial	1	10+	0	**3**	Non-shortage area
159	Gwinnett	Atlanta	927,781	Metro	0	10.7	14.0%	0.8	0	Yes	0	No	0	4	0	**0**	Non-shortage area
131	Baldwin	Central	44,823	Urban Area	1	25.2	29.9%	1.7	3	Demand-Response	2	No	0	3	0	**6**	Shortage area
132	Bibb	Central	153,095	Metro	0	25.0	35.6%	2.1	3	Yes	0	No	0	5	0	**3**	Non-shortage area
133	Bleckley	Central	12,838	Small City	2	20.3	26.7%	1.6	3	Demand-Response	2	Entire	2	1	1	**10**	Shortage area
134	Butts	Central	24,193	Urban Area	1	18.3	30.5%	1.8	3	None	3	No	0	1	1	**8**	Shortage area
135	Carroll	Central	118,121	Metro	0	17.2	21.3%	1.2	2	Demand-Response	2	No	0	1	1	**5**	Borderline
136	Clayton	Central	289,615	Metro	0	16.3	26.1%	1.5	3	Limited	1	No	0	6	0	**4**	Borderline
137	Coweta	Central	145,864	Metro	0	10.4	14.9%	0.9	0	Demand-Response	2	No	0	1	1	**3**	Non-shortage area
138	Dodge	Central	20,705	Urban Area	1	21.8	28.6%	1.7	3	Demand-Response	2	No	0	1	1	**7**	Shortage area
139	Fayette	Central	113,459	Metro	0	5.7	8.9%	0.5	0	None	3	No	0	0	2	**5**	Borderline
140	Heard	Central	11,879	Small City	2	18.9	20.5%	1.2	0	Demand-Response	2	No	0	0	2	**6**	Shortage area
141	Henry	Central	230,220	Metro	0	9.8	14.0%	0.8	0	Limited	1	No	0	0	2	**3**	Non-shortage area
142	Jasper	Central	14,040	Small City	2	17.6	22.8%	1.3	3	None	3	Entire	2	0	2	**12**	Shortage area
143	Jones	Central	28,616	Urban Area	1	12.9	16.1%	0.9	0	Demand-Response	2	No	0	1	1	**4**	Borderline
144	Lamar	Central	19,000	Small City	2	16.5	26.7%	1.6	3	Demand-Response	2	No	0	1	1	**8**	Shortage area
145	Laurens	Central	47,325	Urban Area	1	22.6	31.8%	1.9	3	None	3	No	0	1	1	**8**	Shortage area
146	Meriwether	Central	21,068	Urban Area	1	19.9	25.6%	1.5	3	Demand-Response	2	Entire	2	2	0	**8**	Shortage area
147	Monroe	Central	27,520	Urban Area	1	13.3	11.9%	0.7	0	None	3	No	0	0	2	**6**	Shortage area
148	Newton	Central	109,541	Metro	0	13.4	19.7%	1.2	2	None	3	No	0	0	2	**7**	Shortage area
149	Pike	Central	18,634	Small City	2	10.7	14.2%	0.8	0	Demand-Response	2	No	0	1	1	**5**	Borderline
150	Putnam	Central	21,809	Urban Area	1	17.2	18.9%	1.1	2	Demand-Response	2	No	0	1	1	**6**	Shortage area
151	Rockdale	Central	90,594	Metro	0	14.1	20.6%	1.2	2	None	3	No	0	1	1	**6**	Shortage area
152	Spalding	Central	66,100	Metro	0	19.9	29.2%	1.7	3	Demand-Response	2	No	0	2	0	**5**	Borderline
153	Telfair	Central	15,876	Small City	2	34.6	35.4%	2.1	3	Demand-Response	2	No	0	1	1	**8**	Shortage area
154	Troup	Central	70,034	Metro	0	21.6	26.0%	1.5	3	Demand-Response	2	No	0	0	2	**7**	Shortage area
155	Twiggs	Central	8,188	Small Town	3	22.2	20.1%	1.2	2	Demand-Response	2	Entire	2	1	1	**10**	Shortage area
156	Wilkinson	Central	9,036	Small Town	3	23.5	30.0%	1.8	3	None	3	No	0	1	1	**10**	Shortage area
1	Appling	East	18,507	Small City	2	22.2	31.0%	1.8	3	Demand-Response	2	No	0	1	1	**8**	Shortage area
2	Bacon	East	11,185	Small City	2	28.2	27.0%	1.6	3	Demand-Response	2	No	0	1	1	**8**	Shortage area
3	Brantley	East	18,897	Small City	2	19.0	19.4%	1.1	2	Demand-Response	2	Entire	2	1	1	**9**	Shortage area
4	Bryan	East	38,109	Urban	1	10.4	16.0%	0.9	0	Demand-Response	2	No	0	1	1	**4**	Borderline
5	Bulloch	East	77,296	Metro	0	24.6	27.9%	1.6	3	Demand-Response	2	No	0	1	1	**6**	Shortage area
6	Burke	East	22,423	Urban	1	23.1	36.6%	2.1	3	Demand-Response	2	Entire	2	1	1	**9**	Shortage area
7	Camden	East	53,677	Metro	0	12.5	18.6%	1.1	2	Demand-Response	2	No	0	1	1	**5**	Borderline
8	Candler	East	10,836	Small City	2	24.7	43.7%	2.6	3	None	3	No	0	1	1	**9**	Shortage area
9	Charlton	East	12,968	Small City	2	25.6	22.1%	1.3	3	None	3	Entire	2	1	1	**11**	Shortage area
10	Chatham	East	289,195	Metro	0	16.3	21.5%	1.3	3	Yes	0	Partial	1	10	0	**4**	Borderline
11	Clarke	East	127,330	Metro	0	26.6	32.3%	1.9	3	Yes	0	No	0	2	0	**3**	Non-shortage area
12	Columbia	East	154,291	Metro	0	6.6	8.8%	0.5	0	Demand-Response	2	No	0	0	2	**4**	Borderline
13	Effingham	East	62,190	Metro	0	9.8	10.5%	0.6	0	Demand-Response	2	Partial	1	0	2	**5**	Borderline
14	Elbert	East	19,120	Small City	2	22.9	32.0%	1.9	3	Demand-Response	2	No	0	1	1	**8**	Shortage area
15	Emanuel	East	22,612	Urban	1	27.6	31.4%	1.8	3	None	3	Entire	2	1	1	**10**	Shortage area
16	Evans	East	10,721	Small City	2	28.0	31.2%	1.8	3	None	3	No	0	1	1	**9**	Shortage area
17	Glascock	East	2,995	Rural	4	17.3	6.9%	0.4	0	Demand-Response	2	Entire	2	1	1	**9**	Shortage area
18	Glynn	East	85,219	Metro	0	17.0	26.0%	1.5	3	Demand-Response	2	No	0	2	0	**5**	Non-shortage area
19	Greene	East	17,698	Small City	2	17.0	31.0%	1.8	3	Demand-Response	2	No	0	3	0	**7**	Shortage area
20	Hancock	East	8,348	Small Town	3	30.3	50.0%	2.9	3	Demand-Response	2	Entire	2	1	1	**11**	Shortage area
21	Hart	East	26,099	Urban	1	18.9	25.0%	1.5	3	Demand-Response	2	Entire	2	1	1	**9**	Shortage area

22	Jeff Davis	East	15,029	Small City	2	21.2	26.5%	1.5	3	None	3	Entire	2	0	2	12	Shortage area
23	Jefferson	East	15,430	Small City	2	24.0	35.0%	2.0	3	Demand-Response	2	Entire	2	2	0	9	Shortage area
24	Jenkins	East	8,683	Small Town	3	32.8	32.8%	1.9	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
25	Johnson	East	9,708	Small Town	3	29.0	27.0%	1.6	3	None	3	Entire	2	1	1	12	Shortage area
26	Liberty	East	61,497	Metro	0	16.8	18.6%	1.1	2	Limited	1	Entire	2	2	0	5	Borderline
27	Lincoln	East	7,915	Small Town	3	18.1	35.3%	2.1	3	Demand-Response	2	Entire	2	0	2	12	Shortage area
28	Long	East	18,998	Small City	2	19.1	18.7%	1.1	2	Demand-Response	2	Entire	2	1	1	9	Shortage area
29	Madison	East	29,650	Urban	1	15.9	19.7%	1.2	2	None	3	No	0	1	1	7	Shortage area
30	McDuffie	East	21,531	Urban	1	21.2	33.7%	2.0	3	Demand-Response	2	No	0	0	2	8	Shortage area
31	Mcintosh	East	14,340	Small City	2	19.5	21.4%	1.3	3	Demand-Response	2	Entire	2	1	1	10	Shortage area
32	Montgomery	East	9,193	Small Town	3	20.5	22.5%	1.3	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
33	Oconee	East	39,272	Urban	1	6.5	8.00%	0.5	0	Limited	1	No	0	0	2	4	Borderline
34	Oglethorpe	East	15,054	Small City	2	13.4	28.6%	1.7	3	Demand-Response	2	No	0	1	1	8	Shortage area
35	Pierce	East	19,389	Small City	2	19.4	25.9%	1.5	3	Demand-Response	2	No	0	0	2	9	Shortage area
36	Richmond	East	201,554	Metro	0	23.7	32.0%	1.9	3	Yes	0	No	0	5	0	3	Non-shortage area
37	Screven	East	13,938	Small City	2	20.5	30.2%	1.8	3	Demand-Response	2	Entire	2	0	2	11	Shortage area
38	Taliaferro	East	1,608	Rural	4	26.5	38.9%	2.3	3	Demand-Response	2	Entire	2	1	1	12	Shortage area
39	Tattnall	East	25,391	Urban	1	27.3	31.1%	1.8	3	None	3	No	0	1	1	8	Shortage area
40	Toombs	East	26,887	Urban	1	22.3	24.5%	1.4	3	None	3	No	0	1	1	8	Shortage area
41	Treutlen	East	6,809	Small Town	3	27.4	24.8%	1.5	3	None	3	Entire	2	1	1	12	Shortage area
42	Ware	East	35,680	Urban	1	22.0	30.4%	1.8	3	Demand-Response	2	No	0	1	1	7	Shortage area
43	Warren	East	5,251	Small Town	3	27.9	36.9%	2.2	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
44	Washington	East	20,386	Urban	1	26.7	34.5%	2.0	3	None	3	No	0	2	0	7	Shortage area
45	Wayne	East	29,808	Urban	1	20.2	20.7%	1.2	2	Demand-Response	2	No	0	1	1	6	Shortage area
46	Wheeler	East	7,879	Small Town	3	37.4	43.9%	2.6	3	None	3	Entire	2	1	1	12	Shortage area
47	Wilkes	East	9,876	Small Town	3	22.8	39.2%	2.3	3	Demand-Response	2	No	0	0	2	10	Shortage area
97	Banks	North	18,988	Small City	2		15.9%	0.9	0	Demand-Response	2	No	0	1	1	5	Borderline
98	Barrow	North	80,809	Metro	0		14.0%	0.8	0	None	3	No	0	1	1	4	Borderline
99	Bartow	North	106,408	Metro	0		14.5%	0.8	0	Demand-Response	2	No	0	1	1	3	Non-shortage area
100	Catoosa	North	67,420	Metro	0		12.3%	0.7	0	Demand-Response	2	No	0	2	0	2	Non-shortage area
101	Chattooga	North	24,790	Urban Area	1		23.7%	1.4	3	Demand-Response	2	No	0	1	1	7	Shortage area
102	Cherokee	North	254,149	Metro	0		10.2%	0.6	0	Yes	0	No	0	1	1	1	Non-shortage area
103	Cobb	North	756,865	Metro	0		11.1%	0.6	0	Yes	0	No	0	3	0	0	Non-shortage area
104	Dade	North	16,226	Small City	2		20.4%	1.2	2	Demand-Response	2	Entire	2	1	1	9	Shortage area
105	Dawson	North	25,083	Urban Area	1		15.1%	0.9	0	Demand-Response	2	No	0	1	1	4	Borderline
106	Douglas	North	145,331	Metro	0		16.7%	1.0	0	Demand-Response	2	No	0	1	1	3	Non-shortage area
107	Fannin	North	25,964	Urban Area	1		15.6%	0.9	0	Demand-Response	2	No	0	1	1	4	Borderline
108	Floyd	North	97,927	Metro	0		22.8%	1.3	3	Limited	1	No	0	0	2	6	Shortage area
109	Forsyth	North	236,612	Metro	0		5.8%	0.3	0	Demand-Response	2	No	0	2	0	2	Non-shortage area
110	Franklin	North	23,023	Urban Area	1		26.9%	1.6	3	None	3	No	0	1	1	8	Shortage area
111	Gilmer	North	30,816	Urban Area	1		25.3%	1.5	3	Demand-Response	2	No	0	2	0	6	Shortage area
112	Gordon	North	57,685	Metro	0		23.4%	1.4	3	Demand-Response	2	No	0	0	2	7	Shortage area
113	Habersham	North	45,388	Urban Area	1		18.1%	1.1	2	Demand-Response	2	No	0	1	1	6	Shortage area
114	Hall	North	202,148	Metro	0		19.4%	1.1	2	Demand-Response	2	No	0	1	1	5	Borderline
115	Haralson	North	29,533	Urban Area	1		21.3%	1.2	2	Demand-Response	2	No	0	0	2	7	Shortage area
116	Jackson	North	60,485	Metro	0		11.4%	0.7	0	Demand-Response	2	No	0	2	0	2	Non-shortage area
117	Lumpkin	North	32,955	Urban Area	1		15.0%	0.9	0	Demand-Response	2	No	0	1	1	4	Borderline
118	Morgan	North	18,853	Small City	2		17.1%	1.0	1	Demand-Response	2	Entire	2	0	2	9	Shortage area
119	Murray	North	39,921	Urban Area	1		19.1%	1.1	2	Demand-Response	2	No	0	1	1	6	Shortage area
120	Paulding	North	164,044	Metro	0		10.3%	0.6	0	Demand-Response	2	Entire	2	0	2	6	Shortage area
121	Pickens	North	31,980	Urban Area	1		8.4%	0.5	0	Demand-Response	2	No	0	1	1	4	Borderline
122	Polk	North	42,470	Urban Area	1	19.0	27.7%	1.6	3	Demand-Response	2	No	0	1	1	7	Shortage area
123	Rabun	North	16,867	Small City	2	17.8	26.2%	1.5	3	Demand-Response	2	No	0	2	0	7	Shortage area
124	Stephens	North	26,035	Urban Area	1	18.7	20.1%	1.2	2	None	3	No	0	0	2	8	Shortage area
125	Towns	North	11,852	Small City	2	13.8	22.6%	1.3	3	Demand-Response	2	No	0	0	2	9	Shortage area
126	Union	North	24,001	Urban Area	1	15.4	23.0%	1.3	3	Demand-Response	2	No	0	0	2	8	Shortage area
127	Walker	North	69,410	Metro	0	15.6	19.9%	1.2	2	Demand-Response	2	No	0	1	1	5	Borderline
128	Walton	North	93,503	Metro	0	12.3	14.3%	0.8	0	Demand-Response	2	No	0	1	1	3	Non-shortage area
129	White	North	29,970	Urban Area	1	13.3	21.9%	1.3	3	Demand-Response	2	No	0	1	1	7	Shortage area
130	Whitfield	North	104,062	Metro	0	16.5	21.5%	1.3	3	Demand-Response	2	No	0	1	1	6	Shortage area
48	Atkinson	Southwest	8,297	Small Town	3	24.2	33.0%	1.9	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
49	Baker	Southwest	3,092	Rural	4	24.6	17.4%	1.0	1	Demand-Response	2	No	0	1	1	8	Shortage area
50	Ben Hill	Southwest	16,787	Small City	2	24.5	34.6%	2.0	3	Demand-Response	2	No	0	1	1	8	Shortage area
51	Berrien	Southwest	19,252	Small City	2	18.6	29.8%	1.7	3	Demand-Response	2	Entire	2	1	1	10	Shortage area

52	Brooks	Southwest	15,513	Small City	2	23.7	34.9%	2.0	3	Demand-Response	2	Entire	2	1	1	10	Shortage area
53	Calhoun	Southwest	6,352	Small Town	3	35.1	39.7%	2.3	3	Demand-Response	2	No	0	1	1	9	Shortage area
54	Chattahoochee	Southwest	10,684	Small City	2	19.6	13.6%	0.8	0	Demand-Response	2	No	0	1	1	5	Borderline
55	Clay	Southwest	2,887	Rural	4	33.1	57.8%	3.4	3	Demand-Response	2	Entire	2	0	2	13	Shortage area
56	Clinch	Southwest	6,648	Small Town	3	27.6	43.7%	2.6	3	Demand-Response	2	No	0	0	2	10	Shortage area
57	Coffee	Southwest	43,093	Urban Area	1	24.9	31.7%	1.9	3	Demand-Response	2	No	0	3	0	6	Shortage area
58	Colquitt	Southwest	45,592	Urban Area	1	25.6	30.6%	1.8	3	Demand-Response	2	Entire	2	2	0	8	Shortage area
59	Cook	Southwest	17,162	Small City	2	21.3	27.5%	1.6	3	Demand-Response	2	No	0	1	1	8	Shortage area
60	Crawford	Southwest	12,318	Small City	2	17.6	22.1%	1.3	3	Demand-Response	2	Entire	2	0	2	11	Shortage area
61	Crisp	Southwest	22,601	Urban Area	1	29.7	40.2%	2.4	3	Demand-Response	2	No	0	6	0	6	Shortage area
62	Decatur	Southwest	26,575	Urban Area	1	21.9	32.0%	1.9	3	Demand-Response	2	No	0	1	1	7	Shortage area
63	Dooly	Southwest	13,706	Small City	2	27.6	30.6%	1.8	3	Demand-Response	2	Entire	2	1	1	10	Shortage area
64	Dougherty	Southwest	91,243	Metro	0	28.2	37.6%	2.2	3	Demand-Response	2	No	0	8	0	5	Borderline
65	Early	Southwest	10,247	Small City	2	26.7	33.4%	2.0	3	Demand-Response	2	Entire	2	1	1	10	Shortage area
66	Echols	Southwest	4,000	Rural	4	26.5	26.9%	1.6	3	Demand-Response	2	Entire	2	0	2	13	Shortage area
67	Grady	Southwest	24,748	Urban Area	1	20.3	30.9%	1.8	3	Demand-Response	2	No	0	0	2	8	Shortage area
68	Harris	Southwest	34,475	Urban Area	1	8.3	7.6%	0.4	0	None	3	Entire	2	1	1	7	Shortage area
69	Houston	Southwest	155,469	Metro	0	13.0	20.1%	1.2	2	Demand-Response	2	No	0	4	0	4	Borderline
70	Irwin	Southwest	9,398	Small Town	3	22.0	28.9%	1.7	3	Demand-Response	2	No	0	2	0	8	Shortage area
71	Lanier	Southwest	10,340	Small City	2	20.5	27.8%	1.6	3	Demand-Response	2	Entire	2	0	2	11	Shortage area
72	Lee	Southwest	29,764	Urban Area	1	10.9	12.2%	0.7	0	Demand-Response	2	Entire	2	1	1	6	Shortage area
73	Lowndes	Southwest	116,321	Metro	0	25.3	26.8%	1.6	3	Demand-Response	2	No	0	1	1	6	Shortage area
74	Macon	Southwest	13,143	Small City	2	29.6	37.5%	2.2	3	Demand-Response	2	Entire	2	2	0	9	Shortage area
75	Marion	Southwest	8,351	Small Town	3	23.9	27.7%	1.6	3	None	3	Entire	2	0	2	13	Shortage area
76	Miller	Southwest	5,686	Small Town	3	23.8	38.0%	2.2	3	Demand-Response	2	No	0	0	2	10	Shortage area
77	Mitchell	Southwest	22,192	Urban Area	1	27.5	31.9%	1.9	3	Demand-Response	2	Entire	2	0	2	10	Shortage area
78	Muscogee	Southwest	194,160	Metro	0	22.6	24.6%	1.4	3	Limited	1	No	0	1	1	5	Borderline
79	Peach	Southwest	27,297	Urban Area	1	19.6	21.1%	1.2	2	None	3	Entire	2	1	1	9	Shortage area
80	Pulaski	Southwest	11,069	Small City	2	22.5	27.9%	1.6	3	Demand-Response	2	No	0	1	1	8	Shortage area
81	Quitman	Southwest	2,279	Rural	4	26.1	46.3%	2.7	3	Demand-Response	2	Entire	2	1	1	12	Shortage area
82	Randolph	Southwest	6,833	Small Town	3	33.6	57.0%	3.3	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
83	Schley	Southwest	5,236	Small Town	3	18.0	28.5%	1.7	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
84	Seminole	Southwest	8,315	Small Town	3	29.2	40.2%	2.4	3	Demand-Response	2	No	0	0	2	10	Shortage area
85	Stewart	Southwest	6,199	Small Town	3	36.2	48.7%	2.8	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
86	Sumter	Southwest	29,733	Urban Area	1	25.5	43.6%	2.5	3	Demand-Response	2	No	0	5	0	6	Shortage area
87	Talbot	Southwest	6,272	Small Town	3	22.2	21.1%	1.2	2	Demand-Response	2	Entire	2	1	1	10	Shortage area
88	Taylor	Southwest	8,039	Small Town	3	23.7	32.2%	1.9	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
89	Terrell	Southwest	8,611	Small Town	3	33.0	47.3%	2.8	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
90	Thomas	Southwest	44,448	Urban Area	1	17.9	24.2%	1.4	3	Demand-Response	2	No	0	3	0	6	Shortage area
91	Tift	Southwest	40,571	Urban Area	1	21.7	30.1%	1.8	3	Demand-Response	2	No	0	2	0	6	Shortage area
92	Turner	Southwest	7,912	Small Town	3	27.6	38.1%	2.2	3	Demand-Response	2	No	0	1	1	9	Shortage area
93	Upson	Southwest	26,215	Urban Area	1	20.5	29.5%	1.7	3	Demand-Response	2	No	0	1	1	7	Shortage area
94	Webster	Southwest	2,611	Rural	4	20.0	20.8%	1.2	2	None	3	Entire	2	1	1	12	Shortage area
95	Wilcox	Southwest	8,812	Small Town	3	30.7	24.8%	1.5	3	Demand-Response	2	Entire	2	1	1	11	Shortage area
96	Worth	Southwest	20,299	Urban Area	1	21.6	31.2%	1.8	3	Demand-Response	2	No	0	0	2	8	Shortage area

** Families with related children under 18*

Number of counties, Non-shortage ar	16	10.1%
Number of counties, Borderline	26	16.4%
Number of counties, Shortage areas	117	73.6%

Appendix C. Methodology & sources

The Health Transportation Shortage Index (HTSI) aims to examine health care access through transportation scarcity. GHF assessed each of Georgia's 159 counties using the HTSI's validated procedures. GHF then grouped the counties into the Georgia Department of Community Health's non-emergency medical transportation regions for analysis: North, Central, Atlanta, East, and Southwest regions.

Materials
The validated instrument, the Health Transportation Shortage Index, associates transportation shortage with five measurable factors: type of area, household poverty rate, public transportation availability, health professional shortage area designation, and location of federally qualified health centers. Type of area was measured based on population size and defined counties as rural, a small town, small city, urban area, or metropolitan area. Household poverty rates were measured relative to the current US household poverty rate. Much emphasis was placed on specifically measuring the household poverty rate for "Families with Related Children Under 18". Public transportation availability distinguishes among fixed-route mass transit systems, fixed-route transit systems with limited coverage, demand-response paratransit systems, and the absence of all types of public transportation. The health professional shortage areas (HPSA) were assessed by utilizing the Health Resources and Services Administration (HRSA) website. Federally qualified health centers (FQHC) can also be assessed by using HRSA website.

Procedure
National, state, and local data were gathered to assess the five factors outlined above. Sources included the US Census, the American Public Transportation Association, the Health Resources and Services Administration, and local transportation and health care authorities.

The counties' results were then analyzed using the HTSI tool and established protocol. Microsoft Excel was used to collect and analyze the HTSI findings and scores. The final scores represent transportation-related barriers to health care access. A score of 6 or higher indicates a transportation scarcity area.

The findings were packaged in the form of descriptive Excel data worksheets, charts, and graphs. A customized map was also created using the MapChart tool to display the final HTSI scores.

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[i] Grant, Roy & Johnson, Dennis & Borders, Stephen & Gracy, Delaney & Rostholder, Tracy & Redlener, Irwin. (2012). The Health Transportation Shortage Index: The Development and Validation of a New Tool to Identify Underserved Communities.
[ii] National Conference of State Legislators (2015). Non-Emergency Transportation: A Vital Lifeline for a Healthy Community. Available at http://www.ncsl.org/research/transportation/non-emergency-medical-transportation-a-vital-lifeline-for-a-healthy-community.aspx

[iii] National Equity Atlas. Percent of households without a vehicle by race/ethnicity: United States vs. GA, 2015. Accessed on September 16, 2019. Available at https://nationalequityatlas.org/indicators/Car_access/By_race~ethnicity%3A49791/United_States/Georgia