Closing the Gap:

A study of transportation barriers and mobility for individuals with brain health/mental health and disability needs in East Central Iowa

August 2023

Mental Health/
Disability Services of the
East Central Region

IOWA INITIATIVE FOR SUSTAINABLE COMMUNITIES

IOWA | School of Planning and Public Affairs

IOWA | College of Public Health

Contributors

This study was completed conducted by University of Iowa faculty and students, with support from staff at the Mental Health/Disability Services of the East Central Region (ECR).

A faculty and staff research team led the focus group research process and survey design and served as advisors for student contributors. A graduate research assistant contributed throughout the process, primarily with analysis of data from the focus groups and survey.

Portions of the study involved community-engaged teaching and learning, in which students in graduate-level courses led the research process under the guidance of faculty advisors. Students in the Spring 2022 *Transportation Research Methods & Analysis* course developed a regional profile, inventory of mobility-related services, and GIS-based transportation service analysis. As part of their Spring 2023 graduate capstone course, a team of Master of Public Affairs students researched case studies, engaged with service providers, and developed recommendations and strategies. That work continued into the Summer 2023 *Transportation Planning Studio* course, in which students delved further into service provider engagement and potential strategies.

Special thanks to the many groups and individuals that have participated in the development of this study. We'd especially like to thank the Dubuque Disability Council, the ECR Adult and Family Peer Support Committee, the ECR Children's Advisory Committee, and the ECR Regional Advisory Committee for giving time and space to join their meetings.

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Introduction

Access to transportation services, support, and infrastructure contribute significantly to an individual's overall health and well-being. For individuals with brain health conditions or disabilities, planning and completing trips can be difficult or impossible without the proper systems in place. Creating and sustaining systems that meet the needs of these individuals is a complex task.

This is especially true across large and diverse geographic areas such as the region served by the Mental Health/Disabilities Services of the East Central Region (ECR). This nine-county region (including Benton, Bremer, Buchanan, Delaware, Dubuque, Iowa, Johnson, Jones, and Linn Counties) includes a mix urban and rural communities and varying levels of transportation services.

To best serve the transportation needs for individuals with brain health/mental health needs across the region, ECR partnered with the University of Iowa to conduct an analysis of existing gaps in transportation services and to identify opportunities to increase access to essential services and other unmet needs.

The study was conducted in multiple phases between January 2022 and August 2023. Final recommendations address potential actions both for ECR specifically and for key partners across the region.

ECR Region
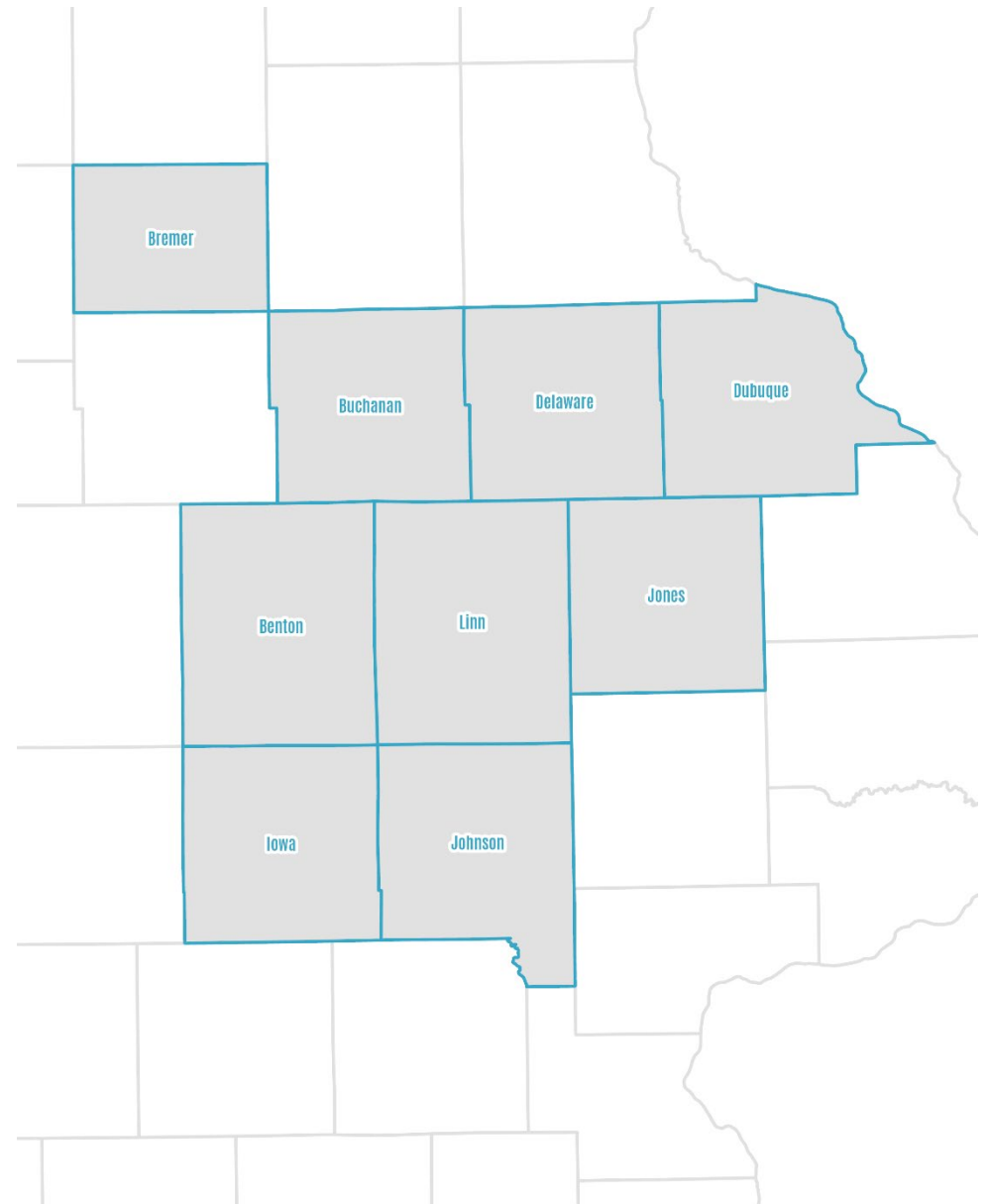
Background & Context

Mental Health/Disabilities Services of the East Central Region (ECR)

ECR (www.ecriowa.org) is a quasigovernmental organization comprised of nine counties (Benton, Bremer, Buchanan, Delaware, Dubuque, Iowa, Johnson, Jones, and Linn) with a mission to "collaboratively strengthen the regional network of quality and accessible supports to meet the needs of adults and children with disabilities." The multi-county partnership pools resources to provide comprehensive brain health and disability services to individuals within the region. Examples of services provided and supported by ECR include crisis services, support for community living, recovery coordination, targeted case management, and much more.

Formed in 2013 under Iowa Code Chapter 28E, ECR is governed by a board comprised of elected officials from each county, individuals with lived experiences, and representatives from organizations that provide services to ECR's client population.

Individuals eligible to receive services from the ECR reside in one of the nine partner counties, have a household income of less than or equal to 150% of the federal poverty level for adults and a household income less than or equal to 500% of the federal poverty level for children, and satisfy varying criteria depending on the nature of their diagnosis (mental health, intellectual, or developmental). In FY2021, the ECR served 551 children and 4,400 adults.

While ECR is not a transportation provider and does not directly offer transportation to its clients, they can help assist clients burdened by transportation costs and they work closely with service providers to meet client needs. As a multi-county partnership, ECR is well positioned to facilitate and support new regional initiatives and collaboration. To that end, ECR commissioned this transportation study and ECR staff have provided guidance throughout the process.

608,921

AGE
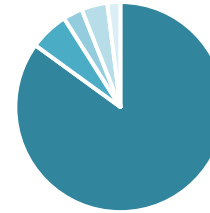### Under 18 – 22.5%
Over 65 – 15.5%

White	85%
Black or African American	6%
Asian	3%
Two or More Races	4%
Other	2%

COUNTY-LEVEL MENTAL HEALTH DATA

	Population	Cognitive Disability (%)	Severe Depression*	Psychosis*	Frequent Suicidal Ideation*	Trauma Survivor*	PTSD*
Linn County	230,229	4.0%	127	95	136	288	73
Johnson County	152,854	3.0%	128	87	117	269	57
Dubuque County	99,266	3.9%	101	79	119	231	85
Benton County	25,636	3.1%	103	59	88	180	70
Bremer County	25,575	3.6%	117	35	90	144	51
Buchanan County	20,565	4.5%	66	66	88	203	66
Jones County	20,646	3.8%	113	48	113	190	61
Delaware County	17,488	2.9%	113	78	98	211	83
Iowa County	16,662	3.0%	68	NA	92	222	43

* Per 100,000 population; Source: ACS; Mental Health America (www.mhanational.org)

Methodology

The research process was divided into three primary phases, each with specific methods and analyses. Phase 1 focused on assessing gaps from the perspective of individuals with lived experiences and their advocates, caregivers, and caretakers, as well as analyzing existing conditions. Phase 2 focused on best practices and service provider input to inform potential future actions. Phase 3 focused on potential strategies to mitigate transportation service gaps as well as recommendations for implementing policy and programming changes.

Phase 1
Understanding the "Transportation Gap"

→

Phase 2
Case Studies and Provider Perspectives

→

Phase 3
Strategy Alternatives and Implementation

- Focus Groups
- Region-wide Survey
- Mobility Inventory
- Multi-Criteria "Hot Spot" Analysis

- Case Study Research
- Transportation Service Provider Interviews

- Strategy Alternatives
- Recommendations

Focus Groups

Four focus group sessions were conducted with ECR stakeholders between February and May of 2022. The purpose of the focus groups was to provide more information about the barriers that clients face and to inform the region-wide survey design. Sessions lasted between 45 and 90 minutes and consisted of groups of between 8 and 12 people. Groups that participated in the sessions were ECR Adult and Family Peer Support Committees (2 separate groups); ECR Children's Advisory Committee; ECR Regional Advisory Committee; and Dubuque Disabilities Council.

In the focus group for the Dubuque Disabilities Council, the coordinator suggested that an infographic (shown on the bottom right) be used to help participants better engage in the discussion. The infographic was designed using key themes from earlier sessions.
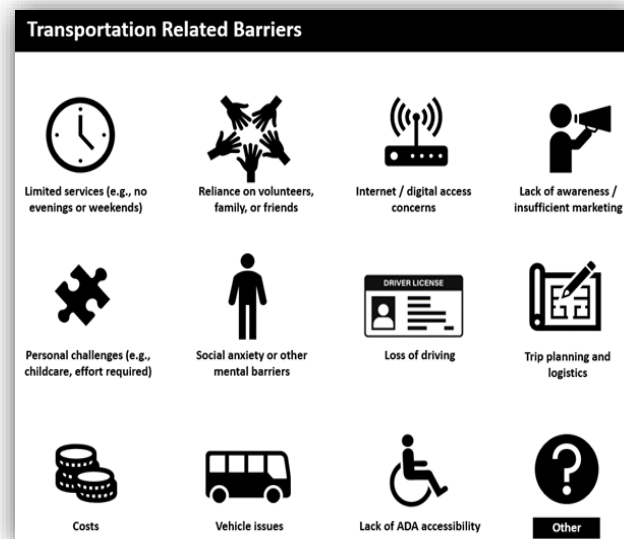
The discussions in the focus groups generally followed the four questions listed to the right.

Region-wide Survey

The purpose of the survey was to gather qualitative and quantitative data from individuals with lived experiences to better understand how transportation supports or limits their access to services. The survey was open in October and November of 2022.

Outcomes from the focus groups proved essential in designing questions that might otherwise have been overlooked, particularly regarding experiences individuals have while using or trying to access transportation services. Additionally, comparable transportation studies were reviewed to inform the survey design.

> › **Do you believe that lack of access to transportation is a major issue for those in the community seeking mental health and disability services?**
>
> › **How do existing transportation services help individuals meet basic daily needs and in what ways are they falling short?**
>
> › **What other barriers besides transportation services exist? (For example, cost, lack of knowledge, barriers in the built environment, and social anxiety)?**
>
> › **How could technology such as telemedicine help in addressing transportation difficulties?**

Transportation Related Barriers

Limited services (e.g., no evenings or weekends)	Reliance on volunteers, family, or friends	Internet / digital access concerns	Lack of awareness / insufficient marketing
Personal challenges (e.g., childcare, effort required)	Social anxiety or other mental barriers	Loss of driving	Trip planning and logistics
Costs	Vehicle issues	Lack of ADA accessibility	Other

Focus Group Infographic

Because some individuals within the survey's target population may have limited ability to complete the survey, caregivers and caretakers could self-identify and provide answers on behalf of those individuals. All answers were completely anonymous and voluntary- respondents could skip any questions they felt uncomfortable answering. Major categories of the survey included 1) their current experiences and capabilities related to transportation; 2) their experiences with existing transportation services; 3) their perceptions about the positives aspects of the existing transportation system and its limitations; and 4) their demographic information.

Because the region is large and levels of service vary significantly, the survey used design logic to tailor questions based on the respondents' home counties. The survey was distributed in both online and paper forms, and an option to complete they survey over the phone with a member of the research team was available. One person used the phone number and requested two paper surveys. Copies of the survey with self-addressed stamped return envelopes were sent but completed paper surveys never arrived.

The project team designed a flyer to promote the survey - a URL address and QR code directed people to the online Qualtrics survey, and the flyer included an email and a (now disconnected) phone number for respondents to request a paper copy or conduct the survey by phone. ECR staff managed promotion of the survey. They posted graphics and information designed by the project team to their social media accounts, included information in their newsletter, and forwarded flyers and links to their network.

A relatively low number of responses, 134, were received. Most respondents identified as caretakers or caregivers, with just 18 respondents identifying as individuals with lived experiences. While results could not produce statistically significant results, written responses to open ended questions provided nuanced details that helped provide a deeper understanding of how transportation access and services are impacting the lives of some individuals in the region.
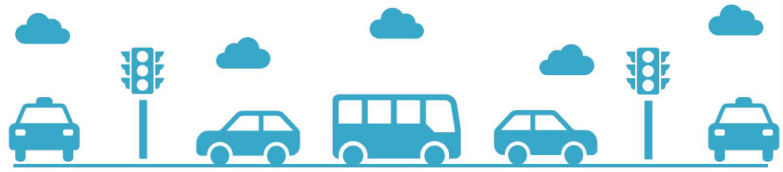

Social media post

Mobility Inventory

To understand services available to individuals with brain health needs across the region, the project team explored transportation services and providers throughout the region. Information about existing public transportation services was collected from NHGIS, including information on routes and stops. Commercial transportation services were identified by locating where Uber and Lyft provide their services. Client specific transportation services and emergency medical services were provided by ECR. Paratransit services were obtained from the Iowa Public Transit Association. Information on bicycle transportation was provided by the City of Cedar Rapids. For a full mobility inventory, this report directs readers to the three Passenger Transportation Plans (PTPs) that provide comprehensive overviews of services within the region.

Multi Criteria "Hot Spot" Analysis

To determine the geographic locations where services might be prioritized, we calculated a composite index based on several factors related to transportation need. Specifically, we analyzed the location of people who may not be able to drive due to their age, income, or lack of car access. This data was then overlaid on the estimated risk of mental illness at the county level. This was obtained from Mental Health America's screening surveys between January 2020 and March 2023.

These factors were combined into an overall index that identified the locations in the region where residents might have difficulty traveling independently and where mental health needs are estimated to be the greatest.

Survey flyer

Case Study Research

Case study research provided examples of effective strategies from across the US that enhance transportation access for individuals with brain health/ mental health needs.

Service Provider Interviews

Informational interviews with key staff at transportation and disability service organizations provided details about services offered, perceptions of challenges and unmet needs of those being served, ideas or strategies to address those challenges, and obstacles that stand in the way. Questions asked in the interviews were informed by survey findings. Questions during the interview were drawn from a premade list of eight, but the course of each conversation changed with the responses given from the interviewee. The questions were open-ended to elicit detailed answers and follow up questions were asked for clarification and more explanation.

Follow up interviews with six providers in Iowa explored issues in more depth. Topics included: prior research undertaken to understand how clients access transportation alternatives, coordination of services across county boundaries, services outside of normal business hours, the use of technology, and use of medical reimbursement.

Strategy Alternatives

Case studies, interviews, and consultations provided a range of potential strategies to address transportation gaps within the region. Identifying the organizations that would be best suited and responsible for implementing potential strategies is a key consideration. In particular, the research team sought to understand ECR's specific role, if any, in potential policy and programming changes. As the primary organization serving the 9-county partnership, ECR has well-established networks and capabilities. However, ECR may not always provide direct services, but rather function as a facilitator, advocate, or financial backer.

To better understand ECR's role in implementing transportation service improvements, as well as their responses to strategy alternatives, ECR staff were asked to complete a short survey asking 1) how much they would like to see each proposed change in the region (on a scale of 5 from "like a great deal" to "dislike a great deal") and 2) the likelihood that ECR would play the lead role in implementing the strategy (on a scale of 5 from "very likely' to "very unlikely"). Reponses from ECR staff helped provide an understanding of feasibility and were used to evaluate and refine strategy alternatives. The Master of Public Affairs graduate team made a presentation to the ECR Regional Governing Board on April 27th, during which they shared preliminary recommendations. Feedback from the group was considered for the final recommendations in this report.

Phase 1

Understanding the "Transportation Gap"

Focus Groups and Survey Findings

Focus Groups – Key Findings

Not surprisingly, transportation costs and the lack of transportation services at certain times or locations were a major theme in focus group discussions. These are constant challenges for public transportation providers, particularly in suburban and rural areas where the low density of residents or businesses makes transit service unviable. In these areas, on-demand paratransit is often the only available public option, but it is much more expensive for providers and users.

However, respondents also identified several challenges specific to individuals with mental or physical disabilities that helped provide a deeper understanding of existing barriers. These included a lack of connections in social networks that could lend transportation support by friends, the difficulty of relying on others or on volunteer services, and a perceived lack of sensitivity to the needs of people with brain health issues.

Additional personal challenges include arranging schedules around children, including childcare scheduling, and restrictions on children at appointments. Also, participants noted the difficulty of making other trips, such as shopping for groceries or filling prescriptions, without access to a car. Access to a reliable personal vehicle was noted by several participants, due to cost of purchase and ownership and lack of driving privileges in some cases. COVID-19 restrictions and risks for volunteers and users were also cited as recent disruptions.

Focus groups also revealed that many clients have difficulties taking advantage of technology that could help with obtaining information or scheduling transportation. This includes mobile apps for transportation planning like those provided by most transit agencies. Generally, participants seemed to agree that having a central transportation coordinator for the region's clients would help to overcome the difficulties in accessing scheduling information. In addition, this service might help to address other issues that were identified by participants, including lack of knowledge about the range of transportation options and anxiety around logistics planning.

One final topic that was discussed in each focus group was the potential role of telemedicine in reducing the need to travel for appointments. The responses to this were mixed, with participants noting that difficulties in making use of technologies like video conferencing and access to good quality high-speed internet presented barriers. Others stated that telehealth had worked well for them during the COVID-19 pandemic when face-to-face appointments were limited.

Survey – Key Findings

A survey was created to identify transportation barriers for individuals with brain health, mental health and intellectual or developmental disabilities in the region. Appendix F includes a detailed survey analysis.

The results of the transportation gap analysis are based on a survey of 134 individuals—those with brain and mental health needs, caregivers (medical service providers, healthcare providers, etc.), and caretakers (family members, friends, etc.). Only 18 survey respondents identified as someone with a brain health issue or a mental/physical disability, and most respondents identified as a caretaker/caregiver, or other community professional such as a social worker. Not every respondent answered every question. Most respondents identified as residents of Linn (32), Johnson (25) and Dubuque (12) counties, while other counties in the region each had fewer than 10 responses. However, 43 did not answer the question about their home county.

A top-level finding is that 63% of respondents said that they are not always able to get to where they need to go. Additionally, nearly half of respondents described cost as a major barrier to transportation access. Other significant findings are described below.

Obstacles to mobility
The lack of accessible, dependable, and frequent transport services that do not go to the desired location was cited by respondents as the main reason for their concern by 46 respondents. Other significant factors include lack of access to a personal vehicle or a driver's license (7 respondents), living far from bus stops (8 respondents), not having affordable transportation options (8 respondents), having unstable finances due to low income (18 respondents), and living far from bus stops (8 respondents). Insufficient ridesharing (4 respondents), lack of knowledge of available transportation options (4 respondents), physical and mental incapacity to use public transportation (4 respondents), difficulties navigating transportation systems (6 respondents), and difficulties using medical and insurance-provided transportation options (17 respondents) were additional factors resulting in transportation challenges.

Current modes of transportation
The survey results revealed that approximately 13% (26 individuals out of 207 total responses) of respondents use active modes of transportation, such as walking or bicycling, to get to their brain health/mental health appointments. Self-driving was another prevalent mode of transportation, with 29 respondents (14% of the total) selecting this option. With 61 respondents (29.5% of the total) indicating this preference, riding with someone else in their vehicle emerged as the most popular mode of transportation. In addition, a total of 45 respondents (21.7%) utilized public transportation. A smaller proportion of respondents, 16 (7.7%), utilized taxis, Uber, or Lyft services. Furthermore, 30 respondents (14.5%) reported using unspecified transportation services.

Anxiety

When asked how anxious people are when using transportation services, 58% of respondents reported experiencing some levels of anxiety while using public transportation. A large percentage of respondents (29%) rated their anxiety as moderate, followed by 18% who rated it as high and 11% who rated it as very high.

Reliance on others

The survey included a question designed to determine the frequency with which respondents relied on another person for transportation, while many others rely on public transportation. Nearly half of the respondents, or 48%, reported almost always relying on someone else for transportation. 14% reported never having to rely on someone else for transportation, indicating a degree of independence in meeting their transportation requirements.

Types of trips

Medical appointments are the most common category, highlighting the importance of transport for getting access to healthcare services. Work-related travel and shopping also feature prominently, highlighting the importance of transport assistance for employment and basic needs. The inclusion of leisure and recreation trips emphasizes the need for accessible modes of transportation to promote social engagement and overall health.

Access to information

A majority of respondents (54%) reported a need for assistance with getting additional information about the bus system or other transportation alternatives. 34% of respondents, on the other hand, indicated that they do not require assistance in this regard. The high percentage of respondents indicating a need for assistance suggests that there may be obstacles or knowledge gaps regarding available transport services.
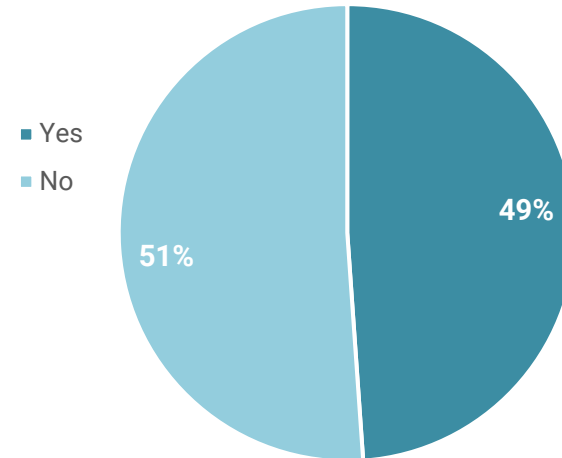
Telehealth

A large percentage of respondents (42%) identified inadequate internet access as the most significant barrier to using telehealth, while 18% cited unfamiliarity with technology as a significant barrier. 18% of respondents reported additional obstacles, emphasizing the importance of addressing individual requirements. Additionally, 18% of respondents indicated that they had no problems with telehealth appointments, showing a positive experience and the convenience of these services. Furthermore, 65% of the survey respondents are willing to use a phone or attend a meeting via video conferencing, when possible and appropriate, rather than traveling to get to their healthcare provider

When thinking about transportation, can you always or almost always get where you need to go?

- Yes
- No
- Not Sure

7%
35%
63%
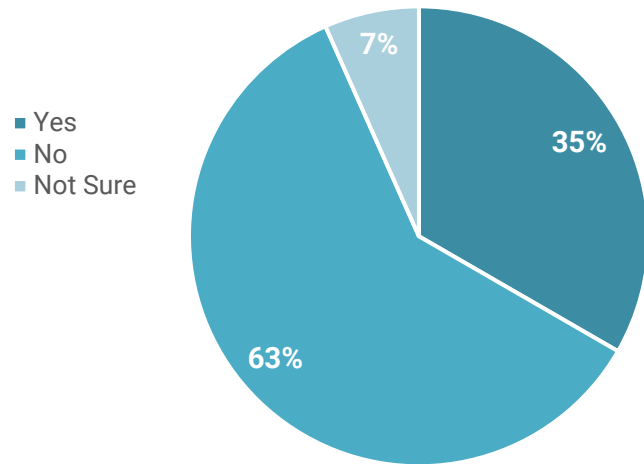
Do you have a valid and current driver's license?

- Yes
- No

49%
51%

Ho do you typically get to your brain health/mental health appointments?

Ride in someone's car	Public transportation	Drive myself	Walk or bike	Taxi/Uber/Lyft	Other
61	45	29	26	16	30
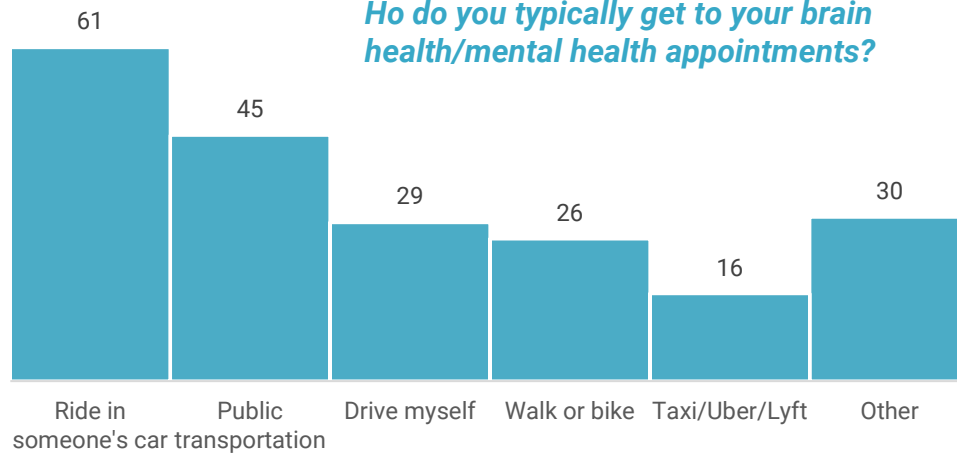
Top three most reasons for not being able to get where they need to go.

Lack of available/reliable transportation	36.8%
Lack of financial resources (low-income)	14.4%
Issues with using medical/insurance	13.6%
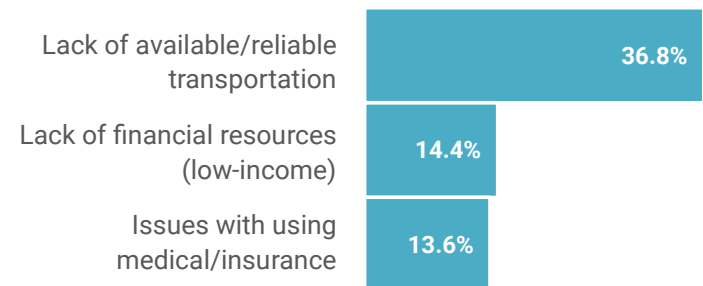
Transportation Service Providers

Service Providers - City Transit

Public transportation is only available in the urban areas of Dubuque, Johnson, and Linn counties. The current transportation services have limited services during evenings and weekends.

Johnson County's services include Iowa City Transit, Coralville Transit, CAMBUS (University of Iowa's free public transportation), and 380 Express. The Express 380 bus runs from Downtown Cedar Rapids to the Iowa City area. Notably, as of August 1st, 2023, Iowa City Transit has made all rides free during a 2-year pilot study.

Service Providers - ParaTransit

Beyond the client-specific transportation services, paratransit services provide regular service to some areas of the region.

Linn County LIFTS is based in Cedar Rapids and provides door-to-door service for "eligible elderly and disabled citizens in the metro area of Cedar Rapids, Marion, and Hiawatha". If outside the Cedar Rapids metro, LIFTS can provide service anywhere within Linn County. Corridor Rides serves Benton, Iowa, Jones, Johnson, and Linn Counties. Corridor Rides has four services vanpool, carpool, rural dial-a-ride, and 380 Express. Johnson County SEATS is based in Iowa City and provides service for "senior citizens, people with disabilities, and others". MiniBus in Dubuque offers alternative transportation options for elderly and disabled passengers who are unable to use the fixed route bus system. Jones County Jets is available to anyone but is especially committed to transporting the elderly, those in wheelchairs, and those with physical or mental disabilities.

Service Providers - City Transit and Paratransit

Provider	Contact
The Jule (Dubuque) 950 Elm St. Dubuque	Russ Stecklein rsteckle@cityofdubuque.org 563-589-4196
Cedar Rapids Transit 450 1st St. SE Cedar Rapids	Brad DeBrower CRTransit@cedar-rapids.org 319-286-5573
Coralville Transit 900 10th St. Coralville	Vicky Robrock vrobrock@coralville.org 319-248-1790
Iowa City Transit 1200 S. Riverside Drive Iowa City	Darian Nagle-Gamm ICTransit@iowa-city.org 319-356-5151
CAMBUS 100 W Campus Transportation Center Iowa City	Brian McClatchey Cambus-transit@uiowa.edu 319-335-8632
MiniBus (Dubuque) 950 Elm St. Dubuque	Russ Stecklein rsteckle@cityofdubuque.org 563-589-4196
Linn County LIFTS 5815 4th Street SW Cedar Rapids	Tom Hardecopf lifts@linncountyiowa.gov 319-892-5170
Corridor Rides 5755 Willowcreek Dr SW Cedar Rapids	Brock Grenis brock.grenis@ecicog.org 319-365-9941
Johnson County SEATS 4810 Melrose Ave Iowa City	Tom Brase tbrase@johnsoncountyiowa.gov 319-339-6128

Client-Specific Transportation Services

ECR contracts with 7 different agencies across five of the nine counties within the ECR to provide transportation to their clients. There is also a service based in Black Hawk County that serves Bremer and Buchanan Counties.

Some of the contracted services rely on volunteers, as does RTA. These tend to have limited hours and do not provide service on the weekend. During the COVID-19 pandemic many volunteer-based services were cancelled. The volunteer population tends to be older adults who did not feel comfortable providing services during this time. It can also be difficult for volunteers to know where they are going if they are not familiar with the service providers, which is frustrating for those relying on them for transportation.

One area in which services are lacking is after-hours non-emergency transportation. There are very limited options besides calling 911 or going to an emergency room.

Emergency Medical Transportation

For medical specific emergencies, ambulance services are used across all nine counties. For brain health emergencies, there are three options that offer transportation: the local county sheriff's office, the Central Iowa Detention Center, or the North Iowa Detention Center.

Ride Share Services (Uber & Lyft)

Uber and Lyft are both available in the entire East Central Region. Both services split eastern Iowa into 4 regions. Because of this, not all counties part of the ECR would be able to use Uber or Lyft to go to service providers if they are in a different region.

| Provider / Main Office Location	Contact
A1 Taxi and Delivery 4923 Asbury Road Dubuque	Larry Regan mrlprsir@aol.com
Benton County Transportation 611 W 9th Street Vinton	Dean Vrba, Director dvrba@bentoncountyia.gov 319-472-2413
Horizons 819 5th Street SE Cedar Rapids	Michael Barnhart, CEO mbarnhart@horizonsfamily.org 319-398-3943 x 2101
Iowa County Transportation 1680 Franklin Ave Marengo	Becky Fry, Director bfry@co.iowa.ia.us 319-642-7615
Iowa Northland Regional Transit Commission 229 E. Park Ave. Waterloo	Carter Baldwin, Director cbaldwin@inrcog.org 319-235-0311
Region 8 Transit Authority 7600 Commerce Park Dubuque	Chandra Ravada, Director CRavada@ecia.org 563-556-4166 x 230
Jones County Jets 814 John Drive Monticello	Jamie Ginter jamie.ginter@jonescountyiowa.gov *319-465-6564*

Uber and Lyft are the primary ride share services available in the region. Relying on these commercial services is not always affordable for those needing services. In addition, these two commercial service providers do not enable individuals to travel from some areas to others uninterruptedly. For example, if a passenger who lives in Vinton or Cedar Rapids wants to attend a doctor's appointment in Iowa City, it would not be possible as neither of the service providers offer direct access from Cedar Rapids area to Iowa City Area. In other words, commercial service providers offer services to residents in the region, but the difference in area coverage leads to a disconnection between the areas which makes the trips inconvenient, especially for people with disabilities.

Volunteer Transportation Programs

Volunteer transportation programs provide transportation service to many elderly residents who live in the seven-county planning area. These programs provide transportation to healthcare appointments and, in a few counties, attempt to accommodate transportation for outpatient treatments. Aging Service Transportation is the sole volunteer transportation program that offers trips for groceries. The clients that utilize these programs are unable to ride on public transit vehicles because of physical restrictions or because of the need for one-on-one care to make the medical trip. Each program's administrative staff is either part-time or volunteer. Each of the volunteer transportation programs has an extensive volunteer driver pool that utilizes their personal vehicles for the cause. Programs can offer various mileage reimbursement rates. Many volunteer services paused or suspended their services during the COVID-19 pandemic and their status for resuming services is uncertain. Unless stated otherwise, all volunteer programs utilize vehicles owned by individual volunteers, which fluctuate based on availability and demand and are not ADA accessible.
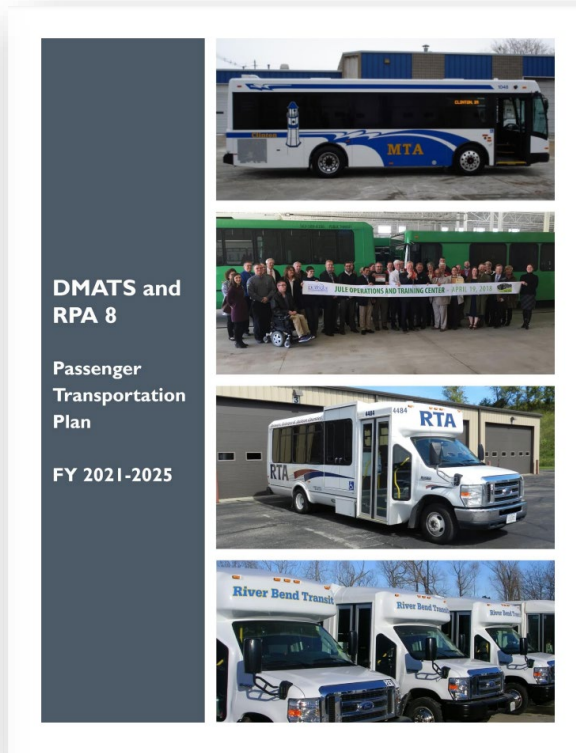
Passenger Transportation Plans

All 18 Regional Planning Affiliations (RPAs) in Iowa are required to prepare a passenger transportation plan every 5-years. Three RPAs \ overlap with the counties in the ECR Region - East Central Iowa Council of Governments (ECICOG), East Central Iowa Council of Governments (ECIA) and Iowa Northland Region Council of Governments (INRCOG). The process for creating these plans is very throughout and includes compiling details on transportation services providers. To access the transportation service provider inventory within the region, this report directs readers to the PTPs, which have a lot of useful information and strategies along with the detailed lists of providers. Of course, they are a snapshot in time and may not have the most current information. Hyperlinks to the PTPs are included on the next page.
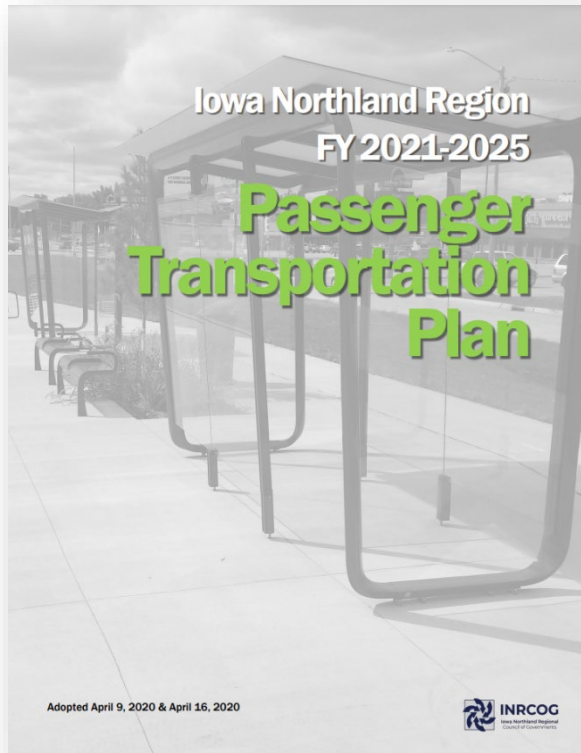
INRCOG
Passenger Transportation Plan, 2021-2025

ECR Counties: Bremer, Buchanan

The Transportation Service Inventory begins on page 21 of the document.

ECIA
Passenger Transportation Plan, 2021-2025

ECR Counties: Delaware, Dubuque

The Transportation Service Inventory begins on page 5 of the document.

ECICOG
Passenger Transportation Plan, 2021-2025

ECR Counties: Benton, Iowa, Johnson, Jones, Linn

The Transportation Service Inventory begins on page 9 of the document.

Multi-Criteria "Hot Spot" Analysis

In order to determine the geographic locations where services might be prioritized, we calculated a composite index based on several factors related to transportation need and mental health needs. Specifically, we analyzed the following data:

› Percentage of youth population
› Percentage of elderly population
› Percentage of households without access to a car
› The US Housing and Urban Development poverty index
› Percentage of population that is a racial minority
› Prevalence of mental health needs (rate per 100,000 persons) from Mental Health America data

All of the variables were mapped at the census tract level with the exception of the Mental Health America rates. These were only available at the county level. The county values used in the analysis are the sum of the at-risk rates for depression, suicide, PTSD, trauma survival, and psychosis based on screening data collected by MHA between January 2020 and March 2023. Details can be found at https://mhanational.org/mhamapping/mha-state-county-data.

These factors were combined into an overall index that identified the locations where residents might have difficulty traveling independently and where mental health needs are greatest. The calculation was carried out using the Calculate Composite Index tool in ESRI ArcGIS Pro. The tool standardizes the inputs listed above to a common scale and combines them into a single index value.
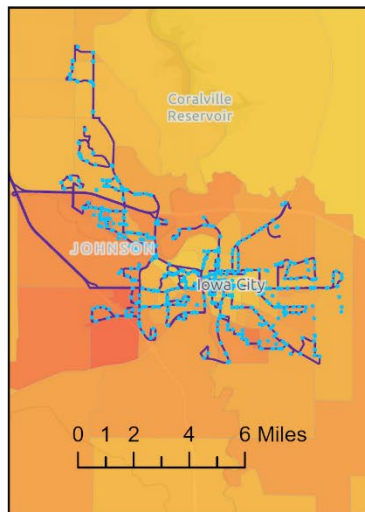
The map on the following page shows priority levels based on the index, along with the location of regularly scheduled public transportation lines and stops. The three insets at the bottom of the map show the three metropolitan areas in the region that have scheduled public transportation service: Cedar Rapids, Iowa City and Dubuque.

Generally, the maps show that the highest priority locations are in the main urbanized areas in the region. These locations also have transit availability in most cases. However, there are a number of smaller towns and rural areas that also show as high priority. For example, Manchester shows as a priority area as do northern Linn and Buchanan Counties. Western Dubuque County and parts of Jones County also show higher priority based on the index. Overall, the maps allow the identification of specific populations where service providers might consider carefully examining resources and allocating more if needed. They also indicate locations where technology such as telemedicine centers might be most effective in substituting for longer range trips to providers.

Maps are also included below that show the distribution of each of the individual variables across the East Central Region. These give the location of specific target groups of interest, such as the elderly, minorities, or households without personal vehicle access.

Transit Routes
Transit Stops

Priority Index

lowest

highest

0 5 10   20 Miles
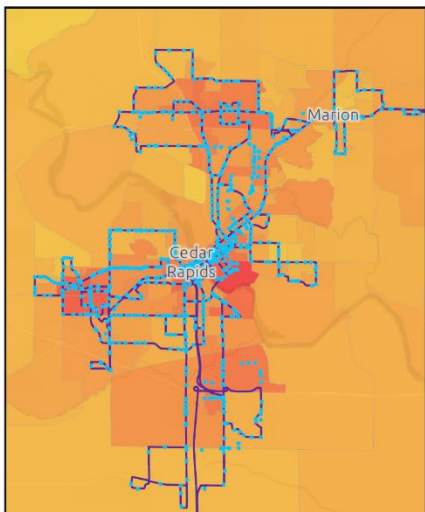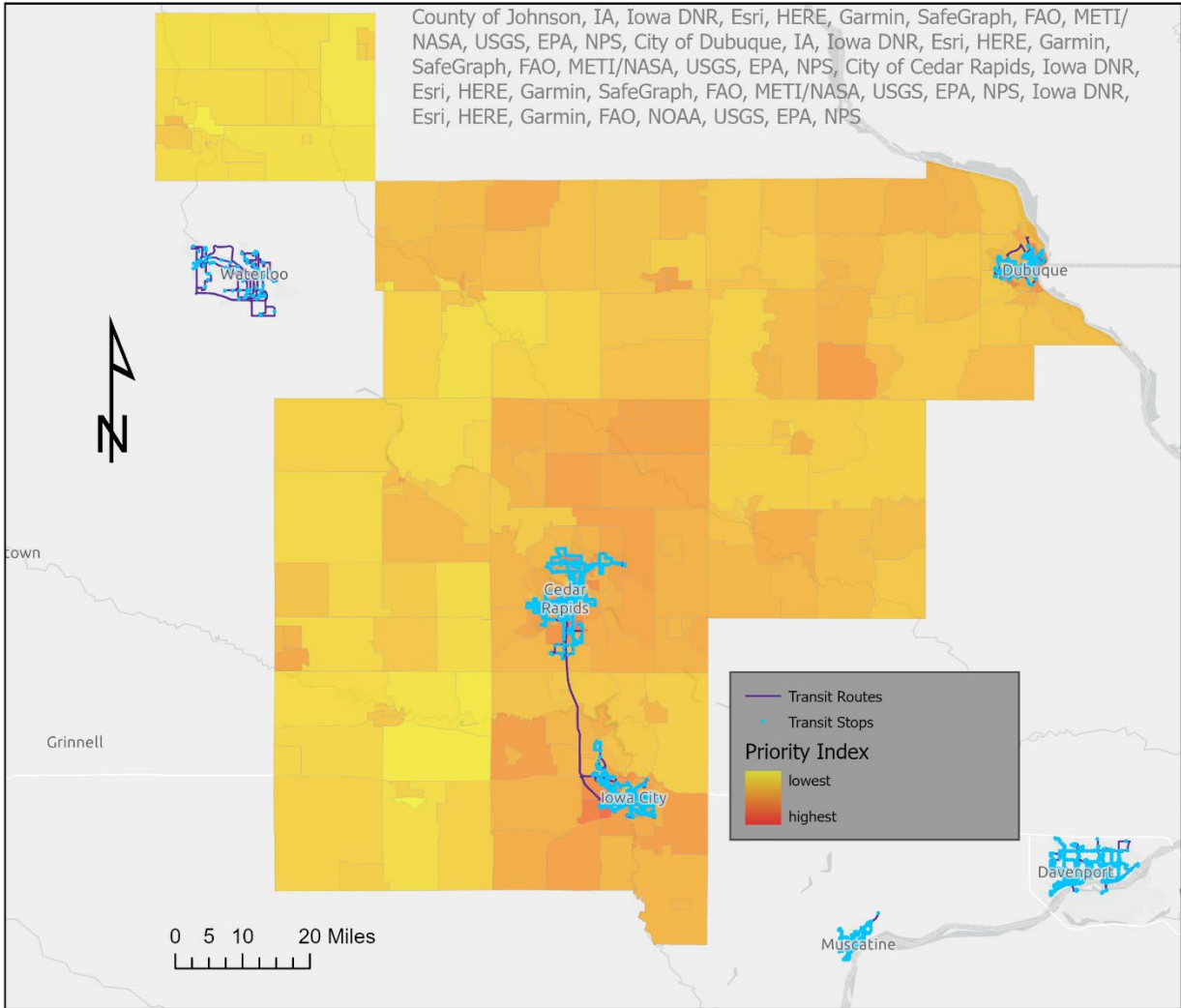
Cedar Rapids Insert

Iowa City Insert

0 1 2   4   6 Miles
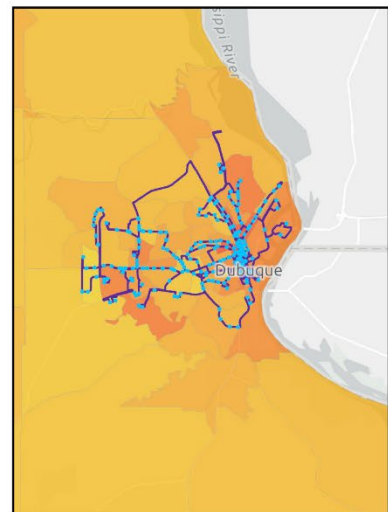
Dubuque Insert
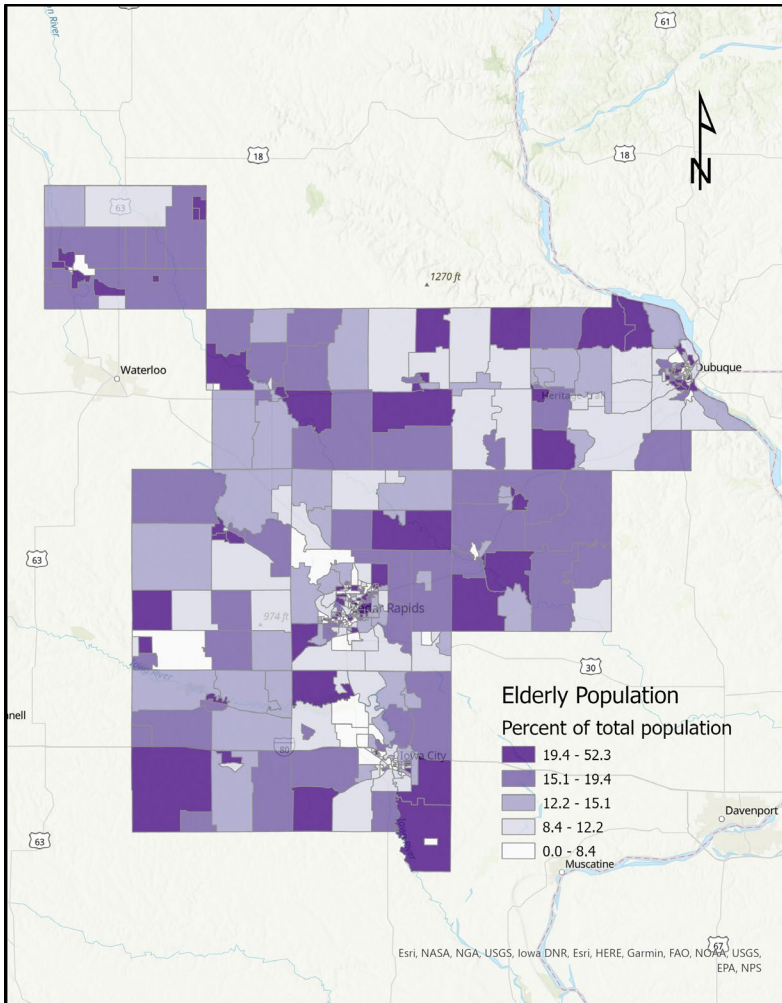
Percent of elderly (65+) population by census tract
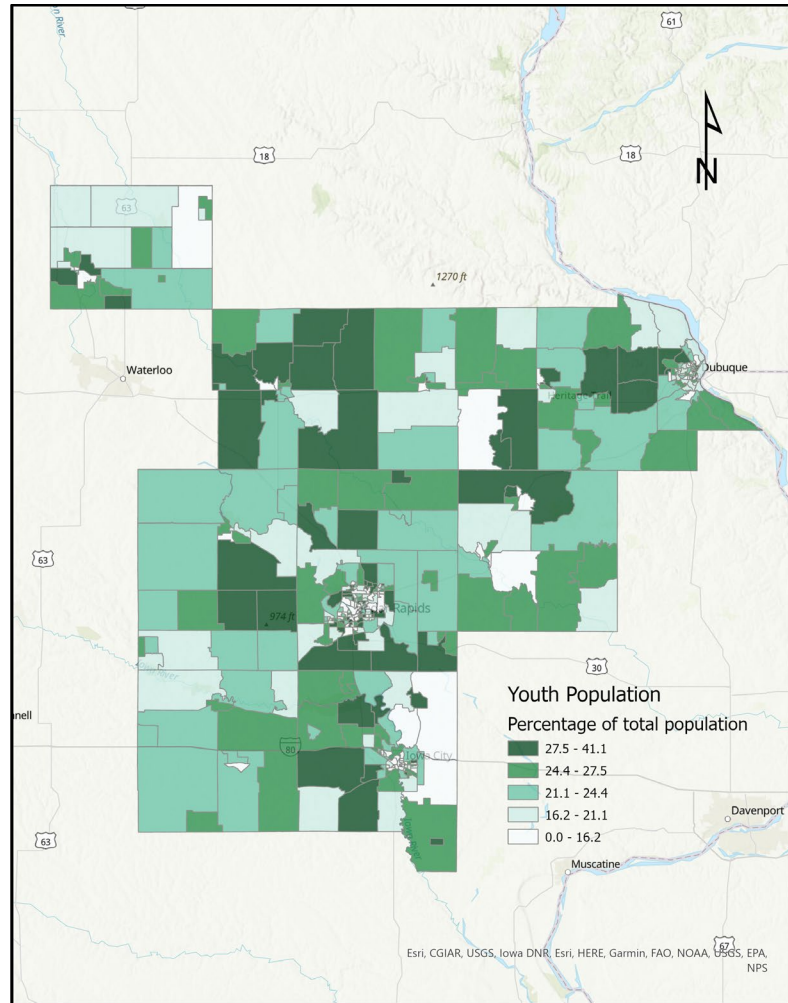
Percent of youth population (18 and under) by census tract
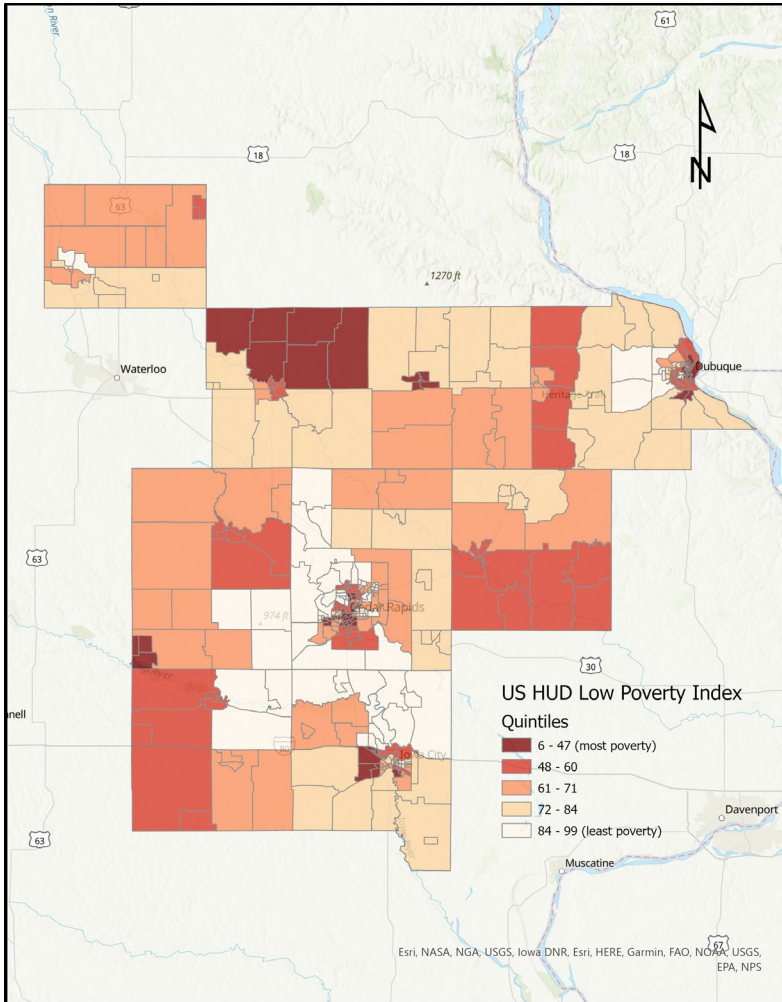
US Housing and Urban Development Low Poverty Index
(0-100 scale with 100 indicating least poverty)
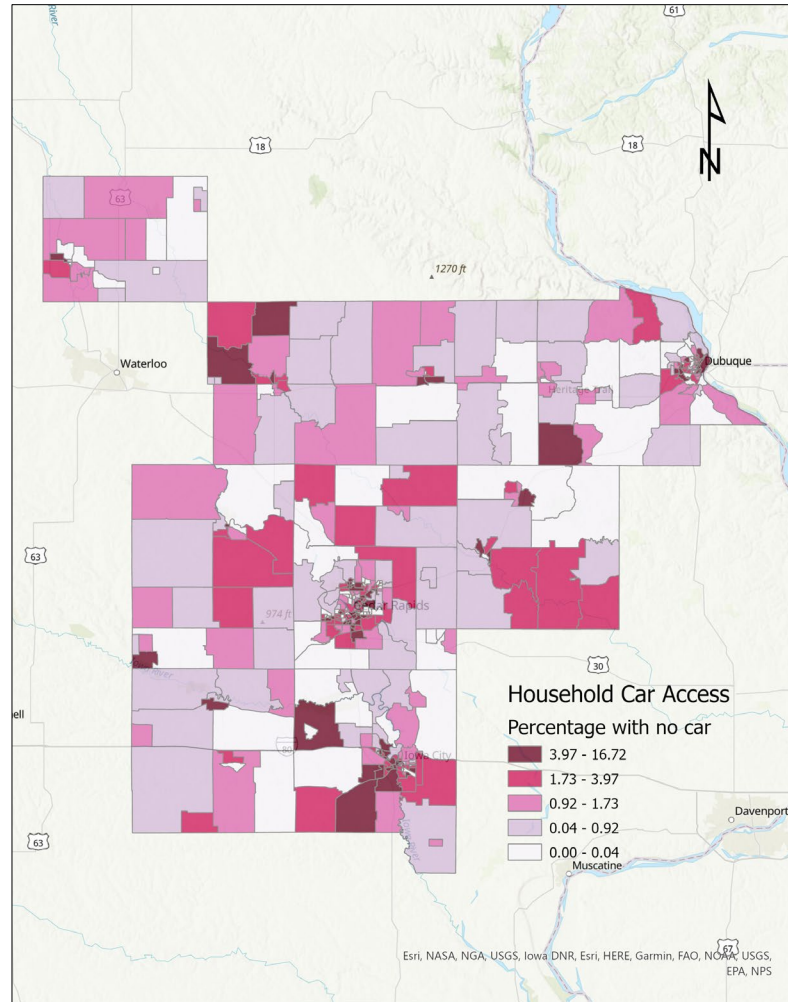
Percentage of households without vehicle access
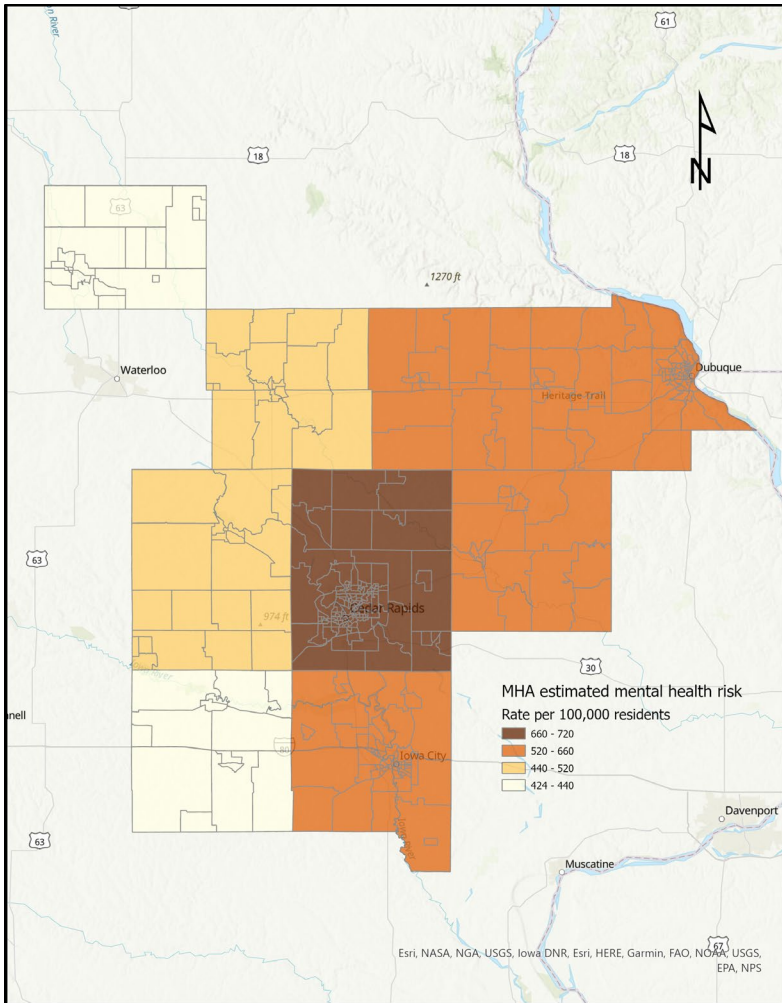
MHA Estimated Mental Health Risk by County (#/100,000 residents)
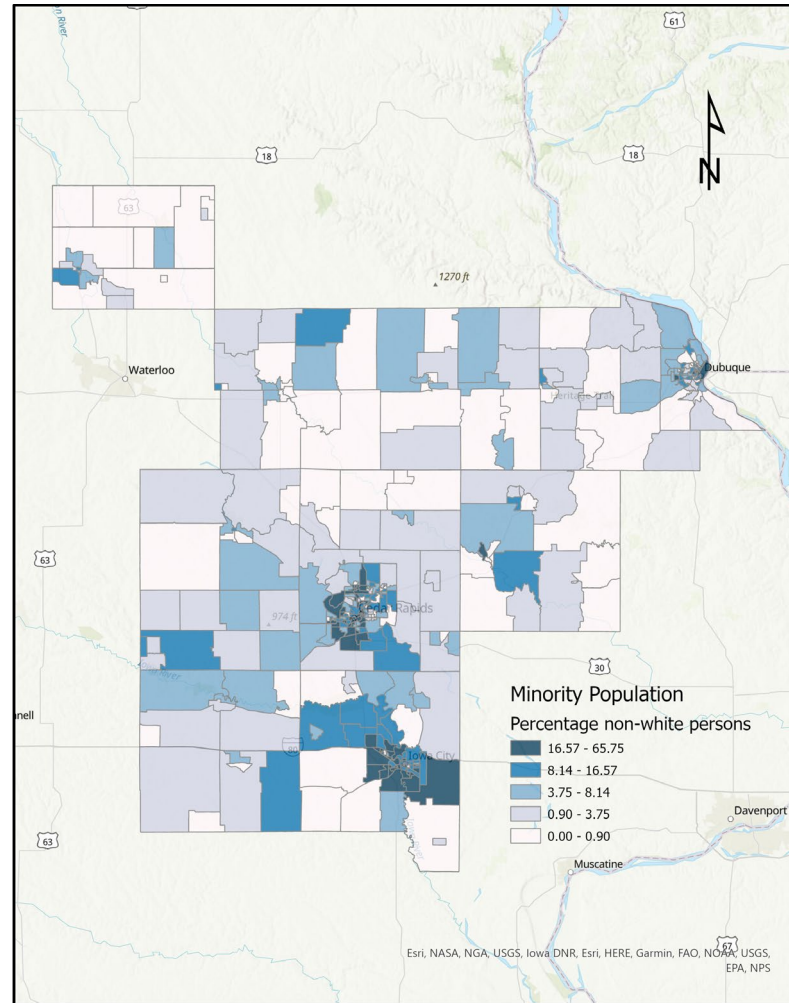
Percent minority population by census tract

Service Provider Interview Findings

The following individuals where interviewed: Jan Heidemann from ECR, Carter Baldwinn from Linn County Lifts, Tom Brase from Johnson County Seats, Kelly Schneider who is the Johnson County Mobility Coordinator, and Brock Grenis from the East Central Iowa Council of Governments. Key takeaways are shared below.

Tom Brase
Fleet Director
Johnson County Seats

Current challenges
Increased demand for transportation services is straining the existing resources of JCS. Demand for rides is going up at a rate that is beginning to take a toll on JCS staff and equipment. JCS must try to keep up with the regulations in place for the staff and equipment of paratransit providers. Drivers must be trained properly and are hard to replace.

Ride Scheduling
JCS completes 400 rides per day. Rides can be scheduled over the phone or through the Amble app. There are two schedulers who answer around 200 phone calls a day and confirm ride requests submitted through the app. The app saves time for the schedulers because rider information is entered directly into the system by the riders. It is hard to find long-term, reliable scheduling software. JCS has experienced multiple sales of the ownership of the software it uses which causes technical support and service delays. It is also difficult to receive the amount of funding required to purchase the rights to this type of software. The price tag can easily be over half a million dollars.

Fulfilling specific requests
JCS is receiving more requests for rides in rural areas. If JCS cannot complete those rides, staff at the East Central Iowa Council of Governments who operate Corridor Rides may be able to. JCS will first see if it can complete the trip and refer the individual to other providers if it cannot.

Marketing and communication
JCS does not really advertise its services but contacts homes or organizations with individuals it thinks would benefit from its services. JCS receives calls from parents or group homes who either have a child or residents who need transportation services. It also works with the Johnson County Mobility Coordinator, Kelly Schneider, to provide rides for the people who she works with.

JCS's new Same-Day Service Policy
He said he has learned that the service was a worthwhile investment because there is demand for it in Johnson County. The service continues to attract more riders with currently over a dozen rides scheduled every day. Individuals can complete trips around their schedules in a way they could not before.

Medicare or Medicaid Reimbursement / Donations
JCS does not take either as a form of payment. It used to take Medicare or Medicaid Non-Emergency Medical Transportation Reimbursement but has stopped because the process was too cumbersome. Tom stated that he thought taking donations is a promising idea but there is not anything like it currently in use at JCS.

Communication/coordination with other providers
JCS works closely with the other organizations that operate under Corridor Rides. Most communication with other transportation providers is to share comments from riders and new ideas. Communication between JCS and other transportation providers seems to occur over email most of the time. JCS often discusses cross county service with the organizations that are a part of Corridor Rides. JCS does not interact with the ECR very often.

If he had $1M to invest
He said he would pay the cost of trips for individuals who are burdened by the cost. This would allow more people to access the services JCS provides. He would purchase electric vehicles for JCS to use. This would allow JCS to provide its services in a more ecofriendly manner. Lastly, he would provide bonuses for JCS staff. He wants to acknowledge them for the hard work they put in to keep up with rising demand.

Carter Baldwin
Director
Linn County LIFTS

Services offered by Linn County Lifts
The City of Cedar Rapids contracts with LIFTS to provide paratransit service, which prioritizes riders who are unable to use city buses due to a disability. A one-way ride for a senior citizen or an individual with disabilities is $2. Additionally, LIFTS serves anyone in the county who lives outside of the Cedar Rapids Metro area for a one-way fee of $6. LIFTS operates from 5:15 AM – 7 PM on weekdays, 8 AM – 5 PM on Saturdays, and does not offer Sunday service. LIFTS has a dispatch office takes phone calls from 7 AM – 5 PM and arranges rides.

How new riders register/qualify for services
Carter said that this would depend on where the person lived. If he or she was a Cedar Rapids resident, LIFTS has an application process intended to vet if the person could ride the city bus system. The first step is a questionnaire asking personal questions. If the individual has a physical disability where they cannot get to a bus stop or a cognitive disability that makes navigation difficult, this will likely qualify. The second step of qualification is to receive= documentation from a social worker or doctor confirming a diagnosis. Carter said for the most part, eligibility is pretty much permanent. Sometimes there is a short-term disability that improves and then that person is removed from the list, but this is rare.

Current challenges
"It's one of the challenges as a transit agency to get the word out there about what services we provide," said Carter. He believes that some people in Linn County simply don't know that LIFTS exists. He mentioned efforts to get word on through advertising and social media but said that specifically rural population is difficult to access. He also mentioned the added challenge of primarily serving seniors and individuals with disabilities, as these are two of the most difficult groups to reach.

Medicaid reimbursement
Carter said that eligible individuals on Medicaid can book free rides through "Access to Care," which is a service contracted through Medicaid to connect them with a ride from an eligible provider. LIFTS was a provider in the past, but not currently. Carter said that reimbursement was a challenge, specifically with the required regulatory and documentation processes. From his past career experience, Carter noted that many small transit companies don't have the back-office staff to process the documentation. Referring to the bureaucratic hurdles involved in reimbursement, Carter quipped, "It's sort of like a doctor's office."

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Kelly Schneider
Mobility Coordinator
Johnson County

Position description
Kelly Schneider serves as the Mobility Coordinator for Johnson County out of Johnson County offices in Iowa City. Kelly provides residents and visitors to Johnson County with assistance while scheduling trips, training on how to ride public transportation, and outreach to community groups who want to know more about existing transportation resources. She is the only County Mobility Coordinator within the East Central Region (ECR). Linn County used to have a Mobility Coordinator, but since the previous individual in that position left there has been a discussion on whether the position is worth the expense. There has not been a search for a replacement, and in the meantime, staff overseeing Corridor Rides at the East Central Iowa Council of Governments have been filling the void.

Services Provided
Her focus is to connect those with disabilities, low incomes, and age limitations with transportation services within Johnson County. She provides individuals with training on how to ride public transportation and schedule rides with transportation providers. This training can be in a one-on-one setting or to larger groups within the county. Also, she advocates for transportation related issues within the county and greater eastern Iowa region. She presents at county meetings and different board meetings to inform community leaders about the work she does and how they can support the individuals she works with.

Coordination with ECR
She completes some work with the ECR on a varied basis. The work consists of assisting clients identify available transportation services and trip planning. The scope is limited to clients that either live or are traveling to Johnson County.

Services outside Johnson County

Kelly is currently the only County Mobility Coordinator within the ECR. Her work is mainly with residents of Johnson County, but she also works with people who need to travel into Johnson County for things such as healthcare appointments. She works with these individuals to plan transportation to and from Johnson County. She pointed out that travel between counties is cumbersome. Transferring transportation services and using a different service to leave and return are often necessary.

Coordination with Transportation Service Providers

She interacts with transportation providers daily. She finds it easy to contact each transportation provider but reiterated that transportation between counties can be a pain to schedule. It is easy for her to know who to contact, but those who need transportation services can find it confusing when trying to understand the services an organization like Johnson County Seats provides.

Common challenges

She listed after hours service, transportation between counties, and scheduling as difficulties for the people she works with. She also agreed that the four issues outlined in the report, cost, access, scheduling, and coordination are barriers that need to be addressed to improve transportation services. An example for both cost and scheduling were provided to illustrate how they can be a barrier. She stated that public transportation is easier to obtain compared to higher cost private providers. The $2 charge for Johnson County Seats is a burden for a handful of the people she works with but not the majority. However, there is not any assistance for those individuals who find it difficult to pay the current $2 charge. She believes more people would use the services Johnson County Seats provides if they cost less or were free. Dialysis patients find it hard to schedule rides in Johnson County. There is not a dialysis center within Johnson County, so individuals who need dialysis must travel outside the county. It can be a burden to schedule those trips because they occur more often than most other healthcare appointments.

Impacts of new Same Day Service policy

Same day service has been a success so far. Individuals are finding it easier to run errands and get to work. She used a trip to Menards in Iowa City as an example of how the service is benefiting individuals who rely on public transportation. The closest bus stop is in on Mormon Trek Boulevard near McDonalds across Highway 218. Now individuals can request a same day ride instead of walking the mile from that bus stop to Menards. The service is busy because there is only one vehicle and bus driver currently in operation for Johnson County Seats. She wishes it received more support from organizations in eastern Iowa.

Fulfilling specific requests

She will do everything she can to provide individuals who come to her with options. She keeps an internal list of private pay options to recommend if public transportation, paratransit, and contracted transportation providers are not able to complete the requested trip. It is up to the individual how much they are comfortable spending and who they choose to provide the transportation.

If she had $1M to invest

She would invest in two things: a web application to schedule rides and expanded after-hours service. A web application for scheduling would hopefully improve scheduling between providers and provide a better experience for users who need to travel between counties. Expanded after hours service would allow users to retain late shift work and make trips on a schedule catered more to their needs.

Jan Heidemann, Operations Coordinator, Mental Health/Disability Services of the East Central Region (ECR Iowa)

Administration overview

As the Operations Coordinator, Jan organizes, oversees, and facilitates training for the providers over all nine counties. As a team, Mae Hingtgen, Peggy Petlon, and Jan Heidemann present different initiatives and program ideas to the Regional Governing Board (RGB). The RGB is made up of nine representatives from each of the nine counties the ECR serves, a provider representative, an adult with disabilities representative, and a parent of a child with disabilities representative. An important note is that during this discussion, the team learned that the term "brain health" was adopted into the ECR as the politically correct term for the individuals they serve. Jan also provided insight about the significant workload for ECR staff, which suggests that recommendations will have to consider staff and administrative capacity.

Client Population

ECR has an eligibility criteria checklist for clients that is income restricted. Many of the individuals ECR serves are eligible due to their Medicaid insurance. Those who do not have Medicaid can be eligible due to their income. The key takeaway is that the ECR is the "funder of last resort." With respect to transportation, ECR hopes to focus on preventative and proactive transportation strategies so that individuals do not have to use transportation with sheriffs and other last-minute transportation needs.

Purpose of the study
ECR Iowa team wanted to have a better understanding of what they have that is successful right now, what isn't, and how they can become more successful. She provided some of her own ideas, such as the grant Delaware County received that allowed them to provide their own van for transportation.

Transportation funding through ECR
Nearly all of ECR's budget comes from the Iowa state government. ECR has funding available for transportation initiatives. Currently, a portion of the transportation budget goes towards the invoices from county sheriffs transporting individuals to for in-patient clinics or hospitals. These forms of transportation are typically across county borders, which Jan noted is not favorable to the sheriff and county clerks, who are tasked with finding the open in-patient space. Additionally, ECR can cover costs for individuals who need to get to healthcare hubs in Cedar Rapids and Iowa City. The largest takeaway from this section of the interview is that the current form of payment is reactionary, and not preventative. Jan indicated that this is something the ECR administration team is hoping to change.

Partnerships
Transportation providers can complete an application to register as an official ECR partnering organization. Specific requirements are listed in the contract to ensure that drivers are qualified and safe. One key issue with partnerships is accountability. If an individual user makes a complaint, it is not likely that it will reach ECR unless the individual specifically calls ECR. Jan stated that communication with providers could be improved. Currently, little or no internal marketing is used to promote providers- the only way an individual could learn about ECR partnerships with providers currently is by visiting the ECR website, which isn't likely something that many people think to consider when looking for ECR-supported transportation providers.

Jan indicated that some of their goals of preventative tactics include providing transportation training, providing funding to sheriff departments for crisis prevention, having law enforcement liaisons, and reaching out to schools and providing wellness checks to students and staff. Jan emphasized ECR's interest in Telehealth Providers to provide help for rural communities.

Communications
The last part of the interview focused on marketing and communications between ECR and stakeholders. ECR does not currently engage significantly in marketing and promotion. Jan discussed how relatively little communication and marketing creates challenges for connecting with stakeholders. As an example, regional social workers are present in each county, however there is little coordination.

Key Takeaways from One-on-One Interviews

Cost/Finance

› Two providers mentioned that some people cannot afford even the very lost cost transportation options and may not always have a means of paying for rides. Financial assistance to support those clients is not always available.
› Johnson County Seats and Linn County LIFTS stopped taking Medicaid and NEMT reimbursements for trips because the paperwork was too cumbersome.
› One provider suggests that extra funding should go towards cost-burdened individuals.
› Currently, the ECR acts as the "funder of last resort."
› HIRTA has solicited donations to fund rides for needy residents through its 501(c)(3) nonprofit

Access

› Several providers mentioned that understanding services provided by some public transit organizations can be confusing for users.
› Two providers stated that same-day service has received positive feedback.
› Two providers pointed out that service days/times don't always align with riders' schedules.
› One provider mentioned that Medicaid reimbursed private services often stay in the metro areas and won't serve rural riders.

Scheduling

› One provider mentioned that dialysis trips in a different county can be difficult to schedule.
› One provider mentioned that most people need to schedule over the phone, and Johnson County Seats has had difficulty finding a cost-effective and reliable app.
› The HIRTA representative stated that the VIA app has worked very well for HIRTA's riders to schedule same-day-service.
› Three providers pointed out that new scheduling software can be expensive.
› One provider stated that the process to call for a ride can be confusing and "archaic"

Coordination

› Two providers mentioned that transportation between counties can be difficult to schedule, and one specifically mentioned the challenges with scheduling dialysis trips across county lines.
› Johnson County Seats has had difficulty finding a cost-effective and reliable app- currently most people need to schedule over the phone.
› One provider stated that regional social workers in each county have little collaboration.
› HIRTA will contact other providers to try and arrange a ride if the ride is outside their service area.
› Of the counties in the ECR region, only Johnson County currently has a Mobility Coordinator.

Following the initial round of interviews, the project team followed up with six providers in June 2023 in Iowa to explore issues in more depth. Interviewees in this phase included:

› David Sturch, Waterloo: Metropolitan Transit Authority
› Brock Grenis, Corridor Rides
› Kelly Schneider, Mobility Coordinator for Johnson County
› Tom Brase, Johnson County SEATS
› Nick Fratzke, Iowa Northland Regional Transit Commission (RTC)
› Chandra Ravada, Delaware Dubuque & Jackson County Regional Transit Authority (RTA)

Topics included: prior research undertaken to understand how clients access transportation alternatives, coordination of services across county boundaries, services outside of normal business hours, the use of technology, and use of medical reimbursement. These conversations raised challenges and opportunities not previously identified, and specific to the provider perspective.

› The lack of availability of drivers is a major issue, particularly during weekends and holidays. Hiring is also a challenge- wages and tedious CDL requirements were specifically mentioned. .

› Collaboration is currently not happening well.

› There is uncertainty and unreliability with non-emergency medical trips. Some providers do not provide these trips.

› Fleet and rolling stock are issues.

› One-call or one-click option could benefit providers and users.

› Web service would be great, but some people will not use it. Some would like to have a website or app that can be used to dispatch drivers and make the reservation. However, that could raise privacy issues if people would not want their location known.

› The idea of a mobility coordinator was appreciated by the providers.

› Providers do not use the same software. Software that could accept multiple revenue sources would be beneficial.

› The Federal Highway Administration (FHWA) has established protocols followed by all states. It would be also helpful to have a common guideline for all the service providers on how transportation is done.

Defining the "Gap"

Findings from the survey and the focus groups pointed to four main barriers to transportation among ECR clients. These include the following:

- › **Limited access** to public transportation and other alternatives
- › Difficulties **scheduling** rides
- › Challenges with **coordination** across multiple transportation providers
- › **Cost** of transportation services

Limited Access to Alternatives

Difficulties in accessing alternatives, particularly public transportation, was a main theme of both the focus groups and the survey responses. Stakeholders expressed frustration with the limited hours of many of the public transportation options. For example, Benton County Transportation only offers rides between 7 AM and 4:30 PM, and most of these public providers do not offer service on Sundays. Several survey participants expressed displeasure with the infrequency of service on bus routes and the distance between stops.

In addition to operating hours, respondents also noted difficulties accessing the nearest bus stop. Many live far away from any public transportation, while others have physical disabilities that make walking to and waiting at stops extremely difficult. Finally, an accessible transportation system also ensures that its riders are physically and mentally comfortable while riding. Several clients reported anxiety about navigating public transit systems that forces them to seek other means of transportation.

Scheduling Difficulties

Another barrier to transportation access is the difficulty of scheduling rides. Many paratransit providers require riders to call ahead at least 24 hours in advance. Several survey respondents expressed frustration at the reliability of the drivers even for the pre-scheduled rides. This can make it difficult for clients to plan their transportation, and often adds time to their commute.

One of the major barriers is a lack of uniform systems for reserving rides across providers. For example, some require a phone call to schedule a ride, others an email. Cedar Rapids Public Transit posts downloadable timetables on its website, while Iowa City Transit has an app. Navigating the logistics of scheduling or planning a ride can be a major source of anxiety, with some clients describing the process as "overwhelming."

Scheduling rides can also become complicated when users need to use two different transportation providers, especially in multiple counties. The lack of common scheduling systems and lack of coordination of fares and schedules results in additional barriers for users who depend on multiple providers for their travel needs.

Coordination across jurisdictional boundaries
Coordination between the different transportation providers in the ECR region creates other barriers for client transportation. The Iowa Department of Transportation divides the state into 16 different transportation regions. ECR's service area does not map neatly on to these regions: it serves mainly counties in 10, but also in Regions 7 and 8. This means that there is no centralized transportation authority able to link the different providers in the ECR region together. This puts an extra burden on riders to navigate these systems themselves.

Cost
The final barrier is cost, meaning the inability for ECR clients to find affordable transportation options. Nearly half of all survey respondents reported household incomes of $15,000 or less, and 71% of respondents stated that cost was a major barrier for getting where they needed to go. Many of these individuals are on fixed, low incomes like social security or disability.

However, survey respondents and focus group attendees expressed different specific cost issues. Many clients stated that acquiring private transportation, such as a cab or Uber, was prohibitively expensive. Some clients felt that the $5 or $10 fee for out-of-county ride fee from their county transportation provider was a significant financial burden. Others who either drive themselves or rely on friends and family expressed concern with rising gasoline prices. Only 53% of respondents stated that they felt knowledgeable about most of the transportation options provided in their county. This suggests that some clients may be purchasing private transportation when a cheaper or even free public option exists.

It is notable that cost intersects with the other three barriers. For example, someone who needs a ride at night is forced to pay for private transportation due to a lack of public services offered at those hours. Some may have transportation needs come up at the last minute and are unable to get a public ride with limited notice, forcing them to pay out of pocket. The proposed recommendations each address at least one of these four barriers.

Addressing the gaps
Of course, the challenges identified by ECR stakeholders are no different than those faced by anyone who relies on transportation other than a personal vehicle. In addition, the difficulty of providing frequent service throughout the day at reasonable cost is exactly what the providers struggle with every day. However, these gaps can be reduced through better regional coordination and the use of technology to ease scheduling for both the rider and provider. In addition, steps can be taken to ease difficulties in driver retention and vehicle acquisition that may help to create a better and more financially sustainable system for ECR clients and everyone who relies on alternative forms of transportation. The remainder of this report examines solutions to the gaps identified during this study. In the section that follows, we use case study research to point out best practices that are already in use elsewhere that could be applied to the ECR Region. The final section outlines goals and recommendations to address the gaps identified here.

Phase 2

Case Studies

Case Studies

Case study research offers information about programs, policies, and initiatives that have been adopted in comparable communities. The sections provide brief synopses of mobility-related strategies employed in other communities across the US, as well as links to sources and additional information.

One online resource stood out as an excellent source of information and case studies. The Rural Transportation Toolkit offered through the Rural Health Information Hub (www.ruralhealthinfo.org) should be bookmarked by transportation providers and advocates. While the site focuses on transportation in rural communities, many of the challenges discussed overlap with needs for individuals with brain health / mental health needs and disabilities in the ECR region.

Additionally, the toolkit summary entitled *Promising Practices for Increasing Access to Transportation in Rural Communities*, available for download on the website, highlights promising rural transportation program models and shares lessons learned from rural communities. While maybe a bit outdated (it was published in April 2018), the report includes useful information on 1) models to improve access to transportation 2) models to overcome transportation barriers 3) models to improve transportation safety or infrastructure 4) implementation strategies 5) program evaluation strategies and 6) sustainability strategies.

This section also includes a case study highlight on innovative strategies from the Heart of Iowa Regional Transit Agency (HIRTA) serving Iowa Region 11.

Using "Enabling Technology" to help individuals navigate transportation	In 2018, the Chattanooga Area Regional Transit Authority (CARTA), City of Chattanooga and the Tennessee Department of Intellectual and Developmental Disabilities (DIDD), partnered with the mobile app developer AbleLink Smart Living Technologies on an initiative to help people with cognitive disabilities navigate public transportation and more using mobile application based enabling technology. The initiative is described in this news release.
	Using the customizable mobile app, individuals tap on an image showing where they want to go and then receive very specific instructions for each step along their route. For example, instructions might say "When you see Waffle House, pull the yellow cord" or "Pass the McDonald's on your left" or "Make sure to wait for the walk sign to cross the street." Through the partnership, individuals were provided iPads specifically designed to help them meet their transportation needs.
	While the initiative received special funding, AbleLink's website shows that the mobile app can be installed on an Apple or Android device and the service is $60 month. The website does not offer many details but includes contact information to connect with representatives.
	› This video shows how the service has increased independence for an individual with disabilities. › DIDD's Enabling Technology Program is a good resource for learning about other related tools.
Increasing access to services with "mental health machine" iPads	GRAND Mental Health provides mental health and addiction-related services for 12 counties in Oklahoma. They operate 2 crisis centers and 20 clinics. With much of their coverage area being very rural, many clients were not always able to access in-person services because of lack of transportation, not being able to get time off work, and other reasons. In response, the organization launched a program in 2016 to distribute iPads with a secure video app for counseling sessions and crisis intervention. With just the press of a button, first responders, hospitals, and people in crisis can immediately connect face-to-face with the Grand Lake Mental Health Center crisis line. Nearly 6,000 "mental health machine" iPads having been distributed to clients and other service providers, such as law enforcement officers, enabling GRAND Mental Health to provide 24-hour services through their customized iPads and app. Additionally, health care providers can conduct their initial assessments over the iPads to determine if transportation services are needed for future in-person visits.
	› "Mental health machine" iPads featured in this article › GRAND Mental Health website

Using a regional call center and volunteer drivers for transportation coordination	The New Freedom Transportation Program from the Center for Independent Living Western Wisconsin (CILWW) helps persons with disabilities and older adults access transportation services for medical, shopping, and recreational trips. A call center staffed by transportation specialists helps coordinate travel for clients. Many of the transportation services are provided by volunteer drivers who are reimbursed for their miles. They also offer a voucher program that reimburses clients who provide their own drivers. The New Freedom Transportation Program covers an 18-county area and requires coordination across numerous agencies and organizations in the region. Important considerations include volunteer availability, background checks, insurance, and liability.
	
	  › Rural Health Information Hub [Volunteer Models](#)
	  › [CILWW Transportation Services](#)

Connecting health care providers with transportation coordinators to decrease missed appointments and lost revenue	In rural south-central Missouri, transportation barriers were causing some patients to miss appointments, leading to significant loss revenue for the health care providers. The HealthTran initiative was formed to provide non-emergency rides to patients in a 10-county region, primarily serving elderly, disabled and/or Medicare/Medicaid dually eligible patients. Riders are usually referred by their medical providers, who send transportation requests electronically to HeathTran coordinators, who work with riders on their transportation needs. The program has proven to be effective at significantly reducing missed appointments and improving access to healthcare for individuals with limited transportation mobility.
	
	  › Rural Health Information Hub's [summary/profile of HealthTran](#) and [media article](#)
	  › Missouri Rural Health Association's [HealthTran webpage](#)

Training and Certification for "Mobility Managers"	The Mobility Management Certificate Program (MMCP) is a self-directed course (usually completed in 4-6 weeks) developed by University of Missouri School of Medicine and MU Extension Office of HOPE. The course provides Mobility Management trainees the skills, knowledge, and resources that will improve transportation access for Missourians who have the greatest need. Upon completion of the course the trainee will be able to identify their community's transportation resources and barriers, communicate

with others using non-biased language, collaborate effectively, identify funding resources to assist consumers with transportation cost, and identify requirements and restrictions of funding for consumers. Additionally, trainees will create their own National, State, and Local Mobility Management Resources Toolkit that is focused on the trainee's community of service.

› Missouri Rural Health Association's MMCP webpage
› Mobility Management Certificate Program spotlighted here

Connecting individuals with limited mobility to services through a user-friendly online portal

Ride Connection provides transportation services to residents of rural Clackamas, Multnomah, and Washington counties in Oregon. It is a private, non-profit organization based in Portland. The organization brings many different transportation providers together to provide services to the elderly and disabled. You can request a ride with a phone call or through an online form for returning customers. They also offer training for drivers and riders. They receive their operating funds from grants and work with their transportation partners when they are unable to get one of their vehicles to an individual. They have a travel options tool that website visitors can use to quickly learn about transportation services available to them.

› Ride Connection website

Sending auto-texts asking if a ride is needed to a health care appointment

West Counties Health Centers in Northern California conducted piloted an initiative in 2019 with Hitch Health, a software company that links appointment data to rideshare providers, to help individuals with limited access to transportation make it to their health care appointments. Hitch Health is a software product that "integrates any appointment system with any ride service (such as Uber or Lyft) to seamlessly and proactively remove transportation barriers and reduce no-show rates." Essentially, when people in the region scheduled a doctor's appointment, they received an automated text asking if they wanted a Lyft ride to the appointment. Hitch Health uses provider criteria to filter and identify appointments eligible for rides and then sends ride offers to patients via SMS text when appointment data meets the criteria. If the patient responds "Yes" to the text, the ride is scheduled.

› Details on Case study here
› Hitch Health website

Supporting late shift work	The American Public Transportation Association (www.apta.com) published a report on how transportation for late shift workers can be improved. The report may offer insight for how the study population within the ECR Region can access employment outside of limited public transportation service hours. One of the suggestions is to allow employers to subsidize transportation when they would benefit from employees receiving transportation assistance. This would benefit those who would need transportation when public transportation options aren't running, or other transportation organizations are done for the day. They also suggest a framework be made for the process private employers would need to complete to contribute/subsidize transportation. A framework would put down on paper what the partnership between a private employer and transportation provider would look like. › *Supporting Late-Shift Workers: Their Transportation Needs and the Economy* accessed May 2023 at https://www.apta.com/wp-content/uploads/APTA_Late-Shift_Report.pdf.

Service area and ridership

Heart of Iowa Regional Transit Agency (HIRTA). HIRTA serves Iowa Region 11, which includes Boone, Dallas, Jasper, Madison, Marion, Story, and Warren County. Danny estimated that HIRTA completes about 400,000 trips a year. He noted that ridership dipped during the pandemic (this was not unique to HIRTA) but has risen since then.

Marketing and communication

Danny emphasized that HIRTA provide brochures to all health centers and doctors' offices in the region. Danny referenced statistics of appointment no-show rates of 18.8% and annual costs $150 billion as a selling point for the program. Medical providers ask their patients when scheduling an appointment if they have transportation. If a patient says no, the provider gives them the HIRTA brochure and ride information. Like Carter Baldwin, Danny referenced that targeting people with disabilities is difficult, as they tend to be less online than the general public.

Soliciting input and feedback

Complaints are filed directly with executive director through an online portal. There is a "Thank a HIRTA HERO" section of the website dedicated to complimenting HIRTA drivers. HIRTA also sends out a customer satisfaction survey once a year, which includes questions about bus reliability, cleanliness, and driver attitudes. Danny noted that HIRTA has a public participation plan with riders and other stakeholder that tries to meet once a month, but mostly communicates by email.

Current challenges

Danny believed that ride availability in terms of days and times offered is the biggest challenge HIRTA faces. Recently, HIRTA adopted same-day-scheduling, which Danny thought has helped to address some of the availability issues. This scheduling is offered through a new app, similar to Uber. Danny also said that since many of HIRTA's riders have disabilities, payment can be a struggle. HIRTA is trying to address the cost issue with its "Adopt-A-Rider" and volunteer driver programs.

App Development

HIRTA recently changed the scheduling software from 24 hours in advance to on-demand. They just agreed to license the software from a third-party vendor, Via Transportation. Danny couldn't

give a price point on the software but stated that it was expensive. Danny he did not have usage data on hand, and that the app is quite new (it launched in September).

Fulfilling special transportation needs
If the request is out of HIRTA's service area, Danny will email another transportation provider and pass it over to them. If that provider cannot meet the rider's needs, Danny said that HIRTA always tries to help the client reschedule for another time or change an existing ride's timeline to free up a vehicle.

Pros and Cons of regionalized service
Danny noted that Iowa is unique in that by state law, every county has to have public transportation. It can be hard to ask for funding as an individual county, so combining into one organization appeals to some counties. However, Danny said that success depends on what works best for that region. He noted that having both urban and rural areas in a region can create challenges. For example, in HIRTA's region Madison County does not like that its county funds might pay for rides to a larger city.

Establishing a non-profit to receive philanthropic donations
Danny was excited to talk about Heart of Transit, HIRTA's 501(c)(3). Having the adjacent nonprofit allows HIRTA to apply for grants that they otherwise wouldn't be eligible for. Danny noted that any state dollars for transportation need to be matched by the public transit providers, so these grants have been an excellent source of matching funds. Donations to HIRTA also pass through Heart of Transit.

Around 2020, HIRTA contracted with a lawyer to set up the nonprofit. However, it has the same board as HIRTA, so all contact between the two organizations is streamlined without running into bureaucratic slowdowns. It makes it easy for money to flow from Heart of Transit to HIRTA.

Donations into Heart of Transit go into a pool of money that HIRTA uses from program's like Adopt-A-Rider. People with financial needs can ask for free fares, and Danny said that HIRTA takes their word for it. He said that HIRTA has never run out of money in that account, so there is no need to prioritize who gets free rides. He also mentioned that Hy-Vee sells "HIRTA bucks" that social workers, community members, and worship leaders buy and give out to contacts in need.

Phase 3

Goals and Recommendations

Goals and Recommendations

This section describes potential actions to mitigate transportation gaps and to increase access to services for individuals with brain health/mental health needs and limited mobility. Detailed recommendations provide information about implementation, how they connect to regional needs, real-world examples from other communities. The recommendations are not intended to be an exhaustive list of all possible strategies, but ideally help address many current challenges and spur new innovative collaborations.

The recommendations fall into three main focus areas: community knowledge, technology, and regional partnerships & services. Goals and recommended strategies (described in more detail in the following pages) include:

Goal 1 _Increase Community Knowledge_	Goal 2 _Utilize Technology_	Goal 3 _Enhance partnerships & services_
Develop the knowledge and skills of ECR's clients, their caretakers, and other community members to improve utilization of existing transportation resources. _Strategies:_ › Conduct **Travel Awareness Trainings.** › Create a regional **Mobility Coordinator** position to assist clients with their transportation needs. › Establish a **Mobility Management Certificate Program** for caretakers, community leaders, social workers, and other providers/advocates.	Provide an array of online and mobile resources to help plan and coordinate trips, increase outreach to clients, guide clients while using public transportation, and improve relationships between clients and community members. _Strategies:_ › Distribute **Customized iPad Assistants.** › Produce a **Mobile Web Application** for scheduling trips. › Develop a **Regional Website** to promote transportation services. › Explore a **Mobile Brain Health Clinic** to eliminate transportation burdens.	Increase collaboration and knowledge sharing transportation providers, health care providers, mental health service agencies, and other stakeholders while also addressing systemic issues. _Strategies:_ › Hold monthly, regional t**ransportation stakeholder meetings.** › Share knowledge and collaborate to **expand same-day service.** › **Empower healthcare providers** to best support the transportation needs of their patients. › Address the need for **more drivers** › Address **transit procurement** issues

Goal 1: Increase Community Knowledge
Develop the knowledge and skills of ECR's clients, their caretakers, and other community members to improve utilization of existing transportation resources.

The ECR region is served by a variety of public and private transportation providers. Lack of awareness among clients about the existence or capabilities of these services can lead to difficulty scheduling trips. Community knowledge improvements address the four issue areas in the following ways:

- › Awareness of all options, including possibilities for Medicaid reimbursement, helps identify the **lowest cost options.**
- › Familiarity with schedules and operating times of all transportation services increases **access and mobility.**
- › Knowledge of dial-a-ride protocols makes it **easier to schedule** a ride.
- › Understanding which transportation providers make sense for complex or inter-county trips helps improve **coordination.**

Related Survey & Focus Group Findings
- › Only 53% of survey respondents believe that they know about most transportation services in their city or county.

- › 71% of survey respondents stated that cost is a barrier to getting where they need to go. More awareness of free ride options and pathways to reimbursement will help alleviate these financial burdens.

- › Many focus group participants were unaware of transportation options and how to access them.

- › Several focus group participants expressed anxiety about riding the bus, while others indicated that the process of waiting for unreliable transportation can cause anxiety

Related Provider Interview Findings
- › Advertising services to individuals with disabilities can be difficult.

- › Inter-county travel within the region can be extremely difficult for people to coordinate.

- › One process that riders must go through to schedule a ride was described as "archaic."

- › Medicaid-eligible rides is not consistent among transportation service providers across the region.

Community Knowledge Strategy #1: Conduct Travel Awareness Trainings.

The ECR, potentially in partnership with some of the regional transportation providers, could offer multiple trainings to directly educate its clients on best practices for scheduling and using transportation services. This recommendation is based on trainings delivered by Ride Connection, an organization in Portland that helps both seniors and people with disabilities navigate the Portland public transportation system. The program can include both route-specific and generalized system trainings, along with specific advice for people with intellectual disabilities. Part of these trainings might include partnered trips, where volunteers or other community members accompany an ECR client with the goal of improving his or her confidence using transportation.

Community Knowledge Strategy #2: Create a regional Mobility Coordinator position.
Please see Appendix B for a detailed description of this recommendation

A regional Mobility Coordinator would be employed in the region. Currently, Johnson County is the only one of the nine member counties with its own Mobility Coordinator. This Coordinator would be directly responsible for client outreach and transportation scheduling. This might include adding features to the ECR website or other ways to improve client awareness of transportation options. Depending on capacity, the Mobility Coordinator might also respond to individual client or caretaker calls and help them arrange specific transportation needs.

Community Knowledge Strategy #3: Establish a Mobility Management Certificate Program

The Mobility Management Certificate Program would be a free, 6–8-week course to educate community members about transportation options in the region. These community members could include family caretakers, social workers, religious leaders, and others who support individuals with brain health needs. After taking the course, these new "Mobility Managers" would be able to help clients in their network schedule transportation and develop the confidence to navigate the system independently. This option is based on the success of the Missouri Rural Health Association offering a similar program across a ten-county region in rural Missouri. This program has the potential to offer different modules, either county-specific or modules geared towards urban or rural transportation. The course would be administered through an online educational platform and might include videos from transportation providers explaining how to schedule all the services offered.

There is not currently a location or website where individuals can access a comprehensive list of available transportation resources in the ECR region. County transportation providers, public transportation systems, and private transportation providers have individual websites, but few people likely have insight and knowledge about the complex network of transportation options across the region. Within the region, the East Central Iowa Council of Governments (ECICOG) and the Iowa Northland Regional Council of Governments (INRCOG) may have the most comprehensive knowledge. Certainly, individuals may find it hard to identify and understand all the available transportation resources. Additionally, access to public transportation and private transportation provider services varies significantly between urban and rural areas. Expanded applications of technology will address cost, access, scheduling, and coordination in the following ways:

› Providing information on all available transportation options in one place and offering brain health care in locations closer to patients will reduce transportation related costs for individuals with brain health needs.
› Having technological tools and knowledge of transportation systems will improve access to transportation resources.
› Giving individuals with brain health needs the option to conduct telehealth appointments and plan trips using a mobile application will improve the scheduling trips for both users and providers.
› Establishing lines of communication between both transportation provider organizations and transportation users through mobile applications and website search tools will improve coordination for both users and providers.

Related Survey & Focus Group Findings
› 37% of survey respondents identified a lack of available, reliable, frequent, and location specific transportation as a reason they are not always able to get where they need to go.

› 42% of survey respondents identified poor internet access as a barrier using telehealth.

› Focus group participants expressed that anxiety can be an issue when using public transportation, both when riding and waiting to be picked up.

Related Provider Interview Findings
› One provider pointed out that she may be the only mobility coordinator in the region.

› Two providers expressed that travel between counties can be difficult for users to schedule and coordinate.

› One provider shared that the ownership of the software his organization uses has been sold multiple times. This could cause confusion about who to contact with service questions.

Technology Strategy #1: Distribute Customized Electronic Tablet Assistants

Personal electronic devices allow individuals to access services they would usually have to plan a trip from where they currently are and reach their destination more efficiently while using public transportation. One potential use would be for telehealth appointments for patients who can't easily access transportation or technology. iPads could be for individual use or in a public setting, such as a library, if internet access is unreliable. The iPads could also be equipped with a crisis button that connects users to a mental health professional without having to travel to a doctor's office. A third potential use would be to include an app on personal iPads that provides detailed step-by-step instructions for traveling to a destination.

Not everyone has access to a smartphone or reliable internet or cellular service, so providing individuals with this technology will increase their chances of attending telehealth appointments and provide them with confidence while using public transportation. These iPads would be for telehealth and transportation assistance only with all other functions turned off. Each device would come with a case, require a case specific password, and have ECR or other organizations branding on the case and home screen background. Making changes to many of the device's settings would require an administrative log-in. Providing iPad Assistants would require funding to purchase the devices, identification of locations to distribute, and development or subscription of the mobile apps.

Technology Strategy #2: Mobile Web Application for Trip Scheduling

Mobile devices and the internet allow individuals to access brain health resources and schedule trips on their own. Like the mobile apps used by HIRTA and Johnson County Seats, a regional mobile app would allow riders to schedule, pay for, and track their rides from their phone. A mobile app could free up time for schedulers to assist other users. A region-wide mobile app would also allow the county transportation providers to see where rides are being requested. Riders would also be able to see the map of their trip and get real-time information about the ride service, which may help alleviate stress and anxiety. Pooling resources to make a large, one-time purchase to access a reliable software or application will reduce hassle and headaches for transportation providers.

This strategy would require funding to purchase software licensing, hire a developer to build a new application, or expand current application use to more providers. Transportation provider staff and mobility coordinators may need to train individuals on the new technology.

Not everyone has a cell phone, other personal electronic devices, or even a reliable internet connection. Pairing this strategy with the iPad strategy above could eliminate these barriers. However, keeping a scheduler available over the phone would be the best option for some riders.

Technology Strategy #3: Develop a Regional Website to promote transportation services
Individuals with brain health needs, caretakes, and health care providers cannot currently access a comprehensive list of regional transportation resources online. A single resource hub could share information about services and resources to users. A website could also include a "travel options tool" that provides customized search results based on an individual's location. Users could see how many bus stops are near them, how to schedule a ride with a provider, and how to access travel training if they are unsure how to use the transit options presented to them. The site could also provide contact information for mobility coordinators. It would be important to pursue partnerships with other community organizations to market and promote the site.

Technology Strategy #4: Mobile Brain Health Clinic
For individuals that live far from health care services and hve limited mobility, getting to appointments can be challenging. Public or private transportation services may not always be available, cost of transportation can be a barrier, and some individuals have anxiety about using transportation services. Mobile health clinics provide an alternative that greatly reduces barriers to access caused by limited transportation and mobility.

Mobile clinics are often used to address healthcare gaps. For example, dental exams and x-rays have been conducted out of mobile clinics. A mobile brain health clinic in the ECR region could significantly increase access to services and good health outcomes. The mobile clinic could have scheduled times withing communities throughout the region. Volunteers or staff from healthcare providers would be needed to administer services.

Individuals would need to be informed on when the clinic will be in their area, where it will be located, what services it will offer, and whether walk-ins are welcome or if appointments are necessary. This strategy will not eliminate the need for transportation in all cases. Some may still need transportation services to get to the mobile clinic; however, these trips will be shorter than what is currently required. The mobile clinic would not eliminate the need for transportation for these individuals, but it would decrease the amount of time they spend in transit to their appointments.

Please see Appendix C for a detailed description of the Technology Improvements goal and strategies.

Goal 3: Enhance Regional Partnerships & Services
Increase collaboration and knowledge sharing among public and private transportation providers, health care providers, mental health service agencies, and other stakeholders within the region, while also addressing systemic challenges

While the ECR region is served by a variety of public and private transportation providers, coordination among these providers does not appear to be common practice. Connecting with other service organizations, such as health care centers, would also enhance services to the target population. Regional collaboration can potentially increase efficiency, mitigate the challenges related to travel across county borders, and implement best practices uniformly across service areas. Regional partnerships address the issue areas in the following ways:

› Stakeholder meetings and other coordinated efforts highlight best practices and will likely lead to new ways of increasing **access and mobility**.
› Cost-sharing, joint grant applications, and a unified effort to engage state and federal agencies could yield additional resources and **lower costs** for large expenses, such as mobile apps and software, ideally lowering costs for riders as well
› Collaborative efforts should focus on strategies for making it **easier to schedule** and **coordinate** rides.

Related Survey & Focus Group Findings
› A majority of respondents (54%) reported a need for assistance with getting additional information about the bus system or other transportation alternatives.

› Generally, focus group participants seemed to agree that having a central transportation coordinator for the region's clients would help to overcome the difficulties in accessing scheduling information

Related Provider Interview Findings
› Several providers mentioned that understanding services provided by some public transit organizations can be confusing for users.
› Three providers pointed out that new scheduling software can be expensive.

› One provider stated that regional social workers in each county have little collaboration.

› All provider face challenges attracting and retaining drivers

Regional Partnerships Strategy #1: Hold monthly, regional transportation stakeholder meetings.
From discussions with providers, there seems to be some lack of knowledge about how different transportation providers in and around the region operate and how they could better coordinate their services. Setting up monthly meetings will enable all service providers in the region to get on the same page, create unity, exchange ideas, and receive feedback. The regional transportation providers should set regular monthly or bi-monthly meetings to discuss how to better coordinate and share resources. ECR or East Central Iowa Council of Governments (ECICOG) are two organizations that could facilitate these meetings. Because of their expertise and advocacy for the population they serve, ECR is well-equipped to gather together advocates and service providers. ECICOG could be a facilitator because many of its communities are within the area of this project and the organization already plays a role in transportation related decisions. The main topics to be discussed at monthly meetings may include public transport information, current or upcoming projects, and current problems (i.e., driver shortage, funding, interagency coordination, Medicare reimbursement, gaps in service times etc.).

Stakeholders could consider opening meetings or portions of meetings to the public. Monthly meetings can be broadcast live on social media channels such as Facebook or YouTube. Customers/clients would be informed of developments, rather than only transportation administration, and can ask their questions live and discuss their opinions and complaints with regional transport providers. In summary, people with disabilities, the elderly, families with children, members of society, or service providers can attend these monthly meetings.

Regional Partnerships Strategy #2: Share knowledge and collaborate to expand same-day service and extended hours.
Same-day service policies and transportation on nights and weekends responds to a significant need among individuals with brain health / mental health and disability needs. Implementation is likely very resource-heavy and expensive, so this strategy focuses on advocacy and knowledge-sharing among providers about how to move in this direction, and to explore how coordination can help accomplish this goal. One recent change in the region can inform future decisions, particularly as the effectiveness of the program becomes more evident. Johnson County SEATS, with funding from the American Rescue ACT Plan (ARPA), implements a same-day on-demand service, in January 2023. Individuals can schedule ride service from 7:30 a.m. to 4:30 p.m. Monday through Friday. Riders must get a one-time referral through a local human services agency or Johnson County's Mobility Coordinator before accessing the service. Rides cost $5 each way.

Regional Partnerships Strategy #3: Empower healthcare providers to best support the transportation needs of patients.
One of the main transportation concerns for individuals with brain health / mental health and disability needs is getting to in-person healthcare appointments. Establishing direct lines between healthcare providers and transportation service providers can greatly enhance mobility for patients while also reducing missed appointments that affect health care center operations. Several of the other recommendations, such as a comprehensive website and a mobility coordinator, make these connections more possible. Case studies illustrate ways that technology and mobile apps can enable health care providers to help patients make relatively fast, real-time accommodations. A more minimal, low-cost strategy would be to develop and distribute informational brochures to clinics and medical centers with detailed information about the transportation services available to patients with brain health needs.

Regional Partnerships Strategy #4: Continue to address driver shortages.
Please see Appendix D for a detailed description of this recommendation

East-Central Iowa's transit providers shared almost universal concern about how employment struggles are affecting operations. Driver shortages lead to trip caps, wait lists, or an inability to serve the client. Providers can consider various steps to address driver shortages. First, they should conduct agency audits of driver hiring policies and practices, and reconsider overarching bans that disqualify applicants. Such bans have excluded individuals with criminal records who might otherwise be very capable and qualified and disproportionately affect candidates from marginalized communities. Second, providers can evaluate their fleets and consider passenger vehicles that don't require a relatively expensive and more difficult to obtain CDL operating license.

Regional Partnerships Strategy #5: Continue to address transit procurement issue.
Please see Appendix E for a detailed description of this recommendation

The struggles with procuring fleet ("any kind of vehicle") were universal among providers. Until the rolling stock shortage is resolved, volunteers, ride-sharing and related efforts will play an even more important role by augmenting the formal transit system. Micro transit (a shared transportation hybrid of traditional fixed route transit and ride-hailing technologies) as well as taxi and ride-hailing providers can help alleviate the strain on the current system as well, but affordability may limit these mobility options for all affected clientele. Revisiting the topic of regional coordination may also serve as an ongoing partial solution to limited fleet options. As vehicles are taken out of service for maintenance or repair, reciprocal transit assistance across service boundaries from neighboring operations should be further considered.

Appendix A

Summary of Focus Group Themes and Findings

Appendix A - Summary of Focus Group Themes and Findings

Service limitations	› Some service providers limit the number of children that can come along to appointments, which makes it harder for individuals to attend their mental health appointments (lack of childcare services).
	› Unavailable bus services during late evenings and weekends.
	› Limited transportation providers (e.g., no taxis in some areas).
	› Unreliable bus services.
	› Service providers prioritize people with chronic and severe disabilities.
	› Lack of frequency of public transportation services
	› Lack of public transportation area coverage.
	› Lack of consistency in areas covered by bus pass (e.g., individuals responded that their Iowa City bus pass does not work in Coralville).
	› Lack of assistance for car repair, registering for insurance, payments etc. for clients living on disability.
	› Lack of local knowledge of drivers employed by service providers (e.g., GPS leading them astray, having trouble finding addresses).
	› Teenagers with mental disabilities sometimes cannot attend their appointments because of not having reliable travel.
	› Using public transportation when shopping for groceries limits the amount of food and essentials individuals can purchase (and/or carry with them).
	› Major waitlists for people with cognitive disabilities to get an appointment.
	› Lack of transportation vehicles available for service providers. Inadequate training for service providers' drivers regarding how to interact with people with brain health needs.
	› After hours non-emergency issues are not being addressed.
	› Often, services are too far apart from other facilities such as Walmart/drugstores/coffee shops, and restaurants.

	› Transportation providers cannot hire enough drivers.
	› Even some transportation staff have difficulties going to places.
	› Scheduling through the managed care transportation can be difficult (people have to go all the way through the website and set up all the rides if they miss a ride due to personal issues.)
Cost	› Insufficient money (e.g., paying for gas, getting uber, or even getting a bus pass).
	› Exorbitant costs for agencies to offer Uber or other non- traditional services.
	› Expensive tickets for paratransit services such as SEATS ($5 per ride).
	› People who are living on a disability or social security income cannot afford essentials towards the end of the month.
	› Cost of living in bigger cities (such as Iowa City), force people to move out of the area with services/resources.
	› The cost of travel to rural areas is $25 one way, which puts a great burden on the individuals.
Social anxiety or other mental barriers	› Bus trips can lead to increased stress for people who have social anxiety.
	› Planning trips can be challenging for people with disabilities.
	› Fear and mistrust while using private transportation services can increase already elevated levels of stress (e.g., Uber and Lyft – especially for women with metal disabilities).
	› Anxiety about the consequences of missing an appointment due to lack of transportation (e.g., providers might sometimes drop a client for missing an appointment, even when the client's driver has not shown up).
Lack of awareness and insufficient marketing	› Many individuals are unaware of all available sources of transit and how to access them.
	› Some people are not aware of the related/responsive service providers to their issues and just call 911.
	› Many individuals are not aware of 988 (crisis service line).

Personal challenges	›	Physical barriers for people with disabilities (e.g., requiring a wheelchair ramp without one being available).
	›	Sometimes it can take 45 minutes for people with severe disabilities to reach their appointments.
	›	Transportation difficulties due to lack of social networks (if an individual has no informal network, they have very few transportation options).
	›	Some individuals with disabilities have to figure out if they can afford to put all their energy into planning and trying to get to/from a single appointment.
	›	Some individuals with mental disabilities have to take their children along on the bus, which adds to complex planning. (e.g., for grocery shopping or attending an appointment).
	›	An increase in the number of families that are driving with a suspended or barred license to get to health/mental appointments. Lack of safety due to inefficiency of public transit (people have to wait at bus stations in night time.)
	›	Lack of trust in current medical system (not trusting the effectiveness of the drugs they are taking).
	›	Finding a consistent provider/prescriber that feel comfortable with.
	›	People with mental disabilities are sensitive to how they are being treated.
	›	Denial/stigma is strong – admitting the need for getting help is an issue.
	›	Bus Transfer is problematic for people with brain health needs. Navigating through websites can be challenging for people with low computer skills.
Challenges with volunteer-based services	›	Some volunteer programs (e.g., the Delaware Country RTA program) are only operational at certain times (such as not on weekends).
	›	Covid-19 situation caused some volunteer-based services to be cancelled.
	›	Although they can fill up transportation gaps, informal carpooling networks are not as common in rural areas.
Lack of access to telemedicine	›	Some people do not have access to or cannot afford an internet connection or electronic devices such as laptops and tablets, which limits them from using telemedicine.
	›	Some people have difficulties using telemedicine technologies.

Appendix B

In-depth Analysis of Mobility Coordinators

Appendix B – Mobility Coordinator

Transportation users in and around Region 10, outside of Johnson County, do not currently have a consistent face to put with the information and services offered by their regional transportation providers. Having a face to connect to the services and develop a trusting relationship with is currently limited to drivers who may not be the same every trip and administrative staff that have more on their plate than user outreach.

Currently, Johnson County is the only entity within Region 10 and the surrounding area with a dedicated Mobility Coordinator (Figure 1). Linn County used to also have one, but the position has not been filled since the previous coordinator left in 2022. There is a Statewide Mobility Coordinator, but their focus is much broader than that of a reginal, city, or county specific coordinator. The Johnson County Mobility Coordinator's job is to inform others on transportation services, teach users how to access available services, and develop relationships with community members so they feel comfortable using transportation. Those who live outside of Johnson County are missing out on an advocate because of where they live. This lack of locally dedicated mobility coordinators leaves individuals with one less resource when navigating the transportation services in eastern Iowa.

Equity efforts on behalf of individuals with mental health needs or disabilities are also diminished with a lack of available mobility coordinators. Without assistance from a local mobility coordinator, transportation users are susceptible to falling into gaps such as a lack in the development of personal relationships between users and providers, the dissemination of transportation service information to the public, coordination between regional providers, and the internal tracking of transportation gaps.

Having a mobility coordinator that focuses on and closing the gaps mentioned above would improve the user experience and provide a more cohesive network of communication between transportation providers. A mobility coordinator (or multiple coordinators) could be instituted at a few different levels within the transportation landscape of eastern Iowa. The position could be housed at the county level, provider level, or regional level. If instituted at the county level, the position would function much like the Johnson County Mobility Coordinator does. Each coordinator would serve the residents of their county, educate individuals on area providers, and track gaps for those within the county. The position would function similarly at the provider level but may be shared between multiple providers to save costs and increase connectivity. The coordinator would serve individuals within the service boundaries of the providers they work with and communicate with others as necessary.

Figure 1. Map of current mobility coordinators in Iowa provided on the Iowa DOT website.[1] The titles Mobility Coordinator and Mobility Manager are used interchangeably.

Iowa Mobility Manager Map

Travis Halm, Transportation Planner, Metropolitan Area Planning Agency Contact: 401-444-6866 ext.3229 thalm@mapacog.org

Kristen Templeton, Transit Coordinator, Southwest Iowa Transit Agency Contact: 712-243-4196 ext. 232 kristen.templeton@swipco.org

Kelly Schneider, Social Services Mobility Coordinator, Johson County Social Services Contact: 319-356-6090 kschneider@co.johnson.ia.us

Danny Schnathorst, Marketing Outreach Coordinator, Heart of Iowa Regional Transit Agency Contact: 515-309-9284 dschnathorst@ridehirta.com

Catlin Curry, Mobility Coordinator, Des Moines Area Regional Transit Authority Contact: 515-246-2526 ccurry@ridedart.com

Emma Simmons, Statewide Mobility Coordinator, Iowa DOT Public Transit Team Contact: 515-233-7877 emma.simmons@iowadot.us

The position would also look similar at the regional level but align more with how transportation resources are divided within the State of Iowa. This would mean the coordinator is housed with other Reginal Transit System employees and cover a multicounty area where trips between them are common. An individual mobility coordinator may be overwhelmed at the regional level, but this option is less costly and would cover larger areas where individuals normally travel to and from. If a mobility coordinator cannot be instituted as a new position at any of the levels mentioned above, an existing staff member could be designated as an individual who

can be reached to answer questions concerning available services or attend meetings with other mobility coordinators to represent the organization.

A familiar face who you feel comfortable sharing thoughts with and asking questions can make the difference when you are unfamiliar with technology related transportation tools or are unfamiliar with the necessary procedures needed to use transportation services. In Phase 1 of the project participants in the focus groups expressed that users of can face anxiety while using transportation services. Uncertainty about routes and timing, scheduling, boarding, or riding procedures, and technological tools can prohibit individuals from taking advantage of available transportation resources or induce anxiety while using transportation.

Mobility coordinators can be the face of transportation providers to their users through relationship building and outreach. The Johnson County Mobility Coordinator is currently doing this. The coordinator is available for appointments virtually or in person to assist individuals with their search for available transportation services and navigate the transportation infrastructure of the county. Coordinators can leverage technology by conducting appointments online or responding to comments and concerns left on an online message board. Developing connections with individual users can make them feel welcomed and provide them with the confidence needed to take advantage of the transportation resources available to them.

As alluded to above, providing education to users and community stakeholders would be a major portion of the work carried out by any mobility coordinator. Educating individuals on how to utilize transportation services and infrastructure, finding available transportation options on a case specific basis, and informing other community points of contact on available transportation resources all fall under the umbrella of community outreach and education. The Johnson County Mobility Coordinator currently does this both in-person and online.

For example, individuals can receive assistance searching for available transportation options during an online meeting or meet at specific transportation infrastructure locations in Johnson County to learn how to utilize the transportation that operates there. Information can also be shared through online resources such as provider or county websites. Whether online or in-person, the education and outreach conducted by any mobility coordinator will take one of these four forms: user options, user procedures, other community professionals, and other community organizations.

Education Form 1: User Options
This form is the first and most basic information potential users need to know before utilizing transportation: the options available to them. Options can be dependent on user location, destination, timeframe, cost, and available technology. A mobility coordinator is someone knowledgeable of available options and can help an individual find what works for them based off the constraints above. A variation of this type of assistance is provided by the Portland, OR based organization Ride Connection. The organization has a travel options tool available for users to enter their beginning and ending locations to receive a list of potential transportation providers and nearby public transportation infrastructure. Users are also given

information on where they can find additional information and assistance related to their proposed trip. Receiving this type of assistance from a mobility coordinator would mean it would take place in a more face-to-face manner, giving it the added benefits of reducing user anxiety and establishing a personal relationship between user and coordinator.

Education Form 2: User Procedures
Once a user knows what options are available to them the next hurdle is how to use those options. Whether it's how to schedule a trip using unfamiliar technology or inexperience entering and exiting a bus, a mobility coordinator can walk a user through the necessary procedures to successfully utilize the resources available to them. This can take place either in-person or online. Coordinators can walk through scheduling procedures online and teach the ins and outs of transportation infrastructure use while out in the community. For example, the Johnson County Mobility Coordinator takes people out to places such as the Downtown Interchange in Iowa City to show them how to utilize the bus system. This personalized education answers individual's questions in real time and empowers them to take advantage of the resources at their disposal.

Education Form 3: Other Community Professionals
Many individuals interact with the transportation system or work with others who depend on the transportation system without using it themselves. Other professionals in the healthcare, education, and mental health professions would benefit from receiving information of the structure, schedules, and procedures of public transportation providers. The Missouri Rural Health Association (MHRA) has partnered with the University of Missouri to provide a Mobility Management Certificate Program to provide others with this information.[2] This partnership was created to education individuals who are not in the transportation profession on what resources are available in their community. The course covers topics such as advocacy, agencies that provide funding, toolkit creation, and stakeholder identification. Mobility coordinators could educate other points of contact within the community by developing a similar curriculum that's specific to eastern Iowa.

Education Form 4: Other Community Organizations
There are many meetings of organizations and boards that take place throughout the region. Appearing at these meetings and sharing information or answering questions is something that mobility coordinators could do. This allows information to reach individuals who may not otherwise receive it and puts transportation issues on the mind of other organizations. The Johnson County Mobility Coordinator has spoken at community meetings such as the Urbanized Area Policy Board of the Metropolitan Planning Organization of Johnson County. This opportunity was used to update the board on the current state of transportation in the county. Appearances at meetings like this stimulate transportation related conversations and develop relationships between individuals in different organizations. Figure 2 is a diagram of the proposed education hierarchy for transportation services.

Since transportation in Region 10 is structured differently than in the rest of the state, mobility coordinators could serve as bridge between the providers in the region and providers outside the region. Mobility coordinators who have knowledge of rides and services throughout the region could be shared to facilitate transfers between county providers. This would not be a duty designated solely to mobility coordinators, schedulers and drivers also have a role to play, but they could serve as a voice with overarching knowledge of multiple providers.

Transfers at the regional level did not seem to be a major hurdle after talking to providers at the two roundtable meetings, but this could still be an activity mobility coordinators are involved in. They can also act as connections between regional providers by attending and setting the agenda for the monthly meetings suggested earlier in this report. This would establish recurring communication between a group of individuals with a common purpose from each organization. Whether at the regional or provider level, mobility coordinators have a role to play in the connection and planning between providers as a user advocate.

Lastly, tracking transportation gaps internally is an important duty that can be completed by a mobility coordinator(s). This is also something that the Johnson County Mobility Coordinator currently does. These gaps can be identified through either one-on-one meetings with users or from receiving comments and concerns through a web portal located on a provider website or application. This would also facilitate communication between individuals providing services out in the field and conducting administrative work in the office. Fleet management personnel, drivers, coordinators, and other administrative staff would use this information to guide discussions and establish service goals throughout the organization. These six areas are where mobility coordinators should look out for potential gaps: time, location, cost, employment, technology, and representation.

Figure 2. Diagram of the education hierarchy for transportation services. Information starts with the mobility coordinator(s) and first gets shared with users. Then information is shared with other individuals and organizations within the community. Those individuals and organizations can then share information with users. Mobility coordinators can learn how to improve transportation and outreach efforts from everyone below them in the diagram.
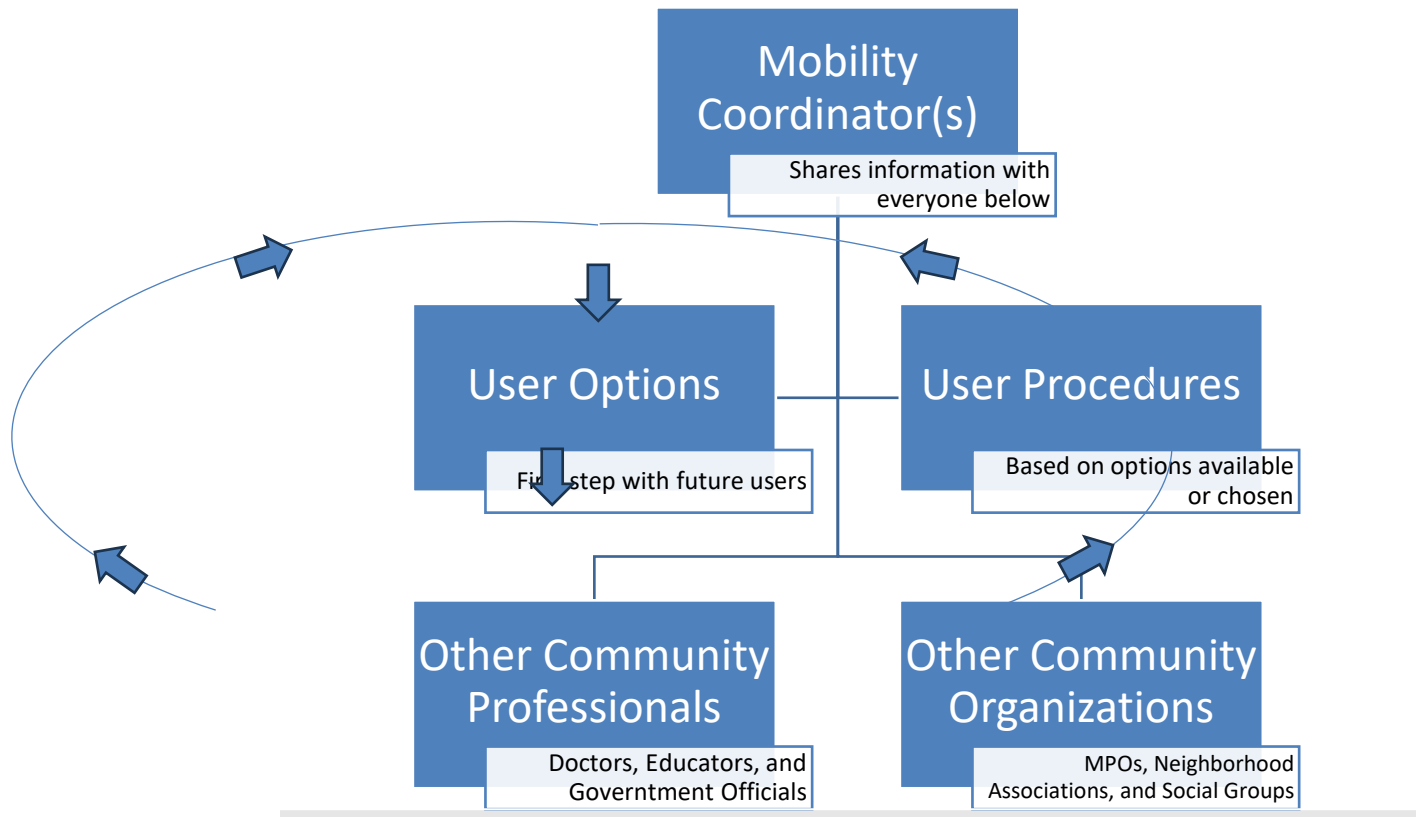
Potential Gap 1: Time
Transportation providers have defined timetables for service, and not all users only need transportation within those windows. Travel early in the morning or in the evening can often not be accommodated. Also, users may need to schedule trips days in advance. This leaves little flexibility for users to plan trips or change plans to adapt with their schedule. Mobility coordinators can attack the problem of service times by tracking which times rides are requested at often but unfulfilled and share that information with transportation providers as well as advocate for increases in same-day service.

Regional Example: Johnson County Seats has recently expanded same-day service with American Rescue Act Plan funding for a one-way fare of $5. There is currently one vehicle running this service and spots are filling up fast according to the Johnson County Mobility Coordinator and Director of Johnson County Seats.

Potential Gap 2: Location
If individuals do not live near fixed route transportation or within a provider's defined service area, they can find it hard to utilize public transportation. A lack of available drivers, the need for transfers between providers, and a fixed number of vehicles can also limit the area and trips providers can serve. Mobility coordinators can help bridge this gap by keeping track of locations where rides are requested but unfulfilled, work to facilitate transfers with providers, and provide individuals with other options they can choose to use that fill their needs. Mobility coordinators can use this knowledge to recommend where to expand service or improve connections between providers.

Potential Gap 3: Cost
Individuals may have many transportation options available to them based on location and time, but the cost of each option can eliminate them. Transit providers in and around Region 10 offer rides at a cost of $2 one-way with some public transportation systems operating with no fares. This cost is a burden to some, and others may not know these options are available, so they turn to higher cost private providers. Increased outreach and allowing donations to cover the cost of rides can tackle these obstacles. Mobility coordinators can combat this gap by identifying individuals who have trouble paying for rides and connecting them to these types of resources. They can also contribute to the discussion of whether individuals with disabilities or brain health needs be paying for transportation at all. The City of Iowa City has decided to go fair free with their public transportation. Mobility coordinators can be advocates for other transportation systems to do the same.

Case Study: The central Iowa organization Heart of Iowa Regional Transit Authority (HIRTA) does a few things to pay for rides for individuals who can't themselves. The organization takes donations for fares and sells HIRTA Bucks in house and at local Hy-Vee stores that are used to pay for rides. The organization also operates an online store with HIRTA branded items with the proceeds paying for rides.[3]

Potential Gap 4: Employment

Many individuals use public transportation to get to work. Some jobs have shifts at times when transportation providers do not offer services. If employees need to get to work early in the morning or late at night, they most likely have fewer transportation options available to them. One option to provide transportation at these times is for employers to form partnerships with transportation providers. Employers would subsidize transportation for employees in these partnerships. Both organizations can benefit from this type of partnership because employers will employ workers with reliable transportation to and from work and transportation providers will be able to provide services at a reduced cost to them. Mobility coordinators can identify employers with workers who have a hard time getting to work and suggest partnerships be made.

Case Study: An example of a similar partnership is the one between the Pittsburgh international Airport, the Port Authority of Allegheny County, and ISS Facility Services. The airport contracts with ISS Facility Services for cleaning. The airport reached out to the Port Authority of Allegheny County to ask for bus routes to begin earlier in the morning.[4] This partnership benefits all parties because employees can get to work, and the transportation provider has reliable ridership in the morning.

Potential Gap 5: Technology

Transportation providers have embraced technology in many areas of their organizations. Whether it be app scheduling or real time vehicle tracking, users these days need proficient technology skills to utilize transportation systems efficiently. Barriers to reliable internet and cellular service, modern devices with the ability to download applications, and the knowledge to confidently use technology can prohibit potential users from accessing transportation. Mobility coordinators can respond to these gaps by assisting individuals with their search for assistance with the cost of these services. Once service and devices are obtained, users will need to know how to use them. Mobility coordinators can provide this training so that users can take advantage of all the resources available to them.

Available Resources: Individuals can gain assistance with obtaining internet access through the Bipartisan Infrastructure Law. Those who have an income at or below 200% of the Federal Poverty Guidelines, someone in their household participating in other government programs such as Medicaid or meet the eligibility criteria for participating broadband provider's existing low-income internet program can qualify for $30 off internet bills under the Affordable Connectivity Program.[5] Lifeline is an assistance program that provides low–income individuals with a $9.25 monthly discount on cellular services. To qualify for Lifeline, individuals must have an income at or below 135% of the Federal Poverty Guidelines or participate in federal assistance programs like the Supplemental Nutrition Assistance Program.[6]

Potential Gap 6: Representation
It is hard to know who is falling through the cracks if you aren't aware that they are out there. This is a gap that mobility coordinators can address through their outreach. Coordinators know who is reaching out to them on the day-to-day and who is making decisions within transportation organizations. They can use this knowledge to advocate for administrations and boards who represent the users. They can also use this knowledge to reach out to other community organizations who serve individuals that are currently not represented in the transportation user base. Expanding service through outreach is a win for both users and providers.

For a picture of the timeline for adding a mobility coordinator(s) and the cost of doing so we can look at the Johnson County Mobility Coordinator position. The Johnson County Mobility Coordinator began as a part-time position but moved to full-time once the scope of the workload was realized. The workload was not known beforehand because the position was new to the area. Now there is an existing position for a new mobility coordinator(s) position to be based on. It may take a couple of months to put out job postings, conduct interviews, and on-board a new hire, but the road map for the duties once the new hire is in place has been established. This will require a connection between a new mobility coordinator and the Johnson County Mobility Coordinator to make the transition into the position for the new hire go smoothly. If new hires can't be instituted in a timely manner, the Johnson County Mobility Coordinator's role could be expanded to serve the larger area of Region 10 or a specific group of providers. This would serve as a bridge between the current structure and the institution of a larger network of mobility coordinators while expanding services to more individuals in the meantime.

Johnson County has a mobility coordinator's salary somewhere between $55,000 and $66,000 for an entry or midpoint qualified hire.[7] One or multiple organizations could fund the position(s) depending on the area they serve. Some possible U.S. Department of Transportation Federal transit Administration program opportunities include the Urbanized Area Formula Grant 5307, Formula Grants for Rural Areas 5311, and Enhanced Mobility of Seniors & Individuals with Disabilities 5310. These funding opportunities allow mobility management to receive funding for up to 80% of expenses.[8] A relationship with the Iowa Department of Transportation will be needed because these funds are given to the state and then distributed to transportation organizations.

Next steps to consider:

› Develop a network of mobility coordinators at the provider, county, and/or regional level.

› Provide education to users, professionals, and organizations in the community on transportation options and technology resources.

› Track gaps that appear in relation to time, location, cost, employment, technology, and representation.

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Appendix C

In-depth Analysis of Technology Improvements

Appendix C – Technology Improvements

Service providers have the issue of coordinating the rides in their respective zones. However, service users are also unwilling to use technology like websites or mobile apps to book their trips. All the agents in the ECR region have a booking system, but many reported that less than one percent of their clients use that available technology. Technology involving the use of websites and phone applications has revolutionized the way people book their rides. For instance, the arrival of Uber and Lyft changed the Taxi industry in the country.[1] In addition to that, thanks to access to the internet and mobile phones, it is easy to book rides in most parts of the country. However, no size fits all; there is a population that does not have access to mobile phones, tablets, or computers or can't use them. Only 61% of adults aged 65 and above use smartphones.[2] This is where the problem with the use of technology comes in. Similarly, in some places, especially rural areas, due to population number there are no ride hailing services making them dependent on available shuttle services.

Additionally, the service providers voiced complaints about the lack of standard payment methods that can be included on the website. Different payment methods are used, including money, debit cards, Medicaid, and bus passes. However, the service providers need help processing all forms of payment. Thus, the new technology can be used to integrate all the forms of payment and help the transit providers in ECR to procure all the payment methods, especially Medicaid.

One recommendation is for providers serving the ECR to have one website that comprises all the service providers. The website, which can also be integrated into the phone application, would help provide travel information throughout the area. Since each service provider has their own website, it is hard to coordinate rides, and the users need to scout around different places. Thus, sharing one website will benefit both service providers and users. The other benefit of having one website will be the ability to dispatch vehicles and know their exact location in real-time using the GPS devices and Automatic Vehicle Location devices in the vehicles. That can also allow the users to determine if a shuttle is near them or how long it will take to get one. This website can also be integrated with all forms of payment. For the people who use Medicaid as their form of payment, there is a 3rd party software called Experience.care that can be linked to the online booking system. With this software, it will be easier for service providers to process their billings. Also, it will be better for people to buy bus passes to eliminate the problem of process changes. Similarly, the website can allow people to share rides when they go to the same destination. The rideshare or carpool functionality has been used on other websites, including IowaRideShare but has yet to become popular. The ECR and service providers can be better advertised. In addition, the shared website can be a great place to collect user feedback that can help improve the quality of services.

Different Transportation providers in the country have websites and phone applications. For instance, in 2021 the Cape Cod Regional Transit Authority in Massachusetts launched the SmartDart service. With SmartDart, the users can request and pay for their rides in real time using their phones.[3] Similarly, the Metropolitan Council in the Twin Cities (Minneapolis and Saint Paul) has a Metro Mobility

online booking system, and the rider can pay with cash or prepaid Pay With Go-To Card. The Metro Mobility users who choose to pay with cash are required to have bills equal to the fare since no cash change is provided by the drive.[4]

Moreover, Intelligent Transportation Systems (ITS) has emerging technology solutions that can help to solve the mobility issues in ECR. The ITS Joint Program Office provides guidelines on designing and implementing traveler information service.[5] Thus, the ECR does not have to invent the wheel but can use the already made services to give the users the information on traveling. The information includes available rides in the area and how long it will take to reach a certain destination. The ITS Joint Program Office has an already built ITS Architecture that can be accessed on their [website](). The other emerging technology is autonomous vehicles (AVs), which are improving over time. Autonomous vehicles can significantly affect transportation, especially in rural areas without rideshare services. Also, AVs will help to solve the issue of the shortage of drivers in many transportation industries.[6] However, autonomous vehicles still need more development to take the road and address the safety issues. There are ongoing projects to test the viability of autonomous vehicles. One example is the Bear Tracks Automated Shuttle in White Bear Lake in Minnesota.[7] The autonomous shuttle aims to serve older adults, people with disabilities, and low-income individuals.[8] The shuttle routes were also designed to move people from the Senior Living Apartments and the YMCA.[9] Minnesota has other ongoing projects testing self-driving vehicles in rural areas, including [goMARTI]() that is free of charge has goals to increase awareness of autonomous vehicles and help people who have transportation challenges.[10] Lastly, the University of Iowa has done research in Autonomous Driving Systems (ADS) to test transit services in rural areas.[11] The research showed the potential of having a shuttle service on rural roads that can also help people with disabilities to move from place to place.[12]

On the other hand, more safety features must be implemented to make people feel comfortable driving in autonomous vehicles.[13] Autonomous car manufacturers need to do more research and improvements to make autonomous safe and increase their range of operation instead of only working in pre-mapped areas. Additionally, autonomous vehicles are expensive to operate[14], and some service providers claim that in rural areas, there needs to be infrastructure like a high broadband network to operate the autonomous vehicles.

To successfully implement the available technology, the service providers need only to choose what meets their needs. Many agencies adopt any available technology without defining their needs. We advise the service providers in the ECR to look at other agencies on how they implemented some of the technology and find a way it can solve transportation issues. For instance, the US DOT is currently conducting pilot projects in different parts of the country.[15] The goal is to examine the use of technology to provide transportation to all American, including those living in rural areas, seniors, and people with disabilities. The complete list of ongoing projects can be found on the [Federal Transit Administration]() website. Additionally, there is a [web-based]() training offered by US Department of Transportation for transit coordinators in the rural areas. There is also in person training offered by the [National Transit Institute at Rutgers University.]()

Figure 1: White Bear Lake Autonomous Shuttle
(Source: Twin Cities Business)

Figure 2: goMarti Autonomous Vehicle in Grand Rapids MN
(Source: KAXE KBXE)

The last point is the use of Telemedicine or telehealth that can reduce the number of trips. Many hospitals and caregivers have the option of Telemedicine to facilitate service provision and help to reduce the spread of disease, especially for older people. Telemedicine is a time saving and less hassle service for older adults and disabled people who cannot drive.[16] Telemedicine service providers must train the users to access the service and overcome the slow internet issues, especially in rural areas.[17] Although Telemedicine can provide users with a way to get medical services, there is a need to provide other services like shopping and visiting parks. Not being able to move can cause individuals to feel lonely and depressed.[18] The ECR can create more social activities like visiting parks, or group shopping that can increase the morale of seniors and people with disabilities.

Next steps for consideration:

› Build a one Website and phone application to help in reservations, vehicle dispatch, travel information, and rideshare.

› Consult the ITS solutions for Rural Transit to learn about ongoing technology and equity transit projects conducted around the country. Those also include potential technology improvement funding for service providers in the ECR.

› Build technology solutions that reflects the needs of local people.

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Appendix D

In-depth Analysis of Addressing Driver Shortages

Appendix D – Addressing Driver Shortage

East-Central Iowa's transit providers shared almost universal concern about how employment struggles are affecting operations. When asked about how the Gap Analysis Group could further support providers, a common theme voiced was concern over the current job market deficit for transit operators, including ongoing struggles in recruiting. One stakeholder inquired as to whether case studies or examples existed for regions in Iowa or other areas that have been successful in addressing these needs.

During the discussion, one provider voiced that the lack of operators has left them at the point of trip denial for demand-responsive requests. Another stated that they would like to provide service across service area limits, but they did not have available personnel to provide the service. One shared that cross-county trips had to be weighed on a case-by-case basis, and that without available drivers they would need to focus on trips within the county/service limits. Finally, another stated that, due to being inundated and short-handed, not having the time available for an operator to travel outside of the county was a prevalent concern. These issues are not isolated to East-Central Iowa; they have also been discussed at the Iowa Public Transit Association over the past several years.[1]

Driver shortages lead to trip caps, wait lists, or an inability to serve the client. From a purely modal perspective, transportation network companies (i.e., ride-hailing services including Uber and Lyft) can facilitate a connection when transit services are absent or insufficient. However, ride-hailing does not significantly replace travel in "transit deserts", as the majority of ride-hailing is typically concentrated in areas with a higher degree of privilege.[2] Furthermore, transit provider employment shortages are often unknown to the public and can yield a loss of system reliability and familiarity for clientele. This issue is especially critical for the elderly and those struggling with mental and emotional disorders, as the actual or impending loss of modal choice can make seeking help or completing simple tasks requiring travel much more difficult.

The United States' transit workforce, including drivers, is significantly older when compared to all other employment sectors (Figure 1).[3] The root of the problem, however, contains more factors than retirement. There are difficulties in recruitment and hiring replacements. This employment challenge is further compounded by an almost universal issue affecting the US workforce--retention, a struggle now affecting two-thirds of transit operators in the US. In 2022, the American Public Transportation Association reported that 96% of surveyed public transit agencies were experiencing employment shortages, and 84% limited the agency's day-to-day operations.[4]

The East-Central Iowa transit provider interviews demonstrate that the crisis with transit operator shortage significantly impacts small and medium-scale transit operations, but even large-scale metropolitan operations across the US have been severely impacted.[5] The decline in operators yields larger-scale fiscal ramifications as agencies strive to restore pre-Covid19-level ridership. Though not all the recruitment, hiring, and retention issues will be applicable to East-Central Iowa, remediation strategies for an agency's most significant overarching issues should be considered.

Figure 1: Transit Workforce Age Distribution

The transit workforce is, on average, older than the American workforce as a whole.
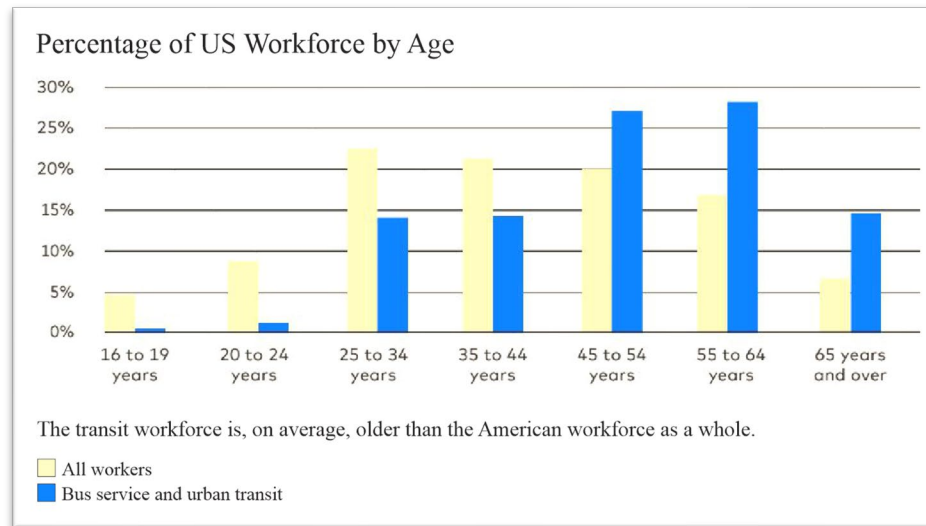
Driver Shortage Strategy 1: Reconsider Overarching Bans that Disqualify Applicants

Many transit agencies have reconsidered more stringent approaches to applicant screening. Reconsideration of a candidate's history as a condition of employment can not only widen the circle of potential applicants, but also promote a higher level of equity in the hiring process. Applicants should still be required to disclose traffic or criminal records within a specified lookback window, but employers should primarily focus on the qualifications and skill sets of the candidates.

Utilizing blanket bans during screening process can disproportionately affect candidates from marginalized communities. These populations often have a very high need for transit, and drivers most familiar with the community could be beneficial liaisons. Given a chance at employment, such candidates are more likely to acclimate; if reentering the community from the justice system, these potential hires may have a higher chance to reintegrate into society successfully. Therefore, removing these overarching restrictions as a condition of employment may not only benefit the individual seeking employment, but also may positively contribute to the overall well-being of the community being served by transit.

The Metropolitan Transit Authority (MTA) serves North America's largest transportation network yet is an example of an agency that does not utilize blanket bans (including the use of credit history, arrest records, or convictions) as a basis for disqualification from hire. However, *the failure of an applicant to disclose* can and has led to termination. Closer to home, Iowa City widens the pool of

candidates by requiring a motor vehicle records screening of only three years. Applicants are assigned a screening rating based on findings and may still be hired even with traffic infractions; those with greater numbers or types of violations are removed from further consideration. These methodologies can yield a more sizable pool of applicants, fulfilling the need for a qualified driver and transit needs within the community.

Revision of these practices should be carefully promulgated by the agency's legal resource team, as municipal law prescribing when an employer may legally utilize a candidate's criminal record has been legally challenged and partially overturned.[6] The primary legal inconsistency behind legality lies in Iowa Code section 364.3(12)(a), which prohibits local governments from adopting ordinances that provide for terms or conditions of employment that exceed or conflict with the U.S. Code or Iowa state law.

Driver Shortage Strategy 2: Evaluate Fleet Vehicle Passenger Capacity and Gross Vehicle Weight Rating (GVWR) and Need for CDL Operators.

A transit driver's license requirement class is determined by the vehicle's original passenger capacity and GVWR. As required by the Federal Motor Carrier Safety Administration (FMCSA), a vehicle weight over 26,000 pounds requires a Class B CDL. A Class C with passenger endorsement is required if transporting more than 15 passengers including the driver. This also applies to retrofitted paratransit vehicles that no longer transport 16 passengers. However, if the vehicle is under both the weight and passenger threshold, a much less expensive Class D (chauffeur) license is required, rather than a CDL. A CDL costs a driver or agency between $1,000 and $8,000 per employee. Unfortunately, agencies often support this endorsement only to have the operator leave the agency for more lucrative employment.

Figure 2: Single-Wheel Cutaway Van (creativecarriage.com)

One potential workaround could be the replacement of larger buses (now priced over $500,000) on lower demand routes with an appropriate number of single-wheel (non-dually rear wheeled) vans. These vehicles consist of van cutaways with cab and chassis, retrofitted with a bus body typically designed for 13 passengers or less (Figure 2). These smaller fleet vehicles would obviously require additional drivers, but operators could be hired and drive without CDLs, would be easier to recruit and replace, and would require far less training to be placed behind the wheel. Historic pricing for van cutaway transit units begins at $50,000 but will run higher depending on the degree of retrofit, market fluctuation, inflation, and other factors.

Driver Shortage Strategy 3: Conduct an Agency Audit of Driver Hiring Policy and Practice.
A host of transit operator recruitment through retention strategies has been recently published, most notably through the American Public Transportation's (APTA) *Transit Workforce Shortage Synthesis Report*[7], and TransitCenter's *Bus Operators in Crisis*.[8] Transit providers may benefit from an internal review of policy and practice in consideration of these approaches for recruitment, hiring, training, and retention. Illustrated in Figure 3, these strategies generally fall into four broad categories:

› **Recruitment.** Strategies include communicating testing requirements early in the application stage, including informing applicants of any required drug testing and background checks in order to reduce ineligible applicants. To widen the net of potential candidates, agencies may wish to consider how far back the "lookback window" should be for traffic infractions.[9] In another transit region of the state, reconsideration of "blanket-ban" screening processes was suggested, allowing those with histories in the state's justice system potential job candidacy, thereby narrowing the employment crisis gap.[10]

› **Hiring.** Strategies begin with an evaluation of existing practices within the agency. Government entities often have long hiring processes with unreasonable delays and chokepoints, human resource (HR) office checks and balances, wait times for wage analysis, and background checks. Agencies should reconsider if the interview process can be streamlined; the formal interview may be reduced to a shorter and less stressful timeframe. Interviews may be scheduled more quickly if other front-line personnel can step in and lighten the load of HR by replacing them at the interview. Finally, agencies may wish to reconsider if *all* transit vehicles in the provider's fleet require a CDL for operation.

› **Training.** Agencies are encouraged to implement early training and onboarding to minimize the gap between employee hire and first day of employment. Training should be accessible and flexible, maximizing online or hybrid formats in order that this learning can take place at any time convenient to the new hire. If warranted, agencies should partner with ESL organizations to offer training to those with limited English proficiency. Strategies also include expanding on-the-road training with experienced operators or volunteers to ensure employee confidence is bolstered and minimize potential "early quits". Agencies can also help applicants acquire CDLs with entry-level driver training programs, and/or partner with technical schools to help meet this requirement.

› **Retention** has become an unfortunate and significant issue in the past several years for transit agencies. Retainment strategies proposed include reviewing compensation and benefits to avoid recruitment from competing industries. Working conditions should be evaluated, including employee access to clean bathrooms and other needed facilities; worker health and safety should be reviewed, as well as morale issues associated with ongoing difficult social interactions with the public.

› Agencies may wish to revisit the very complicated issues of scheduling. Though often viewed as fixed, management can ensure that workers who routinely cover difficult shift times are recognized for their effort. Agencies can review scenarios in which comprehensive coverage still takes place if workers take on four 10-hour shifts instead of five 8-hour shifts, or other scenarios. Agencies may wish to consider incentivized pay for less desirable shifts. Lastly, if needed, agencies may consider the conversion of part-time positions to full-time to better cover client needs within their service limits.

› Finally, agency culture also plays a significant role in retention; employees must feel that management supports their often-difficult day-to-day efforts in the field. Additional strategies offered include the development of an employee career path, and development of programs for recognition and acknowledgment.

Next steps to consider:

› Reconsider blanket bans for applicants.

› Consider transit vehicles that do not require CDLs.

› Consider internal audit of hiring and retention practices.

Figure 3: Agency Strategies for Transit Operator and Recruitment, Hiring, Training, and Retention

Strategies for Life-Cycle of Transit Operator Employment
The Tough Road from Recruitment to Retention

Develop Performance Reporting System for Recruitment & Hiring. Identify "gaps, barriers, and bottlenecks" in your agency's process.

Increase Recruiting Capacity in your agency (even temporarily) if needed to speed up applicant reviews.

Enhance Marketing. Send the right message: longevity, career, service to community, etc. Also, get the message to the right people (i.e., targeted mailers), review current staff who may qualify.

Recruitment

Referral Networks. Partner with workforce development, immigrant support programs, high schools, technical schools, and community colleges.

Hiring

Promote Application Process Accessibility. Offer assistance for those who are not fully computer or English proficient. Simplify process.

Streamline Hiring. What are your agency delays and chokepoints? How long does hiring process take?

Review testing requirements; share these at application: drug testing, background checks, etc. Reduce the "lookback window" for traffic & other infractions.

Adapted and modified from APTA's *Transit Workforce Shortage Synthesis Report - March 2023* & TransitCenter's *Bus Operators in Crisis - July 2022*

APTA TransitCenter

CDL Reqs. Do all transit vehicles in your fleet require one?
Help applicants acquire CDLs; partner with technical school.

Training

Implement Immediate Training, prioritize retention by reducing gap between hire and first day.

Make Training Accessible and Flexible. Online or hybrid formats allow training to take place at times more convenient to the hire. Partner with ESL organizations to offer training to those with limited English Proficiency.

On-the-Road Training. Create environment where new drivers feel safe and secure by having extended ride-alongs with experienced operators.

Expand Part-time Positions to full time; allow PT positions to convert.

Ensure Driver Access to Clean Bathrooms and other basic facilities.

Review Scheduling. Often determinate; ensure that drivers who routinely cover less desirable shifts are not overlooked. Can workers utilize 4-10s? Is it possible to **incentivize** less desirable shifts? Retainment bonuses?

Ensure worker health and safety. Also address morale issues associated with difficult social interactions.

Review Comp/Benefits to Improve Retention to prevent attrition to competing industries.

Develop a Career Path for bus operators. Are there options for advancement?

Retention

Develop Recognition and Acknowledgment Programs. Do your drivers believe management has their back?

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Appendix E

In-depth Analysis of Transit Procurement

Appendix E – Transit Procurement

Providers shared about the inability to procure rolling stock, as well as market-cost stability. The struggles with procuring fleet ("any kind of vehicle") were universal among providers. Beyond the ability to reliably serve customers, one provider noted that a limited fleet means even routine maintenance becomes more challenging, as there is no interim vehicle that can be cycled when the vehicle in need of maintenance is pulled from circulation.

According to an Iowa DOT *2020 Report to the Iowa General Assembly and Governor Kim Reynolds*, Iowa has one of the oldest transit fleets in the nation. By year-end 2022, 53% of Iowa's statewide transit fleet had passed federally recommended guidance for replacement.[1] Unfortunately, by that time, over 20,000 orders for small buses were queued nationwide, and industry professionals estimate it will take five to seven years for industry to meet this backlog.[2] The letter further explained that only one of seven manufacturing facilities for the nation's largest producer were operational.

In October 2022, the Community Transportation Association of America (CTAA), American Public Transportation Association (APTA), and American Association of State Highway and Transportation Officials (AASHTO) signed joint correspondence to USDOT Secretary Buttigieg, requesting assistance to resolve the nationwide transit fleet crisis. The letter asked for his encouragement of increased chassis set asides for small bus manufacturing, as well as flexible, streamlined procurement regulations. Though no solution will provide immediate procurement, the Federal Transit Administration (FTA) has provided Partial Buy America Waivers for vans and minivans to be used in federally funded vanpool programs.[3] Under the Buy America statute, the FTA will not authorize funding to procure rolling stock unless the cost of components and subcomponents produced in the United States exceeds 70 percent of the total cost of all vehicle parts, and if the final assembly of the vehicle takes place within the US. The 2022 correspondence also requested that the FTA Buy America non-availability waiver for passenger vans be temporarily extended for small buses. A final request was for clear-cut FTA guidance on how to change procurement or reprogram funds when vehicles cannot be procured.

Although fiscal impact for *un-procured* rolling stock appears beneficial, there are possible unforeseen negative impacts for those outside the industry to consider:

› The cost of the vehicle will inevitably be higher by the long-awaited procurement date, and transit providers are now facing greater numbers of contract terminations from bus manufacturers due to escalating costs.[4]

› Due to ongoing wear and tear, the cost of maintaining the current vehicle subject to replacement will become costlier and more frequent. Transit buses travel an average of over 40,000 miles per year and require considerable maintenance.

› Though the engine and other equipment undergo multiple rebuilds, the average life expectancy of a transit coach chassis is approximately 12 years.[5] Regardless of maintenance and repair activity, all equipment must eventually reach the end of its limited lifespan and inevitably end its terms of service.

› There may be a perceived budget surplus unless the funding is encumbered, and that other equipment needs can be postponed or forgone.

Until the rolling stock shortage is resolved, volunteers, ride-sharing and related efforts will play an even more important role by augmenting the formal transit system. Micro transit (a shared transportation hybrid of traditional fixed route transit and ride-hailing technologies) as well as taxi and ride-hailing providers can help alleviate the strain on the current system as well, but affordability may limit these mobility options for all affected clientele. In addition, relying on strangers (rather than familiar faces) for transportation can be challenging for those afflicted with mental and emotional struggles, including those with acute social anxiety and potentially marginalized groups such as the elderly.

Revisiting the topic of regional coordination may also serve as an ongoing partial solution to limited fleet options. As vehicles are taken out of service for maintenance or repair, reciprocal transit assistance across service boundaries from neighboring operations should be further considered. Such arrangements have proved successful in areas including Colorado's North Front Range, where transit operators and related providers voluntarily agreed to continue to work together, assist each other as requested, and cross service boundaries when conditions warranted.[6]

Next steps to consider:

› Continue to advocate for Buy America waivers for small bus procurement.

› Continue to support volunteers, ridesharing, and micro transit to help alleviate the strain on the current system.

› Consider reciprocal, regional coordination to cover vehicles under maintenance or repair.

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Appendix F

Survey Analysis Report

Appendix F – Survey Analysis Report

The Mental Health/Disabilities Services of the East Central Region (ECR) and the University of Iowa conducted a transportation gap analysis to identify transportation barriers for individuals with brain health, mental health and intellectual or developmental disabilities. In this report, the results of the transportation gap analysis based on a survey of 134 individuals—those with brain and mental health needs, caregivers (medical service providers, healthcare providers, etc.), and caretakers (family members, friends, etc.)—are presented. The majority of respondents reported that they had trouble consistently getting where they wanted to go. The lack of dependable and easily accessible transportation options, challenges with affordability and financial stability, and difficulties with navigation were all mentioned as major issues.

The report also highlights transportation challenges that individuals deal with on a daily basis like shopping as well as access to healthcare and travel to work. It emphasizes the significance of attending to those with physical health limitations, supporting people with decision-making and navigation, and addressing mental and cognitive health issues. It is important to improve accessibility, affordability, and information sharing in the transportation sector.
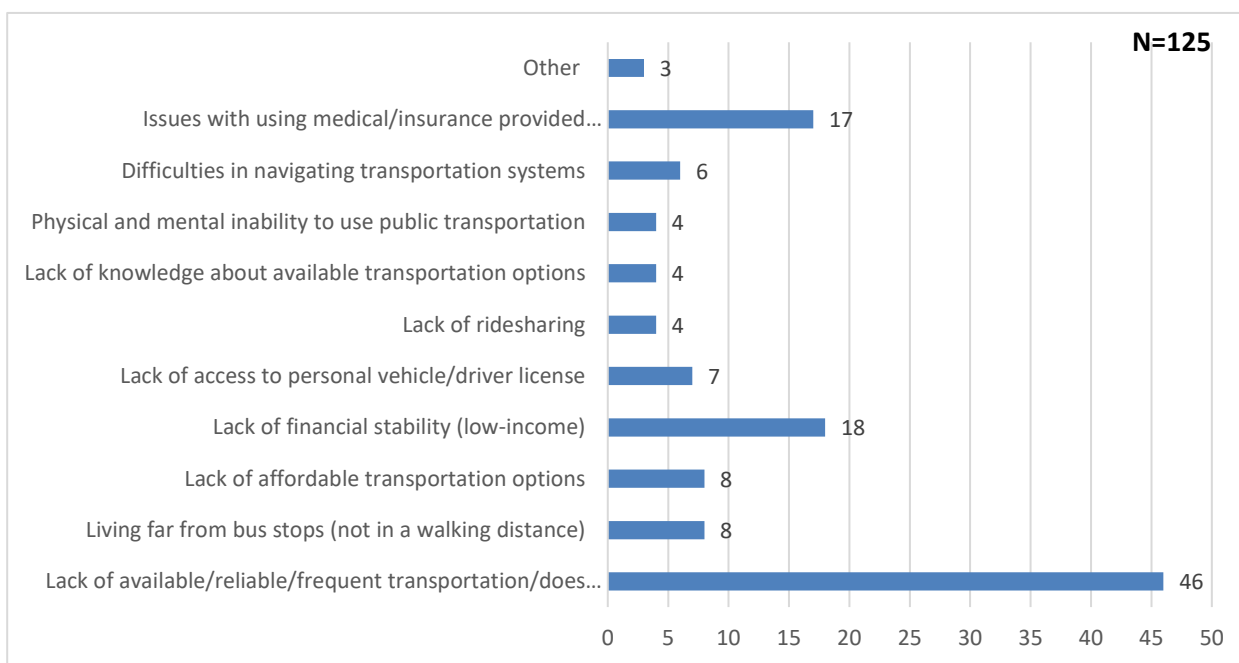
When thinking about transportation, can you always or almost always get where you need to go?

Out of the 105 responses to this question, 35 individuals (33.3% of the total) responded affirmatively, indicating that they can consistently reach their desired destination using transportation. However, 63 respondents (60% of the total) reported being unable to always or almost get where they need to go. In the east-central region, a significant population resides in suburban and rural areas, resulting in limited access to a convenient and dependable transportation service.
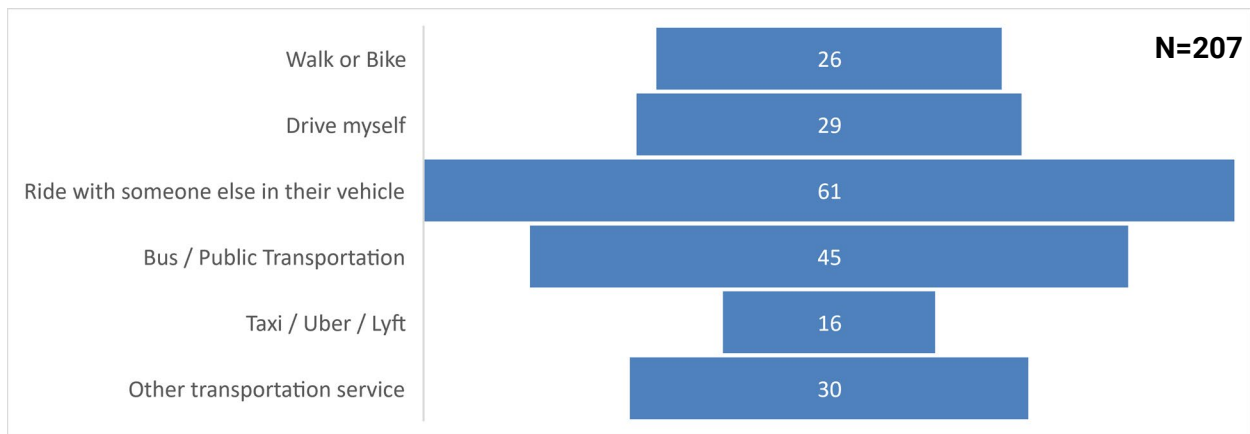
N=105
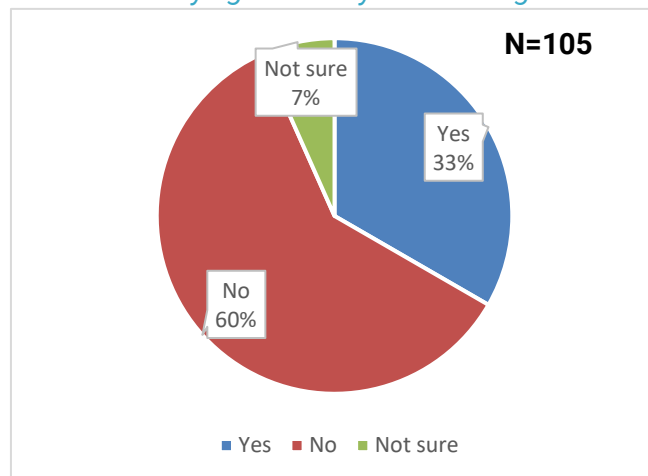
Please provide one or two reasons why you are not always able to get where you need to go.

The lack of accessible, dependable, and frequent transport services that do not go to the desired location was cited by respondents as the main reason for their concern by 46 respondents. Other significant factors include lack of access to a personal vehicle or a driver's license (7 respondents), living far from bus stops (8 respondents), not having affordable transportation options (8 respondents), having unstable finances due to low income (18 respondents), and living far from bus stops (8 respondents). Insufficient ridesharing (4 respondents), lack of knowledge of available transportation options (4 respondents), physical and mental incapacity to use public transportation (4 respondents), difficulties navigating transportation systems (6 respondents), and difficulties using medical and insurance-provided transportation options (17 respondents) were additional factors resulting in transportation challenges.

N=125

How do you typically get to your brain health / mental health appointments? Please check all that apply.

The survey results revealed that approximately 13% (26 individuals out of 207 total responses) of respondents use active modes of transportation, such as walking or bicycling, to get to their brain health/mental health appointments. Self-driving was another prevalent mode of transportation, with 29 respondents (14% of the total) selecting this option. With 61 respondents (29.5% of the total) indicating this preference, riding with someone else in their vehicle emerged as the most popular mode of transportation. In addition, a total of 45 respondents (21.7%) utilized public transportation. A smaller proportion of respondents, 16 (7.7%), utilized taxis, Uber, or Lyft services. Furthermore, 30 respondents (14.5%) reported using unspecified transportation services.

Mode	Count
Walk or Bike	26
Drive myself	29
Ride with someone else in their vehicle	61
Bus / Public Transportation	45
Taxi / Uber / Lyft	16
Other transportation service	30

N=207

Do you have a driver's license?

Participants were asked about the status of their driver's licenses as part of the survey. Forty-four respondents (48.9%) out of a total of ninety confirmed possession of a valid driver's license, indicating that a sizeable proportion of the surveyed population is authorized to operate a motor vehicle without supervision. On the other hand, 38 respondents (42.2%) said they did not have a driver's license, showing a reliance on other forms of transportation or help from others. In addition, 8.9% of the entire sample admitted to having a driver's license that was either invalid or expired, which could make it difficult to use personal vehicles for transportation since there wouldn't be a valid license to drive.
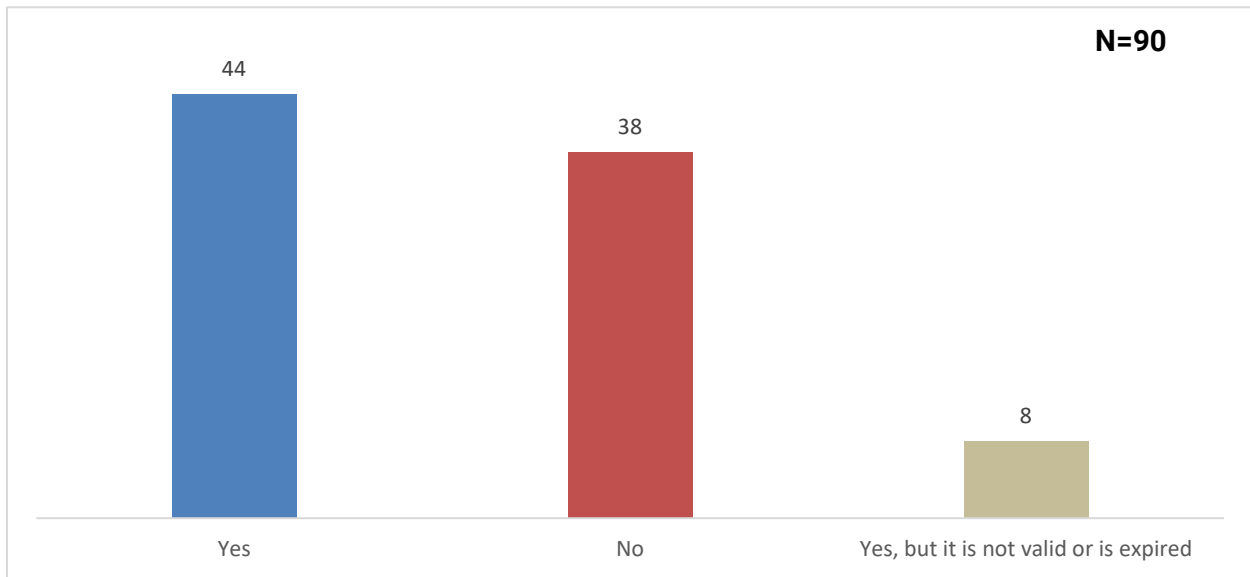

How often do you need to rely on someone else for transportation?

The survey included a question designed to determine the frequency with which respondents relied on another person for transportation. Nearly half of the respondents, or 48% (42 people), reported almost always relying on someone else for transportation. Surprisingly, 14% (12 individuals) reported never having to rely on someone else for transportation, indicating a degree of independence in meeting their transportation requirements.
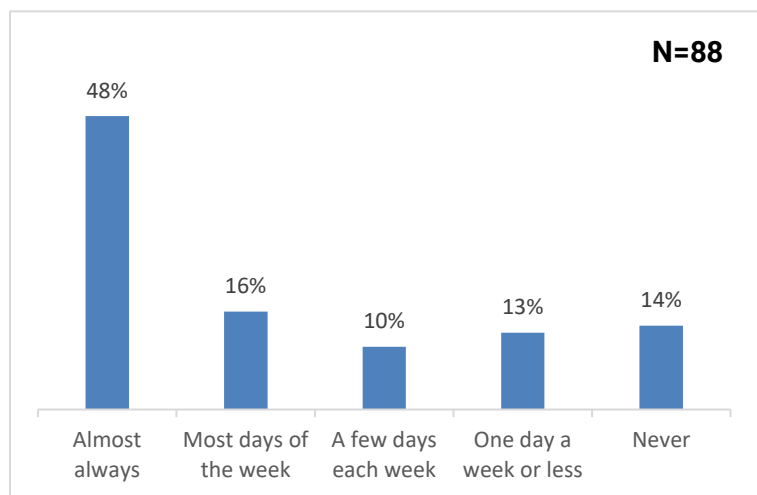
What kinds of trips do you need help from others to make?

Looking into different types of trips that individuals need assistance with medical appointments are the most common category, highlighting the importance of transport for getting access to healthcare services. Work-related travel and shopping also feature prominently, highlighting the importance of transport assistance for employment and basic needs. The inclusion of leisure and recreation trips emphasizes the need for accessible modes of transportation to promote social engagement and overall health.
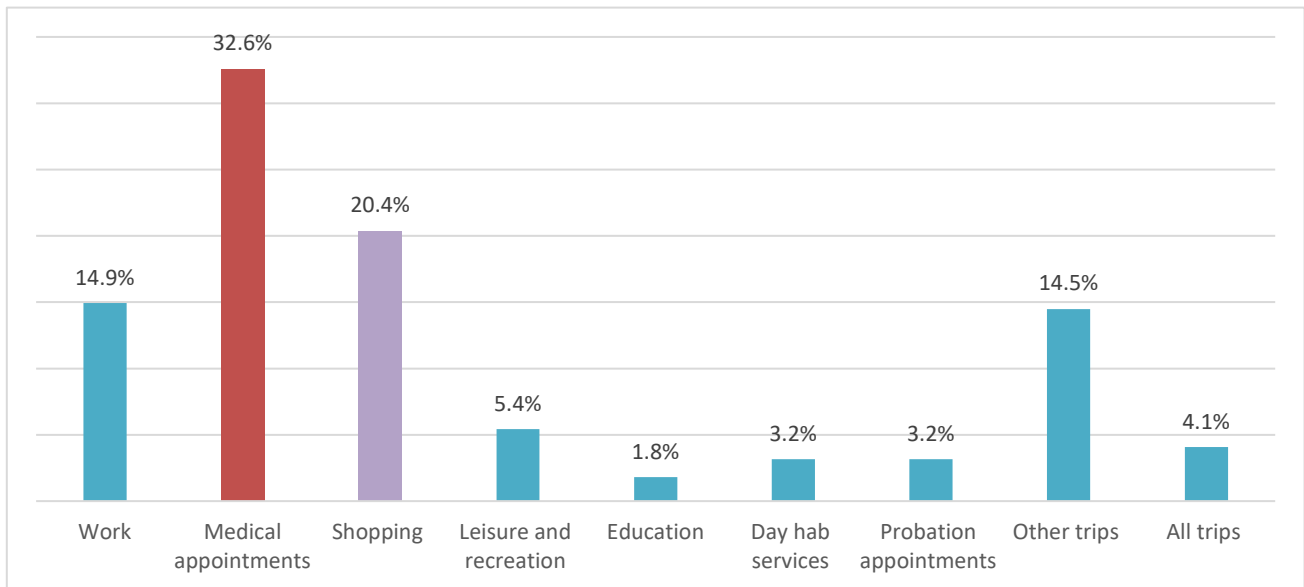

How would you rate your anxiety while using transportation services?

When asked how anxious people are when using transportation services, 58% of respondents reported experiencing some levels of anxiety while using public transportation. A large percentage of respondents (29%) rated their anxiety as moderate, followed by 18% who rated it as high and 11% who rated it as very high.
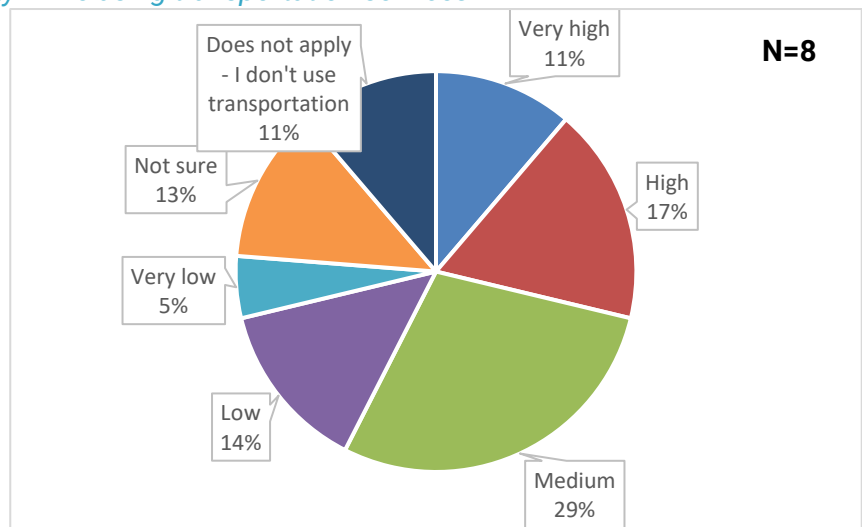
Have you ever had a healthcare appointment using video or phone conferencing?
Despite the fact that a small percentage of respondents (8%) have not had a healthcare appointment via video or phone conferencing, it is important to recognize that this subset exists.
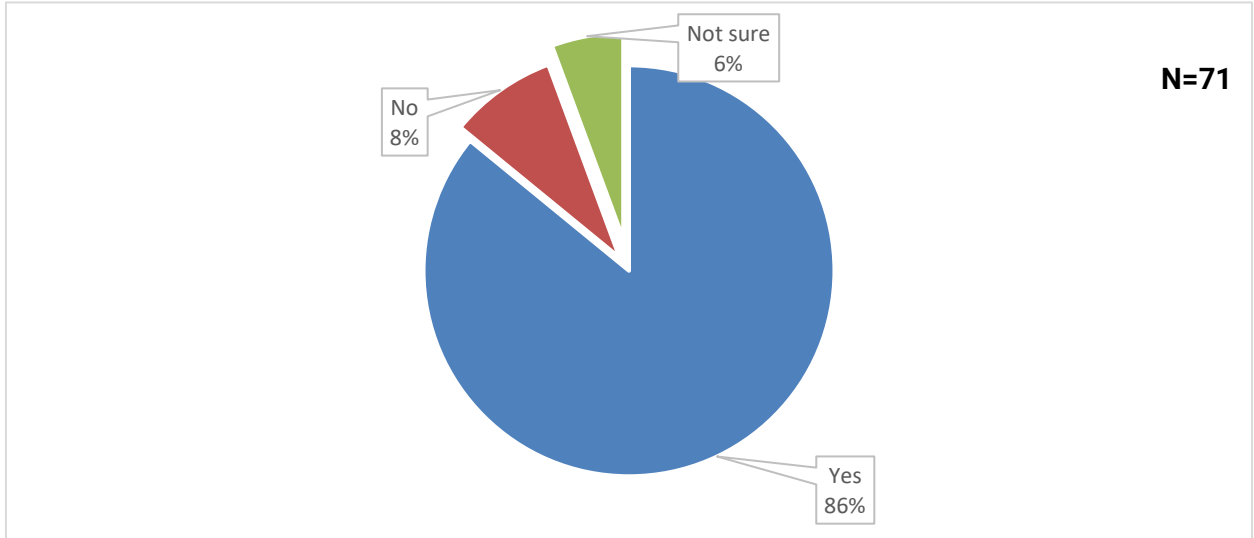
Not sure
6%

No
8%

N=71

Yes
86%

If it was available, how likely is it that you would use phone or video conferencing instead of traveling to get to your healthcare provider?

Response	Percentage
Extremely likely	26%
Somewhat likely	39%
Neither likely nor unlikely	26%
Somewhat unlikely	6%
Extremely unlikely	4%
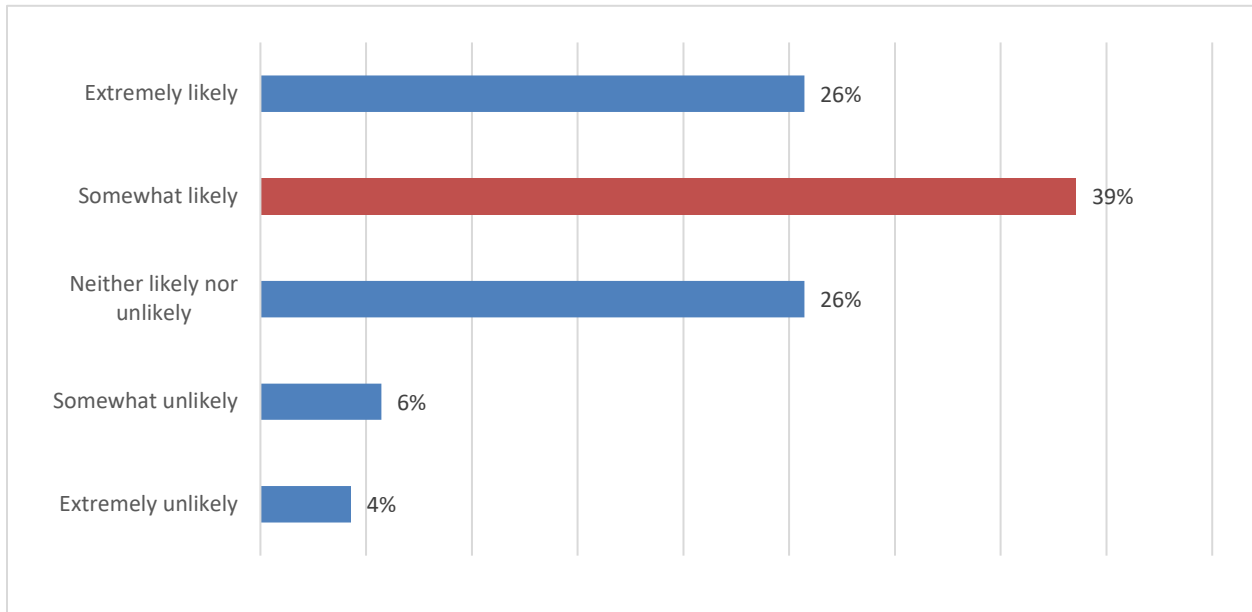
Could you use help getting more information about the bus system or other options?
The majority of respondents (54%) reported a need for assistance with getting additional information about the bus system or other transportation alternatives. 34% of respondents, on the other hand, indicated that they do not require assistance in this regard. This data emphasizes the significance of providing comprehensive and accessible information about public transportation systems and alternative modes of transportation. The high percentage of respondents indicating a need for assistance suggests that there may be obstacles or knowledge gaps regarding available transport services.
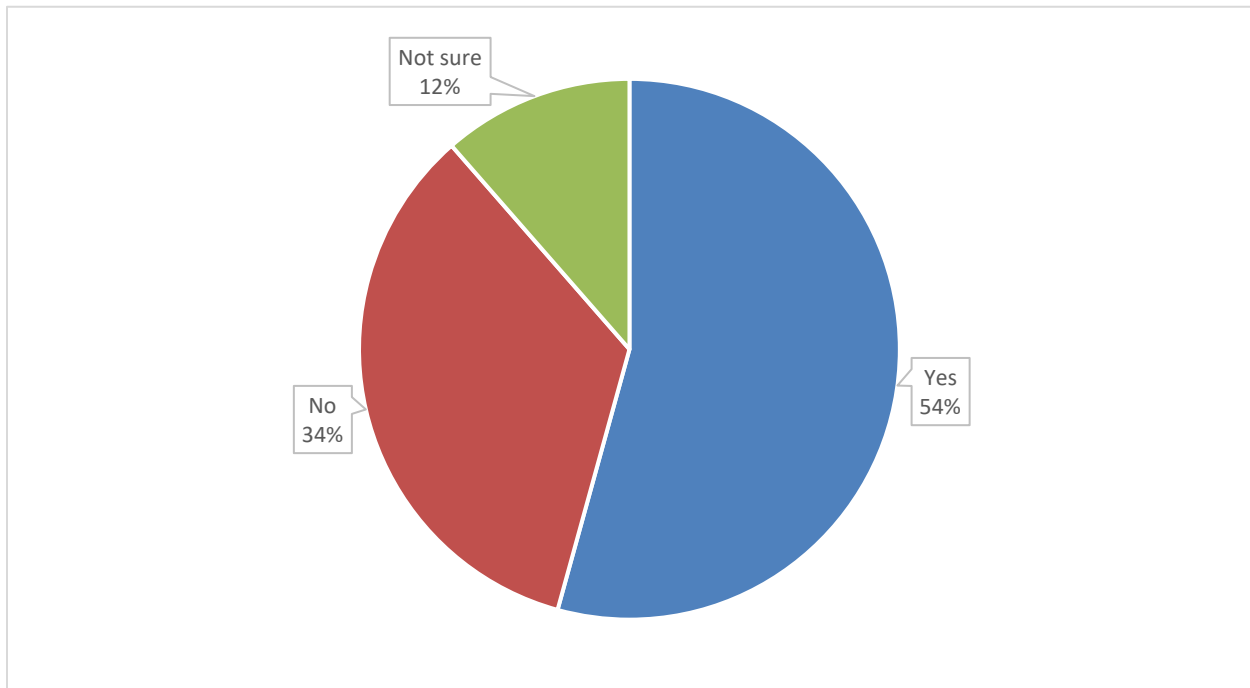
Please provide one or two reasons why you need someone to accompany you when you travel.
Mental and cognitive health issues are cited as the primary reason for needing a travel companion by 27% of respondents, making it the most frequently mentioned explanation. This emphasizes how crucial it is to provide assistance and support for people with these conditions in order to ensure their safety and well-being while traveling. The need for assistance with decision-making and navigation was listed by respondents as another important factor 17% of the time. This implies that some people might need assistance and guidance with route planning, comprehension of available modes of transportation, and decision-making while traveling. The data also reveals that a sizable portion of respondents (10%) cited physical health issues as an explanation for needing a companion. This shows the need for assistance in managing physical restrictions or health-related difficulties while traveling. The need for childcare while traveling (1%), safety and security concerns (4%), difficulties with reading,

writing, or language barriers (4%), the need for emotional support (4%), and other unspecified reasons (6%), among others, are also mentioned as possible explanations.
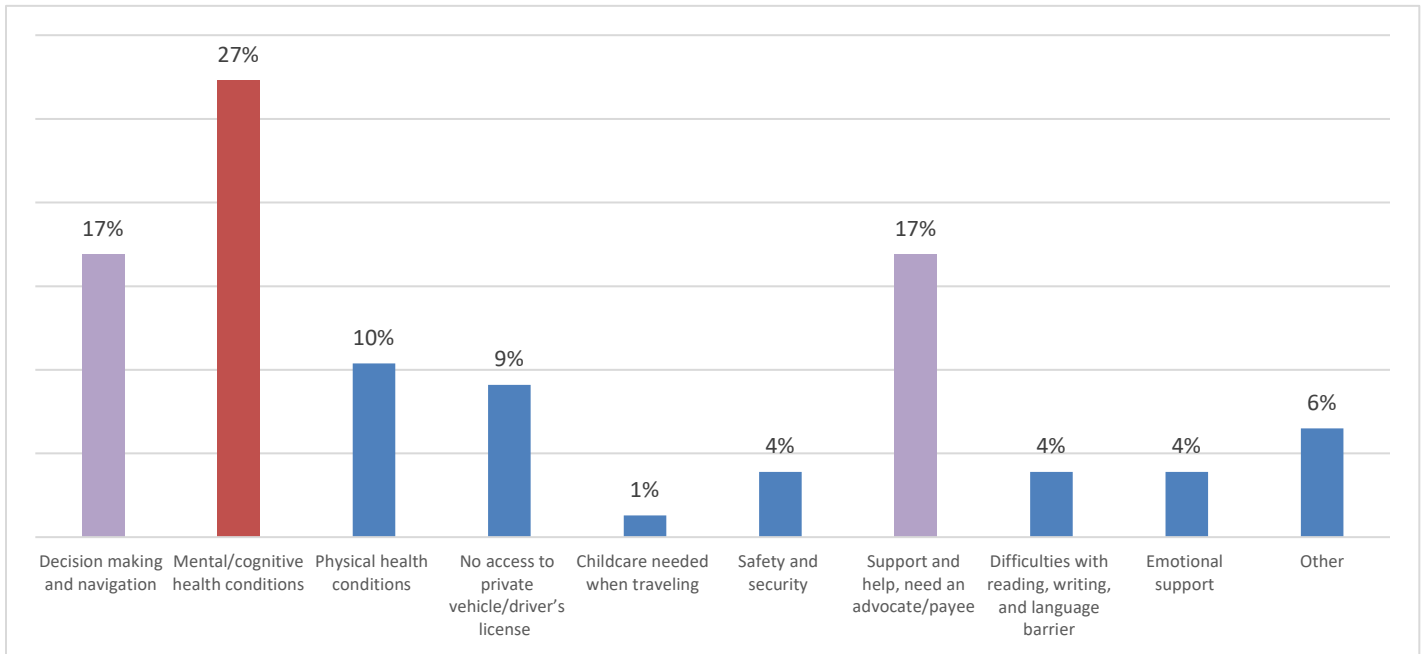
Survey question 2: Please tell us who you are, choosing the options that best describes you.

Individual with Brain Health Needs	18
Caretaker (relative, friend, etc.)	14
Caregiver (medical service provider, healthcare provider, etc.)	50
Other	29
Total	111

Survey question 5: Please provide one or two reasons why you are not always able to get where you need to go.

Lack of available/reliable/frequent transportation/does not go near the desired location	46
Living far from bus stops (not in a walking distance)	8
Lack of affordable transportation options	8
Lack of financial stability (low-income)	18
Lack of access to personal vehicle/driver license	7
Lack of ridesharing	4
Lack of knowledge about available transportation options	4
Physical and mental inability to use public transportation	4
Difficulties in navigating transportation systems	6
Issues with using medical/insurance provided transportation options	17
Other	3
Total	125

Survey question 6: Can you always or almost always get to your destination at the time you need or want to be there?

Yes	32
No	57
Not sure	11
Total	100

Survey question 7: Please provide one or two reasons why you sometimes cannot get to your destination at the time you need or want to be there.

Lack of convenient transportation options	17

Lack of affordable transportation options	4
Lack of available/reliable transportation	28
Depending on others for rides	3
Lack of access to personal vehicle / driver license	2
Issues with the medical/non-medical transportation provider services	19
Difficulties in navigating the transportation systems	1
Lack of financial stability (low-income)	7
Physical and mental inability to use/plan public transportation	6
Other	5

Survey question 9: Which of those do you use most often to get to your brain health / mental health appointments? Please arrange the choices in the order that reflects how much you use them, starting with the most frequently used choice at the top.

	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Total
Walk or Bike	5	5	8	2	3	0	23
Drive myself	3	4	4	5	2	0	18
Ride with someone else in their vehicle	16	11	7	3	0	0	37
Bus / Public Transportation	9	13	7	3	0	0	32
Taxi / Uber / Lyft	1	3	1	1	3	3	12
Other transportation service	7	5	3	5	0	0	20

Survey question 11: How often do you have access to a reliable vehicle?

Almost always	22
Most days of the week	10
A few days each week	10
One day a week or less	19
Never	28
Total	89

Survey question 12: Do you use your own vehicle to help others with brain health / mental health and disability needs get to place they need to be?

Yes, often	11
Yes, but not very often	6
No	26
Total	43

Survey question 14: What kinds of trips do you need help from others to make? Examples include medical appointments, work, shopping, etc.


	Work	Medical appointments (mental and physical)	Shopping	Leisure and recreation (cultural, religious events, …)	Education	Day hab services	Probation appointments	Other trips	All trips
■ Count	33	72	45	12	4	7	7	32	9
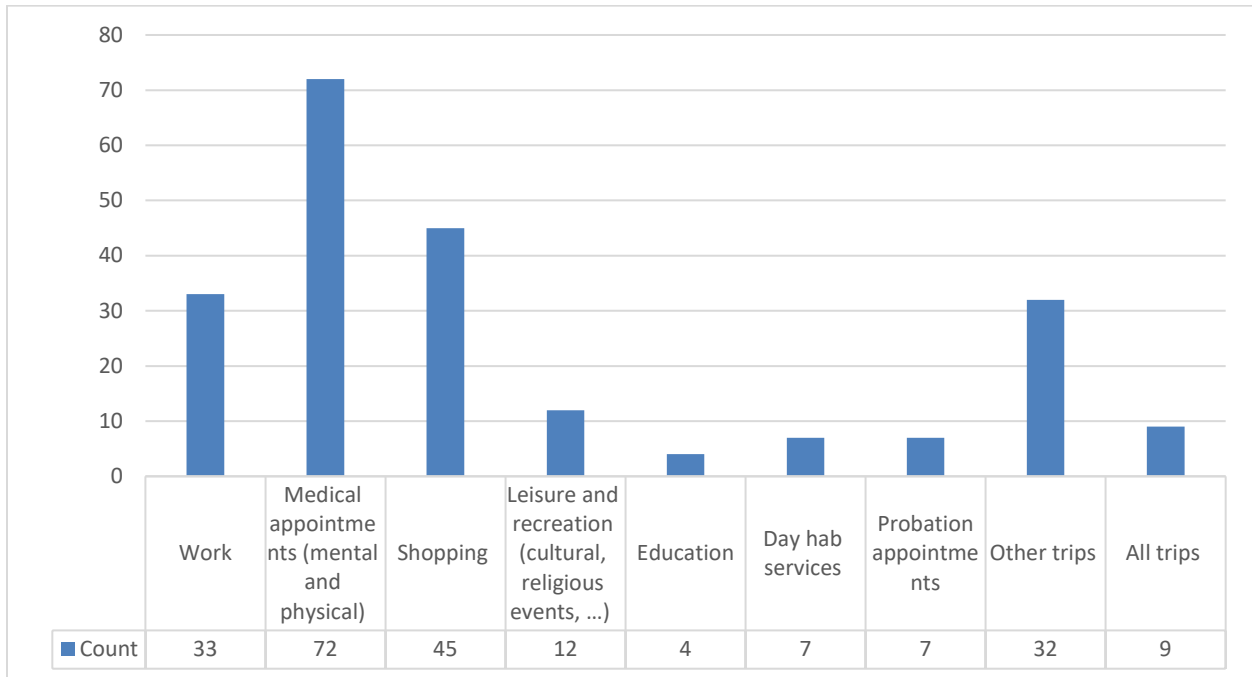
Survey question 15: Overall, how would you describe your current health?

Excellent	6
Good	31
Fair	39
Poor	8
Prefer not to answer	4
Total	88

Survey question 17: Do you need someone to accompany you when you travel?

Always	6
Most of the time	14
Sometimes	27
Rarely Never	19
Never	17
Total	83

Survey question 18: Please provide one or two reasons why you need someone to accompany you when you travel.
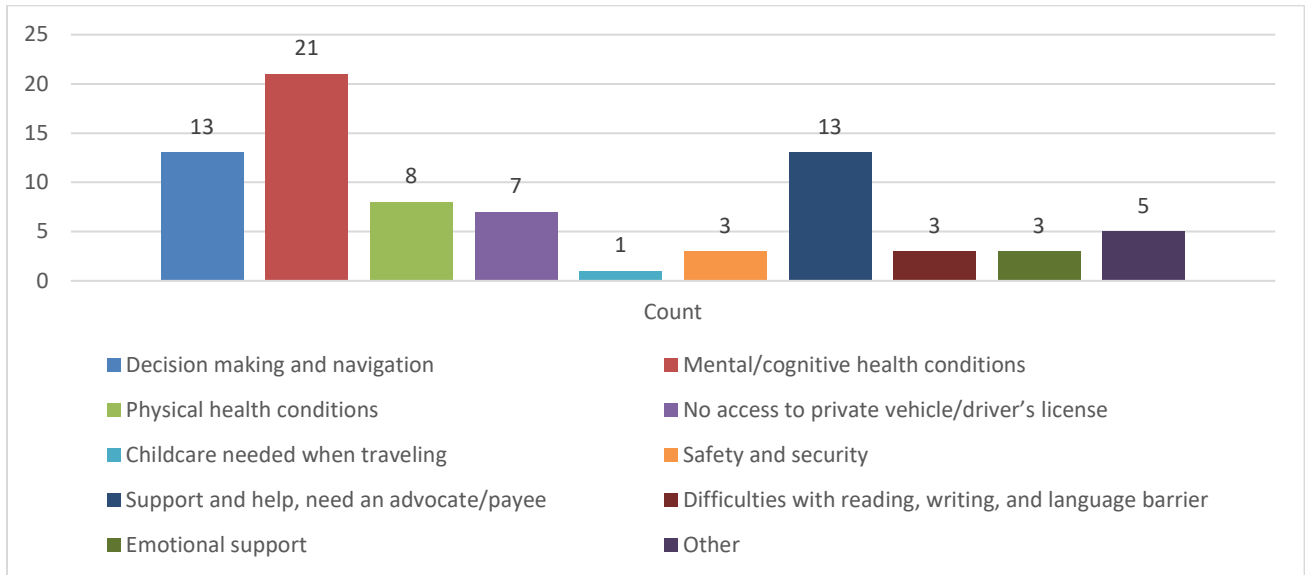
Survey question 19: In general, is cost a major barrier to getting where you need to go?

Yes	53
No	21
Not sure	7
Total	81

Survey question 20: Can you provide one or two examples of how transportation providers and drivers have been helpful and respectful of your needs?

Lack of personal cars due to high upkeep expenses	14
Lack of financial stability (limited income)	42
Unable to take public transportation (i.e., motion sickness, physical limitation, anxiety)	3
Lack of available services in certain times	6

Survey question 21: Is it difficult for you to use technology (mobile apps, computers, the internet, etc.) to plan trips?

Yes	30
No	38
Not sure	13
Total	81

Always	3
Most of the time	25
Sometimes	33
Rarely	6
Total	67

Survey question 22: Is it difficult for you to use technology to access other services, such as online shopping or online banking?

Yes	34
No	36
Not sure	10
Total	80

Survey question 23: How would you rate your anxiety while driving?

Very high	3
High	11
Medium	14
Low	7
Very low	8
Not sure	11
Does not apply - I don't drive	26
Total	80

Survey question 25: When using transportation services, do you feel that the providers and drivers are sensitive and respectful to your needs?

Survey question 26: Can you provide one or two examples of how transportation providers and drivers have been helpful and respectful of your needs?

Reliability of drivers to get people to their destinations (i.e., cab drivers) / punctuality	8
Giving ride despite forgetting bus pass	2
Being polite, friendly, and welcoming	10

Bus drivers stopping off-stop locations according to the need of individuals	1
Helping with navigation and timing (i.e., when and where to get off)	3
Providing good services and accommodating individuals' special needs (getting as close to the destination as possible, helping with bags, helping with boarding, and exiting the vehicle especially in bad weather, etc.)	15
Being sensitive to clients' feelings	4

Survey question 27: Has feeling a lack of sensitivity or respect to your needs from transportation providers and drivers caused you to avoid or stop using these services?

Yes	14
No	13
Not sure	11
Total	38

Survey question 28: Please provide an example of when you have felt that a provider or driver has not been sensitive or respectful to your needs.

Being impatient with clients (refusing to wait a couple of minutes for pickup, especially when they are late, etc.)	4
Neglected clients' needs (looked away while other riders misbehaved/bullied, etc.)	3
Not being on time/being late for pick up and drop off (and therefore leading to missing an appointment)	8
Driver not showing up at all	6
Disrespectful and insensitive to clients' needs / Refuse to answer questions	5

Survey question 29: Does your brain health / mental health and disability healthcare provider offer transportation services for you?

Yes	23
No	37
Not sure	13
Total	73

Survey question 31: Did you use video or phone conferencing for your brain health / mental health and disability service, some other health care, or both?

Brain health care / mental health	21
Other health care	8
Both	32
Total	61

Survey question 34: Does your employer offer transportation services for you?

Yes	1
No	43
I'm not employed	26
Total	70

Survey question 35: Do you feel like you know about most transportation services in your city or county?

Yes	38
No	14
Not sure	19
Total	71

Survey question 36: Which county/counties do you live/work in?

Linn County	32
Johnson County	25
Dubuque County	12
Benton County	5
Iowa County	3
Jones County	6
Bremer County	2
Delaware County	4
Buchanan County	2
Total	91

Survey question 37: What are your opinions about the following transportation services in Johnson County?

What are your opinions about the following transportation services in Johnson County?	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service	Total
Iowa City Transit	9	8	5	2	1	25
Coralville Transit	5	8	6	4	1	24
Cambus	8	3	7	5	1	24
380 Express	4	5	4	10	1	24
Yellow Cab	4	8	5	7	0	24
Johnson County SEATS	6	5	3	8	2	24
Corridor rides	1	2	6	11	4	24
Uber / Lyft	3	9	5	7	0	24
Other Taxis	1	5	8	10	0	24

Survey question 38: What are your opinions about the following transportation services in Linn County?

What are your opinions about the following transportation services in Linn County?	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service	Total
Cedar Rapids Transit	7	19	2	3	1	32
380 Express	4	12	5	9	2	32
Horizons, A Family SVC Alliance	5	7	5	10	5	32
Linn County Lifts	6	12	5	7	2	32
Corridor Rides	3	11	7	11	0	32
E-Bikes / E-Scooters	5	6	8	10	3	32
Uber / Lyft	4	15	8	5	0	32
Other Taxis	3	18	7	4	0	32

Survey question 39: What are your opinions about the following transportation services in Dubuque County?

What are your opinions about the following transportation services in Dubuque County?	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service	Total
Cedar Rapids Transit	7	19	2	3	1	32
380 Express	4	12	5	9	2	32
Horizons, A Family SVC Alliance	5	7	5	10	5	32
Linn County Lifts	6	12	5	7	2	32
Corridor Rides	3	11	7	11	0	32
E-Bikes / E-Scooters	5	6	8	10	3	32
Uber / Lyft	4	15	8	5	0	32
Other Taxis	3	18	7	4	0	32

Survey question 40: What are your opinions about the following transportation services in Benton County?

What are your opinions about the following transportation services in Benton County?	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service	Total
Benton County Transportation	1	3	1	0	0	5
Corridor rides	1	1	2	0	1	5
Uber / Lyft	1	2	0	2	0	5
Other Taxis	1	2	0	2	0	5

Survey question 41: What are your opinions about the following transportation services in Iowa County?

What are your opinions about the following transportation services in Iowa County?	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service	Total
Iowa County Transportation	1	1	0	1	0	3
Corridor rides	1	1	0	1	0	3
Uber / Lyft	1	1	0	1	0	3
Other Taxis	1	1	0	1	0	3

Survey question 42: What are your opinions about the following transportation services in Jones County?

What are your opinions about the following transportation services in Jones County?	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service	Total
Jones County Jets	2	1	0	0	2	5
A1 taxi & delivery, LLC	1	1	0	2	2	6
Corridor rides	1	1	2	0	2	6
Uber / Lyft	1	2	0	2	1	6
Other Taxis	1	2	0	3	0	6

Survey question 43: What are your opinions about the following transportation services in Bremer County?

What are your opinions about the following transportation services in Bremer County?	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service	Total
Iowa Northland Regional Transit Commission	0	1	1	0	0	2
Uber / Lyft	0	1	1	0	0	2
Other Taxis	0	2	0	0	0	2

Survey question 44: What are your opinions about the following transportation services in Delaware County?

What are your opinions about the following transportation services in Delaware County?	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service	Total
A1 taxi & delivery, LLC	0	1	0	1	1	3
RTA	1	1	0	1	1	4
Uber / Lyft	0	1	1	1	0	3
Other Taxis	0	1	1	1	0	3

Survey question 45: What are your opinions about the following transportation services in Buchanan County?

What are your opinions about the following transportation services in Buchanan County?	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service	Total
Iowa Northland Regional Transit Commission	1	0	0	0	1	2
Uber / Lyft	0	1	1	0	0	2
Other Taxis	0	1	1	0	0	2

Survey question 47: Do you participate in any programs that provide free or reduced-cost bus passes?

Yes	31
No	29
Not sure	10
Total	70

Survey question 48: Other than free or reduced-cost bus passes, do you participate in any other free or reduced cost transportation programs?

Yes	17
No	40
Not sure	12
Total	69

Survey question 54: What is your gender? Please choose all that applies to you.

Agender	1
Cisgender	7
Man	20
Non-binary	1
Transgender	1
Woman	39
Another gender not listed	1
Prefer not to answer	9
Total	79

Survey question 55: What is your race/ethnicity? Please check all that apply to you.

Asian / Pacific Islander	1
Black / African American	3
Hispanic / Latino	3
Native American / Alaska Native	2
White / Caucasian	60
Other	4
Total	73

Survey question 57: Are you a student?

Yes	3
No	67
Total	70

Survey question 58: What is your annual household income?

Less than $15,000	30
$15,001 to $35,000	11
$35,001 to $55,000	9
$55,001 to $75,000	6
$75,001 to $100,000	3
More than $100,000	4
Total	63

Appendix G

Survey: Paper Version

Transportation Gap Survey

Conducted by University of Iowa
On behalf of Mental Health / Disability Services of the East Central Region (ECR)
Survey period: **26 September 2022 – 15 November 2022**
Return survey to **347 Jessup Hall, Iowa City, IA, Zip code: 52242**

To take the survey online, please scan the QR code or visit https://bit.ly/ECR-transportation

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The Mental Health/Disabilities Services of the East Central Region (ECR) and the University of Iowa are conducting a study to identify transportation barriers for individuals with brain health / mental health and intellectual or developmental disabilities. Results from the study will help identify transportation needs and will inform opportunities for improving transportation services in the future.

An important part of our study is learning about the challenges individuals face when traveling to healthcare appointments and other activities, such as work and shopping.

The questions below can be answered by an individual with lived experience, caretaker, or caregiver.

The survey should take about 10 minutes to complete. All answers are completely anonymous and voluntary. You can skip any questions you feel uncomfortable answering.

Thank you for giving us a few minutes of your time today.

Q1 Please tell us who you are, choosing the option that best describes you:

◯ Person who uses brain health / mental health and disability services

◯ Caretaker (relative, friend, etc.)

◯ Caregiver (medical service provider / healthcare provider, etc.)

◯ Other (please describe below)

_____

Q2 You indicated that you are completing this survey as a caretaker or another role that supports a person who uses brain health / mental health and disability services. Please respond to the following questions from the point of view of their travel needs and requirements.

○ Okay, got it

Q3 When thinking about transportation, can you **always or almost always** get where you need to go?

○ Yes

○ No

○ Not sure

Q4 **(Skip this question if you answered "Yes" to the previous question)** Please provide one or two reasons why you are not always able to get where you need to go.

_____

_____

_____

_____

_____

Q5 Can you **always or almost always** get to your destination **at the time** you need or want to be there?

○ Yes

○ No

○ Not sure

Q6 **(Skip this question if you answered "Yes" to the previous question)** Please provide one or two reasons why you sometimes cannot get to your destination at the time you need or want to be there.

_____

_____

_____

_____

Q7 How do you typically get to your brain health / mental health appointments? Please check all that apply.

☐ Walk or Bike

☐ Drive myself

☐ Ride with someone else in their vehicle

☐ Bus / public transportation

☐ Taxi / Uber / Lyft

☐ Other transportation service (please specify)

_____

Q8 Which of those do you use most often to get to your brain health / mental health appointments?

Please arrange the choices in the order that reflects how much you use them, starting with the most frequently used choice at the top.
_____ Walk or Bike
_____ Drive myself
_____ Ride with someone else in their vehicle
_____ Bus / public transportation
_____ Taxi / Uber / Lyft
_____ Other transportation service (please specify)

Q9 Do you have a driver's license?

    ◯ Yes

    ◯ No

    ◯ Yes, but it is not valid or is expired

Q10 How often do you have access to a reliable vehicle?

    ◯ Almost always

    ◯ Most days of the week

    ◯ A few days each week

    ◯ One day a week or less

    ◯ Never

Q11 **(Skip this question if you answered "No" to the question 9)** Do you use your own vehicle to help others with brain health / mental health and disability needs get to places they need to be?

    ◯ Yes, often

    ◯ Yes, but not very often

    ◯ No

Q12 How often do you need to rely on someone else for transportation?

    ◯ Almost always

    ◯ Most days of the week

    ◯ A few days each week

    ◯ One day a week or less

    ◯ Never

Q13 **(Skip this question if you answered "Never" to the previous question)** What kinds of trips do you need help from others to make? Examples include medical appointments, work, shopping, etc.

_____

_____

_____

_____

_____

Q14 Overall, how would you describe your current health?

◯ Excellent

◯ Good

◯ Fair

◯ Poor

◯ Prefer not to answer

Q15 Would you please list the disabilities that impact your transportation choices and needs?

_____

_____

_____

_____

_____

Q16 Do you need someone to accompany you when you travel?

○ Always

○ Most of the time

○ Sometimes

○ Rarely

○ Never

Q17 **(Skip this question if you answered "Rarely" / "Never" to the previous question)**
Please provide one or two reasons why you need someone to accompany you when you travel.

_____

_____

_____

_____

Q18 In general, is cost a major barrier to getting where you need to go?

○ Yes

○ No

○ Not sure

Q19 **(Skip this question if you answered "No" to the previous question)** Please provide
one or two reasons why cost is a major barrier to getting where you need to go.

_____

_____

_____

Q20 Is it difficult for you to use technology (mobile apps, computers, internet, etc.) to plan trips?

○ Yes

○ No

○ Not sure

Q21 Is it difficult for you to use technology to access other services, such as online shopping or online banking?

○ Yes

○ No

○ Not sure

Q22 How would you rate your anxiety while driving?

○ Very high

○ High

○ Medium

○ Low

○ Very low

○ Not sure

○ Does not apply - I don't drive

Q23 How would you rate your anxiety while using transportation services?

○ Very high

○ High

○ Medium

○ Low

○ Very low

○ Not sure

○ Does not apply - I don't use transportation services

Q24 **(Skip this question if you do not use any transportation services)** When using transportation services, do you feel that the providers and drivers are sensitive and respectful to your needs?

○ Always

○ Most of the time

○ Sometimes

○ Rarely

○ Never

Q25 **(Skip this question if you answered "Rarely" / "Never" to the previous question)** Can you provide one or two examples of how transportation providers and drivers have been helpful and respectful of your needs?

_____

_____

_____

_____

Q26 **(Skip this question if you answered "Always" / "Most of the time" to question 24)**
Has feeling a lack of sensitivity or respect to your needs from transportation providers and drivers caused you to avoid or stop using these services?

◯ Yes

◯ No

◯ Not sure

Q27 **(Skip this question if you answered "Always" / "Most of the time" to the question 24)**
Please provide an example of when you have felt that a provider or driver has not been sensitive or respectful to your needs.

_____

_____

_____

_____

_____

Q28 Does your brain health / mental health and disability healthcare provider offer transportation services for you?

◯ Yes

◯ No

◯ Not sure

Q29 Have you ever had a healthcare appointment using video or phone conferencing?

○ Yes

○ No

○ Not sure

Q30 **(Skip this question if you answered "No" / "Not sure" to the question 29)** Did you use video or phone conferencing for your brain health / mental health and disability service, some other health care, or both?

○ Brain health care / mental health

○ Other health care

○ Both

Q31 What barriers do or might you face related to healthcare appointments conducted through video or phone conferencing?

○ None

○ Poor internet access

○ Unfamiliar with the technology

○ Lack of privacy

○ Other _____

Q32 If it was available, how likely is it that you would use phone or video conferencing instead of traveling to get to your healthcare provider?

○ Extremely likely

○ Somewhat likely

○ Neither likely nor unlikely

○ Somewhat unlikely

○ Extremely unlikely

Q33 Does your employer offer transportation services for you?

○ Yes

○ No

○ I'm not employed

Q34 Do you feel like you know about most transportation services in your city or county?

○ Yes

○ No

○ Not sure

Q35 What are your opinions about the following transportation service? Please answer only for the county/counties you live/work in.

Johnson Country	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service
Coralville Transit	○	○	○	○	○
Iowa City Transit	○	○	○	○	○
Cambus	○	○	○	○	○
380 Express	○	○	○	○	○
Johnson County SEATS	○	○	○	○	○
Corridor rides	○	○	○	○	○
Yellow Cab	○	○	○	○	○
Uber / Lyft	○	○	○	○	○
Other Taxis	○	○	○	○	○
Linn County	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service
Cedar Rapids Transit	○	○	○	○	○
380 Express	○	○	○	○	○
Horizons, A family SVC alliance	○	○	○	○	○
Linn County Lifts	○	○	○	○	○

	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service
Corridor Rides	○	○	○	○	○
E-Bikes / E-Scooters	○	○	○	○	○
Uber / Lyft	○	○	○	○	○
Other Taxis	○	○	○	○	○
Dubuque County	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service
Dubuque - The Jule	○	○	○	○	○
A1 taxi & delivery, LLC	○	○	○	○	○
RTA	○	○	○	○	○
Uber / Lyft	○	○	○	○	○
Other Taxis	○	○	○	○	○
Benton County	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service
Benton County Transportation	○	○	○	○	○
Corridor Rides	○	○	○	○	○
Uber / Lyft	○	○	○	○	○
Other Taxis	○	○	○	○	○

Iowa County	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service
Iowa County Transportation	○	○	○	○	○
Corridor Rides	○	○	○	○	○
Uber / Lyft	○	○	○	○	○
Other Taxis	○	○	○	○	○

Jones County	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service
Jones County Jets	○	○	○	○	○
A1 taxi & delivery, LLC	○	○	○	○	○
Corridor Rides	○	○	○	○	○
Uber / Lyft	○	○	○	○	○
Other Taxis	○	○	○	○	○

Bremer County	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service
Iowa Northland Regional Transit Commission	○	○	○	○	○
Uber / Lyft	○	○	○	○	○
Other Taxis	○	○	○	○	○

Delaware County	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service
A1 taxi & delivery, LLC	○	○	○	○	○
RTA	○	○	○	○	○
Uber / Lyft	○	○	○	○	○
Other Taxis	○	○	○	○	○
Buchanan County	I value this service	This service could be improved	Neutral / No opinion	I have never used this service	I have never heard of this service
Iowa Northland Regional Transit Commission	○	○	○	○	○
Uber / Lyft	○	○	○	○	○
Other Taxis	○	○	○	○	○

Q36 Can you provide one or two examples what you value or appreciate about existing transportation services?

_____

_____

_____

_____

_____

Q37 Do you participate in any programs that provide free or reduced-cost bus passes?

○ Yes

○ No

○ Not sure

Q38 Other than free or reduced-cost bus passes, do you participate in any other free or reduced cost transportation programs?

○ Yes

○ No

○ Not sure

Q39 **(Skip this question if you answered "No" / "Not sure" to the question 38)** Please list the other free or reduced-cost transportation programs you use.

_____

_____

_____

_____

_____

Q40 Could you use help getting more information about the bus system or other options?

○ Yes

○ No

○ Not sure

Q41 What would you most like to see change about transportation so that you can better get where you need to go?

_____

_____

_____

_____

Q42 What year were you born?

_____

Q43 What is the zip code where you live?

_____

Q44 What is your gender? Please choose all that applies to you.

☐ Agender

☐ Cisgender

☐ Man

☐ Non-binary

☐ Transgender

☐ Woman

☐ Another gender not listed

☐ Prefer not to answer

Q45 What is your race/ethnicity? Please check all that apply to you.

☐ Asian / Pacific Islander

☐ Black / African American

☐ Hispanic / Latino

☐ Native American / Alaska Native

☐ White / Caucasian

☐ Other: _____

Q46 How many days in a typical week do you work away from home?

_____

Q47 Are you a student?

○ Yes

○ No

Q48 What is your annual household income?

○ Less than $15,000

○ $15,001 to $35,000

○ $35,001 to $55,000

○ $55,001 to $75,000

○ $75,001 to $100,000

○ More than $100,000

Thank you for your time!