Are We There Yet?
A Rapid Health Impact Assessment on Access to Care for Mobility Challenged People in Central Alabama
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Amy Rauworth,
Lakeshore Foundation

Barbara Newman,
Jefferson County Department of Health

Michele Gowens,
Jefferson County Department of Health

Steve Ostaseski,
The Planning Work Group

Ben Wieseman,
REV Birmingham

Cheryl Morgan,
Emerita Professor Auburn University

Yochai Eisenberg,
University of Illinois Chicago

_Funding provided by:_

Community Foundation of Greater Birmingham,
Birmingham, Alabama
Lakeshore Foundation, Birmingham, Alabama
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Abstract

People without access to a personal vehicle have limited transportation options to access medical care, grocery stores, merchandise, and other essential services in the Jefferson County area. Finding information about available transportation options is a challenge for a significant segment of the population. With funding from the Community Foundation of Greater Birmingham and Lakeshore Foundation, a multi-disciplinary team conducted a Rapid Health Impact Assessment (HIA) on one of the most pressing needs for mobility challenged individuals: access to medical care. In order to gain insight into the difficulties faced by this group, the HIA team administered patient transportation surveys at seven health care facilities and interviewed focus groups with key stakeholders to gain a deeper awareness of the challenges in getting to medical care. This HIA outlines a set of recommendations to community decision makers regarding strategies to improve transportation to healthcare. The timing of this assessment was ideal, as the Birmingham Jefferson Transit Authority continues working on improvements to the system and transportation network companies (TNC), such as Uber and other fee for service transports are coming into the transportation market.
A Rapid Health Impact Assessment on Access to Care for Mobility Challenged People in Central Alabama

Health Impact Assessment Process

According to the World Health Organization, “Health Impact Assessment (HIA) is a means of assessing the health impacts of policies, plans and projects in diverse economic sectors using quantitative, qualitative and participatory techniques.”

A Health Impact Assessment is characterized by six distinct steps:

1. Screening: Determine whether a HIA is needed or useful.
2. Scoping: In consultation with stakeholders, develop a plan for the HIA, including the identification of potential health risks and benefits.
3. Assessment: Describe the baseline health of affected communities and assess the potential impacts of the decision.
4. Recommendations: Develop practical solutions that can be implemented within the political, economic, or technical limitations of the project or policy being assessed.
5. Reporting: Disseminate the findings to decision makers, affected communities and other stakeholders.
6. Monitoring and Evaluation: Monitor the changes in health or health risk factors and evaluate the efficacy of the measures that are implemented and HIA processes as a whole.

Transportation is key to accessing health care: Getting to medical appointments, sick visits, screenings for preventive care and ongoing therapy such as dialysis is critical. Unfortunately, it is difficult to get around Birmingham, Jefferson County, and the surrounding Counties of Blount, Shelby, St Clair, and Walker, without a personal vehicle. Transportation options are few and often unreliable. Transportation, for many residents, is a barrier to accessing health care.

With support of a Community Foundation of Greater Birmingham (CFGB) grant, Lakeshore Foundation conducted a rapid Health Impact Assessment (HIA) to gather data on transportation access to health care for people in the five county area mentioned previously who are mobility challenged. This population includes adults and children with
disabilities, older adults unable to drive, and low-income populations who lack capital for personal vehicles. A HIA is a systematic way to ensure that input of those impacted by health disparities and stakeholders is considered in planning and decision-making. The rapid HIA process involved getting input from mobility challenged patients as well as staff of health care provider organizations. Rapid HIA’s are usually done when the scope is more focused and time and resources may be limited. Data for the five-county region on issues of health care access by this vulnerable population was built on transportation data from the Community Foundation’s EngAge project. The HIA team obtained survey responses from 224 patients from four medical providers at seven locations in the Birmingham area:

1. Jefferson County Department of Health Clinics
   a. Central Health Center, 1400 6th Avenue South, Birmingham, AL 35233
   b. Eastern Health Center, 601 West Blvd Roebuck, Birmingham, AL 35206
   c. Western Health Center, 631 Bessemer Super Hwy, Midfield, AL 35228
   d. Morris Health Center, 586 Morris Majestic Road, Morris, AL 35116
2. Christ Health Center, 5720 1st Avenue South, Birmingham, AL 35212
3. Travelers Aid of Greater Birmingham, 1605 5th Avenue North, Birmingham, AL 35203
4. Midtown Pediatrics, 1400 4th Avenue South, Birmingham, AL 35233

Project results will inform planners, decision-makers, and stakeholders about incremental, viable steps that may be implemented to improve future access to healthcare for these residents and lead to positive impacts for patients’ health and lower costs for healthcare providers. Implementing these steps in combination with studies and initiatives of transportation agencies, regional planning agencies, municipal governments, non-profit agencies, and health care agencies will help to improve accessibility to health care for many of the most vulnerable citizens. These recommendations will assist mobility challenged people and improve transportation for all citizens who would rather utilize public or fee for service transportation instead of personal vehicles.

Screening

The purpose of the screening step is to assess the appropriateness of a HIA to inform decision makers that the role of health in a proposal, project or policy is needed or at least will benefit the health of affected stakeholders. With funding from the National Center for Mobility Management, Lakeshore Foundation held a series of “Design 4 Mobility” meetings in 2015 using a design thinking process with transportation users, decision makers and stakeholders. These meetings revealed a need for data on health access by people with mobility challenges in order to effectively advocate for transportation changes.

The screening worksheet (available from the Human Impact Partners website) was used
to evaluate the need and potential health improvements to access to not only medical facilities, but, other needed services for a healthy lifestyle such as healthy food options and exercise:

<table>
<thead>
<tr>
<th><strong>Screening Questions</strong></th>
<th><strong>Response and Supporting Facts</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Project and Timing</td>
<td>The City of Birmingham Transit Program is working on a &quot;Connecting the world with our Magic City&quot; program.</td>
</tr>
<tr>
<td>Has a project, plan or policy been proposed?</td>
<td>Three projects are currently underway:</td>
</tr>
<tr>
<td></td>
<td>1. Bus Rapid Transit (BRT),</td>
</tr>
<tr>
<td></td>
<td>2. Transit Oriented Development (TOD), and</td>
</tr>
<tr>
<td></td>
<td>3. Transit Development Plan (TDP).</td>
</tr>
<tr>
<td>Is there sufficient time to conduct an analysis before the final decision is made?</td>
<td>The city is collaborating with Smart Growth America on its TOD as a part of its BRT project, which is funded by the Federal Transportation Administration and the City of Birmingham.</td>
</tr>
<tr>
<td></td>
<td>The Birmingham Jefferson County Transit Authority (BJCTA) is seeking input from citizens and other interested groups on the BRT project and on improvements to their overall Max Transit service.</td>
</tr>
<tr>
<td></td>
<td>These inputs are being sought now and will continue into 2018.³</td>
</tr>
</tbody>
</table>
### Health Impacts

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the decision have the potential to affect environmental or social determinants that impact health outcomes?</td>
<td>Access to health care, healthy food, and recreational choices: Mobility challenged patients in the Birmingham area have limited transportation options. This may limit their ability to get to medical appointments. Many must rely on friends or family for transportation.</td>
</tr>
<tr>
<td>If so, which determinants and which health outcomes?</td>
<td>Built Environment: More comfortable, convenient, and safe locations for transportation access are needed, i.e., pick-up and drop-off locations.</td>
</tr>
<tr>
<td>Are the proposal’s impacts to health likely to be significant in terms of the number of people impacted, the magnitude, breadth and/or immediacy of impacts?</td>
<td>Better transportation options have the potential to help a large number of people in the area.</td>
</tr>
<tr>
<td></td>
<td>Jefferson County is the most populated county in the state of Alabama, with the highest # of people with disabilities. In 2016, an estimated 101,127 of the county population of 652,623 (15.5 %) were people with disabilities.</td>
</tr>
<tr>
<td></td>
<td>Other residents in the area that have other mobility challenges would be affected as well.</td>
</tr>
<tr>
<td>Do evidence, expertise, and/or research methods exist to analyze health impacts of the decision?</td>
<td>BJCTA ridership and transit routes can be analyzed periodically to see if increases have occurred in a year.</td>
</tr>
<tr>
<td></td>
<td>Blue Cross/Blue Shield can be contacted to see if partnership with Lyft has decreased missed appointments.</td>
</tr>
<tr>
<td>Potential Impact of HIA Findings</td>
<td>The TOD is looking at all aspects of transportation development including access to needed services.</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Is health already being considered in the proposal or as part of the decision-making process?</td>
<td>Birmingham Transit Program is looking at convenience and economic development related to a better transit corridor. Input from the public and other interested stakeholders has been solicited.</td>
</tr>
<tr>
<td>Are the links between the proposal and health or health determinants clear?</td>
<td>The TDP component of the program is the strategic guide for continued development of the public transportation system.</td>
</tr>
<tr>
<td>Is the decision-making process open to the HIA and/or recommendations for changes to design, mitigations and/or alternatives?</td>
<td>The potential for improvement to medical care as well as healthy living choices is there. Patients, especially those with mobility challenges, would have more options for transportation.</td>
</tr>
<tr>
<td>If applied, would HIA findings and recommendations potentially improve medical care?</td>
<td>Past relationships have been utilized for input. Members of the team have worked closely with planners on the Strada Group which has been contracted to conduct research and engage the community in the BRT and TOD projects and to make recommendations on improvements in the transportation system.</td>
</tr>
<tr>
<td>What are the potential impacts of the HIA process (e.g., building relationships, empowering community members, demonstrating how health can be used in decision making)?</td>
<td>These would be made stronger with the HIA process.</td>
</tr>
<tr>
<td></td>
<td>Community and medical providers would favor a more reliable way for patients to get to appointments.6,7,8</td>
</tr>
<tr>
<td><strong>Stakeholder Interest and Capacity</strong></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>--</td>
</tr>
<tr>
<td><strong>Have public concerns about the health impacts of the decision been voiced or documented?</strong></td>
<td>Prior focus group meetings facilitated by the Lakeshore Foundation have revealed a need for better transportation options. The Metropolitan Planning Organization (MPO) has a citizen’s committee that has voiced concerns.</td>
</tr>
</tbody>
</table>
| **Who are the stakeholders and interest groups involved in the decision-making process?** | Mobility challenged residents (people with disability, older adults, children, low-income)  
MPO Citizen’s Committee  
Medical Providers$^{6,7,8}$  
All residents who would like to use transportation other than a personal vehicle.  
Government officials who see the need for a more reliable transportation for residents and visitors to the area.  
BJCTA  
United Way of Central Alabama(UWCA)  
211 Call Line |
<p>| <strong>Do stakeholders have the interest to participate in the HIA?</strong> | Stakeholders, including citizens, agencies, and medical providers, have a vested interest in the HIA and its recommendations.$^{6,7,8}$ |
| <strong>Do stakeholders have the capacity (resources, skills, etc.) to participate in the HIA?</strong> | Through the CFGB grant, funding and in-kind resources from Lakeshore Foundation, the capacity was provided to conduct the HIA. |</p>
<table>
<thead>
<tr>
<th>Would stakeholders use the HIA to inform or influence the decision-making process?</th>
<th>Municipal leadership and cities in Jefferson County, the Community Foundation and specific organizations like Lakeshore Foundation, Rev Birmingham, BJCTA, medical providers, etc. could use the findings to leverage more financial support for transportation improvements, such as funding from Section 3006(b) of the FAST Act. The decision makers could be federal funders as well as local government funders.</th>
</tr>
</thead>
<tbody>
<tr>
<td>How?</td>
<td>UWCA could use the transportation information to enhance their 211 Call Line. This added resource would include transportation options for people without availability of a personal vehicle.</td>
</tr>
<tr>
<td></td>
<td>The starting point for discussions with decision makers will be the assembly of a community-wide team to actively pursue funding from FTA of Section 3006(b). The Community Team must include elected officials from federal, state and local levels, the BJCTA, the Metropolitan Planning Organization, Lakeshore Foundation, the Community Foundation of Greater Birmingham, the Center for Independent Living, Travelers Aid, ClasTran, Yellow Cab, Uber, Lyft, Medicaid, and ALDOT Local Planning section that deals with transit issues.</td>
</tr>
<tr>
<td></td>
<td>A more sustainable business model is needed to gain support for improvements with decision makers.</td>
</tr>
</tbody>
</table>
Scoping

This step is used to determine what health impacts are studied, scope, affected populations, goals, stakeholders, stakeholder engagement, a work plan, research methods, evaluation methods, geographic or demographic boundaries, etc.

An overall view of the information used in setting a course for this HIA process was helpful.

**Work Team**

Amy Rauworth, Lakeshore Foundation  
Barbara Newman, Jefferson County Department of Health  
Steve Ostaseski, Transportation Planner  
Ben Wieseman, REV Birmingham,  
Cheryl Morgan, Auburn Urban Studio  
Yochai Eisenberg, University of Illinois, Chicago  
Michele Gowens, Jefferson County Department of Health

**Financial Resources**

Community Foundation of Greater Birmingham (Direct Funding)  
Lakeshore Foundation (Direct Funding)  
Jefferson County Department of Health (In-Kind)

**Health Effects**

1. Improved health maintenance  
2. Reduced missed appointments  
3. Reduced complications and possibly reduced ER visits.

**Data Sources**

1. Patient Transportation Surveys JCDH, Children's of AI, Christ Health Center, Traveler's Aid  
2. Birmingham Transit Program  
3. HCS Demographics  
4. Transit Access Maps  
5. Previous Surveys

**Time Line**

TOD Plan will be incorporated in BRT as part of the Birmingham Transit Program.  
Public meetings began in 7/17 and will continue until implemented.  
BRT Public engagement began 2016 and will be ongoing.  
BRT is scheduled to begin prior to World Games in 2021.  
Monitoring of transportation options in area will be ongoing.
### Outputs
Survey results data regarding patient transportation difficulties
24% of those surveyed indicated missing or being late for an appointment
Focus group write-ups and evaluation of transportation options currently available

### Disseminating HIA
- BJCTA Officials
- Medical Providers Surveyed
- Mayor’s Association
- Transportation Planning committees
- Focus Group Attendees
- United Way of Central Alabama

### Questions
<table>
<thead>
<tr>
<th>Questions</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are plans for monitoring and evaluating</td>
<td>Conduct patient surveys after improvements in system, especially regarding information on transit options Follow-Up Focus Groups</td>
</tr>
<tr>
<td>What is the time span of the effects</td>
<td>Ongoing</td>
</tr>
</tbody>
</table>
| How will stakeholders be engaged?      | 1) One on one meetings with BJCTA, local government officials  
2) Written report of findings  
3) Attendance at stakeholder meetings of BJCTA |
The Assessment Step is used to describe the baseline health of the affected community, special group or identified population and assess the potential impacts of a decision or lack of action. Using the Kansas Health Institute Handbook for Practitioners, 2017, recommendation for key elements, this HIA developed the following:

<table>
<thead>
<tr>
<th>Key Element</th>
<th>Findings</th>
<th>Supporting Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline Profile of Current Conditions</td>
<td>Design for Mobility Meetings 2015 conducted at Lakeshore Foundation revealed a need for data on transportation difficulties for mobility challenged people</td>
<td>Design 4 Disability&lt;br&gt;American Community Survey&lt;br&gt;Community Health Needs Assessments from area hospitals</td>
</tr>
<tr>
<td>Conduct Literature Review</td>
<td>1) New York Clinic Study&lt;br&gt;2) Florida Health Department Study of Maternity Patients&lt;br&gt;Blue Cross/Blue Shield and Lyft</td>
<td>Transportation to Clinic: Findings from a Pilot Clinic-Based Survey of Low-Income Suburbanites&lt;br&gt;A Study of Missed Appointments in a Florida Public Health Department.&lt;br&gt;www.bcbs.com</td>
</tr>
<tr>
<td>Conduct Data Analysis</td>
<td>Transportation Options&lt;br&gt;Transportation Surveys of 224 patients at seven medical facilities in Jefferson County</td>
<td>Transportation Options Spreadsheet&lt;br&gt;Transportation Survey utilizing Survey Monkey© design</td>
</tr>
<tr>
<td>Engage Stakeholders (interviews, surveys, etc.)</td>
<td>Focus Groups:&lt;br&gt;Fairfield-2&lt;br&gt;Woodlawn-3&lt;br&gt;YWCA-1&lt;br&gt;Single Interviews =2&lt;br&gt;Transportation Surveys of 224 patients at seven medical facilities in Jefferson County</td>
<td>Patient Transportation Surveys&lt;br&gt;Focus Group and Interview Questions</td>
</tr>
</tbody>
</table>
Medical Provider Surveys

The HIA team administered a transportation survey (20 questions) at seven non-emergency medical care facilities in the Jefferson County area. There were approximately 50 home zip codes of patients represented. Those surveyed were distributed throughout Jefferson and adjoining counties. Most of the patients surveyed indicated they do not have private insurance and make well below the median income level for the area. Four of the medical clinics are operated by the Jefferson County Department of Health, a public agency. The remaining three are operated by non-profit organizations: Christ Health Center is operated is by a local faith-based organization; Midtown Pediatrics is operated by Children’s of Alabama; and Travelers Aid is operated as an assistance agency for transient individuals and the elderly. Of the 224 patients surveyed, 53 or 23.8% experienced a problem that had prevented them from getting medical care (see Figure 1 on the next page):
What kinds of difficulties do you have in getting the transportation that you need?
(Please check all that apply.)

Answer Choices

<table>
<thead>
<tr>
<th>Difficulty</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't have a car</td>
<td>39.62%</td>
</tr>
<tr>
<td>Bad weather</td>
<td>33.96%</td>
</tr>
<tr>
<td>Costs too much</td>
<td>33.96%</td>
</tr>
<tr>
<td>Don't want to ask for help or inconvenience others</td>
<td>33.96%</td>
</tr>
<tr>
<td>No one to depend on</td>
<td>33.96%</td>
</tr>
<tr>
<td>No or limited public transportation in community</td>
<td>32.08%</td>
</tr>
<tr>
<td>None</td>
<td>28.30%</td>
</tr>
<tr>
<td>Bus stops are too far away</td>
<td>24.53%</td>
</tr>
<tr>
<td>Doctor's office is too far</td>
<td>20.75%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>20.75%</td>
</tr>
<tr>
<td>Buses don't run on time or don't run when needed</td>
<td>20.75%</td>
</tr>
<tr>
<td>No or limited taxi service in community</td>
<td>9.43%</td>
</tr>
<tr>
<td>Fear of crime</td>
<td>9.43%</td>
</tr>
<tr>
<td>Physical or other disability makes transportation hard to use</td>
<td>7.55%</td>
</tr>
<tr>
<td>Can't use equipment such as a walker, cane, wheelchair, etc., with available transportation</td>
<td>3.77%</td>
</tr>
</tbody>
</table>

Of the difficulties indicated by the above-mentioned 53 patients, not having a car was the most common difficulty (39%). Other reasons ranged from limited public transportation (32%) to “no one to depend on” (34%).
1. JCDH - Morris
2. JCDH - Eastern
3. Christ Health Center
4. Traveler’s Aid
5. Midtown Pediatrics
6. JCDH - Central
7. JCDH - Western
Focus Group Responses

One on one interviews and focus groups were used to gain deeper insight into the role of reliable transportation or the lack of reliable transportation played in getting to medical care as well as other activities related to their health. The individual responses included the following insights; these are legitimate observation by the users of the system.

- Transportation System is hard to navigate
- Max bus stop is not close enough to walk
- ClasTran transportation is reliable to the appointment but takes much longer to get home.
- Taxis are too expensive
- Access to healthy living options are limited. Groceries, other supplies are hard to navigate on bus.
- Transportation information is limited and sometimes incorrect.
- Public transportation usually takes all day
- Bus stops may not be physically safe

The full results are included in the appendix.

Other Considerations

The following maps reveal that most areas of Jefferson County have services such as medical providers, grocery stores, and pharmacies, but that those living in HUD housing have challenges in accessing these amenities. Transit stops may be less than a mile away, but they are frequently not convenient, safe, or walkable. Few bus stops are protected from rain, wind, or the blazing Alabama sun. Many are mere signs on the side of a busy roadway with neither shelter nor even a safe place to stand. Transit pick-ups are often too infrequent (>45 min) to be practical for pre-set appointments.

Eastwood Festival Stop, Max Transit Route 17
Visualization of access to health care

As part of the health impact assessment of mobility in the Birmingham area, it is critical to understand where there are issues with mobility, and where there are people who experience difficulties with mobility. In the scope of this HIA, this would include people with disability, older adults and people experiencing poverty. The following maps analyze and illustrate the problem of community mobility in Birmingham as well as Jefferson and Shelby counties.

Do People with Disabilities have Access to Healthcare and Grocery Stores in Birmingham, AL?

In map #1, we see where people with disability are located in relation to transportation as well as community amenities important to health, such as hospitals, pharmacies, grocery stores. The map also includes HUD housing sites, which are occupied by our populations of interest, people with disability, impoverished people, and older adults. People with disability are mostly concentrated in central Birmingham and areas to the Northwest of Birmingham. Some of these areas on the outskirts of Birmingham are clearly not served by public transportation or community amenities. The pink dashed line is a 3/4 mile buffers around transit lines. Only people who live within these boundaries are able to access the paratransit door-to-door service. The data is from the American Community Survey (ACS) 5-year 2011-2015 estimates at the census tract level. Disability is defined in the ACS as any limitation in ambulation, hearing, vision, cognition, self-care and independent living.
Do People in Poverty have Access to Healthcare and Grocery Stores in Birmingham, AL?

Map #2 illustrates the percentage of residents in poverty along with access to transit and community amenities. Poverty appears to be concentrated in central Birmingham, where in some census tracts, greater than 75% of residents are in poverty. Fixed-route transit appear to be serving people in poverty well as bus lines overlap with high poverty areas. Poverty was defined as being below 185% of the federal poverty level, which is a benchmark used for many public assistance programs.
Where are the households with limited access to vehicles in Birmingham, AL?

Map #3 shows the percentage of households with no vehicle. This metric represents those in most need of assistance with mobility. In Birmingham 12.3% of households have no car and most (45.8%) have 1 car. The areas with a greater percentage of household with no available vehicle is in central Birmingham. Vehicle availability was measured from the American Community Survey (ACS) 5-year, 2011-2015.
Proximity to Healthcare and Grocery in Birmingham, AL

In map #4, three maps are displayed side by side. The maps illustrate access to healthcare and grocery by showing the route from HUD housing sites to the nearest hospital, pharmacy and grocery store. Grocery stores are used because of the importance of access to healthy foods in maintaining one's health. Downtown Birmingham appears to have good access to all 3 amenities but moving away from the center, the travel is longer. Some of the areas with higher rates of disability and poverty, appear to also have higher distances to healthcare and grocery. On average, for the HUD housing sites, hospitals take the longest to get to (2.6 miles), followed by pharmacy (1.9 miles) and then grocery stores (1.5 miles). Data was gathered from various sources in Birmingham including RPCGB, REV and Steve Ostaseski.
Access to the proposed Bus Rapid Transit (BRT) in Birmingham, AL

In map #5, the proposed BRT adds new transit service through central Birmingham. With fewer stops, the BRT is intended to be a faster option of travel. The proposed route appears to connect HUD housing and census tracts with higher proportions of people with disability to hospitals, pharmacies, and grocery stores.
Recommendations

Recommendations provide ways to suggest action that can enhance positive health effects and mitigate potential negative health effects related to a proposed plan or project.

Background Conditions

Overall 24% of residents participating in the transportation survey missed scheduled appointments important to their ongoing healthcare because of a lack of transportation. Twenty-six individuals were engaged in in-depth conversations through a combination of individual interviews and focus groups. The demographics included 23 women and 3 men. The majority were over 60; all were on fixed incomes, with limited means, and struggling with poverty. At a minimum, the participants had at least one chronic condition that required a quarterly doctor’s visit.

Collectively, they all had an issue with transportation in multiple aspects of their lives. Most do not drive, and if they do drive the cost of operating and maintaining a vehicle is a significant financial burden. Current estimated costs for operating an automobile that does not have a loan is approximately $4,400.00 annually. If, they still drive, clinics and hospitals are difficult destinations because of downtown traffic, parking in big decks, and in general, highly disorienting and confusing environments.

The following quote from, The Future of Disability in America, addresses another gap that Birmingham needs to address, “Our conclusions, as detailed in this report, entitled The Future of Disability in America, document the sobering reality that far too little progress has been made in the last two decades to prepare for the aging of the baby boom generation and to remove the obstacles that limit what too many people with physical and cognitive impairments can achieve”.

Basic Demographics

In Birmingham, 17.9% (35,398) of the population (200,370) has a disability and 99% of people with a disability are within 3/4 of a mile from a transit route.
(35,090). This proximity to a fixed transit route figures prominently for the population with disabilities but not necessarily for the elderly or other challenged populations. For example, approximately 12.3% of the Birmingham population (24,645) do not own an automobile.

**Challenges to Mobility**

Without a personal vehicle, stakeholders have limited choices, it is either public transportation or friends or family. Those without friend or family must rely on public transportation. They view the system as complex and hard to navigate, without a good central information source for the available options, and those options are viewed as not being dependable. The people interviewed regard the existing transit system as time consuming and particularly physically challenging. The stops are usually no more than signs and walking to them challenges their stamina and/or chronic condition. They find the bus system hours of operation don’t correspond to what is needed, although operating hours extend from 6:00 am through 7:30 pm on most routes. A very real challenge is a limitation of two carryon bags which makes grocery shopping unrealistic.

Most are paying friends/family an average of $20 per trip to get them to medical appointments, pharmacy, and grocery shopping. It is often complicated for family to assist because of job schedules, child-care, and distance. Those on limited incomes do not ask for or cannot afford additional trips for “normal” quality of life outings: library, park, or casual shopping. This most certainly contributes to a strong sense of isolation and challenges their personal sense of independence.

**Addressing Challenges**

Federal regulations protect people with disabilities that live within ¾ mile of existing transit routes. That same population living outside of this buffer does not have any such protection. The population that is old and poor does not have any such protection. And the population that is simply without a personal vehicle lacks any protection of any type. Yet they all face the same challenges when attempting to access health care, food, or to reach employment.

The recent work completed by the Regional Planning Commission of Greater Birmingham (RPCGB), in collaboration with researchers at the University of Alabama at Birmingham (UAB), responded to a call for proposals (CFP) from Pew Charitable Trusts and the Robert Wood Johnson Foundation. to conduct a health impact assessment (HIA) in the closely related work on including an HIA in the City of Birmingham’s comprehensive framework plans and developing a health report card for each neighborhood in the Birmingham city limits. The completed work clearly identified transportation as the third most important social determinant of health by organizational stakeholders. It was also ranked third by residents during the same initial study.
Transportation is important.

Pieces of the Puzzle (Transit Operators)

| Birmingham Jefferson County Transit Authority | Lyft |
| ClasTran                                      | Uber |
| Travelers Aid                                 | Yellow Cab |
| Kid One                                       | Multiple Small Private Operators |

Pieces of the Puzzle (Funding for 2016)

Annual Earmarks or Transfers

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 5309 (Seniors and Persons with Disabilities Transportation to BJCTA)</td>
<td>$666,744</td>
</tr>
<tr>
<td>Birmingham Highway Funding Flexed to FTA for Seniors and Persons with Disabilities Transportation</td>
<td>$3,800,000</td>
</tr>
<tr>
<td>Section 5307 Urban Area Funding (Only Urban Area)</td>
<td>$7,224,000</td>
</tr>
<tr>
<td>New Jefferson County Sales Tax Reallocation Funding</td>
<td>$2,000,000</td>
</tr>
</tbody>
</table>

Up to $2 million a year to the Birmingham-Jefferson County Transit Authority for 10 years, and up to $1 million a year after for an additional 20 Years

Special One Time Earmarks or Transfers

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Starts BRT Funding</td>
<td>$12,000,000</td>
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</table>

Operating Cost From 2015 NTD

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>BJCTA Fixed Route Hourly Operating Costs</td>
<td>$61.89</td>
</tr>
<tr>
<td>BJCTA Demand Response Hourly Operating Costs</td>
<td>$56.31</td>
</tr>
</tbody>
</table>

National Competitive Funding Opportunity

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 3006(b) of the FAST Act (appropriated in 2018)</td>
<td>$3.25 million</td>
</tr>
</tbody>
</table>

Medical transportation rules

- Medicaid Non-Emergency Medical Transportation for Categorically Needy: 2/Trips Per Month
- Viva Healthcare for Medicare Eligible Medicaid Recipients: 20 trips annually

Issues and Strategies

Issue: The transportation system is complex and hard to navigate

Strategy: Bring trip planning software to the BJCTA (see Orlando FL System Lynx, Lubbock, TX, or Durham, NC). This will not make the trips any shorter; it will not make the buses any prettier, but residents will be able to plan a trip, and with slightly more effort an App can be developed.

Issue: Reaching the stops can be physically challenging

Strategy: Involve Transit Network Companies (TNCs) as part of the system solutions. Uber and Lyft have introduced their own versions of shared ride pools: Uber Pool and Lyft Line. Building on the trip planning concept, it adds “routes” to the system that can fill the gaps to getting to stops or final destinations. On Lyft’s own website we find the following restatement of the problem and how they are addressing
transportation to health care in New York City. “Every year, around 3.6 million Americans miss or delay medical care because they lack appropriate transportation to their appointments. As the metro with the lowest rate of car ownership, this problem looms especially large in New York City – more than half of New York City households are car-free. Since Lyft has long been on a mission to reconnect people and communities through better transportation, we’re making sure people who need rides most are able to get them, starting with a new partnership and a new product being piloted in NYC.” They have provided Concierge, or their third party solution, to the service that Common Courtesy is providing. Uber announced collaboration with a new company, Circulation, to fulfill third-party, health care–related ride requests. They recognize the issue.

**Issue:** TNCs like Uber or Lyft could be part of the solution.

**Strategy:** If rides are shared they become more affordable. A trip of ten miles on Uber trip is between $18 and $23, a five-mile trip is between $11 and $14, and the one-mile trip is the minimum $5.75 charge. Yellow Cab fees are $4.50 first mile, $2.00 each additional mile and $2.00 for each additional person. So, the ten-mile trip on Yellow Cab would cost $22.50, the five-mile trip would be $12.50 and the one-mile trip $4.50. Lyft and Uber do not have an additional passenger charge but typically limit ridership to four people with one origin and one destination. A ten-mile trip on Uber shared by three people could cost as little as $8 each one-way. For those eligible for paratransit, subsidies for using TNCs could help in reducing costs for passengers and for BJCTA, ClasTran and Kid One.

**Issue:** Some seniors are not comfortable with technology, is there an option to help with their transportation needs?

**Strategy:** There is a model that has developed from a group in Atlanta known as Common Courtesy. Common Courtesy bridges the gap between riders and Uber or Lyft. They offer training and materials to anyone wanting to establish a chapter in their own area. The rides are funded with a participant’s own account or through a “chapter” account. Organizations wishing to provide transportation to all of their members, for example a church group, could create a fund only available for their members. The “coordinators” are all volunteers.

**Issue:** How can potential strategies be funded?

**Strategies:** There are many funding sources being brought together to provide seniors and person with disabilities transportation resources. In the NTD database, BJCTA reports that their expenses were $4,438,596 to run some 1,126,703 miles of service and 110,907 unlinked passenger trips. There is a transfer of almost $3,800,000 from highway funds to the Federal Transit Administration for the support of activities by Paratransit Consortium. If the Bus Rapid Transit system from Woodlawn to the Crossplex is funded and will be completed, changing the backbone of the transit system and the level of service for all members of the community. It is time to examine how funds for elderly and disabled transportation are being programmed.

The fact that stakeholders reported a 24% incidence of missed medical trips is important. The fact that the majority of users do not know how to navigate the transit system, do not have faith in the systems dependability, and cannot bring home a multiple day supply of groceries when using the system, is equally critical. As a community, we need to have an in-depth conversation addressing these issues and an
examination of the integration of potential funding and technology.

The Section 3006(b) of the FAST Act grant (if funded) may help to address mobility challenges. If it fails, decision makers and stakeholders should re-examine programming funding for existing dedicated elderly and handicapped funding. We cannot avoid this difficult issue. The landscape is changing and the conversation must occur. The technology is available, but working together and collaborating are essential. The solution will require a detailed plan and a committed champion.

**Reporting**

Reporting involves distribution of the findings to decision makers, stakeholders and others involved in the process. The type of report will be determined by the type of audience and the level of input they are able to provide to the process. The chart below will be utilized:

**Figure 2**

<table>
<thead>
<tr>
<th>Participants</th>
<th>Type of Communication</th>
<th>Dissemination of Information</th>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIA Funders</td>
<td>Written Report</td>
<td>HIA Full Report</td>
<td>October, 2017</td>
</tr>
<tr>
<td>Birmingham Jefferson County Transit Authority (BJCTA)</td>
<td>One on one meeting with leadership</td>
<td>HIA Full Report, One page information sheet</td>
<td>2017 - 2018</td>
</tr>
<tr>
<td>Health Action Partnership Priority Groups: 1) Access to Care 2) Built Environment</td>
<td>Presentation at regular scheduled meetings</td>
<td>Power Point, One page information sheet</td>
<td>2017 - 2018</td>
</tr>
<tr>
<td>Elected Officials</td>
<td>Meeting with elected officials who have shown an interest in better transportation options for mobility challenged people</td>
<td>Power Point, One page information sheet</td>
<td>2017-2018</td>
</tr>
</tbody>
</table>

The HIA full report can be housed on collaborating agencies’ websites: Lakeshore Foundation, Jefferson County Department of Health, REV Birmingham, and Community Foundation.
## Monitoring Plan

<table>
<thead>
<tr>
<th>Action</th>
<th>Who?</th>
<th>How</th>
</tr>
</thead>
</table>
| Recruit a steering committee                                           | Find core stakeholders and other interested, influential people with expertise | 1. Follow-up meeting with HIA team  
2. Recruit steering committee members                                   |
| Continue presence at transportation meetings                           | Agency representative                                                 | Request attendance from agency                                       |
| Continue attendance at Health Action Partnership Priority Groups:      | Current agency representative                                         | Attend meetings and continue to report on transit developments       |
| 1) Access to Care                                                     |                                                                      |                                                                      |
| 2) Built Environment                                                  |                                                                      |                                                                      |
| Conduct a “Lessons Learned” meeting                                  | HIA work group                                                       | Facilitate open discussion of what was right, what was mediocre, and what was wrong |

## Conclusion

The option of driving a personal car to work, appointments, goods, and services is not readily available for 15% of the population of Jefferson County and surrounding areas. Due to this lack of accessibility, numerous citizens are deprived of many of the rights that other people in the region enjoy. The difficulty imposed by a lack of dependable public transportation is a health equity issue that has detrimental effects not only on the patients themselves, but frequently on their families as well. This HIA has identified the issues and potential strategies for improving the health of residents with mobility challenges. The greater Birmingham region needs to use its technical expertise and identify sustainable funding to develop a viable transportation system for not only citizens with mobility challenges, but for all citizens.
References


12 https://www.nerdwallet.com/blog/loans/total-cost-owning-car/


Appendix

Personal Interview

<table>
<thead>
<tr>
<th>Interview</th>
<th>Date</th>
<th># Present</th>
<th>Location</th>
<th>Health Determinants to Address</th>
</tr>
</thead>
</table>
| Jefferson County Health Department (JCDH) | 6/20/2017  | 1         | JCDH Central Health Center   | 1. Access to Care  
|                                    |            |           |                              | 2. Healthy Food  
|                                    |            |           |                              | 3. Built Environment |

**Key Findings**
1. Transportation System is hard to navigate
2. Max bus stop is not close enough to walk.
3. Hard to get to other service needs such as grocery store or pharmacy
4. Community is not organized to address transportation issues
5. Access to grocery store sometimes is just once per month this precludes eating fresh food
6. Transportation needs to be available more than 1/month
7. Delivery services from grocery store would be helpful.
8. Feel guilty asking friends or family.
### Focus Groups

<table>
<thead>
<tr>
<th>Focus Group</th>
<th>Date</th>
<th># Present</th>
<th>Location</th>
<th>Health Determinants to Address</th>
</tr>
</thead>
</table>
| W. Clyde Williams Residents Group 1 & 2 | 7/11/2017 | Group 1 = 6 Group 2 = 6 | W. Clyde Williams Sr. Apartments, Fairfield, Al | 1. Access to Care  
2. Built Environment  
3. Limited Income  
4. Zip Code  
5. Access to other services, food, prescriptions  
6. Mobility challenges  
7. Reliable transportation |

### Key Findings

1. Transportation to medical appointments is mostly provided by friends and family.
2. Private insurance provides transportation for some (usually 20 one-way trips/year).
3. ClasTran transportation is fairly reliable to the appointment, but takes much longer to get home.
4. Taxis are too expensive.
5. Bus stop is too far to walk; connection is very inconvenient.
6. Health care providers are scattered throughout area.
7. Unplanned illnesses must depend on friend or family to get to care.
8. For emergency, must call ambulance.
9. All have cancelled medical appointment due to transportation problems.
10. $20.00 seems to be most frequent amount for friends and family to transport.
11. Doctor’s office usually charge $30.00-$50.00 for missed visits.
12. Feel guilty asking friends or family for rides.
<table>
<thead>
<tr>
<th>Focus Group</th>
<th>Date</th>
<th># Present</th>
<th>Location</th>
<th>Health Determinants to Address</th>
</tr>
</thead>
</table>
| REV Social Venture Group 1  | 8/28/2017 | 2         | Woodlawn REV Office | 1. Access to Care  
2. Built Environment  
3. Limited Income  
4. Zip Code  
5. Access to other services, food, prescriptions  
6. Mobility challenges  
7. Reliable transportation |

**Key Findings**

1. Hours of bus transportation may not meet needs. (Dart does not begin service until 10:00 AM.)
2. Access to healthy living options are limited. Groceries, other supplies are hard to navigate on bus.
3. Transportation information is limited and sometimes incorrect.
4. Public transportation usually takes all day.
5. Safe bus stops are needed.
6. Bus stops are usually in elements (hot, cold, rain, etc.)
7. ClasTran is crowded takes a long time for pick-up from medical provider.
8. Feel guilty asking family and friends.
9. Transportation system is hard to navigate.
10. Affordable price point for reliable transportation (two-way) is $10.00

<table>
<thead>
<tr>
<th>Focus Group</th>
<th>Date</th>
<th># Present</th>
<th>Location</th>
<th>Health Determinants to Address</th>
</tr>
</thead>
</table>
| REV Social Venture Group 2  | 8/28/2017 | 2         | Woodlawn REV Office | 1. Access to Care  
2. Built Environment  
3. Limited Income  
4. Zip Code  
5. Access to other services, food, prescriptions  
6. Mobility challenges  
7. Reliable transportation |

**Key Findings**

1. Transportation System is hard to navigate.
2. Information reg. transportation is limited.
3. Hours of bus transportation may not meet needs.
4. ClasTran is available but takes all day due to pick up from medical provider.
5. Training on using public transportation is needed.
<table>
<thead>
<tr>
<th>Focus Group</th>
<th>Date</th>
<th># Present</th>
<th>Location</th>
<th>Health Determinants to Address</th>
</tr>
</thead>
</table>
| REV Social Venture Group 3 | 8/28/2017  | 2         | Woodlawn REV Office | 1. Access to Care  
2. Built Environment  
3. Limited Income  
4. Zip Code  
5. Access to other services, food, prescriptions  
6. Mobility challenges  
7. Reliable transportation |

**Key Findings**

1. Transportation is a symptom of a deeper problem.
2. Regional solution is needed.
3. Community input is needed in transportation improvement.
4. Transportation system needs better navigation information.
5. Transportation information needs to be user friendly.
6. Stops are hard to get to.
7. Hours of bus transportation may not meet needs.
8. System is not reliable.
9. Chronic medical conditions may be worsened by missed appointments.
10. Race is an issue.
11. Stigmas associated with public transportation.
12. Emergency transportation (ambulance) is expensive.
13. Social media could be utilized for information.
14. Need better access to recreation, good grocers, shopping.
<table>
<thead>
<tr>
<th>Focus Group</th>
<th>Date</th>
<th># Present</th>
<th>Location</th>
<th>Health Determinants to Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>YWCA Residents</td>
<td>8/30/2017</td>
<td>6 = (2+4)</td>
<td>Downtown YWCA</td>
<td>1. Access to Care</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Built Environment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. Limited Income</td>
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<td>4. Zip Code</td>
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<td></td>
<td></td>
<td>5. Access to other services, food, prescriptions</td>
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<td></td>
<td>6. Mobility challenges</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7. Reliable transportation</td>
</tr>
</tbody>
</table>

**Key Findings**

1. Transportation system is hard to navigate.
2. Better information is needed regarding system.
3. Economic disadvantages causes a victimization and stigma.
4. Data base with transportation information.
5. Medical provider does not like for patients to miss.
6. They feel labeled.
7. Once independent, they feel frustrated by dependence on others.
8. Lack of independence deepens poverty.
9. Bus Drivers lack social skills.
10. Mobility challenged riders have little help from drivers.
11. Bus stops are usually in elements (hot, cold, rain, etc.)
12. Bus stops may not be physically safe.
13. Public transportation is stigmatized.