

The experience of transportation to visit a Nursing home resident: a case study

Vivian J. Miller

To cite this article: Vivian J. Miller (2020): The experience of transportation to visit a Nursing home resident: a case study, *Social Work in Health Care*

To link to this article: <https://doi.org/10.1080/00981389.2020.1756556>



Published online: 05 May 2020.



Submit your article to this journal [↗](#)



View related articles [↗](#)



View Crossmark data [↗](#)



The experience of transportation to visit a Nursing home resident: a case study

Vivian J. Miller, Ph.D., MSSA, LMSW 

Department of Human Services, Bowling Green State University, Bowling Green, OH, US

ABSTRACT

Maintaining social connections in the community can be accomplished through transportation access and opportunities. This includes relationships between family and residents in nursing homes. Previous research supports the relationship between transportation, social support, and visitation of residents in nursing homes (NHs), however no empirical research to date explores this relationship of family member transportation as a means to visit their loved one in this setting. Guided by a case study approach, a sample of 11 (N = 11) family members of residents in nursing homes across North Central Texas were selected to develop an in-depth understanding of transportation access and mobility, as it relates to visitation of residents in nursing facilities. Analyses revealed the following seven themes: Car access, Alternative modes, Flexibility, Travel time, Actual cost, Collateral cost, and Health and Mobility. Findings from this study uncover how cost, both actual cost and collateral cost, are greatly linked to car access, transportation access, and opportunities to visit, as well as the impact each of these features, and emergent themes, related to transportation have on maintained or fractured relationships of family and residents in nursing homes. This article concludes with implications for future research and social work practice.

ARTICLE HISTORY

Received 9 September 2019
Revised 6 April 2020
Accepted 8 April 2020

KEYWORDS

Nursing home care; older adult; social Work; social support; transportation

Introduction

Maintaining social engagements, social relationships, and social connections within the community can be accomplished through access to transportation and transportation opportunities (Delbosc & Currie, 2011c; Fields et al., 2019). This is the same for the maintenance of relationship between family and residents in nursing homes (NHs); family visitation to residents in NHs is mainly driven by transportation access (Port, 2004; Port et al., 2001). Previous research supports the relationship between transportation access, social support, and visitation of residents in long-term care (Miller, 2019), however there has been no qualitative research to date that explores this family member transportation as a means to visit their loved one in a nursing home and the influence this transportation has on the relationship of family members to

CONTACT Vivian J. Miller  millevj@bgsu.edu  Department of Human Services, Bowling Green State University, 220 Health and Human Services Bldg., Bowling Green, OH 43403, US

© 2020 Taylor & Francis

resident. This article presents findings from a multiple-case study that expands on family members' experiences of transportation access and opportunities as a means to visit a resident in nursing home.

Background

Nursing home care is intended to address the physical and/or cognitive care needs of aging adults. Recent statistics report that there are over 1.4 million older adults living in nursing homes across America (Centers for Disease Control and Prevention [CDC], 2016). These residents are most often 65 years or older and 41.6% of them identify as oldest-old (age 85+; Centers for Medicare and Medicaid Services [CMS], 2015). Nursing home care is often associated with an acute loss of control (Hansen, 2016). This transition from community to nursing home may contribute to feelings of isolation and a lack of strong social connectivity (Steptoe et al., 2015). Residents have frequent contact with nursing staff, activity directors, and social workers, however, these engagements are often focused on resident care (Lee et al., 2016). Social connection and engagement within the nursing home, while important and necessary for residents overall, is not substitution for the relationship between a resident and their family members.

The continued involvement of family members with residents has been linked to a number of positive resident outcomes. Family members' visitation and engagement helps to maintain a sense of family, social connection, and relationships (Gaugler, 2005). Additionally, family involvement in care ensures provision of specialized health-care preferences of the resident, as families most often serve as resident advocates (Lao et al., 2019; Yamamoto-Mitani et al., 2002). Furthermore, family members visitation to their resident has been found to relieve psychological stress and improve overall quality of life outcomes (Gaugler, 2005; Lao et al., 2019). While the evidence is clear that family visitation to residents in nursing homes is generally positive and has been linked to well-being and quality of life (Koren, 2010), understanding the role of transportation as a vehicle to visit residents may contribute to a holistic understanding of the contextual factors that facilitate and/or impeded the relationship and visitation of family members to residents.

Review of the literature

Extant literature has found that a lack of transportation access greatly impedes family members' visitation to residents in long-term care (Miller, 2019). Dating back to the 1950s, with more recent data emerging in the last 20 years, transportation access and opportunities greatly impact all community members (U.S. Department of Transportation, 2013). A lack of transportation access, also referred to as transportation disadvantage, is an

economic and social concern (U.S. Government Accountability Office, 2004). This is especially salient among community members living in rural areas, whereby transportation opportunities are a concern (Henning-Smith et al., 2017). More broadly, transportation disadvantage can impact overall quality of life, where individuals and groups experiencing ongoing difficulties associated with accessing and maintaining transportation can lack choices, and experience barriers to civic participation, housing, employment, respect, and inclusion (World Health Organization, 2007).

Transportation is one of eight domains included in the World Health Organization's age-friendly city guide (WHO, 2007). As a feature of the built environment, transportation access shapes the ways in which older adults are able to age in place. This includes the aging children, spouses, siblings, and family members of residents in nursing homes. Most notably, availability of transportation, community transport options, affordability, reliability and frequency, travel destinations, specialized services for older adults, and transport information all determine the scope and range of opportunities for older adults to socialize with family and friends across generations, access others, and visit those in long-term nursing home care (Social Interventions Research and Evaluation Network, 2017). Residents of nursing homes are not often viewed as broader-members of the community when in reality, transportation solutions are critical to serve *all* community members to promote community connection, aging well, and healthy aging.

Moreover, transportation is vital for accessing social opportunities and connections (World Health Organization, n.d.). A lack of transportation is associated with poor social and psychological well-being outcomes (Adorno et al., 2018; Currie et al., 2010; Currie & Delbosc, 2010; Delbosc & Currie, 2011a; 2011b; 2011c; Miller, 2019). For already at-risk populations (e.g., persons with disabilities, age-related constraints, geographical constraints, or socio-economic status; Shay et al., 2016; U.S. Government Accountability Office, 2003), the concepts of transportation and mobility contribute to a larger aim to reduce social exclusion, thus compounding the effects of decreased well-being and quality of life (Mack, 2016; WHO, n.d.). Furthermore, transportation is key to linking community members despite any preexisting restrictions to transportation.

Research across the professions of transportation planning, health care, and social work have cited transportation barriers as a cause of missed health-care appointments, a lack of health-care access, and missed medications (Kim et al., 2017; Syed et al., 2014). These missed appointments increase the risk of chronic illness and disease, as well as poor health outcomes (Syed et al., 2014). A lack of transportation access and travel time has also been associated with a lack of receiving mental health services, challenges in getting to work, and participation in recreational and social activities (Texas Council for Developmental Disabilities, 2015). The U.S. Department of Health and Human Services

(2009) noted that for those with preexisting low-socioeconomic status, “these barriers to employment and self-sufficiency were exacerbated by a lack of reliable and affordable transportation” (p. 8).

While much research has examined the role of transportation and mobility on healthcare access, employment, and even visitation to residents in NHs, no qualitative research to date has explored the lived experiences of community members’ transportation as a means to engage socially and visit their loved ones in these settings. The visitation of family members to residents in NHs has been found to be critical to resident overall quality of life, encompassing lower rates of physical decline, increased mental health, and lower rates of mortality (Gaugler, 2005). Thus, any challenges in transportation, or transportation disadvantage, extend beyond the family members’ both ability and desire to visit their loved one within a nursing home and participate in the crucial aspects of care. These challenges in transportation, therefore, also have an effect on the older adult residing in the nursing home. The purpose of this qualitative research is to develop an in-depth understanding of transportation access, opportunities, and mobility, as it relates to visitation of residents. Thus, allowing for an in-depth picture and analysis of transportation on social connection between community members and a particularly isolated older adult population (Creswell & Poth, 2018).

Methods

This study is part of a larger study, a sequential mixed-methodological research project. The first phase of this two-phase study design sought to confirm the following two hypotheses: (1) Transportation of family has an effect on depression symptoms of residents in nursing homes, mediated by visitation; and (2) Transportation of family has an effect on depression symptoms of residents in nursing homes, mediated by social support. Results showed that perceived transportation accessibility was associated with depressive symptoms of residents in nursing homes mediated by social support, however findings were not significant. As such, the findings from the first phase support this second phase, an explanatory design to guide selection of a sub-sample of individuals based on scores on the transportation measure used in the first phase of this study (Creswell & Plano Clark, 2018; Morgan, 2014; Morse, 1991).

Sample

Eligible family members of residents were purposively sampled to participate in this study. To be eligible for participation and meet inclusion criteria, family member participants were over the age of 18 years old, spoke English, and visit their family member living in the nursing home from time to time, as reported by the resident. The University Institutional Review Board

approved this study in early-May 2018 (*IRB#*: 2018–0486). Data were collected between end-of-May 2018 and January 2019. A final sample of 11 participants ($N = 11$) was chosen as multiple-case study designs are encouraged to have six to ten cases in total (Yin, 1994). Moreover, Yin (1994) articulates that study participants, “should be selected explicitly to encompass instances in which the phenomena under study are likely to be found” (Zach, 2006, p. 9). Therefore, family members who had no challenges with visitation to the facility and family members who had great challenges with visitation were selected for this follow-up study.

Data collection

Qualitative data were collected through individual interviews with family members. Prior to interviewing family members, the researcher obtained written-informed consent for this phase of this study. Additionally, the interviewers obtained verbal consent via telephone. Upon participant agreement, the interviewer proceeded to conduct the interview at that time or scheduled a time at the participant’s convenience.

Guided by a case study approach (Creswell & Poth, 2018), a semi-structured interview guide of four questions were developed to ask family members to describe their greatest challenges and opportunities to transportation access and mobility (see [Appendix A](#)). This case study approach allowed for the researcher to explore and uncover trends in a bounded system (Mills et al., 2010), in this case, the experience of family members visiting their loved ones in long-term care nursing homes.

In this study, family members were asked to describe their most positive and negative experiences of transportation access and mobility. Interview probes were used to clarify participant statement, obtain more details, and redirect focus (Kennedy, 2006). Data were collected by the principal investigator of this study. Interviews took between 15 to 30 min in total. Each interview was recorded and transcribed verbatim.

Analysis

Qualitative data were analyzed using data sources from interview transcriptions, transcribed verbatim, and researcher notes. Data were then organized and managed using Atlas.ti v.8 (Friese, 2019). A conventional content analysis approach was used to study the qualitative data (Hsieh & Shannon, 2005; Miles & Huberman, 1994). Paragraphs, phrases, and words were organized according to the interview guide, and then subsequently coded using an “open, prospective approach guided by the study’s research questions” (Towsley et al., 2011, pp. 1–14). The primary investigator in this study conducted an initial analysis. Next, the data were triangulated with an

outside researcher to better understand the emerging themes to avoid biases. This analysis approach is appropriate for this study, as there is no literature to date that explores these research questions. Furthermore, credibility was enhanced through peer debriefing (Creswell & Miller, 2000). Results include direct quotes from participants with their respective anonymous identification to note differentiation between respondents.

Results

Demographic characteristics

Most family member participants in this qualitative study were female (63.6%). Twenty-seven percent were aged 60 to 69 years old. Nearly all participants identify as non-Hispanic White (72.7%), followed by Black or African-American (27.3%). Participant's highest level of education varied, with over 30% (36.4%) of family having a bachelor's degree, followed by some high school (27.3%). A proportion of participants (36.4%) self-rated their health as "Fair." Over half (63.6%) of family members were the child of the resident they visited. Most of the participating family members used a car (72.7%) as their primary mode of transportation to visit the nursing home, compared to bicycle (1.2%), and other (e.g., airplane, van service; 2.3%). [Table 1](#) reports all demographic characteristics of family member participants from this study.

Analysis of the family members' experiences with transportation access to and from visiting their loved one resulted in a total of seven primary themes. These themes include: 1. *Car access*, 2. *Alternative modes*, 3. *Flexibility*, 4. *Travel time*, 5. *Actual cost*, 6. *Collateral cost*, and 7. *Health and Mobility*. Additional findings from the data found a subsequent two- ancillary themes that came out of the initial seven influencing themes, which includes: *Maintained relationships* and *Fractured relationships*. [Figure 1](#) is a visual representation of emergent and ancillary themes from the current study.

Car access

Many ($n = 7$) of the family member participants shared that one of the most significant factors to visiting a loved one in the nursing home was the fact that they were able to and had access to a car as their primary mode of transportation.

One family member, daughter to a resident, shared:

I have the access to do that. It's no problem. I physically am able to do that because I'm fit and I'm really ... Those are good things. I'm healthy. I'm able to do what I need to do. The benefits for me are even greater to be able to go see my mother even though she is in long-term care and that wasn't a choice. Do I necessarily like

Table 1. Demographic characteristics of family member participants (N = 11).

Variables	N(%)
Gender	
Male	4(36.4%)
Female	7(63.6%)
Age	
18–39 years old	3(27.3%)
40–49 years old	1(9.1%)
50–59 years old	2(18.2%)
60–69 years old	3(27.3%)
70 and above	2(18.2%)
Race/Ethnicity	
Non-Hispanic White	8(72.7%)
Black or African-American	3(27.3%)
Highest Level of Education	
Some high school	3(27.3%)
High school/GED	2(18.2%)
Some college credit, no degree	2(18.2%)
Bachelor’s degree and above	4(36.4%)
Self-Rated Health	
Poor	1(1.9%)
Fair	4(36.4%)
Good	2(18.2%)
Very good	1(1.9%)
Excellent	3(27.3%)
Relation to Resident in NH	
Spouse	2(18.2%)
Child	7(63.6%)
Sibling	1(9.1%)
Other (e.g., POA, in-law)	1(9.1%)
Difficulty in Paying for Basic Needs	
Not at all	7(63.6%)
Somewhat	2(18.2%)
Very well	2(18.2%)
Employment Status	
Full-time	4(36.4%)
Retired	2(18.2%)
Unemployed	3(27.3%)
Primary Mode of Transportation to NH	
Car	8(72.7%)
Bicycle	1(9.1%)
Other (e.g., airplane, van service)	2(18.2%)

it? Would I rather my parents be together? Of course, I would. But, you know, life happens and you have to make choices (P2312).

Another participant shared similarly in that they both had access to a car and they were physically able, so therefore they could visit, stating: “I don’t have any problems even with one car because of the way we schedule things together to be able to have access to my mother. I don’t have any disabilities so, therefore, I don’t have any issues regarding getting to my mother” (P2008). Another participant who, at one time relied on a bus as her primary mode of transportation to visit her mother, shared positive regard to now

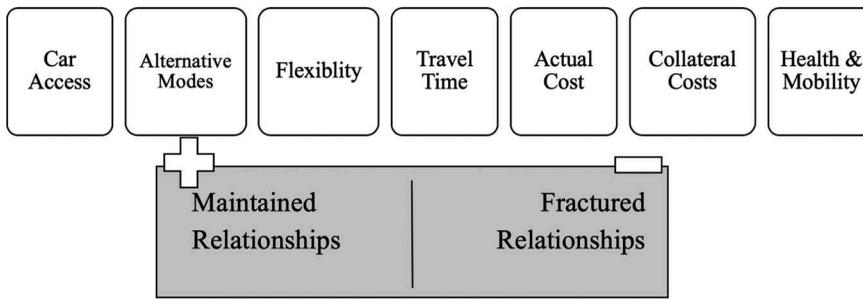


Figure 1. Emergent primary themes and ancillary themes.

having access to a car, sharing: “So having this new car, it just opened the door for possibilities ... ” (P2086).

Alternative modes

A number of family members ($n = 4$) described alternative modes of transportation and this was found to limit visits. One resident’s wife stated that her: “Greatest challenge was just getting a ride” (P2312). Another stated that, “someone else would have trouble getting there without a car. No transportation there. No bus route ... To get. If they have to depend on someone bringing them or catching a ride. If they didn’t have transportation themselves” (P2128). Finally, one family shared an alternative option stating that they would use a train, but that isn’t an option: “passenger trains. I don’t know. They don’t up in this part of the country, but maybe they do central and southwestern trains. I think they still run. That would be the only way I could get there, yeah” (P2133).

For those family who did rely on alternative modes of transportation ($n = 3$), their feedback was overall undesirable. The daughter of a resident shared her experience using the Greyhound stating that, “When I took the Greyhound? Okay, that was a truly terrible experience.” Moreover, “It was always so expensive because I was trying to bring my mom gifts and things that she would need and so the Greyhound would charge you for all of the luggage you would have to bring” (P2086). Another family who relied on a van service to visit her spouse shared their experience, saying: “Very limited access that was very disappointing and disgusting is that I didn’t always have transportation available to go see him. That was a big downer for me” (P2123).

One resident’s daughter who relied on the bus from time to time stated that their travel was disjointed because of transfers, where a resident’s daughter stated, “... we’ve got to take three buses to get there” (P2311). Finally, one participant, son of a resident, relied on a bicycle as their primary mode of transit stating, “Yeah. I have a lot of outstanding tickets for ...

outstanding driving tickets that I have not paid off. So my only mode of transportation right now is a bicycle” (P2519).

Flexibility

Those family members that had car access were able to visit and many found that their flexibility was due to this transportation option ($n = 5$). Some family could visit when they most needed to, as well as when they desired to. Getting to the facility in a moment’s notice allowed family to not only visit around their own schedule depending on free time and flexibility but could also get to the facility in case of any emergency. A family member stated, “I can get to her or if there is ever an emergency and she needs to come to me, I can go to her and get her” (P2312). Similarly, another resident’s daughter stated, “I think that with the car, if there is an emergency, if my mom gets sick or I get that phone call that she’s dying. If I get that phone call, I can get to her in a dependable way. If I need to absolutely drop everything and get to her I can” (P2086).

Transportation access and opportunities were positive for family members to get to the facility in need, as well as to follow through with desired trips that weren’t necessarily cases of emergency. Access to a car was positive to family members, as they were able to have control over their visitation schedule; One family member shared:

Well I own my own vehicle. So if I get on a whim and I just really want to go visit her, I can do it at any point in time. I don’t have to wait on a set schedule. I can leave at any point in time during the day. So that’s nice, and then getting over there to the facility. They don’t have a set, specific hours that you can’t or can come in, usually. You can go in at any time. So, I mean, that helps (P2516).

The daughter of another resident stated, “I have some access to two cars so I always have a car available. I’m retired so I have complete control over when I travel and I can go at a moment’s notice since I have to or plan accordingly for doctors visits or other activities that we need to do” (P2025). One resident’s husband, who lived very close, stated that there was no issues in traveling to the nursing home, which he did on a daily basis, stating: “Well, it wasn’t bad, because, like I said we stay right across the freeway, on the other side of the freeway. So, there was no problem getting there” (P2128).

Travel time

Family members ($n = 5$) reported negative aspects of transportation and travel, regardless of the mode. A family member who relied on a car shared that although she had a car, it could be a challenge if she traveled all the distance to visit her mother to have something happen, stating: “one of the negative things of me having a car is that if I do go down there and I get

stuck or if I get in a wreck or something, I'm stuck there because I have no family there anymore. My mom is the only one who'd be able to help me and she can't help me because she's in a nursing home" (P2086). Another family member shared that it isn't feasible to visit often, and this is mainly because: "Well, for one just distance. It's a three and a half hour drive one way, so that would be one contributing factor" (P2025). Another stated, "Just that ... the distance, and then once you get there, you're just like okay now I'm here and I gotta spend time with my family ... and usually you're tired after four and a half hour trips, so tired and just ready to get moving. Yeah" (P2516). These drives are not only long-distances for some, but also stressful. One participant shared, "May I just say stressful drive, like I said it's three and a half hours on a very busy highway on I35" (P2025). Finally, the daughter of a resident stated, "But I do live six hours away from there. So the problem would be the time travel ..." (P2086).

Actual cost

The actual cost of traveling to the nursing home to visit a loved one was found to be a significant contributor that prohibited transportation and transportation options ($n = 5$). One family member stated, "Of course there's a cost related to gasoline and car maintenance and those types of things as well, so that would be a couple negatives" (P2025). The daughter of a resident, who is a student and has a job, states that she has to think a lot about her financial situation and plan before visiting, sharing: "So, like I said, I am in school, and I don't have a dependable ... I have a job. But it's not enough money for me to make trips like that, so I haven't really been able to go down there and see my mom." She also shared, "I think that money would be a challenge" (P2086).

Another resident's family member, at times, would take another family member to visit their resident, but, on a fixed income, it just wasn't always feasible, stating: "So it's kind of hard to come up with the cash to buy the gas to take him back and forth" (P2312). Ultimately the cost of transportation became too great for one family member, whereby they had to reduce their visits and shortening their stays, sharing:

I have been going about once every four weeks trying to extend that out to every five or six weeks at this point because of the cost of the nursing home went up ten dollars a day, so that equates to about 300 USD more a month out of pocket for us. So I have tried to offset some of that expense by going a little less often or not staying quite as long (P2025).

Collateral costs

On top of the actual cost of transportation for gasoline to travel a far distance to the facility, family ($n = 4$) also shared that the costs of their visits were compounded by indirect costs of having to source lodging during their visit,

where a family member reported: “Yeah, ... and then I also have to find a place to stay” (P2086). One participant stated that their most negative experiences were, “Probably a mix of the time and the cost. I mean gas isn’t super expensive, but there’s more with it than just the gas to get there ... we actually had to find a place to stay and have the money to be able to do that” (P2516).

Another family member shared: “And then I guess a third would be somewhat of a monetary restriction. I have to stay in a hotel room when I’m there so that costs anywhere between 150 USD-\$200 a night. And my visits are shortened because of that restriction too” (P2025). She went on to share that: “But certainly if I lived closer I’d feel that I could visit more often for shorter times but more often and not have as much expense on hotels or gasoline” (P2025). One participant reported that they did what they could to offset these indirect costs of visiting their loved one in the nursing home, as able, however it was sometimes in lieu of a longer visit, for example: “Trying to reduce the cost of the hotel by a night or so when I do go. Coming home late in the afternoon instead of staying over a night and coming home the next morning, that type of thing.”

Health and mobility

Family members ($n = 2$) shared that they have their own pressing health and mobility challenges which is directly related to their experiences with transportation access, in turn linked to their visitation. One family member, brother of a resident, states, “The fact is I’m 78 years old. I’ve had three back operations. I’m going to have a knee replacement Friday ... I can’t really walk ... So, I’m not really in a position to travel, you know, at the moment” (P2133), which was due to physical barriers where he also stated: “Well, at this point in time, I’m not sure I could complete a trip ... You know, physically” (P2133). During self-identified good times, one family member relies on assistive equipment to aid her visitation to the facility. This half-sister stated, “I have a scooter, a walker to get around with. And when I feel good, them things work really good for me in getting in and out of the nursing home” (P2312). While another participant, spouse of a resident shared their mobility impacting visitation, where he stated: “I can’t get around like I used to” (P2132).

These seven primary themes articulate the notable barriers and benefits to transportation to and from the nursing facility to visit residents. Beyond these benefits and barriers, family members share the ancillary results of these visits. In addition, these visits, driven by transportation, were found to produce maintained relationships or fractured relationships. Reported below are findings from these themes.

Maintained relationships

These influences of visitation to and from the nursing home were found to be greater than simply having car access, being faced with the challenge of

travel time, and dealing with actual and collateral costs. These visits extended beyond the tangibility of seeing a loved one to make a lasting, positive impact on the lives of both residents and their family ($n = 5$). One family member shared simply of their visits that, “It’s positive on the days that I can go” (P2312). The son of a resident who relied on a bicycle didn’t let anything get in his way of visiting and maintaining the relationship with his mother, where he stated: “No. Just she’s my mother. So I want to visit her as often as I can” (P2519). Another family member, daughter of a resident, stated that getting to spend the time is the biggest benefit, stating: “I’m able to spend the one-on-one time with her that is so wonderful. That has made this huge difference in my life, in our lives. So as far as I’m concerned that’s the biggest benefit for me regarding being able to have the mobility and the transportation that I can do that” (P2008). Another family shared, “We may not like the facility, but we love our parents, or people that are in there” (P2516). Some family felt it was ultimately their responsibility and duty to uphold these relationships with their family, stating: “She’s my mother. I love her. I respect her” and “I take care of my mom and dad. That is my job ... Though they each have different problems of their own, including their advanced aging, they have to come first on my schedule” (P2008), as these relationships were maintained by family members’ access to transportation.

Fractured relationships

Some family ($n = 5$) shared that while it is hard to visit due to travel time, they would increase visitation if the circumstances were different. The results of the inability to visit led to fractured, strained relationships between family and resident. One resident’s daughter stated, “Just if I lived a lot closer, I would probably visit a whole lot more frequently, like at least once a week. But it’s so far away that’s obviously just can’t happen, so unfortunately. I wish” (P2516). Another family member stated, “Yes, I used to see her ... I mean, anytime I would run in to town, I could go by and see her. Multiple times a week, if I wanted to. And now I see her, only when we’re out long enough in school, for me to go down there and stay” (P2073). Family would like to visit more, but just aren’t able. One resident’s child stated, “Yeah, it’s a challenge for me to get down there. I mean I don’t go as much as I would like to go because I’m not able” (P2312). Another family member who relied on a van service with limited opportunities to visit stated that if they had access, “The outcome would have been real great, that way I could have had more chances to gone and seen, visit with him. Which is what he was needing as well. That would have been the greatest outcome of it is if I could have had more times of transportation of being able to go visit him more often” (P2123).

Discussion

The findings from this study provide interesting points for discussion. The main focus of this study was to examine how transportation influenced family members' visitation and visitation experience to residents in nursing homes. Each participant in this follow-up study were purposively sampled to include those with no challenges in transportation, who were able to visit daily, as well as those who had extenuating transportation experiences.

Family members reported that car access was instrumental in their visitation. For family members with car access, visitation was frequent. Previous research has documented similar findings in that transportation access is related to visitation (Bern-Klug & Forbes-Thompson, 2008; Choi et al., 2008; Port, 2004; Port et al., 2001). Transportation access, irrespective of travel time, and distance to the facility, was most predictive of visitation (Port, 2004). Despite these findings, this study extends beyond the current literature to highlight that car access was vital for the opportunity to visit, whereas conversely (alternative modes of transit) were indicative of presenting issues to visit. These findings are endorsed by literature that has found car ownership to be associated with a sense of autonomy and other perceived benefits (Ellaway et al., 2003).

Alternative modes of transit were used by three of the 11 family member participants in this study ($n = 3$). For these family members without personal car access, a van service, bus system, bicycle, or other (e.g., train, airplane) was the only mode of transportation as an option to visit their loved ones. Port (2004) has noted that nursing homes likely have "overlooked ride systems or other transportation solutions for family caregivers" (p. 775). An early study (Friedemann et al., 1997) explored services offered to nursing home resident-family members found that facilities largely have not focused on interventions related to the transportation of family members. Since this time, the overall concept of transportation as it relates to resident-family members has continued to be under-researched. Especially so, despite transportation being a vital component of community connectedness, transportation assessments within United States communities have continued to fall short (Pyrialakou et al., 2016).

It is interesting to consider that no participants in this study utilized ridesharing or ride-hailing app to visit their loved one in the nursing home; all family members relied on either car access, bus, van service, or a bicycle to reach the facility. One consideration for family members who are unable to access the aforementioned alternative modes of transportation may consider transportation solutions such as Uber, Lyft, or other ride-sharing services that promote autonomy and independence, and allow for increased flexibility in travel (Fields et al., 2019). Although relying on ride-sharing apps may be cost prohibitive and require a mobile device application, credit card,

and training in technology use, nursing home staff (i.e., Social Worker) may be best positioned toward understanding the complex transportation needs of family members.

Family members' visitation was found to be largely influenced by flexibility in their ability to visit. This flexibility may have been due in part to retirement status, job commitments, and perhaps linked to car access, as well as travel time. These results are similar to previous findings (see Miller, 2019 for review) that identified persons of low-socioeconomic status, coupled with the associated economic instability, were more likely to experience several barriers to visitation. Family members with low income are likely to experience greater barriers to transportation, and transportation alternatives, which may impact this visitation to a resident in long-term care. Additionally so, persons who are *transportation disadvantaged* often experience greater pulls from other family members, and increased family challenges that may impact the relationship to the resident in the nursing home, thus decreasing flexibility in scheduling to visit a loved one (University of Minnesota, n.d.). A final feature of transportation herein is travel time. Travel time was found to be a contributing factor to flexibility. For family members who reported 1 h–4 h- time travel to visit a loved one, increased visitation was just not feasible.

Findings from this study extend beyond what we already know to uncover how cost, both actual cost and collateral cost, are greatly linked to car access, transportation access, and opportunities to visit. Family members who were auto-dependent shared their challenges with the cost of gasoline to travel to visit their loved one in long-term care. Furthermore, lengthier travel times were associated with higher costs in gas, and travelers needed to consider any incidentals that may take place when traveling far distances. This cost of transportation was associated with other financial obligations that had to be considered when traveling, such as lodging. Family members that lived out of town had to plan ahead for stays in hotel and strategize on length of visit, as that was the determining factor for the former two challenges associated with their visit. While these findings note the impact of cost on visitation to residents, this may speak to the larger scope of visitation practices within nursing homes. Perhaps facilities prohibit visitation hours during normal business operation (e.g., 8:30 AM to 5:00 PM), and the consideration of increased hours for flexibility of visitation may promote family engagement. This may be especially salient for family that rely on alternative modes of transit (i.e., van service, bus, greyhound), as the constraints in fixed routes and operating times create compounded barriers to visitation.

The final theme to emerge from this study was *Health and Mobility*. It is important to note that nearly half (45.4%) of the participants in this study were age 50 years old and above. These high levels of physical challenges and issues in mobility are not new findings, however these challenges had not yet been connected to transportation access in the context of visiting residents in

nursing homes. These findings make for an interesting discussion regarding age-friendly communities and equity in transportation solutions. Recent studies (Adorno et al., 2018; Fields et al., 2019; Twis et al., 2019) conducted in Arlington, TX, a high-density suburban environment, have found that certain populations of older adults were at a significant disadvantage of transportation due to decreased abilities.

Beyond the primary themes in this study emerged two ancillary outcomes of transportation access of family members on visitation to loved ones in nursing homes, including: *Maintained relationships* and *Fractured relationships*. The transportation of family members to residents in nursing homes allows for visitation, thus leading to socioemotional engagement, the provision of social support, and a reduction in feelings of isolation for residents (Gaugler, 2005). Family members shared that they loved their parent or spouse, and their visitation was priority. Conversely, family members who had greater transportation access challenges, higher travel times, thus reduced opportunities to visit, they stated their desire to visit more frequently. The inability to visit as often when compared to those with no transportation barriers was found to take a toll on relationships and strain the family dynamic.

Limitations

A few limitations are worth noting in this study. First, the sample size in this study is adequate yet quite small. Additional family members were identified from the larger sample of 86 to participate in this follow-up, however a significant portion opted out of volunteering when contacted for this qualitative follow-up. Second, there were a total of 11 nursing homes in the original study, but family member participants in this qualitative study are from only two of the three communities (low-density urban and rural) included in the sampling strategy. This, again, was due to non-answering or refusal to participate in the qualitative follow-up survey despite expressing interest upon participation of the first phase of this larger study.

Implications for research and practice

Findings from this study highlight family members' challenges and opportunities to visit their loved ones in nursing homes. The visitation patterns to residents in nursing homes were disproportionate between participants who had transportation access and the financial means to travel the distance plus arrange lodging, as required. This research has significant implications for future studies. The role of transportation is critical to connect community members for both social opportunities and relationship maintenance, as

highlighted in this study. It is also imperative for job development and engagement in daily activities.

First, future research may consider an exploration into the differences in transportation access of family members across nursing facilities located in rural versus low-density urban communities. Existing studies have shown that rural communities face increased challenges and barriers to affordable, reliable, and safe transportation options. Rural community members are required to travel longer distances to access health services, employment, and social opportunities, which includes visitation to a nursing home (Rural Health Information Hub, n.d.; TRIP, 2019). In addition, a greater percentage of rural populations are aged 65 and above, compared to urban areas, which may present compounded barriers to transportation. Continued efforts to uncover the unique needs of rural community members that promote social engagement and visitation to residents in nursing homes warrants attention.

Second, while transportation access may promote increased visitation, connection, and maintained relationships between family and residents, nursing homes should consider expanding alternative methods of engagement for families unable to visit due to challenges at the intersection of health and mobility, costs, and time. One alternative mode for community may be solutions that allow for virtual-visitation that includes the use of videoconferencing apps (i.e., Skype, Zoom, WebEx, Google Hangouts). Earlier studies have shown that these virtual visits may be especially critical to the overall health and well-being of isolated residents (Mickus & Luz, 2002). To do this, facilities may need to consider external funding opportunities in support of this programming or increase their budget to cover the cost of technology devices that enhance this communication (laptop, tablet, low-cost video phones). Regardless of expense, this should not be a prohibitive factor as this alternative mode of family-resident connection has been regarded as making the difference between life or death (Schoch, 2020).

Lastly, future research ought to extend beyond family members to examine the perceptions of transportation access and opportunities from a variety of stakeholders in nursing homes. Extending beyond resident-family members to include residents' transportation services to social activities, and staff-members' transportation access to their facility may help to better understand the impact transportation has on this particularly isolated population of residents in nursing homes. Additionally, a social network analysis examining the relationship of transportation to network of residents across various nursing home settings may help to detect transportation as a structural component of a resident's larger social system.

This study also has implications for practitioners, including social workers, allied health-care professionals, and transportation planners. Within the nursing home, social workers (SWs) can harness their unique skillset to

explore and understand the challenging circumstances faced by a family wishing to visit their resident. For instance, SWs can leverage their role on the interdisciplinary care team comprised of nursing, therapy (i.e., occupational, speech, and physical), and nutrition staff to advocate for each resident's individual, unique needs and desired goals to spend time with family. Transportation, broadly, can be a topic of discussion included across all resident Care Plans, as this barrier is often overlooked within nursing homes despite its recognition across other health-care settings (Syed et al., 2014).

Additionally, nursing home social workers can investigate potential subsidies for vouchers or assistance in local transportation programs to increase family members' opportunities for visitation. SWs working in community and administrative practice positions may be especially crucial for integrating change within the larger communities they serve. For those at agencies such as Area Agencies on Aging, Housing Shelters, Meals on Wheels, Senior Centers, and the like, SWs can work toward identifying and screening clients to ask if they have a family member who resides in a nursing home. As noted earlier, transportation disadvantage is closely linked to persons of low-socioeconomic status, on top of other social pressures, where the persons utilizing these services may be at a higher need for assistance with transportation and may subsequently benefit more from this engagement and connection (Compton & Shim, 2015). To this end, the social worker can engage, assess, and intervene with the community member to offer solutions that promote visitation and engagement with their resident in long-term care.

Transportation planners ought to continue to explore innovative transportation assessments that include particularly at-risk, marginalized, and isolated populations, such as residents in nursing homes and older adults. As the population within the United States, and worldwide, continues to age at a rapid pace, researchers across disciplines (e.g., transportation planning, civil engineers, social workers) will need to continue to explore new ways to improve the overall quality-of-life for community-members.

Conclusion

The findings from the current study identified that transportation of family members impedes and facilitates visitation to residents in nursing homes. This visitation has an impact on overall resident well-being (Gaugler, 2005), including family relationships, quality of relationships, finances, and perhaps even feelings of disappointment, as family members noted their wishes in visiting, but were not able to given current circumstances. These results contribute to the existing body of literature that noted both travel time and transportation access as barriers to visitation, highlighted in the article titled: [name deleted to maintain the integrity of the review process]. Furthermore,

these results extend what we already know by identifying the impact these visits have on family members and their relationship to residents. Future research to explore the development of transportation assessments to understand the needs of community members, especially those aging, as these are necessary to allow a better understanding of this complex concept of transportation.

Funding

This work was supported by the National Institute for Transportation and Communities (NITC) grant numbers 1187 and 1197.

ORCID

Vivian J. Miller  <http://orcid.org/0000-0003-2030-862X>

References

- Adorno, G., Fields, N., Cronley, C., Parekh, R., & Magruder, K. (2018). Ageing in a low-density urban city: Transportation mobility as a social equity issue. *Ageing and Society*, 38(2), 296–320. <https://doi.org/10.1017/S0144686X16000994>
- Bern-Klug, M., & Forbes-Thompson, S. (2008). Family members' responsibilities to nursing home residents: "she is the only mother I got". *Journal of Gerontological Nursing*, 34(2), 43–52. <https://doi.org/10.3928/00989134-20080201-02>
- Centers for Disease Control and Prevention [CDC]. (2016). *Nursing home care*. CDC/National Center for Health Statistics. <https://www.cdc.gov/nchs/fastats/nursing-home-care.htm>
- Centers for Medicare and Medicaid Services [CMS]. (2015). *Nursing home data compendium 2015 edition*. U.S. Department of Health and Human Services. https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/CertificationandCompliance/Downloads/nursinghomedatacompendium_508-2015.pdf
- Choi, N. G., Ransom, S., & Wyllie, R. J. (2008). Depression in older nursing home residents: The influence of nursing home environmental stressors, coping, and acceptance of group and individual therapy. *Ageing & Mental Health*, 12(5), 536–547. <https://doi.org/10.1080/13607860802343001>
- Compton, M. T., & Shim, R. S. (2015). The social determinants of mental health. *Focus*, 13(4), 419–425. <https://doi.org/10.1176/appi.focus.20150017>
- Creswell, J. W., & Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory into Practice*, 39(3), 124–130. https://doi.org/10.1207/s15430421tip3903_2
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry & research design, choosing among five approaches*. SAGE Publications, Inc.
- Currie, G., & Delbosc, A. (2010). Modelling the social and psychological impacts of transport disadvantage. *Transportation*, 37, 953–966. <https://doi.org/10.1007/s11116-010-9280-2>
- Currie, G., Richardson, T., Smyth, P., Vella-Brodrick, D., Hine, J., Lucas, K., Stanley, J., Morris, J., Kinnear, R., & Stanley, J. (2010). Investigating links between transport

- disadvantage, social exclusion and well-being in Melbourne – Updated results. *Research in Transport Economics*, 29(1), 287–295. <https://doi.org/10.1016/j.retrec.2010.07.036>
- Delbosc, A., & Currie, G. (2011a). Exploring the relative influences of transport disadvantage and social exclusion on well-being. *Transport Policy*, 18(4), 555–562. <https://doi.org/10.1016/j.tranpol.2011.01.011>
- Delbosc, A., & Currie, G. (2011b). Transport problems that matter – Social and psychological links to transport disadvantage. *Journal of Transport Geography*, 19(1), 170–178. <https://doi.org/10.1016/j.jtrangeo.2010.01.003>
- Delbosc, A., & Currie, G. (2011c). The spatial context of transport disadvantage, social exclusion and well-being. *Journal of Transport Geography*, 19(6), 1130–1137. <https://doi.org/10.1016/j.jtrangeo.2011.04.005>
- Ellaway, A., Macintyre, S., Hiscock, R., & Kearns, A. (2003). In the driving seat: Psychosocial benefits from private motor vehicle transport compared to public transport. *Transportation Research. Part F, Traffic Psychology and Behaviour*, 6(3), 217–231. [name deleted to maintain the integrity of the review process]. [https://doi.org/10.1016/S1369-8478\(03\)00027-5](https://doi.org/10.1016/S1369-8478(03)00027-5)
- Fields, N., Cronley, C., Mattingly, S. P., Murphy, E. R., & Miller, V. J. (2019). “You are really at their mercy”: Examining the relationship between transportation disadvantage and social exclusion among older adults through the use of innovative technology. *Transportation Research Record: Journal of The Transportation Research Board*, 2673(7), 12–24. doi:10.1177/0361198119839969
- Friedemann, M. L., Montgomery, R. J., Maiberger, B., & Smith, A. (1997). Family involvement in the nursing home: Family-oriented practices and staff-family relationships. *Research in Nursing & Health*, 20(6), 527–537. [https://doi.org/10.1002/\(SICI\)1098-240X\(199712\)20:6<527::AID-NUR7>3.0.CO;2-O](https://doi.org/10.1002/(SICI)1098-240X(199712)20:6<527::AID-NUR7>3.0.CO;2-O)
- Friese, S. (2019). *ATLAS.ti 8 Mac user manual*. ATLAS.ti Scientific Software Development. https://downloads.atlasti.com/docs/manual/manual_a8_mac_en.pdf?_ga=2.213173076.1946794883.1552541645-1781160218.1552541645
- Gaugler, J. E. (2005). Family involvement in residential long-term care: A synthesis and critical review. *Aging & Mental Health*, 9(2), 105–118. <https://doi.org/10.1080/13607860412331310245>
- U.S. Government Accountability Office. (2004). *Transportation disadvantaged seniors: Efforts to enhance senior mobility could benefit from additional guidance and information*. Retrieved from <http://www.gao.gov/products/GAO-04-971>
- Hansen, A. (2016). *How to ease a loved one’s transition into a nursing home*. GoodTherapy, LLC. <https://www.goodtherapy.org/blog/how-to-ease-loved-ones-transition-into-a-nursing-home-0105164>
- Henning-Smith, C., Evenson, A., Corbett, A., Kozhimannil, K., & Moscovice, I. (2017, November). *Rural transportation: Challenges and opportunities*. Policy Brief. University of Minnesota Rural Health Research Center. http://rhrc.umn.edu/wp-content/files_mf/1518734252UMRHRCTransportationChallenges.pdf
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288. <https://doi.org/10.1177/1049732305276687>
- Kennedy, M. (2006). *Interview probes*. Michigan State University. <https://msu.edu/user/mkenedy/digitaladvisor/Research/interviewprobes.htm>
- Kim, S. H., Myers, C. G., & Allen, L. (2017). *Health care providers can use design thinking to improve patient experiences*. Harvard Business Review. <https://hbr.org/2017/08/health-care-providers-can-use-design-thinking-to-improve-patient-experiences>
- Koren, M. J. (2010). Person-centered care for nursing home residents: The culture-change movement. *Health Affairs*, 29(2), 312–317. <https://doi.org/10.1377/hlthaff.2009.0966>

- Lao, S. S. W., Low, L. P. L., & Wong, K. K. Y. (2019). Older residents' perceptions of family involvement in residential care. *International Journal of Qualitative Studies on Health and Well-being*, 14(1), 1611298. <https://doi.org/10.1080/17482631.2019.1611298>
- Lee, A. A., Lee, S. N., & Armour, M. (2016). Drivers of change: Learning from the lived experiences of nursing home social workers. *Social Work in Health Care*, 55(3), 247–264. <https://doi.org/10.1080/00981389.2015.1111967>
- Mack, J. (2016). *Social exclusion*. Poverty and Social Exclusion. Poverty and Social Exclusion (PSE), PSE: UK. <https://www.poverty.ac.uk/definitions-poverty/social-exclusion>
- Mickus, M. A., & Luz, C. C. (2002). Televisits: Sustaining long distance relationships among institutionalized elders through technology. *Aging Mental Health*, 6(4), 387–396. <https://doi.org/10.1080/1360786021000007009>
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage.
- Miller, V. J. (2019). Investigating barriers to family visitation of nursing home residents: A systematic review. *Journal of Gerontological Social Work*, 62(3), 261–278. doi:10.1080/01634372.2018.1544957
- Mills, A. J., Durepos, G., & Wiebe, E. (2010). *Encyclopedia of case study research* (Vols. 1-0). SAGE Publications, Inc. <https://doi.org/10.4135/9781412957397>
- Morgan, D. L. (2014). *Integrating qualitative and quantitative methods: A pragmatic approach*. SAGE.
- Morse, J. M. (1991). Approaches to qualitative-quantitative methodological triangulation. *Nursing Research*, 40(2), 120–123. <https://doi.org/10.1097/00006199-199103000-00014>
- Port, C. L. (2004). Identifying changeable barriers to family involvement in the nursing home for cognitively impaired residents. *The Gerontologist*, 44(6), 770–778. <https://doi.org/10.1093/geront/44.6.770>
- Port, C. L., Gruber-Baldini, A. L., Burton, L., Baumgarten, M., Hebel, J. R., Zimmerman, S. I., & Magaziner, J. (2001). Resident contact with family and friends following nursing home admission. *The Gerontologist*, 41(5), 589–596. <https://doi.org/10.1093/geront/41.5.589>
- Pyrialakou, V. D., Gkritza, K., & Fricker, J. D. (2016). Accessibility, mobility, and realized travel behavior: Assessing transport disadvantage from a policy perspective. *Journal of Transport Geography*, 51, 252–269. <https://doi.org/10.1016/j.jtrangeo.2016.02.001>
- Rural Health Information Hub. (n.d.). *Barriers to transportation in rural areas*. <https://www.ruralhealthinfo.org/toolkits/transportation/1/barriers>
- Schoch, D. (2020). *Nursing homes scramble to enable televisits amid coronavirus*. AARP. <https://www.aarp.org/caregiving/health/info-2020/nursing-home-televisits-during-coronavirus.html>
- Shay, E., Combs, T. S., Findley, D., Kolosna, C., Madeley, M., & Salvesen, D. (2016). Identifying transportation disadvantage: Mixed-methods analysis of combining GIS mapping with qualitative data. *Transport Policy*, 48(C), 129–138. <https://doi.org/10.1016/j.tranpol.2016.03.002>
- Social Interventions Research and Evaluation Network. (2017). *Social determinants of health series: Transportation and the role of hospitals*. SIREN, University of California San Francisco. <https://sirennetwork.ucsf.edu/tools-resources/mmi/social-determinants-health-series-transportation-and-role-hospitals>
- Steptoe, A., Deaton, A., & Stone, A. A. (2015). Psychological wellbeing, health, and ageing. *Lancet*, 385(9968), 610–648. [https://doi.org/10.1016/S0140-6736\(13\)61489-0](https://doi.org/10.1016/S0140-6736(13)61489-0)
- Syed, S. T., Gerber, B. S., & Sharp, L. K. (2014). Traveling towards disease: Transportation barriers to health care access. *Journal of Community Health*, 38(5), 976–993. <https://doi.org/10.1007/s10900-013-9681-1>

- Texas Council for Developmental Disabilities. (2015). *Barriers to transportation in Texas*. The Texas Council for Developmental Disabilities (TCDD). <http://www.tcdd.texas.gov/transportation-barriers-texas/>
- Towsley, G. L., Beck, S. L., Dudley, W. N., & Pepper, G. A. (2011). Staffing levels in rural nursing homes. *Research in Gerontological Nursing*, 4(3), 207–220. <https://doi.org/10.3928/19404921-20100831-01>
- TRIP. (2019). *Rural connections: Challenges and opportunities in America's heartland*. TRIP, A national transportation research nonprofit. https://tripnet.org/wp-content/uploads/2019/08/Rural_Roads_TRIP_Report_May_2019.pdf
- Twis, M., Miller, V. J., Cronley, C., & Fields, N. (2019). Collecting qualitative data through text messaging among individuals experiencing transportation disadvantage: A multiple case study report. *Journal of Technology in Human Services*. doi:10.1080/15228835.2019.1599766
- U.S. Department of Health and Human Services. (2009). *Overcoming transportation barriers: A path to self-sufficiency*. Final Report. The Office of Family Assistance (OFA). https://peerta.acf.hhs.gov/sites/default/files/public/uploaded_files/New%20Jersey%20Transportation%20Final_0.pdf
- U.S. Department of Transportation. (2013). *How does transportation affect public health?* U.S. Department of Transportation Federal Highway Administration. <https://www.fhwa.dot.gov/publications/publicroads/13mayjun/05.cfm>
- U.S. Government Accountability Office. (2003). *Transportation-disadvantaged populations: Many federal programs fund transportation services, but obstacles to coordination persist*. U. S. Government Accountability Office. <https://www.gao.gov/products/GAO-03-698T>
- University of Minnesota. (n.d.). *2.4 The consequences of poverty*. University of Minnesota. <http://open.lib.umn.edu/socialproblems/chapter/2-4-the-consequences-of-poverty/>
- World Health Organization. (2007). *Ageing and life course: Towards an age- friendly world*. World Health Organization. <http://www.who.int/ageing/age-friendly-world/en/>
- World Health Organization. (n.d.). *Transport and health*. World Health Organization. <https://www.who.int/sustainable-development/transport/en/>
- Yamamoto-Mitani, N., Aneshensel, C. S., & Levy-Storms, L. (2002). Patterns of family visiting with institutionalized elders: The case of dementia. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, 57(4), S234–46. <https://doi.org/10.1093/geronb/57.4.S234>
- Yin, R. K. (1994). *Case study research: Design and methods*. Sage.
- Zach, L. (2006). Using a multiple-case studies design to investigate the information-seeking behavior of arts administrators. *Library Trends*, 55(1), 4–21. <https://doi.org/10.1353/lib.2006.0055>

Appendix A.

Qualitative Interview Guide

- (1) What are some of your greatest challenges to transportation access and mobility?
- (2) What are some of your greatest opportunities to transportation access and mobility?
- (3) What are some of the most positive experiences of transportation access and mobility?
- (4) What are of the most negative experiences of transportation access and mobility?

Probing/Follow-up Questions

- (1) Can you please tell me a bit more about that ... ?
- (2) Could you say more about that ... ?
- (3) What do you mean by ... ?
- (4) What did you do then ... ?/What would you do then ... ?
- (5) Why do you think that is the case ... ?
- (6) What do you think would happen ... ?
- (7) What sort of impact do you think ... ?
- (8) How did you decide ... ?
- (9) What is the connection between ... and ... ?
- (10) What if the opposite were true?