Limited Technology Access Among Residents of Affordable Senior Housing During the COVID-19 Pandemic

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Abstract

While US adults living in affordable senior housing represent a vulnerable population during the COVID-19 pandemic, affordable housing may provide a foundation for interventions designed to improve technology access to support health. To better understand technology access among residents of affordable senior housing, we surveyed members of a national association of resident service coordinators to assess their experiences working with residents during the pandemic (n=1440). While nearly all service coordinators report that most or all residents have reliable phone access, under a quarter report that most or all have reliable internet access; they also report limited access to technology for video calls. Lack of internet access and technology literacy are perceived as barriers to medical visits and food procurement for low-income older adult residents of affordable housing. Policies to expand internet access as well as training and support to enable use of online services are required to overcome these barriers.

Introduction

Technology has proven an important tool allowing people in the United States to stay connected and meet daily needs during the pandemic, including accessing health care and food (Auxier, 2020). However, there are significant disparities in technology access. Nearly a fifth of households below the federal poverty line have no access to the internet, compared

with only 3% of those with incomes at or above 400 percent of the federal poverty line (Swenson & Ghertner, 2020). Disparities in technology access and use among older adults are even more striking, with one-third of all adults over age 65 and over half of adults over age 65 with household incomes under $30,000 reporting they never use the internet (Anderson & Perrin, 2017). Additionally, even those older adults who do access the internet may have a limited skillset for using the technology (Hargittai et al., 2019). These divides have implications for the health and well-being of older adults, as they may not be able to readily access health information or telemedicine services (Lam et al., 2020; Roberts & Mehrotra, 2020).

Access to technology among residents of affordable senior housing and in the context of COVID-19 has not been well-characterized. Over 1.8 million older adults (age 62+) receive federal housing assistance which, through Section 202 properties, public housing, and other programs, typically limits out of pocket spending on rent and utilities to a third of household income (Congressional Research Service, 2019; Collinson et al., 2019). Other types of affordable senior housing include a range of properties and funding mechanisms designed to allow for below-market rents. Seniors who live in affordable senior housing represent a particularly vulnerable population due to their age, lack of financial resources, disproportionate share being non-white, and clustering in multi-unit buildings (HUD Office of Policy Development and Research, 2020b). At the same time, affordable senior housing may provide a foundation for interventions designed to improve access to technology to support health and nutrition. Fundamental to this foundation is that many properties have on-site resident service coordinators to help individuals and families navigate the complex realities of accessing support and services. Service coordinators are charged with assessing resident needs, advocating on behalf of residents with landlords and government agencies, and connecting residents with food resources and medical care. To better understand technology access among residents of affordable senior housing, we surveyed on-site resident service coordinators who interface directly with residents to address their social needs.

Methods

We conducted an electronic survey of service coordinators who are members of the American Association of Service Coordinators (AASC), a national non-profit professional member association with approximately 3500 members. The survey was distributed to 3,368 members via the organization's list serve, which is typically used to disseminate information to members. The survey was designed to assess service coordinators' experiences working with residents during the COVID-19 pandemic, including efforts to mitigate exposure, to increase awareness, and to facilitate residents' health care and food access. All respondents were asked questions about property characteristics, resident demographics, communication modalities, resident technology access, and COVID-19 pandemic-related changes in policies, practices, and resident experiences (Appendix 1). To reduce response burden, service coordinators were then randomized to health care or food access modules. The health care access module asked about resident experiences with accessing medical care and associated services during the COVID-19, use of telemedicine, and challenges associated with telemedicine. The food access module asked about resident food sources,

challenges accessing food, and assistance provided by the property to help meet food needs. For this analysis, we excluded respondents working at non-senior properties. Responses were collected from May 29 to June 10, 2020; informed consent was obtained during the electronic survey process. Quantitative data analysis was conducted with Stata. This study was reviewed by the Johns Hopkins Bloomberg School of Public Health Institutional Review Board and was determined to be exempt.

Results

Overall, 1440 service coordinators from 48 states responded to the survey (response rate 42.8%). Of these, 88.1% (N=1086) work at properties serving primarily older adults and are the focus of this report (Table 1). Approximately 30% of these service coordinators report that more than 25% of their residents are Black, and nearly 17% report that more than 25% of their residents are Latinx. Twenty-four percent of coordinators report that more than 25% of their residents have limited English proficiency. Demographics were similar across the two modules.

While 97.5% of service coordinators report that most or all of their residents have reliable phone access, only 23.0% report that most or all have reliable internet access. Over a third (35.5%) report that few or none of their residents have technology for video calls such as smart phones, tablets, or computers, whereas only 9.6% report that most or all have such technology (Figure 1).

The majority (81.2%) of service coordinators know of residents connecting with medical providers by phone, while 52.4% know of residents connecting via video. Of those aware of residents connecting via these modalities, far more report that residents have difficulty with video visits than phone visits (43.8% vs 25.5%). Poor technology literacy is the most commonly cited reason for these difficulties, though physical impairments are also a factor (Figure 1).

About half (49.3%) of service coordinators report that at least some residents were using grocery delivery prior to the COVID-19 pandemic, whereas 79.8% report the use of grocery delivery by at least some residents since this pandemic began. In their open-ended responses, several service coordinators note that the lack of internet access and technological literacy prevent residents from using online delivery services.

Discussion

The survey results highlight that service coordinators perceive lack of internet access and technology literacy as barriers to both medical visits and food procurement for low-income older adult residents of affordable housing, who face higher risks of morbidity and mortality associated with coronavirus.

The results suggest the need for expansion of internet access, technological device availability, and technology training for older adult residents of affordable housing. Steps should be taken to increase internet access, which may include expanding the ConnectHomeUSA program that streamlines the internet sign-up process for residents of

affordable housing and including internet as part of the utilities calculation for federal housing assistance (ConnectHomeUSA, n.d.; HUD Office of Policy Development and Research, n.d.). Building-wide internet and internet hotspots are promising approaches to help alleviate the lack of connectivity.

The dissemination of free or low-cost internet access is likely necessary but not sufficient to improve technology access; provision of devices with associated training and support are required to overcome technology literacy barriers and facilitate interaction with health care providers and food delivery. A number of small-scale studies including the Tech Allies community partnership in San Francisco, a randomized trial of the Individualized Community and Home-Based Access to Technology Training program in New Hampshire, and the multi-site PRISM Trial have demonstrated benefits from providing technology training and devices in older populations and could serve as models for translation to the affordable housing setting (Arthanat, 2019; Fields et al., 2020; Mitzner et al., 2019). The Lighthouse for Older Adults pilot initiative in California, for example, incorporates the provision of internet access, devices, and training and specifically targets older adults in affordable housing communities (Stann, 2020). Building on these local successes, expanded implementation of similar programs is imperative in the context of the COVID-19 pandemic, which has been particularly isolating for older adults. Future research should further evaluate the efficacy of technology training interventions for older adults, measure nutrition- and health-related outcomes resulting from expanded technology access, and explore more nuanced disparities in access for residents of affordable housing, for example between rural versus urban settings.

Additionally, given that expanding technology access may take time, there is a need for rapid implementation of policies and procedures to facilitate telephone access. An analysis of California's Federally Qualified Health Centers (FQHCs) illustrates the importance of telephone access for lower-income populations, with findings that telephone visits increased significantly during the COVID-19 pandemic, peaking at 65.4% of primary care visits and 71.6% of behavioral health visits conducted via telephone in April 2020 (Uscher-Pines et al., 2021). Policies may include reimbursing telephone medical visits at the same rate as video visits for this population and creating systems that allow groceries to be ordered over the phone.

Beyond addressing health and nutritional needs, technology also has the potential to alleviate social isolation. Increased technology use for social purposes has been shown to decrease loneliness while increasing social engagement among older adults (Szabo et al., 2018). For older populations facing difficulties with technology, various programs such as internet training and use have been shown to significantly improve older adults' well-being by promoting interpersonal communication, cognitive function, and independence, ultimately preventing age-related deterioration (Shapira et al., 2006). Once proficient, older adults routinely use technology to maintain and strengthen existing relationships, contributing to a sense of companionship (Quan-Haase et al., 2017). Social isolation, a challenge for many older adults, may be heightened at affordable housing properties given the vulnerabilities of the population served. Expanding access to technology may mitigate this by providing a connection to family and friends, neighbors, and community groups.

This study has several limitations. First, non-response may bias our findings, given a 42.8% response rate. Second, the study results are generalizable only to affordable senior housing where service coordinators are present. Third, the findings represent a point in time during a rapidly evolving pandemic, and the circumstances have likely continued to change since this survey was carried out. Fourth, we did not collect precise locations of the housing units that would allow for better characterization of the location and context (for example, rural versus urban). Finally, we surveyed the resident service coordinators rather than residents themselves, however given the service coordinators' integral role in the affordable housing communities they serve, their perspective is valuable in understanding how resident needs can be met.

Existing disparities in technology access and use among low-income older adults have led to difficulties accessing food and health care during the COVID-19 pandemic. Addressing these disparities is key to improving nutrition, health, and social connection for older residents of affordable housing communities.

Funding Statement

Appendix 1: Sample Questions from a Survey of Resident Service Coordinators in Affordable Housing Communities During the Coronavirus-19 Pandemic

Please note that the following is a sampling of questions asked in the survey; it is not the complete survey.

From Initial Questions

1. Which of the following best describes the property you work at? If you work at more than one type of property, please describe the property you work at the most.

   a. Primarily older adults (age 62+)

   b. Primarily non-elderly adults with disabilities

   c. Primarily families with children

   d. Other

2. What state is the property located in?

3. About how many residents are at the property that you work in?

4. About what percent of residents are black or African American?

(None, <25%, 25 to <50%, 50% to <75%, 75%+)

5. About what percent of residents are Asian?

(None, <25%, 25 to <50%, 50% to <75%, 75%+)

6. About what percent of residents are white?

(None, <25%, 25 to <50%, 50% to <75%, 75%+)

7. About what percent of residents are Latino or Hispanic?

(None, <25%, 25 to <50%, 50% to <75%, 75%+)

8. About what percent of residents have limited English Proficiency?

(None, <25%, 25 to <50%, 50% to <75%, 75%+)

9. About what percent of households at the property would you estimate have:

(Few/None, Some, Most, Nearly All/All)

  a. Reliable phone service

  b. Reliable internet service

  c. Technology for video calls such as smart phones, tablets, or computers

10. How strongly do you agree or disagree with the following statements about people's experience during COVID-19?

(Strongly Agree/Agree/Neither Agree nor Disagree, Disagree, Strongly Disagree, Don't Know)

  a. Many residents report feeling isolated

  b. Many residents report feeling lonely

  c. Many residents report feeling worried or anxious

  d. Many residents report feeling sad or depressed

  e. Many residents report feeling of grief related to loss of normal functions and social connections

From Health Module

1. Are you aware of residents connecting with their medical providers through video visits?

(Yes/No/Don't know)

2. If yes for 1, have you heard about residents having difficulties connecting with their medical providers through video visits?

(Yes/No/Don't know)

3. Are you aware of residents connecting with their medical providers through telephone visits?

(Yes/No/Don't know)

4. If yes for 3, have you heard about residents having difficulties connecting with their medical providers through telephone visits?

(Yes/No/Don't know)

5. About how many residents would you estimate face the following challenges with video visits?

(Few/None, Some, Most, Nearly All or All)

   a. Difficulties hearing

   b. Visual impairments

   c. Cognitive or behavioral impairments

   d. Physical disabilities

   e. Poor computer literacy

   f. Language barriers

   g. Concerns about privacy/confidentiality

   h. Concerns about insurance coverage

From Food Module

1. About how many of your residents get food from the following sources? (Used in the 12 months before COVID-19 / Used in the past month)

(Few/None, Some, Most, Nearly All or All)

   a. Grocery delivery

   b. Meal delivery (e.g., Meals on Wheels)

   c. Food Stamps/SNAP

   d. WIC (Women, Infants, and Children program)

   e. Off-site food pantry

   f. On-site food pantry

   g. School food program

   h. Summer meal program

   i. Off-site grab-and-go meal distribution program (e.g., school meal or senior meal distribution site or truck)

   j. On-site grab-and-go meal distribution program

   k. Senior or other community meal program (e.g., soup kitchen)

    l.   Farmers' market, local farm or community supported agriculture (CSA)

    m.   Growing or raising food, foraging, or hunting

    n.   Accepting food from friends or family

    o.   Other (please specify)

2.   Please describe anything else that you would like to share about concerns you may have about food access and how the property is working to help address the issue.

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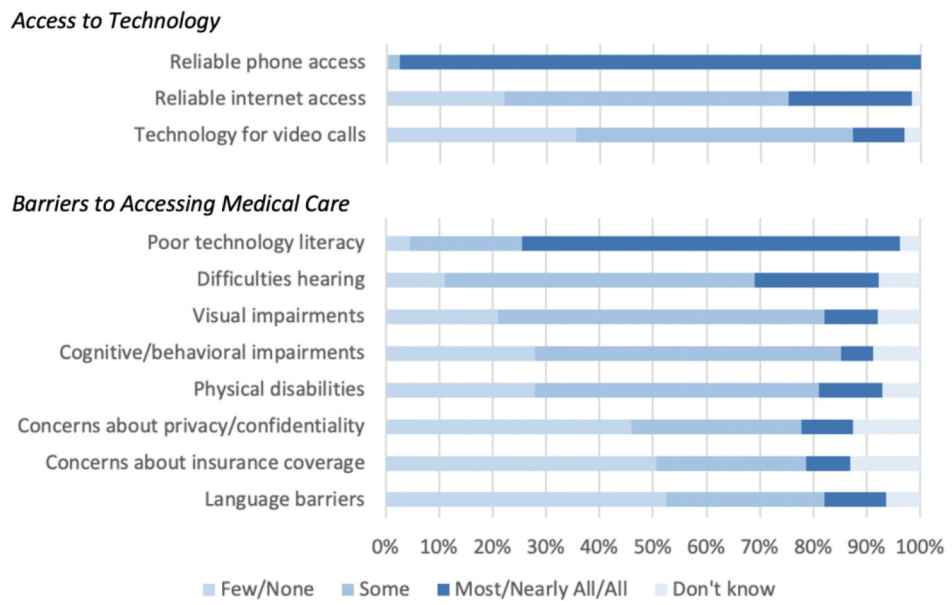
Figure 1:
Resident Service Coordinators' report of technology access and perceived barriers to accessing medical care among their residents living in affordable senior housing (technology access N=1086, medical care access N=539 randomized to health care module).

Table 1:

Demographie Characteristics of Properties and of Residents Reported by Resident Service Coordinators Working at Properties Serving Primarily Older Adults (n=1086)

Demographic		% of Respondents (n)
Survey Module [1]	Health Care	49.6 (539)
	Food	48.0 (521)
Geographic Region	Northeast	17.26 (171)
	Midwest	31.99 (317)
	South	25.93 (257)
	West	24.82 (246)
Federal Assistance	Yes	96.9 (1021)
Black or African American Race	None	14.10 (139)
	Less than 25%	53.75 (530)
	25% to <50%	11.46 (113)
	50% to <75%	6.29 (62)
	75% or more	12.17 (120)
	Don't know	2.23 (22)
Asian Race	None	42.96 (409)
	Less than 25%	41.39 (394)
	25% to <50%	5.15 (49)
	50% to <75%	3.36 (32)
	75% or more	4.41 (42)
	Don't know	2.73 (26)
White Race	None	4.61 (45)
	Less than 25%	19.77 (193)
	25% to <50%	15.47 (151)
	50% to <75%	17.01 (166)
	75% or more	41.39 (404)
	Don't know	1.74 (17)
Latino or Hispanic Ethnicity	None	25.59 (248)
	Less than 25%	55.11 (534)
	25% to <50%	10.22 (99)
	50% to <75%	4.44 (43)
	75% or more	2.17 (21)
	Don't know	2.48 (24)
Limited English Proficiency	None	27.04 (262)
	Less than 25%	46.96 (455)
	25% to <50%	8.98 (87)

Demographic		% of Respondents (n)
	50% to <75%	6.60 (64)
	75% or more	8.46 (82)
	Don't know	1.96 (19)
With Disability	None	2.17 (21)
	Less than 25%	39.01 (378)
	25% to <50%	27.55 (267)
	50% to <75%	17.75 (172)
	75% or more	11.35 (110)
	Don't know	2.17 (21)

[1] A small number of respondents completed initial survey questions but did not continue to the point of randomization. Demographics were similar across the two survey modules.