Experiences of Rhode Island Assisted Living Facilities in Connecting Residents with Families through Technology During the COVID-19 Pandemic

BENJAMIN GALLO MARIN, AB; PATRICK WASSERMAN, AB; JOHN COTOIA, MSc; MANRAJ SINGH, AB; VIRA TARNAVSKA, AB; LINDA GERSHON, MS; IAN LESTER, BA; RORY MERRITT, MD, MEHP

ABSTRACT

BACKGROUND AND STUDY OBJECTIVE: The COVID-19 pandemic has forced assisted living facilities (ALF) to implement strict social isolation for residents. Social isolation in the geriatric population is known to negatively impact health. Here, we describe how ALFs in Rhode Island utilized device donations received from Connect for COVID-19, a nationwide nonprofit organization which has mobilized medical students to gather devices for donations to care centers.

METHODS: Rhode Island ALFs were contacted to determine if they were interested in receiving smart device donations. After donations were made, an impact survey was electronically administered.

PRIMARY RESULTS: A total of 11 facilities completed the survey with a response rate of 24% (11/46). The facilities were located throughout all five counties in Rhode Island, with the majority located in Providence County. All but one of the facilities that responded to the survey (n=10, 90.9%) have used the devices to allow residents to video-call their family members. Seven responses (63.6%) indicated that devices were used for more than one purpose.

PRIMARY CONCLUSIONS: Smart devices were well received by Rhode Island ALFs and used for purposes beyond video conference calls. ALFs should consider advertising the need for devices to encourage community donations. Future studies should investigate the direct impact that digital connectivity has had on Rhode Island ALF residents.

KEYWORDS: Assisted Living Facility, COVID-19, digital connectivity, smart devices

INTRODUCTION

The COVID-19 pandemic engendered public health officials to urge social isolation and quarantine as methods to prevent further disease spread given lack of alternative less-restrictive means to control viral spread.[1] While social distancing has been vital to mitigate the current pandemic, it is important to recognize the emotional and psychological implications of isolation.[2–4]

Assisted living facilities (ALFs) and nursing homes have adopted strict isolation protocols since older age is a major determinant of COVID-19 severity and mortality.[5–7] Therefore, residents of these communities are particularly vulnerable to the psychological burdens associated with social isolation.[8,9] Loneliness in the geriatric population has been associated with cognitive decline, depression, anxiety, fatigue, and sleep disturbances.[10–14] In addition, older adults suffering from social isolation are more likely to be re-hospitalized following heart failure,[15] and show overall higher rates of mortality.[16–18]

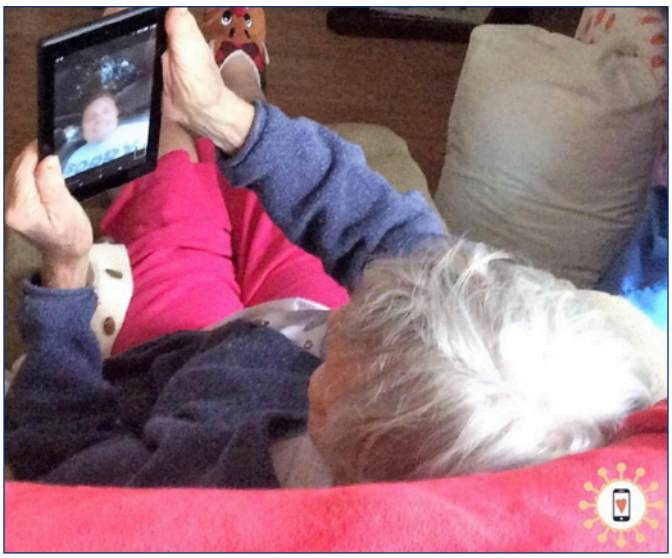
Mobile technology such as tablet and smartphones allow face-to-face virtual communication and may help ALF residents experience social engagement that may contribute to better health outcomes.[19,20] Investigating how care centers for the elderly have made use of digital connectivity during the pandemic may offer important insights to leadership of ALFs and similar facilities. Here, we discuss the experiences of Rhode Island ALFs that received donated smart devices as part of the national volunteer organization and non-profit Connect for COVID-19.

METHODS

Rhode Island community members provided donations to purchase smart tablets. Some devices were directly donated to Connect for COVID-19 for subsequent distribution. Most devices that were obtained were Amazon Fire Tablets and a few were Apple iPads. A team of volunteers prepared the devices with pre-installed software and Zoom accounts in order to minimize onboarding burden to IT departments in ALFs. Following device collection and preparation via donations, Rhode Island ALFs were contacted to gauge their interest in receiving smart devices through direct email, email listservs, telephone communication, and newsletter announcements. ALFs that expressed interest in receiving devices were asked to fill out an online Google form with a formal request.

Device allocation to the facilities was done in multiple rounds, based primarily on the number of beds at each facility. Other factors taken into consideration were the number of devices requested, whether or not the institution had other similar devices in use currently, and WiFi capabilities at the institution, which was required. While the number of devices per bed differed in each allocation due to the number of available devices on hand for donation, there was an attempt to balance consistency with rapid allocation and distribution.

Devices were primarily distributed directly to the facilities by medical student volunteers. For one allocation, there were two afternoon slots during which facilities could pick up their allocated devices from a centralized location in order to minimize volunteer driving. The institutions were provided with the device ID login and password information by email in addition to online instructions for use. Two weeks after the bulk of the devices had been distributed to facilities, an email was sent to the participating institutions with a request for their feedback in an online "Impact Survey" Google form.



Anne at Brookdale Senior Living in Rhode Island talking to her daughter.

RESULTS

The total number of devices donated to Rhode Island ALFs was 254 to 46 facilities. Eleven facilities completed the survey with a response rate of 24% (11/46). Supplemented by information available on each institutions' webpage, all provided at least one or more services to their patients. The median number of devices donated was 5.45 (range = 2–20) and the most common number of devices donated to a facility was 2 (n=5, 31.2%).

Supplemented by information available on each institutions' webpage, all provided at least one or more services to their patients. Ten (90.9%) provided two or more services and the average number of services provided by facilities was 4.36 (range = 1-9).

The facilities were located throughout all five counties in Rhode Island, with the majority located in Providence County.

All but one of the facilities that responded to the survey (n=10, 90.9%) have used the devices to allow residents to video-call their family members. Of note, 7 responses (63.6%) indicated that devices were used for more than one purpose. Reported uses included patients video-calling their families [10, 90.9%], health workers providing status updates to patients' families [4, 36.4%], telehealth purposes [4, 36.4%], social services [3, 27.3%], administrative purposes [1, 9.1%], and other [2, 18.2%]/recreational purposes [3, 27.3%]. Per information from the facility contacts, a total of 374 residents were served with these devices and across facilities, on average, each device was used by 14.8 patients (range= 0-40).

DISCUSSION

Rhode Island ALFs responded positively to the receipt of donated devices. We hypothesized that isolation of residents during the COVID-19 pandemic could be mitigated through digital connectivity. Virtually all of the facilities that responded to our survey confirmed that residents used the devices to connect via video conferencing calls with others. In addition, devices were used for educational and entertainment purposes. Our results suggest that technology is a key tool in the context of social isolation during the current pandemic and in other situations.

ALFs may benefit from institution-specific plans to ensure widespread use of smart devices. For example, a designated coordinator such as an activity director could communicate with Information Technology (IT) specialists to create strategies to show residents how to use the devices. Implementing short training sessions for these coordinators could ensure that they become comfortable with the task of helping residents successfully use devices. In addition, besides making use of devices on a one-on-one basis, ALF administrators could consider their use in broader activity-based and social communication sessions with residents.

With the continuity of the current pandemic, it is imperative that ALFs and similar institutions receive assistance

from the community to protect the mental and emotional wellbeing of their residents. Our findings support the role for technology-based donations to these institutions as one mechanism to ensure that these residents remain connected with their loved ones. ALFs should consider advertising the need for smart devices to inform community members about this need.

LIMITATIONS AND FUTURE STUDIES

Our investigation is not without limitations. Our low response rate probably reflects the administrative burdens that many ALFs are likely facing in the context of the pandemic. Another limitation to our study is that we received information directly from administrators rather than ALF residents. Therefore, we cannot directly conclude from our survey responses whether ALF residents experienced a greater sense of social connectivity because of these devices. Future research should describe the digital connectivity experiences of ALF residents who have made use of donated devices and investigate whether device utilization is associated with self-reported wellness, cognitive performance, and other indicators of health status.

References

1. Schunkert H, Erbel R. [Evidence-based primary prevention: Where do we stand in 2020?]. Herz 2020;45(1):1–2.
2. Lima CKT, Carvalho PM de M, Lima I de AAS, et al. The emotional impact of Coronavirus 2019-nCoV (new Coronavirus disease). Psychiatry Res 2020;287:112915.
3. Brooks SK, Webster RK, Smith LE, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. Lancet 2020;395(10227):912–20.
4. Venkatesh A, Edirappuli S. Social distancing in covid-19: what are the mental health implications? BMJ. 2020;369:m1379.
5. American Geriatrics Society. American Geriatrics Society (AGS) Policy Brief: COVID-19 and Assisted Living Facilities. J Am Geriatr Soc 2020;68(6):1131–5.
6. Jawaid A. Protecting older adults during social distancing. Science 2020;368(6487):145.
7. Gallo Marin B, Aghagoli G, Lavine K, et al. Predictors of COVID-19 severity: A literature review. Rev Med Virol 2020; 395:e90.
8. Trabucchi M, De Leo D. Nursing homes or besieged castles: COVID-19 in northern Italy. Lancet Psychiatry 2020;7(5):387–8.
9. Plagg B, Engl A, Piccoliori G, Eisendle K. Prolonged social isolation of the elderly during COVID-19: Between benefit and damage. Arch Gerontol Geriatr 2020;89:104086.
10. Lara E, Caballero FF, Rico-Uribe LA, et al. Are loneliness and social isolation associated with cognitive decline? Int J Geriatr Psychiatry 2019;34(11):1613–22.
11. Tadaka E, Kono A, Ito E, et al. Development of a community's self-efficacy scale for preventing social isolation among community-dwelling older people (Mimamori Scale). BMC Public Health 2016;16(1):1198.
12. Shub D, Bass DM, Morgan RO, et al. Irritability and social isolation in dementia patients with and without depression. J Geriatr Psychiatry Neurol 2011;24(4):229–34.
13. Cho JH-J, Olmstead R, Choi H, Carrillo C, Seeman TE, Irwin MR. Associations of objective versus subjective social isolation with sleep disturbance, depression, and fatigue in community-dwelling older adults. Aging Ment Health 2019;23(9):1130–8.
14. Alexopoulos GS. Depression in the elderly. Lancet 2005;365 (9475):1961–70.
15. Saito H, Kagiyama N, Nagano N, et al. Social isolation is associated with 90-day rehospitalization due to heart failure. Eur J Cardiovasc Nurs 2019;18(1):16–20.
16. Perissinotto CM, Stijacic Cenzer I, Covinsky KE. Loneliness in older persons: a predictor of functional decline and death. Arch Intern Med 2012;172(14):1078–83.
17. Luo Y, Waite LJ. Loneliness and mortality among older adults in China. J Gerontol B Psychol Sci Soc Sci 2014;69(4):633–45.
18. Luo Y, Hawkley LC, Waite LJ, Cacioppo JT. Loneliness, health, and mortality in old age: a national longitudinal study. Soc Sci Med 2012;74(6):907–14.
19. Banskota S, Healy M, Goldberg EM. 15 Smartphone Apps for Older Adults to Use While in Isolation During the COVID-19 Pandemic. West J Emerg Med 2020;21(3):514–25.
20. Zamir S, Hennessy CH, Taylor AH, Jones RB. Video-calls to reduce loneliness and social isolation within care environments for older people: an implementation study using collaborative action research. BMC Geriatr 2018;18(1):62.

Authors

Benjamin Gallo Marin, AB, Alpert Medical School of Brown University, Providence, RI.

Patrick Wasserman, AB, Alpert Medical School of Brown University, Providence, RI.

John Cotoia, MSc, Alpert Medical School of Brown University, Providence, RI.

Manraj Singh, AB, Princeton School of Public and International Affairs, Princeton University, Princeton, NJ.

Vira Tarnavska, AB, Princeton School of Public and International Affairs, Princeton University, Princeton, NJ.

Linda Gershon, MS, Alpert Medical School of Brown University, Providence, RI.

Ian Lester, BA, College of Pharmacy, The University of Rhode Island, Kingston, RI.

Rory Merritt, MD, MEHP, Department of Emergency Medicine, Alpert Medical School of Brown University, Providence, RI.

Acknowledgments

B.G.M. was supported by the National Institutes of Health and National Institute of Allergies and Infectious Diseases award number R25AI140490.

We would like to acknowledge the individuals who provided charitable donations to Connect for COVID-19 in Rhode Island.

We would like to acknowledge Amazon for their generous donation of Amazon Fires.

We would like to acknowledge the efforts of all the Connect for COVID-19 volunteers.

We would like to acknowledge COVID Connectors for their guidance and support throughout our project experience in Rhode Island.

Correspondence

Benjamin Gallo Marin

222 Richmond Street, Mailbox G-9005, Providence, RI 02906

ben_gallo@brown.edu