Resident and Staff Satisfaction with Telehealth Implementation in Long Term Care Facilities

R Arends, P Heinricy

Abstract

Telehealth has been proven to be a safe and effective method to increase access to healthcare. In the general population, patient report satisfaction with telehealth visits for the delivery of healthcare. A population which has not been included in these studies are residents of long-term care facilities. Telehealth equipment was placed in long-term care facilities for the use in the assessment of residents with acute health changes. Following each visit, staff and residents were surveyed to determine satisfaction with the visit, timeliness of the visit, value of the service, and if they would recommend the service to others. Both staff and residents reported satisfaction with the delivery of healthcare through telehealth. Telehealth should be utilized more frequently in long-term care settings.

BACKGROUND

Telehealth has demonstrated usefulness in rural settings by increasing access to care, decreasing healthcare costs, and improving patient health outcomes. Many healthcare clinics utilize telehealth to increase access to primary and specialty care. Overall, patients report satisfaction with use of telehealth to fulfill their healthcare needs (Harkey et al., 2020). However, gaining access to telehealth resources is sometimes not easy. Telehealth used for primary and acute care usually require patients to travel to a healthcare clinic with telehealth equipment for connection with a nurse practitioner (NP) or another healthcare provider or have telehealth equipment in their home (Grundstein et al., 2020). One group that is typically not considered for increasing access to care through telehealth are residents of long-term care (LTC) facilities.

Residents of LTC facilities, especially those in rural communities, face unique challenges in accessing healthcare. Many LTC residents have physical mobility limitations or cognitive decline which limits transportation options. If family is not present or transportation is not provided, the resident may be without a mode of travel. Long-term care facilities in rural areas may not have access to healthcare service outside normal clinic hours (Henning-Smith et al., 2017). As a result, when symptoms of illness or a change in condition occurs outside clinic hours, an on-call healthcare

provider is notified. This provider may not have easy access to the resident's medical records or be familiar with the resident's health status. This may lead to a decision to transfer the resident to a local emergency department (ED) for evaluation of conditions that could have been treated at the LTC facility (Chellappa, et al., 2018).

If the decision is made to transfer residents to EDs, the resident is then exposed to the added stress and hazards of the transfer. They face extremes in weather temperatures in the summer and winter months as well as hazardous road conditions caused by ice or snow (Zou et al., 2021). Residents may be traveling without family and become disoriented in a new environment. At the ED, residents risk exposure to disease causing pathogens which could cause an infection that would not be present had the resident not been transferred to the ED. Furthermore, the resident may carry the pathogen back to the LTC facility where it may be transmitted to other residents. This can increase morbidity and mortality for not only the resident but other occupants of the LTC facility (Gardner et al., 2020).

Residents in LTC facilities face challenges in seeking care for routine conditions and acute illnesses. Residents may be scheduled for an appointment at a nurse pracitioner's clinic but lack the transportation needed to reach the facility. This causes a delay in care until transportation is available or

reliance on family to transport. Use of family members may lead to missed days at work as well as transportation costs. In rural states, specialty care may be delivered at sites several hours away leading to additional expenses (Henning-Smith et al., 2017). Use of telehealth at the facility reduces barriers for receiving care for acute and chronic healthcare conditions (Curfman et al., 2021).

Telehealth in LTC facilities allows a NP to assess, diagnose, and treat without the resident leaving the healthcare facility. The NP can order and interpret diagnostic tests and evaluate changes in the resident resulting from the treatment plan (Wong et al., 2020). Use of telehealth in LTC settings has shown to reduce 30-day readmissions and improve resident satisfaction with care delivery. Many residents of LTC facilities would prefer to be treated at the facility rather than transferring to the hospital (Xu et al., 2020).

Telehealth benefits have been amplified with the onset of the COVID-19 pandemic. During this time, geriatric patients posed an increased risk for contracting the COVID-19 virus and having poor outcomes. As a result, LTC facilities reduced access from visitors including family and healthcare providers such as NPs (Low et al., 2021). Nurse practitioners and other healthcare providers coming into the facility to care for residents of LTC facilities risked exposing residents to COVID-19. These providers were potentially seeing patients in the clinic environment who could have been infected with COVID-19 and then unknowingly carrying the virus to the LTC facility potentially infecting high-risk patients. Telehealth proved to be a useful healthcare modality to decrease risk of transmission while still providing high quality, evidence-based care (Monaghesh et al., 2020). The purpose of this project was to determine resident and staff satisfaction with use of telehealth in the LTC setting.

METHODS

Telehealth services were provided to LTC facility residents in the Midwest United States to diagnose acute and chronic medical conditions. Residents who resided at the LTC facilities present with many different diagnoses and prognoses. Some residents were at the facility for rehabilitation services where others were at the facility for long-term nursing care and management.

Telehealth equipment that included audio-visual connection along with peripheral devices that served as a stethoscope, dermatological camera, otoscope, and laryngoscope were placed in participating LTC facilities. Nursing staff and administration at each facility underwent training to understand how and when to utilize the equipment. This training was provided by nurses who were employed at the originating telehealth site known as the hub site. Prior to the COVID-19 pandemic, this training was conducted on site. During and after the pandemic, this training was provided virtually to assist in limiting the number of people in the LTC facilities and to comply with mandates. During the training, staff at the LTC facility connected to the hub site to experience the equipment and the connection. During this time, nurses were able to talk with the hub staff as well as connect and use the peripheral device on another person to gain familiarity equipment functionality. Staff at the hub site who assisted in training included NPs and nurses. An instruction book that detailed step-by-step instructions as well as pictures of each step were provided along with the telehealth equipment.

The staff at the hub site included Geriatric Certified Nurses, NPs, pharmacists, a Geriatrician, and a social worker. Nurses and NPs were available 24 hours a day, 365 days of the year. The remaining staff were present Monday-Friday during business hours and provided on-call support during nights, evenings, and weekends. When LTC staff identified a resident who had health or care concerns, they called the nurses at the hub site to discuss and triage. Concerns included, but were not limited to, potential infection, fever, hypo or hypertension, hypoxemia, hypo or hyperglycemia, dyspnea, chest pain, abdominal pain, confusion, or a change in condition. Certified Geriatric Nurses at the hub site triaged the patients and presented to the nurse praciitoner working. The nurse praciitoner had access to the resident's EMR and was able to review healthcare trends, documentation, medications, and diagnostic studies. From this initial assessment, the NP made the determination regarding whether the resident needed to be seen on camera, could be managed via telephone, or needed emergent treatment via emergency medical services.

If the decision was made to see the resident on a telehealth video encounter, the NP assessed the resident using the telehealth equipment. The NP first obtained an appropriate history from the resident as well as staff and family, if present. The NP then conducted a physical exam using the peripheral devices as applicable. Based on the history and physical, the NP determined if diagnostic tests were indicated and ordered these tests. The NP would then determine treatment including ordering medications, therapeutic devices, or transport to a higher level of care.

Additionally, the NP educated the resident and nursing staff on the condition and treatment. Once the visit was completed, the NP sent their completed encounter note to the facility and the primary care provider to ensure continuity of care. Often, the NP would put an alert in the documentation system to recheck the resident to ensure symptoms were improving or determine if further intervention was needed. If the decision was made to transport to a higher level of care, the healthcare team provided support based upon the resident condition and needs of the healthcare facility.

Staff at the hub site provided support to nursing staff at the LTC facility through assisting with assessment, providing education on conditions and treatment, and clarifying orders. The social worker present at the hub provided support through discussing advanced care planning and assisting with transitioning from the LTC facility to the home. The pharmacists assisted with medication reconciliation between the hospital or home medication lists and the LTC medication lists in addition to providing support for medication therapeutic dosing questions and reducing medication burden. When needed, these members of the healthcare team were consulted to provide comprehensive care to the resident.

RESULTS

For 11 months, following each video encounter, staff and residents voluntarily completed a survey on their perception of the encounter. All questions were optional to answer, and the staff or resident could choose to answer one or more questions. The surveys were combined to include both staff and resident responses on one survey. The surveys included an overall ranking of the service using the descriptors fair, good, and excellent. Staff were asked if the care provided was satisfactory, if the care was provided in a timely manner, if the service was valuable to the facility, and if staff would recommend the service to family and friends. All questions were asked in a yes/no format. Residents were asked if they were satisfied with the care, if they understood the treatment plan, and if they would recommend the service to family and friends. At the end of the survey, there was an opportunity for both staff and residents to provide additional feedback.

Monthly return rates for the surveys ranged from 1.9% (2 surveys) to 10.5% (17 surveys). A total of 102 surveys were returned from residents and staff. Overall, staff found the services to be satisfactory as 86 of the 102 (84.3%) surveys reported that care was provided satisfactory and 87 out of

102 (85.3%) responded that care was provided in a timely manner. The remaining surveys did not have a response for this question. Eighty-five percent of staff felt the telehealth visits were valuable to the facility and 82% would recommend the service to family and friends.

Comments on the surveys indicated that staff at the LTC facilities appreciated the promptness of communication and orders as well as the ease of discussion with the NP. Staff in the LTC facilities stated they had the perception their concerns were validated, and they appreciated the time the hub providers took to assess and analyze the resident situation.

Resident surveys had a lower response rate. It was noted by staff that some residents were not able to complete due to health status, confusion, dementia, or had a health concern that lead to a transfer to the ED. Of the 102 surveys, 54 residents (52.9%) reported satisfaction with the care provided. The remaining surveys did not have an answer to this question. Fifty-one (50%) of the residents would recommend the telehealth service to others with the remaining surveys leaving this question unanswered. Resident and family comments were positive with reports that family and residents felt listened to and were satisfied with the care they received during the telehealth visit.

IMPACT STATEMENT

The telehealth program has several implications for LTC residents. The project showed that residents and staff were satisfied with the use of telehealth to respond to resident health concerns. Both residents and staff felt that the telehealth visits were prompt and able to address problems in a timely manner. Additionally, staff and resident were satisfied with the communication with the NP. Through the establishment of rapport over telehealth equipment, the NPs were able to obtain information necessary to provide care to the resident and manage health changes in a timely manner.

It was discovered that education, which includes the hands-on use of the equipment, was essential. Due to the COVID-19 pandemic, some facilities were not able to have instructors come to the facilities to teach about the equipment. In addition, due to staffing and scheduling, some staff members missed the education on the telehealth equipment when an instructor was present. The staff who were not familiar with the equipment were more hesitant to initiate a request for a telehealth visit. It was through one-on-one counseling while walking the staff through the visit that visits were made. After the encounter, nurses would

frequently report that the telehealth equipment was not as difficult as they feared indicating a need for increased education and exposure to nurses and staff who are already employed on the use of telehealth.

Having proper medical equipment at the ready also proved necessary for the success of telehealth care. To provide the best care for the resident, the NP needed the ability to perform the assessment as they would if they were face-to-face with the resident. Use of the stethoscope to auscultate the heart, lungs, and abdomen as well as use of equipment to visualize skin concerns, tympanic membranes, and pharynx is vital to the patient visit. Without the appropriate equipment, key pieces of the physical examination would not be present. This may lead to overutilization of diagnostics or transfers due to insufficient information being obtained during the examination. At times, use of peripherals during the resident visit was not possible due to equipment malfunction. In these instances, the NP needed to rely on equipment that was available but ultimately, lack of equipment sometimes led to transfer to a higher level of care as a full assessment was not possible.

It was also discovered that even though access to a NP was increased, limited access to needed diagnostic testing may still hinder the ability for the LTC facility to treat the patient at the facility rather than transfer. Some facilities lacked access to radiology or laboratory testing. In these instances, if the testing was needed for an accurate diagnosis or safe treatment, the resident had to be transferred for the diagnostic testing. Through tracking these encounters, facilities had increased information to determine if the benefits outweigh the costs for initiation of a contract for these services.

The presence of information technology (IT) support is essential when working with telehealth. IT support is needed at both the originating and consulting site in cases of equipment malfunction, breakage, or connectivity concerns. It is also important to ensure that connectivity issues are also addressed. In order for telehealth to be successful, a strong and secure connection is needed to ensure images and sound being sent from the LTC facility to the NP and back are providing the clearest and most accurate data. Keeping track of connectivity concerns or delays assist IT in ensuring the best functionality of equipment and trouble shoot delays in care related to technology.

CONCLUSION

Overall, the initiation of the telehealth program at LTC facilities was a success. The use of telehealth in LTC settings provides staff and resident satisfaction while providing increased access to care. It is recommended that healthcare systems continue to explore increasing access to telehealth services in LTC facilities to improve patient outcomes while maintaining satisfaction with healthcare.

References

Chellappa, D.K., DeCherrie, L.V., Escobar. C., Gregoriou, D. & Munjal, K.G. Supporting the on-call primary care physician with community paramedicine. Internal Medicine Journal, 2018; 48(10), 1261-1264.

Curfman, A., McSwain, D., Chuo, J., Yaeger-McSwain, B., Schinasi, D.A., Marcin, J., Herendeen, N., Chung, S.L., Rheuban, K., Olson, C. A. Pediatric telehealth in the COVID-19 pandemic era and beyond. Pediatrics, 2021; 148(3), e2020047795.

Gardner, W., States, D., & Bagley, N. The coronavirus and risks to the elderly in long term care. Journal of Aging and Social Policy, 2020; 32(4-5), 310-315.

Grundstein, M.J., Sandhu, H.S., & Cioppa-Mosca, J. Pivoting to telehealth: The HSS experience, valued gained, lessons learned. The Musculoskeletal Journal of Hospital for Special Surgery, 2020; 16(Supp), 164-169.

Harkey, L.C., Jung, S.M., Newton, E.R., & Patterson, A. Patient satisfaction with telehealth in rural settings: A systematic review. International Journal of Telerehabilitation, 2020; 12(2), 53-64.

Henning-Smith, C., Kozhimannil, K.B., Casey, M.M., & Prasad, S. Beyond clinical complexity: Nonmedical barriers to nursing home care for rural residents. Journal of Aging & Social Policy, 2017; 30(2), 109-126.

Low, L., Hinsliff-Smith, K., Sinha, S.K., Stall, N.M., Verbeek, H., Siette, J., Dow, B., Backhaus, R., Devi, R., Spillsbury, K., Brown, J., Griffiths, A., Bergman, C., & Comas-Herrera, A. Safe visiting is essential for nursing home residents during the COVID-19 pandemic: An international perspective. Journal of the American Medical Directors Association, 2021; 22(5), 977-978.

Monaghesh E. & Hajizadeh, A. The role of telehealth during COVID-19 outbreak: A systematic review based on current evidence. BMC Public Health, 2020; 20, 1193.

Wong, R., Ng, P., Spinnato, T., Taub, E., Kaushal, A., Lerman, M., Fernan, A., Danier, E. & Noel, K. Expanding telehealth competencies in primary care: A longitudinal interdisciplinary simulation to train internal medicine residents in complex patient care. Journal of Graduate Medical Education, 2020; 12(6), 745-752.

Xu, H., Granger, B.B., Drake, C.D., Peterson, E.D., & Dupre, M. E. Effectiveness of telemedicine visits in reducing 30-day readmission among patients with heart failure during COVID-19 pandemic. Journal of the American Heart Association, 2020; e023935.

Zou. Y., Zhang, Y., & Cheng, K. Exploring the impact of climate and extreme weather on fatal traffic accidents. Sustainability, 2021; 13(1), 390.

Author Information

R Arends
Avel Ecare
Sioux Falls, SD

P Heinricy
Avel Ecare
Sioux Falls, SD