

# Pi Theta Epsilon Gamma Mu Chapter

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## Applications of Telehealth in Occupational Therapy: An Annotated Bibliography

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*Due to the COVID-19 pandemic there has been a rise in the use of telehealth to provide virtual occupational therapy (OT) services. Below is a brief review of evidence found in support of telehealth as a service model. Although there is still much research to be done to determine the effectiveness of telehealth OT services, recent studies have exhibited promising benefits.*

American Occupational Therapy Association. (2018). Telehealth in Occupational Therapy.

*American Journal of Occupational Therapy, 72(Suppl.2), 1-18.*

<https://www.doi.org/10.5014/ajot.2018.72S219>

This position paper supports the use of telehealth services by occupational therapy practitioners. These services can be provided as synchronous or asynchronous sessions, can remove barriers to accessing care, and successfully address all factors within the occupational therapy domain for clients.

Bendixen, R. M., Levy, C. E., Olive, E. S., Kobb, R. F., & Mann, W. C. (2009). Cost

effectiveness of a telerehabilitation program to support chronically ill and disabled elders in their homes. *Telemedicine and e-Health, 15(1), 31-38.*

<https://doi.org/10.1089/tmj.2008.0046>

Given the rapid growth of the aging population and their increased risk of developing costly chronic illnesses, this study focused on the effects of a Veteran's Administration telerehabilitation program on healthcare costs for the participants. Over 11 individuals received the telehealth program. These individuals had comorbidities of arthritis,

diabetes, hypertension, and stroke. Through the use of Low Activities of Daily Living Monitoring Program (LAMP), the participants were provided adaptive equipment and environmental modifications in their homes. Participants enrolled in the LAMP program were compared to a pool of 9,862 individuals served by the VA. Although there were no significant differences in the costs between the LAMP group and the control group, the LAMP group had an increase in number of clinic visits following the program and a decrease in nursing home and hospital stays.

Campbell, J., Theodoros, D., Hartley, N., Russel, T., & Gillespie, N. (2020).

Implementation factors are neglected in research investigating telehealth delivery of allied health services to rural children: A scoping review. *Journal of Telemedicine and Telecare*, 26(10), 590-606. <https://doi.org/10.1177/1357633X19856472>

A systematic scoping review was completed addressing telehealth services provided to children in rural Australia. The authors note a direct relationship between distance from major urban areas and the proportion of children who are developmentally vulnerable on all five domains of the 2018 Australian Early Development Census. Since travel is often a significant barrier to receiving treatment, telehealth is a viable option to deliver therapy to rural areas; however, telehealth also comes with obstacles, such as connectivity, technology, and technology literacy. The authors' scoping review found that though research proves that telehealth can be a viable therapy option for limited circumstances, there is a lack of research on the success of telehealth implementation and focus on assessments. Research on various disciplines using telehealth in allied health is minimal, and therefore, suggests that children in rural areas are underserved. Furthermore, studies focused solely on individual treatment and neglected community-

based methods. Therefore, more research is needed to obtain a comprehensive understanding of telehealth's efficacy for children in rural settings as a delivery method.

Cason, J. (2015). Healthy Policy Perspectives- telehealth and occupational therapy: integral to the triple aim of health care reform. *American Journal of Occupational Therapy*, 69(2), 1-8, <https://doi.org/10.5014/ajot.2015.692003>

The OT profession needs to prepare for a trend towards the telehealth service delivery model as it will allow for effective and cost-efficient services. Telehealth is in line with the 'Triple Aim' of the 2010 Patient Protection and Affordable Care Act, promoting population health, economical care, and improved care. Because OT plays a unique role in population health the profession should be included in funded research opportunities aimed to explore cost effective and enhanced quality of care. The profession needs to take action to ensure inclusion in future telehealth research.

Hersch, G., Kao, B., Melton, L., & Pancheri, K. (2015). Telehealth usage by occupational therapy practitioners. *American Journal of Occupational Therapy*, 69(1), 6911510038. <https://doi.org/10.5014/ajot.2015.69S1-PO1095>

Utilizing a Health Resources and Services Administration (HRSA) grant, Houston-based OT practitioners were surveyed about their use of telehealth in clinical practice. They were asked questions about the services provided, barriers encountered, and attitudes towards telehealth practice from professional experience. Responses suggest that telehealth was being utilized in clinical practice by only a few practitioners for evaluations and intervention purposes. Many practitioners recognized the potential benefits, however, lacked self-efficacy with telehealth technology and expressed a need for further training.

Nissen, R. M., & Serwe, K. M. (2018). Occupational therapy telehealth applications for the dementia-caregiver dyad: A scoping review. *Physical & Occupational Therapy In Geriatrics*, 36(4), 366-379, <https://www.doi.org/10.1080/02703181.2018.1536095>

This scoping review synthesized data from 14 articles about the use of occupational therapy telehealth interventions specifically for clients with dementia and their caregivers. The delivery of interventions through telehealth services is effective in decreasing caregiver burden and increasing caregiver self-efficacy. Telehealth supports the dementia-caregiver dyad because it removes the strain of leaving home, but transitioning in-person services into a telehealth format or choosing when to use in-person services versus telehealth still needs to be determined.

Nissen, R. M., Hersch, G., Tietze, M., & Chang, P. F. J. (2018). Persons with dementia and their caregivers' perceptions about occupational therapy and telehealth: A qualitative descriptive study. *Home Healthcare Now*, 36(6), 369-378.  
<https://doi.org/10.1097/NHH.0000000000000697>

This study aimed to identify how people with dementia and their caregivers perceived the use of telehealth to provide OT services. Through the use of a qualitative descriptive design, the researchers fit the participants' answers into one of three categories: dementia journey, perceptions of OT, and technology use skills. Limitations of this study included homogenous sample sizes as well as insufficient collection of data to reach a saturation of the themes. Results overall support the need for further research and exploration on the use of telehealth to provide OT services for clients with dementia and their caregivers.

Rortvedt, D., & Jacobs, K. (2019). Perspectives on the use of a telehealth service-delivery model as a component of school-based occupational therapy practice: designing a user-experience. *Work*, 62(1), 125-131. <https://doi.org/10.3233/WOR-182847>

This survey investigation sought to illustrate the perceptions of 27 participants, school based OTs and associates administration, in regards to the use of telehealth in a school setting. Over half of the respondents in a survey study expressed that telehealth could have the ability to improve OT services, especially considering a scarcity of OTs in the school setting and high caseloads. Telehealth in the school setting could have many benefits such as cost effectiveness, more flexible scheduling, and increased collaboration with other school staff. Although more research is needed to determine the effectiveness of it in the school setting telehealth, over half the participants in the study believe that this model of service could improve OT practice.

Tenforde, A. S., Borgstrom, H., Polich, G., Steere, H., Davis, I. S., Cotton, K., O'Donnell, M., & Silver, J. K. (2020). Outpatient physical, occupational, and speech therapy synchronous telemedicine. *American Journal of Physical Medicine and Rehabilitation*, 99(11), 977-981. <https://doi.org/10.1097/PHM.0000000000001571>

Due to the Covid-19 restrictions and need for safety, insurance changes provided coverage for telerehabilitation at the same rate as face-to-face visits in Massachusetts. A survey of service satisfaction was conducted with 205 clients, primarily women following receipt of telehealth services for lower limb injuries. Overall, an excellent client satisfaction with telerehabilitation services was reported by administering surveys to clients after participating in telehealth with healthcare providers. A majority were follow-up visits, seeking OT, PT, and SLP. Convenience, caregiver support, and establishing

new routines were reported benefits. Many barriers encountered during telerehabilitation included behavioral and attention issues with pediatric patients, inability to be hands-on, safety with feeding therapy, and technological challenges.

Zylstra, S. E. (2013). Evidence of the use of telehealth in pediatric occupational therapy. *Journal of Occupational Therapy, Schools, & Early Intervention*, 6(4), 326-355.

<https://doi.org/10.1080/19411243.2013.860765>

In this evidence-based review, the author seeks to discover telehealth's efficacy as a means of rehabilitation service delivery for children under 16. The author uses discipline-specific outcomes and/or satisfaction with services provided to quantify the success of telehealth. With up to a fifth of the United States population living in rural areas where there are usually provider shortages, telehealth is a means to mitigate the lack of therapists. Furthermore, studies have shown that telehealth is a more cost-effective mode of therapy delivery. Additionally, telehealth enables the delivery of services in a client's natural environment. The author believes that there is sufficient research evidence to support telehealth services satisfaction. Unfortunately, the author did not find such rigor supporting telehealth in this population when examining discipline-specific outcomes. Therefore, more research is necessary before telemedicine can be more widely accepted. Reimbursement protocols also need to be established for telehealth. The author believes as more affirmative research on telehealth becomes evident, the more favorable the reimbursement from insurance companies.