

POSTER SESSION 2

Unmet needs and barriers to use of technology and potential novel solutions for family caregivers

O. Atoyebi, M. Beaudoin, F. Routhier, M. Plante, C. Auger, L. Demers, A. Wister, W. Ben Mortenson

Atoyebi et al. (2020). *Gerontechnology* 19(suppl); <https://doi.org/10.4017/gt.2020.19.s.69912>

Purpose Stress, burnout and mental health issues are common among those caring for people with chronic illnesses and disability. Even with some support, family caregivers continue to experience unmet needs pertaining to their caregiving tasks. Research has shown that devices and other technologies can help caregivers solve problems (Mortenson et al., 2012). However, there are barriers that seem to hamper the effective use of technology by family caregivers. Objectives: (1) To describe the evolving needs of family caregivers; (2) to explore barriers that hinder access, acceptance and utilization of assistive technology available for caregiving, and (3) to identify potential technological solutions (e.g., devices, services, programs) that caregivers would like to see developed. **Methods** People aged 19 and above who are current caregivers were recruited. As part of a larger study, participants took part in a series of semi-structured interviews. Our analysis focuses on secondary interviews that highlight important and unmet needs, barriers to accessing, accepting and using technology to provide care and potential solutions. Interviews were recorded and transcribed verbatim. Thematic content analysis of transcripts was carried out using NVIVO 12. **Results and Discussion** As described in Table 1, twenty-one family caregivers aged 31 to 91 participated in this study. Three themes were identified: caregiver requirements, experience with technology experiences, and making caregiving easier. “Caregiver requirements” represented the evolving and unresolved needs of caregivers. “Technology experiences” described difficulties that caregivers had in identifying, selecting, acquiring and using technology for care provision. “Making caregiving easier” outlined the suggestions of caregivers about possible technological solutions that could address their needs. These fell into three broad categories included in Table 2: applications, devices and services. This research will inform user-centered development of technological solutions to address caregiver’s unmet needs and achieve their desired goals.

References

Mortenson, W.B., Demers, L., Fuhrer, M.J., Jutai, J.W., Lenker, J., & DeRuyter, F. (2012). How assistive technology use by individuals with disabilities impacts their caregivers: a systematic review of the research evidence. *American journal of physical med & rehabilitation*, 91(11), 984. <https://doi.org/10.1097/phm.0b013e318269ecec>

Keywords: caregivers, needs, disability, technology

Address: Department of Occupational Science and Occupational Therapy, Faculty of Medicine, University of British Columbia|

Email: ben.mortenson@ubc.ca

Table 1: Sociodemographic characteristics of participants

Characteristics	Number of Caregivers (N=21)
Age	64±12 years
Sex	
Female	18
Relationship to primary care recipient	
Child	5
Spouse/partner	7
Parent	6
Other (friend, neighbor, cousin)	3
Education	
High school	3
College/non-University diploma	5
At least Bachelor’s or equivalent	8
Unspecified	5
Marital Status	
Single/Widowed	4
Married/common law	11
Unspecified	6

Table 2: Potential solutions suggested by participants

Potential solution	Category
Website for Counselling	Applications
Website for recruiting healthcare provider/aid	
Website for Assistive Technology Training for Caregivers and Users	
Website for Social Activity	
Telemedicine app for doctor’s appointments	
Meal container for keeping meals warm	Devices
Smart Braking System for Walkers/ Walking Aid Devices	
Smart Cane/Walker with a Wearable Bracelet	
Posture Monitoring Device for Wheelchair Users	
Hydraulic bath chair	
Smart Chair (robot that is integrated in chair and recognizes unsafe instances and prevents chair from moving forward till safety is noted)	
Remote control lock (that can be deactivated by fire or remotely by a person)	
Tracker/alarm system that deters wandering	
Reminder/timer	
Technology to assist with phone use if person no longer can use	
Volunteer foot care service	Services
A Personalized Cab Service for Transportation	