

The Use of Technology in the Support of Family Caregivers

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#DementiaCareSummit

How can Technology Help?

Potential Role of Technology

- Facilitate access to health care professionals, family members, and other caregivers.
- Permits easier access to a wide array of information and services.
- Permits flexible communication.
- Offers opportunities to decrease problems with isolation and enhance connectivity.
- Enhances opportunities for monitoring and assessment.

Technology Applications

- Telemedicine applications
- Technology-based intervention programs.
- Interactive communication systems
- Informational websites
- Online Support Groups
- Wearables, assessment programs
- Sensing and monitoring systems
- Reminder systems.

Potential Benefits and Challenges of Using Technology

Benefits

- Helps eliminate logistic challenges for both caregivers and clinical teams.
- Provides a flexible format for presenting information – e.g., speech, videos, face-to-face.
- Facilitates access to a broad array of information and services and the ability to integrate that information in one convenient location – e.g. dedicated website.
- Can be easily updated for multitudes of users.
- Can be tailored to support user needs – e.g., artificial intelligence.

Challenges

Caregivers

- Lack of internet access.
- Lack of awareness of technology-based resources, technology skills.
- Lack of access to technology applications & training opportunities.
- Cost.
- Concerns about privacy/security.

Researchers

- Fostering communication among multi-disciplinary research teams.
- Access to needed technical support.
- Choice of technology/applications – e.g. laptop, mobile device, web-based, app.
- Measurement/analytic strategies – e.g., use
- Choice of control group – e.g. technology-based?
- Cost.

What is the Evidence: Summative Findings

- A wide variety of technologies have been used to deliver interventions and support programs.
- The available evidence indicates that technology-based intervention approaches are:
 - acceptable and feasible with caregiver populations
 - efficacious
- Uptake of technology applications has been slower than anticipated.
- Problems with cost, usability and interoperability remain.
- Large scale support for this type of research has lagged.
- Caregivers also increasingly need to interact with complex technology in the delivery of care.

Findings from the Center on Aging

VideoCare: Evaluated the feasibility, acceptability, and efficacy of a technology-based psychosocial intervention for diverse family caregivers of AD patients. (Czaja, Lee, Schulz et al., *A. J. of Geriatric Psychiatry*, 2013)

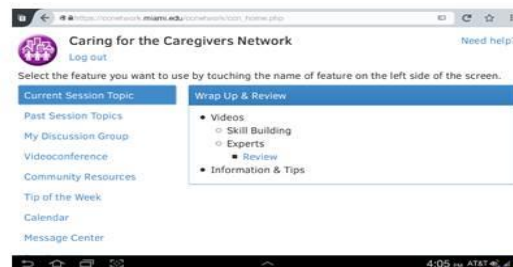
- Caregivers who received the intervention reported:
 - a significant decrease in caregiving burden.
 - a significant increase in positive aspects of caregiving.
 - a significant increase in social support.
- Caregivers also reported:
 - The videophone was valuable and easy to use.
 - The educational videos were helpful.
 - The resource guide was valuable.
 - The support groups were valuable and easy to attend.
- Initially none of the caregivers had internet service in their home.
- The technology became outdated.



Findings from the Center on Aging

Caring for the Caregiver Network: Evaluating the acceptability of a culturally tailored technology-based psychosocial intervention for family caregivers of AD patients.

- Enrolled and Randomized 244 Dyads:
 - 109 Hispanics
 - 79 White/Caucasians
 - 55 African Americans
- Low Attrition ~ 13%
- Caregivers easily adapt to the technology
- The interventionists find that technology is an effective mechanism of intervention delivery
- Caregivers enjoy the video support group sessions – able to participate from their home
- Caregivers like the flexibility of using the tablet – enhances the convenience of the intervention



Recommendations

- There is a strong need for a solid evidence base of what technology applications (existing and emerging) work, for whom and in what context.
- The research must:
 - Extend beyond the examination of the delivery of technology-based intervention programs and include other technology applications such as sensing/monitoring systems, assessment programs, EMRs, robotic applications, etc.
 - Include diverse caregiver populations
 - Include data on challenges and negative outcomes (“what doesn’t work”).
 - Include multi-disciplinary research teams
 - Include measures of cost effectiveness and usability
- There is a need for new approaches for measurement and a careful consideration of metrics – how do we best define *Impact*.

Recommendations

- Research and development efforts should be directed towards the development of: novel/integrated platforms to assist caregivers with:
 - the monitoring, assisting or maintaining daily functioning of older individuals with AD/ADRD and other cognitive impairments.
- The development of interventions should incorporate findings and practices from *implementation science* to ensure that evidenced-based interventions are widely disseminated in community and clinical settings.
- There should be greater collaboration between federal agencies and industry (especially the tech industry) to support research within this domain.

References

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