



Technology to Support Community-Dwelling Older Adults with Dementia: A Survey of Home Care Clinicians



Alayna Payne¹, Debra Sheets, Ph.D., MSN, RN, FAAN¹, Cheryl Beach, Ph.D., PT²
¹School of Nursing, University of Victoria,¹ Home & Community Care, Island Health²

Introduction

Caring for persons with dementia is having an unprecedented impact on the need for home care as well as on the 2.7 million Canadian caregivers (Statistics Canada, 2008). One in five home care clients have dementia and family caregivers often provide more than three-quarters of the necessary care (CIHI, 2012; Health Council of Canada, 2012). The use of technologies to support aging in place has the potential to relieve burden on the home care system as well as family caregivers.

Background

All clients receiving case management home care services in BC receive a RAI-HC (Resident Assessment Instrument-Home Care) assessment. The profile of home care clients within Island Health includes a high prevalence of persons with dementia (40%), and high rates of self-reported caregiver distress (34%) (Island Health, 2014).

Purpose

The purpose of our survey was to explore the perceptions of home care clinicians on the use of intelligent technologies (or *i-Technologies*) to support the care of older adults with dementia. *i-Technologies* refer to hardware and/or software-based electronic solutions that support the care needs of a cognitively impaired individual. Examples of *i-Technologies* include automatic medication dispensers, emergency response systems, and monitoring systems

Objectives

- To explore the perceptions, attitudes and beliefs of home care clinicians towards *i-Technologies*.
- To identify barriers to using technologies to support home care
- To investigate caregiving priorities and needs from the perspective of the clinician

Methods

A 15 minute online survey was conducted with home care clinicians working for Island Health in British Columbia in August, 2015.

Sample

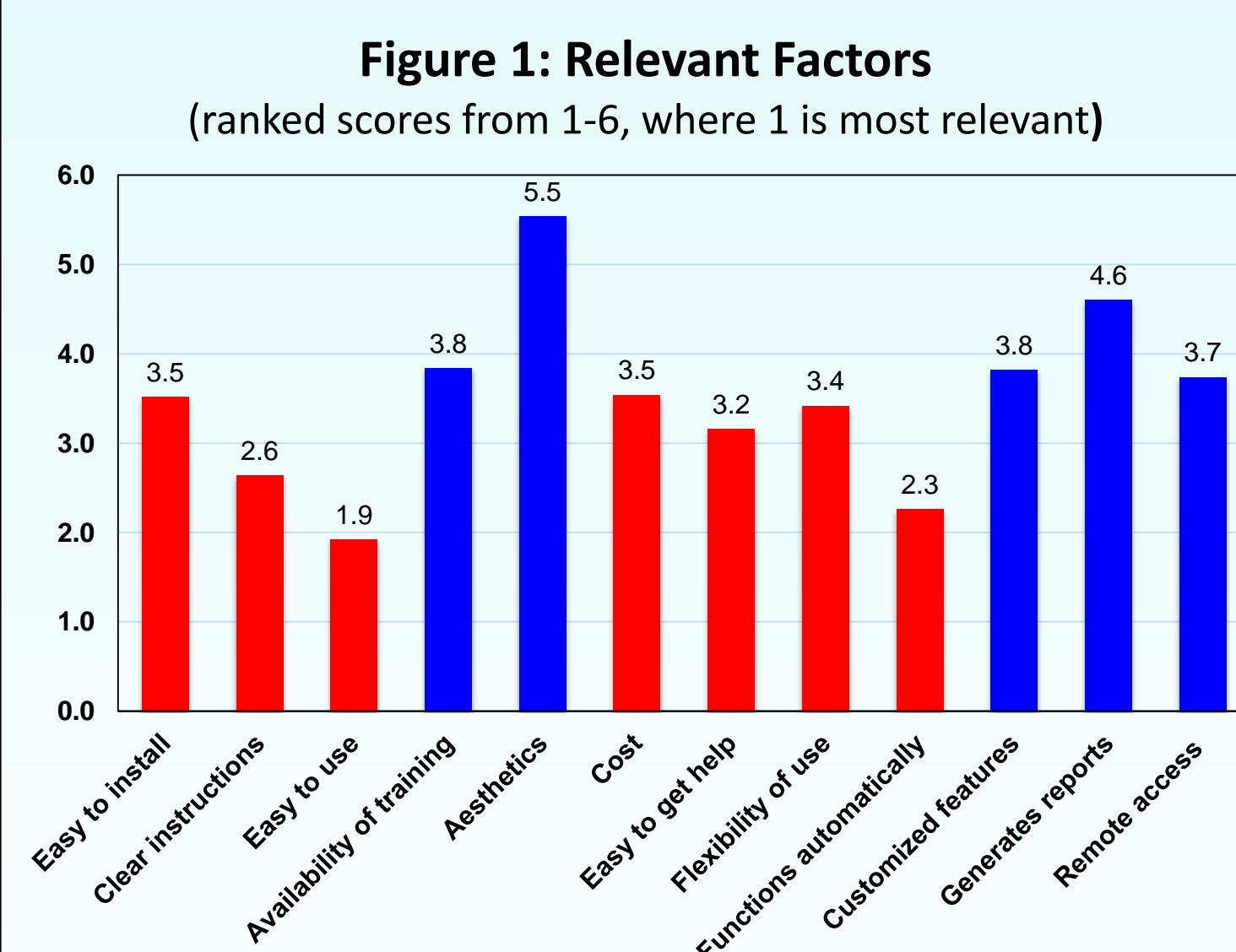
- N=47, Age range 28-66 yrs. 51.1% over age 50.
- Primary roles included: Case managers (36.1%), registered nurses (31.9%), licensed practical nurses (8.5%), occupational therapists and physiotherapists (17.0%) and social workers (4.3%)..
- 80.9% had 10+ yrs. experience caring for clients with dementia

Analyses

Quantitative survey data were analyzed using Excel to run descriptive statistics

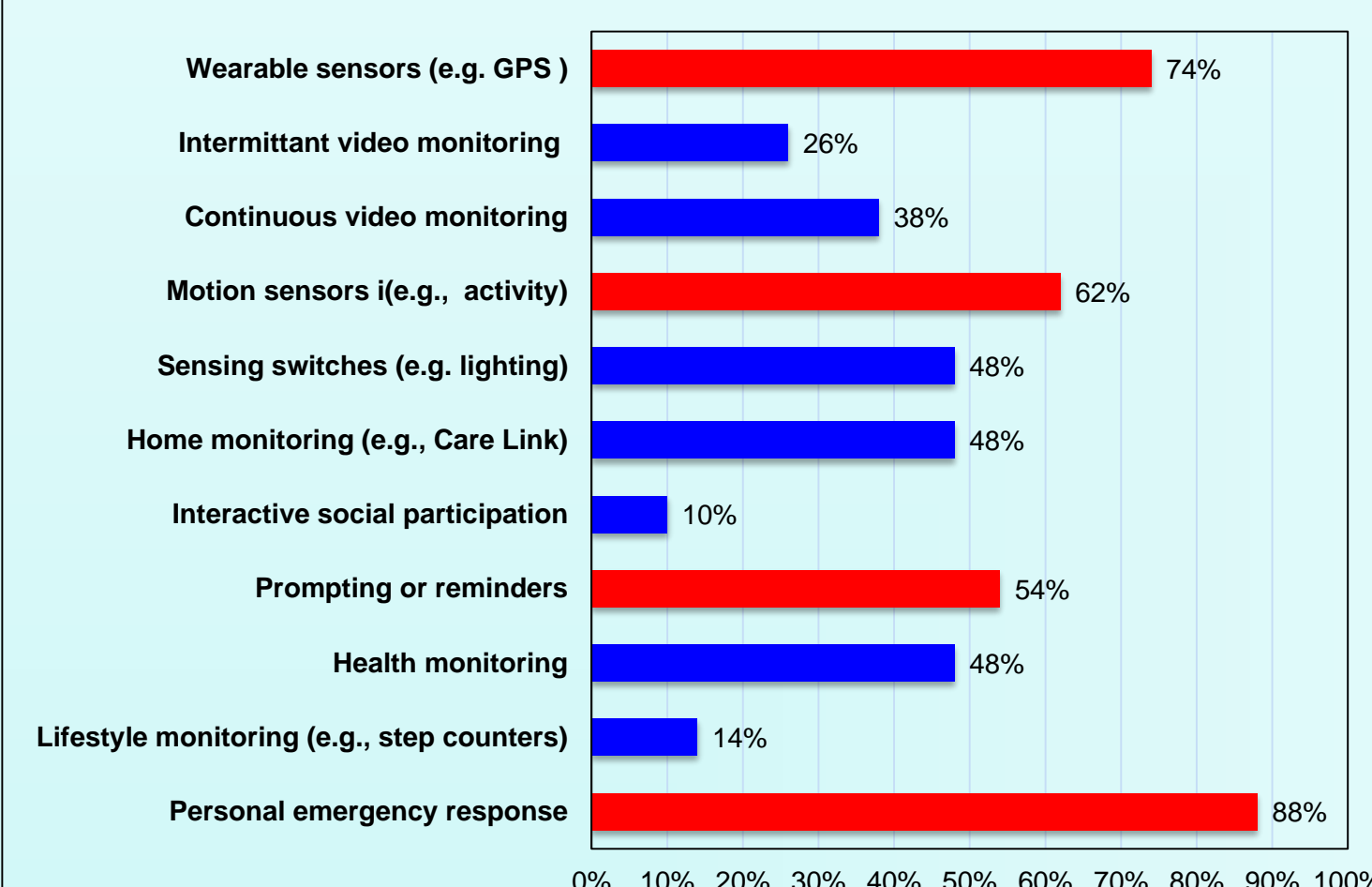
Results

- 53.2% report knowing at least three or more *i-Technologies*.
- 57.4% have used *i-Technologies*
- 38.3% report that their clients are likely to use technologies.
- As shown in Figure 1, factors ranked important in **USING** technologies included: being easy to use, function automatically, have clear instructions, and ease in getting help with the technology.
- Client interest was the most important factor in adoption & use. Aesthetics and ability to generate reports for the user were less important



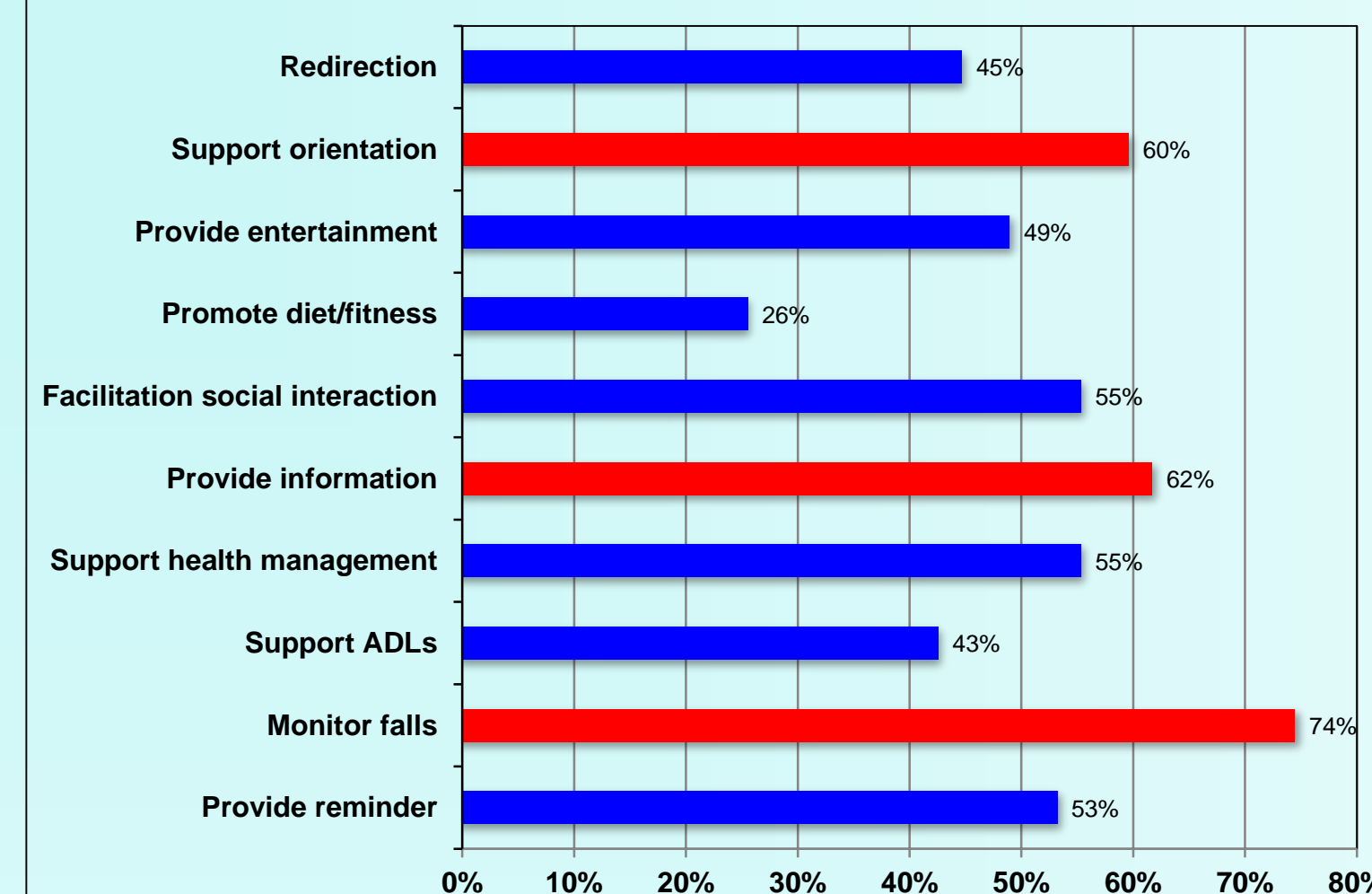
Types of technologies reported to be most useful include: personal response, reminders, motion sensors and GPS (Figure 2).

Figure 2: Effective or Useful Technologies
(extremely or very effective/very useful or useful)



Areas that *i-Technologies* could be of most **BENEFIT** (red) include monitoring for falls, providing information, and supporting orientation (Figure 3).

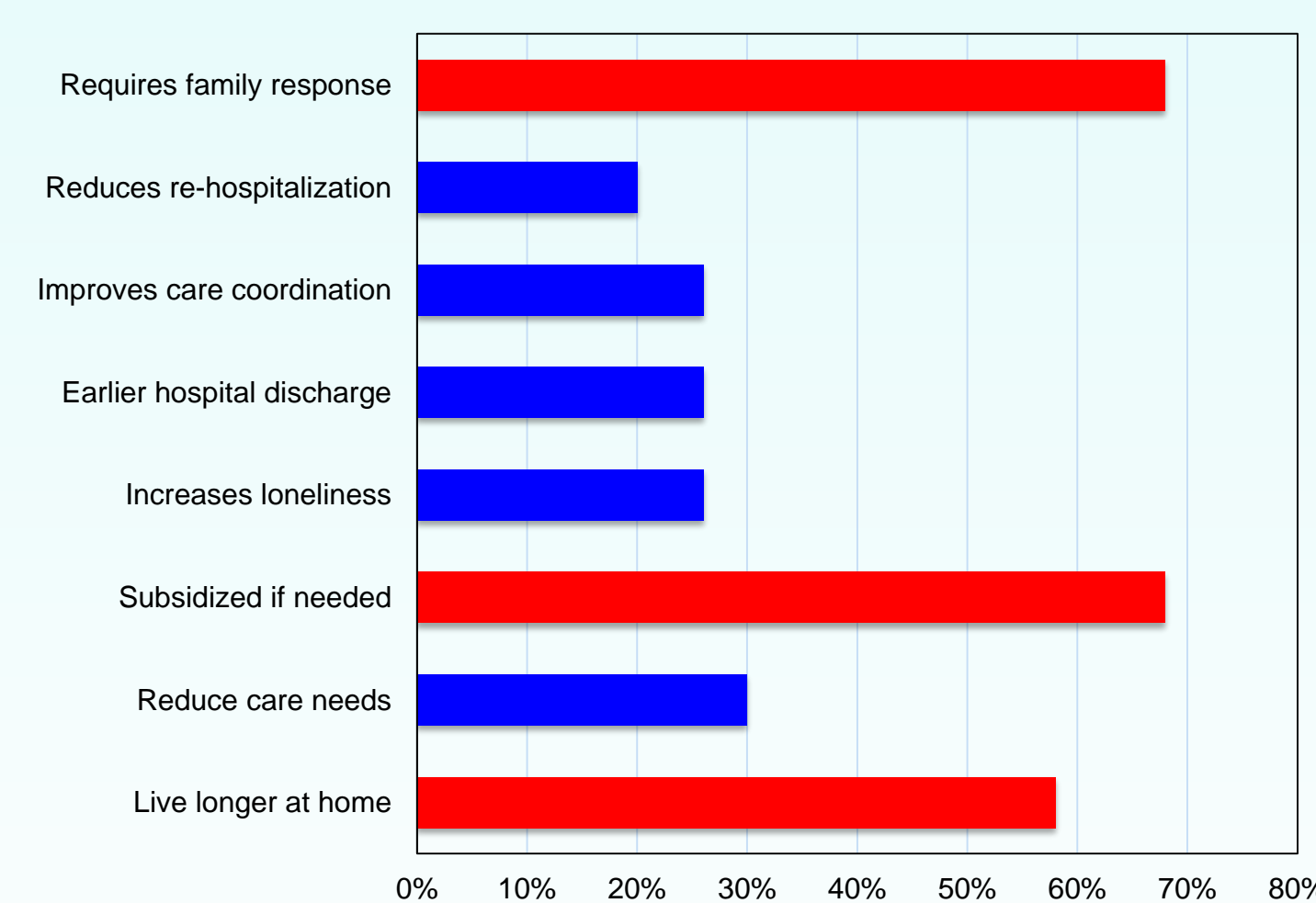
Figure 3: Benefits of *iTechnologies*
(Extremely or Very Beneficial)



Respondents agreed that:

- **Benefits of use** were earlier hospital discharge and clients able to live longer at home.
- **Barriers to use** were the need for cost subsidies, and the need for families to respond to alerts (Figure 4)

Figure 4: Technology Benefits & Barriers
(Strongly Agree and Agree)



Discussion

Given the growing role of technology in our everyday lives, the potential of technologies to assist with caregiving is significant. To date, use of technologies to support caregiving has been limited. Yet more than one-half of the respondents were knowledgeable about *i-Technologies* and report using them with clients.

Findings indicate that further development and evidence is required for technologies to meet the caregiving needs of persons with dementia. Home care clinicians need support for technology implementation and health agencies need guidelines to support implementation.

Conclusion

Preferences of home care clinicians must be taken into account if technologies are implemented more widely to support the care of home care clients. Caregiving is complex and clinician preferences point to a need for integration of technologies into a seamless system of support (Adler & Mehta, 2014). Lastly, barriers to use (e.g., cost, who responds) will need to be addressed through policy.

Limitations of the study

- Convenience sample may favor those who use technology with clients
- Small sample size
- Regional survey of Island Health BC--generalizability is limited.
- Ambiguity about the term "user"

References

- Adler, R. & Mehta, R. (2014). Catalyzing technology to support family caregiving. National Alliance for Caregiving.
- Canadian Institute for Health information. (2010). Analysis in brief: Caring for seniors with Alzheimer's disease and other forms of dementia. Retrieved from http://www.alzheimer.ca/~media/Files/on/PPPI%20Documents/CIHI_Report_Dementia_Aug_2010_EN.pdf
- Health Council of Canada. (2012). Seniors in need, caregivers in distress: What are the home care priorities for seniors in Canada? Retrieved from http://www.alzheimer.ca/pec/~media/Files/on/Media%20Releases/2012/April%202012/HCC_HomeCare_2d.pdf
- Statistics Canada (2008). *Eldercare: What we know today*. Statistics Canada 11-008-x No. 86 2008002. Retrieved from <http://www.statcan.gc.ca/pub/11-008-x/2008002/article/10689-eng.htm>