

# IT WORKS: INNOVATING TOGETHER: WORKING WITH TECHNOLOGIES IN DEMENTIA

Telepresence robot – Double 3



# DISCLOSURE

Faculty: Dr. Lillian Hung

- Assistant Professor
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Relationships with commercial interests:

- None

Grants/Research Support:

- Alzheimer Society of Canada



# Supporting virtual care during COVID19, possibilities in the Future



# Virtual special issue – Using touchscreen tablets for virtual connection

Lillian Hung, Jim Mann

First Published May 7, 2020 | Editorial | [Find in PubMed](#) | 

<https://doi.org/10.1177/1471301220924578>

[Article information](#) ▾



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People with dementia are at high risk during the coronavirus disease 2019 (COVID-19) pandemic. Many people with dementia live alone in the community or with another older person. The closure of the coffee shop and business stores can disrupt social routines. Social distancing is necessary to reduce the chance of spreading the infection. Still, it can have severe implications for the mental health of people who may feel lonely and isolated. People with dementia in nursing homes or hospitals may feel confused, abandoned, anxious, and sad when they are not allowed to have visitors. Emotional distress can lead to responsive behaviors and the use of chemical and physical restraints as confinement and restraints would have adverse effects on physical, social, and emotional well-being. Families and friends may feel helpless as they cannot enter the care facilities to offer reassurance and support. Social and psychological support for people living with dementia and their families is urgently needed globally.



## EVIDENCE AND PRACTICE

# Using virtual care interventions to provide person-centred care to hospitalised older people with dementia

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### Why you should read this article:

- To recognise the benefits of virtual care interventions in providing person-centred care to patients with dementia in hospital
- To understand the barriers to the implementation of virtual care interventions for hospitalised older people with dementia
- To learn about the experiences of hospitalised older people with dementia using an iPad



# Connecting patients and families by an iPad on wheels during the time of COVID-19 pandemic

Lillian Hung, Cheryl Chan, Bryan Chow, John Shadarevian, Annette Berndt, Christine Wallsworth, Neil Horne, Mario Gregorio, Jim Mann, Cathy Son, Ryan O'Neill, Habib Chaudhury

## BACKGROUND


The lockdown in hospitals and care homes can generate anxiety for families. People with dementia may not be able to follow isolation and infection control procedures. We developed a toolkit to support using virtual care for hospitalized older people with dementia.

## METHODS

The project team includes: people with lived experience (MG, JM) and families (AB, CW, NH), physicians (BC, RO), medical student (JS) and nurses (LH, CC, CS), academic professor (HC)

We facilitated staff focus groups (n=3), and conducted stakeholders' interviews (n=4) to gain a more comprehensive understanding of users' needs.



Barriers	Strategies
<b>Human issues</b> <ul style="list-style-type: none"> <li>knowledge about how</li> <li>Support to build confidence</li> </ul>	<ul style="list-style-type: none"> <li>Create a toolkit to provide step by step support</li> <li>Short videos to provide successful examples</li> <li>Use patient stories to connect people's heart</li> </ul>
<b>Mechanical issues</b> <ul style="list-style-type: none"> <li>Nurses were fearful about dropping the iPad with their hands full with medications</li> <li>Patients found the iPad is too heavy to carry and difficult to watch when lying in bed or wheelchair</li> </ul>	<b>"The iPad on Wheels"</b> <ul style="list-style-type: none"> <li>Secure the iPad with a mechanical arm and mobile stand with wheels</li> </ul> 
<b>Ethical and privacy issues</b>	<ul style="list-style-type: none"> <li>Get to know patients to understand what works best for each individual</li> <li>Explore with family to find preferred activities to optimize the iPad use (i.e. games, music)</li> <li>Organize individual albums to personalize</li> <li>Encrypted the iPad with password to protect</li> </ul>

## It reduces responsive behaviors



- Use the touchscreen for positive distraction

## It alleviates anxiety and worries



- Connect a dying patient with family for compassion

## RESULTS: It puts a smile on the patient's face



- Engage meaningfully to reduce boredom and loneliness

## IMPLICATIONS

- ✓ Check out our iPad project toolkit for implementation
- ✓ Involve staff, patient and family partners in technology adoption









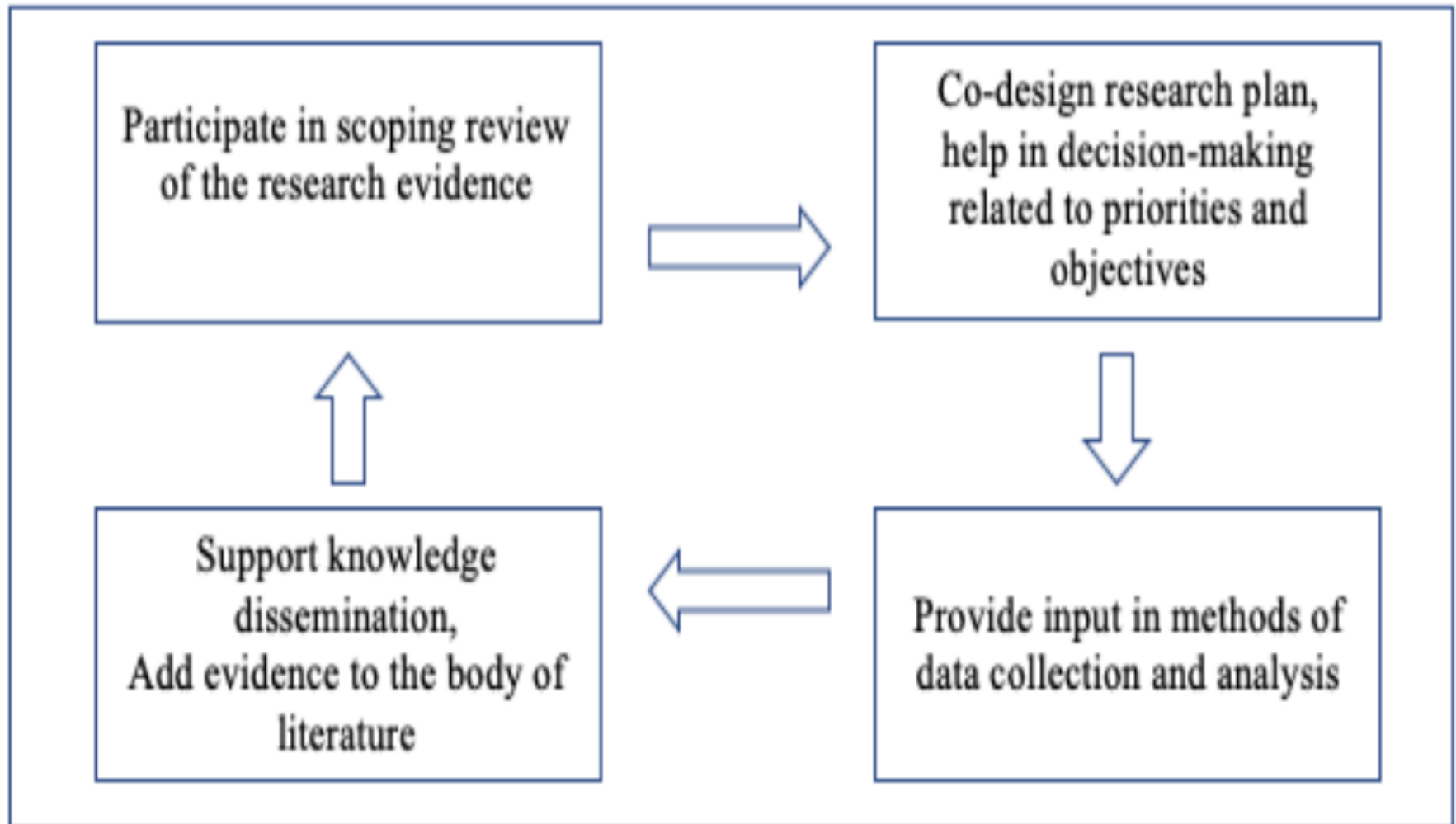







# Co-research, innovate together

Figure 1. Patient and family engagement in the research cycle



# BMJ Open Use of touch screen tablets to support social connections and reduce responsive behaviours among people with dementia in care settings: a scoping review protocol

Lillian Hung ,<sup>1</sup> Annette Berndt,<sup>2</sup> Christine Wallsworth,<sup>2</sup> Neil Horne,<sup>2</sup> Mario Gregorio,<sup>2</sup> Jim Mann,<sup>2</sup> Cathy Son,<sup>3</sup> Ainsley Camps,<sup>4</sup> Bryan Chow,<sup>5</sup> Ryan O'Neill,<sup>5</sup> Habib Chaudhury<sup>6</sup>

**To cite:** Hung L, Berndt A, Wallsworth C, *et al.* Use of touch screen tablets to support social connections and reduce responsive behaviours among people with dementia in care settings: a scoping review protocol. *BMJ Open* 2019;**9**:e031653. doi:10.1136/bmjopen-2019-031653

► Prepublication history and additional material for this paper are available online. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2019-031653>).

## ABSTRACT

**Introduction** The disabilities associated with dementia make the adjustment to staying in a care setting stressful. Separation from family can exacerbate the effects of stress. The use of touch screen tablets such as an iPad may offer potential to support the person with dementia staying in a care setting. Although electronic devices are used among people with dementia for a variety of purposes, a comprehensive review of studies focusing on their impact in care settings for social connection and patient/resident behaviour is lacking. This scoping review will focus on the use of touch screen tablets to support social connections and reducing responsive behaviours of people with dementia while in a care setting, such as a hospital ward.

**Methods and analysis** This scoping review will follow

## Strengths and limitations of this study

- This review involves knowledge users, including front-line clinicians, patient and family partners in setting the research questions and in designing and writing of the review protocol.
- This is a novel and timely review to understand how touch screen tablets may support social connections and reduce responsive behaviours among people with dementia in care settings.
- Although the results may have useful value to health professionals by providing a comprehensive evidence base to help with their planning and decision-making regarding the intervention, implications for practice are limited by the fact that an assessment

# Using touchscreen tablets to support social connections and reduce responsive behaviours among people with dementia in care settings: A scoping review

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2021, Vol. 20(3) 1124–1143

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DOI: 10.1177/1471301220922745

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# Creating a toolkit with stakeholders for leveraging tablet computers to support person-centred dementia care in hospitals

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Journal of Rehabilitation and Assistive Technologies Engineering  
Volume 7: 1–9  
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DOI: 10.1177/2055668320960385  
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## Abstract

**Introduction:** People with dementia may refuse care because they feel overwhelmed by an unfamiliar environment. Everyday technology such as tablets have the potential to support person-centred dementia care in hospitals.

**Aims:** We aimed to identify barriers and enabling factors in order to develop a toolkit to support the use of tablets in engaging individual and group activities, especially to play family videos, for hospitalized older people with dementia.

**Methods:** A participatory action research approach was employed. We facilitated staff focus groups and conducted interviews with stakeholders. A toolkit was developed based on participants' perspectives on how to support successful adoption.

**Results:** Our analysis identified two enabling factors: users' engagement in developing a toolkit for support and adapting implementation to meet local needs. Barriers included staff and family inexperience, mechanical instability of hardware, issues around privacy and data access, technology use and personalization of messages. The toolkit includes short videos, a brochure for family caregivers, and a pocket card for staff.



**Figure 1** Some commercial telepresence robots.





# Double 3



# Robotic-Assisted Virtual Care

Improve social connections in people with dementia with families in LTC



## AIMS

Investigate feasibility & acceptability

Co-produce collaborative actions

Evaluate outcomes

## INTERVENTION

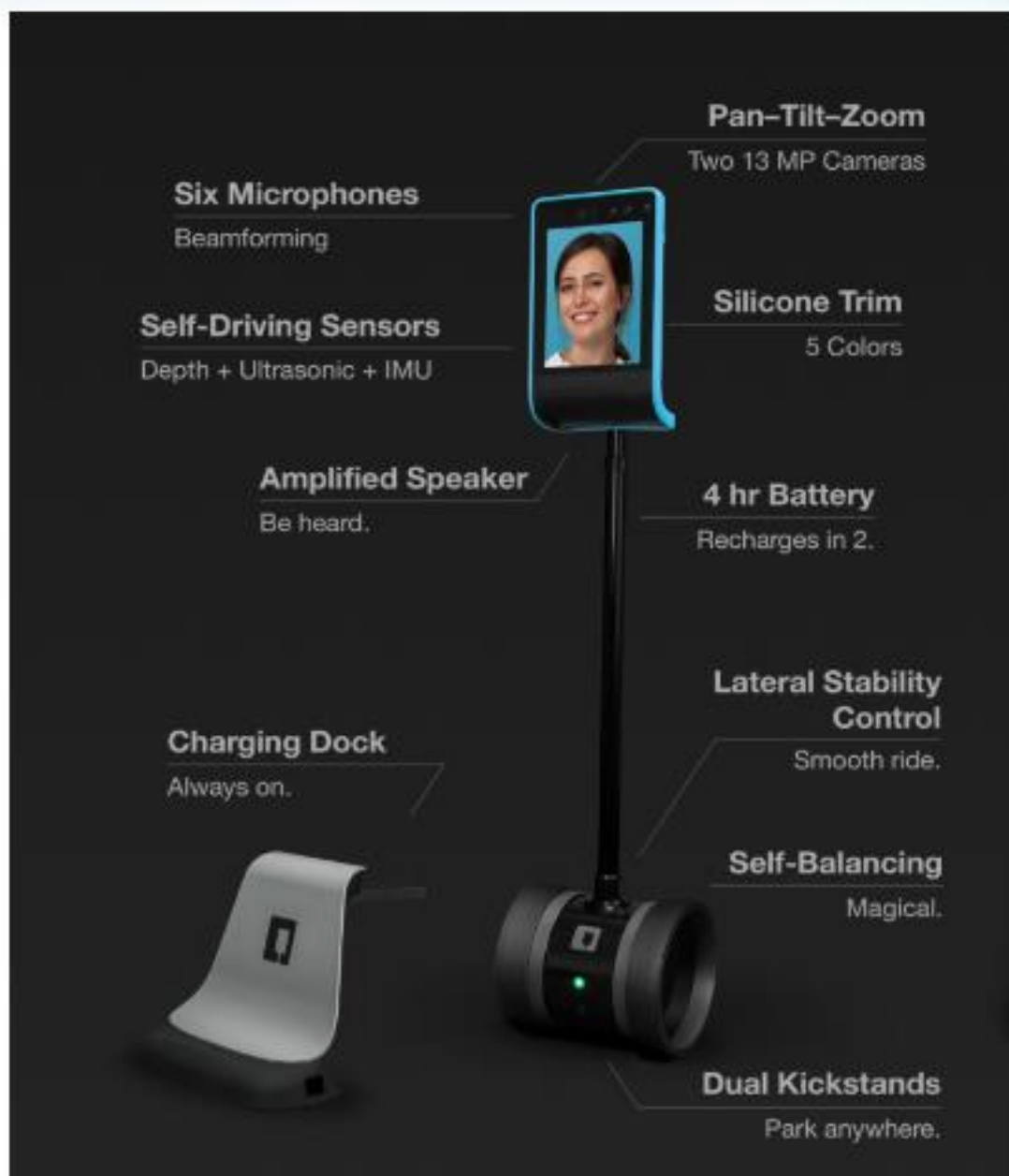
### Robotic Assisted Family Connection

A telepresence robot  
**Double** to make family presence easy, & accessible

## OUTCOMES

Quality of life  
Mood  
Loneliness  
Social support  
Usability  
Acceptance







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