

S13: Technology enabled care for neuropsychiatric symptoms of dementia: implementation at the point of care

Authors: Amer M. Burhan, Winnie Sun, Mary Chiu, Samira Choudhury, Abeer Badawi, and Khalid Elgazzar

Symposium Overview:

Neuropsychiatric symptoms of dementia (NPSD) are diverse and prevalent group of symptoms that impose significant challenge for people living with dementia (PLWD), their caregivers, and the system of care. Quality standards in all jurisdictions stipulate that individualized, non-pharmacological intervention for NPSD needs to be provided to PLWD before pharmacological interventions are used due to modest effect size and the risks involved in using the latter. Implementation of individualized non-pharmacological plan of care face many challenges including limited staffing, issues with skill development in formal and informal caregivers, difficulty in achieving individualization of behavioral plans with precision, issues with environmental design to name few. To that end, technology has been proposed to address some of these challenges with significant promise at the proof-of-concept level but real-life implementation remains limited.

At the Ontario Shores Centre for Mental Health Sciences in Whitby, Ontario, in collaboration with Ontario Tech University, we have established the “Advancement for Dementia Care Centre”, whereby technological solutions are tested at the point of care considering implementation challenges and engaging formal and informal caregivers in the co-design and implementation of these interventions.

In this symposium, we aim to provide a framework for the successful implementation of different technological solutions for PLWD and NPSD and present the design and preliminary data from four projects that use technology to facilitate standardized, individualized non-pharmacological care for PLWD and their caregivers. The symposium will have 4 talks:

- 1- Rationale and review of technological solutions to detect emotional distress in PLWD
- 2- virtual reality to provide reminiscence therapy for PLWD
- 3- virtual reality to provide caregiver skill development and problem solving
- 4- the use of simulation platform to provide microcredentialing of health care providers

The objectives of this symposium are:

- 1- discuss opportunities and challenges related to implementing technological solutions for NPSD at the point of care
- 2- discuss a framework for co-designing technological solutions with caregivers at the point of care
- 3- discuss rationale and preliminary findings of 4 projects implemented at the point of care for PLWD presenting with NPSD

This symposium is presented by a multi-ethnic, interprofessional panel including earlier career knowledge mobilization caregiver intervention scientist, a mid career nurse PhD scientist, and a senior clinician investigator geriatric psychiatrist representing a large collaboration team including technology developers, caregivers, engineers, knowledge users and clinicians.

Identifying pre-agitation biometric signature in patients with dementia: A feasibility study

Authors: Choudhury, Samira, Badawi, Abeer, Elgazzar, Khalid, and Burhan Amer M.