A24 – Lifespace and people with dementia: what are the in-home and community mobility issues for people with dementia? Can technology help us understand?

J Liddell¹, D Ireland², L Gustafsson³, K Kang⁴, S Reppermund⁵, SJ McBride⁶, R Lamont⁷, F Harrison⁸, S Brauer⁹, NA Pachana⁷, P Sachdev¹⁰, H Brodaty¹⁶

¹Asia Pacific Centre for Neuromodulation UQ, Centre for Clinical Research, University of Queensland, ²Australian E-Health Research Centre, CSIRO Digital Productivity Flagship, Herston, QLD, ³School of Health and Rehabilitation Sciences, University of Queensland, ⁴Centre for Healthy Brain Ageing, UNSW, ⁵School of Psychiatry, UNSW Medicine, UNSW, ⁶Dementia Collaborative Research Centre – Assessment and Better Care, UNSW, ⁷School of Psychology, University of Queensland, ⁸Department of Developmental Disability Neuropsychiatry, UNSW

Lifespace is the geographic space in which a person lives and conducts activities. A constricted lifespace is predictive of faster deterioration of cognition, need for residential care and reduced well-being. Despite this, not much is known about the lifespace and community mobility needs for people with dementia. This study uses interviews and innovative, objective technologies (smartphone GPS and Bluetooth beacons) to explore the lived mobility, barriers and facilitators to in-home and community mobility and participation. Participants from the Sydney Memory and Ageing Study, a longitudinal study of ageing, with a consensus diagnosis of mild cognitive impairment (MCI) or probable dementia were invited to passively collect their mobility data for one week (by carrying a smartphone). After this, a flexible interview was conducted about lived mobility. Preliminary analyses of data from the initial five participants (three females; average age 85 years; four people with MCI, one person with probable dementia) indicate that mobility issues are important to them and complex. They are influenced by physical and mental health, local environment, life history, informal supports, driving status, available transportation, and their own and their family members’ beliefs about their mobility. Participants expressed concerns about falling, missing activities, being a burden, apathy, fatigue, anxiety and pain related to mobility. Passively collected data provided lifespace metrics, including heatmaps, time spent at home, distances travelled and pattern of trips from home. These indicated variability between participants’ lifespace patterns and generally lower overall levels of lifespace compared to well adults. Passive monitoring technologies may assist in understanding the complex community mobility patterns and needs for people with MCI and dementia. The lifespace metrics and described needs will be used to develop resources to support safe and meaningful in-home and community mobility, which will be monitored using technology.