Manchester Interdisciplinary Collaboration for Research on Ageing (MICRA) Seedcorn grant 2015

Title: Lost Memory, Lost Way: New technology to find people with dementia who have wandered

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Adequately supporting the ability of people with dementia (PwD) to live safely and independently has been identified as a major area of unmet medical need within the UK and EU and has become one of the national priorities for dementia (National Dementia Strategy, 2009; PM's Challenge on Dementia, 2012). Crucially, part of this effort must focus on keeping PwD safe from wandering, leaving their homes and getting lost. Wandering is associated with a faster rate of functional and cognitive decline and 72% of wanderers are repeat wanderers (Silverstein 2002). Police are called in 50% of cases; 69% of wandering cases are associated with severe consequences with the majority of people succumbing to the environment (hypothermia, dehydration) and requiring evacuation (35%).

Current search and rescue methods, which use software based on episodes of previous lost persons, are not designed for the specific characteristics of someone with dementia. Furthermore, finding someone rapidly is critical as death from exposure and other dangers can occur in a short space of time. Currently, two possible and complementary solutions could be explored:

A. Improving the data entered into digital locating software systems used by Search&Rescue teams to be more dementia specific; this might involve gait studies using technology such as the iMagiMat, developed at the University of Manchester (Prof K Ozanyan);
B. Devising a non-invasive, cost effective tracking system using technology such as thermal imaging cameras. If tracking is successful, it would be the least restrictive method of managing wandering

This research project will
(1) Review the research literature on methods used to locate PwD who have become lost
(2) Develop a grant proposal to test a new technology in PwD for front-line implementation
(3) Run a small proof of concept trial of a new technology in the field

1. https://www.gov.uk/government/publications/living-well-with-dementia-a-national-dementia-strategy
2. https://www.gov.uk/government/news/prime-minister-s-challenge-on-dementia

3. Koester R. Lost Person Behavior: A Search and Rescue Guide on Where to Look - for Land, Air and Water. 2014. www.dbs.SAR.com