Housing - Building - Daily Living An app for fall prevention

G. WARD, N. HOLLIDAY. Usability of an app to support home hazard modification for fall **prevention.** Gerontechnology 2016;15(suppl):101s; doi:10.4017/gt.2016.15.s.673.00 The potential of environmental modification to reduce falls has received attention within the gerontology literature 1.2 and has been shown to be effective as part of a multifactorial intervention³. A web-based application (app) to support detection of potential hazards in homes of people at risk of falling has been developed at Coventry University with partners in health and social care across the West Midlands through the 'Innovation in the supporting people at risk of falling' project4. Method The purpose of this paper is to present usability findings of the use of the app to assist the social support network (family members and informal carers) identify potential fall hazards in the home environment of adults at risk of falling and to become actively involved in fall prevention through taking action to make environmental changes and support behavioural changes. Results of a mixed method study including an online survey, telephone interviews and a cognitive walk through to evaluate the app will be presented. Results & Discussion Following download and trial of the app, users' views on the usability of the app are presented from both health and social care professionals' perspectives (n=27) and those of adults at risk of falling (n=23, 14 males, 9 females, age 54-87, mean=69.7 years) and their carers (n=11, 3 males, 8 females, age 19-76, mean= 53.6 years). Qualitative data and usability testing by health and social care professionals found there is scope for using the app as a digital assessment tool by people at risk of falls, and the app is an appropriate and easyto-use tool to make an assessment of the home of the person at risk. Further testing of the usability and effectiveness of the app in supporting behavioral changes and environmental modifications with people at risk of falling and their carers showed that app has good usability for this group of users and supports users to make changes to their home environment. The Fallcheck app demonstrates potential to be embedded within fall prevention interventions in both public and health service contexts to support a broader self-management approach to fall prevention

References

- Pighills AC, Torgerson DJ, Sheldon TA, Drummond AE, Bland JM. Environmental assessment and modification to prevent falls in older people. Journal of the American Geriatrics Society 2011;59(1):26-33; doi:10.1111/j.1532-5415.2010.03221.x
- Gillespie LD, Robertson MC, Gillespie WJ, Sherrington C, Gates S, Clemson LM, Lamb SE.. Interventions for preventing falls in older people living in the community. Cochrane Database Systematic Reviews 2009;2; Article CD007146; doi:10.1002/14651858.CD007146.pub2.
- 3. National Institute for Clinical Excellence. NICE clinical guideline 161: Falls: assessment and prevention of falls in older people; 2013;.www.guidance.nice.org.uk/cg161; retrieved April 1, 2016
- 4. www.coventry.ac.uk/hdti/falls; retrieved September 20, 2016

Keywords: daily living, fall prevention, environmental hazards, smartphone apps Address: Coventry University, Coventry, United Kingdom;

E: g.ward@coventry.ac.uk