

A. E. TCHALLA, F. LACHAL, N. CARDINAUD, I. SAULNIER, A. ROQUEJOFFRE, V. RIALLE, P-M. PREUX, T. DANTOINE. **The effect of fall prevention and management technologies.** *Gerontechnology* 2012;11(2):347; doi:10.4017/gt.2012.11.02.637.00 **Purpose** People of all ages fall, but older people fall more frequently. In fact, losing balance and falling is probably the most common accident that happens to older adults. Although most people are not harmed when they fall, the more a person falls, the greater is the chance of injury. A serious injury can harm your health, your sense of well-being, and your independence. Therefore we set out to evaluate a set of technologies or products to prevent falls and reduce injury. We focused on commercially available specialized equipment. **Method** A longitudinal prospective cohort study was conducted from July 1, 2009 to June 30, 2010. In total 194 adults aged 65 years entered the study, equally divided over two groups, one group using fall prevention and protection devices, and a second group without such interventions. All subjects lived independently and were listed as being frail. Exclusion criteria were severe dementia and palliative care. We considered this sample of older adults as representative of frail elderly people with a high risk of falls. The preventive and protective technologies consisted of (i) assistive devices, (ii) injury protection devices, and (iii) warning devices<sup>1</sup>. All participants were asked about their history of falls during the year prior to their most recent health examination. The recall period is one year. At baseline, 83.9% of subjects were frail in the group using preventive and protective devices; this was 86.7% in the group without such technology interventions. **Results & Discussion** The acceptance rate of the technologies was 97.3%. We observed that 77 (40.5%) elderly fell at home, 29 (30.9%) in the experimental group and 48 (50.0%) in the control group. The use of a light path in combination with tele-assistance was associated with a reduction in falls at home [odd ratio=0.33 IC95% [0.17–0.65], p=0.0012]. There was also a reduction in post-fall hospitalization rate in the experimental group [odd ratio=0.30 IC95% [0.12 – 0.74], p=0.0091]. We hope to confirm these results in a larger randomized trial.

**References**

1. <http://domolim.fr>; Retrieved May 15, 2012

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