

The HIP-HOP Flooring Study: Helping Injury Prevention in Hospitalised Older People

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Background: Falls disproportionately affect older people, who are at increased risk of falls and injury (Cameron et al., 2012). This pilot study investigates shock-absorbing flooring for fall-related injuries in wards for older people.

Methods: We undertook an interdisciplinary, mixed methods study comprising: (1) A non-blinded cluster randomised trial in eight hospitals in England between April 2010 and August 2011. Each site allocated one bay as the 'Study Area', which was randomised via computer to intervention (8.3mm thick Tarkett Omnisports EXCEL) or control (2mm standard in situ flooring). The intervention period lasted one year. Anybody admitted to the Study Area was eligible. The primary outcome was fall-related injury rate. Secondary outcomes were injury severity, fall rate, and adverse events; (2) Interviews with patients, visitors, healthcare and domestic personnel across all sites; (3) Shock-absorbency and slipperiness assessments of the floors over time; (4) A cost-effectiveness analysis.

Results: During the intervention period, 226 participants were recruited to each group (219 and 223 were analysed in the intervention and control group respectively). Of 35 falls (31 fallers) in the intervention group, 22.9% were injurious, compared to 42.4% of 33 falls (22 fallers) in the control group (injury Incident Rate Ratio (IRR) = 0.58, 95% CI = 0.18 to 1.91). There were no moderate or major injuries in the intervention group and six in the control group. The fall IRR was 1.07 (95% CI = 0.64 to 1.81). The new flooring is potentially cost effective depending critically upon whether the flooring increases faller rates. Staff at intervention sites raised concerns about pushing equipment, documenting one pulled back.

Conclusions: Further research on the impact of flooring on faller rates is required and should assess flooring with better 'push/pull' properties. We estimate a fully powered trial will need 33,480 to 52,840 person bed-days in each study group.

References

Cameron, ID., Gillespie, LD., Robertson, MC., Murray, GR., Hill, KD., Cumming, RG. and Kerse, N. (2012) Interventions for preventing falls in older people in care facilities and hospitals. *Cochrane Database of Systematic Reviews*, Issue 12. Art. No.: CD005465. DOI: 10.1002/14651858.CD005465.pub3.