Evaluating the effectiveness of falls prevention strategies in nursing care facilities and hospitals

Falls prevention is a high impact intervention, but which strategies work? This summary outlines the nursing implications of a recent Cochrane review.

REVIEW QUESTION
What is the effectiveness of interventions designed to reduce falls by older people in nursing care facilities and hospitals?

NURSING IMPLICATIONS
There is considerable mortality and morbidity associated with falls in nursing care facilities and hospitals (Cameron et al, 2010). Incidence of falls in nursing care facilities is reported to be about three times that in the community, equating to rates of 1.4 falls per person per year. In hospital settings, incidence rates of 6.2 falls per person per year in wards for older people with mental health problems and 3.4 falls per person per year in rehabilitation wards for older people have been reported.

A Cochrane review was conducted to critically evaluate evidence from randomised controlled studies of falls prevention strategies in nursing care facilities and hospitals in order to inform best practice. As nurses have an important role to play in preventing falls in older people, they need to identify the most effective interventions designed to reduce falls.

STUDY CHARACTERISTICS
The review includes 41 trials involving 25,422 participants with an average age of 83 years, about three quarters of whom were women. Many of the participants had cognitive problems.

There was adequate allocation concealment in 42% of studies, while 68% had outcome assessors who were not blinded. Fifteen studies used a cluster randomised design and participants were individually randomised in remaining studies. The review calculated pooled rate ratios (RRs) and risk ratios (RRs) with 95% confidence intervals (CIs) using the fixed effect model where appropriate. In this review authors have separated results into two groups: nursing care facilities (30 studies) and hospitals (11 studies). In the 30 studies conducted in nursing care settings, follow up times varied from two weeks to two years. In the 11 conducted in hospitals, follow up times were mostly until discharge, varying from 9-12 days to 70-90 days.

SUMMARY OF MAIN EVIDENCE
In nursing care facilities, the results from seven trials testing supervised exercise interventions were inconsistent. This was also the case for multifactorial interventions which, overall, did not significantly reduce the rate of falls (RR 0.82; 95% CI 0.62 to 1.08; seven trials, 2,997 participants) or risk of falling (RR 0.93; 95% CI 0.86 to 1.01; eight trials, 3,271 participants).

A subgroup analysis, however, indicated that, where provided by a multidisciplinary team, multifactorial interventions reduced the rate of falls (RR 0.72; 95% CI 0.55 to 0.95; four trials, 4,512 participants), but not risk of falling (RR 0.98; 95% CI 0.89 to 1.09; five trials, 5,095 participants).

In hospitals, multifactorial interventions reduced the rate of falls (RR 0.69; 95% CI 0.49 to 0.96; four trials, 6,478 participants) and risk of falling (RR 0.73; 95% CI 0.56 to 0.96; three trials, 4,824 participants). Supervised exercise interventions showed a significant reduction in risk of falling (RR 0.44, 95% CI 0.20 to 0.97; three trials, 131 participants).

The full review report, including references, can be accessed at tinyurl.com/cochrane-falls

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REFERENCE