Abstract

Title: Systematic reviews and patient falls: are reportable factors consistent

Authors
Louise Whitby
Louise Whitby and Associates PL
Rural Clinical School, Faculty of Medicine, University of NSW

Craig S McLachlan
Rural Clinical School, Faculty of Medicine, University of NSW

Country: Australia

Introduction
Evidenced based systematic reviews on falls prevention provide a synthesis of current published findings to inform decision making (Higgins & Green, 2011). The data encompassed within systematic reviews principally should be based on incident reporting of falls (Hignett, Sands, & Griffiths, 2013). However models of incident reporting are assumed to be problematic. One way to test this hypothesis is to review two or more systematic reviews that include studies with particular reference incident reports as source data. And secondly whether intervention studies based on falls data within interventions can be used to calculate the percentage of studies with incidence rate ratios.

Method
Two systematic reviews (Cameron et al., 2012; Hempel et al., 2013) were published within the last five years addressing in-patient falls. The factors and findings determined as a result of the reviews are compared for consistency with respect to intervention studies using incidence rate ratios.

Results
Both studies used incidence rate ratio, IRR; the ratio of fall rate post-intervention to the fall rate pre-intervention or control. Cameron et al. (2012) included 60 studies from 1990 reporting on hospital data (both acute and sub-acute) as well as residential care facilities, all from international sources. The rate of falls could be determined from only 41 (68 percent) of the studies. Hempel et al. (2013), included 59 studies, all based on US acute hospitals published from 1983. The rate of falls could be determined from only 12 (20 percent) of studies. Both studies compared single, multiple and multifactorial interventions. Comparing hospital inpatient studies only, Cameron et al. (2012) found that multifactorial interventions provided a reduction in rate of falls but were inconclusive for reducing the risk of falling (patient sustaining two or more falls) however Hempel et al. (2013) found no reduction in rate or risk of fall. Both studies recommend further studies to strengthen the evidence for multifactorial interventions.

Discussion
The small percentage of studies that could determine if an intervention would influence the
rate of falls is problematic and suggests issues with incident reporting data across the majority of studies. The methodology in both studies is consistent in terms of interventions, except for Vitamin D supplementation. The studies appear to have included the same category of interventions, although not necessarily described in the same way. Both systematic reviews have targeted organisational factors that may have implications for incident reporting. For example, Hempel et al. (2013) suggested human factors, or system-related factors that address falls, including, leadership awareness, interdisciplinary team collaboration, quality processes are recurring factors across papers reviewed. Both studies have provided commentary on the limitations in the studies on which these reviews were based, which will inform future research and improve incident data collection i.e. improvements in data description including baseline and controls already in place, improvements in recording outcomes, description of implementation strategies and consistent statistical methodology.

Keywords
in-patient falls, implementation strategies, incidents

References


