Reviewer's report

**Title:** Falls and consequent injuries in hospitalized patients: Effects of an interdisciplinary fall prevention program.

**Version:** 1  **Date:** 23 March 2006

**Reviewer:** David Oliver

**Reviewer's report:**

General
This paper addresses an important issue, namely that of falls in hospital inpatients, which as the authors correctly identify are very common, harmful to patients and costly for organisations both economically and in time and trouble. The review of the existing literature is comprehensive and sets the scene well. In particular they note that studies have not tended to examine the long term impact (over more than 1-2 years maximum) of falls interventions in hospital settings. The intervention they describe is multifactorial - with many elements similar to those employed in previous hospital-based falls prevention trials - namely risk assessment, individualised clinical assessment and general environmental safety measures. And as prospective (historical control)/"before and after" studies go, the duration of follow up and the very large number of patients studied across a variety of settings are impressive. However, ultimately, as the authors readily admit in their discussion, the design employed - described here as a "serial survey" design, is deeply confounded. Of course, we know that it can be very difficult to perform conventional individually randomised trials in acutely ill, confused, or frail patients. Also that cluster randomisation has problems of its own (see CONSORT statement). However, there are many reports in the literature already of evaluation of multifactorial interventions in prospective (historical control) designs and these have been perhaps superceded by some RCTs (e.g. Haines 2004, Healey 2004) of higher methodological quality. It is a useful question to ask whether in real life practice over a number of years, a quality improvement programme can help reduce falls. However, as the authors themselves admit, unit characteristics such as length of stay and nursing time altered during the study. The risk profile of individuals who fell was not assessed in a way that would enable change to be described. Adherence of staff to the intervention was not measured. We do not know whether the practice of performing the research caused significant recording bias. Certainly, the numbers studied were sufficiently large to avoid type 11 error, the statistical analyses were appropriate and a range of potentially confounding variables were described. And I am completely in favour of null results being published where these are operationally useful. However, the study design employed and the acknowledged range of uncontrolled-for confounders, combined with the fact that we now have data from bona fide RCTs of multifaceted falls interventions in hospital inpatients make this a very interesting discussion of a serious attempt to change practice in falls prevention, but with very little real idea as to whether or not the change was effective. For these reasons, I would not recommend publication as a full paper though the work would make an interesting research letter or article for a journal on quality improvement in healthcare.I think it is also worth discussing why the particular interventions chosen as part of the falls programme were chosen.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
Discretionary Revisions (which the author can choose to ignore)

**Which journal?:** Not appropriate for BMC Medicine: an article of only archival interest, but might be suited to BMC Health Services Research

**What next?:** Offer publication in BMC Health Services Research after minor essential revisions

**Quality of written English:** Acceptable

**Statistical review:** No