Reviewer's report

Title: The development of a fall risk assessment for demented nursing home patients in the Netherlands

Version: 2 Date: 19 August 2005

Reviewer: Robert A Ruchinskas

Reviewer's report:

General
This is an area of considerable interest and of practical concern. Reduction of falls in a demented nursing home population is in the best interest of everyone. I applaud the authors for undertaking the first steps in this process.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
My main concern with this paper is the fact that it focuses more on the process of determining potential fall risk factors in this population instead of the actual science behind these predictors. Thus, the reader is left wanting for more. I feel comfortable in the fact that experts have reviewed prior studies and come to these conclusions. I don't need to know much more about that process or who was deemed to be an expert. I do however, want to know more about the data behind these risk factors.

Thus, there are two potential directions that this paper could take. First is the whole work could be summarized in a few paragraphs in a paper that empirically examines the utility of their proposed predictors. While this would be optimal, this is not apparently the authors' current intention. Still, comments about the predictive abilities of their risk factors should have been included (see below).

Instead, the second direction could be to pattern this paper after the many "policy statements" or "white papers" that are found in many fields. A good example would be the American Academy of Neurology and their papers on the detection and treatment of dementia. In such a model, the risk factors that are chosen would be thoroughly detailed to explain their inclusion. Thus, the reader would know the literature behind the inclusion of "medication" in their list and be able to know if there is a critical threshold in the number of medications taken or the specific types of medications that have been found to be optimal in the prediction of falls. Similarly, what do the results of the GUGT and POMA tell us about who is going to fall? What are these tests? What's the cutoff score? Much more needed to be said about what exactly the "correct choice and use" of assistive and protective devices is and how it can be measured in a standardized fashion. Lastly, while the "previous falls" section is accurate, more needs to be said about 1) the exact definition of a fall; and 2) limitations of patient self-report about fall history (especially in a demented population). In other words, all of these factors could use at least a brief review of the literature and more specifics in terms of when they are meaningful predictors.

As stated previously, the best use for such information would be to empirically test the assumption that these risk factors will have validity in predicting falls. Again, while not the apparent focus of the paper, the potential limitations of naming four hypothesized but not proven (in combination in this population) must be noted in this work (if, for nothing else, to guide the study of their belief in predictive efficacy of these risk factors). For example, falls occur frequently in a demented population. While this is good from a research standpoint (in that you are not having to predict an infrequent event such as falls in the general population), it also has drawbacks. For instance, it is
quoted that 75% of the falls that occur in a nursing home happen to those who are demented. Is the mere presence of a diagnosis of dementia going to be the most important risk factor? Why not then just place everyone with a diagnosis of dementia or score below a cutoff on a dementia screening instrument on a fall prevention program? Thus, the questions to be answered are 1) how much do these four risk factors add to the predictive equation? and 2) will there be potential base-rate problems in that most demented individuals will have one or more of the risk factors marked positive? In other words, until the research is done to figure out the best predictor(s), you may have a good instrument in terms of general sensitivity to falls but one that is not specific as to which individual is going to fall (leading back to the "why not place all those with a diagnosis of dementia in a fall prevention program? I declare that I have no competing interests" question).

The authors state that this is a first step in generating guidelines for preventing falls in a demented population. Recognizing the limitations of this approach and the need for developing a valid predictive algorithm based on these risk factors must be stressed in this paper, along with the exact science behind the inclusion of these variables.

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

The word "heart" is incorrectly spelled in Table 1

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Discretionary Revisions (which the author can choose to ignore)

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What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests