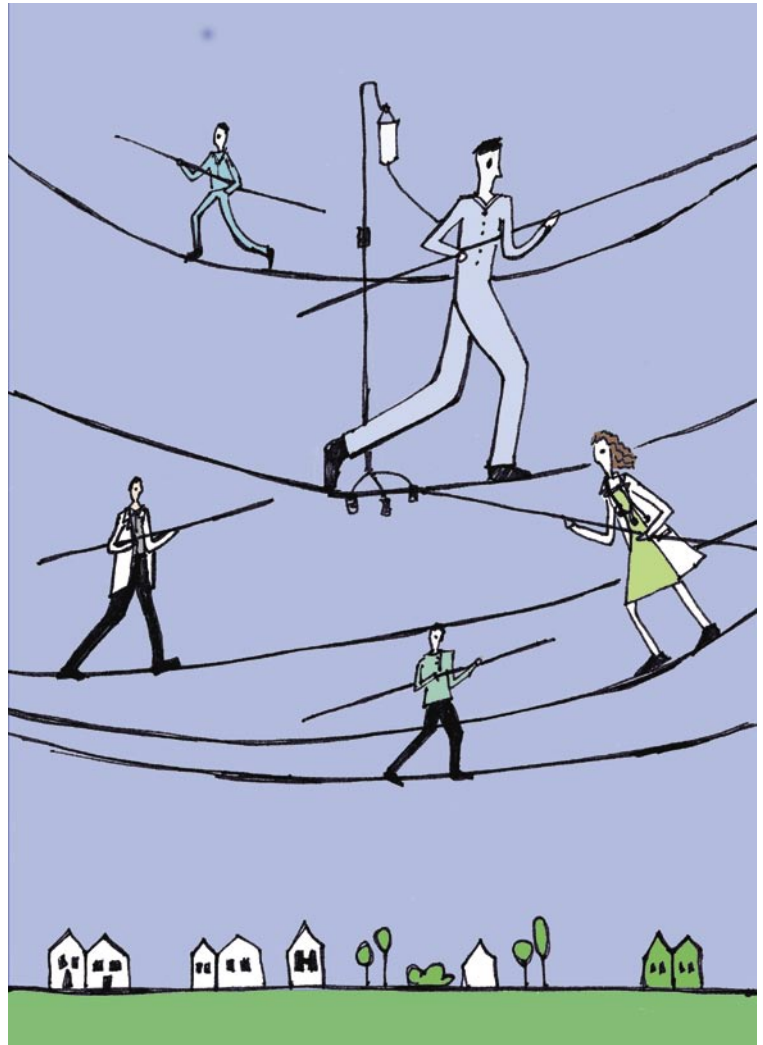




# An Evaluation of a Fall Management Program in a Personal Care Home Population

Elaine M.J. Burland



## Abstract

Falls are a common problem among institutionalized adults, often resulting in serious negative consequences (Tideiksaar 2002). Fortunately, many of these falls are preventable (Tideiksaar 2002). However, there has been a recent shift from a fall "prevention" approach to one of fall "management," which aims at preventing injuries rather than falls. Falling is regarded as indicative of activity, which strengthens muscles, improves balance, and ultimately reduces the risk of falling (North Eastman Health Association Inc. 2005). For this

research, the effectiveness of a fall "management" program that has been implemented in five provincial personal care homes (PCHs) in a Manitoba rural regional health authority will be evaluated. Fall-related administrative data will be analyzed to determine if there are differences (i) within the study sites over time (from pre- to post-intervention) and (ii) between the study and comparison sites. Qualitative information from staff interviews and chart audits will supplement the quantitative information.

## Background

Falls are a common problem among institutionalized adults, resulting in serious negative physical (e.g., injuries), psychological (e.g., loss of confidence) and financial (e.g., increased health-care costs) consequences (Tideiksaar 2002). Approximately 60% of personal care home (PCH) residents fall each year (Hofman et al. 2003; Kannus et al. 2005).

**Rather than trying to prevent falls, the goal is to prevent or at least minimize injuries while simultaneously encouraging mobility and functionality.**

Fortunately, many falls are preventable (JEL Health Education, Ltd. 2002; Tideiksaar 2002), including those occurring in PCHs (Ray et al. 1997). But some efforts to prevent falls can actually increase the risk of falling (Kane 2001). Specifically, physical and chemical restraints have been found to be more detrimental than helpful (Rubenstein et al. 1994). Not only do they hamper quality of life by restricting residents' interaction and involvement in life, but they result in decreased activity, which contributes to muscle atrophy that, in turn, decreases residents' strength, balance and ultimately confidence – all of which increase the risk of falling (Komara 2005; North Eastman Health Association Inc. 2005a). Since the 1990s, there has been a national effort in the United States to reduce and eventually eliminate the use of restraints (Tideiksaar 2002).

Recently, there has been a philosophical shift from fall prevention to fall management as a response to the problem of seniors' falls. Rather than trying to prevent falls, the goal is to prevent or at least minimize injuries while simultaneously encouraging mobility and functionality (North Eastman Health Association Inc. 2005a), which contribute to improved quality of life (North Eastman Health Association Inc. 2006).

Fall management builds on the already established fall prevention theoretical base, keeping components found to be effective (e.g., exercise, nutrition and the minimization of fall risk factors) and revising those found to be ineffective (i.e., restraint use). As well, fall management is consistent with injury prevention and public health efforts to "think upstream," which is to prevent situations that can cause injury and disease, identify high-risk groups and develop and implement interventions that will reduce the incidence and prevalence of those injuries and diseases (Ashton and Lee 1998). Fall management is also consistent with current proactive seniors' health-related policies and initiatives worldwide, including those in Canada (Public Health Agency of Canada 2005), the United States (Smith and Gamroth 1995), the United Kingdom (Higgs et al. 1998) and Australia (Queensland Health Australia 2003).

Moreover, fall management is an important part of a larger effort to move toward a more social model of care (i.e., person-centred care) that acknowledges that quality of life is as important as (if not more important than) simply extending life (North Eastman Health Association Inc. 2006). Research on institutional efforts to operate under a more social model shows overwhelmingly positive results. Resident (and staff) quality of life improved (Ogden 1998; Reese 2001; Sherbrooke Community Centre 2004), as did resident functionality and health (Ogden 1998). There were also fewer negative outcomes, such as pressure sores, weight loss, falls and restraint use (Reese 2001).

However, fall management and injury prevention efforts are not without their limitations. First, not all research results have been positive. Some studies have found no change in fall rates, and others have even found increases (Vu et al. 2004). However, since falling is indicative of activity and mobility, an increase in falls is not necessarily a negative outcome, especially if injuries do not increase. Moreover, much of this research has acknowledged study shortcomings such as small samples (Vu et al. 2004) and differences in the intervention, outcome measures, geography and/or samples sizes (Becker et al. 2003).

**Fall management is part of a social model of care that acknowledges that quality of life is as important as simply extending life.**

A second limitation of fall management efforts is that implementation and assessment of fall management and person-centred care efforts can be difficult. It is challenging to promote safety and independence simultaneously (Theodos 2003) and, in practice, the former continues to take precedence over the latter (Kane 2003). Fall management and person-centred care efforts are difficult to sustain (Dempsey 2004; Rantz et al. 2001). Issues such as inadequate staff numbers and training (Resnick et al. 2004), high staff turnover (Amann Talerico et al. 2003), resistance from residents and families (Boise and White 2004) and finance systems that continue to favour technical and standardized care over prevention and person-centred care efforts (Amann Talerico et al. 2003) all hinder program sustainability.

Assessment also proves to be challenging. Few tools exist for adequately assessing quality of life (Kane et al. 2004). There is an abundance of measures for assessing health-related quality of life, but health is only one aspect of a person's overall quality of life (Kane 2003). The Minimum Data Set (MDS) is one example of a widely used tool for assessing nursing home residents (Kane 2003; Wodchis et al. 2003) that does not adequately assess quality of life: only two of the 24 items are related to quality of life, and these focus on restraint use and

level of daily activity (Kane et al. 2004). Moreover, the MDS is based on staff observation rather than resident perceptions, and residents themselves are the best source of information about their quality of life (Kane et al. 2003).

A third limitation facing fall management and person-centred care efforts is the time, resources and expertise needed to implement and interpret the research to assess these complex endeavours. Still a fourth limitation is that there is no guarantee a program is actually being implemented. Continuous monitoring and evaluation of programs can help ensure proper program implementation. While few programs can afford a continuous formal evaluation, computerizing as much information as possible (e.g., patient information, occurrence reports and charts) can facilitate informal monitoring by providing quickly accessible, real-time data (Chies 2004; Wagner et al. 2005).

Fortunately, many of these limitations are not insurmountable, and the benefits of the implementation of fall management and person-centred care greatly outweigh the challenges.

### Outcomes of the Fall Management Intervention

The first objective of this research is to evaluate the effectiveness of a fall management program recently implemented in the five PCHs in one of Manitoba's regional health authorities in order to assess how well it contributes to minimizing residents' injuries while simultaneously promoting their mobility, functionality and quality of life. The second objective is to disseminate the research findings, positive or negative, to a wide range of audiences.

The design used to measure changes in fall-related risk factors (e.g., polypharmacy) and outcomes (e.g., hip fractures) is multi-faceted: quasi-experimental (non-randomized), time series (pre- and post-intervention), comparison group (control PCHs without a program) and mixed methods (combination of quantitative and qualitative data and methods). These comparisons will be made between (1) study PCHs over time and (2) study PCHs that have a program versus control PCHs that do not have a program.

The research is currently in progress. To date, a program evaluability assessment has indicated that the program is ready to be evaluated as it meets the criteria set out in the professional literature (e.g., goals and objectives are realistic and measurable, and there are no apparent program-related issues that could interfere with program delivery or the evaluation) (Rutman 1980).

The expected outcome of the program is the minimization of preventable negative consequences associated with residents falling through the implementation of a sustainable fall management program (North Eastman Health Association Inc. 2005b). Specifically, it is expected that the rates of fall-related risks and negative outcomes will be lower in the study PCHs following program implementation. As well, lower rates are expected in

the study PCHs compared with the control PCHs that do not have a program in place. Finally, improvement is also expected in resident quality of life as measured by a resident and family survey that is to be re-administered in 2007–2008.

### Implications of Research

Fall management may be a better practice than fall prevention. However, because it is a relatively new theory, there is not much research on fall management itself, especially in PCH populations. Most research focuses on fall prevention in community-dwelling seniors (Vu et al. 2004), and many studies involve sample-based randomized control trials (Moreland et al. 2003). This research project provides an opportunity to test the new fall management theory in a PCH population, a group for whom fall interventions have proven less effective than in their community-counterparts (Vu et al. 2004); it is thus an area in need of more research.

Future research could expand this scope and test fall management at the provincial level, looking at each region within Manitoba rather than just two. Moreover, because of a single-payer, universal system across Canada, similar data exist in other provinces (Martens 2004) that could be used as additional sources for comparative analysis. **HQ**

### About the Author

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