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Feature Article

Exploring falls prevention capabilities, barriers and training needs among patient sitters in a hospital setting: A pilot survey

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ABSTRACT

Older patients in hospitals are at high risk of falls. Patient sitters are sometimes employed to directly observe patients to reduce their risk of falling although there is scant evidence that this reduces falls. The primary aim of this pilot survey ($n = 31$) was to explore the patient sitters' falls prevention capability, self-efficacy and the barriers and enablers they perceived influenced their ability to care for patients during their shifts. Feedback was also sought regarding training needs. Most (90%) participants felt confident in their role. The most frequent reasons for falls identified were patient-related ($n = 91$, 64%), but the most frequent responses identifying preventive strategies were environment-related ($n = 54$, 64%), suggesting that the sitters' capability was limited. The main barriers identified to keeping patients safe from falling were patient-related ($n = 36$, 62%) such as cognitive impairment. However, opportunities that would enable sitters to do their work properly were most frequently categorized as being staff-related ($n = 20$, 83%), suggesting that the sitters have limited ability to address these barriers encountered. While 74% of sitters reported they had received previous training, 84% of participants would like further training. Patient sitters need more training, and work practice needs to be standardized prior to future research into sitter use for falls prevention.

Introduction

Falls are one of the most frequently reported adverse events in hospitals[1,2] and occur in between 13 and 23% of patients.[3,4,5] Between 23 and 42% of falls in hospital are associated with physical injuries,[3,4,6,7] of which between 2 and 7% result in hip fractures.[8,9]

Results from several meta-analyses have suggested that multifactorial falls prevention interventions[10,11,12] and non-pharmacological delirium interventions[13] can be effective in reducing the number of falls in hospitals, although one recent large-scale multifactorial intervention study conducted in acute wards[14] showed no difference in falls or fall injuries. Results from another randomised controlled trial[3] demonstrated that an intervention which involved providing individualised falls education to patients with good levels of cognition, training of hospital staff to support such a programme, and provision of patient feedback to staff significantly reduced the rates of falls and injurious falls in rehabilitation wards. Hence, the latter may be key elements of an effective multifactorial intervention. To date it is not yet clear which interventions or combinations of interventions will lead to the most optimal reduction in hospital falls.

Fall rates in hospitals are higher among older people with cognitive impairment,[8,15,16] and it has been shown that delivering patient falls education is less effective in this subgroup of patients.[3] Additionally, research has demonstrated that falls mainly occur when patients are unsupervised.[9,17–19] In light of these findings, some hospitals choose to increase direct supervision and observation of patients who have a high risk of falling by using volunteers[20] or care staff[21,22] as one strategy within their multifactorial falls prevention programs. In hospitals in Australia and the United States, nursing assistants and care assistants are sometimes employed to directly observe patients specifically to reduce their risk of falling.[23] Results from small prospective and feasibility studies have suggested that the deployment of these so-called *patient sitters* on hospital wards could lead to decreased falls rates.[24,25] However, several other studies have reported that sitter

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use is ineffective and costly,[26,27] and that reducing the number of sitter hours did not increase overall fall rates.[28] A systematic review found that there is lack of rigorous research and scant evidence that patient sitter use is an intervention that leads to falls reduction on hospital wards.[29] One factor that could explain the lack of effect of patient sitters in reducing fall rates could be their lack of knowledge and awareness of falls management best practice principles.

The COM-B (*Capability*, *Opportunity*, *Motivation* to undertake a health *Behavior)* is a health behavior change framework,[30] which can be applied to the patient sitters' behavior necessary to provide care which aims to reduce the falls risk of hospital patients, conceptualizes that one requires the skills (*capability*: knowledge and awareness), *opportunity* (environmental and social) and the intention (*motivation*) to undertake falls risk reducing *behavior*. A survey conducted among care staff in nursing homes, who have similar roles to sitters (nursing assistants) in hospitals, found that low levels of capability regarding falls and falls prevention may have limited their abilities to effectively translate falls prevention evidence into practice despite their high motivation to prevent falls among the residents they cared for.[31] To date, patient sitters' knowledge and awareness about falls among hospitalized patients has never been considered. Therefore, the purpose of this study was to pilot-test a survey among patient sitters in hospitals in preparation for a future larger survey. The survey was based on a previous survey[31] which evaluated care staff who worked in nursing homes regarding falls prevention practice, using the COM-B health behavior change framework. The aim of the study was to explore the patient sitters' falls prevention capability (knowledge, awareness, self-efficacy) and opportunity (perceived barriers in keeping their patients safe from falling, and enablers that might help them to reduce the risk of falls). The secondary aim was to gain their feedback regarding their training needs in this area.

Methods

Design and ethics

This was a descriptive exploratory pilot survey.[32] The study was approved by the Sir Charles Gairdner Group Human Research Ethics Committee (Quality Improvement Activity 11155). All participants were provided with written and verbal information about the study, which included statements about the survey being anonymous and that no personal details were sought. Participants consented to participate by completing the survey.

Setting

The survey was conducted in the acute stroke, medical, cardiac, renal, geriatric rehabilitation, general surgical, and older adult mental health wards of a large tertiary hospital, and in the stroke and aged care rehabilitation wards of a secondary hospital in the Greater Perth region in Western Australia.

Participants and recruitment

Potential participants were Assistants in Nursing or Personal Care Assistants from both private and government agencies who were employed to complete a shift in either of the two selected hospitals, with the specific task of providing one-to-one supervision for older patients at risk of falls. Eligible participants had to have worked at least one supervisory shift in the 12 months prior to recruitment and be able to read and write English sufficiently to respond to the survey. Recruitment took place in February and March 2016.

Questionnaire development

Prior to the study a bespoke questionnaire was constructed.[33] All questions were formulated at the seventh-grade English literacy level using the Flesch-Kincaid readability index program[34,35] since it was known that sitters' education levels could be low.[31] Questions were designed based on the constructs of the COM-B health behavior change framework, a theoretical psychological model of behavior change.[30] The wording of the questionnaire items was also derived from previous work in which self-efficacy for preventing falls among nursing staff and knowledge about falls prevention among hospital patients were assessed,[36,37] but modified to suit the context of this questionnaire. Nine items collected the participants' background characteristics and 12 (comprising a mix of open- and closed-ended Likert scale,[38] multiple choice, and categorical) items assessed falls prevention capability (knowledge, awareness, self-efficacy), opportunity (barriers, enablers) in keeping their patients safe from falling, and training needs (Table 1). The response options for the two multiple choice questions were based on the advice that nurses would give sitters on their wards (these were derived from recommendations found in national falls prevention guidelines[22]). Prior to the survey, face validity of the questionnaire was evaluated during a "talk through"[33] session amongst a convenience sample of five hospital employees who operated within a falls prevention community of practice, and six patient sitters from different wards in the hospital to rate clarity and ease of use of the questions. Questions were amended according to the outcome of this evaluation.

Procedure

Two surveyors (a registered nurse and a physiotherapist) who worked at the hospitals identified potential participants at the sites' nursing resource centres. Subsequently they approached the clinical areas' senior nurse at the wards where potential participants were working that day to inform them of the survey. Patient sitters who were willing to participate and who had not previously completed the survey were presented with a written explanation of the study and were given the opportunity to have their questions answered. Participants were subsequently checked for the inclusion criteria and eligible participants were asked to complete the questionnaire on a paper printout or on a tablet via SurveyMonkey®. The surveyors took the position of the patient sitter while the participant was completing the survey. After completion, paper-based surveys were directly handed to the surveyor who then entered the responses manually into SurveyMonkey®.

Statistical analysis

Quantitative results were summarized using frequencies and percentages. All verbatim responses from participants were extracted from SurveyMonkey® and organized using Microsoft Excel. Content analysis of the open ended questions was undertaken using a deductive approach.[39] The categorization matrix was developed based on concepts of behavior change[30] and previous work, which identified a framework for how falls are likely to occur in hospital.[40] This framework conceptualizes that when there is effective interaction between three domains in a hospital ward (patient actions, staff actions and the surrounding environment) then falls are less likely to occur. Two researchers (LDdJ, A-MH) independently read through the data several times. Responses were coded by theme and first assigned to the pre-determined generic category. Subcategories with similarities were grouped within each generic category and then grouped under higher order headings to reduce the number of categories through the collapse of like and unlike categories.