Fall Prevention in the Acute Care Setting

By

BRENDA ATENCIO

A project submitted in fulfillment of
The requirements for the degree of:

MASTER OF NURSING

WASHINGTON STATE UNIVERSITY

College of Nursing

December 2010
To the Faculty of Washington State University:

The members of the Committee appointed to examine the project of BRENDA ATENCIO find it satisfactory and recommend that it be accepted.

___________________________
Ginny Guido, JD, MSN, RN, FAAN

___________________________
Joan Caley, MS, RN, CNS, CNAA, BC

___________________________
Lida Dekker, MN, RN, CNM
Abstract

Using transformational leadership skills, a nurse leader can guide a multidisciplinary team to develop and implement strategies to effectively assess fall risks and implement interventions to reduce the number of patient falls in hospitals. Patient falls have a huge impact, both financially and personally. The leading cause of harm in a hospitalized patient is due to falling (Institute for Clinical Systems Improvement, 2008). Injuries from falls often prolong, complicate, and increase the cost of hospitalization challenging facilities to implement successful fall prevention strategies. Hospitals are no longer reimbursed for costs due to preventable fall related injuries and must make efforts to reduce these. Decreasing the incidence of falls is not an easy task for hospitals. Nursing is critical in the identification of patients who are at risk for falling and for carrying out interventions that help keep patients safe. A fall prevention team can be instrumental in evaluating complex and multifaceted clinical and organizational processes related to the identification and care for patients at risk for falling. This paper explores the need for reducing patient falls and the nurse leader’s role in developing and leading an effective fall prevention team.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>iii</td>
</tr>
<tr>
<td>Statement of Purpose</td>
<td>1</td>
</tr>
<tr>
<td>Conceptual Framework</td>
<td>2</td>
</tr>
<tr>
<td>Government Involvement</td>
<td>2</td>
</tr>
<tr>
<td>Fall Risk Factors</td>
<td>4</td>
</tr>
<tr>
<td>Fall Risk Assessment</td>
<td>5</td>
</tr>
<tr>
<td>Fall Prevention Interventions</td>
<td>7</td>
</tr>
<tr>
<td>Fall Prevention Education</td>
<td>8</td>
</tr>
<tr>
<td>Developing an Influential Fall Prevention Team</td>
<td>9</td>
</tr>
<tr>
<td>Conclusions and Recommendations</td>
<td>12</td>
</tr>
<tr>
<td>References</td>
<td>13</td>
</tr>
</tbody>
</table>
FALL PREVENTION IN THE ACUTE CARE SETTING

Increases in length of hospital stays and poor patient outcomes due to falls can be both financially and personally devastating. Fall rates vary significantly depending on the type of acute care unit and the patient population served. Fall rates are estimated to be 2.2 falls per 1,000 patient days for first time falls and 3.6 falls per 1,000 patient days on high performing medical-surgical units (Boushon, Nielsen, Quigley, Rutherford, Taylor, & Shannon, 2008).

Falls can increase the length of stay and healthcare costs due to injuries. Patients whose falls resulted in injuries reported hospital charges over $4200 higher than patients who did not fall; these costs do not include the expenses associated with long-term rehabilitation, patient’s pain and suffering, or the costs of lawsuits (Bates, Pruess & Platt, 1995). The cost of injuries from falls for people older than 65 in 1994 was $27.3 billion. By 2020, it is estimated to be 43.8 billion (Boushon et al., 2008).

The statistics vary for the injury rate from falls. It has been reported that 29% to 48% of falls result in injury, and 4% to 7.5% of falls result in serious injuries (Hitcho et al., 2004). Falls can result in bruising, fractures, lacerations, head injuries, soft tissue trauma, fear of repeat falls and a decreased ability to return to baseline health status prior to hospital admission.

Statement of Purpose

The purpose of this literature review was to examine the significance of patient falls on patients and hospitals, explore options for assessment and interventions, and determine the nurse leader’s role in developing a successful fall prevention team while utilizing a transformational leadership style. Transformational leadership may help facilitate team members to engage in learning and implementing best practices in the assessment, intervention and education of patients, family and staff about fall prevention practices that ultimately help prevent falls.
Conceptual Framework

Bass' (2006) theory of transformational leadership provided the framework for this paper. Transformational leadership is a leadership approach that creates change in individuals and systems and enhances the motivation, morale and performance of followers through a variety of mechanisms. Leaders “stimulate and inspire followers to both achieve extraordinary outcomes, and in the process, develop their own leadership capacity” (Bass &. Riggio, 2006, p. 3). This includes connecting the follower's sense of identity and self to the mission, being a role model for followers that inspires them, challenging followers to take greater ownership for their work, and understanding the strengths and weaknesses of followers. Transformational leaders achieve superior results by using one or more of the four components (idealized influence, inspirational motivation, intellectual stimulation and individualized consideration) of transformational leadership. Idealized influence is described as the ability to emphasize the importance of a collective sense of mission and reassurance that obstacles can be overcome. Inspirational motivation is the ability to articulate a compelling vision for the future. Transformational leaders stimulate their followers’ efforts to be innovative and creative and these leaders are described as having the ability to get others to look at problems from different perspectives, thus providing intellectual stimulation. Finally, transformational leaders pay attention to individuals needs for achievement and growth and act as coaches and mentors.

Government Involvement

Government involvement in hospital quality and reimbursement has made it essential for hospitals to work towards preventing falls to decrease financial strains and improve patient outcomes. The Centers for Medicare and Medicaid Services (CMS) issued the final Inpatient Prospective Payment System (IPPS) rule for hospitals on August 1, 2007. This rule called for
the continued improvement of hospital quality measurement, public reporting and financial penalties for failures to meet those obligations. There also was elimination of additional reimbursement for selected conditions and complications acquired in the hospital. The purpose of this rule was to reform the Diagnosis-Related Group (DRG) system. Nursing has been impacted by several provisions of this new rule. Historically, payment systems have not recognized nursing’s responsibility for quality improvement. The changes made in this final rule are indirectly intended to address this concern. Under the IPPS final rule, hospitals will not be reimbursed for the care of complications, errors, injuries, and infections that could have been reasonably prevented (Robert Wood Johnson, n.d.).

A majority of hospitals utilize The Joint Commission’s accreditation program as a way to meet the government’s requirement for hospital licensure. The Joint Commission provides standards for fall risk assessment and prevention that hospitals must comply with to meet accreditation standards. “The hospital assesses and manages the patients risk for falls, is the requirement specific to falls” (The Joint Commission, 2010, Standard PC.01.02.08). The elements of performance for this measure are:

the hospital assesses the patient’s risk for falls based on the patient population and setting, and the hospital implements interventions to reduce falls based on the patients’ assessed risks. The Joint Commission gives five classifications that falls can be scored into: (a) no apparent injury, (b) minor injuries such as bruises or abrasions, (c) moderate injuries such as an injury that causes tube or line displacement, a fracture, or a laceration that requires repair, (d) major injury that requires surgery or a move to ICU for monitoring a life-threatening injury, and (e) death. (The Joint Commission, 2010, para 9).
The goal of reducing the risk of patient harm from falls first appeared on The Joint Commission’s National Patient Safety list in 2005 and continues to be on the list for 2010 because falls continue to account for a significant portion of injuries in hospitalized patients (The Joint Commission, 2010).

**Fall Risk Factors**

Risk factors for falling can be categorized as either intrinsic or extrinsic to each individual patient. Intrinsic risk factors are connected to each individual patient whereas extrinsic factors are external conditions to the person that create risks for falling. Extrinsic risk factors are external to each patient and are related to the physical environment, such as lack of support equipment next to bathtubs and toilets, design of floors, poor illumination, inappropriate footwear, improper use of assistive devices and inadequate assistive devices (Tzeng & Yin, 2008). Intrinsic factors include age-related changes, reduced vision, unsteady gait, musculoskeletal system deficits, mental status deficits, acute illness, chronic illness and also a history of a previous fall. Mental status is a key component of the assessment when trying to determine if a patient is at risk for falling. Delirium has consistently been shown to be a significant contributor to falls in the hospital setting. Patients with cognitive impairments are also at an increased risk to fall due to impaired executive functioning, loss of insight, and an inability to differentiate between a safe and unsafe environment (Institute for Clinical Systems Improvement, 2008).

Environmental hazards, accidents, and falls from bed were identified as the most common causes of falls among the elderly (Tzeng & Yin, 2009a). One factor resulting in falls is the response time to patient requests. A quick response time for nursing staff to respond to a call light is crucial. Patients often become impatient when they perceive that a call light is not
answered timely, and they attempt activities that threaten their safety. It is not only the response of someone responding in person or communicating through the answering system, but the timeliness of the response to the patients’ requests that is vital. Another factor is the height of patient beds used in acute care units. Hospital beds typically are much higher than the average height of beds designed for home use (Tzeng & Yin, 2008). Finally, patients need to be provided with either their own ambulatory aids, or an ambulatory aid from the facility if it is determined they need one. In one study, one fourth of the patients surveyed used ambulatory aids at home, yet only one third of those patients were using an aid in the hospital at the time of the fall (Hitcho et al., 2004).

The Joint Commission reviewed patient falls between 1995 and 2004 and found that the primary root causes of fatal falls included five components:

1) inadequate staff communication and incomplete orientation and training;
2) incomplete patient assessments and reassessments; 3) environment issues;
4) incomplete care planning and unavailable or delayed care provision; and
5) inadequate organizational culture of safety (Sulla, 2007 p. 140).

In 2000, the Joint Commission on Accreditation of Healthcare Organizations (renamed The Joint Commission in 2008) published a Sentinel Event Alert for fatal falls citing that communication between staff involved with the patient was a factor in more than half of all patient falls.

**Fall Risk Assessment**

A key part of preventing falls in the hospital is to assess patients for their risk of falling. There are a number of fall risk assessment tools that have been developed and validated for their ability to accurately screen patients for their potential of falling. These tools include the Hendrich I and II, Johns Hopkins, Innes, Morse, STRATIFY, Downton, Tinetti and Schmidt
Fall Prevention instruments. There is not a consensus as to whether any of these assessment instruments were better than others in fall prediction. Current available literature suggests fall risk prediction can be condensed to two questions: has the patient fallen in the last year and does the patient look like he or she is going to fall (Institute for Clinical Systems Improvement [ICSI], 2008).

Although all fall risk assessment tools vary somewhat, key points of a fall risk assessment generally include: assessment of cognitive dysfunction, gait, mobility, medications, history of recent falls and an environmental safety assessment.

A complex fall risk assessment is not the only choice for assessing a patient’s risk to fall. An alternative to using a fall risk assessment tool is a simple screening protocol of determining if patient has fallen in the last year, performing a mobility assessment and the clinical judgment of the person assessing the patient (ICSI, 2008). They concluded:

(a) falls risk scores are not an essential part of falls prevention policies, (b) the falls risk score may under or over predict falls, (c) any falls risk score should be tested at the facility for specificity and sensitivity, (d) of currently available fall risk scores, the Hendrich II has been associated with better performance benchmarks in fall prevention in a major multihospital health care system, and (e) a second state of assessment for modifiable (personal) risk factors leading to risk factor specific interventions should be done. (ICSI, 2008, p. 10)

A key note to remember though is that regardless of the fall risk assessment tool that is used, an assessment does not prevent falls. It only predicts which patients are at a higher risk to fall.

When working on fall prevention, it may be helpful to determine where and when patients have the highest incidence of falling. A study by Hitcho and associates (2004), which researched the activity at time of falls, showed that 19.1% of falls occurred during ambulation,
Fall Prevention

10.9% when getting out of bed, 9.3% while sitting down or standing up and 4.4% while using a bedside commode or toilet. A facility must look at their own data to determine at what times patients are more likely to fall. Hospitals can tailor some of the fall prevention interventions based on the trends in their own facility.

**Fall Prevention Interventions**

There is no consistent evidence of effective interventions to prevent falls among hospital patients. This can make determining what interventions to implement very difficult (Dykes, Carroll, & Hurley, 2009). Hospital staff can help prevent falls by applying patient specific and unit wide interventions. Universal fall prevention interventions for all patients should include: familiarizing patients to the environment, education on call light use, keeping the call light and personal possessions within reach, ensuring a safe environment, keeping the bed low with the brakes locked, providing non-skid footwear, adequate lighting, ensuring the floor is clean and dry, and communicating the patient’s risk to all staff (Boushen et al., 2008). Interventions for patients assessed to be at an increased risk to fall need to be more aggressive than universal precautions. These more aggressive precautions should include having a system to visually indicate the patient is at risk such as marking the room door with a visual clue. Patients should be provided ambulatory aids if needed. Bed and chair alarms can be used to notify hospital staff when a patient is trying to exit a bed or a chair. Evaluations and treatment from physical and occupational therapy may help improve strength and mobility.

Hourly rounding on patients has been an effective method to deliberately encourage routine checks on patients. When researchers compared the number of falls before rounding with the number of falls after rounding, falls were reduced approximately 60% one year later in hospitals (Quigley et al., 2008). Tasks included in the rounds are: checking on patients and
asking about any pain or discomfort, offering assistance to toilet, providing water, environmental safety checks, making sure items such as the call light, urinals and telephones are within easy reach, and checking the lighting and temperature. As a general fall-prevention strategy, nursing staff should always ask patients about their needs (e.g., toileting assistance, food, and water) every time before leaving a patient room. Nursing staff should also explain and reinforce to patients that falls and fall-related injuries can be prevented if patients allow staff to help when getting out of bed.

After a patient fall, a huddle can be utilized to pull together a group to discuss the circumstances around the fall. Utilizing a post fall huddle may give staff an opportunity to review factors that contributed to the fall, learn from, and make improvements in fall prevention for future patients. Key points to discuss during a post fall huddle are: what threatened the patient’s safety; what should have happened; why it did not; and what can be done to prevent it again (Quigley et al., 2008). Responses from fall huddles can also be shared with the hospital’s fall prevention team to help better understand the needs of patients and staff.

**Fall Prevention Education**

An important intervention in the prevention of falls is education to patients and family members. Reliable and consistent communication with patients and families is critical in the prevention of falls. Tools for patient education and strategies for improving staff communication are essential for nursing staff to aid in the education of patient and family members. Educational tools include: written and verbal education; teach back methods; visual cues such as flyers, posters and videos on patient safety for patients and family members to watch. In a study by Tzeng & Yen (2007), which studied fall-prevention education and programs received during hospitalization, patients were asked about safety issues with regard to the room design
and the care environment. Insufficient fall prevention education and unavailability of nurses to help when needed were indicated. Participants also recommended nurses give and repeat directives about fall prevention as often as possible. Reminders or posters on the patient’s room in large print with only brief and vital information may be useful tools for nurses to refer to while providing education to patients and families while in the patient rooms.

**Developing an Influential Fall Prevention Team**

Organizational support for decreasing the incidence of patient falls is critical in developing a successful fall prevention team. A multidisciplinary fall prevention team should include clinical and non-clinical staff, such as nurses, pharmacists, physical therapists, occupational therapists and physicians. When possible, it is preferable to have at least one person that has additional education in fall prevention. The support of the fall prevention team from medical staff has been linked to a reduction in fall rates (Institute for Clinical Systems Improvement, 2008). To sustain long term improvements in fall prevention, leadership must advocate for systems that promote learning, evaluation and improvement of the fall prevention program.

The role of the team includes ensuring there are processes, policies and procedures for assessment of fall risk, appropriate fall prevention interventions and education to all staff, patients and families. The team must ensure that the rates of falls and falls with injuries are tracked and shared with the fall prevention team, leadership and the entire organization. The most reliable and useful approach to analyze fall related statistics is an examination of a facility’s own quality indicator data over time (Premier, Inc., 2010). It is a necessity that the leader understands the rates and data, and engages the team to respond quickly when fall rates begin to rise. The team can also help develop and distribute to departments educational material on fall
prevention for employees, patients and families. An effective leader needs to ensure the group continues to understand the vision of the organization with regards to patient safety and fall prevention, and facilitate periodic review of the goals and update as necessary.

A transformational nurse leader is instrumental in guiding a fall prevention team to decrease the number of falls, decrease costs associated with patient falls, and improve outcomes. Using the components' of the Bass' model of leadership, a transformational leader can motivate team members to achieve great results. The first component, idealized influence, is described as the ability for the leader to articulate a compelling vision. To influence the team, the leader must demonstrate passion and ambition for fall prevention. If the leader does not fully embrace the meaningful impact of fall prevention, he or she will not express the enthusiasm needed to engage the team to work towards the vision. With idealized influence, the leader will be able to persuade the team to work towards a collective purpose to decrease falls, minimize fall risk and improving patient safety.

The second quality, inspirational motivation, is the ability to motivate others. The leader can encourage this by clearly articulating the goals of the team and a compelling vision. The Institute of Medicine report *Keeping Patients Safe: Transforming the Work Environment of Nurses* (2004) noted that “transformational leadership is in essence a relationship of mutual stimulation and elevation that raises the level of human conduct as well as the aspirations of both the leader and those led, and has a transforming effect on both” (p. 110). Engagement of team members can be encouraged through the assignment of meaningful work and providing coaching or mentoring to the team.

The leader must challenge individual’s thoughts and create intellectual stimulation. The leader may be able to do this by providing and discussing difficult case scenarios, discussions
and evaluations of different events that have occurred. The leader needs to challenge the team to look at problems differently than they have in the past. Fall prevention strategies that have worked in prior situations may need to be revisited with changing patient demographics and changes in patient care equipment. The leader can use the varying educational backgrounds of team members to help bring a broader perspective to the group. Different team members may also be interested in reading research about fall prevention specific to their area of education.

The fourth component of transformation leadership is individual consideration. A leader demonstrates this by understanding the preferences of team members and individual motivating factors. Certain team members may prefer to work on policies and procedures, review research and literature, or others may prefer to do education to staff. A leader must understand these preferences and accommodate these preferences when possible. Understanding individuals’ personal wants, needs and motivations require ongoing communication and an exchange of information between the leader and the team members. These four characteristics of a transformational leader can help the team move from a transactional relationship, towards a team that strives for higher levels of potential.

Further research is needed in the area of fall prevention and injury prevention. A fall prevention team can contribute to the growing body of evidence on fall prevention by participating in research related to fall risk assessments, fall prevention interventions and injury prevention. Much research has been done on identifying risks for falls and interventions that can help prevent falls. Further research is needed in this area to help prevent or decrease injuries from falls.
Conclusions and Recommendations

A transformational nurse leader can successfully lead a fall prevention team in working to reduce an organization’s fall rate. The nurse leader’s responsibility is to help nurses utilize current evidence and knowledge to change practices that create better outcomes in patient safety. Hospitals that have proven best practices have achieved this when there is significant organizational support for fall reduction across disciplines and departments (ICSI, 2008). Interdisciplinary collaboration with admitting physicians, pharmacists and nurses in fall prevention is critical. The nurse leader has the responsibility to embrace best practices in fall prevention while empowering the team to be successful with different fall prevention initiatives such as doing environmental rounds, looking for safety concerns and speaking with staff. An organization’s selection of a fall prevention team leader that has characteristics of a transformational leader may provide the best assurance of progress towards decreasing a facilities fall rate.
References


