Fall Reduction in the Emergency Department Using a Fall Prevention Bundle

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Background:

Falls within the Emergency Department (ED) account for 6% of all organizational falls and present a unique problem for the healthcare system. Over half of the patients who fall in the ED require additional diagnostic testing and hospitalization. Patients that fall in the ED are more likely to sustain an injury or die as a result of their fall compared to other areas of the hospital. As a measure of the quality of care, the rate of patient falls in the ED influences overall organizational rankings.

Evidence-Based Solution:

Combining fall prevention measures into a multi-component bundle can reduce the patient’s risk of falling by up to 30% in the acute care setting. Common components of a fall prevention bundle include assessment of fall risk, application of multifactorial interventions, and making falls prevention part of the unit culture. When these measures are tailored and applied to the ED setting, a reduction in the number of falls is observed.

Problem Statement and Project Purpose:

The rate of patient falls in a 70,000 visit/year urban academic medical center ED averaged 0.44 falls and 0.06 falls with injury per 1,000 visits. This posed a threat to patient safety and negatively impacted this ED’s rankings among similar academic medical center EDs. The purpose of this project was to reduce falls and fall-related injuries through the implementation of an ED-specific fall prevention bundle.

Methods:

The ED fall prevention bundle was implemented over five months and consisted of a fall risk screening inclusive of ED-specific fall-risk factors, fall prevention equipment, and staff education. Fall prevention material such as bed alarms, gait belts, commodes, non-skid socks, and door signage was acquired and placed in an area central to nursing activity. Staff was educated on the use of the equipment through short lessons delivered through peer-to-peer education by members of the interdisciplinary ED Fall Prevention Team.

During the implementation period, the fall risk screening tool was modified to be more applicable to the ED setting. A review of research literature identified some ED-specific fall risk factors and a systematic review of ED falls within the last fiscal year revealed other fall-risk factors not captured by the current screening tool. This included ED-specific factors, such as intoxication and sedation, as well as general fall-risk factors, such as weakness, confusion, and unsteady gait that when added to the current tool would better capture patients at-risk for falling in the ED. An online learning module on the modified fall-
risk assessment was developed to educate ED nursing staff. The modified fall-risk screening was then incorporated into the triage nursing assessment.

The implementation period was successful in that all of the fall prevention material requested was acquired on time, the modified fall risk assessment was built into the electronic medical record (EMR), and more than 90% of ED staff participated in peer-to-peer and online education prior to the go-live date.

Results:

Evaluation of the ED fall prevention bundle outcomes spanned six months and examined fall-risk screening, fall precaution application, and fall rates. Project objectives states that greater than 95% of ED patients would be screened for fall risk on arrival, greater than 95% of patients identified as at-risk would have fall precautions applied, and that this ED would achieve a fall rate of less than 0.3 falls per 1,000 visits six months after implementation.

Consistency of fall risk screening was measured at the end of each month by generating a report from the EMR of the number of ED arrivals that were screened and not screened. Fall precaution application was evaluated through live audits using a tool which measures the six fall precautions (fall-risk wrist band, non-skid socks, stretcher in low position, side rails raised, call bell in reach, and fall-risk door sign posted) that are required be in place upon entering a patient’s room. Evaluation of the fall rate was calculated using indecent reports and ED volume metrics and performed by comparing pre- and post-intervention data.

At the end of six months, greater than 95% of ED patients were screened for fall risk on arrival which met the project objective. More than 85% of patients at-risk had complete fall precautions in place during live audits, which fell slightly short of the stated goal. The fall rate was reduced to 0.17 falls/1,000 visits by the sixth month and 0.27 falls/1,000 visits for the final quarter which achieved the project objective. There were no falls with injury during the six months after bundle implementation.

Discussion:

A successful reduction in falls and falls with injury has been achieved in this ED using a fall prevention bundle composed of a fall risk screening with ED fall-risk factors, fall prevention equipment, and staff education. Extensive staff preparation brought about a high rate of fall risk screening and fall precaution application, which ultimately cut the fall rate in half while avoiding even a single fall with injury. Involvement of bedside interdisciplinary staff, support from organizational nursing leadership, and creating a culture of fall prevention were key components in the success of this bundle. Improvement patient outcomes and ED rankings among peer organizations were achieved as a result of this intervention.

Conclusion:

Falls in the ED present a significant risk to patient safety and require innovative approaches for mitigation. Use of multifactorial fall prevention bundles customized to the ED setting is an important strategy in reducing patient falls and fall-related injuries. Emphasis on fall prevention in the ED helps provide a safer healthcare environment and improves the quality of care for ED patients.

Title:
Fall Reduction in the Emergency Department Using a Fall Prevention Bundle

Keywords:
Emergency Nursing, Fall Prevention and Patient Safety

References:


3. National Database of Nursing Quality Indicators. (2016). *Emergency Department Total Patient Falls Per 1,000 Patient Visits/Cases.*


Abstract Summary:
A successful reduction in patient falls was achieved the ED through a fall prevention bundle composed of improved fall-risk screening, multifactorial interventions, and staff education. High rates of fall risk screening and fall precaution application post-implementation reduced the fall rate by half while averting even a single fall with injury.

Content Outline:

1. Background
   1. Falls in the Emergency Department (ED) present a challenge for patient safety.
   2. Patients that fall in the ED often require additional testing or hospitalization and are more likely to have poorer outcomes as a result of their fall.

2. Evidence-Based Solution:
   1. Multifactorial fall prevention bundles can reduce a patient’s risk for falling in the acute care setting.
   2. When these bundles have been applied to ED setting the fall rate has decreased.

3. Problem Statement and Project Purpose
   1. The rate of patient falls in a 70,000 visit/year urban academic medical center ED exceeded departmental benchmark.
   2. The purpose of this project was to reduce falls and fall-related injuries through the implementation of an ED-specific fall prevention bundle.

4. Methods:
   1. An ED fall prevention bundle was implemented over the course of five months.
2. The implementation was successful because all the fall prevention material requested was acquired, ED-specific fall risk factors were added to the fall risk assessment, and almost all staff participated in the education sessions.

5. Results
   1. At the end of six months, more than 95% of ED patients were screened for fall risk on arrival and more than 85% of patients at-risk had complete fall precautions in place during live audits.
   2. The fall rate was reduced to 0.17 falls/1,000 visits by the sixth month and 0.27 falls/1,000 visits for the final quarter meeting benchmark.
   3. There were no falls with injury during the six months after bundle implementation.

6. Discussion
   1. A successful reduction in falls and falls with injury has been achieved in this ED using a fall prevention bundle composed of a fall risk screening with ED fall risk factors, fall prevention equipment, and staff education.

7. Conclusion
   1. Use of multifactorial fall prevention bundles is an important strategy in reducing patient falls and fall-related injuries in the ED.
   2. Fall prevention measures can improve the quality of care for ED patients.

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**Author Summary:** Hannah Pop is an Adult-Gerontology Acute Care DNP student enrolled at Rush University. Her doctoral project focuses on fall prevention in the Emergency Department. She has worked as a nurse in various Emergency Departments for the last 14 years.

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**Professional Experience:** Karen Lamb, a certified Gerontological Clinical Nurse Specialist, has worked in the field of aging and nursing education for over 25 years. Her focus has been on educating both nursing staff and students. As an Associate Professor of Nursing at Rush University College of Nursing she teaches a wide variety of courses including Leadership, and Professional Role Development to graduate students. From 2002-2011 Dr. Lamb served as a consultant to Mather LifeWays in Evanston Illinois, a nonprofit focusing on meeting need of older adults and their caregivers. At Mather she developed curriculum and conducted workforce training programs related to the care of older adults. These programs included a one day workshop funded by the Illinois Department of Public Health focusing on communication and cultural competence for long-term care communities that was presented to over
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**Author Summary:** Dr. Lamb has given numerous presentation nationally and internationally on the topics of fall prevention, gerontological nursing, disaster preparedness, and nursing education, in the US and internationally. In addition, Dr. Lamb currently teaches a course for DNP students at Rush University entitled, Quality and Safety for the Aging Adult.

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