Effect of Personal Relevance on Inpatient Falls

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Acknowledgement

- We thank the BestCare grant program for supporting our research efforts to reduce inpatient falls and fall-related injuries.
- We thank nurses on the participating units for their assistance in carrying out the research.
- We thank the patients who gave permission to review their medical records.
Fall Prevention and Patient Safety

- Serious injuries from falls endanger hospitalized patients.
- NDNQI 2011 medical surgical fall rates ranged from 2.72 to 3.79
Fall Risk

- Routinely assessed on each patient on admission, nurse hand off, and change in status
- 42.6% of hospital patients who fell were classified as low risk (Hitcho et al., 2004)
Standard Fall Prevention

- fall risk assessment on admission, transfer, nurse hand off, and with status change
- posting fall risk sign in patient rooms
- teaching patients about fall risk and prevention
- placing the call bell within reach
- instructing to call for assistance when assistance is needed
Fall Prevention Intervention (Dykes et al, 2010)

- Significantly lower fall rate in the tailored intervention units compared to the standard care units, 3.15 falls per 1000 patient days versus 4.18, respectively
Elaboration Likelihood Model (ELM) of Persuasion

- Personal relevance increases attention and central information processing
- When patients actively think as they process fall risk and prevention information they are more likely to retain the information
Hypothesis

- Patients given the personally relevant message and tailored fall prevention bundle and standard care compared to patients given standard fall prevention-only will have reduced odds for falls, and reduced odds for fall-related injuries.
Design

- Cluster randomized design with 6 inpatient units over 8 months
- Units paired on like characteristics and randomized within each pair to:
  - tailored fall prevention + standard fall prevention
  - standard fall prevention-only
Sample

- All inpatients admitted to 1 treatment and 1 control unit from 5/14/2012 to 1/14/2013, and admitted to 2 treatment and 2 control units from 5/14/2012 through 10/2/2012
Sample Size

- N = 10,264 medical surgical inpatient days
- Power analysis based on Dykes et al. (2010)
  - .80 power
  - p = .05
  - to detect 87 versus 67 falls in the control versus tailored fall prevention group
Tailored Fall Prevention

- Fall risk assessment
- Delivery of individually tailored fall prevention message
- Tailored fall prevention poster in patient view
“You are at increased risk to fall due to (insert individual risk factors). Falling in the hospital could seriously injure you and delay your recovery. We need your help to keep you safe. You and the staff need to (insert the individually tailored preventive interventions) until we tell you that your precautions have changed.”
Standard Fall Prevention

- Fall risk assessment
- Fall risk precautions based on the assessment
- Precautions are described to the patient
- Posting of the generic “Call Don’t Fall” sign in patient view
**Procedure**

- Treatment unit RN staff trained in the protocol
- Treatment unit RN staff carried out intervention
- RA made daily rounds
  - collected fall risk and intervention data records
  - discussed intervention with staff
  - noted falls
  - secured patient authorization to review medical record after fall
  - abstracted medical record data related to the fall
Fall Data Abstraction

- Age
- Gender
- Race
- Ethnicity
- Length of unit stay prior to fall
- Length of hospital stay prior to fall
- Diagnosis
- Surgical procedure(s)
- Opioids
- Sedatives
- Antipsychotics
- Benzodiazepines
- Antiepileptics
- Delirium or dementia
- Depression
- Incontinence
- Impaired mobility
- Inability to rise in a single movement
- Vertigo or dizziness
- Vision or hearing impairment
- History of falls
- Number of fall incident reports
- Injury level from each fall
- Additional variables identified as contributing to the fall on the fall incident report.
Results

- 46 falls per 14,822 patient days (3.1 falls/1000 patient days) on the treatment units.
- 39 falls per 15,337 patient days (2.5 falls/1000 patient days) on the control units.
Fall-Related Injuries

- One moderate injury occurred to a treatment unit patient (hematoma to the head)
- Minor to no injuries for the remaining patients
Fall Risks

- Only 4 out of 16 (25%) treatment unit patients who fell had a tailored fall prevention risk and intervention form completed within one day prior to the fall.
Fall Risk Classification

- Patients incorrectly classified as universal fall risk rather than high fall risk for 3 out of 8 (37.5%) of the patients
Example of Incorrect Fall Risk

- Patient diagnosed with weakness and lethargy upon admission
- History of vertigo and use of benzodiazepines
- Classified as a universal rather than high fall risk
Discussion

- Implementation of a personally relevant fall risk and fall prevention message delivered by nurses did not result in reduced falls or fall related injuries.
Intervention Fidelity Issues

- Nurses identified discomfort with delivering the scripted fall risk message to patients
- Small overall percentage of completed Fall Risk forms
- Fall Risk forms might have been perceived by the nurses as unnecessary duplication of work
The fall rate for the treatment units, 3.1, equaled the significantly lower fall rate for treatment units found by Dykes and colleagues.

Lower than the median fall rate for similar nursing units published by the National Database of Nursing Quality Indicators (NDNQI) for 2011 and 2012.
Post Fall Huddles

- Might provide a more feasible way for nurses to strengthen clinical judgment within the context of their patient population and unit environment.

- Actively engage nurses in unit specific revisions for fall prevention.
Limitations

- Unit-related differences such as Dx and Tx
- Elimination of 4 of the 6 units during the study
- Nursing staff changes and competing initiatives
- Few Risk Assessment data forms completed within 24 hours prior to the falls
- Review of only 25 of the 85 patients who fell
- Personal relevance fall risk intervention not applicable to patients with dementia
- One medical center
Conclusion

- The effect of personal relevance of fall risk and fall prevention interventions did not reduce patient falls and fall-related injuries, possibly because the intervention was implemented inconsistently.
- Fall prevention efforts must be relevant for both patients and nurses.
- Post fall huddles might provide a more feasible way to identify personally relevant fall risks and interventions.