We Got You Covered – A Hip Protector Pilot Study

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IDENTIFICATION:
One of our medical-surgical units at Anne Arundel Medical Center (AAMC) has exhibited a high prevalence rate of falls with injury for the past three quarters (Q1 09 – 3Q 09). Since 2003, AAMC has participated in the National Database of Nursing Quality Indicators (NDNQI), where the fall rate and fall injury rate for all eligible units are benchmarked against similar units nationally. Our goal is to decrease the fall injury rate on this unit to zero. In examining the falls with injuries that have taken place on this unit and other units similar units at AAMC, we identified hip injuries as the major type of severe injury most likely to result from a patient fall.

PROCESS:
AAMC participates in the Maryland Patient Safety Center Comprehensive Fall Prevention Program. One of the fall prevention strategies recommended to provide a safe environment is the use of fall equipment, such as hip protectors, to reduce risk of injury. In order to determine whether the use of hip protectors would be feasible as well as effective in reducing hip injuries related to falls on this medical-surgical unit we are conducting a pilot study. The aim of this pilot study is to test the feasibility of using hip protectors on high fall risk patients and to determine if hip protectors reduce hip injuries related to patient falls. We are especially interested in learning about:

- The practical applications of the use of hip protectors
- The acceptability to patients
- The learning needs of the staff
- Estimation of annual cost
- Reduction in hip injuries

Hip Protector Evaluated:
The hip protector that is being evaluated is the Posey® Hipsters® EZ-On Brief with Removable Pads. This hip protector has impact absorbing soft foam pads over the critical fracture area (trochanter area) to help reduce the risk of injuries from falls, such as hip fractures.

Setting:
This pilot study is being conducted on the medical-surgical unit with the highest rate of injury falls in the hospital.
Dates:
The study will be conducted for a 4-week period beginning on January 22, 2010.

Participants:
All patients who meet the following inclusion criteria will be enrolled in this pilot study:

- Patients with a high fall risk score indicating risk for falls and one or more of the following criteria:
  - Able to get out of bed with or without assistance.
  - History of hip injury/hip fracture
  - History of falls
  - Gait and balance disorders
  - Osteoporosis
  - Fear of Falling

The following high risk fall patients will be excluded from this study if they have one or more of the following conditions:

- Uncontrollable incontinence
- Presence of wounds over the greater trochanter areas
- Immobility
- Hip size outside of hip size range of available hip protectors

Study Steps:
1. Eligibility of patient to participate in study using the inclusion and exclusion criteria will be determined.
2. The patient and his/her family will be educated on the importance of using the hip protector in the prevention of injuries related to falls.
3. Fall precautions will be used in addition to the use of hip protectors:
   - Falling star sticker/magnet on door frame
   - Fall sticker on chart
   - Bed in low position
   - Call bell in reach
   - Personal items in reach
   - Bed alarm on
   - Nonskid footwear
   - Adequate lighting
   - Toileting every 2 hours
   - No greater than 3 side rails up
   - Fall risk communicated during patient handoff of care
   - Patient fall education
o Family education
o Environmental rounds conducted every 12 hours
o Reassess fall risk every 12 hours. Additionally, patients should be assessed for falls on transfer from one unit to the next, following any change in status, or following a fall.

4. Skin integrity will be maintained by:
   o Assessing the patient’s skin every 12 hours using the Braden scale
   o Prior to performing the skin assessment, removing the Velcro straps around the patient’s waist and thighs in order to assess the skin under these locations.

5. The assigned nurse or Patient Care Technician on every day shift during the pilot study will complete one evaluation form for each assigned high risk fall patient. This investigator-developed evaluation form measures the following: patient demographic characteristics (age, gender), staff perception of hip protectors (ease of application, ease of use with other equipment, interference with patient mobility, patient comfort and patient compliance), and evaluation of staff perception of pre-pilot training received (teaching patient/family about hip protectors, putting the hip protector on, and assessing for skin breakdown). Additionally, the evaluation includes an item on whether the patient fell during the shift and whether the hip protector prevented a hip injury.

**SOLUTION:**

If this pilot study indicates that the use of hip protectors is feasible than hip protectors will be utilized on all adult high-risk fall patients at AAMC who have a history of falls, history of hip fracture, osteoporosis, fear of falling, and balance, gait, and mobility problems.

**OUTCOMES:**

The pilot study is currently being conducted and will conclude on February 22, 2010. The data will be analyzed to determine the following:

- Percent of patients who meet the eligibility criteria for use of hip protectors.
- Percent of patients who meet the eligibility criteria but refuse to wear hip protector.
- Percent of patients who meet the eligibility criteria and wear the hip protector.
- Percent of patients who fell while wearing the hip protector and the percent that injured their hip.
- Staff nurse perception of hip protectors (ease of applications, works well with other equipment, interference with patient mobility, patient comfort and patient compliance).
- Staff nurse perception of information received on hip protectors (teaching patient/family about hip protectors, putting the hip protector on, and assessing for skin breakdown.
- Estimated annual cost of providing hip protectors.