

**Selected Best Practices and Suggestions for Improvement**

**PSI 8: Postoperative Hip Fracture**

**Why Focus on Postoperative Hip Fracture?**

- Hip fracture is one of the most serious consequences of elderly falls. Approximately 73%-90% of hip fractures result from a fall.<sup>1</sup> Preventing falls is key to preventing hip fractures.
- Falls are also associated with higher anxiety and depression scores, loss of confidence and are associated with increased LOS and higher rates of discharge to long-term institutional care.<sup>2</sup> Thus, preventing falls is likely to have other benefits beyond prevention of hip fractures.
- Fractures increase the risk of mortality.<sup>3</sup> At 5 years post hip fracture, mortality has been estimated at 50% according to one study.<sup>4</sup>
- Not only does postoperative hip fracture cause patient harm, it also significantly increases the cost of patient care.
- At least part of this cost is likely to be shouldered by hospitals. In 2008 the Centers for Medicaid & Medicare Services (CMS) identified falls and trauma—including fractures—as one of a number of conditions for which hospitals do not receive the higher payment for cases when the condition was acquired during hospitalization.<sup>5</sup>
- Starting in 2015, the postoperative hip fracture PSI will be one of the measures used for Medicare’s Hospital Value-Based Purchasing (as part of a composite indicator) that links quality to payment.<sup>6</sup>

<b>Recommended Practice</b>	<b>Details of Recommended Practice</b>
Identification of Patients at Risk for Falls	Clinical and environmental factors that place a patient at risk for falling postoperatively should be identified and managed. <sup>2,7</sup>
Postoperative Medication Management	Polypharmacy has been shown to increase a patient’s risk for falls and postoperative hip fracture. <sup>8-14</sup> In addition, use of certain medications may reduce a patient’s risk for postoperative hip fracture after falling postoperatively. <sup>3,11-14</sup>
Standard Fall Prevention Protocol	Use a standardized fall prevention protocol to help reduce falls and associated injury. The falls prevention protocol should detail what interventions to put into place and for whom. <sup>2,7</sup>

**Best Processes/Systems of Care:**

**Introduction: Essential First Steps**

- Engage key personnel, including nurses, nursing assistants, physicians, technicians, physical therapists, occupational therapists, pharmacists, and representatives from the quality improvement department, to develop evidence-based protocols for care of the patient postoperatively who is at risk of hip fracture related to fall.<sup>15-17</sup>
- The above team:
  - Identifies the purpose, goals, and scope and defines the target population for this guideline.
  - Analyzes problems with guideline compliance, identifies opportunities for improvement, and communicates best practices to frontline teams.<sup>16</sup>

- Establishes measures to indicate if changes are leading to improvement; identifies process and outcome metrics, and tracks performance using these metrics.
- Determines appropriate facility resources for effective and permanent adoption of practices.

**Recommended Practice: Identification of Patients at Risk for Falls**

- Develop a systematic and standardized approach for team members to acquire detailed history and physicals and assessments for the following risk factors<sup>2,7,16,17</sup>:
  - Older age
  - Polypharmacy
  - Functional dependence
  - Gait instability
  - Lower limb weakness
  - Urinary frequency and incontinence
  - Low albumin level
  - Severe anemia
  - Comorbidities as defined by the American Society of Anesthesia (ASA) score, which defines an individual’s preoperative health, of 3 or greater (A patient with severe systemic disease)
  - Emergency surgery
  - History of previous falls
  - Agitation and/or confusion
  - Iatrogenic delirium
  - Environmental hazards (i.e. medical equipment, electrical cords)

**Recommended Practice: Postoperative Medication Management**

- Develop a systematic and standardized approach for team members to acquire a detailed medication reconciliation upon admission:
  - Polypharmacy of greater than four or five medications per day can double a patient’s risk for falling.<sup>1,8-10,16,18,19</sup>
  - Use of two or more medications in certain populations (e.g., elderly) may constitute polypharmacy and thus increase a patient’s risk.<sup>1,20</sup>
- Develop a systematic and standardized approach for team members to evaluate a patient’s medication regimen postoperatively:
  - Limit use of narcotics and sedatives together.<sup>2,7,9</sup>

**Recommended Practice: Standard Fall Prevention Protocol**

- Develop a systematic and standardized practice for postoperative fall prevention that includes assessing and addressing the aforementioned risks<sup>7,12,17</sup>:
  - Familiarize the patient with the environment.
  - Have the patient demonstrate call light use and keep the call light within reach.
  - Keep patient personal possessions within the patient’s reach.
  - Have sturdy handrails in patient bathrooms, room and hallway.

- Place the hospital bed in a low position and keep the brakes locked.
- Keep non-slip, well-fitting footwear on patient.
- Utilize a night light or supplemental lighting.
- Keep floor surfaces clean and dry. Clean up all spills promptly.
- Keep patient care areas uncluttered.
- Communicate patient fall risk to all caregivers.
- Offer assistance to bathroom/commode or use bedpan hourly while awake.

**Educational Recommendation**

- Plan and provide education on protocols to physicians, nursing staff, therapists, pharmacists, and all other staff involved in postoperative care. Education should occur upon hire, annually, and when protocols are added to job responsibilities.<sup>15,16</sup>

**Effectiveness of Action Items**

- Track compliance with elements of established practices by using checklists, appropriate documentation, etc.
- Evaluate effectiveness of new processes, determine gaps, modify processes as needed, and reimplement practices.<sup>15,17</sup>
- Mandate that all personnel follow the safety practices related to preventing postoperative hip fracture as it relates to falling and develop a plan of action for staff in noncompliance.
- Provide feedback to all stakeholders (physician, pharmacy, nursing, and ancillary staff; senior medical staff; and executive leadership) on level of compliance with process.
- Conduct surveillance and determine prevalence of postoperative hip fracture, as it relates to falls, to evaluate outcomes of new process.<sup>15</sup>
- Monitor and evaluate performance regularly to sustain improvements achieved.

**Additional Resources**

**Systems/Processes**

- Agency for Healthcare Research and Quality. The Falls Management Program: a quality improvement initiative for nursing facilities. Available at: <http://www.ahrq.gov/professionals/systems/long-term-care/resources/injuries/fallspx/fallspxmanual.pdf>.
- Agency for Healthcare Research and Quality. Preventing falls in hospitals: a toolkit for improving quality of care. Available at: <http://www.ahrq.gov/professionals/systems/hospital/fallpxtoolkit/index.html>.

**Policies/Protocols**

- Vermont State Hospital Policy: Fall prevention. Available at: [http://mentalhealth.vermont.gov/sites/dmh/files/policies/DMH-VSH\\_Fall\\_Prevention\\_Policy.pdf](http://mentalhealth.vermont.gov/sites/dmh/files/policies/DMH-VSH_Fall_Prevention_Policy.pdf).
- St. Joseph’s Medical Center, Brainerd, MN, Protocol: Inpatient Fall Prevention/Reduction. Available at: [http://www.mnhospitals.org/Portals/0/Documents/ptsafety/falls/Inpatient\\_Fall\\_Prevention\\_Policy.doc](http://www.mnhospitals.org/Portals/0/Documents/ptsafety/falls/Inpatient_Fall_Prevention_Policy.doc).

**Tools**

- Brigham and Women’s Hospital. Fall TIPS (Tailoring Interventions for Patient Safety). Available at: [http://www.brighamandwomens.org/Patients\\_Visitors/pcs/nursing/nursinged/Falls2Trial.aspx](http://www.brighamandwomens.org/Patients_Visitors/pcs/nursing/nursinged/Falls2Trial.aspx).
- Health Foundation for Western & Central New York. Step Up to Stop Falls Toolkit™. Available at: <http://www.hfwcnny.org/Tools/Broadcaster/frontend/itemcontent.asp?reset=1&ItemID=13>.
- Institute for Healthcare Improvement (IHI). Injurious Fall Data Collection Tool. Available at: <http://www.ihl.org/resources/Pages/Tools/InjuriousFallDataCollectionTool.aspx>.
- IHI. Transforming care at the bedside how-to guide: reducing patient injuries from falls. Available at: <http://www.ihl.org/resources/Pages/Tools/TCABHowToGuideReducingPatientInjuriesfromFalls.aspx>.

**Staff Required**

- Physicians
- Nurses
- Nursing assistants
- Physical therapists
- Occupational therapists
- Dietitian
- Social workers

**Equipment**

- Walkers
- Wheelchairs
- Bed monitors
- Commodes

**Communication**

- Systemwide education on policy/protocol of prevention of patient falls

**Authority/Accountability**

- Senior nursing leadership, nursing unit managers, physical therapy and occupational therapy managers

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