Patient Falls: Healthcare Case Study

Summary

What are patient falls?

Why worry about patient falls?

Plan of action to reduce patient falls

Case Studies

Medication/Reassessment

Transport/Safety Equipment
What is a patient fall?

Agency for Healthcare Research & Quality (AHRQ)

An unplanned descent to the floor with or without injury to the patient.

Falls are the most common adverse event in hospitals:
- Patient falls affect up to 1 million patients a year
- Lead to injury as often as half the time
- Lead to complications in 2% of hospital stays

What are the types of patient falls?

*Everyone is at risk for falling* (Morse 1987)

- Anticipated/ predictable Physiological Falls: 78%
  Typically result from known risk factors (medication, mobility issues, previous falls)

- Unanticipated/ unpredictable Physiological Falls: 8%
  Falls due to unpredictable physiological causes – seizure, fainting, drug reaction

- Accidental Falls: 14%
  Low-risk patient (or non-patient); caused by environment
### Risk Factors

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recent history of falls</td>
<td>Orthostatic hypotension</td>
</tr>
<tr>
<td>Mobility/ gait problems</td>
<td>Vision Impairment</td>
</tr>
<tr>
<td>Use of assistive devices</td>
<td>Impaired mental status</td>
</tr>
<tr>
<td>Use of certain medications</td>
<td>Incontinence</td>
</tr>
<tr>
<td>Tethered to equipment</td>
<td></td>
</tr>
</tbody>
</table>

### Why worry about falls – Patient Safety/ Patient Services

**National Quality Forum/ AHRQ/ Other Studies**

- Every fall represents risk of injury.
- 30-50% of falls result in injury, disability or death.
- Falls not involving injury can result in psychological consequences and raise risk for additional falls.
- Falls are associated with increased length of stay.
- Falls are associated with higher rates of discharge to nursing homes.
Why worry about falls – Financial

AHRQ

• Falls involving injury can increase patient-care costs as much as 61%.

• Operational costs for fallers with serious injury found to be approximately $10,000 higher than non-fallers. (As of 2008, these costs are no longer reimbursed by Medicare.)

ECRI

• High frequency of claims; cost averaging $48,000

Why worry about falls – Regulatory

National Quality Forum “Never Event”

• Patient death or serious injury associated with a fall while being cared for in a health care setting.

CMS “Hospital Acquired Conditions”

• Falls and Trauma

The Joint Commission “Sentinel Events”

• A patient fall that results in death or major permanent loss of function as a direct result of the injuries sustained in the fall.

(Requires root cause analysis)
Steps of In-Hospital Fall Prevention Process

**Patient Assessment**
**Care & interventions**
**Rounding**

**Re-assessment**
**Post-fall review**

- Admission
- Assessment
- Care & Interventions
- Rounding
- Change in status?
- Patient fall?
- Continued care, rounding

Issues noted in fall prevention process

Issues with assessment were the most commonly cited in Sentinel Event reports to The Joint Commission (50% of reports) (436 compared to 329 for communication)
Keys to Interventions based on Assessment

Communication/ Notification

- Falls are more likely to occur when staff members have not been apprised of a patient’s risk for falling (The Joint Commission)

Availability of assistance

- 79% of patients who fell in one study (Hitcho et al) were unassisted

Note on patient transport

- Unable to find much information on falls during transport, but case studies/examples indicate the problem is common
- Lack of communication between caregivers, and between transporter and patient common issues
- Care plan should include plans for transport or require reassessment prior to transport

Universal Fall Precautions: Rounding

Pain

- Assessment
- Medication

Personal Needs/Potty

- Toileting Assistance
  (Half of falls elimination-related – Hitcho et al)
- Food/ Water

Position

- Place bed in low position
- Position patient so comfortable
- Ensure bed/ wheelchair locked

Placement/Possession

- Call button in reach
- Other needs: telephone, TV remote, water, tissues, garbage, table

Prevention

- Wear nonslip footwear
- Use of night lights
- Use of handrails
- Keep floors clean, uncluttered
  (wet floor/ environmental obstacles contributed to 8% of fall EACH, Hitcho)
**STEADI Interventions**

**STEADI**  
(Stopping Elderly Accidents, Deaths & Injuries)

**Screen patients 65+**

**ASK**

- Have you fallen in the past year?
- Do you feel unsteady when standing or walking?
- Do you worry about falling?

**Review**

Medications and stop, switch or reduce the dosage of drugs that increase fall risk

**Recommend**

Vitamin D supplements of at least 800 IU/day with calcium

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**STEADI**

If 5,000 health care providers adopted STEADI, as many as:

- 6.3 million more patients could be screened
- 1.3 million more falls could be prevented
- $3.6 billion more in direct medical costs could be saved
Case Study: Patient Fall – Medication Change

Step 1. Outline

<table>
<thead>
<tr>
<th>What</th>
<th>Problem(s)</th>
<th>Patient fall, injury</th>
</tr>
</thead>
<tbody>
<tr>
<td>When</td>
<td>Date</td>
<td>March 2013</td>
</tr>
<tr>
<td></td>
<td>Time</td>
<td>Early morning</td>
</tr>
<tr>
<td>Where</td>
<td>Facility, site</td>
<td>Medical Center</td>
</tr>
<tr>
<td></td>
<td>Task being performed</td>
<td>Helping patient sleep</td>
</tr>
</tbody>
</table>

Impact to the Goals

<table>
<thead>
<tr>
<th>Goal</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Safety</td>
<td>Three broken ribs</td>
</tr>
<tr>
<td>Patient Services</td>
<td>Lack of additional care after sleeping pill</td>
</tr>
<tr>
<td>Schedule/Operations</td>
<td>Additional two weeks in hospital</td>
</tr>
<tr>
<td>Labor/Time</td>
<td>Months of physical therapy</td>
</tr>
</tbody>
</table>

Step 2. Cause Map

Patient Fall – Medication Change

Patient having difficulty sleeping

Patient given sleeping pill (zolpidem)

Patient fall

Three broken ribs

Lack of additional care after sleeping pill

AND

Fall risk not reassessed
Patient Fall – Medication Change

Step 3. Solutions

Patient Safety Goal Impacted

Three broken ribs

Patient fall

Solution: Bed alarms

Solution: Phase out use of zolpidem

Solution: Bed alarms

Solution: Additional staff/rounding

Solution: Ensure reassessment of fall risk after medication change

Patient having difficulty sleeping

Lack of additional care after sleeping pill

Fall risk not reassessed

Patient given sleeping pill (zolpidem)

Case Study: Patient Fall – Transport Equipment

Step 1. Outline

<table>
<thead>
<tr>
<th>What</th>
<th>Patient fall, blunt force trauma, death</th>
</tr>
</thead>
<tbody>
<tr>
<td>When</td>
<td>2011</td>
</tr>
<tr>
<td></td>
<td>9:14 PM</td>
</tr>
<tr>
<td></td>
<td>No strap on geri/bed chair</td>
</tr>
<tr>
<td>Where</td>
<td>Oceanside, California</td>
</tr>
<tr>
<td></td>
<td>Medical Center</td>
</tr>
<tr>
<td></td>
<td>Geri/bed chair</td>
</tr>
<tr>
<td></td>
<td>Transporting patient to radiology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact to the Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Safety</td>
</tr>
<tr>
<td>Patient death</td>
</tr>
<tr>
<td>Compliance</td>
</tr>
<tr>
<td>Noncompliance of license requirements</td>
</tr>
<tr>
<td>Organization</td>
</tr>
<tr>
<td>Fine by state health department</td>
</tr>
<tr>
<td>Patient Services</td>
</tr>
<tr>
<td>Inadequate transport of patient</td>
</tr>
<tr>
<td>Property, Equipment</td>
</tr>
<tr>
<td>Equipment missing safety features</td>
</tr>
<tr>
<td>Frequency</td>
</tr>
<tr>
<td>Third administrative penalty</td>
</tr>
</tbody>
</table>

Cost of this incident $75,000
Patient Fall – Transfer Equipment
Step 2. Cause Map

Patient Safety Goal Impacted

<table>
<thead>
<tr>
<th>Patient death</th>
<th>Blunt force injury</th>
<th>Patient fall out of geri/bed chair</th>
<th>Inadequate transport of patient</th>
</tr>
</thead>
</table>

Patient Fall – Transfer Equipment
Step 2. Cause Map

Inadequate transport of patient

<table>
<thead>
<tr>
<th>Patient left unattended</th>
<th>Unaware patient was high fall risk ?</th>
<th>Patient transported by transport team AND</th>
<th>Transport team did not receive report</th>
</tr>
</thead>
</table>

Patient not secured in geri/bed chair

<table>
<thead>
<tr>
<th>No straps on equipment</th>
<th>?</th>
</tr>
</thead>
</table>
Patient Fall – Transfer Equipment

Step 3. Solutions

Inadequate transport of patient

\[ \text{AND} \]

Patient left unattended

Unaware patient was high fall risk?

Patient transported by transport team

\[ \text{AND} \]

Transport team did not receive report

Solution: Ensure care report to transport team

Solution: Patients positioned to allow monitoring by staff

Patient not secured in geri/bed chair

No straps on equipment

Solution: Chairs checked to ensure in good working order

Tips for Root Cause Analysis

ALL error is “human error”

- Ending an analysis at “human error” limits potential solutions

Typically, multiple causes contribute to events

- Finding all the causes results in better solutions

Analyze “near misses” or case studies to reduce risk

For low-probability events, evaluate presence of contributing factors to determine success of program
Tips for Solutions

Department of Veterans Affairs Hierarchy of Actions

Weak: Actions that depend on staff to remember

- Warnings/ labels, policies, training

Intermediate: Actions that provide tools to help staff; modify existing processes

- Decrease workload/ distraction, checklists, built-in redundancy

Strong: Actions that do not depend on staff; change or redesign process

- Physical changes: grab bars, non-slip strips, straps; end use of particular medications

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Bibliography:

Case Studies:

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www.ahrq.gov/legacy/research/ltc/fallpxtoolkit/

ECRI Falls Data:
www.ecri.org/Documents/RMHRC_TOC/SafSec2.pdf

The Joint Commission Sentinel Event Reports summary:
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VA root cause analysis:
www.patientsafety.va.gov/docs/TIPS/TIPS_NovDec06.pdf

Studies:
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Morse: www.ncbi.nlm.nih.gov/pubmed/4005770

STEADI:
http://www.cdc.gov/steadi/index.html