Fall Prevention in Acute Care Hospitals: A Randomized Trial

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Preliminary Work/Fall TIPS Toolkit

Results From the Clinical Trial

Lessons Learned/Implications
Introduction

- Falls are a leading cause of death and disability
  - ~ 33% of older adults fall each year
- Hospitalization increases the risk for falls
  - ~ 3% hospitalized patients fall
  - ~ 30% of inpatient falls result in injury
- Patient falls and injurious falls are employed as national metrics for nursing care quality
  - The incidence of patient falls and related injuries are publicly reported by acute care hospitals.
  - As of October 2008, costs associated with fall-related injuries in hospitals are no longer reimbursable under Medicare
Fall Prevention at Partners HealthCare

- Reducing falls is high priority goal for Partners HealthCare (PHS)
  - 2007-2009: Fall TIPS conducted in 4 PHS hospitals
    - Robert Wood Johnson Foundation funded study
    - Aim: To establish linkages between routine nursing fall risk assessment, structured communication and tailored interventions to prevent falls
Barriers to Fall Prevention

- Delays in patient report
  - Well, we (PCAs) come in at 7 they (RN) are giving report to each other. We are on the floor… I don’t know who has been asleep since 10:30 at night. I don’t know his activity level… If I don’t have this information I have to go over there and then come back to the nurse.

- Generic signage
  - “If we have 35 patients on the floor and shy ten they are all on fall precautions. It’s like everybody falls into that category…”

- Lack of individualized (tailored) information
  - “When we identify someone at risk for fall, we need to talk more about the intervention that goes along with their risk for fall. Is it cognitive? Physical? A high score might not tell you why the person is at risk.”
  - …It is a critical piece of information (knowing what to do when answering a call light), and how we get that out there so that it is readily available for everybody, and I think that’s what stops you from answering lights sometimes. You say, “I don’t know what to do with this person anyway. Let their nurse take care of them.”
The Fall TIPS Toolkit Requirements

- Leverage Existing Workflows
- Surveillance
- Tailoring
- Teamwork
- Communication
The Fall TIPS Toolkit: Fall Risk Assessment/Tailored Plan

<table>
<thead>
<tr>
<th>Fall T.I.P.S.</th>
<th>Tailoring Interventions for Patient Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Name: Jane Doe</td>
<td>MRN: 12345678 (BWH) Location: 14-10A</td>
</tr>
<tr>
<td>Morse Fall Scale:</td>
<td></td>
</tr>
<tr>
<td>History of Falls - past 3 months: Yes (25)</td>
<td></td>
</tr>
<tr>
<td>Secondary Diagnosis: Yes (15)</td>
<td></td>
</tr>
<tr>
<td>Ambulatory Aid:</td>
<td></td>
</tr>
<tr>
<td>None / Bed Rest / Nurse Assist (0)</td>
<td>Crutch / Cane / Walker (15)</td>
</tr>
<tr>
<td>Furniture (30)</td>
<td></td>
</tr>
<tr>
<td>IV or Hep Lock Present: Yes (20)</td>
<td></td>
</tr>
<tr>
<td>Gait:</td>
<td></td>
</tr>
<tr>
<td>Normal / Bed Rest / Wheel Chair (0)</td>
<td>Weak (10)</td>
</tr>
<tr>
<td>Impaired (20)</td>
<td></td>
</tr>
<tr>
<td>Mental Status:</td>
<td></td>
</tr>
<tr>
<td>Oriented to own ability (0)</td>
<td>Overestimates, forgets limitations (15)</td>
</tr>
<tr>
<td>Morse Fall Score: 65</td>
<td></td>
</tr>
</tbody>
</table>

Interventions

- Safety documentation
- *Safety Precautions
- Document previous fall
- Review Medication List

Consultations

- Consult with MD/Pharmacist
- PT consult

Assistance with ambulating

- Provide Ambulatory aid:
  - Crutches
  - Cane
  - Walker
  - Other Device
- IV assistance when walking
- Out of bed with assistance:
  - 1 Person
  - 2 Persons

Assistance with toileting

- Toileting schedule using:
  - Bed Pan
  - Commode
  - Assist to bathroom

Print Documents

- Bed Poster
- Plan of Care
- English
- Spanish

Fall risk assessment

Tailored plan based on patient’s determinants of risk
The Fall TIPS Toolkit: Bed Poster

**Jane Doe**
Avoid Slips, Trips and Broken Hips!

CALL DON'T FALL!

<table>
<thead>
<tr>
<th>History of Falls</th>
<th>Ambulatory Aid: Walker</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Out of Bed with Assist</td>
<td>Bed/Chair Alarm On</td>
</tr>
</tbody>
</table>

Bed Poster
Fall Prevention Information

As part of the admission process, your nurse has assessed your risk for falling while you are in the hospital. You have been evaluated to be at risk for falling.

Jane Doe, why are you at risk for falling?
- You are in an unfamiliar environment.
- You are not feeling well.
- You have fallen before and may fall again.
- You are unsteady on your feet.
- You are weak.

How can we work together to prevent you from falling while you are in the hospital?
- We will assist you out of bed as soon as you are able.
- Wear nonskid foot wear.
- Ask to have needed items within reach.
- Use your walker.
- Tell your nurse about recent falls.

Remember to:
- Call for help to get out of bed.
- The bed/chair alarm is on to remind you and your nurse that you need help to get out of bed/chair.

Ask your nurse for more information on Fall Prevention or visit:
http://www.partners.org/cird/FallsPrevention/FallsInfo.htm
## The Fall TIPS Toolkit: Plan of Care

**Fall Prevention Plan of Care**

**Problem:** ***Patient is at risk for falls***

**Patient Name:** Jane Doe  
**MRN:** 12345678  
**Printed:** March 04, 2009

| Patient has a history of falls | Safety Precautions  
|-------------------------------|-------------------
|                               | Document circumstances of previous falls
| Patient uses ambulatory aid    | Place WALKER at bedside
| Patient’s gait is Weak        | Patient needs AssistX1
| Patient overestimates ability, forgets limitations | Bed/Chair alarm turned on  
|                               | Move pt. close to nurse station  
|                               | Freq Checks; re-orientation; distractions

**Total Morse Fall Score:** 65

**Sign/Credentials:** Patricia C. Dykes R.N  
**Date/Time:** 3/04/09

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**Fall T.I.P.S. Research Study Plan of Care Documentation Form October 1, 2008 - June 30, 2009**

**Medical Record Copy**
Research Questions

Did patients on units using the Fall TIPS toolkit have…

1. Fewer falls
2. Fewer falls with injury (secondary outcome)

…than patients on units without the Fall TIPS toolkit?
## Results

<table>
<thead>
<tr>
<th></th>
<th>Control Units</th>
<th>Intervention Units</th>
<th>Rate Difference</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baseline</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall rate/1000 patient days</td>
<td>5.56</td>
<td>5.85</td>
<td>-0.29</td>
<td>.61</td>
</tr>
<tr>
<td>All Patients</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. pts with falls/ total no. patients</td>
<td>87/5104</td>
<td>67/5160</td>
<td></td>
<td>.02</td>
</tr>
<tr>
<td>*Adjusted Fall rate/1000 patient days</td>
<td>4.18</td>
<td>3.15</td>
<td>1.03</td>
<td>.04</td>
</tr>
<tr>
<td>Observed no. falls with injury</td>
<td>12</td>
<td>14</td>
<td></td>
<td>.64</td>
</tr>
<tr>
<td>Patients aged &lt;65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. pts with falls/ total no. patients</td>
<td>36/2595</td>
<td>33/2405</td>
<td></td>
<td>.72</td>
</tr>
<tr>
<td>*Adjusted Fall rate/1000 patient days</td>
<td>3.76</td>
<td>3.72</td>
<td>.04</td>
<td>.97</td>
</tr>
<tr>
<td>Observed no. falls with injury</td>
<td>3</td>
<td>7</td>
<td></td>
<td>.2</td>
</tr>
<tr>
<td>Patients aged &gt;/=65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. pts with falls/ total no. patients</td>
<td>51/2509</td>
<td>34/2755</td>
<td></td>
<td>.004</td>
</tr>
<tr>
<td>*Adjusted Fall rate/1000 patient days</td>
<td>4.75</td>
<td>2.66</td>
<td>2.08</td>
<td>.003</td>
</tr>
<tr>
<td>Observed no. falls with injury</td>
<td>9</td>
<td>7</td>
<td></td>
<td>.66</td>
</tr>
</tbody>
</table>

*Adjusted for site, sex, race
To our knowledge, this is the first clinical trial to provide evidence that a specific HIT intervention reduced falls in acute care short-stay hospitals.

There were fewer falls in intervention units than in control units.

No significant effect was noted in fall related injuries.

Patients aged 65 or older benefited most from the Fall TIPS toolkit.
What we learned

Falls are prevented when key stakeholders have easy access to patients’ specific risks for falling and current care plan with tailored interventions to prevent falling.

Innovations should be thoughtfully introduced.

“A picture is worth a thousand words”
Conclusion: What should acute care hospitals do to prevent patients from falling?

Conduct accurate fall risk assessments. Generate care plans using HIT linking assessments to evidence based interventions to prevent patients from falling.

Have the fall prevention plan immediately available pictorially and in plain text for all key stakeholders (patients, family, staff).
Fall TIPS *(Tailoring Interventions for Patient Safety)*
Research Team/Funding Support

- **Investigators**
  - Patricia C. Dykes, DNSc, RN
  - Diane Carroll, PhD, RN
  - Ann Hurley, DNSc, RN
  - Stuart Lipsitz, ScD
  - Blackford Middleton, MD, MPH, MSc

- **Research/HIT Team**
  - Angela Benoit, BComm
  - Frank Chang, MSE
  - Jan Horsky PhD
  - Seth Meltzer
  - Lana Tsurikova, MSc, MA
  - Luba Zuyev, MA
Questions?