Bridging the Gap: A Multidisciplinary Approach to Fall Prevention

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Setting

Atlanta VA Medical Center
VA–TAMMCS

IMPROVE

VISION - ANALYSIS

Leadership & will to transform

Leadership & Alignment top to Bottom

Map & Measure

Change

Team & Aim

SUSTAIN

Spread Change Over Time, Transformation

Feb 2013    July 2013 Aug 2014
Vision & Analysis
Background

**National Incidence of Falls**
- 3% - 20% of inpatients fall at least once. ¹
- Falls are the 6th most commonly reported sentinel event. ²

**Consequences of Falls**
- 20% - 30% suffer injuries that ↑ their risk of early death. ³
- Leading cause of injury-related death for adults over 65 yo. ⁴
- Fractures most common and costly injury. ⁵

**Cost of Falls**
- ↑ Length of stay, ↑ rates of discharge to institutional care, ↑ resource use ³-⁴,⁶
Evidence

**National Imperative**

- National Patient Safety Goal - TJC 7
- Serious Reportable Event - NQF 8
- No reimbursement – CMS 9

**Local Priority**

- Atlanta VAMC: Vulnerable population - many fall related risks

**Solution** 1,10-11

- Multifactorial assessment & management effective
- Success associated with multidisciplinary team
- Tailored interventions can prevent injury
Local Priority: Preventing falls and fall related injury will decrease expenditures and enhance patient safety as well as the organization’s accountability to provide quality care.

Problem Statement: In FY2013 (through May) the hospital reported more than twice the national rate of falls with serious injury. Two units had rates that exceeded the hospital average as well as the national average of VHA hospitals of comparable acuity and size.
Team
Aim
Map
Measure
Change

Improve
TEAM
Atlanta VAMC Falls Prevention Sub-Committee

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Sandra Dukes, RN, DNP, CNS, AC
William Greene, RN, Mental Health

Sponsor: Sandy Leake, RN, MSN, Associate Director, Nursing and Patient Care Services and Chief Nursing Officer
The goal of the quality initiative was to decrease the rate of falls/injury by mitigating modifiable risk factors and enhancing inter-professional collaboration.
AIMS

- To reduce rates of **falls** on 8 Palliative at Atlanta VAMC by 50% from a rate of 4.47 to 2.33 by July 2014
  - To have zero injurious falls on 8 Palliative at Atlanta VAMC

- To reduce rates of **falls** on 9 Surgical at Atlanta VAMC by 50% from a rate of 1.28 to 0.64 by July 2014
  - To have zero injurious falls on 9 Surgical at Atlanta VAMC
Map: Analyzing the Problem

- Electronic data bases
- Chart audits & queries
- Patient interviews (VOC)
- Health team member interviews (VOC)
- Direct observation of care
- Surveys

- Organizational capacity
- Workflow patterns
- Circumstances of falls
- Pattern of fall events
- Current processes
Circumstances: In-patient Falls

Primary Reason

Dizziness
Trip/slip
Unknown
Wheelchair
Reaching

ePER Data (Jan – Feb)
Measure

✔ Outcome Measures
  - Fall rate
  - Injury rate
## Change: Pilot Interventions

<table>
<thead>
<tr>
<th>Priority Area</th>
<th>Interventions</th>
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<tbody>
<tr>
<td>Documentation of Risk</td>
<td>Standardize Communication</td>
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<td>Electronic documentation templates</td>
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<tr>
<td>Staff Education &amp; Accountability</td>
<td>Monthly Resident orientation</td>
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<td></td>
<td>Annual Staff Education</td>
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<td>Accountability</td>
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<tr>
<td>Patient Education</td>
<td>Standardize Patient Education process</td>
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<tr>
<td>Individual Risk Factors-</td>
<td>Modify Fall Risk Assessment process</td>
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<td></td>
<td>Modify Post-Fall note</td>
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<td>Environmental/equipment</td>
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<td>modifications</td>
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</table>
Outcomes: Fall Rates

- 9 Surgical
- 8 Palliative

Injurious fall

Improvement Phase

Sustain Phase
Outcomes: Provider KSA

Provider Ordered Interventions

- 77% Assess lower extremity strength
- 62% Initiate fall prevention in-patient referrals
- 58% Evaluate orthostatic hypotension
- 35% Assess vision

Evaluate osteoporosis 0%
Initiate fall prevention community referrals 15%
Document history of falls 19%

N = 26

N = 81
Post-Fall Assessment:
Date/times of fall(s): Apr 12, 2014@07:10
Location of fall(s): Bedside
Date of last fall: Mar 10, 2014
Injury: yes
Description of injury: Bruise occipital area head
Factors possibly contributing to fall(s): Polypharmacy (>4 medications), Dementia, Lower extremity weakness, Other.

Risk factors specifically identified & interventions elucidated

Fall & Injury Risk Factors Identified:
Agitation/delirium (infection, withdrawal, metabolic)
Patient has the following factors which increase the risk of sustaining injury from falls:
Interventions:
Fall Prevention:
Enhanced Surveillance:
One to one observation in addition to high risk fall precautions
Injury Prevention:

Neuro: No change in mental status; CV: Reg; Lungs: CTA. No cuts, abrasions; small bruise on occipital and left forearm; Extremities: Moves all extremities purposefully; No external rotation in lower extremities.

Veteran with multiple falls and history of hyperammonemia and not consistently having enough bowel movements to keep ammonia level low. Suspect veteran constipated and also with urinary retention.

PLAN:
Hyperammonemia—increase lactulose to q2 hours until having bowel movements 3-4 times per day.
Urinary retention—14G catheterize q shift
Continue one to one observation with toileting every 2 hours.
Repeat Ammonia level; CMR
<table>
<thead>
<tr>
<th>Date</th>
<th>Instrument</th>
<th>Raw</th>
<th>Trans</th>
<th>Scale</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>09/13/2013</td>
<td>MORSE FALL SCALE</td>
<td>75</td>
<td>15.57</td>
<td></td>
<td></td>
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<tr>
<td>09/19/2013</td>
<td>PULS= 90</td>
<td></td>
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<tr>
<td></td>
<td>TEMP= 36.8 C</td>
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</tr>
<tr>
<td></td>
<td>RESP= 16</td>
<td></td>
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</tbody>
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**Patient History & Physical Exam (H&P):**
- Good example of provider fall assessment in patient at risk for fall

- Fall risk
  - Pt reports almost falling 2 days ago
  - He has a cane at bedside
  - Initiating fall reduction protocol

- Fall/Syncope: Thought to be secondary to vasovagal syncope
  - Orthostatic vitals negative x 2
  - Continue Fall precautions, slow to rise/stand
  - Patient with sitter at bedside

**Provider Fall Evaluation:**
- Example of completed template for patient at risk for injurious fall

**Planning (PLAN):**
- 50-year-old pt with hx of fall at home -- orthostatic 2/2 diarrheal illness, became lightheaded and fell while toileting. At high risk to fall again due to frequent toileting/orthostasis. Pt is at high risk of injury from fall 2/2 anticoagulation.

- Pt reports home Ambien - will hold as Ambien is associated with high fall risk
- 1L bolus NS given on admission
- Pt not currently orthostatic but will monitor orthostatic BP daily
- Counseled pt on standing up slowly

**Discharge Needs:**
- None
Lessons Learned
Implications for Spread
## Lessons Learned

| Risk Communication: | Standardizing communication $\rightarrow$ $\uparrow$ collaboration  
Electronic note template $\rightarrow$ tailored interventions |
|---------------------|---------------------------------------------------------------------|
| Accountability:     | Audits with feedback $\rightarrow$ $\uparrow$ accountability  
Involvement of leaders $\rightarrow$ accountability |
| Patient Education:  | Team involvement $\rightarrow$ $\uparrow$ patient education  
Electronic version $\rightarrow$ $\uparrow$ consistency |
| Individual Risk Factors: | Injury Risk stratification $\rightarrow$ Identifies vulnerability  
Education pamphlet $\rightarrow$ standardizes & $\uparrow$ tailoring |
System–wide adoption

- Relative advantage
- Compatibility
- Complexity
- Trialability
- Observability
I would like to acknowledge team members who partnered in this initiative
- Sponsor: Ms. Sandy Leake, CNE
- Fall Prevention Sub-committee
- Medical Residents: H. Batchelor, V. Pragya, A. Allen
- MPH Student: E. Bredenberg

and colleagues who provided guidance & support
- National Collaborative (NCPS): Virtual Breakthrough Series
- Patient Safety Committee, Atlanta VAMC
- VAQS: Site faculty
References


Appendices

- Baseline assessments
- Examples of interventions
- Audit results
Baseline Measures

Standardize data reporting

Random Chart Audits
- Date of Audit
- Age
- Admitting Diagnosis
- Morse Score on Admission
- Fall Risks Identified Accurately
- Injury Risk Stratification
- Injury Risks
- Communication of Risk – DAR
- Documentation of Tailored interventions
- Documentation of Pt Teaching – Individual Risk
- Nursing Re-assessment Accurate
- Provider Assessment

Inter-professional Rounds
- Accurately report fall risk

Standardize education process

Veteran Interviews
- Top Reasons at Risk
- 3 main reasons fall prevention is important
  - Falls for most part are preventable
  - Falls can result in injury
  - Falls can make hospital stay longer
- 3 actions to stay safe:
  - Learn risk factors
  - Call for help
  - Wait for help
- Two reasons to ask for help when going to bathroom
  - Unfamiliar places increase fall risk
  - BR are small & it is easy to lose balance or get dizzy
- The main purpose to use call light is: to ask the staff for help
- Locate call light: At bedside & in bathroom
- The main reason to wear non-slip footwear
Patient not educated on their risk and why it is important to comply with prevention strategies leading to decreased likelihood that preventive steps taken

Lack of proper equipment e.g., bedside commode, elevated toilet seat, prompts walk to BR and/or bending reaching that ↑ chance of falling

Overcrowded & cluttered room creates obstacles causing unsteadiness or trips that lead to falls and/or surfaces leading to injury

Overemphasis on policy leading to burnout and non-adherence to best practices

Policy cumbersome to read, no method of assuring accountability, and limited resources for enforcement leading to sub-optimal implementation of fall prevention

Team members not aware of policy and not educated about the roles & responsibilities for implementing fall/injury prevention

Pt identified as at risk for fall and not stratified for injury risk decreasing likelihood that medical team is consulted about intervening to prevent injury

Patient not educated on their risk and why it is important to comply with prevention strategies leading to decreased likelihood that preventive steps taken

Fall precautions overused decreasing sensitivity and decreasing use of individualized interventions to prevent falls and/or injuries

Limited resources, sitters to adequately supervise patients leading to unassisted position changes increasing chance of falls

Lack of assistive PT equipment and protective equipment requiring patients to ambulate or transfer unassisted and potentially falling and getting injured

Pharmacist has not identified at risk meds—side effects that cause dizziness or confusion leading to fall

Physician not attuned to assess and intervene to mitigate modifiable fall risk factors leading to ↑ chance of fall &/or injury

Patient behavior (confusion, impulsiveness, Unrealistic estimation of abilities) leads to unassisted ambulation

Staff not able to respond quickly (e.g., due to understaffing) leading to patient not waiting for assistance

Vulnerabilities & Opportunities

Injurious Falls

People

Policies

Procedures

Plant/materials
## Medication Fall Risk Score

<table>
<thead>
<tr>
<th>Point Value (Risk Level)</th>
<th>American Hospital Formulary Service Class</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 (High)</td>
<td>Analgesics,* antipsychotics, anticonvulsants, benzodiazepines†</td>
<td>Sedation, dizziness, postural disturbances, altered gait and balance, impaired cognition</td>
</tr>
<tr>
<td>2 (Medium)</td>
<td>Antihypertensives, cardiac drugs, antiarrhythmics, antidepressants</td>
<td>Induced orthostasis, impaired cerebral perfusion, poor health status</td>
</tr>
<tr>
<td>1 (Low)</td>
<td>Diuretics</td>
<td>Increased ambulation, induced orthostasis</td>
</tr>
</tbody>
</table>

* Includes opiates.
† Although not included in the original scoring system, the falls toolkit team recommends that you include non-benzodiazepine sedative-hypnotic drugs (e.g., zolpidem) in this category.

Score ≥ 6: Higher risk for fall; evaluate patient.

Resident Education: Preventing Inpatient Falls at the AVAMC

Why should we care about falls?

- 33% of patients who fall in the hospital do not survive beyond one year of the fall.
- Death occurs in 15% of elderly who fall in the hospital.
- Falls result in increased length of stay (LOS), higher rates of discharge to institutional care, and greater amounts of healthcare resource use (D. Oliver, et al., 2010).
- 30% of the falls at the AVAMC in 2013 were repeat fallers; we need to change things!

Who is at risk?

- Any patient in the hospital! AVAMC assumes all veterans are at risk for fall regardless of their age (118-04 Falls Prevention Program Final Policy, 2013).
- Most at risk appear to be those with previous falls, delirium, dementia, and limitations of mobility.
- Most at risk for injury from a fall are those age >85, anticoagulation use, history of fracture or bone disease, or recent surgery.

What is a Morse Falls Scale?

- The Morse falls scale gives a numerical value to patient's potential to either fall or not fall. This scale is documented in nursing notes.
- Based on the scale range the patient will be placed on fall risk for fall precautions.
- Range of Scale: Low Risk (0-24), Moderate Risk (25-44), High Risk (≥45).

What is my role as the physician?

- Everyone on a patient team has a responsibility to keep patients safe while in the hospital. As the primary care team:
  - Perform a falls risk assessment. Note Morse scale, check vitals, assess visual scuity, and check for physical exam (gait, balance, mobility, and neurological impairment).
  - Develop a medication list for medications that can lead to gait instability or confusion; consider the schedule of medications (most falls occur at night).
  - If a patient is high risk for fall (Morse 45), you should be notified by a nurse to trigger a risk for injury assessment.
  - In high risk for fall and injury patients consider ordering hip protectors, floor mats, and other interventions.

What if my patient falls?

- Always assess the patient and determine if further testing is indicated (i.e., radiologic imaging).
- Discuss the circumstances with the patient, family, and the nursing team by having a brief face to face huddle.
- Focus on changes that can PREVENT another fall and injury.
- Document a post-fall assessment in CPRS.

What are considerations for discharge?

- Refer for home health evaluation to assess for home safety and equipment needs.
- Recommend an outpatient evaluation of anticoagulation medication risks and/or bone health assessment (DEXA bone scan).
- Document risk for falls/injury and follow up plan in the discharge summary for the PCP.
Why You are at Risk for Falling?

Check All that Apply

[ ] History of falling
[ ] More than one illness
[ ] Medicines for pain, sleep, blood pressure, relaxation, other pills
[ ] Weakness or unsteady gait
[ ] Use of canes, crutches, or walkers
[ ] Confusion
[ ] Medical tubing or cords
[ ] Needing to use toilet more

Why You are At Risk for Injury

- Older than 85 years old
- Bone disease
- Bleeding problem
- Recent surgery

What Actions Can You Take to Prevent a Fall?

Learn why you are at risk to fall
Avoid standing on footrest of wheelchair or chair
Get up from bed or chair slowly
Wear non-skid socks or shoes
Correctly use canes, crutches, or walkers
Be sure to lock wheels on chairs
Use grab bars for support
Tell us about any vision problems
Put on glasses if needed
Avoid clutter & spills on floor
Avoid climbing over side rails
Avoid reaching for items

Call for help & wait!

Before You Get Out of Bed:

- Do not feel you are a burden!
- Ask us for help, by using call bell especially at night!
- Please be patient and wait for help to arrive
- If it is dark, turn the lights on
- Sit on the side of the bed for a minute before you stand up
- Stand up slowly!

- Wear non-skid socks or shoes
- Use your cane, crutches, or walker

We Remind Everyone of Your Risk of Falling

★ Purple Star
★ Purple Wrist Band
★ Purple Socks

Patient Education Pamphlet
<table>
<thead>
<tr>
<th>Provider Fall Evaluation Note</th>
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<tbody>
<tr>
<td><strong>Fall Risk Evaluation</strong></td>
</tr>
<tr>
<td>• Pertinent Medical History</td>
</tr>
<tr>
<td>• Identification of Risk Factors</td>
</tr>
<tr>
<td>• Interventions linked to Fall &amp; Injury risk</td>
</tr>
<tr>
<td>- PT consult</td>
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<tr>
<td>- OT consult</td>
</tr>
<tr>
<td>- PharmD consult</td>
</tr>
<tr>
<td>• Orthostatic VS</td>
</tr>
<tr>
<td>• Enhanced surveillance</td>
</tr>
<tr>
<td>• Toileting assistance</td>
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<td>• Injury prevention</td>
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<thead>
<tr>
<th>Post Fall Evaluation</th>
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<tbody>
<tr>
<td>• Date of last known fall</td>
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<tr>
<td>• Assessment for injury</td>
</tr>
<tr>
<td>• Identification of factors contributing to fall risk</td>
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**Assessment of Injury Risk**