Objectives

At the completion of this session the learner will be able to:
- Describe how the VHA defines falls and fall related injury levels.
- Discuss VHA fall and fall related injury rates for specific patient populations.
- Describe summary findings from a year of nationwide VHA fall root causes analyses summary data.
The Problem of Falls and Fall Related Injuries

- Falls with injury continue to challenge healthcare
- One of the top ten reported sentinel events: Joint Commission
- Nearly 25% of falls required MD or hospitalization (Healey et al, 2012)
- 30-50% result in injury such as fractures or head trauma (Oliver 2010, Miake-Lye 2013)

Falls in the Veterans Health Administration

Loss of upright position that results in landing on the floor, ground, or an object or furniture, or a sudden, uncontrolled, unintentional, non-purposeful, downward displacement of the body to the floor/ground or hitting another object like a chair or stair; excluding falls resulting from violent blows or other purposeful actions.

Injury Definitions

- **Major:** Any fall that sustains a fracture in any bone with or without surgery, a dislocation, and/or trauma requiring emergency treatment; **head trauma** which includes patient’s head striking a surface or object and may include or result in any of the following: subdural hematoma, concussion, TBI or behavioral changes. The major injury definition includes death

- **Non-Major:** Any fall with an injury that is not classified as major (may be minor or moderate injury). This includes injuries that resulted in application of a dressing, inc; cleaning of a wound, limb elevation, topical medication, pain, bruise, or abrasion and those that resulted in suturing, application of steri-strips/skin glue, splinting, or muscle/joint strain. (If a patient has multiple injuries in one fall, this still counts as one fall with injury).
### Acute Care and ICU Combined

<table>
<thead>
<tr>
<th>Measure</th>
<th>Average for FY19 Quarter 1</th>
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<tbody>
<tr>
<td>Falls Rate</td>
<td>3.60 falls per 1000 BDOC</td>
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<tr>
<td>Falls with Major Injury Rate</td>
<td>0.05 falls with major injury per 1000 BDOC</td>
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<tr>
<td>% Major Injury</td>
<td>1.42% falls with major injury</td>
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<tr>
<td>Falls with Non-Major Injury Rate</td>
<td>1.00 falls with non-major injury per 1000 BDOC</td>
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<tr>
<td>Falls with Any Injury Rate</td>
<td>1.05 falls with any injury per 1000 BDOC</td>
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### Community Living Center

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<thead>
<tr>
<th>Measure</th>
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<td>Falls Rate</td>
<td>5.31 falls per 1000 BDOC</td>
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<tr>
<td>Falls with Major Injury Rate</td>
<td>0.08 falls with major injury per 1000 BDOC</td>
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<tr>
<td>% Major Injury</td>
<td>1.45% falls with major injury</td>
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<tr>
<td>Falls with Non-Major Injury Rate</td>
<td>1.52 falls with non-major injury per 1000 BDOC</td>
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<tr>
<td>Falls with Any Injury Rate</td>
<td>1.60 falls with any injury per 1000 BDOC</td>
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### Behavioral Health

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<th>Measure</th>
<th>Average for FY19 Quarter 1</th>
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<tr>
<td>Falls Rate</td>
<td>3.33 falls per 1000 BDOC</td>
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<tr>
<td>Falls with Major Injury Rate</td>
<td>0.02 falls with major injury per 1000 BDOC</td>
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<tr>
<td>% Major Injury</td>
<td>0.54% falls with major injury</td>
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<tr>
<td>Falls with Non-Major Injury Rate</td>
<td>1.01 falls with non-major injury per 1000 BDOC</td>
</tr>
<tr>
<td>Falls with Any Injury Rate</td>
<td>1.03 falls with any injury per 1000 BDOC</td>
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Goals of study

- We wanted to examine what the details were on the reported falls with serious injury
  - What contributed to these falls?
  - What were the injuries?
  - What protective measures were in place at the time of the falls?
  - What were the lessons learned?
  - What improvements could we make?

Methods

- We reviewed Root Cause Analysis (RCA) reports between August 1, 2016 and August 1, 2017.
- Study included all VA facilities: Over 1243 health care facilities nationwide, including 172 VAMC and 1062 outpatient sites.
- We coded for types of falls, patient outcomes (injury level: none, major, non-major)
- injury type (fracture, laceration, etc.),
- root causes of the event, and lessons learned.
Results

- 154 RCA reports of serious patient falls.
- Community living center (CLC) (35%, n=54),
- acute care units (24%, n=37),
- inpatient non-specified (12%, n=19),
- inpatient behavioral health (8%, n=13), and
- intensive care units (2%, n=3).

remaining 18% (n=28) occurred off inpatient units

The falls were classified as: anticipated physiological (67%, n=103), accidental falls (23%, n=36), not classified (6%, n=9), and unanticipated physiological (4%, n=6).

Types of Injuries
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Accident Theory: All new admissions are considered a fall risk until proven otherwise.

Best Practice Approaches

- Fall prevention requires multiple interventions that are multifactorial, crossing several disciplines to be effective in mitigating or eliminating patient-specific, modifiable, fall risk factors.
- It takes truly an interdisciplinary team effort to reduce the risk of falls and related injuries.

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Actions: modify patient specific fall and fall related risk factors

- Strongest Patient Safety Actions:
  - Implementation of safer environment of care – protect and pad the environment
  - Identify those at risk for fall and fall related injury
  - Implementation of interventions targeting those at risk for falls
  - Interventions to reduce risk of injury to those who do fall
Identifying High Risk, Vulnerable Populations

- Screen for history of falls, or falls as reason for admit
- Consider elders high risk
- Screen for risk of injury using a tool such as the A, B, C, S
  - A = Age (equal to or greater than 85) or frailty
  - B = Bones (fracture risk or history)
  - C = AntiCoagulation (bleeding disorder)
  - S = Recent surgery (during current episode of care)


The ABCS Tool

- Tool offers insight into what interventions should be put in place to protect the patient from injury in the event of a fall.
  - Example: patients at risk for hip fracture due to poor bone health might be offered hip protectors.
- Assume your at risk patient WILL FALL.

Challenge

- Prevent falls and fall related injuries
- While promoting mobility
  - How?
Hip Fractures and Hip Protectors

- Our study showed that 43% of all injuries were hip fractures.
- 21% of root causes cited a lack of use of protective equipment such as hip protectors, helmets, or floor mats.
- Have been shown to reduce the force of impact below the fracture threshold, reducing the risk of fracture.
- Goal is to focus on fall injury protection.

Hip Protectors

- Although the evidence is mixed, research generally supports the use of hip protectors to prevent hip fractures, in nursing home settings, when they are worn.
- Multiple trials have reported positive results, up to 84% reduction of risk of hip fracture if the protector was worn at the time of fall (Korall et al. 2015, Santesso et al. 2014).
- Patient acceptance and low adherence has been cited as an explanation for the lack of effectiveness (Cameron et al. 2011).
- No serious side effects, a low cost approach to prevent hip fractures.

Tips for success

- Staff buy-in: staff must believe in – build relationships with residents.
- Cameron et al found that although overall adherence to use is modest, it is higher in nursing homes (49%) as opposed to those in hospitals (36%).
- Education and patient read back/teach back: The 3 main reasons fall prevention is important: 1. Falls for the most part are preventable; 2. Falls can result in injury and adversely impact your life (mobility, fear of falling, living situation); 3. Falls can lead to hospital stays or increase length of a hospital stay.
- Purchase a variety of hip protectors, let residents choose their own. Different styles, textures, incontinence hip protectors available. Integrate the resident and family in the purchase and use of these.
Hip Protectors – Examples

Hip Protector Toolkit
https://www.patientsafety.va.gov/docs/fallstoolkit14/HipProtectorToolkit_rev100709VK.doc

- This web-based toolkit includes:
  - selection of brands and models,
  - sizing guidelines,
  - protocol for replacement,
  - policy template,
  - handling procedure,
  - stocking procedure,
  - monitoring tools,
  - patient education materials,
  - provider education materials.

Below are links to information that you might find helpful for hip protectors:

- Hip protectors in an inpatient setting
  https://www.patientsafety.va.gov/docs/fallstoolkit14/Hip_Protectors_in_an_inpatient_setting.pdf

- Protecting your hips with hip protectors
  https://www.patientsafety.va.gov/docs/fallstoolkit14/Protecting_your_hips_with_hip_protectors.pdf

- Hip protectors pamphlet
  https://www.patientsafety.va.gov/docs/fallstoolkit14/Hip_Protector_Toolkit_rev100709VK.doc

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Traumatic brain injury in older adults and the use of helmets

- In our study 16% of patient sustained serious head injuries, but no patients were wearing head protection. There were no actions related to head protection for patients at risk for head injuries or bleeding.

Evaluation of Protective Properties of Commercially Available Medical Helmets

- Head protection can minimize fall related head impact and injury, especially for those who are anti-coagulated. (Harvey et al. 2017, Wu et al. 2010, Wong et al. 2011)

- Companies are developing innovative products with the appearance of baseball caps, winter hats, and beanies, to encourage patient compliance and comfort in using the products.
High Risk Injury Interventions

Low Beds
Low profile beds are beds for frequent fallers. Low beds help prevent injuries because they are so low to the ground, often as low as 14 inches. If the patient did fall out of bed, the potential for injuries would be significantly reduced.

Fall Protection Mats
Bedside floor mats protect patients from injuries associated with bed-related falls. Mats can be placed on one side or both sides of the patient’s bed. May not be for every patient but for those with specific needs and history of falling from bed.

Eliminate Sharp Edges

Patient Observation
- In our study, 75% of falls were un witnessed by staff.
- Purposeful rounding and 1:1 observation has been shown to decrease falls by nearly 60% (Quigley et al. 2009).
- Non-purposeful rounding does not seem to have a marketed impact on patient care and fall reduction, but patients on purposeful rounding are less likely to get up without calling for help, as their needs are addressed preemptively (Mitchell et al., 2013).
- Pennsylvania study found that sitter use was associated with decreased rates of falls with injury due to the increase in number of assisted falls, although no decrease in fall rate (Feil et al., 2014).
- Remember - ultimate goal is to eliminate INJURY

Think, Pair and Share
1. What fall and fall-related injury prevention interventions have you implemented recently?

2. Do you find these interventions successful?

3. What helped with the successful implementation of these interventions?

4. What were some barriers you had to overcome?

Take Home Points

• Develop individualized intervention plans tailored to individual patients’ needs, and be consistent on ensuring these interventions are in place.

• Consider any and all fall injury protection approaches.

Part 3: Approaching Your Area: Toolkits

VA National Center for Patient Safety Falls Toolkit.


https://www.jointcommission.org/assets/1/6/SEA_55_Falls_4_26_16.pdf

http://www.ihi.org/resources/pages/tools/tcabhowtoguidereducingpatientinjuriesfromfalls.aspx

HELP (Hospital Elder Life Program) Delirium Assessment, Prevention and Management Tools.

Preventing Falls in Hospitals: A Toolkit for Improving Quality of Care. AHRQ.  

STOP to START Improving Fall Injuries: Facing the Facts about Falls in Hospitals.  

https://www.nice.org.uk/guidance/cg161

CAPTURE Falls Toolkit. Interdisciplinary team tools, post fall huddles, medication and mobility assessment tools.  

References


http://www.jointcommission.org/sea_issue_55/

http://www.ncbi.nlm.nih.gov/books/NBK133363/


Questions?

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