

Session 2: Best Practice Approach: Fall Risk and Injury Reduction – Focus on Clinical Practice and Patient Engagement

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Overview

1. Profile changing epidemiology of the aging hospital population
2. Review latest breakthrough and nationally adopted techniques in fall-related injuries in the aging population
3. Implement population-specific fall and injury prevention practices across settings of care

Hospital Falls: D. Oliver, et al. Falls and fall-related injuries in hospitals. (2010, Nov). *Clinics in Geriatric Medicine*.

- 30% to 51% of falls result with some injury
- 80% - 90% are unwitnessed
- 50%-70% occur from bed, bedside chair (suboptimal height) or transferring between the two; whereas in mental health units, falls occur while walking
- Risk Factors: Recent fall, muscle weakness, behavioral disturbance, agitation, confusion, urinary incontinence and frequency; prescription of "culprit drugs"; postural hypotension or syncope

Most effective, fall prevention interventions should be targeted at both point of care and strategic levels

- **Best Practice Approach in Hospitals:**
 - Implementation of safer environment of care for the whole patient cohort (flooring, lighting, observation, threats to mobilizing, signposting, personal aids and possessions, furniture, footwear)
 - Identification of specific modifiable fall risk factors
 - Implementation of interventions targeting those risk factors so as to prevent falls
 - Interventions to reduce risk of injury to those people who do fall

(Oliver, et al., 2010, p. 685)

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Making Health Care Safer II 2013

- Chapt 19: Preventing In-Facility Falls
- **Includes Hip Protectors!**

Head Injuries

- The CDC reports falls as the leading cause of TBI for adults aged 75 years and older (CDC, 2015a).
- Of all the TBI-related ED visits in the United States during 2006 to 2010, the 65-years-and-older age group accounted for 81.8% of the TBI-related ED visits (CDC, 2015b). This age group also has the highest rates of TBI-related hospitalization and death.

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Population Profile

- Groups at risk for the development of TBI include men, who are twice as likely to sustain a TBI, adults aged 75 years or older, and African Americans who have the highest death rate from TBI (CDC, NCIPC, 2007).
- Older adult residents who experienced head injuries from a fall were more likely to live in assisted living (47.9%; $p < .04$) and to be walking at the time of their fall (69.0% versus 36.1%) compared with older adult fallers without a head injury (Gray-Miceli, Ratcliffe, & Thomasson, 2013).

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Hip Fractures

- The CDC estimates that more than 95% of hip fractures are caused by falling, often sideways, on the hip (CDC, 2015c).
- Annually, at least 258,000 hospital admissions for hip fracture among those 65 years and older occur nationwide (CDC, 2015c).

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Population Profile

- Women, especially White women, carry the greatest risk for hip fracture compared with men (National Hospital Discharge Survey), African American, or Asian women (Ellis & Trent, 2001).
- An underlying diagnosis of osteoporosis increases risk for fall-related hip fracture (National Osteoporosis Foundation, 2013).

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Survival and Functional Outcomes after Hip Fx among NH Residents

- Outcomes after hip fractures among long term care nursing home resident
- Data Sources: Medicare Claims Data; Retrospective cohort study, n=60,111 medicare beneficiaries residing in NHs who were hospitalized with hip fracture between July 1, 2005-June 30, 2009
- Neuman, M.D., Sibling, J.H., et al., (2014), JAMA, 174(8) 1273-1280

Outcomes:

- Of 60,111 pts, 21,766 (36.2%) died by 180 days after fracture
- Among pts not totally dependent in locomotion at baseline, 53.5% died or developed new total dependence within 180 days
- Function declined substantially after fracture across all ADL domains assessed

In adjusted analyses:

The greatest decreases in survival after fx occurred with:

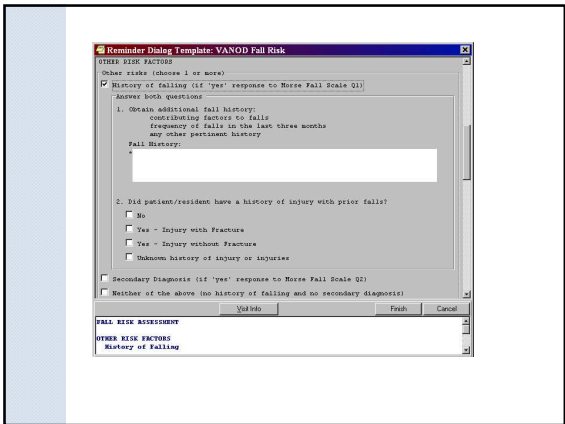
- Age older than 90 yoa
- Non-operative fx management
- And advanced comorbidities

(All analyses with statistically significant hazard ratios)



Morse Fall Scale (Morse, 1997, Preventing patient falls.)

Risk Factor	Scale	Score
History of Falls	Yes	25
	No	0
Secondary Diagnosis	Yes	15
	No	0
Ambulatory Aid	Furniture	30
	Crutches / Cane /	15
	None / Bed Rest /	0
	Wheelchair	
IV Therapy / Heparin Lock	Yes	20
	No	0
Gait (Transferring)	Impaired	20
	Weak	10
<i>"If the patient is in a w/c, this is scored based on the gait the patient uses to transfer"</i>	Normal/ Bed Rest / Immobile	0
Mental Status	Forgets Limitations	15
	Oriented to Own Ability	0

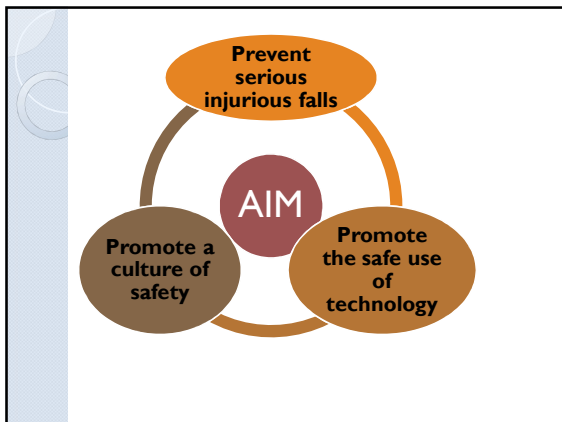


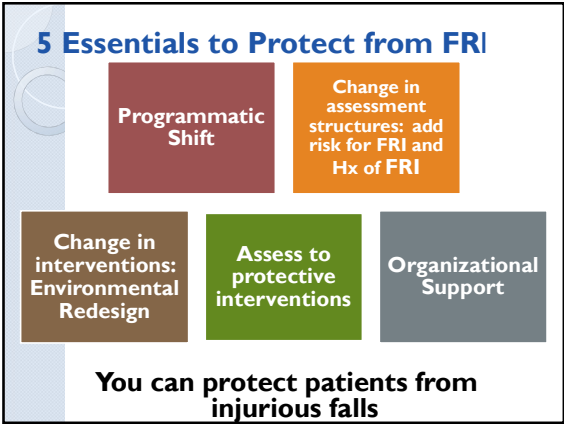
Screening to Assessment

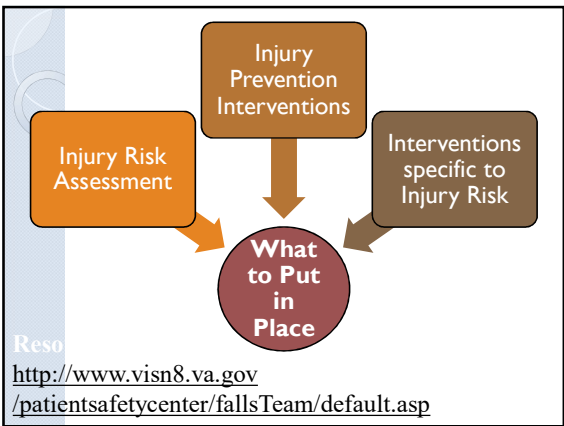
- History of Falls
 - Screen: yes or no
 - Assessment: based on positive or negative screen response
- Assessment must be comprehensive
- Required for rest of nursing process

Interventions

1. Basic preventive and **universal falls precautions** for all patients
2. **Assessment** of all patients for risk of falling **and sustaining injuries** from a fall in the hospital
3. **Cultural** infrastructure
4. Hospital protocols for those identified at risk of falling
5. Enhanced **communication** of risk of injury from a fall
6. **Customized interventions** for those identified at **risk of injury from a fall**







Creating Safe Environment

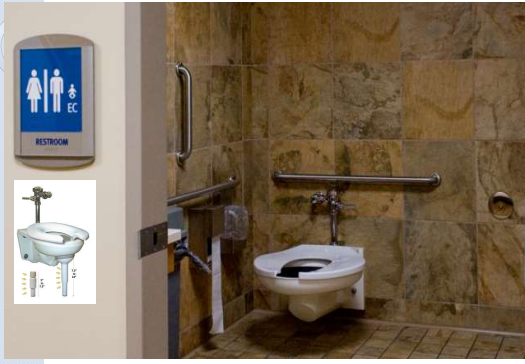
Reduce Blunt Force Trauma

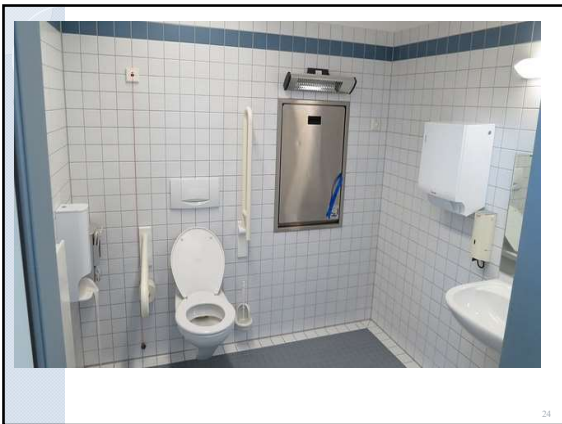
- Try to eliminate sharp edges
- Decrease impact from falls
- Ensure Safe Bathrooms! Why?

Why Not This?



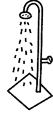
WHAT'S THE MATTER WITH THIS?



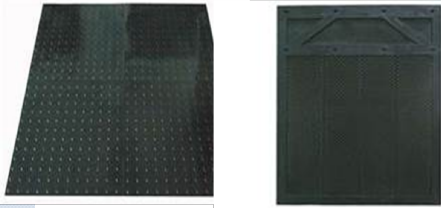


Shower Rooms

- Grab Bars
- Liquid soap vs. bar soap
- Plenty of towels available
- Grit on floors vs. floor mats
- Shower chairs in working order/wheels lock? Right size?
- Does water drain off quickly?



Rubberized Flooring



Eliminate Sharp Edges

- KidCo
- KidSafe

Search:

- Furniture
- Corner Cushion



Biomechanics of Fall-Related Injuries

Understanding the “rate of splat” and its impact on injury

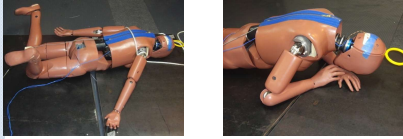
Falls from High Bed: Head First



Falls from High Bed: Foot First



Simulating a Fall



Bedside Mats – Fall Cushions



bedside fall cushion



Floor Mat



Floor Cushion



Tri-fold bedside mat



Roll-on bedside mat



Soft Fall bedside mat

Summary of Results

Feet First Fall from Bed

- No Floor Mat fall over top of bedrails: ~40% chance of severe head injury
- No Floor Mat, low bed (No Bedrails): ~25% chance of severe head injury
- Low bed with a Floor Mat: ~ 1% chance of severe head injury

Technology Resource Guide: Bedside Floor Mats



- Bedside floor mats protect patients from injuries associated with bed-related falls.
- Targeted for VA providers, this web-based guidebook will include: searchable inventory, evaluation of selected features, and cost.

Hip Protectors

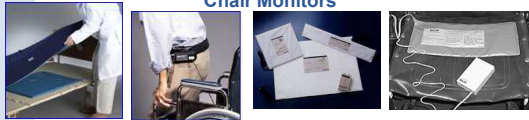


Hip Protector Toolkit



- This web-based toolkit will include:
 - prescribing guidelines
 - standardized CPRS orders
 - selection of brands and models
 - sizing guidelines
 - protocol for replacement
 - policy template
 - laundering procedure
 - stocking procedure
 - monitoring tools
 - patient education materials
 - provider education materials

Assistive technology for safe mobility-Bed & Chair Monitors



AirPro Alarm

Locator Alarm

Bed & Chair Alarm

Chair Sentry



Pad Alarm

Floor Mat Monitor

Keep Safe

QualCare Alarm

Alarmed Seatbelt

Emerging Technology and Aging

- Helmets
- Remote Patient Monitoring
 - Mobility and Wandering – Location Tracking
 - Fall Detection
- Real-time Surveillance
 - Wireless
 - Camera Systems
- Ambulatory Aides
 - Laser Light

Patient Engagement: Health Literacy

- Health Literacy Definition: The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions. (Ratzan and Parker, 2000)
- According to the research, about 52% of patients understand what we tell them or give them to read?
- 1 in 3 patients have inadequate health literacy skills

IOM Report: Health Literacy: A Prescription to End Confusion 2004
healthliteracy@ama-assn.org

Partnering

- **Patients**
 - Need support and education to make good choices
 - Benefit from easy to use directives
 - Need to be accountable
 - Need practical examples to put principles into place
- **Family**
 - Partners in Care – Advocates, Information Gatherers
 - Messengers
 - Provide ongoing assessment in the home
 - Teach clinicians about their safe practices

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Autonomy

- What does this mean to you?
- What happens after a fall?

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“Teach Back”

- **“Teach Back” Testing:** what are the trends in patients’ difficulty to understand what is taught ?
Ask the patient to describe or repeat back in his or her own words what has just been told or taught. Return demonstration is a similar technique used by diabetic educators, physical therapists, and others. When the health professional hears the patient’s description in her/his own words, further teaching can be accomplished to correct misunderstandings. Never ask whether patients understand; they always say “yes”.

<p>"I want to be sure I explained everything clearly. Can you please explain it back to me so I can be sure I did?"</p> <p>Teach Back Question Card #1</p> <p>We covered a lot today about preventing falls, and I want to make sure that I explained things clearly. So let's review what we discussed. What are three strategies that will help you prevent falls?"</p> <p>Teach Back Question Card #3</p>	<p>"I want to make sure I explained this clearly. When you get back home in a few days, what will you tell your <i>[friend or family member]</i> about <i>[key point just discussed]</i>?"</p> <p>Teach Back Question Card #2</p> <p>"I want to be sure that I did a good job of teaching you today about risk for falls. Could you please tell me in your own words what you are doing to prevent falls? How will you prevent falls in the future?"</p> <p>Teach Back Question Card #4</p>
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When "Teach Back" Is Especially Important:

- New medications
- A new diagnosis
- Instructions for calling for help to BR
- Instructions for self care
 - e.g. ask, "How can you stay safe from falling in the hospital?"
- Patients are cautioned on how to prevent falls in the hospital
 - e.g. young male patients who suddenly have high doses of pain meds but want to toilet themselves. Ask, "How will you best prevent yourself from falling when you are given this powerful drug for pain that is known to cause falls?"

Ask Me 3

- Ask Me 3 materials are available at: <http://www.npsf.org/askme3/>

Ask Me 3 – Adapted for Falls

How many patients understand what we teach them?


- Teach patients with this format:
 - Their main problem putting them at fall risk
 - What they need to do to keep from falling in hospital
 - Why is it important for them to do this
- Check the family's understanding:
 - What is the patient's main problem?
 - What can the patient do to stay safe from falling in the hospital?
 - Why is it important for the patient to do this?

Teaching: After a Fall

- Reframe patient education curricula to include "what happens after a fall".
- What can we learn from this event?
- How can we work together to prevent this again?

Best Practice Patient Education Brochure "Anticoagulation: Preventing Injurious Falls"





What to do When you Fall...

Evaluation of Learning

- Design patient education program evaluation as a knowledge and skills checklist for cognitive and psychomotor domains of learning.
- Include Health Literacy Assessment to check ability to comprehend and use health information

Communication With Patients/Staff About Fall Reduction/Injury Prevention

Label or signal patients: known fallers and those at risk of fall or injury

- Use signage/other visual indicators (bracelets, colored socks, special blankets, etc.)

Ensure Safe Handoffs

- Verbalize and repeat-back risk of fall and risk of harm from fall at change of shift
- Verbalize and repeat-back risk of fall and risk of harm from fall between departments

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Session 3

- Population-based Approach to Injury Reduction

- But first, Stretch Break!

Moderate to Serious Injury

- Those that limit function, independence, survival
- Age
- Bones (fractures)
- AntiCoagulation (hemorrhagic injury)
- Surgery (post operative)

Universal Injury Prevention

- Educates patients / families / staff
 - Remember 60% of falls happen at home, 30% in the community, and 10% as inpts.
 - Take opportunity to teach
- Remove sources of potential laceration
 - Sharp edges (furniture)
- Reduce potential trauma impact
 - Use protective barriers (hip protectors, floor mats)
- Use multifactorial approach: COMBINE Interventions
- Hourly Patient Rounds (comfort, safety, pain)
- Examine Environment (safe exit side)

Moderate to Serious Injury: A, B, C, S

- Those that limit function, independence, survival
- Age
- Bones (fractures)
- Bleeds / AntiCoagulation (hemorrhagic injury)
- Surgery (post operative)

		Fall Prevention and Injury Reduction Matrix (Assumes Universal Falls Prevention Implemented)	
RISK OF FALL	+	+ RISK FALL/- RISK INJURY Implement fall reduction interventions Assess, intervene and communicate if <u>injury risk</u> changes	+ RISK FALL/+ RISK INJURY Implement fall reduction interventions Implement injury prevention interventions Assess, intervene and communicate if <u>fall risk or injury risk</u> changes
	-	-RISK FALL/-RISK INJURY Assess, intervene and communicate if <u>fall risk or injury risk</u> changes	-RISK FALL/+RISK OF INJURY Implement injury prevention interventions Assess, intervene and communicate if <u>fall risk</u> changes
		-	RISK OF INJURY FROM A FALL
			+

Age: > 85 years old

- Education: Teach Back Strategies
- Assistive Devices within reach
- Hip Protectors
- Floor Mats
- Height Adjustable Beds (low when resting only, raise up bed for transfer)
- Safe Exit Side
- Medication Review

Bones

- Hip Protectors
- Height Adjustable Beds (low when resting only, raise up bed for transfer)
- Floor Mats
- Evaluation of Osteoporosis

Bleeds/Anticoagulation

- Evaluate Use of Anticoagulation: Risk for DVT/Embolic Stroke or Fall-related Hemorrhage
- Patient Education
- TBI and Anticoagulation: Helmets
- Wheelchair Users: Anti-tippers

Surgical Patients

- Pre-op Education:
 - Call, Don't Fall
 - Call Lights
- Post-op Education
- Pain Medication:
 - Offer elimination prior to pain medication
- Increase Frequency of Rounds

Detection Methods

Rounding
Purposeful Rounding
Camera Surveillance
Alarms

Toolkits and Best Practice Recommendations for Fall Prevention

AHRQ Falls Prevention Toolkit



Case DA, et al. Agency for Healthcare Research and Quality. 2011.

VA NCPS Falls Toolkit



VA National Center for Patient Safety (NCPS). 2014.

ICSI Prevention of Falls Protocol



Dupelin L, et al. Institute for Clinical Systems Improvement (ICSI). 2012.

HHI Reducing Patient Injuries from Falls How-to Guide



Braden B, et al. Institute for Healthcare Improvement. 2008.

Shifting

- From Reducing Falls to Protecting from Fall Related Injury
- Integrate Injury Risk /History on Admission
- Implement Universal Injury Reduction Strategies
- Implement Population-Specific Fall Injury Reduction Interventions



Getting ready to dance

Pat And Her Mom
