Fall Prevention:
A Nursing Perspective

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Famous Fallers

Not So Famous Faller!

Definition

"A sudden, unintentional descent, with or without injury to the patient, that results in the patient coming to rest on the floor, on or against some other surface (e.g., a counter), on another person, or on an object (e.g., a trash can)."

NDNQI guidelines data collection and submission for patient falls.

"Injury received when a person descends abruptly due to the Force of gravity and strikes a surface at the same of lower level

CMS: Hospital Acquired Conditions

A Sobering Problem

- One out of three older adults (65 or older) falls each year but less than half talk to their healthcare providers about it.
- Among older adults, falls are the leading cause of both fatal and nonfatal injuries.
- More than 662,000 of these patients were hospitalized
- In 2010, the direct medical costs of falls, adjusted for inflation, was $30 billion

http://www.cdc.gov/HomeandRecreationalSafety/Falls/adultfalls.html

A Sobering Problem

- About 50% of patients requiring hospitalization will not Return to Independent Living
- Men are more likely than women to die from a fall. The fall death rate in 2010 was 40% higher for men than for women.
- Up to 30% of all falls result in moderate to severe injury. Up to 50% of falls

http://www.cdc.gov/HomeandRecreationalSafety/Falls/adultfalls.html

Falls in Hospitalized Patients

National Database for Nursing Quality Indicators (**NDNQI**)

Mean Total Fall Rate: 2.82/1000 pt days

Mean Fall With Injury Rate: .55/thousand pt days

A Nursing Sensitive Quality Indicator?

"Nurses are responsible for identifying patients who are at risk for falls and for developing a plan of care to minimize that risk. Short staffing, nurse inexperience, inadequate nurse knowledge, and the immature state of the science regarding fall prevention may place patients at risk for injury."

"The average cost of an accidental fall is $17,500". Patients who fall have an increased length of stay (6.3-12 days).

NDNQI-Reducing Falls. Increasing Quality, 2013

Liability

A stroke rehabilitation patient fell off a commode after reaching for the toilet paper, despite being instructed to wait for help. She ended up in a cast for a month and developed foot drop.

$178,750 judgment against hospital.

Your organization must demonstrate a fall prevention program that is organized and current.

TJC Patient Safety

Elements of Compliance

1. Establish a fall prevention program

2. Program includes evaluation specific to patient population, settings, service

3. Intervene!

JCAHO Patient Safety

4. Educate your staff

5. Educate patients and families

6. Evaluate to determine effectiveness

Cracking the Code
AKA-Why Is This So Hard?

Aging patient population

Rising Patient Acuity/Dynamic changes in condition

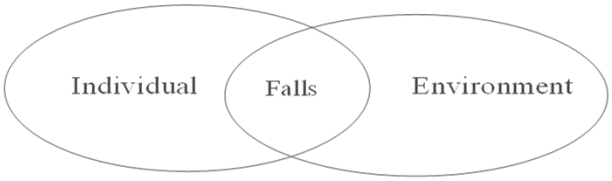
Nurse Shortages

Inefficient work environment for healthcare workers ….proximity counts!

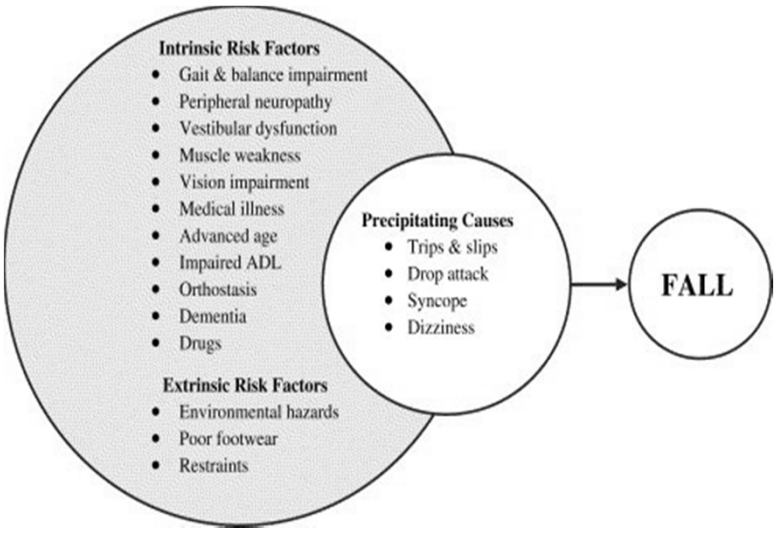
Patient Autonomy

Etiology-A Perfect Storm

Falls result from an interaction between risk factors in the individual and factors in the environment.



It's Multifactorial



Screening-Will My Patient Fall?

Outpatient Screen
Likelihood of 65 yr old falling 27%
(95% confidence interval, 19%-36%)

Have you fallen in the last year?
(OR 2.3-2.8)

Do you have a gait or balance problem?
(OR 2.4)

Fall Risk Factors in the Individual

- Previous history or fear of falling
- Altered elimination
- Balance, weakness or gait problems
- Confusion,impulsivity, poor judgment
- Sensory or visual impairments
- Hemodynamic instability
- Depression
- Benzodiazepines, Antiepileptics, Opioids
  Epidural Medication

Relative Risk-16 Studies

Factor	Mean RR	Range
Weakness	4.4	1.5-10.3
Prior fall	3.0	1.7-7.0
Balance Deficit	2.9	1.6-5.4
Gait Deficit	2.9	1.3-5.6
Assistive Device	2.6	1.2-4.6
Arthritis	2.4	1.9-2.9
ADL Deficit	2.3	1.5-3.1

Rubenstein LZ - *Med Clin North Am* - September 2006; 90(5); 807-824

Intrinsic Risk Factor

Delirium is thought to be a risk factor in 10% (residential care) and 45% (hospital) falls

Environmental Risk Factors

- Clutter
- Poor lighting
- Wheelchairs/bed not locked
- Slippery floors/Sharp Corners
- Pajama bottoms too long (trips)
- IV tubing and poles
- Scatter rugs
- Magazines

Environmental Risk Factors

- IV poles/SCDs
- Slippery soled shoes/ Stocking feet
- Bare Feet
- Use of assistive devices (canes and walkers) that do not fit

Pearl-Patients are 11X more likely to fall if in bare or stocking feet.

Fall Risk Assessment

- Standardized, Validated Tools
  - Morse
  - Hendrich II
  - Johns Hopkins

  Hybrid/Institution Specific Tools

Risk of Injury Assessment

- Thrombocytopenia
- Osteoporosis
- Anticoagulation

Fall Assessment

Assess the Patient's 3 M's:

- **Mentation**
  - Acute Confusion
  - Disorientation
  - Depression
- **Medication**
  - Benzodiazepines
  - Epidural drugs
  - Opioids

Mobility

-Know recent ability

-Know fall history

Real Time Assessment:

-Balance

-Strength

-Ability to move

How To Test For Mobility

- Supine Assessment:
  - Ankle ROM, Straight leg raise without bending knee
- Sitting:
  - Dizzy?
  - Trunk strength
  - Leg strength-rising from chair
- Standing:
  - Dizzy?
  - Weight shift, march in place

Step by step assessment will drive how every patient will be most safely mobilized

Match the Intervention to the Risk Factor-Confusion

- Bed alarm
- Fall mats-Use when pt is unattended
- Omni-belt-Use when pt is unattended
- Routine toileting every 2-3 hours
- Do NOT use 3 side rails

Fall Mat

Match the Intervention to the Risk Factor-Confusion

- Avoid benzodiazepines as much as possible
- Schedule Physical Therapy
- If possible, mobilize patient 2-3 times per day
- Do not leave patient unattended commode, toilet or side of the bed

- Use gait belt when mobilizing patient

Match the Intervention to the Risk Factor

- Depression
  - Ensure clear path to bathroom
  - Keep room free of clutter
  - Give clear instructions to patient before mobilizing
  - Encourage safe mobility
  - Use a gait belt for transferring or ambulating patient

Match the Intervention to the Risk Factor

- **Altered Elimination**
  - Routine toileting every 2-3 hours
  - Non-skid slippers
  - Fall mat for unattended patients and under commode
  - Assure foley catheter is patent
  - Avoid benzodiazepines as much as possible
  - Use a gait belt for when mobilizing patients

Match the Intervention to the Risk Factor

- **Dizziness/Vertigo**
  - **Have pt dangle legs for 20 seconds before standing**
  - **Have pt wear non-skid slippers**
  - **Consider PT consult for mobilization recommendation**
  - **Do not leave patient unattended on commode or toilet**
  - **Use gait belt when mobilizing pt**
  - **Consider Hip Protectors**

Match the Intervention to the Risk Factor

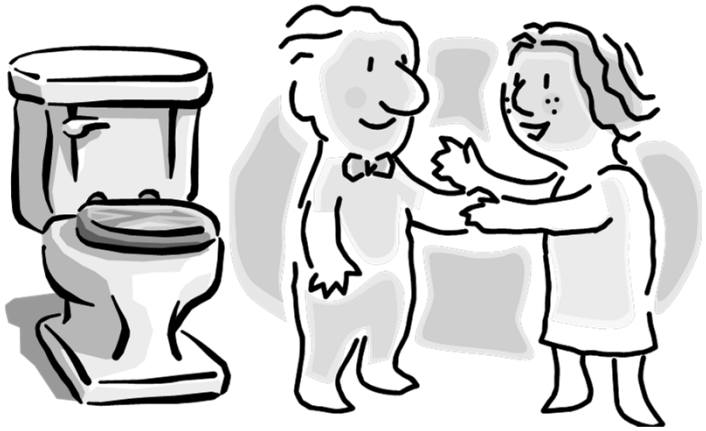
- Antiepileptics/Benzodiazepines*
  - Fall mat when patient is unattended
  - Routine toileting every 2-3 hours
  - Have pt dangle legs for 20 seconds before standing
  - Re-evaluate need for/dosage of benzodiazepines periodically
  - Use gait belt when mobilizing patient

*Consider these interventions for patients receiving opioids and/or epidural medication

Match the Intervention to the Risk Factor

- Weakness
  - PT consult
  - Stay close enough to the patient to make a difference
  - Obtain assistance from colleagues or lift team
  - Consider lift
  - **Do not leave pt unattended on commode toilet or side of bed**
  - Non-skid slippers
  - Use the gait belt with every transfer
  - Consider Hip Protectors

It Takes 2-To-Toilet!



Up to 66% of Falls in the Hospital Are Related to Toileting

Clyburn & Heydemann, 2011. Fall Prevention in the Elderly: Analysis and Comprehensive Review of Methods Used in the Hospital and in the Home. J Am Acad Orthop Surg 2011;19:402-409

Fall work to be done

- "If you wake 'em, take 'em".
  - Patients who have their vitals taken should be instructed that for their own safety, we recommend an assisted trip to and from the restroom.
- "Timed toileting"
  - Every patient will be offered the chance to use the bathroom 3x/shift, either by a nurse or a HA.

Fall Work to be done

- "Assist in, Assist out".
  - Every patient who requires assistance into the bathroom will be assisted back to bed and will not be left unattended.

What Works

- Vitamin D

"High dose supplemental vitamin D reduced fall risk by 19% (pooled relative risk (RR) 0.81, 95% CI 0.71 to 0.92; n=1921 from seven trials), whereas achieved serum 25(OH)D concentrations of 60 nmol/l or more resulted in a 23% fall reduction (pooled RR 0.77, 95% CI 0.65 to 0.90)."

Bischoff-Ferrari, HA et al., BMJ 2009;339:b3692

What Might Work

- Exercise with focus on balance
  - Tai Chi

"Despite the evidence demonstrating the beneficial influence of Tai Chi practice on known risk factors for falling in older adults, evidence indicating an actual impact on falls-related outcomes is equivocal. More large-scale, longitudinal studies with consistent intervention parameters and clinically meaningful outcome variables are needed to a clarify the role of Tai Chi in effective falls prevention programs."

Med Sport Sci. 2008;52:124-34. doi: 10.1159/000134293.

Pearls

- Focus on Your Population
- Build Safety into the Environment
- Use clinical judgment along with scale to determine risk

Questions?

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