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Safe Mobility is Fall Prevention

July 14, 2021, 12:00 PM – 1:00 PM

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Safe Mobility is Fall Prevention



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Consultant

My Goals

- **Challenge** and **inspire** you to add **precision** to your patient safety practices, **safe mobility** and fall prevention clinical practices to ***reduce risk factors*** and **improve health and function.**

My Hope

- *Change your practice* beyond an over-reliance on screening tools (mobility and falls), universal precautions and approaches to care driven by a score.
- Implement individualized/population-specific care planning to **safe mobility** and fall prevention, detection and protection.

Our Webinar Schedule

Webinar 2: Best Practices to Reduce Falls Associated with Toileting - August 18

- Coaching Session: September 1

Webinar 3: Redesigning Post Fall Management - September 15

- Coaching Session: September 29

Webinar 4: Program Evaluation: Reengineering Fall and Fall Injury Programs: Infrastructure, Capacity and Sustainability – October 13

- Coaching Session: October 27



Objectives: Safe Mobility and Fall Prevention

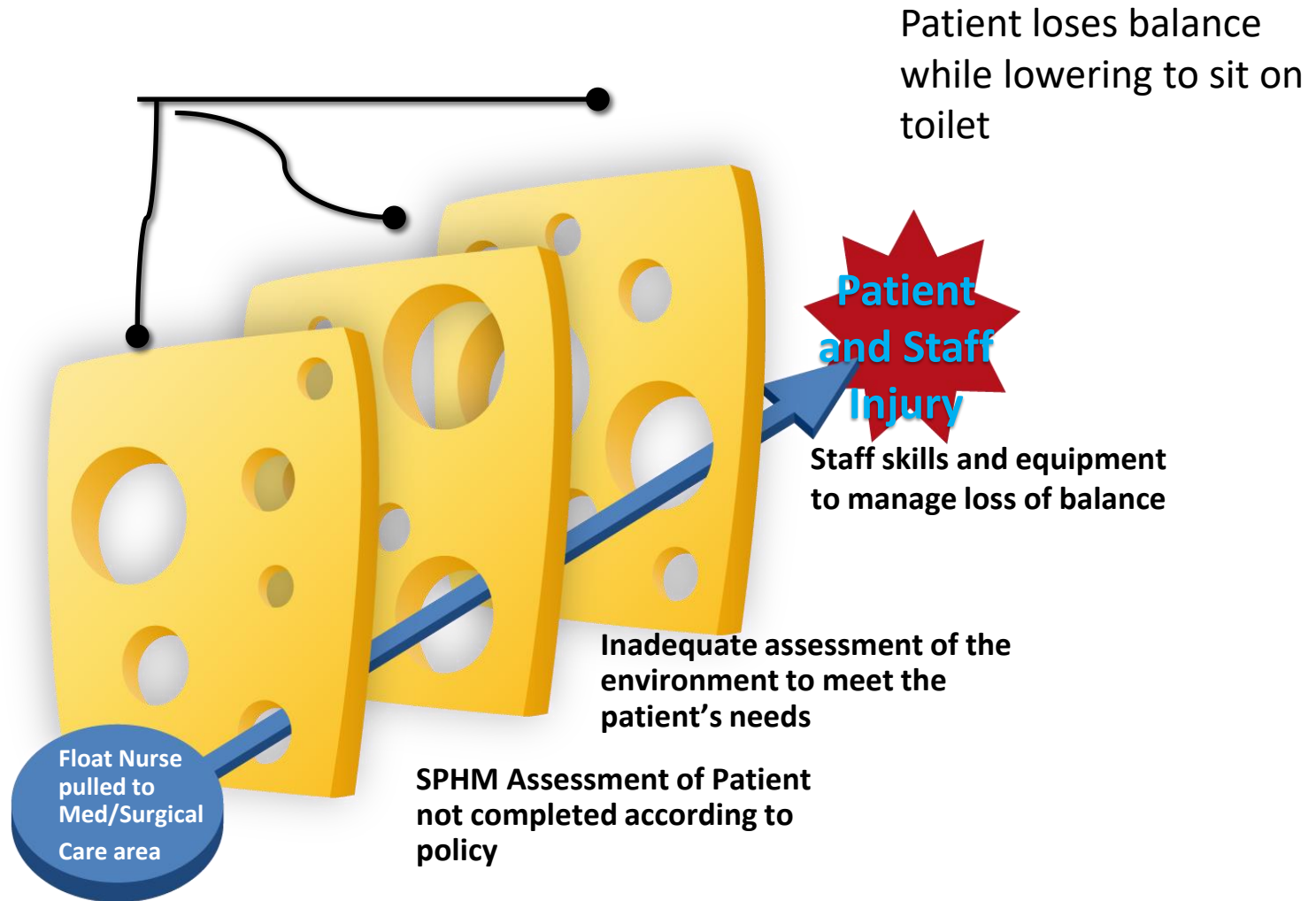
- Distinguish Models for Managing Risk for Falls Due to Unsafe / Unassisted Mobility
- Differentiate Strategies for Transforming Practice for Safe Mobility
- Apply Practice Imperatives to Commit to Change for Patient and Staff Safety

Understanding and Managing Risk

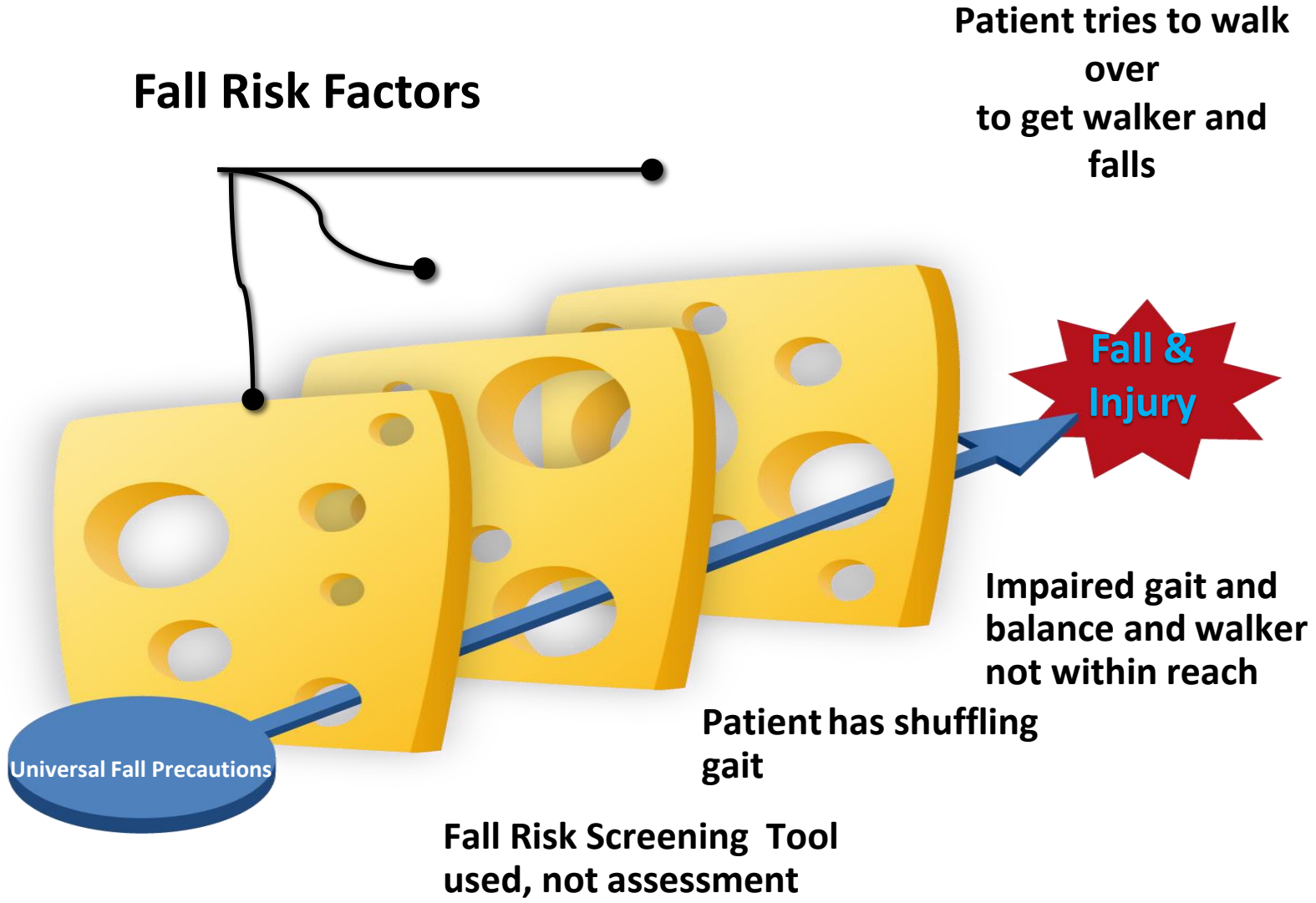
- Understand, manage and **reduce risk**
- Associated with patient, environment, and the interaction within organizations
- Who is NOT at risk?
- Risk adjustment

SPHM: Patient Handling Injury

Barriers to prevent injury



Fall Event: Fall Risks



Risk Adjustment

- Differentiate level of vulnerability
 - Each patient
 - Each unit
 - Each hospital
- Determine readiness to protect from harm based on vulnerability
- How ready are you to protect your staff and patients from injury during mobility? Infrastructure and capacity?

Aging Hospital Population: 2010

- 45% of the inpatient hospital population in the US was 65 years of age and older,
- among whom 19% were ages 75-84, and
- 9% were 85 years and older

Levant, S., Chari, K., & DeFrances, C.J. (2015). Hospitalizations for patients age 85 and over in the United States, 2000-2010. NCHS Data Brief. No. 182. Available at: <http://www.cdc.gov/nchs/data/databriefs/db182.htm>.

Manage and Reduce Risk

- Patient: Screening is NOT the same as Assessment
- Environment: Infrastructure and Capacity must be enhanced
- Interaction between both Pt and Environment: Consider Cognitive and Mobility Function and Individualize the Environment

Context Matters: Culture, Leadership, Varying levels of Clinical Expertise and Judgment and Patient Autonomy

Population Determinants to Differentiate Vulnerability

- Age
- Cognition
- Fall history
- PMH/PSH (hip fracture/ORIF, TBI)
- Comorbidities
- Health literacy

Fill In Your Pyramid – Know Your level of Risk



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Which Model Do You Favor?

- Accident Theory
- Risk Adjust
- Population Determinates

How about a combination?

Let's go for my 85-year-old population? What resources do you need for **safe mobility** and prevention from injury *when (not if) they fall?*

Differentiate **Screening** from Assessment

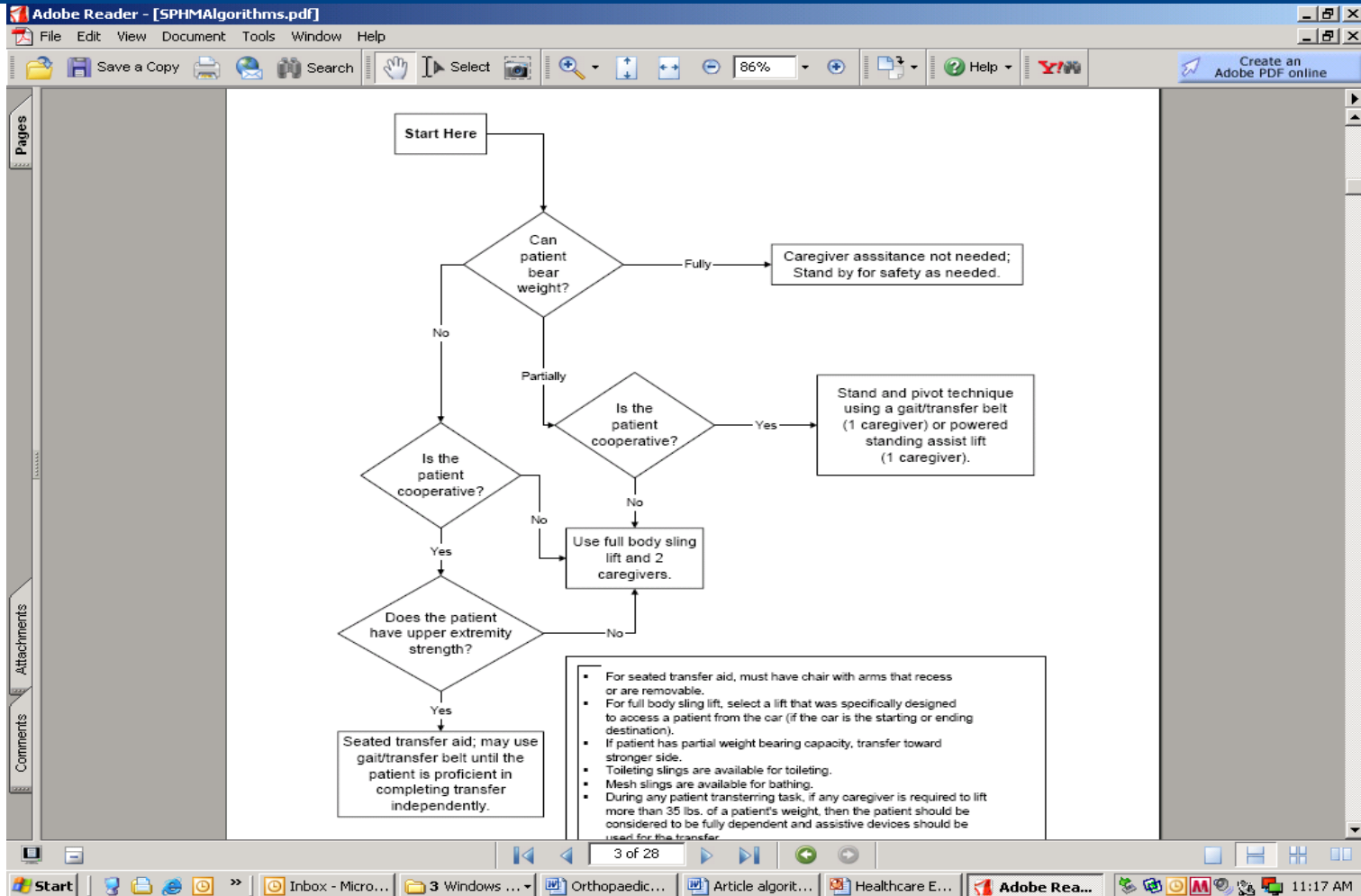
- **Screening**
 - Pathology / Disease Detection
 - Who should undergo diagnostic testing for confirmation - cut off point to be negative or positive
- **Assessment**
 - Data for differential diagnosis

Example: yes, to history of falls; history of FRI

Assessment is Comprehensive – Interdisciplinary

- Screening, if positive, proceed to assessment
- History: if history of falls, ask about the falls - etiology, circumstances, etc.
- Observation – gait and balance
- Physical Exam - PN
- Vital Signs - OH
- Functional Assessment – single leg stance
- More.....

SPHM Algorithms: Traditional Suggested Care Pathway



VISN 8 PSCI, 2005, Safe Patient Handling and Movement Algorithms

1. Transfer to and from: bed to chair, chair to toilet, chair to chair, or car to chair
2. Lateral transfer to and from: bed to stretcher, trolley
3. Transfer to and from: chair to stretcher, chair to chair, or chair to exam table
4. Reposition in bed: side to side, up in bed
5. Reposition in chair: wheelchair or dependency chair
6. Transfer a patient up from the floor

https://www.lmcins.com/uploads/3/2/0/7/3207324/safe_patient_handling.pdf

BMAT for Nurses

Test/Task/Response/Fail (Choose Most Appropriate Equipment/Device(s) / Pass

Assessment Level 1: cognition, trunk strength; seated balance

Assessment Level 2: LE strength, stability

Assessment Level 3: LE strength for standing

Assessment Level 4: Standing Balance; Gait

My Assertion: This is Screening, not Assessment

Example

- Level 3: LE strength for standing
- Stand: ask patient to elevate off the bed or chair, seated to standing, using assistive device (**cane** or bedrail)

(what nursing unit has canes? Why a cane? Body mechanics)

Level 3 Continued

- If use of an assistive device (**cane**, walker, **crutches**) is needed, **mobility level is a 3**
- Fail: instruction to nurse: use assistive device (**cane**, walker, **crutches**)

Question? Which nursing unit has access to multiple devices?

- **Problem: Reducing patient to a level and selecting interventions based on level – that is not assessment**

Morse Fall Scale (Morse, 1997, *Preventing patient falls.*) This is a Screening Tool, *Not an Assessment Tool*

Morse Fall Scale		
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 / Wheel Chair / Nurse	0
IV / Heparin Lock	Yes	20
	No	0
Gait / Transferring	Impaired	20
	Weak	10
	/ Bed Rest / Immobile	0
Mental Status	Forgets Limitations	15
	Oriented to Own Ability	0



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The HD (Hester Davis) Nursing Solution

With a comprehensive, *individualized* falls management program, providers will have the tools needed to improve patient safety outcomes and address the growing costs associated with falls.

- Predict: Hester Davis Fall Risk Assessment Scale[©]
- Prevent: HD Falls Care Plan[©]
- Sustain: HD Falls Tool Kit[©]

<https://hdnursing.com/hd-falls-program/>



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Polling Question #1

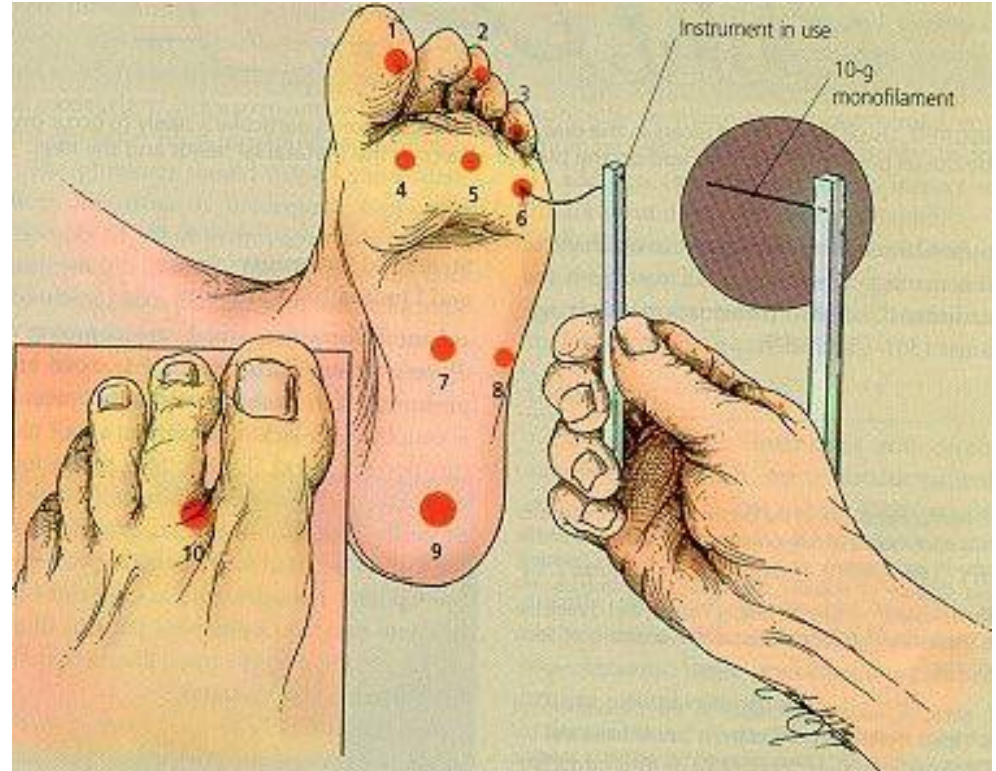
- Do you take care of patients living with chronic diabetes?

Polling Question #2

- If you answered yes, do you assess for lower extremity sensory neuropathy as part of your pre-mobility assessment?

Sensory Monofilament Exam

- Determine if you can feel pressure when eyes are closed



Safe Mobility AND Fall Prevention: Non-Skid Socks vs Shoes

Proper footwear

- Stop universal use of non-skid socks
- Criteria for use of non-skid socks
- Use shoes for walking
- **You can't put non-skid socks on diabetic patients with severe peripheral neuropathy!**



Polling Question #3

- Do you take care of 65 year and older patients with hypertension and treated with antihypertensive agents?




Polling Question #4

- If you answered yes, do you assess for postural hypotension as part of your pre-mobility assessment?

Measuring Orthostatic Blood Pressure

1. Have the patient lie down for 5 minutes.
2. Measure blood pressure and pulse rate.
3. Have the patient stand.
4. Repeat blood pressure and pulse rate measurements after standing 1 and 3 minutes.

A drop in bp of ≥ 20 mm Hg, or in diastolic bp of ≥ 10 mm Hg, or experiencing lightheadedness or dizziness is considered abnormal.

Position	Time	BP	Associated Symptoms
Lying Down 	5 Minutes	BP ____ / ____ HR _____	
Standing 	1 Minutes	BP ____ / ____ HR _____	
Standing 	3 Minutes	BP ____ / ____ HR _____	



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For relevant articles, go to: www.cdc.gov/injury/STEADI



Safe Mobility AND Fall Prevention

- Positive OH
- Symptomatic vs. Non-symptomatic
- Strategy for Mobilization
 - Contact Guard vs. Standby Assist
 - Rolling seated walker



Strategies to Transform Practice

Align practice redesign and innovations with *national patient safety priorities*:

- Reduce harm: workforce injury, patient fall injuries
- Create safe environments
- Patient engagement

Facts – What We Know From the Evidence

- Not all falls are equal
- Universal fall prevention bundles are not effective
- Forced immobility is causing harm
- “Non-compliance” is overused
- Bed alarms cause more harm than good
- Falls are not just a nursing issue
- Staff are still getting injured

Facts – What We Know From the Evidence

- Sitters don't prevent falls (with sitters, most falls are not assisted; Feil & Wallace, 2014)
- Evidence to support intentional rounding is weak, feasibility for sustainability is uncertain (LeLaurin & Shorr, 2019)
- Patients' own footwear remains safest option for fall prevention (not non-skid socks) (LeLaurin & Shorr)

Nationally Adopted Interventions to Reduce Preventable Falls and Fall-related Injuries

Practice Imperatives:

- Identify and address each patient's specific fall and injury risk factors (Lelaurin & Shorr, 2019)
- Integrate new systems and devices (webcams, video tele-sitter technology) that better predict and prevent falls than bed alarms (Lelaurin, et al; Quigley, et al, 2019)
- System-based interventions work: toileting (i.e. wake 'em, take 'em; timed toileting; assist in and out of bed) (Resnick & Boltz, 2019)

Nationally Adopted Interventions to Reduce Preventable Falls and Fall-related Injuries

- Interventions to increase physical activity (motivate and engage patients in activity) *increase* function and mobility (Resnick & Boltz, 2019)
- Function-focused care – *increases* physical activity (Resnick & Boltz)
- September 28, 2015: TJC #55 Sentinel Alert: Preventing Falls and Fall Injuries
- D. Oliver, et al. Falls and fall-related injuries in hospitals. (2010, Nov). *Clinics in Geriatric Medicine*. 26(4). p. 645-692.

Safe Mobility: Reduces Workforce Injury

- SMPH: More Time for Staff to Use Equipment for Increasing Bariatric Population (Galinsky, et al. 2021)
- Adherence to Best Practice Recommendations (Sorenson, et al. 2018)

Ergonomic Exposures Associated with Caregiver-assisted Activities of Daily Living (ADLs) – So Many Ways for Injury To Occur

- Bending
- Twisting
- Lifting
- Crouching
- Reaching
- Static postures
- Slippery floors
- High forces
- High repetition

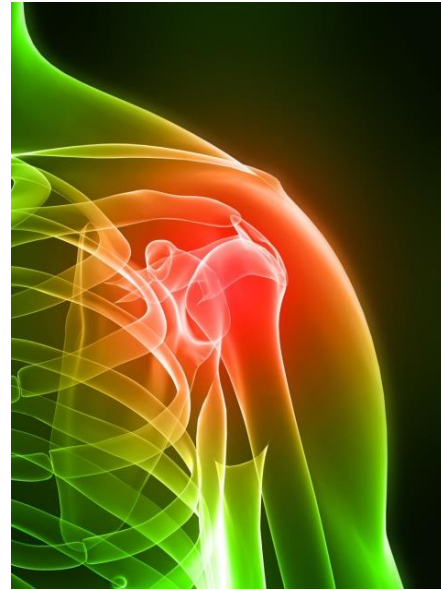
Use SPHM

equipment to prevent injury



Staff Safety Perspective

- Staff are getting hurt protecting patients from being injured during a fall occurring while transferring or ambulating
- Staff safety will improve if we can prevent patients from falling
- Staff Safety = Patient Safety



Example: Assisted Toileting

-
- Patient Assessment
 - Environmental Assessment
 - Injury Risk Assessment
 - Interface of the Patient – Environment
 - Function
 - Height

Other Examples – Assisted Mobility

- Bed/chair transfers
 - safe exit sides
 - height adjustment
 - arm rests/grab bars
- Assisted Ambulation
 - CGA/SBA
 - gait belt

Gait Belts

- Venema, D.,M. Skinner, A.M., Nailon, R., Conley, D., High, R., & Jones, K.J. (2019). Patient and system factors associated with unassisted and injurious falls in hospitals: An observational study. *BMC Geriatrics*, 19: 348. Available [here](#)

Study Purpose

- This study identified risk factors for unassisted and injurious falls in rural hospitals. Methods: Seventeen hospitals reported 353 falls over 2 years in rural hospitals.
- Categorized falls by type (assisted vs. unassisted) and outcome (injurious vs. non-injurious).

Findings: Odds of Falling

- 2.55 times greater for a patient aged ≥ 65 than < 65 (95% confidence interval [CI] = 1.30-5.03)
- 3.70 times greater for a patient with cognitive impairment than without (95% CI = 2.06-6.63), and
- 6.97 times greater if a gait belt was not identified as an intervention for a patient than if it was identified (95% CI = 3.75-12.94)

My New Injury Reduction Intervention

- ***Gait belts reduced patient injuries during an assisted fall:*** among adults 65 and older, the risk for patient injury was 3.65 times greater if the fall occurred with hands-on assistance provided without a gait belt, compared to those who fell with hands-on assistance with a gait belt

Fall Injury Interventions

- Floor mat
- Hip protectors
- Helmets
- Low beds
- Eliminate sharp edges
- Assisted fall
- *Gait belts*

Falls Committee Includes SPH

- SPH facility champion attends regular Falls Committee meetings
- Falls Committee owns:
 - Pre-Mobility Assessment (OH, PN)
 - Audits for:
 - Falls interventions
 - Use of equipment for Total Assist patients

Falls Committee Collaboration

- Invite SPH Facility Champions to monthly Falls Committee meetings
- Demonstrate through data and stories the interdependence of patient handling injuries and falls prevention
- Develop protocols to communicate type and assistance with mobilization

Set Goals

- Increase assisted bed exits 50% in 1 year
- Increase assisted ambulation by 75% in 1 year
- Increase assisted falls by 20% in 1 year

Integrate Protocols

- Mobility protocols (CGA, SBA, AD within reach)
- Re-engineer sitter programs to mobility aides
- Aligning interventions to specific outcome
- Set up balancing measure – staff injuries vs. assisted fall

Accidental Falls Due to Falls from Low Beds

- Structural goal: develop a safe bed program (height adjustable beds, safe exit side, concave mattresses)
- Outcome goal: reduce bed-related patient falls by 70% on rehab unit within 1 year
- Set up your task force

Anticipated Physiological Falls Due to Postural Hypotension

- Structural goal: implement a postural hypotension program (P&P, EMR Templates; patient assessment and care management) by 5 months
- Outcome goal: reduce falls due to OH by 80% in 1 year
- Set up your task force

Injurious Falls from Bed

- Structure goal: implement a floor mat program (product selection, pilot test, P&P development, EMR template, staff education, patient education) by 6 months
- Outcome goal: within 1 year, 90% of patients who fall from beds will fall on a floor mat; reduce fall-from-bed serious injuries by 80% in 1 year (some body parts fall outside the floor mat surface area)
- Set up your task force

Rely on Small Tests of Change: Planned Change Theory

- Plan-Do-Check-Act (PDCA)
 - Focus on assisted falls and connection to patient handling in other departments during ambulation and transfers
 - Revise patient mobility assessment
 - Implement electronic assessment
 - Develop new work standards

Life is Rich with Opportunities

- The evidence supports **opportunities** to enhance safe mobility and fall and fall with injury prevention program infrastructure
- What will you do to *change practice*?

That's Implementation Science

- Focus on risk factors
- Focus on preventing injury
- Learn from adverse events - falls and injuries
- Partner with patients and family members

Rethink Zero...

- Are you still trying to get to zero fall rates?
- Rethink this.....
- Always remember the other side of the equation

What critical lessons did you learn?



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Thank You and Please Share More!

- See you on **July 28th** for our follow-up coaching session – please join me!
- Thank you for attending, be a champion for change, and keep me posted – I am here for you!
- pquigley1@tampabay.rr.com



You Can Always Reach Me!

- Patricia Quigley, PhD, MPH, ARNP, CRRN, FAAN, FAANP, FARN, Nurse Consultant
- pquigley1@tampabay.rr.com

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Clinics in Geriatric Medicine, May, 2019

Optimizing Function and Physical Activity in Hospitalized Older Adults to Prevent Functional Decline and Falls

- Barbara Resnick, Marie Boltz, p237–251

Preventing Falls in Hospitalized Patients: State of the Science

- Jennifer H. LeLaurin, Ronald I. Shorr, p273–283

Outcomes of Patient-Engaged Video Surveillance on Falls and Other Adverse Events

- Patricia A. Quigley, Lisbeth Votruba, Jill Kaminski, p253–263

References

AHA HRET 2018: Falls Change Package – Preventing Harm from Injuries from Falls and Immobility

<http://www.hret-hiin.org>

Feil, M., & Wallace, S. (2014, Mar. 6). The use of patient sitters to reduce falls: Best practices. Pennsylvania Patient Safety Advisory.

https://www.researchgate.net/publication/266022031_The_Use_of_Patient_Sitters_to_Reduce_Falls_Best_Practices/citation/download

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Oliver, D. et al. Falls and fall-related injuries in hospitals. (2010, Nov). *Clinics in Geriatric Medicine*. 26(4). p. 645-692.



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Bed Height – Read:

Christman, M. , Morse, J., et al. (2015). Analysis of the influence of hospital bed height on kinematic parameters associated with patient falls during egress. *Procedia Manufacturing* 3 (2015) 280 – 287

[Morse, J.M.](#), [Gervais, P.](#), et al. . (2015) The Safety of hospital beds: Ingress, egress, and in-bed mobility. [Glob Qual Nurs Res.](#) 27;2:2333393615575321. doi: 10.1177/2333393615575321. eCollection 2015 Jan-Dec.

Available: <https://www.ncbi.nlm.nih.gov/pubmed/28462302>



- Galinsky, Deter, et al (2021). Safe patient handling and mobility for increasingly bariatric patient populations: Factors related to caregivers' self-reported pain and injury. Applied Ergonomics, 91, February 2021, 103300

<https://www.sciencedirect.com/science/article/abs/pii/S0003687020302489>

- Sorenson, G., Sparer, E., et al. (2018). Measuring best practices for workplace safety, health and wellbeing: The Workplace Integrated Safety and Health Assessment. J Occupational Environ Med, 60(5): 430-439.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5943154/>

Thank you!

