Reducing Patient Harm From Falls and Pressure Ulcers in the Hospital Setting

February 7, 2019
2:00 p.m. – 3:00 p.m.
Guest Speakers

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AGENDA

- Ensuring a Consistent Data Collection Process
- What Fall Interventions are Working?
- Collecting Pressure Ulcer Data Using HRET Guidelines/Requirements
- What Pressure Ulcer Prevention Interventions are Working?
- Q & A
- HRET Resources
### Learning Objectives

<table>
<thead>
<tr>
<th>Describe</th>
<th>List</th>
<th>Compare and Contrast</th>
<th>Evaluate</th>
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<tr>
<td>Describe data collection techniques to assure consistent patient falls with injury data reporting.</td>
<td>List at least one intervention that is preventing improvement in reducing injuries from falls that should be eliminated and replaced with one evidence-based or newly-emerging strategy from the field.</td>
<td>Compare and contrast different pressure ulcer data collection sources and select the best method for their organization.</td>
<td>Evaluate current structures and processes that support pressure ulcer prevention and identify one gap in their organization that can be addressed within the current environment.</td>
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Who is in the room?

- Name
- Title
- Organization
Ensuring a Consistent Data Collection Process

Mary Erikson, RN, BSN, MSM
Advanced Quality Improvement Lead
Mountain – Pacific Quality Health
Data Collection General Tips for Success

- Clearly understand and agree upon the definition for what it is and avoid over interpretation.
- Leverage the electronic health record (EHR) or other reporting mechanisms; chart audit should be the last resort.
- EHRs and other reporting systems can streamline your work, but put in place a data validation method prior to using the data for reporting or improvement.
- Talk to people about the data – does it make sense for your facility? If they question the integrity, take another look and completely understand any limitations.
Data Collection General Tips for Success (cont.)

- Make a data collection “cheat sheet” for yourself:
  - Where did you get the data?
  - What was the report name?
  - What were the steps you went through to slice the data?
  - Take screenshots of where you entered the data query info.
  - What if someone else has to do it for you? How would they know what data to pull?
**Leverage the EHR for Data Collection**

- **Lab interfaces (or lab results as structured data)**
  - Data points can be retrieved from lab results
  - Lab results (structured data) enhance use of clinical decision support rules or guidelines at point of care

- **Computerized Physician Order Entry (CPOE)**
  - Data points can be retrieved from CPOE
  - CPOE enhances use of clinical decision support rules or guidelines at the point of care
Leverage the EHR for Data Collection

- Clinical Decision Support (CDS)
  - Target conditions and standardize treatments
    - Data display: Flow sheets, patient data reports and graphic displays
    - Workflow assistance: Task lists, patient status lists, integrated clinical and financial tools
    - Data entry: Templates to guide documentation and structured data collection
    - Decision-making: Access to resources, rule-based alerts, clinical guidelines or pathways, patient/family preferences and diagnostic decision support
Data Validation Process

1. Run report
2. Run patient list – Who met the denominator? Who met the numerator?
3. Review patient chart
4. Find data field
5. Talk to staff, do they usually document there?
6. Does the report reflect what you found?

Data validation is important for numerators AND denominators!
Data Validation Is Key

- During data validation process, expect to find data entry and collection improvement opportunities. Utilize workflow review and conversation with staff to determine and make necessary changes as first step in any improvement project.

- A good data validation process with improvements results in:
  - Valid reports so your future changes are backed by solid data
  - Streamlined data collection
  - Decreased reporting burden
  - Increased understanding of data limitations
  - Side benefit – staff understand project
Data Collection: Patient Falls with Injury Numerator

Measure definition:

**Numerator:** Total number of patient falls of **injury level minor or greater** (whether or not assisted by staff member) by eligible hospital unit during measurement period

Injury level minor or greater is defined by National Quality Forum (NQF) as:

- **Minor**
  - Resulted in application of dressing, ice, cleaning of wound, limb elevation, topical medication, pain, bruise or abrasion

- **Moderate**
  - Resulted in suturing, application of steri-strips/skin glue, splinting or muscle/joint strain

- **Major**
  - Resulted in surgery, casting, traction, required consultation for neurological (basilar skull fracture, small subdural hematoma) or internal injury (rib fracture, small liver laceration) or patients with coagulopathy who receive blood products as result of fall

- **Death**
  - Patient died as result of injuries sustained from fall (not from physiologic events causing fall)

Hospitals have 24 hours to determine injury level, e.g., when you are awaiting diagnostic test results or consultation reports
Data Collection: Patient Falls with Injury Numerator

- Process of data collection must include two components:
  1. Patient fell, (encourage reporting assisted and unassisted)
  2. **Patient sustained injury as result of fall** – NOT every patient fall is reported to Hospital Improvement Innovation Network (HIIN)

- Identify multiple sources of data
  1. Event reporting system
  2. EHR automatic triggers (i.e., if post-fall assessment template is used, it triggers quality department)
Data Collection: Patient Falls with Injury Denominator

Process of data collection

1. Patient days in **eligible units** during measurement period
   - Eligible units are defined as:
     - Inpatients, short-stay patients, observation patients and same-day surgery patients who receive care on eligible inpatient units for all or part of a day on the following unit types: adult critical care, step-down, medical, surgical, medical-surgical combined, critical access and adult rehabilitation inpatient units

2. Billing department, patient days reports, census

3. Pick one – be consistent throughout project
What Fall Interventions are Working?

Jackie Conrad RN, BS, MBA, RCC ™
Improvement Advisor
Cynosure Health
PREVENTING INJURY FROM FALLS AND IMMOBILITY: STOP to START Approach

STEP 1 – Bust the Myths
- Signage alone does not influence care
- Score based bundles are ineffective
- All Falls are not equal
- Forced immobility is causing harm
- Delirium is the leading contributor to falls
- Bed alarms cause more harm than good
- The term non-compliant is overused
- Nursing alone cannot reduce fall related injuries
- Medications are the easiest risk factor to modify

http://www.hret-hiin.org/resources/display/stop-to-start-improving-fall-injuries
STOP to START Approach

STEP 2 – Replace STOPS with STARTS

• STOP using bed alarms and sitters to restrict mobility
• START supporting the patient’s highest level of mobility 3 x day
  • Use sitters to ambulate
• STOP telling patients what to do
• START engaging patients as partners in safe mobility.
  • Use fall teach back tool

http://www.hret-hiin.org/resources/display/stop-to-start-improving-fall-injuries
STOP Focusing on Preventing ALL Falls

START focusing on preventing injuries from falls

- Use ABCS to screen for injury risk
- Use floor mats, hip protectors, helmets
- Assess and mitigate environmental factors: thresholds, sharp edges, hard surfaces, water

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<td>A</td>
<td>Age &gt; 85</td>
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<tr>
<td>B</td>
<td>Bones – history of fracture, bone disease, osteoporosis</td>
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<tr>
<td>C</td>
<td>Coagulation – on blood thinners or bleeding disorder</td>
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<td>S</td>
<td>Surgery within current episode of care</td>
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STOP Focusing on Preventing ALL Falls

START focusing on learning from and preventing UNASSISTED falls

- Establish criteria for toileting supervision: arms length, foot in the door, help staff stay on task
- Provide more frequent, purposeful rounding for patients high risk for fall or injury
- Scheduled toileting for patients needing assistance ambulating to the toilet. Toilet before pain meds, at bedtime. “I have the time”
STOP Relying on a Fall Risk Score for Action

START focusing on identifying risk factors and activating interventions to address each risk factor

– START identifying high risk or vulnerable populations to conduct a multifactorial assessment
  • Patients admitted for a fall
  • High risk for injury – ABCS
  • Known faller
– START using Get Up and Go or BMAT admission mobility assessment to trigger rehab referral
– START capturing known faller status to EMR banner
STOP using bed alarms & sitters to restrict mobility

START supporting the patients highest level of mobility at least three times a day

- Use pedometers to track mobility
- Assess mobility on admission and activate 3 x day
- Train sitters to ambulate patients
- Identify who is responsible for mobilization
- Recruit a physician champion
Replace Bed alarms with Pedometer?

Bottom Line:
The higher the step count, the better the outcome
STOP using bed alarms & sitters to restrict mobility

START using less restrictive measures
- More frequent checks
- Scheduled toileting
- Activities and ambulation

START focusing on preventing and minimizing delirium
- Assess for delirium – B-Cam or CAM
- Discontinue tethers – urinary catheters, IVs
- Mobilize at highest level 3 x per day or more
- Minimize CNS affecting meds and anticholinergics
STOP Thinking you cannot afford a mobility program

- START training sitters to mobilize patients
- START recruiting volunteers to support mobility activities
- START calling your fall team the mobility team
- START thinking PT stewardship – the right level of staff for mobility activities
STOP Thinking you cannot afford a mobility program

START developing a ROI based upon current rates of harm and employee lifting injuries

Case Study: St Francis, Michigan City, IN

- 3 mobility trained nursing assistants. Results after 1 year
  - 70% reduction in HAPI
  - 40% reduction in worker back injuries
  - 45% reduction in RN turnover
  - 43% reduction in readmission
  - 39% reduction in d/c to SNF
STOP telling patients what to do, calling them noncompliant & naming family as the problem

- START partnering with family members in the safety of their loved one.
  - Family attendance in bedside handoffs
  - Wrist band designation for “family in training” or passed competency

- START engaging patients as partners in safe mobilization
  - Use teach back for fall safety – teach the “why”
  - Provide structured education, questionnaire
  - Use patient agreements
Engaging Patients and their Family Members

New terminology:
Over Confident
instead of
Non-Compliant

Patient Fall Questionnaire
STOP Targeting Nursing Alone

START a “Whole House Approach”

- Falls discussed in leadership safety briefings
- Leaders attend and support post fall huddles
- All staff trained on “No Pass Zone”
- Physicians and pharmacists review medications
- Interdisciplinary environmental safety and “clutter rounds” – (Environmental services, Materials, Biomed, Engineering)
Collecting Pressure Ulcer Data Using HRET Guidelines/Requirements

Mary Erikson, RN, BSN, MSM
Advanced Quality Improvement Lead
Mountain – Pacific Quality Health
Data Collection: Pressure Ulcer Prevalence Numerator

Measure definition:

Patients who have at least one category/stage II or greater hospital-acquired pressure ulcer on day of prevalence measurement episode (point in time measurement)

• Data collection for prevalence measurement relies on direct surveillance methods
• Be consistent with team and method doing surveillance
• Use surveillance as patient and staff education opportunity
Data Collection: Pressure Ulcer Prevalence Denominator

- All patients, 18 years of age or greater, surveyed for measurement episode
- Process of data collection
  - Billing department
  - Be consistent
Data Collection: Pressure Ulcer Rate Numerator

- Pressure Ulcer Rate, Stages 3+ (preferred pressure ulcer measure)
- Discharges, among cases meeting inclusion and exclusion rules for denominator, with any secondary diagnosis codes for pressure ulcer and any secondary diagnosis codes for pressure ulcer stage III or IV (or unstageable)
Data Collection: Pressure Ulcer Rate Numerator

- Process of data collection must include data validation
  - Relying on primary and secondary diagnosis for inclusion requires data validation and provider education to prevent false zeros
  - Chart review to determine community-acquired versus hospital-acquired

- May need to identify multiple sources of data
  1. Event reporting system, quality department notification
  2. EHR automatic triggers (i.e., Braden risk score, orders for physical therapy, skin-related referrals trigger quality department)
  3. Billing charges for skincare-related items – dressings, etc.
Data Collection: Pressure Ulcer Prevalence
Denominator

- Surgical or medical discharges for patients ages 18 years and older
  - Surgical and medical discharges are defined by specific Diagnostic Related Group (DRG) or Medicare Severity (MS-DRG) codes

- Process of data collection
  - Billing department, census reports
  - Be consistent
What pressure ulcer prevention interventions are working?

Jackie Conrad RN, BS, MBA, RCC™
Improvement Advisor
Cynosure Health
Revisiting Competency

Staff skills in preventing recognizing, staging and documenting wounds

System’s ability to deliver preventative skin care measures reliably

Is one more important? Or are both important?
Pt
HAPI
Free

RN skills in preventing recognizing, staging and documenting wounds

System’s ability to deliver preventative skin care measures reliably: policies, products, equipment, champions, prevalence
System Responsibilities

- Adequate pressure redistribution surfaces.
  - ICU, Med Surg
  - OR, ED
- Supplies
  - Barrier creams
  - Incontinence management
  - Underpads
  - Soft
- Education
  - Annual skin care education – RNs, and Techs
  - Enhanced education for champions
- Policies
  - Skin inspection
  - Medical Devices
  - Repositioning, avoiding friction, use of SPH
  - Progressive mobility
  - Peri operative prevention
- Practices
  - Prevalence Studies
  - Skin Champions
  - Access to experts
  - Patient Family Engagement
Bedside Responsibilities
Skin Care Planning – what’s new

- Based Upon Bundle Score
  - Braden < 18 is at risk
    - 23-20 – low
    - 19-16 – medium
    - 15-11 – high
    - 10-6 – very high

- Based Upon Risk Factors
  - Friction and Sheer
  - Sensory Perception
  - Moisture
  - Activity
  - Mobility
  - Nutrition

- Not all risk factors are equal (Tescher et al)
  - Braden friction score of 1 or 2 has the highest association for PU development
  - Moisture, and low sensory perception are also more predictive than other sub scores (mobility, nutrition and activity were less predictive)
Skin Care Bundle

- S – Skin Inspection
- K – Keep Moving
- I – Incontinence
- N - Nutrition
Skin Inspection Evidence Based Guidelines

- Increase frequency of inspection to with every position change for high risk or deteriorating patients
  - Assess bony prominences with each position change with special attention to sacrum, ischial tuberosities, greater trochanter and heels
- Inspect skin for erythema or redness
  - Assess if the skin is blanchable or non-blanchable
  - Do not position a patient areas with erythema
- Assess the skin temperature, for edema and consistency related to surrounding tissue
- Inspect around and under medical devices at least once a day

NPUAP 2014 Practice Guidelines
Skin Inspection Best Practices

- Frequent, ongoing education on staging and skin assessment
  - In orientation and in annual skills fairs
  - Build assessment skills beyond visualization – teach palpation and assessment of skin temperature
    - AHRQ Comprehensive Skin Assessment Video – 53 minutes
    - HRET HIIN Recognizing Pressure Injury – 20 minutes

- Engaging unlicensed assistive personnel as skin champions

- Use of photos
  - WOCN Photography in Wound Documentation Fact Sheet

- Access to an expert: “phone a friend”
Four Eyes Assessment
Skin Inspection Best Practices

- Educating patients that pain over bony prominences or under devices is an early warning sign of tissue injury
  - Preventing Pressure Ulcers: A Patient's Guide excerpt to right

- Availability of mirrors to check heels, for patients to check sacrum
K – Keep Moving
Goal: Reduce Pressure, Friction, Shear

Moisture increases the impact of shear and friction.

Pressure

Friction & Shear

Pressure Injury
Pressure

Hard surface

Softer surface
Pressure is redistributed
Friction

- **Static friction**
  - resistance at rest
  - keeps the object in place
  - friction load peaks before movement occurs

- **Dynamic friction**
  - resistance during movement

How does moisture impact friction?
Shear

- Distortion or deformation of tissue by two oppositely directed parallel forces. Pressure and friction are the forces.
  - Shear stress augments the ischemic effect of pressure
  - Shear strains fracture fine biological structures
Minimize Pressure, Friction & Shear

- Strategies
  - Lift don’t drag
  - Protective Dressing
  - Manage Moisture
  - Mobilize – up in chair, turn Q 2
  - Float Heels
  - [NPUAP White Paper](#) on use of slings

- Support Surfaces
  - Are they adequate? – do a hand test under the mattress
  - Don’t over pad the bed
K – Keep Moving Evidence

- Repositioning frequency is determined based upon the patient’s needs
  - Tissue tolerance
  - Level of activity and mobility
  - General medical condition
  - Overall treatment objectives
  - Skin condition
  - Comfort

Image source
Teach the patient and family to do pressure relief lifts or other pressure relieving maneuvers
K – Keep Moving Evidence – The BASICS

- Position in a way that pressure is relieved or redistributed
- Avoid positioning over bony prominences
- Avoid pressure and shear forces
- Avoid positioning over medical devices
- Do not leave a patient on a bed pan longer than necessary
- Provide sitting position to allow full range of activities
- Select a seated posture that minimizes pressure and shear
  - No sliding down in the chair
- Ensure feet are properly supported when seated
K – Keep Moving Evidence

- Don’t position on an existing pressure injury or reddened skin
- Don’t use a ring or donut shaped device
- Don’t use synthetic sheep skin pads, cut outs IV bags or water filled gloves to elevate heels
Sacrum 37% of all injuries

*Elevated head of bed lying with the backrest at a 45° angle causes a high combination of shear stress and pressure at the buttocks and sacral area, i.e., patients with respiratory compromise.
Protective Dressing

Expert consensus recommendation:
For critically ill patients, include a five layer soft silicone bordered dressing on the sacrum to reduce pressure, shear and microclimate.

Implications:
• ICU
• ED
• OR

http://www.hret-hiin.org/resources/display/dressings-as-an-adjunct-to-pressure-ulcer-prevention-consensus-panel-recommendations
Why Heel Injuries are so prevalent?

- Sustained high pressure over small area
- Supine position is highest risk
- Friction and shear when sliding down in bed, or if agitated, spasms
- Blood supply may be poor
- Very little padding, thin skin

Image from NDNQI training module
Boot or Pillow or Dressing

- Soft foam protective dressing: agitated patients to reduce friction damage

- Pillows: alert patients who can maintain extremities on pillows. Avoid pressure on Achilles tendon

- Boot: decreased level of consciousness, spinal cord injury, contractures
I – Incontinence

Moisture

“In high risk individuals, shear/friction and moisture are modifiable but often underappreciated risk factors in pressure injury development.” (Brindle 2010)
Moisture-Associated Skin Damage

- Inflammation and erosion of the skin caused by prolonged exposure to various sources of moisture.
  - Urine or stool
  - Perspiration
  - Wound exudate
  - Mucous or saliva
- Includes intertriginous skin related issues
- Moisture Associated Skin Damage (MASD) is not classified as a Pressure Injury unless the injury is associated with pressure over a bony prominence, not simply from superficial moisture damage.

Incontinence Irritants

- **Urine**
  - *Water*: saturates skin, reduces hardness, increases risk of friction and erosion
  - *Ammonia*: raises pH, promotes pathogenic growth, disrupts acid mantle, activates fecal enzymes
  - Damage can occur within 48 hours

- **Stool**
  - *Fecal enzymes*: damage stratum corneum, promotes erosion, worse in high volume diarrhea
  - *Gastrointestinal Bacteria*: may be pathogenic
  - Damage in 8 hours (possibly less) with high volume diarrhea

Gray M. Journal of WOC Nursing
I – Incontinence Moisture

**Interventions – Best Practices**
- Low air loss mattress
- Wicking under pads, no diapers in bed
- Use mild soap, soft wash cloths, no HOT water
- Barrier creams
- Manage incontinence
- External catheters – male and female
- Fecal collection devices for liquid stool – address the cause

**Skill building in differentiating Moisture vs Pressure:**
- [HRET HIIN Recognizing Pressure Injury](#) – 20 minutes
- [HHRET Moisture Related Skin Damage Webinar Recording](#) – 60 min
N – Nutrition and Hydration
N – Nutrition and Hydration

- Evidence Based Practices
  - Assess individual’s ability to eat independently
  - Assess adequacy of intake
  - Provide 30-35kcalories/kg body weight for adults with a PU or at risk for malnutrition.
  - Adjust for underweight individuals
  - Offer fortified foods or hi calorie hi protein supplements between meals if dietary intake is not meeting nutritional requirements
  - Provide and encourage adequate fluid intake.
  - Provide additional fluids for individuals with dehydration, elevated temperature, vomiting, sweating, diarrhea or draining wounds
Thank You!

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Resources for Building Front Line Champions

- Complimentary NPUAP webinar recordings:
  - FAQs about Pressure Injury Staging
  - Unavoidable Pressure Injuries, Terminal Ulcers and Skin Failure
  - OR Positioning and Pressure Injury Prevention
  - Why is this wound not healing?
  - Considerations for Bariatric Patients in Pressure Injuries & Wound Care
  - Nutrition & Pressure Injuries
- NDNQI Pressure Ulcer Training
- AHRQ Resources and RN Attitude and Knowledge Assessments
HIIN Recordings for Skill Building

- Acute Skin Failure from Sepsis Webinar Recording
- Early Detection of Pressure Injuries webinar
- Recognizing Pressure Injuries - 20 min
- Moisture Associated Skin Damage Webinar
- Preventing Perioperative Pressure Injuries Webinar
- Fruits of PU Staging and Prevalence Study Webinar
Resources

- The Agency for Healthcare Research & Quality (AHRQ) has developed a comprehensive resource for measuring fall rates and fall prevention practices. The resource is available online at the following link:

- The American Nurses Association (ANA) has published an article about measuring fall program outcomes. The article is available online at the following link:
  - [http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume122007/No2May07/ArticlePreviousTopic/MeasuringFallProgramOutcomes.html](http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume122007/No2May07/ArticlePreviousTopic/MeasuringFallProgramOutcomes.html)

- The Partnership for Patients has also gathered many resources for falls prevention and measurement. These resources are catalogued online at the following link: