Indiana’s Bold Aim

To make Indiana the safest place to receive health care in the United States... *if not the world*
Agenda

- Welcome and Introductions
- Get UP Campaign
- Jackie Conrad, RN, BS, MBA, RCC - Cynosure Health
- Resources and Support
- Get Up Webinar Series
UP Campaign

Goal: Simplify safe care and streamline cross-cutting interventions to reduce the risk for multiple patient harms
Early Progressive Mobility

- Falls
- Pressure Ulcer and Injury
- Delirium
- Catheter-Associated Urinary Tract Infection (CAUTI)
- Ventilator-Associated Events (VAE)
- Venous Thrombo-Embolism (VTE)
- Readmissions

GET UP
Mark your calendars for Thursday, **November 16** to raise awareness for pressure injury prevention and to educate staff on this topic.

The National Pressure Ulcer Advisory Panel (NPUAP) has promotional materials to support your efforts on their [website](http://www.npuap.org).

New tools that will help staff gain confidence in staging and documenting are available via the HRET HIIN website:

- [Full Color Pressure Injury Staging Poster](http://www.npuap.org)
- [Medical Device Related Pressure Injury Poster](http://www.npuap.org)
- [NDNQI Pressure Injuries and Staging Training Modules](http://www.npuap.org)

[http://www.hret-hinin.org/topics/pressure-ulcers.shtml](http://www.hret-hinin.org/topics/pressure-ulcers.shtml)
Pressure Injury Toolkit from the National Pressure Ulcer Advisory Panel

Best Practices for Prevention of Medical Device-Related Pressure Injuries

- Choose the correct size of medical device(s) to fit the individual
- Cushion and protect the skin with dressings in high risk areas (e.g., nasal bridge)
- Remove or move removable devices to assess skin at least daily
- Avoid placement of device(s) over sites of prior, or existing pressure ulceration
- Educate staff on correct use of devices and prevention of skin breakdown
- Be aware of etiologies under device(s), and potential for skin breakdown
- Confirm that devices are not placed directly under an individual who is bedridden or immobile
Pressure Injuries: Just the facts!

Definition of Pressure Injury: A pressure injury is localized damage to the skin and/or underlying soft tissue usually over a bony prominence or related to a medical or other device. The injury can present as intact skin or an open ulcer and may be painful. The injury occurs as a result of external force prolonged pressure, in combination with shear. The absence of soft tissue the pressure and shear may also be affected by microclimate, salivary, edema, co-morbidities and condition of the soft tissue.

Stages of Pressure Injuries:

Additional Pressure Injury Definitions:

For more information, visit www.npuap.org.

http://www.npuap.org/resources/educational-and-clinical-resources/2017-world-wide-pressure-injury-prevention-day/
History of Hospital Acquired Pressure Ulcers-Hospitals Only

Indiana State Medical Error Report for Hospital Acquired Pressure Ulcers 2006-2015

Definition of State Reportable Harm: Stage 3 or Stage 4 pressure ulcers acquired after admission to the facility. Excluded is progression from State 2 or Stage 3 if the Stage 2 or Stage 3 pressure ulcer was recognized upon admission or unstageable due to the presence of eschar.

*HIIN Reporting measure includes unstageable ulcers.


IHAconnect.org/Quality-Patient-Safety
Guest Speaker

Jackie Conrad, RN, BS, MBA, RCC
Improvement Advisor, Cynosure Health
GET UP Early to Save Skin

November 14, 2017
Why this is important

Mobility matters
• Early mobility accelerates progress
• How we mobilize can prevent injury – staff and patients
• Integrate HAPI prevention into Get UP progressive mobility activities.

• Discuss the implications for linking HAPI, early mobility and safe patient handling to accelerate progress.
SKIN

• Comprises 10-15% of body weight

• Receives approximately 1/3 of the circulating blood volume

• Complex organ with multiple functions, yet dependent on other organs for function

• Primary functions: water balance, body temperature control, immunocompetence, maintenance of vasomotor tone
Pressure Injury Factors

**Intrinsic factors**
- Vascular health
- Nutrition
- Muscle tone
- Age

**Extrinsic factors**
- Pressure
- Microclimate
  - Temperature
  - Moisture
- Shear from friction
Pressure Injury Etiology

- **Pressure**
- **Friction & Shear**
- **Moisture**

**Moisture increases the impact of shear and friction**

Pressure Injury

IHAconnect.org/Quality-Patient-Safety
Pressure
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
Movement influences shear forces

Pressure: 8mmHg
Lateral movement: None

Pressure: 8mmHg
Lateral movement: Only 5mm!

Movement increases strain in deep tissues
Impact of Critical Illness on Skin

- **Hemodynamic changes**
  - Hypo-perfusion
  - Mean arterial pressure – 70 for perfusion
- **Impaired thermoregulatory control**
  - Microclimate – heat and moisture
Hemodynamic Changes

- Fluid shifts
- Orthostatic intolerance
- Hypo-perfusion of skin
Gravitational Equilibrium

- Orthostatic tolerance decreases within 8 hours
- Inhibits the body’s ability to adapt to position changes
- Normal vestibular adjustment may be mislabeled as hemodynamic instability

Microclimate - heat

- **Temperature affects metabolic rate**
  - Increases need for nutrients and oxygen
  - Produces higher volume of toxins that expedite ischemic conditions
  - Local tissue temperatures are affected by the heat transfer and insulation properties support surface
  - Reduces natural healing to slight amounts of tissue trauma
Microclimate - moisture

• Moisture
  – Reduces strength of outer most layer of skin
  – Causes irritation
  – Increases friction
Sacrum 37% of all injuries

- Pressure
- Moisture

"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

http://www.hret-hiin.org/resources/display/dressings-as-an-adjunct-to-pressure-ulcer-prevention-consensus-panel-recommendations
ICU Challenges

• “Too unstable to turn”

• Off loading and repositioning is often missed
  “patients may remain in one position for extended periods of time”
  Krishnagopalan 2007

• Staff uncomfortable with mobilizing hemodynamically unstable patients
• *How do we start mobility early to prevent gravitational equilibrium?*
Does Incremental Positioning (Weight Shifts) Reduce Pressure Injuries in Critical Care Patients?

Lee Ann Krapfl ◆ Julia Langin ◆ Caitlin A. Pike ◆ Patricia Pezzella

ABSTRACT
BACKGROUND: Incremental positioning or weight shifts are often suggested as an alternative to standard repositioning/turfing in critical care patients deemed clinically unstable.

OBJECTIVE: This evidence-based report card reviews whether incremental positioning and/or weight shifts reduce hospital-acquired sacral/buttocks pressure injuries in critical care patients deemed too unstable to turn.

METHODS AND SEARCH STRATEGY: A scoping review of the literature was conducted for studies related to repositioning and hospital-acquired pressure injuries in high-risk, critical care patients. The databases searched were CINAHL, EMBASE, and PubMed. Key words used in the search were “intensive care,” “critical care,” “pressure ulcer(s),” “pressure injury(ies),” “pressure sore(s),” “turn(s),” “turning,” “shift(s),” “shifting,” “position(s),” OR “positioning, cardiopulmonary support.” The search yielded 183 articles. The search was then narrowed to those published within the past 10 years, yielding 35 citations. Following title and abstract review, 5 studies were identified that met inclusion criteria; an additional 13 articles were found by ancestry and hand-searching.

FINDINGS: No evidence was identified that incremental positioning and/or weight shifts reduce hospital-acquired sacral/buttocks pressure injuries in critical care patients deemed too unstable to turn. In addition, no evidence was found that incremental positioning and/or weight shifts affect interface pressure on the sacrum/buttocks. However, there was evidence that incremental positioning and/or weight shifts do impact gravitational equilibrium.

CONCLUSION: Despite the paucity of evidence, incremental positioning and/or weight shifts are recommended as an intervention in critical care patients deemed too unstable to turn. Further research is needed to examine whether incremental positioning and/or weight shifts are effective in reducing pressure injuries in critical care patients.

- > 30 HOB elevation increases sacral pressure
- Evidence is lacking incremental turns directly impact HAPI development
- Incremental turns and weight shifts DO impact gravitational equilibrium
- Incremental turns should be employed to train to turn
Progressive Mobility

Elevate HOB

Manual turning

PROM AROM

CLRT and Prone positioning

Upright / leg down position

Chair position

Dangling

Ambulation

Vollman, 2010
Start within 8 hours of admission

Duke Progressive Mobility Protocol
Progressive Mobility Continuum Courtesy of Teresa Murray, CNS, Community Health Network, IN
Lateral turn results in a 3%-9% decrease in SVO$_2$, which takes 5-10 minutes to return to baseline.

The act of turning may have the greatest impact on any instability seen.

Activities That Increase O$_2$ Demand

- Chest X-ray 25%
- Bath 23%
- Suctioning 27%
- ↑ work of breathing 40%
- Weigh on sling scale 36%
- Position change 31%
- Linen change 22%
- Chest physiotherapy 35%
- Dressing change 10%
- Physical exam 20%
- Agitation 18%

Vollman KM. *Crit Care Nurs Q*. 2013;36:17-27
Interventions for the Unstable Patient

• Shift weights or micro-turns
• Elevate heels from surface of bed
• Reposition arms and legs every hour, PROM
• Consider Continuous Lateral Rotation Therapy
  – Driven by a protocol
  – Begin slow and low angles
  – Stop every 2 H and reassess
Micro-turns

• **Baby steps**

- 15 degrees
- 15 seconds
Tips for Training to Turn

• Determine the best time when the body is at rest.
• Go SLOW!!!
• Monitor for 5-10 minutes for tolerance. VS should recover within 10 min
• Start with right lateral – easier tolerated
• Return to supine w/ HOB up or right lateral up if unable to recover position change within 10 minutes

Vollman KM. Crit Care Nurs Q. 2013;36:17-27
Decision-Making Tree for Patients Who Are Hemodynamically Unstable With Movement

- Screen for mobility readiness within 8 hrs of admission to ICU & daily initiate in-bed mobility strategies as soon as possible

  - Is the patient hemodynamically unstable with manual turning?
    - $O_2$ saturation $\leq$ 90%
    - New onset cardiac arrhythmias or ischemia
    - HR $< 60$, $< 120$
    - MAP $< 55$, $> 140$
    - SPB $< 90$, $> 180$
    - New or increasing vasopressor infusion

  - Is the patient still hemodynamically unstable after allowing 5-10 minutes' adaption post-position change before determining tolerance?

    - Yes
      - Initiate continuous lateral rotation therapy via a protocol to train the patient to tolerate turning
    - No
      - Begin in-bed mobility techniques and progress out-of-bed mobility as the patient tolerates

    - Screen for mobility readiness within 8 hrs of admission to ICU & daily initiate in-bed mobility strategies as soon as possible

    - Has the manual position turn or HOB elevation been performed slowly?

      - Yes
        - Begin in-bed mobility techniques and progress out-of-bed mobility as the patient tolerates
      - No
        - Allow the patient a minimum of 10 minutes of rest between activities, then try again to determine tolerance

    - Try the position turn or HOB maneuver slowly to allow adaption of cardiovascular response to the inner ear position change

A word about sedation and delirium mgt

• **Critical to early ICU mobility success**
  – Coordinate timing of sedation and mobility to optimize wakefulness
  – Follow the ABCDEF Bundle

• **Tune in the “Wake UP” events to learn more**
EBP for off-loading & pressure reduction

- Use 30 degree tilted side lying position as condition allows
- Encourage self re-positioning
- Assess whether offloading has occurred
- Use lifting devices or other aids to reposition to make it easier to turn
- Encourage proper seating in a chair – no slouching

NPUAP 2014
EBP to reduce Shear and Friction

• **Loose covers and increased immersion in the support surface**
• **Protective dressing**
• **Use lifting / transfer devices**
  – Mechanical lifts
  – Transfer sheets
  – 2-4 person lifts
  – Turn and assist features on beds

Support surface with immersion reduces friction

NPUAP 2014
Caring for our Caregivers
How safe are hospitals for workers?

Which work setting has the highest work related injury or illness rates?

1. Hospitals
2. Construction
3. Manufacturing?
Days away from work by sector

Injuries and Illnesses Resulting in Days Away from Work, 2011

- Hospitals: 157.5 cases per 10,000 full-time employees
- Construction: 147.4 cases per 10,000 full-time employees
- Manufacturing: 111.8 cases per 10,000 full-time employees
- Private industry (U.S. average): 105.2 cases per 10,000 full-time employees
- Professional and business services: 54.5 cases per 10,000 full-time employees

Data source: Bureau of Labor Statistics
Provide world class care to your caregiver so they can provide world class service to the patient.
Can we integrate SPH with Get UP and HAPI Prevention?
Linking outcomes

**Hurley Medical Center**

Compared standard care: off loading with under pads, pillows, rolled blankets compared to use of a patient turning and positioning device and pressure relieving heel protectors

- 28% decrease in HAPI
- 58% decrease in HC worker injury
- $432 K savings

**Franciscan Health, Michigan City**

Implemented a mobility team staffed 7 days a week to ambulate patients. After 6 months, achieved improvements:

- 70% decrease in HAPI
- 40% reduction in HC worker back injuries
- 45% drop in readmissions
Causes & Types of Hospital Work Related Illness / Injury

Top Five Causes of Injury Among Hospital Workers
- Overexertion and bodily reaction: 48%
- Slips, trips, and falls: 25%
- Contact with objects: 13%
- Violence: 9%
- Exposure to substances: 4%
- All other causes: 1%

Hospital Injuries Resulting in Days Away from Work, by Type
- Sprains and strains: 54%
- Cuts and punctures: 3%
- All other injuries: 14%
- Multiple trauma: 3%
- Fractures: 5%
- Bruises: 11%
- Soreness/pain: 10%

Musculoskeletal injuries by role

Musculoskeletal Injury Rates For Selected Occupations In 2013
Nonfatal injuries and illnesses resulting in lost work days, per 10,000 full-time workers

- Orderlies: 241.0
- Firefighters: 231.8
- Nursing assistants: 208.4
- Police and sheriff's patrol officers: 88.2
- Correctional officers and jailers: 88.2
- Construction laborers: 72.3
- Personal care aides: 61.1
- Registered nurses: 55.7

Source: Bureau of Labor Statistics
Credit: NPR
Risks are on the Rise

Heavier Patients Mean Heavier Lifts
How much each body part might weigh for a man at different body weights (in pounds)

<table>
<thead>
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<th>HEAD/NECK</th>
<th>TRUNK</th>
<th>ARM</th>
<th>LEG</th>
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Notes:
- The average weight distribution did not differ greatly between women and men.
- “Arm” includes the upper arm, forearm and hand.
- “Leg” includes the thigh, shank and foot.

Source: Weights calculated from body segment parameters compiled by Paolo de Leva in a study published in the Journal of Biomechanics. Credit: Lydia Emmanouilidou and Alyson Hurl/NPR

IHAconnect.org/Quality-Patient-Safety
Why body mechanics fail

- Focus on using the legs and back
- 20-30% of a nurse's time is spent bent forward with trunk twisted
- Horizontal movement
  - Arms and shoulders lifting
Equipment Types

Lifts

Sit to Stand Device

Lateral transfer aids / glide sheets

Beds and Positioning Systems
Embracing Safe Patient Handling

- If you build it, they will come......
Make it important
Make it easy

Make it hard to do the wrong thing
First listen

- **Involve management and staff in a conversation**
  - What is the data telling you?
  - What are the barriers?
  - What special need patient population should we focus on?


Get Up Resources
How Can IHA Help?

• What resources do you need to help with your improvement efforts?
HRET Change Package-Pressure Ulcers/Injuries

http://www.hret-hiin.org/resources/display/hospital-acquired-pressure-ulcersinjuries-change-package

IHAconnect.org/Quality-Patient-Safety
HRET Change Package/Fact Sheet—Falls and Immobility

http://www.hret-hiin.org/topics/injuries-from-falls-immobility.shtml

IHAnetconnect.org/Quality-Patient-Safety
Teach-Back Tool

http://www.hret-hiin.org/resources/display/hret-hiin-teachback-tool-for-falls-prevention

IHAconnect.org/Quality-Patient-Safety
AHRQ Toolkits for Falls & Ventilator Acquired Events


https://wwwprofessionals/systems/h.ahrq.gov/ospital/fallpxtoolkit/index.html

IHAconnect.org/Quality-Patient-Safety
GET UP

GET UP focuses on mobilizing patients to return to function more quickly.

Keeping a patient mobile is key to helping them avoid various types of harm.
Maintaining a consistent emphasis on mobility can assist in the prevention of several harm events, including CAUTI, delirium, falls, HAPI/L, readmissions, VAE, and VTE.

There are many resources available at IHAconnect.org, including those below, to help your organization address these harm events and engage with the UP Campaign.

GET UP Resources

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<th>Link</th>
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Social Media Messaging

• IHA has created messaging for both general public, health care providers

• Messaging provided for formats:
  - Twitter
  - Facebook
  - LinkedIn
Up Campaign Schedule

Last Webinar 12/14/17

GET UP
Mobilizing patients to return to function more quickly

WAKE UP
Reducing unnecessary sleepiness and sedation

SOAP UP
Implementing appropriate hand hygiene to reduce the spread of infection

Coming 1Q 2018!

3Q 2017

IHAconnect.org/Quality-Patient-Safety
Get Up Survey Open

Help IHA better understand challenges and successes your team is having regarding falls by completing a Falls Checklist survey
• Responses are anonymous
• Will take approximately two minutes
• Complete by Nov. 30

https://www.surveymonkey.com/r/FallsChecklist
GET UP Webinar Series

Last Webinar in the Get Up Series!

Dec. 12-Multi-disciplinary Approach to Early Progressive Mobility
How are you incorporating GET UP within your organization?

http://www.hret-hiin.org/engage/up-campaign.shtml
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