Target Zero: Addressing Modifiable Risk Factors for the Patient and Staff in Preventing Hospital Acquired Skin Injury

Kathleen M Vollman, MSN, RN, CCNS, FCCM, FAAN
Clinical Nurse Specialist/Consultant
ADVANCING NURSING LLC
kvollman@comcast.net
www.vollman.com

©ADVANCING NURSING 2016
Disclosures for Kathleen Vollman

- Consultant-Michigan Hospital Association Keystone Center
- Consultant/Faculty for CUSP for MVP—AHRQ funded national study
- Subject matter expert CAUTI, CLABSI, HAPU, Safety culture
- Consultant and speaker bureau for Sage Products LLC
- Consultant and speaker bureau for Hill-Rom Inc
- Consultant and speaker bureau for Eloquest Healthcare
Objectives

• Discuss transforming a culture that creates safety for the patient and staff while achieving evidence based outcomes
• Outline evidence-based prevention strategies for incontinence associated dermatitis, friction reduction and pressure injury prevention
• Describe key care process changes that lead to a successful reduction of skin injury and prevent healthcare worker injury
Notes on Hospitals: 1859

“It may seem a strange principle to enunciate as the very first requirement in a Hospital that it should do the sick no harm.”

Florence Nightingale

Advocacy = Safety
Protect The Patient From Bad Things Happening on Your Watch

Implement Interventional Patient Hygiene
Interventional Patient Hygiene

- Hygiene…the science and practice of the establishment and maintenance of health
- Interventional Patient Hygiene….nursing action plan directly focused on fortifying the patients host defense through proactive use of evidence based hygiene care strategies

Comprehensive Oral Care Plan

Hand Hygiene

Incontinence Associated Dermatitis Prevention Program
INTERVENTIONAL PATIENT HYGIENE (IPH)

- VAP/HAP
- Oral Care/Mobility
- HAND
- HYGIENE
- Skin Care/Bathing/Mobility
- Catheter Care
- CA-UTI
- CA-BSI
- SSI
- Falls
- HASI

Safety is avoiding both short- and long-term harm to people resulting from unsafe acts and preventable adverse events.

Current infrastructure “silos” safety programs, creating one for patients, another for workers, and yet another for others who may be at risk. (Quality department, Risk Management, Employee Health, SPH)

The organizational culture, principles, methods, and tools for creating safety are the same, regardless of the population whose safety is the focus.

A true culture of safety—and the organization leaders who create and sustain it—will not be considered legitimate and genuine if the culture excludes some groups within the organization.

What Does it Mean to Be in A Safe Culture for You & Your Patient?
Changing the Paradigm

Culture of Safety in Health Care

Patient Safety

Culture of Safety for Healthcare Workers

Healthcare Worker Safety

Safety Culture for the Patient & the HCW
Changing the Perception of Safety on Your Unit

- Safety for the patient and healthcare worker are integrated
- Transcends individual improvement initiatives and departmental walls
- High reliable unit/organization: engaged leadership, culture of safety, organizational processes and infrastructure to support safe practices
- Implement and maintain successful worker and patient safety improvement initiatives within your unit & organization.
- Create measurements that integrate patient safety and healthcare worker safety

Castro GM. Am J SPHM, 2015;5(1)34-35
Add ANA-
The Goal: Patient & Caregiver Safety

- Safe Patient Handling
- Prevention of Pressure Injuries
- Patient Progressive Mobility
How Well Are We Doing?
REPOSITIONING /MOBILIZATION OF THE PATIENT

PATIENT SKIN INJURY
CAREGIVER INJURY
Do We Even Achieve the Minimum Mobility Standard… “Q2 Hours..”?
Body Position: Clinical Practice vs. Standard

• Methodology
  – 74 patients/566 total hours of observation
  – 3 tertiary hospitals
  – Change in body position recorded every 15 minutes
  – Average observation time 7.7 hours
  – Online MD survey

• Results
  – 49.3% of observed time no body position change
  – 2.7% had a q 2 hour body position change
  – 80-90% believed q 2 hour position change should occur but only 57% believed it happened in their ICU

Krishnagopalan S. Crit Care Med 2002;30:2588-2592
Positioning Prevalence

• Methodology
  – Prospectively recorded, 2 days, 40 ICU’s in the UK
  – Analysis on 393 sets of observations
  – Turn defined as supine position to a right or left side lying

• Results:
  – 5 patients prone at any time, 3.8% (day 1) & 5% (day 2) rotating beds
  – Patients on back 46% of observation
  – Left 28.4%
  – Right 25%
  – Head up 97.4%
  – Average time between turns 4.85 hrs (3.3 SD)
  – No significant association between time and age, wt, ht, resp dx, intubation, sedation score, day of wk, nurse/patient ratio, hospital
International Survey of Early Mobilization Practices: Where Do We Stand

• Surveyed directors of medical and mixed medical surgical ICUs in 4 countries
• Institutions selected a random
• Results
  • 833 ICUs (US 396; France 151, UK 138, Germany 148)
  • 27% reported having a formal EM protocol
  • 21% have adopted him practices without a protocol
  • 52% have not adopted EM practices
  • EM protocols applied to both ventilated and non-ventilated upon ICU admission
• Factors associated with EM protocol
  – presence of multidisciplinary rounds (US)
  – written daily goals (US)
  – Sedation protocol (US)

Environmental Scan of EM Practices

• 687 randomly selected ICU’s stratified by regional density & size- 500 responded (73% response rate)

• Demographics:
  – 51% academic affiliation, mixed medical/surgical (58%) or medical (22%) with a median of 16 beds (12–24)
  – 34% dedicated PT or OT for the ICU
  – Performed a median of 6 days, 52% began on admission

Factors associated with EMP:
• Dedicated PT/OT
• Written sedation protocol
• Daily MDR
• Daily written goals
Outcomes of Early Mobility Programs

- ↓ incidence of VAP
- ↓ time on the ventilator
- ↓ days of sedation
- ↓ incidence of skin injury
- ↓ delirium
- ↑ ambulatory distance
- Improved function

Thomsen GE, et al. CCM 2008;36;1119-1124
Winkelman C et al, CCN,2010;30:36-60
Body Position: Clinical Practice vs. Standard

- **Methodology**
  - 74 patients/566 total hours of observation
  - 3 tertiary hospitals
  - Change in body position recorded every 15 minutes
  - Average observation time 7.7 hours
  - Online MD survey

- **Results**
  - 49.3% of observed time no body position change
  - 2.7% had a q 2 hour body position change
  - 80-90% believed q 2 hour position change should occur but only 57% believed it happened in their ICU

Krishnagopalan S. Crit Care Med 2002;30:2588-2592
Positioning Prevalence

• Methodology
  – Prospectively recorded, 2 days, 40 ICU’s in the UK
  – Analysis on 393 sets of observations
  – Turn defined as supine position to a right or left side lying

• Results:
  – 5 patients prone at any time, 3.8% (day 1) & 5% (day 2) rotating beds
  – Patients on back 46% of observation
  – Left 28.4%
  – Right 25%
  – Head up 97.4%
  – Average time between turns 4.85 hrs (3.3 SD)
  – No significant association between time and age, wt, ht, resp dx, intubation, sedation score, day of wk, nurse/patient ratio, hospital

Goldhill DR et al. Anaesthesia 2008;63:509-515
IF AT FIRST YOU DON'T SUCCEED, YOU'RE RUNNING ABOUT AVERAGE
Pressure Injury Data

- Canada: 1 in 8 patients in Acute Care develop a HAPU, 1 in 11 Nursing Home residents, 1 in 50 at home.
- 4 days LOS, 7% greater likelihood of dying & cost to system est. 13,500.
- US-NDNQI data base: critical care 7%  Med-Surg: 1-3.3%
- 1716 patients incontinent (44%)
  - 57% both FI and UI, 27% FI, 15% UI
  - 24% IAD rate
    - 60% mild
    - 27% moderate
    - 5% severe
  - 73% was facility acquired
  - ICU a 36% rate
  - IAD 5x more likely to develop a HAPU

http://healthydebate.ca/opinions/should-ontario-be-more-proactive-in-pressure-ulcer-prevention
accessed 102013
Giuliana K. Presented at the CAACN September 25-27th Winnipeg, Manitoba, CA
A Five Year Study of an Ontario hospital determined the net costs of facility acquired pressure ulcers based on degrees of trauma.

<table>
<thead>
<tr>
<th>Category</th>
<th>Hospital acquired</th>
<th>Pre-admission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category II</td>
<td>$43,930</td>
<td>$10,810</td>
</tr>
<tr>
<td>Category III</td>
<td>$68,320</td>
<td>$15,100</td>
</tr>
<tr>
<td>Category IV</td>
<td>$90,000</td>
<td>$18,520</td>
</tr>
<tr>
<td>Unstageable</td>
<td>$45,570</td>
<td>$8,305</td>
</tr>
</tbody>
</table>

What are Ergonomic Risk Factors

- Force
- Repetition
- Posture
- Duration of Exposure
Oh, My Aching Back!

• 8 out of 10 nurses work despite experiencing musculoskeletal pain\(^1\)
• 62% of nurses report concern regarding developing a disabling musculoskeletal injury\(^1\)
• 56% of nurses report musculoskeletal pain is made worse by their job\(^1\)
• Nursing assistants had the 2\(^{nd}\) highest and RNs had the 6\(^{th}\) highest number of musculoskeletal disorders in the U.S.\(^2\)


Contributing Factors to Injury

- Health care is the only industry that considers 100 pounds to be a “light” weight
- Other professions use assistive equipment when moving heavy items
- On average, nurses and assistants lift 1.8 tons per shift (ANA, n.d.)

Canada Health Care Worker Safety

• Cameron Mustard, president of The Institute for Work & Health: mining and manufacturing have seen a decline but not health care.

• Mary Ferguson-Paré, past Chief Nursing Executive at University Health Network: health care work is different than other industries. “It is expected in health care that front line workers put themselves forward to care for patients at all costs – they step up and do what they can, often at their own peril.”

• 2010 study in BC found that about 83% of health care worker injuries were musculoskeletal in nature.
  – Most of these injuries were sustained during patient handling – which could include repositioning, transferring and assisting patients during a procedure.

### Number, Incidence Rate, & Median Days Away From Work for Occupational Injuries RN’s with Musculoskeletal Disorders in US, 2003 – 2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Ownership</th>
<th>Occupation</th>
<th>Total Cases</th>
<th>Incidence Rate*</th>
<th>Median Days Away From Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>Private industry</td>
<td>RNs</td>
<td>8,760</td>
<td>51.6</td>
<td>8</td>
</tr>
<tr>
<td>2010</td>
<td>Private industry</td>
<td>RNs</td>
<td>9,260</td>
<td>53.7</td>
<td>6</td>
</tr>
<tr>
<td>2011</td>
<td>Private industry</td>
<td>RN’s</td>
<td>10,210</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>2012</td>
<td>Private industry</td>
<td>RN’s</td>
<td>9,900</td>
<td>58.5</td>
<td>8</td>
</tr>
<tr>
<td>2013</td>
<td>Private Industry</td>
<td>RN</td>
<td>9,820</td>
<td>56.2</td>
<td>7</td>
</tr>
<tr>
<td>2014</td>
<td>Private Industry</td>
<td>RN</td>
<td>9,820</td>
<td>55.3</td>
<td>9</td>
</tr>
<tr>
<td>2014</td>
<td>Private Industry</td>
<td>NA</td>
<td>18,510</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

* Incidence rate per 10,000 FTE

Skin & Immobility Prevention Strategies

Skin Risk Factors

- Moisture
- Pressure
- Shear
- Friction

Clean & Protect

Reduce Pressure & Shear

In-bed & Out of Bed Mobility

Care Giver Risk

- Repetitive motion, Lifting
- Repetitive motion, Lifting & Limb holding
- Repetitive motion, Dragging, patient weight

Skin & Immobility Prevention Strategies

Clean & Protect

Reduce Pressure & Shear

In-bed & Out of Bed Mobility

Care Giver Risk

- Repetitive motion, Lifting
- Repetitive motion, Lifting & Limb holding
- Repetitive motion, Dragging, patient weight
The Goal: Patient & Caregiver Safety

- Safe Patient Handling
- Prevention of Pressure Injuries
- Patient Progressive Mobility
Patient Progressive Mobility
**Progressive Mobility Continuum**

**START HERE**
Perform Initial mobility screen w/in 8 hours of ICU admission
Reassess mobility level at least every 24 hours (Recommended at shift Δ)

Refer to the following criteria to assist in determining mobility level:
- PaO2/FiO2 > 250
- Peep <10
- O2 Sat > 90%
- RR 10-30
- No new onset cardiac arrhythmias or ischemia
- HR >60 <120
- MAP >55 <140
- SBP >90 <180
- No new or increasing vasopressor infusion
- RASS > 3

**LEVEL I**
RASS -5 to -3
**Goal:** clinical stability; passive ROM
**ACTIVITY:**
- Q 2 hr turning
- Passive/Active ROM 3x/d
- HOB 45º X 15 min.
- HOB 45º, Legs in dependent position X 15 min.
- Step (3) & full chair mode
- Full assist into cardiac chair 2X/day

**LEVEL II**
RASS -3 & up
**Goal:** upright sitting; increased strength and moves arm against gravity
**ACTIVITY:**
- Q 2 hr turning
- Self or assisted Q 2 hr turning
- Sitting on edge of bed w/RN, PT, RT assist X 15 min.
- Progressive bed sitting Position Min.20 min. 3X/d
- Step (3) & full chair mode
- Full assist into cardiac chair 2X/day

**LEVEL III**
RASS -1 & up
**Goal:** increased trunk strength, moves leg against gravity and readiness to weight bear
**ACTIVITY:**
- PT: Active Resistance
- Once a day, strength exercises
- OT consultation prn

**LEVEL IV**
RASS 0 & up
**Goal:** stands w/min. to mod. assist, able to march in place, weight bear and transfer to chair
**ACTIVITY:**
- PT x 2 daily
- OT consult for ADL’s

**LEVEL V**
RASS 0 & up
**Goal:** Increase distance in ambulation & ability to perform some ADLs

For each position/activity change allow 5-10 minutes for equilibration before determining the patient is intolerant

*If the patient is intolerant of current mobility level activities, reassess and place in appropriate mobility level*

**Mobility is the responsibility of the RN, with the assistance from the RT’s Unlicensed Assistive Personnel and PT/OT. PT and OT may assist the team with placement to the appropriate mobility level of activity, always prioritizing patient and provider safety. Placement is based on clinical judgment.*
Early Physical and Occupational Therapy in Mechanically Ventilated Patients

- Prospective randomized controlled trial from 2005-2007
- 1161 screen, 104 patients mechanically ventilated < 72hrs, functionally independent at baseline met criteria
- Randomized to:
  - early exercise of mobilization during periods of daily interruption of sedation (49 pts)
  - daily interruption of sedation with therapy as ordered by the primary care team (55 pts)
- Primary endpoint: number of patients returning to independent functional status at hospital discharge able to perform activities of daily living and walk (independently)

Early Physical and Occupational Therapy in Mechanically Ventilated Patients


<table>
<thead>
<tr>
<th>Intervention (n=49)</th>
<th>Control (n=55)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time from intubation to first PT/OT session (days)</td>
<td>15 (1.0-21)</td>
<td>7.4 (6.0-10.9)</td>
</tr>
<tr>
<td>Independent ADLs total at ICU discharge</td>
<td>3 (0-5)</td>
<td>0 (0-5)</td>
</tr>
<tr>
<td>Independent ADLs total at hospital discharge</td>
<td>6 (0-6)</td>
<td>4 (0-6)</td>
</tr>
<tr>
<td>MRC examination score at hospital discharge</td>
<td>52 (25-58)</td>
<td>48 (0-58)</td>
</tr>
<tr>
<td>Hand-grip strength at hospital discharge (kg-force)</td>
<td>39 (10-58)</td>
<td>35 (0-57)</td>
</tr>
<tr>
<td>Greatest walking distance at hospital discharge (m)</td>
<td>33.4 (0-91.4)</td>
<td>0 (0-30.4)</td>
</tr>
<tr>
<td>Time from intubation to milestones achieved (days)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Out of bed</td>
<td>17 (11-30)</td>
<td>6.6 (4.2-8.3)</td>
</tr>
<tr>
<td>Standing</td>
<td>32 (15-56)</td>
<td>6.0 (4.5-8.9)</td>
</tr>
<tr>
<td>Marching in place</td>
<td>33 (16-58)</td>
<td>6.2 (4.6-9.6)</td>
</tr>
<tr>
<td>Transferring to a chair</td>
<td>31 (18-45)</td>
<td>6.2 (4.5-8.4)</td>
</tr>
<tr>
<td>Walking</td>
<td>38 (19-58)</td>
<td>7.3 (4.9-9.6)</td>
</tr>
</tbody>
</table>

Data are median (IQR). ADLs=activities of daily living. ICU=intensive care unit. MRC=Medical Research Council. PT/OT=physical therapy and occupational therapy. MRC examination scale 0-60.

Table 4: Function and muscle strength outcomes according to study group.

Early Physical and Occupational Therapy in Mechanically Ventilated Patients

- Safe
- Well tolerated
- ↓ duration of delirium
- ↑ VFD
- Functional independence at discharge 59% protocol group vs. 35% in control arm

Protocol Driven Mobility Program: Impacting Neurological Outcomes

- Pre-post intervention study
- Large academic NICU
- 637 patients
  - 260 pre
  - 377 post
- Intervention: Early Progressive Mobility Protocol
  - Exclusion criteria
  - Readiness criteria
  - Started on admission
  - Encourage to use ICU bed features & lifts to assist
  - Protocol place at bedside

Protocol Driven Mobility Program: Impacting Neurological Outcomes

Multivariate analysis done to control for group differences:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Preintervention</th>
<th>Postintervention</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Physiology and Chronic Health Evaluation III score*</td>
<td>59.0 (2.64)</td>
<td>58.7 (2.54)</td>
<td>0.90</td>
</tr>
<tr>
<td>Length of stay</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital, d (sd)</td>
<td>15.16 (0.96)</td>
<td>10.21 (1.04)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Neurologic ICU, d (sd)</td>
<td>7.37 (0.68)</td>
<td>4.75 (0.64)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Psychologic factors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression, mean (sd)</td>
<td>0.76 (0.22)</td>
<td>0.51 (0.22)</td>
<td>0.12</td>
</tr>
<tr>
<td>Anxiety, mean (sd)</td>
<td>0.69 (0.21)</td>
<td>0.42 (0.21)</td>
<td>0.088</td>
</tr>
<tr>
<td>Hostility, mean (sd)</td>
<td>0.38 (0.14)</td>
<td>0.27 (0.14)</td>
<td>0.31</td>
</tr>
<tr>
<td>Combined, mean (sd)</td>
<td>1.80 (0.50)</td>
<td>1.21 (0.48)</td>
<td>0.11</td>
</tr>
<tr>
<td>Highest mobility achieved</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Level 7</td>
<td>1.63 (1.16, 2.33)</td>
<td></td>
<td>0.005</td>
</tr>
<tr>
<td>3 levels</td>
<td>1.92 (1.43, 2.58)</td>
<td>&lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>4 levels</td>
<td>1.78 (1.32, 2.41)</td>
<td>&lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>Mortality, 30 d</td>
<td>0.96 (0.58, 1.59)</td>
<td>0.87</td>
<td></td>
</tr>
<tr>
<td>Discharge home</td>
<td>1.53 (1.03, 2.27)</td>
<td>0.033</td>
<td></td>
</tr>
<tr>
<td>Deep vein thrombosis</td>
<td>1.90 (1.00, 3.60)</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>Deep vein thrombosis*</td>
<td>1.73 (0.95, 3.15)</td>
<td>0.072</td>
<td></td>
</tr>
<tr>
<td>Deep vein thrombosis*</td>
<td>1.52 (0.83, 2.80)</td>
<td>0.18</td>
<td></td>
</tr>
</tbody>
</table>

Determining Readiness

- Perform Initial mobility screen w/in 8 hours of ICU admission & daily
  - PaO2/FiO2 ≥ 250
  - Peep <10
  - O2 Sat ≥ 90%
  - RR 10-30
  - No new onset cardiac arrhythmias or ischemia
  - HR >60 <120
  - MAP >55 <140
  - SBP >90 <180
  - No new or increasing vasopressor infusion
  - RASS ≥ -3

Patient Stable, Start at Level II & progress

Patient is unstable, start at Level I & progress

Consensus on Safe Criteria for Active Mobilization

• Systematic review performed than 23 international experts gather to reach consensus

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>Low risk of an adverse event. Proceed as usual according to each ICU’s protocols and procedures.</td>
</tr>
<tr>
<td>Yellow</td>
<td>Potential risk and consequences of an adverse event are higher than green, but may be outweighed by the potential benefits of mobilization. The precautions or contraindications should be clarified prior to any mobilization episode. If mobilized, consideration should be given to doing so gradually and cautiously.</td>
</tr>
<tr>
<td>Red</td>
<td>Significant potential risk or consequences of an adverse event. Active mobilization should not occur unless specifically authorized by the treating intensive care specialist in consultation with the senior physical therapist and senior nursing staff.</td>
</tr>
</tbody>
</table>

Consensus reach on all criteria. If no other contraindications; vasoactives, endotracheal tube, FIO2 < 60% with SaO2 90% & RR < 30/min were considered safe criteria

Hodgson CL, et. al Critical Care, 2014;18:658
Achieving In Bed and Out of Bed Mobility While Protecting the Patient and Caregiver
Skin & Immobility Prevention Strategies

Skin Risk Factors

- Moisture
- Pressure
- Shear
- Friction

Clean & Protect

Reduce Pressure & Shear

In-bed & Out of Bed Mobility

Care Giver Risk

- Repetitive motion, Lifting
- Repetitive motion, Lifting & Limb holding
- Repetitive motion, Dragging, patient weight

Care Giver Risk Strategies

- Repetitive motion, Lifting
- Repetitive motion, Lifting & Limb holding
- Repetitive motion, Dragging, patient weight

Skin & Immobility Prevention Strategies

Care Giver Risk

- Repetitive motion, Lifting
- Repetitive motion, Lifting & Limb holding
- Repetitive motion, Dragging, patient weight
Building Resiliency Into Interventions

Forcing Functions and Constraints

Automation and Computerization

Standardization and Protocols

Checklist and Independent Check Systems

Rules and Policies

Education and Information

Vague Warning – “Be More Careful!”

STRENGTH OF INTERVENTION

Strongest

Weakest
Oh, My Aching Back!

- 8 out of 10 nurses work despite experiencing musculoskeletal pain\(^1\)
- 62% of nurses report concern regarding developing a disabling musculoskeletal injury\(^1\)
- 56% of nurses report musculoskeletal pain is made worse by their job\(^1\)
- Nursing assistants had the 2\(^{nd}\) highest and RNs had the 6\(^{th}\) highest number of musculoskeletal disorders in the U.S.\(^2\)


NIOSH (National Institute of Occupational Safety and Health) Recommendations for Safe Patient Handling

- Maximum recommended weight limit set for patient lifting
  - The weight being lifted can be estimated
  - When patient is cooperative
  - The lift is smooth and slow
- Maximum recommended limits set for patient push/pull activity
- Proper body mechanics alone will not prevent patient handling injury (Hignett, 2003)
- Safe Work Practices

**IT IS NOT SAFE TO MANUALLY MOVE PATIENTS**

---

What is Safe Patient Handling?

- **Manual Patient Handling**
  - The transporting or supporting of a patient by hand or bodily force, including pushing, pulling, carrying, holding, and supporting of the patient or a body part.

- **Safe Patient Handling**
  - Evidence-based approach to reducing risk to caregivers. Includes risk assessment, use of equipment, patient assessment, algorithms, peer safety leaders, and after-action reviews.

---

Evidence Based Strategies for a Comprehensive SPHM Program

1. Ergonomic Assessment Protocol
2. Patient Handling Assessment Criteria and Decision Algorithms
3. Peer Leaders
4. State-of-the-art Equipment
5. After Action Reviews
6. No Lift Policy

EBP Recommendations to Achieve Offloading & Reduce Pressure (A)

- Turn & reposition every (2) hours (avoid positioning patients on a pressure injury)
  - Repositioning should be undertaken to reduce the duration & magnitude of pressure over vulnerable areas
  - Consider right surface with right frequency*
  - Cushioning devices to maintain alignment /30 ° side-lying & prevent pressure on boney prominences
    - Between pillows and wedges, the wedge system was more effective in reducing pressure in the sacral area (healthy subjects) (Bush T, et al. WOCN, 2015;42(4):338-345)
  - Assess whether actual offloading has occurred
  - Use lifting device or other aids to reposition & make it easy to achieve the turn

Pressure ulcer prevention guidelines:
• Q2 patient turning for sacral offloading:
• Pressure ulcer interventions to prevent skin breakdown:
  – Reduce pressure
  – Reposition
  – Manage moisture
  – Maximize nutrition
  – Enhance mobility and activity
EBP Recommendations to Reduce Shear & Friction

- Loose covers & increased immersion in the support medium increase contact area
- Prophylactic dressings: emerging science
- Use lifting/transfer devices & other aids to reduce shear & friction.
  - Mechanical lifts
  - Transfer sheets
  - 2-4 person lifts
  - Turn & assist features on beds
  - Do not leave moving and handling equip underneath the patient

Prophylactic Dressings: Emerging Therapies

• Consider applying a polyurethane foam dressing to bony prominences in the areas frequently subjected to friction and share (B)
• Consider placement prior to prolonged procedures or continuous head elevation (B)
• Consider ease of application and removal and the ability to reassess the skin.
• Continue to use all of other preventative measures necessary when using prophylactic dressings (C)

Systematic Review: Use of Prophylactic Dressing in Pressure Injury Prevention

• 21 studies met the criteria for review
• 2 RCTs, 9 had a comparator arm, five cohort studies, 1 within-subject design where prophylactic dressings were applied to one trochanter with the other trochanter dressing free

Evaluated nasal bridge device injury prevention

Evaluated sacral pressure injury prevention

EBP Recommendations to Reduce Shear & Friction

- Loose covers & increased immersion in the support medium increase contact area
- Prophylactic dressings: emerging science
- Use lifting/transfer devices & other aids to reduce shear & friction.
  - Mechanical lifts
  - Transfer sheets
  - 2-4 person lifts
  - Turn & assist features on beds
  - Breathable slide stay in bed glide sheet
- Do not leave moving and handling equip underneath the patient

Human Factor Engineering & Ergonomics

- Human Factors: the application of scientific knowledge about human strengths and limitations to the design of systems in the work environment to ensure safe and satisfying performance.
- Ergonomics: the science of fitting workplace conditions and job demands to the capabilities of the working population. A good fit between employee capabilities, workplace conditions, and job demands helps ensure high productivity, avoid illness and injury, and increase satisfaction in the workforce.

Translates to higher quality patient care and fewer adverse events for workers and patients.
The Tail of Ceiling Lifts

• Mechanical lifts are often not used to the extent that was intended, reportedly due to poor access, lack of space for use or storage, inadequate staffing, or increased time required for use of the lift compared to manual methods (Daynard et al., 2001; Evanoff et al., 2003; Garg et al., 1991a, b).

• Studies have shown that ceiling lifts may not be suitable for all patient handling tasks. (Ronald et al., 2002; Villeneuve, 1998)

• Implementing a ceiling lift program significantly reduced (58% reduction, p= 0.011) the rate of musculoskeletal injuries (MSI) to nurses and care aides caused by lifting and transferring.

• Study showed that ceiling lifts did not positively impact rates of MSI caused by repositioning patients in bed. (Ronald et al. (2002))
Achieving the Use of the Evidence For Pressure injury Reduction

Factors Impacting the ability to Achieve Quality Nursing Outcomes at the Point of Care

Resource & System
- Breathable glide sheet/stays
- Foam Wedges
- Microclimate control
- Reduce layers of linen
- Wick away moisture body pad
- Protects the caregiver

Comparative Study of Two Methods of Turning & Positioning

- Non randomized comparison design
- 59 neuro/trauma ICU mechanically ventilated patients
- Compared SOC: pillows/draw sheet vs turn and position system (breathable glide sheet/foam wedges/wick away pad)
- Measured PU incidence, turning effectiveness & nursing resources

### Demographic Comparison

<table>
<thead>
<tr>
<th></th>
<th>SOC</th>
<th>PPS</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean time on product (range), d</td>
<td>7 (1-29)</td>
<td>7 (1-45)</td>
<td>1.00</td>
</tr>
<tr>
<td>Mean age (SD) (range), y</td>
<td>57.72 (18.45) (18-89)</td>
<td>57.73 (17.67) (23-92)</td>
<td>1.00</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>14</td>
<td>10</td>
<td>.43</td>
</tr>
<tr>
<td>Male</td>
<td>16</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Braden Scale score</td>
<td>12.77</td>
<td>13.23</td>
<td>.46</td>
</tr>
<tr>
<td>Mobility</td>
<td>0-1</td>
<td>0-1</td>
<td>1.00</td>
</tr>
<tr>
<td>BMI</td>
<td>29.62</td>
<td>30.97</td>
<td>.65</td>
</tr>
</tbody>
</table>

Comparative Study of Two Methods of Turning & Positioning

• **Results:**
  - Nurse satisfaction 87% versus 34%
  - 30° turn achieved versus -15.4 in SOC/7.12 degree difference at 1hr (p<.0001)

<table>
<thead>
<tr>
<th></th>
<th>SOC</th>
<th>PPS</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>PU development</td>
<td>6</td>
<td>1¹</td>
<td>.04</td>
</tr>
<tr>
<td># of times patients pulled up in bed</td>
<td>3.28</td>
<td>2.58</td>
<td>.03</td>
</tr>
<tr>
<td># of staff required to turn patient</td>
<td>1.97</td>
<td>1.35</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>

¹ PU development with 24hrs of admission

Safe Patient Handling Initiative: Decreases Staff Musculoskeletal Injuries & Patient Pressure Injury's

SAFE PATIENT HANDLING INITIATIVE PROTOCOL

1. Does the patient have a total Braden Score of 14 or less, including Braden mobility score of 1 and/or a Braden moisture score of <2?
2. Does the patient have ANY of the following co-morbidities?
   • Limited mobility post-op for 24 hours or more
   • Morbid Obesity
   • Limited mobility in general due to condition
   • Paraplegia
   • Unconscious/Comatose
3. Does the patient have a past history of pressure ulcers?

IF YES to the above questions, please use the turning and repositioning device
If ordering a turning and repositioning device, also order 1 heel protector and rotate foot every 2 hours
If patient is at risk for foot drop or heel ulcers, order 2 heel protectors i.e. immobile patients

DISCONTINUE USE:

1. When patient is able to independently perform a turn.
2. No longer at risk for potential moisture injury.
3. Braden mobility score of 3 and/or moisture score of 3.

PRECAUTIONS:

1. Single use only. If soiled, wipe the slide sheet or body wedge with damp cloth to clean, DO NOT launder.
2. Periodically check product for signs of wear. Replace if product is damaged.

RESULTS

28%↓
$184,720 savings

58%↓
$247,500 savings

Way H  Presented at the 2014 Safe Patient Handling East Conference on March 27, 2014
Evidence Based Strategies for Safe Patient Handling

The adoption of a new device for turning, boosting and lateral transfer in critically ill patients

Susan L. Salsbury OTR/L CDMS, Occupational Therapist, System Lead for Safe Patient Handling and Mobility, OhioHealth, Columbus, OH
Beth Harper, BSN RN TNCC, Safe Patient Handling and Mobility Co-Lead, OhioHealth Riverside
Justin L. Martin, MPT, Physical Therapist, Safe Patient Handling and Mobility Lead, OhioHealth Mansfield and Shelby

**BACKGROUND**

Over the past decade increasingly more focus is being placed on worker injury and safe patient handling in acute care settings. As a result, ceiling lifts have become more widely implemented in hospitals. While data support that the use of these devices is safe for patients and can reduce staff injury, numerous studies have reported a lack of compliance among healthcare workers in using ceiling lifts for all patient handling. This can be referred to as a lack of full adoption. Research to date supports that most health care workers are only partial adopters of ceiling lift devices.

**PURPOSE**

To measure the proportion of full adopters to partial adopters with the use of a new device for turning, boosting in bed, and lateral patient transfer. The device uses a low friction surface and air-assisted technology to decrease staff exertion repositioning moving patients. While the device can be used without the air, the full benefits for reduced healthcare worker exertion are realized when the blower is turned on.

**METHODS**

The new patient repositioning device was implemented in two intensive care units and used for turning, boosting in bed, and lateral patient transfer.

**RESULTS**

Staff were surveyed on the frequency of blower use while repositioning patients in bed. The percent of full adopters was 93% (39/42) and the percent of partial adopters was 7% (3/42). Overall ease-of-use as compared to standard practice was rated highly at 4.68 out of 5.

**CONCLUSIONS**

Critical care nurses are required to reposition patients in bed as often as 6-10 times per shift. Repositioning is a frequent repetitive activity that requires high exertion, awkward posture, and can lead to staff injury over time. Compliance with the intended use of this device was high as the vast majority of staff were full adopters, likely reducing the staff risk for injury.

Salsbury S. Presented at AACN’s National Teaching Institute, May 16th-19th, 2016. New Orleans, LA.
Evidence Based Strategies for Safe Patient Handling

Evaluation of a new procedure for boosting critically ill patients in bed

Susan L. Salisbury, OTR/L, CDMS, Occupational Therapist, OhioHealth, Columbus, OH • Beth Kager, BSN RR TNCC, Safe Patient Handling and Mobility Co-Chair, OhioHealth Riverside
Justin L. Martin, MPT, Physical Therapist, Safe Patient Handling and Mobility Lead at OhioHealth Mansfield and Shelby

**BACKGROUND**

Patient handling is widely recognized as a contributing factor to musculoskeletal injuries for critical care nurses. Patient handling injuries originate from repeated microscopic trauma due to high exertion, awkward posture, and frequent activities over extended periods of time without enough rest. Critical care nurses are required to boost physically dependent patients in bed as often as 6-10 times per shift. Boosting is a frequent repetitive activity that requires high exertion and awkward posture.

**RESULTS**

Forty-two nurses completed the survey. Device satisfaction was **Very Good** to **Excellent**.

- **Average ease of boosting**: 4.81
- **Average ease of performing lateral transfers**: 4.79
- **Product comparison to current practice for boosting/in-bed mobility**: 4.78
- **Patient comfort**: 4.54
- **Ease of integrating product into clinical workflow**: 4.79
- **Impact on improving clinician safety**: 4.86

Narrative comments included:

"With this procedure, a 100 pound nurse can boost a 300 pound patient; less strain on my back; used down in CT and it was fabulous."

**METHOD**

The purpose of this product evaluation was to appraise the effectiveness of a new airflow assist device used to boost patients in bed. Critical care nurses rated their perceptions regarding ease of boost, ease of lateral transfer compared to current practice, patient comfort, clinical workflow, and clinician safety using a 5-point Likert scale (1 = Poor, 2 = Fair, 3 = Good, 4 = Very Good, and 5 = Excellent).

**CONCLUSIONS**

Critical care nurses rated the boosting device favorably in all categories. Nurses perceive the device easier to use for boosting patients in bed, which may be associated with less back strain.

**SIGNIFICANCE**

Patient handling injury is a significant safety issue for critical care nurses whose patients require assistance with even basic movements. Further evaluation is recommended to evaluate efficacy with interprofessional groups and varied clinical populations.
Physical Exertion Comparison

On average, the Current Practice required 78% greater perceived exertion as compared to TAP.

Repositioning patients is an important component in the prevention of pressure ulcers. The Prevalon Turn Assist and Position (TAP) System helps reduce pressure ulcer risk factors by improving the ease and convenience of turning patients per hospital protocol. Prevalon TAP System may help reduce the risk of employee-related injury that can result from lifting and turning the patient. NPUAP Pressure Ulcer Prevention and Treatment Clinical Practice Guideline.
On average the Current Practice required 78% greater perceived exertion as compared to TAP.

<table>
<thead>
<tr>
<th></th>
<th>TAP Scores:</th>
<th>% Scoring No Exertion to Light (6-10)</th>
<th>% Scoring Light to Hard (11-15)</th>
<th>% Scoring Hard to Max Exertion (16-20)</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Practice Scores:</td>
<td></td>
<td>4.76%</td>
<td>76.19%</td>
<td>19.05%</td>
<td>10</td>
<td>17</td>
</tr>
</tbody>
</table>

Repositioning patients is an important component in the prevention of pressure ulcers. The Prevalon Turn Assist and Position (TAP) System helps reduce pressure ulcer risk factors by improving the ease and convenience of turning patients per hospital protocol. Prevalon TAP System may help reduce the risk of employee-related injury that can result from boosting and turning the patient. 1. NPUAP Pressure Ulcer Prevention and Treatment Clinical Practice Guideline...
In-Bed Mobility
Out of Bed Technology
Current Seating Positioning Challenges

Uncomfortable

Airway & Epiglottis compressed
Body Alignment
Shear/Friction
Sacral Pressure

Frequent repositioning & potential caregiver injury
Potential risk of sliding from chair
Repositioning Patients in Chairs: An Improved Method (SPS)

- Study the exertion required for 3 methods of repositioning patients in chairs
- 31 care giver volunteers
- Each one trial of all 3 reposition methods
- Reported perceived exertion using the Borg tool, a validated scale.

Method 1: 2 care givers using old method of repositioning
246% greater exertion than SPS

Method 2: 2 caregivers with SPS

Method 3: 1 caregiver with SPS
52% greater exertion than method 2

Foundational Skin Care: Starts with Evidence Based Bathing Practice
Optimal Hygiene

• pH balanced (4-6.8)
  – Stable pH discourages colonization of bacteria & ↓ risk of infection
  – Bar soaps may harbor pathogenic bacteria
• Excessive washing/use of soap compromises the water holding capacity of the skin
• Non-drying, lotion applied
• Multiple steps can lead to large process variation

Voegel D. J WOCN, 2008;35(1):84-90
Patients At Risk

Multi-Drug Resistant Organisms
- Immunodeficiencies
- Breaks in skin integrity related to invasive devices
- Co-morbidities
- Hand transmission
- Equipment contamination/Hospital environment

Damaging the Natural Barriers to Infection…the Skin
- Bathing techniques
- Soaps
- Wash cloths

Bonten MJM. *Am J Respir Crit Care Med.* 2011;184:991-993
Traditional Bathing

Why are there so many bugs in here?
Bath Basins
Potential Source of Infection

Large multi-center study evaluates presence of multi-drug resistant organisms

Total hospitals: 88
Total basins: 1103

- Contaminated: 62%
  - 686 basins/88 hospitals

- Gram negative bacilli: 45%
  - 495 basins/86 hospitals

- Colonized w/ VRE: 35%
  - 385 basins/80 hospitals

- MRSA: 3%
  - 36 basins/28 hospitals


Used with Permission Advancing Nursing LLC  Copyright 2013 AACN and Advancing Nursing LLC
Mechanisms of Contamination

- Skin flora
- Multiple-use basins
  - Incontinence cleansing
  - Emesis
  - Product storage
- Bacterial biofilm from tap water

Opportunistic Premise Plumbing Pathogens: Increasingly Important Pathogens in Drinking Water

Joseph O. Falkingham, III 1,*, Amy Pruden 2 and Marc Edwards 2

Healthcare Outbreaks Associated With a Water Reservoir and Infection Prevention Strategies

Hajime Kanamori,1,2 David J. Weber,1,2 and William A. Rutala1,2

1Division of Infectious Diseases, University of North Carolina School of Medicine, and 2Hospital Epidemiology, University of North Carolina Health Care, Chapel Hill

Operating-room machines test positive for Legionella at UW Medicine

Originally published September 19, 2016 at 2:19 pm | Updated September 19, 2016 at 7:31 pm
Understanding Water

- All water with the exception of sterile water and filtered water is contaminated with microbes (e.g., potable water, tap water, showers, and ice).
- In healthy persons, contact or ingestion of such water rarely leads to infection.
- However, contact or ingestion of such water may cause infection in immunocompromised persons or when applied to non-intact skin.
- Transmission of these pathogens from a water reservoir may occur by direct and indirect contact, ingestion and aspiration of contaminated water, or inhalation of aerosols.

Presented at MSIPC October 6th, 2016, Lansing MI by Dorine Berriel-Cass
Waterborne Infection

Hospital Tap Water
- Bacterial biofilm
- Most overlooked source for pathogens
- 29 studies demonstrate an association with HAIs and outbreaks
- Transmission:
  - Drinking
  - Bathing
  - Rinsing items
  - Contaminated environmental surfaces
- Immunocompromised patients at greatest risk

Impact on UTI with Basin Bathing

UTI Rate - Removal of Prepackaged Bath Product QTR 3 FY05

The Effect of Bathing with Basin and Water and UTI Rate, LOS and Costs

<table>
<thead>
<tr>
<th>Phases</th>
<th>Product Cost/ No. of UTI</th>
<th>Median (^4) LOS 17 Days</th>
<th>Median (^4) Cost (4857.00)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I- Pre-Packaged Bathing Washcloths (9 months)</td>
<td>$10,530(^1) ($3.00)</td>
<td>25</td>
<td>175</td>
</tr>
<tr>
<td>II- Basin/Water (9 months)</td>
<td>$3,510(^2) ($1.00)</td>
<td>48</td>
<td>336</td>
</tr>
<tr>
<td>III- Additional Product Cost, UTI, LOS, COSTS</td>
<td>$7,020</td>
<td>23(^3)</td>
<td>151</td>
</tr>
</tbody>
</table>

\(^1\)Based on 3 packages of 8 towels each \(^2\)Based on product cost of towels, soap, and basin \(^3\)Difference between phase I pre-package/phase II basin water \(^4\)McGuckin M, et al. AJIC, 2008;36:59-62
Cleansing of Patients with Indwelling Catheter

• Indwelling catheter care should occur with the daily bath (basinless bathing), as a separate procedure using clean technique
• There is no evidence to support 2x a day indwelling catheter care
• If a large liquid stool occurs, bathe the patient with basinless bathing
• Use separate cloths to clean front to back in the perineal area and 6 inches of the catheter
• Apply barrier cloth to area of skin requiring protection
For Successful Banning of Basins for Patient Care

- We need to provide alternatives for the other functions:

<table>
<thead>
<tr>
<th>Current</th>
<th>New</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emesis</td>
<td>Emebags being installed in every adult and ped pt. room, ACU, PACU</td>
</tr>
<tr>
<td>Storage of patient items</td>
<td>Clear plastic “baggies” Trial of “Concierge List” to decrease waste of unused/unneeded products</td>
</tr>
<tr>
<td>Shampoo patient’s hair</td>
<td>Shampoo caps par’d on all units</td>
</tr>
<tr>
<td>24 hour urine, ice</td>
<td>Store some basins in lab to be dispensed with each 24 hour jug.</td>
</tr>
<tr>
<td>Bath cloths with no insulation, cold halfway through bath.</td>
<td>Bath cloths with insulation to stay warm longer</td>
</tr>
</tbody>
</table>

Quinn B, et al. Presented at NACNS National Conference, March 5-7th, 2015, San Diego Ca
Prevention Strategies for IAD
EBP Recommendations to Reduce Injury From Incontinence & Other Forms of Moisture

• Clean the skin as soon as it becomes soiled.
• Use an incontinence pad and/or briefs that wick away
• Use a protective cream or ointment
  – Disposable barrier cloth recommend by IHI & IAD consensus group
• Ensure an appropriate microclimate & breathability
• < 4 layers of linen
• Barrier & wick away material under adipose and breast tissue
• Support or retraction of the adipose tissue (i.e. KanguruWeb)
• Pouching device or a bowel management system

www.ihi.org
IAD/HAPU Reduction Study

- Prospective, descriptive study
- 2 Neuro units
- Phase 1: prevalence of incontinence & incidence of IAD & HAPU
- Phase 2: Intervention
  - Use of a 1 step cleanser/barrier product
  - Education on IAD/HAPU
- Results:
  - Phase 1: incontinent 42.5%, IAD 29.4%, HAPU 29.4%, LOS 7.3 (2-14 days), Braden 14.4
  - Phase 2: incontinent 54.3%, IAD & HAPU 0, LOS 7.4 (2-14), Braden 12.74

“Even if you are on the right track, you will get run over if you just sit there.”

Will Rogers
Progressive Mobility + Care Giver Safety + Skin Safety
Challenges to Mobilizing Patients

Potentially Modifiable Barriers

- Patient-related barriers (50%)
  - Hemodynamic instability, ICU devices, physical & neurological
- Structural (18%)
  - Human or Technological Resources
- ICU culture (18%)
  - Knowledge/Priority/Habits
- Process related (14%)
  - Service delivery/lack of coordination
  - Clinician function

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?
• O₂ saturation ≤ 90%
• New onset cardiac arrhythmias or ischemia
• HR < 60 ≤ 120
• MAP < 55 > 140
• SPB < 90 > 180
• New or increasing vasopressor infusion

Yes

No

Begin in-bed mobility techniques and progress out-of-bed mobility as the patient tolerates

Begin in-bed mobility techniques and progress out-of-bed mobility as the patient tolerates

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

Yes

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

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

No

Initiate continuous lateral rotation therapy via a protocol to train the patient to tolerate turning

HOB=head of bed; HR=heart rate; MAP=mean arterial pressure; SPB=systolic blood pressure.
Clinical Findings Which Prevent Patient Turning

1. Development of life threatening arrhythmia with symptomatic response (VFIB/VTACH/SVT) This does NOT include asymptomatic AFIB.

2. Active Fluid Resuscitation: (i.e. no volume going in= no systemic blood pressure).

3. Active Hemorrhaging:
   - Following Cardiac Surgery/Active Tamponade
   - Massive GI bleeding with use of Blakemore tube.
   - Active hemorrhage following Trauma.

4. Change in baseline hemodynamic parameters (BP, HR, Oxygen Saturation, RR, etc) that does not recover within 10 Minutes of position change and is not an expected result based on diagnosis.

Recommended Interventions for the Unstable Patient

IF PATIENT IS DEEMED TOO UNSTABLE TO TURN BY ABOVE PARAMETERS:

A TRIAL TURN SHOULD BE ATTEMPTED AT LEAST EVERY 8 HOURS TO DETERMINE ABILITY TO RESUME FREQUENT TURNING AT LEAST EVERY 2 HOURS

1. Provide mini-turns
2. Weight shift patient at least every 30 minutes
3. Elevate heels from surface of bed
4. Reposition patient’s head, arms and legs at least every hour, consider passive ROM
5. Consider use of Continuous Lateral Rotation Therapy to prevent development of “gravitational equilibrium”. Begin: SLOW AND LOW angles of turning to gauge patient response.
6. When turning patient: GO SLOW! Provide serial small turns from supine to lateral position to achieve linen changes, hygiene checks, and reposition with wedges and pillows.

UNSTABLE FRACTURES

1. Patient’s with unstable pelvis injuries LOG ROLL PATIENT ONLY with approval of Attending MD. Consider wedges or pillows placed between the legs to maintain proper alignment.
2. DO NOT use continuous lateral rotation therapy (CLRT) with unstable spinal fractures: these patients should be positioned with multiple wedges to maintain proper alignment
3. Cervical Fractures / UNSTABLE: Patient must have appropriately fitted cervical collar in place. Ensure security and proper positioning of collar, then log roll patient, and wedge in proper alignment.

It is not enough to do your best, you have to know what to do and then do your best.

E Deming
How Do We Make It Happen?
Driving Change

Structure

• Gap analysis
• Build the Will
• Protocol Development

Process

• Make it Prescriptive
• Overcoming barriers
• Daily Integration

Outcomes

• Protocol Development
• Make it Prescriptive
• Overcoming barriers
• Daily Integration
The Goal: Patient & Caregiver Safety

↓ Hospital LOS
↓ ICU LOS
↓ Skin Injury
↓ CAUTI
↓ Delirium
↓ Time on the vent

↓ Repetitive motion injury
↓ Musculoskeletal injury
↓ Days away from work
↓ Staffing challenges
Loss of experienced staff
↓ Nursing shortage

↓ Skin Injury
↓ Costs
↓ Pain and suffering
↓ Hospital LOS
↓ ICU LOS
Action Items

- Talk with local and departmental leadership about a more comprehensive safety culture
- Engage your peers in developing an action plan to address patient and caregiver issues
- Speak up as a leader whenever patient mobility, prevention of pressure injury and worker safety are addressed in silo’s
Contact Kathleen Vollman at
kvollman@comcast.net
www.Vollman.com