



Mass General Brigham

Preventing hospital-acquired pressure injury: From standardization to sustainability

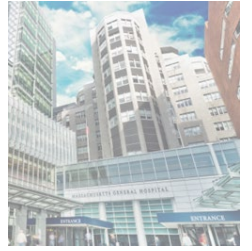
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10/2022

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Objectives



At the completion of this session, the participant will be able to utilize the Standardized Pressure Injury Prevention Protocol (SPIPP) to:

- Optimize pressure injury (PI) assessment, prevention, and mitigation of PI progression
- Ensure reliable and consistent staging of PIs
- Improve clinical documentation
- Reduce institutional liability for PI as a hospital-acquired condition (HAC)



The facts...

Pressure injuries (PI) are *the most frequent and costliest hospital-acquired condition (HAC)*

- In 2017, AHRQ reported that all HACs declined *except* PI, which rose 6%.
- Estimated 25 million cases of PI/year, accounting for 60,000 deaths at a cost of \$26.8 billion.
- Medical conditions that increase the risk of PIs and slow healing:
 - impaired patient mobility (e.g. spinal cord injury)
 - wound environment (e.g. nutrition, incontinence), and
 - comorbid conditions (e.g. diabetes, vascular disease)
- Consequences include prolonged hospitalization, failure to return to full functioning, requirement of long-term care, and death.
- The staggering loss of life, productivity, and cost of care warrant a systematic approach to mitigation of risk to prevent and/or treat PIs.



Standardised pressure injury prevention protocol (SPIPP) checklist
Education & onboarding: engage with senior leadership, implement patient & caregiver education, review outcomes monthly
<ul style="list-style-type: none"> Engage senior leadership in Prevention of Pressure Injury Prevention ("C" Suite Sign Off) Identify wound champion in clinical care to lead SPIPP (e.g. CWS, CWOCN, QI Manager, Hospitalist, PT, Dietician) Complete the "perspectives on Prevention" courses on Connect2Know with 90% Staff completion of: Overview; Skin; Our Ultimate Defense; Legal Aspects; Critical Care Implement training on pressure injury prevention Implement patient & caregiver prevention of pressure injury education Document outcomes in quality measurement system and claims data system Recommendation: publish project results as a quality improvement project poster at an appropriate conference (e.g. WOCN, IHI, NPSF, SAWC)
Risk assessment (braden scale or facility tool): upon admission/upon readmission/with change in condition
<ul style="list-style-type: none"> Reassessment on each Day/Shift Assess for and manage localized pain
Use a structured skin assessment & document findings for head-to-toe exam within 8 hours of admission and at regular intervals
<ul style="list-style-type: none"> Assess bony prominences and tissue under and surrounding medical devices (Sacrum, Heel, Occiput, Elbows, Medical Devices) Carefully assess change in color; patient with dark skin tone will need particular attention including palpation Ensure skin is clean and dry Assess for moisture, employing fecal and urinary incontinence management devices as needed Apply moisturizer and barrier creams after cleansing (do not apply under dressings) Use a single breathable incontinence pad under each patient
Repositioning & mobility: general recommendations
<ul style="list-style-type: none"> Turn and reposition on individualized schedule basis Use a 30-degree turn off the sacrum, ensuring that the sacrum is offloaded Use positioning aids that redistribute pressure/shear, minimize friction, maintain desired position, and protect vulnerable bony prominences, even in the supine position; consider devices that provide positive air displacement and/or conformational positioning Use a pressure redistributing chair cushion when mobilizing the patient to chair or wheelchair
Pressure, friction and shear reduction
<ul style="list-style-type: none"> Alleviate pressure through effective use of repositioning devices Choose appropriate support surface based on patient risk Apply soft-silicone five layer foam dressings to areas at-risk (sacrum, heel, other); use dressings, constructed for pressure injury prevention, as validated through high-level clinical and scientific evidence (i.e. published and peer-reviewed RCT, meta-analysis, systematic review and finite element modeling) Ensure that the heels are free from the bed Use a soft-silicone five layer foam dressing for the heel when the leg cannot be elevated off the surface of the bed Use heel suspension devices for long term immobility; consider devices with a low pressure air chamber that maximizes surface area Apply soft-silicone five layer foam dressings under medical devices, as appropriate
Nutrition: consult registered dietitian
<ul style="list-style-type: none"> Facilitate nutrition plan

FIGURE 1 The Standardised Pressure Injury Prevention Protocol (SPIPP) checklist [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]



Education and Leadership: Engage with senior leadership, implement patient/caregiver education, review outcomes monthly

- Engage senior leadership in Pressure Injury Prevention
- Identify Wound Champion to lead SPIPP



2011 Strategic Plan

Tactic 4: Reduce hospital-acquired pressure injuries

Next Step Owners: T. Gallivan (Associate Chief Nurse, G. Banister, Exec. Dir., IPC)

Aim/Linkage to Strategic Goal: To create an evidence-based standardized approach to the prevention of hospital-acquired pressure injuries and specialty bed use.

Problem Statement: In March 2010, pressure injury prevalence was unfavorably above target in 2 of 4 Patient First (benchmark database) care categories. Overall, pressure injury prevalence is trending upward; pressure injury prevalence climbed from 3.2% in March 2009 to 3.5% in March 2010.

Target/Benefit: Reduce hospital-acquired pressure injury prevalence and evaluate the efficacy of specialty bed use.

In Scope: Evaluate practice related to hospital-acquired pressure injury prevention.

Out of Scope: Practices related to pressure ulcer measurement, documentation and treatment.

System Capabilities/Deliverables: Pending literature and practice review.

Resources Required/Team:



Team Lead: Ginger Capasso

Project Support: Mandi Coakley

Pressure Ulcer / Injury Prevention Program



Executive Level Involvement

- Provides appropriate FTE support.
- Supports time and resources for group meetings and projects
- Appoints Executive Sponsors
 - Theresa Gallivan
 - Gaurdia Banister
- Clinical PIP Program Facilitator
 - V. Capasso, A. Coakley
 - Co-Chairs, WCTF

Pressure Injury Prevention Program (PIPP)

Executive Level Involvement

- Clear reporting structure for PIPP
- Interdisciplinary team development:
 - ad hoc since 2012
- Clear expectations for **benchmarking and outcomes**
 - Prevalence goal: 0% - 1.0%
 - Below NDNQI benchmarks/quarter

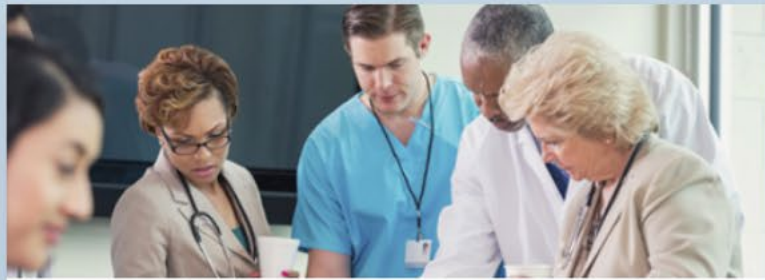


Education and Leadership:
Engage with senior leadership,
implement patient/caregiver education,
review outcomes monthly

- Engage senior leadership in Pressure Injury Prevention
- Identify Wound Champion to lead SPIPP
- Implement training on pressure injury prevention



NDNQI Pressure Injury Training v 8.0



[Module 1](#)
Pressure Injury Staging



[Module 2](#)
Other Wound Types and Skin Injuries



[Module 3](#)
Pressure Injury Survey Guide



[Module 4](#)
Community vs Hospital/Unit-Acquired
Pressure Injuries

THE NORMAN KNIGHT NURSING CENTER FOR CLINICAL & PROFESSIONAL DEVELOPMENT



Date: October 18, 2021

Time: 8:00 am - 4:00 pm

Location: Austen 3-325

Improved Wound Care & Better Patient Outcomes: Level 2

Presented by: CNS/NPS Wound Care Task Force members and other Wound Care Specialists

Activity Summary:

This is an interactive program designed to build on Skin and Wound Care Level 1. It will include updates on Skin A & P, Wound Healing and Assessment, Management and Documentation, including digital imaging. Current wound care products used at MGH will be discussed, followed by discussions about Pressure Injury, Nutrition in Wound Healing, Vacuum-Assisted Closure, Skin Breakdown and Ostomy concerns. The program concludes with several interactive general wound case studies.

Target Audience: RNs

Learning Outcomes:

After completing this session participants will be able to delineate the six key components of wound care: cleansing, wound assessment / imaging, protection of wound margins, dressing selection / securement (primary and secondary dressings), patient / family teaching, follow-up plan

To register: Click [HERE](#) or Scan



6.75 contact hours will be
awarded

THE NORMAN KNIGHT NURSING CENTER FOR CLINICAL & PROFESSIONAL DEVELOPMENT



Date: October 25, 2021

Time: 8:00am - 3:00pm

Location: Austen 325

Improved Wound Care & Better Patient Outcomes: Level 3

Presented by: CNS/NPS Wound Care Task Force members and other Wound Care Specialists

Activity Summary:

This day long program is designed to build on the "Improved Wound Healing & Better Patient Outcomes: Level 2" conference and expand clinical nurses' knowledge and skill in assessing and managing acute and chronic wounds of various etiologies. Acute wounds include burn injuries and radiation dermatitis. Chronic wounds include atypical lesions and wounds, arterial ulcers, venous stasis ulcers, diabetic foot ulcers and lymphedema. Hyperbaric Oxygen (HBO) Therapy and Negative Pressure Wound Therapy (NPWT) i.e. VAC therapy, Prevena and VeraFlo are featured. The program concludes with several complex wound case studies, where the learner has an opportunity to critically think and integrate new knowledge by identifying wounds and discussing assessment, treatment options and documentation.

Target Audience: RNs

Learning Outcomes:

After completing this session participants will be able to discuss the continuum of evidence-based information related to the care, assessment, management and prevention of frequently occurring wounds

To register: Click [HERE](#) or Scan



6.75 contact hours will be
awarded

Provider Education:
“Present on Admission”
(POA)

- Email
 - Rounds
- (Medicine, Quality)

Improved provider
documentation (MDs, NPs,
PAs)



HAPI
30%



Education and Leadership:

Engage with senior leadership,
implement patient/caregiver education,
review outcomes monthly

- Engage senior leadership in Pressure Injury Prevention
- Identify Wound Champion to lead SPIPP
- Implement training on pressure injury prevention
- Implement patient and caregiver pressure injury education



Standardised pressure injury prevention protocol (SPIPP) checklist
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<ul style="list-style-type: none"> • Assess bony prominences and tissue under and surrounding medical devices (Sacrum, Heel, Occiput, Elbows, Medical Devices) • Carefully assess change in color; patient with dark skin tone will need particular attention including palpation • Ensure skin is clean and dry • Assess for moisture, employing fecal and urinary incontinence management devices as needed • Apply moisturizer and barrier creams after cleansing (do not apply under dressings) • Use a single breathable incontinence pad under each patient
Repositioning & mobility: general recommendations
<ul style="list-style-type: none"> • Turn and reposition on individualized schedule basis • Use a 30-degree turn off the sacrum, ensuring that the sacrum is offloaded • Use positioning aids that redistribute pressure/shear, minimize friction, maintain desired position, and protect vulnerable bony prominences, even in the supine position; consider devices that provide positive air displacement and/or conformational positioning • Use a pressure redistributing chair cushion when mobilizing the patient to chair or wheelchair
Pressure, friction and shear reduction
<ul style="list-style-type: none"> • Alleviate pressure through effective use of repositioning devices • Choose appropriate support surface based on patient risk • Apply soft-silicone five layer foam dressings to areas at-risk (sacrum, heel, other); use dressings, constructed for pressure injury prevention, as validated through high-level clinical and scientific evidence (i.e. published and peer-reviewed RCT, meta-analysis, systematic review and finite element modeling) • Ensure that the heels are free from the bed • Use a soft-silicone five layer foam dressing for the heel when the leg cannot be elevated off the surface of the bed • Use heel suspension devices for long term immobility; consider devices with a low pressure air chamber that maximizes surface area • Apply soft-silicone five layer foam dressings under medical devices, as appropriate
Nutrition: consult registered dietitian
<ul style="list-style-type: none"> • Facilitate nutrition plan

FIGURE 1 The Standardised Pressure Injury Prevention Protocol (SPIPP) checklist [Colour figure can be viewed at wileyonlinelibrary.com]





- S** – Skin Assessment / Risk Assessment (Braden) Surfaces
- K** – Keep moving/turning
- I** – Incontinence management
- N** - Nutrition



HEALTHCARE THAT IS SAFE
Delivering Clinically Excellent Care



Key Words:

- Pressure injury, pressure ulcer, decubitus
- Braden/Braden Scale, Braden QD
- Skin integrity, risk for impaired
- Skin assessment

Definitions:

- **Pressure injury:** localized damage to the skin and/or underlying soft tissue that usually occurs over a bony prominence or results from pressure incurred by a medical or other device. The injury occurs as a result of intense and/or prolonged pressure and may occur in combination with shearing forces.
 - Factors that influence soft tissue tolerance include, but are not limited to microclimate (moisture), nutrition, perfusion, comorbidities that affect microvascular blood flow, and the underlying condition of the soft tissue (Edsberg, 2016).
 - See “Standard of Care for Patients with Pressure Injuries” policy for information on classification and staging of pressure injuries.
- **Shearing forces:** sustained tension parallel to the tissue surface (EPUAP, 2019, pg. 18). Shearing forces cause stress and strain with the potential to cause deep tissue injury.
 - **Friction:** contact force parallel to the skin surface due to internal body weight forces or forces exerted by a medical device (EPUAP, 2019, pg. 18). Tissues will distort and deform causing stress and strain and disruption of barrier function of the epidermis (skin tears, skin breakdown).
- **Braden/Braden QD Scales:** Valid and reliable tools for assessing overall risk of pressure injury development. The Braden Scale (see [Appendix B](#)) applies to adult patients, while the Braden QD (see [Appendix C](#)) applies to pediatric patients.

Assessment and Documentation Standards:

- The nurse will perform a comprehensive skin assessment upon admission.
- Skin areas at risk for pressure related breakdown will be assessed at least once per shift as permitted by patient condition.
- Areas of high intensity or prolonged pressure should be assessed more frequently.
- All patients will be assessed for pressure injury risk using the Braden or Braden QD at minimum upon admission and daily thereafter.
- Preventative measures will be put into place based on the nurse’s assessment of risk for injury and the subscale scores on the Braden/Braden QD assessment.
 - See “Preventative Interventions per Braden Scale Subscores” section below ([Appendix A](#)).
- The nurse will document skin assessments and preventative measures in the patient record.
- The nurse will involve the patient/family in the plan of care for pressure injury prevention.
- The risk for skin breakdown should be identified within the plan of care.

Key Words:

- Pressure injury, pressure ulcer, decubitus, bedsore
- Braden/Braden Scale/Braden QD
- Skin integrity, impaired
- Skin assessment, wound assessment, wound measurement
- Pressure injury staging/stages

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S – Skin Assessment / Risk Assessment

- Inspection
 - Head-to-toe
 - Front and back
- On admission, daily, after transfers, and life threatening events
- Consult with the provider (MD/NP/PA) to ensure documentation of pressure “present on admission”



S – Skin Assessment: Technology

- Subepidermal moisture monitoring
- High frequency ultrasound
- Thermal imaging



S – Skin Assessment: Technology

- Subepidermal Moisture (SEM) Monitoring
 - All PUs preceded by abnormal SEM
 - Mean time to PU detection 6 days (SD: 2 days) earlier using SEM)



Bates-Jensen, B, et.al. Subepidermal moisture detection of pressure induced tissue damage on the trunk: The pressure Ulcer Detection Study (PUID). *Wound Repair and Regeneration* 25 (2), May 2017

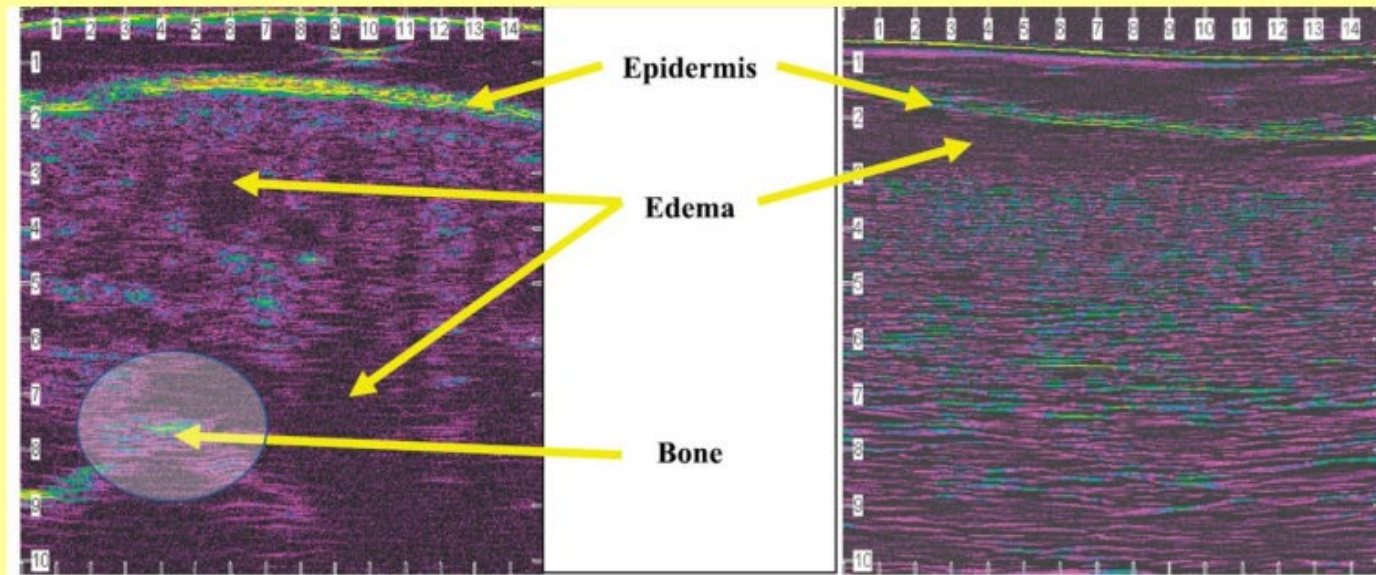
S – Skin Assessment: Technology

- High Frequency Ultrasound
 - Uses the echoes of sound waves to create images of soft tissue anatomy
 - A probe transmits sound waves into the body at frequencies of 20 – 50 mHz → high resolution



S – Skin Assessment: Technology

- High Frequency Ultrasound (Quintavalle, 2006)
 - If the wave encounters dense tissue, it creates a bright reflection known as hyperechoic area (NB: bone)

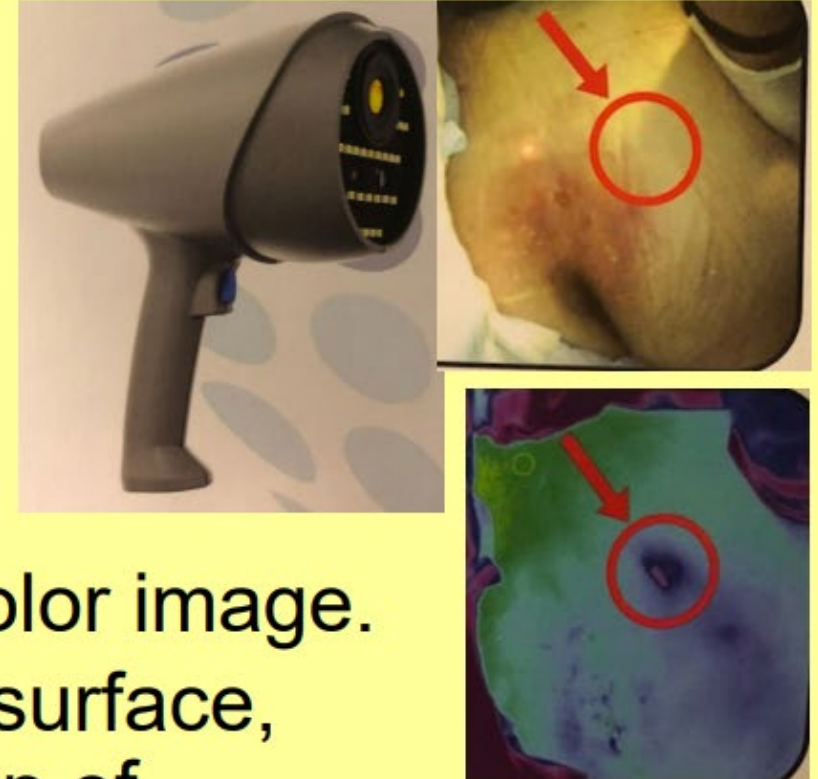


2A. Pattern 1. Example of deep edema extending from the bone and extending upward, most likely caused by pressure.

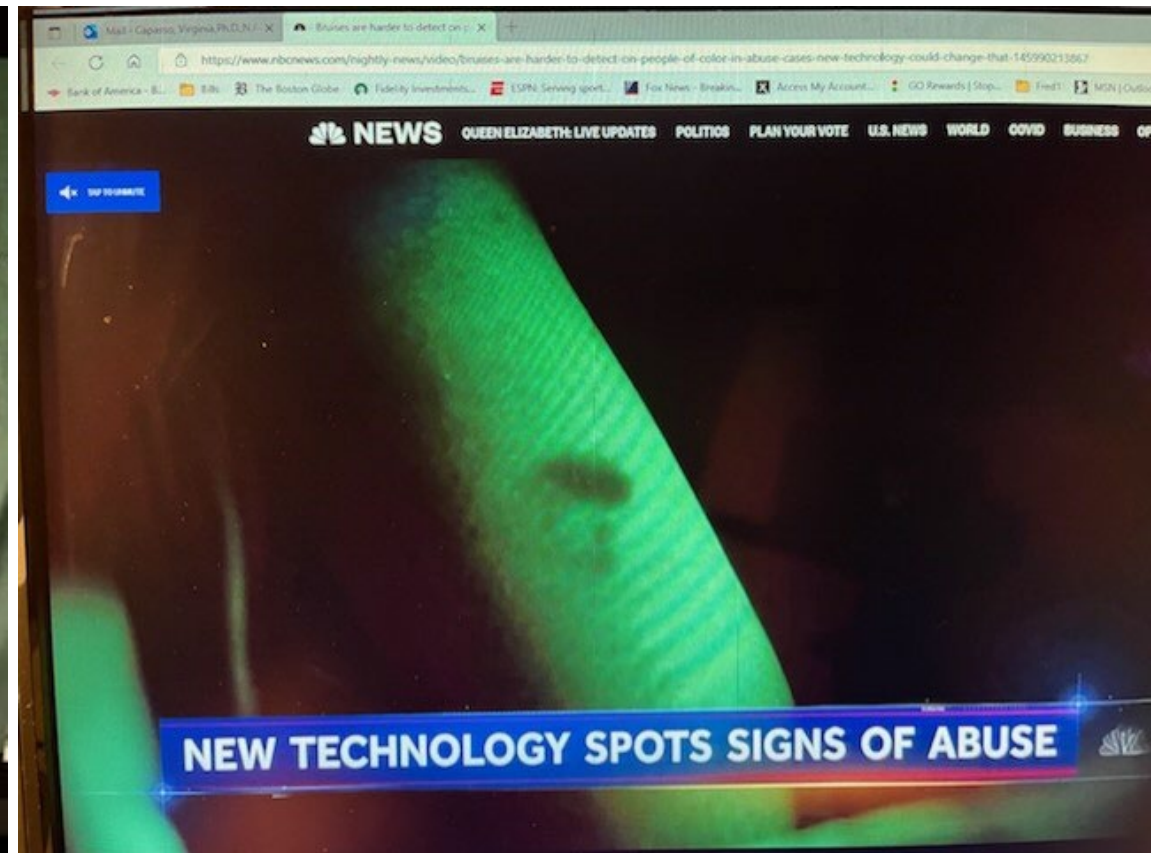
2B. Pattern 2. Example of superficial edema, most likely caused by friction or incontinence.

S – Skin Assessment: Technology

- Thermography
 - Quantifies body surface temperature by capturing the thermal radiation emitted by the body.
 - Radiation is converted to an electrical signal, forming a gray or color image.
 - Thermogram shows colors on body surface, allowing for evaluation / quantification of temperature changes in tissues and skin related to inflammatory processes caused by tissue damage pathways



Skin Assessment – Alternate light



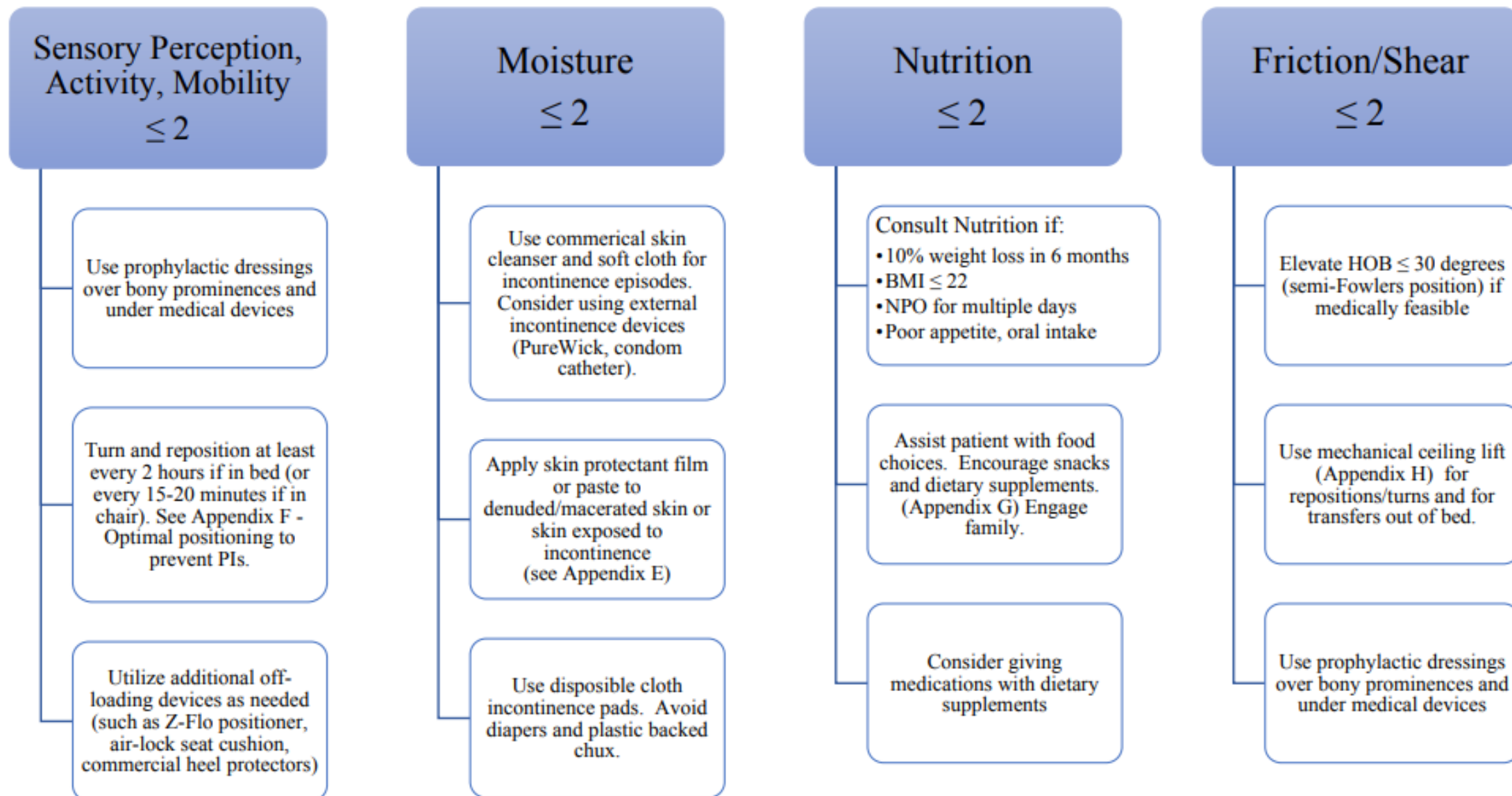
Risk Assessment:
Braden Scale
Braden QD (Pediatric)



Braden Scale (Adult)

Sensory perception Ability to respond meaningfully to pressure-related discomfort	1. Completely limited: Unresponsive (does not moan, flinch, or grasp) to painful stimuli, due to diminished level of consciousness or sedation, OR Limited ability to feel pain over most of body surface	2. Very limited: Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness, OR Has a sensory impairment which limits the ability to feel pain or discomfort over ½ of body.	3. Slightly limited: Responds to verbal commands but cannot always communicate discomfort or need to be turned, OR Has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities.	4. No impairment: Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.
Moisture Degree to which skin is exposed to moisture	1. Constantly moist: Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved or turned.	2. Moist: Skin is often but not always moist. Linen must be changed at least once a shift.	3. Occasionally moist: Skin is occasionally moist, requiring an extra linen change approximately once a day.	4. Rarely moist: Skin is usually dry; linen requires changing only at routine intervals.
Activity Degree of physical activity	1. Bedfast: Confined to bed.	2. Chairfast: Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.	3. Walks occasionally: Walks occasionally during day but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.	4. Walks frequently: Walks outside the room at least twice a day and inside room at least once every 2 hours during waking hours.
Mobility Ability to change and control body position	1. Completely immobile: Does not make even slight changes in body or extremity position without assistance.	2. Very limited: Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.	3. Slightly limited: Makes frequent though slight changes in body extremity position independently.	4. No limitations: Makes major and frequent changes in position without assistance.
Nutrition Usual food intake pattern	1. Very poor: Never eats a complete meal. Rarely eats more than ½ of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement, OR Is NPO ¹ and/or maintained on clear liquids or IV ² for more than 5 days.	2. Probably inadequate: Rarely eats a complete meal and generally eats only about ½ of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement, OR Receives less than optimum amount of liquid diet or tube feeding.	3. Adequate: Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products) each day. Occasionally will refuse a meal, but will usually take a supplement of offered, OR Is on a tube feeding or TPN ³ regimen, which probably meets most of nutritional needs.	4. Excellent: Eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation.
Friction and Shear	1. Problem: Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequent slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures, or agitation leads to almost constant friction.	2. Potential problem: Moves feebly or requires minimum assistance. During a move, skin probably slides to some extent against sheets, chair, restraints, or other devices. Maintains relatively good position in chair or bed most of the time but occasionally slides down.	3. No apparent problem: Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during move. Maintains good position in bed or chair at all times.	

Mitigating Pressure Injury Risk with Targeted Interventions Based on Braden Subscale Scores



1 or 2, there's something to do!



Pressure Injury Prevention Skin Bundle

S-Skin Assessment/Risk Assessment
K-Keep moving/turning in the bed and chair
I-Incontinence Management
N-Nutrition

Pressure Injuries Present on Admission

S-Complete a Safety Report; notify team
I-Head-to-toe skin inspection
P-Comprehensive plan of care

Ordering a Rental Surface/Bed

Notify UC, CNS/NPS
Nurse documents rental surface in EPIC and type of bed on Daily Care/Safety Flowsheet*
Notify UC when discontinued, UC will record start and discontinuation of bed in Epic

Pressure IQ Evolve Hospital-Owned



Indication: All patients
Considerations: Standard mattress with dynamic pressure redistribution. Non-powered, self-adjusting technology, sloped foot section for heel offloading
Weight Limit: 500 lb.
Stryker Bed Frame Weight Limit: 500 lb.
EPIC: Alternating pressure redistribution

Hill-Rom © Wound Surface Hill-Rom rental

Cost per day: \$9.00



Indication: Microclimate (heat & humidity) control & pressure management, i.e., moderate to severe IAD, worsening stage II or > PI
Considerations: Low air loss, pressure redistribution overlay.
Braden Scale: ≤12, Subscale score of 2 or < in Moisture, Friction, & Shear.
Weight Limit: 350 lb.
Stryker Bed Frame Weight Limit: 500 lb.
EPIC: Alternating pressure redistribution and Other: microclimate management*

Dolphin Bed© Hospital-Owned, Adult ICUs, RACU



Indication: High risk flaps/grfts; severe skin conditions; inability to position off existing PI; PIs on 2 or more turning surfaces; at risk for more PIs; PI deterioration despite comprehensive care.
Considerations: Fluid immersion simulation. Placed on specially purchased refurbished SpO2RT© bed frames. Not for patients with unstable spine fractures.
Braden Scale: ≤ 12
SpO2RT Bed Frame Weight Limit: 550 lb.
EPIC: Fluid Immersion Therapy*

Stryker In Touch© Hospital owned; ICU only



Indication: Used in ICU patients to prevent complications due to immobility, long-term ventilation, and falls.
Features: Air-pod technology for pressure redistribution, low air loss for microclimate management (MCM), Back Smart technology to decrease shear and friction, turn assist/lateral rotation, low bed (16"), scale, bed exit alarm, Zoom drive system
Weight Limit: 550lb
EPIC: Alternating pressure redistribution, rotation

Envella Air Fluidized Bed

Cost per day: \$93.00
\$103.00 with trapeze



Indication: High risk of PI re: intrinsic factors (e.g. SCI, vasopressors) and extrinsic factors (e.g. found down) as well as actual PIs at risk of deteriorating.
Considerations: Air fluidized therapy, immersion/envelopment, decreased horizontal stiffness, microclimate management. Order with trapeze, if indicated
Braden Scale: ≤12
Weight Limit: 350 lb. **Height limit:** 84"
EPIC: Air fluidized therapy*

SIZEWISE Evolution™ Low Bed

SIZEWISE rental

Cost per day: \$33.60



Surface: Non-powered
Indication: Used for HIGH RISK FALL patients to prevent injury
Considerations: 3 bed exit alarm sensitivities-can be linked to call bell system. Use with floor mats. Order mats through Materials Management. Braden Scale: for ≤ 12, Subscale score of 2 or < in moisture, friction, can order low air loss mattress to provide alternation, pulsation, rotation, and/or immersion therapy (600 LB capacity)
Weight Limit: 850 lb.
Video demo and more info:
<http://www.sizewise.net/Rental/Beds/SW-Evolution.aspx>
EPIC: Other: Low Bed*

Posey© Bed 8070 Posey Rental

Cost per day: \$45



Surface: Non-powered
Indication: Patients at extreme risk of serious injury from a fall or unassisted bed exit.
Considerations: Patient enclosure; cannot be unzipped from the inside; less restrictive than restraints; not for patients with device that may be self-removed
Weight Limit: 405 lbs.
EPIC: Other: Enclosed Safety Bed*

Hill-Rom Compella™ Bariatric Bed

Hospital owns 6 beds with low air loss & Turn Assist

Cost per day: \$130 (air)/ \$161 (CLRT)



Surface: Low Air Loss (microclimate management) with Turn Assist, pressure redistribution, Braden Scale ≤ 12, Subscale score of 2 or < in Moisture, Friction, & Shear); CLRT available for critical care only.
Indication: Bariatric patients requiring a larger bed than the standard.
Considerations: Maximum width 50 in, has IntelliDrive© Powered Transport (1 person can transport bed), in-bed scale, battery backup, powered width expansion
Weight Limit: 1000lbs
EPIC: Bariatric*

Pressure Redistribution Products



Air-Lock Cushion



Gel Cushion

- 6"x 6" (Thick version)
- Water-based, non-toxic food grade gel, moldable



**Prevalon
Heel Protector**



**Silicone-Coated Foam
Dressings**

Pressure Redistribution Products for Patients Prone for COVID-19



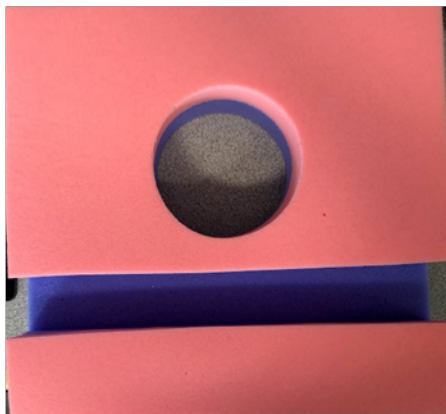
Tri-polymer pressure redistribution pads (Dermisplus)

- Non-adhesive
- Re-usable (same patient)
- Washable



Non-Powered Fluidized Positioner (Z-Flo)

- Moldable
- Ear, Face (commercial ETT holder on cheek),
- Occiput
- Neck (tracheostomy tube), protuberant abdomen



Xodus Pink Pad

- Offload pressure from occiput

ORIGINAL INVESTIGATION: PDF ONLY



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Pressure Injury Development, Mitigation, and Outcomes of Patients Prone for Acute Respiratory Distress Syndrome

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PAP



Metrics

Abstract

OBJECTIVE

To describe trends and risk factors for pressure injuries (PI) in adult critical care patients placed in prone position between April 9, 2020 and June 8, 2020 to alleviate acute respiratory distress syndrome (ARDS) secondary to COVID-19 and examine effectiveness of products and strategies to mitigate PIs.

METHODS

A retrospective chart review was conducted. Demographic data were analyzed using descriptive statistics. Differences between groups with and

Article Level Metrics



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Wolters Kluwer

Article Keywords

Keyword Highlighting

Highlight selected keywords in the article text.



acute respiratory distress syndrome

Keep Moving / Turning



Avoiding Pressure/Friction/Shear

- Reposition every **two hours**/written plan
- Use positioning devices (pillows, wedges)
- Relieve pressure against heels
(Prevalon Heel Protectors, pillows)
- Keep head of bed at lowest level
- Use **ceiling lift**, trapeze, and/or lift sheet
- Pressure redistribution support surfaces
(Bed algorithm)



Tissue Load: In Chair

Maximum 2 hours / session of sitting

Teach patients to shift weight every 15 minutes

Use a pressure redistribution chair pad

When positioning in chair consider postural alignment, distribution of weight, balance and stability, pressure relief



Incontinence Care

Clean:

Use approved skin cleansers to create the optimal pH balance on the skin:

- [Cavilon 3M Skin Cleanser](#)



Protect:

Use protective products to reduce skin exposure to moisture irritants (such as stool, urine or wound drainage):

- [Barrier cream – Remedy Z-Guard](#)
- [Barrier film](#)
- [Cavilon Advanced](#)



Absorb/Wick:

Use products to wick moisture away from the skin:

- [InterDry AG](#)
- Disposable incontinence pads



Nutrition

How to choose the appropriate supplement:

Ensure Clear

- A way to provide protein on a clear liquid diet!
- Gluten-free and suitable for lactose intolerance
- THIN liquid.



Mighty Shakes

- Gluten-free (NOT lactose free)
- NECTAR thick.
- If patient needs, *HONEY thick*, then add *Thick-It* packets to preferred supplement.



Glucerna

- Half the carbs of Ensure Plus, suitable for diabetes
- Gluten-free and suitable for lactose intolerance
- THIN liquid.



Nepro

- Low K, low Ph, low Na, low carb
- Gluten-free and suitable for lactose intolerance
- NECTAR thick.



Ensure Plus

- Gluten-free and suitable for lactose intolerance
- NECTAR thick *IF* served cold.



Med Pass

Administering medications with nutrition supplement

THURSDAY, OCTOBER 30

POSTER SESSION: QUALITY MANAGEMENT/OUTCOMES RESEARCH AND PROFESSIONAL PRACTICE

TITLE: COST-EFFECTIVE NUTRITIONAL INTERVENTIONS IN A CHRONIC DISEASE FACILITY

AUTHOR(S): H. Roth, RD, CD-N; T. Dotson, RD, CD-N; L. Kunkel, RD; Hospital *for Special Care*, New Britain, CT

LEARNING OUTCOME: To identify opportunities for decreasing cost, while maintaining the quality of nutritional care.

ABSTRACT TEXT:

Our hospital is a 200 bed chronic disease and rehabilitation facility with 5 long-term units. The clinical nutrition staff was faced with the challenge of “ensuring quality of care is sustained and enhanced while reducing the cost of providing care” as per the hospital goal. The standard of practice on these

TITLE: Prevent Weight Loss...Push Calories With Meds

AUTHOR(S): Gretchen E. Robinson, MS RD LD FADA
Consultant Dietitians in Health Care Facilities

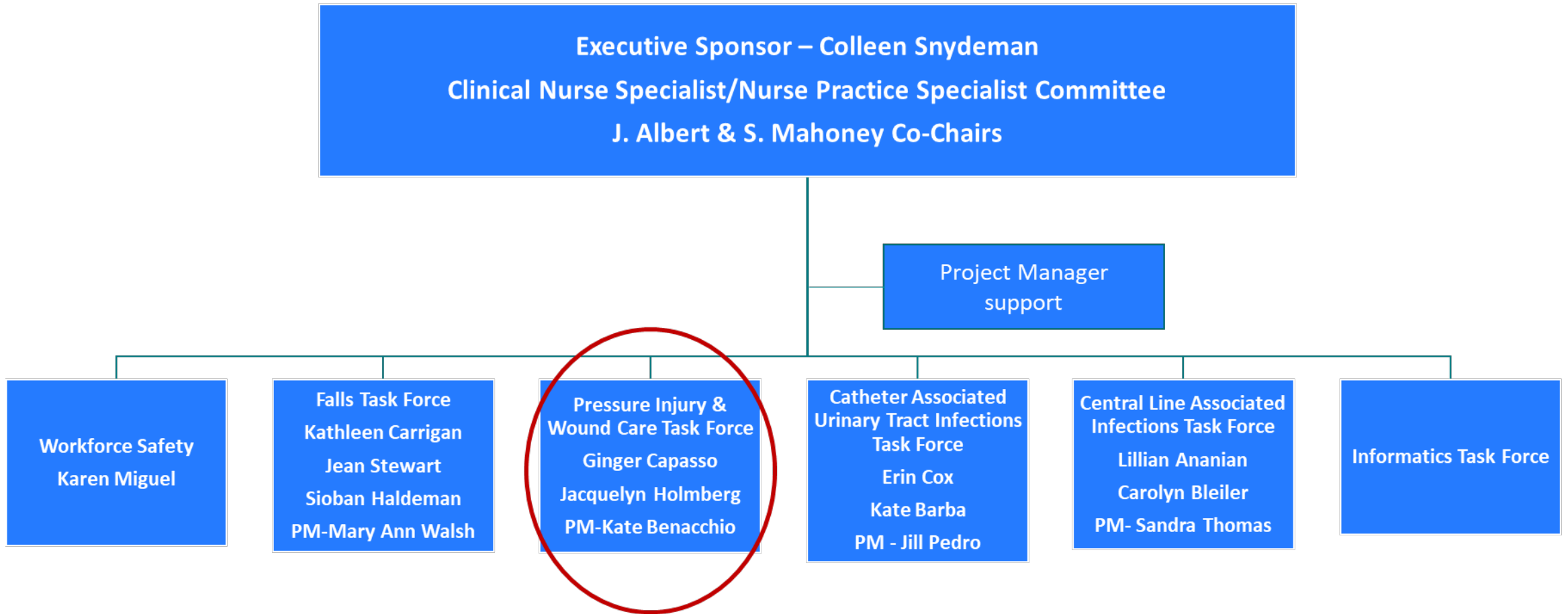
LEARNING OUTCOME: To identify a cost effective approach to reduce the potential for long term complications ie...weight loss, poor wound healing and the development of infections in the elderly.

ABSTRACT TEXT:

Low body weight and unintentional weight loss impacts morbidity, mortality and quality of life of residents living in a nursing home. The consequences of poor nutrition include: confusion; agitation; muscle weakness; increased risk of pressure ulcers with decreased wound healing and compromised immunity.



Nurse Sensitive Indicator Structure



Outcome Data to drive Evidence-Based Quality Improvement

Establishment of a PCS Data Warehouse

Multiple views

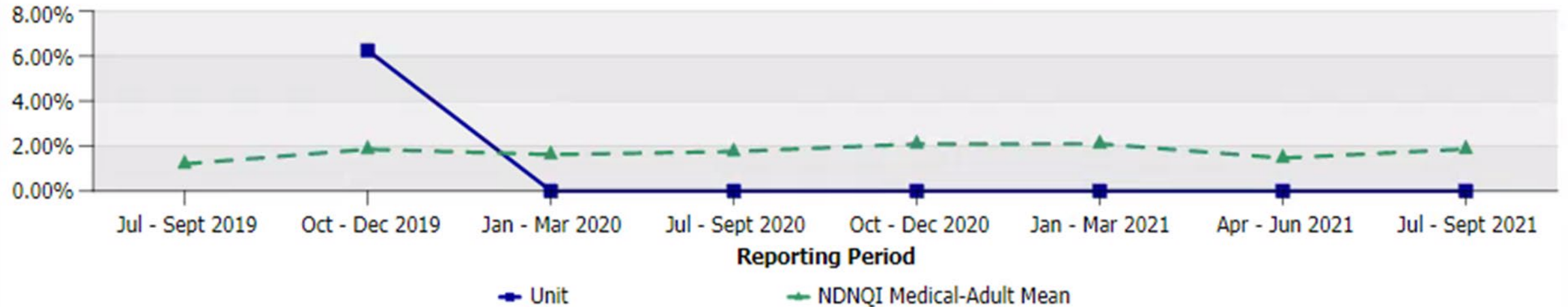
- Quarterly with benchmarks
- Monthly
- Magnet Scorecard
- Drill down
- Unit specific



% of Patients with HAPI Stage 2 and Above

Fiscal Year/Quarter	2019 Q4	2020 Q1	2020 Q2	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4
Reporting Period	Jul - Sept 2019	Oct - Dec 2019	Jan - Mar 2020	Jul - Sept 2020	Oct - Dec 2020	Jan - Mar 2021	Apr - Jun 2021	Jul - Sept 2021
% of Patients with HAPI Stage 2 and Above	N/A	❌ 6.25%	✅ 0.00%	✅ 0.00%	✅ 0.00%	✅ 0.00%	✅ 0.00%	✅ 0.00%
NDNQI Medical-Adult Mean	1.20%	1.85%	1.62%	1.75%	2.09%	2.10%	1.46%	1.86%

General Medicine Unit (██████████) vs. NDNQI Medical-Adult Mean (Hospitals With ≥ 500 Beds)



Pressure Injury Safety Events (as of 11/30/2021)

Reporting Period (click on starting/end date for a pop-up calendar)

December 1, 2020 November 30, 2021

POA vs HAPI
(All)

ACN/Director
(All)

PI Staging
(All)

Braden score
(All)

NDNQI Unit Type
(All)

Location
(All)

SRE Flag
(All)

Device Related?
(All)

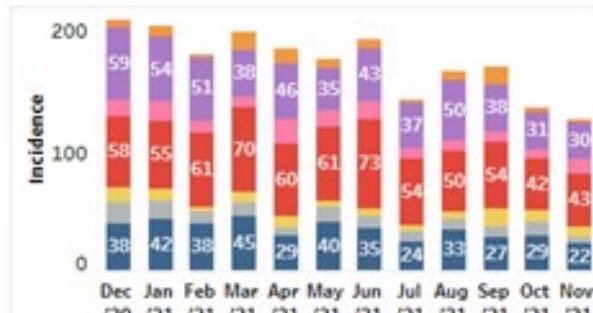


MASSACHUSETTS
GENERAL HOSPITAL

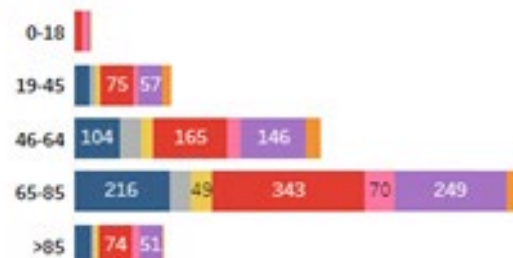
PCS QUALITY, SAFETY & PRACTICE

Monthly Volume

	Total PIs	HAPI	DPH Reportable
December 2020	205	77	4
January 2021	201	98	8
February 2021	177	81	5
March 2021	195	90	7
April 2021	182	83	3
May 2021	173	61	9
June 2021	189	84	3
July 2021	140	69	8
August 2021	163	54	5
September 2021	167	79	3
October 2021	133	46	3
November 2021	124	52	5
Grand Total	2,049	874	63



PI by Age Group



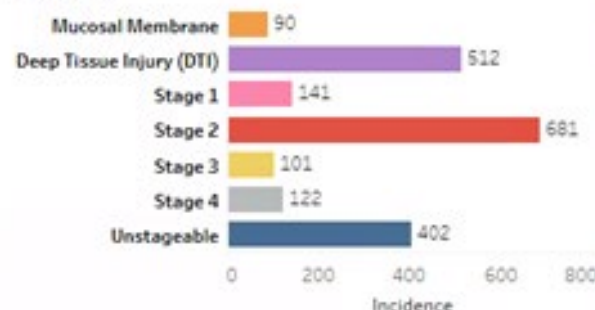
Days Since Last HAPI

0
11/30/2021

Days Since Last DPH Reportable

4
11/26/2021

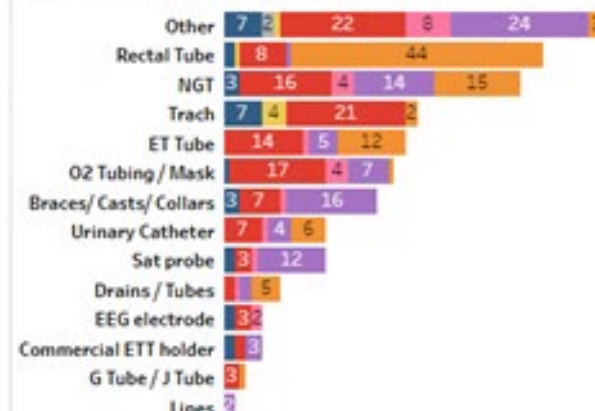
PI Staging



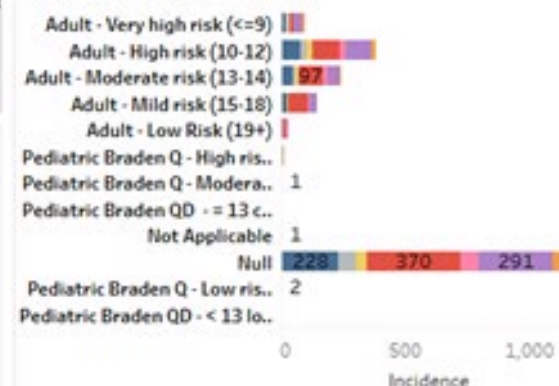
Device Related?



PI by Device Type Drilldown



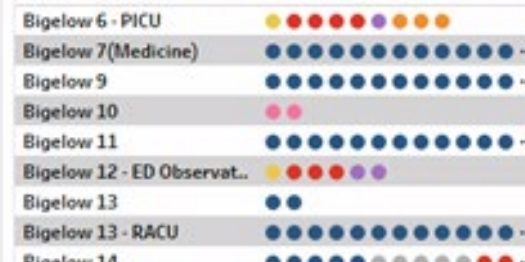
Braden Score Assessment



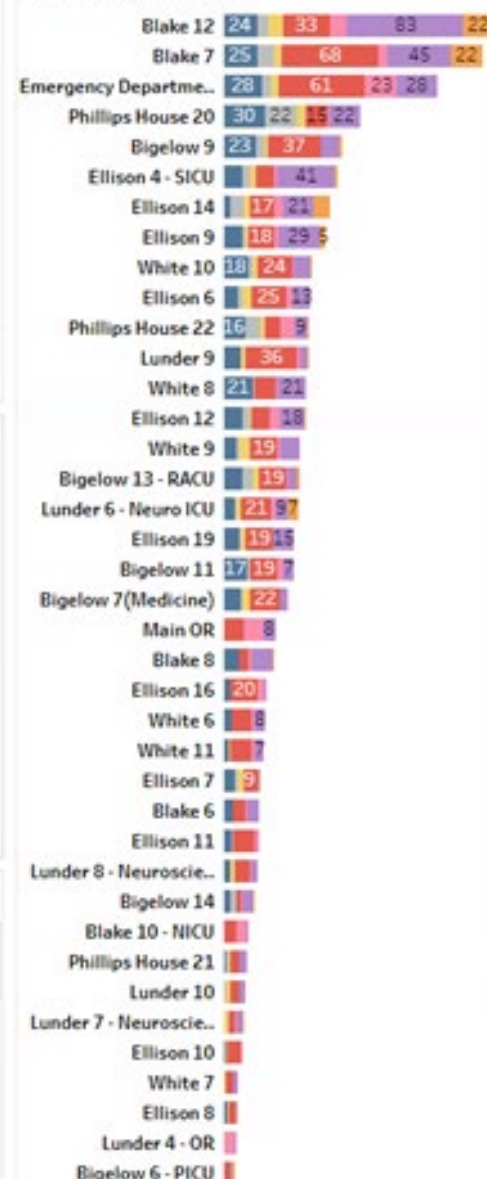
PI Body Site

Body Site	PI Count	%
coccyx	518	25%
buttocks	335	16%
heel	234	11%
sacrum	202	10%
other	181	9%
nose	84	4%
ischium	76	4%
anus	53	3%
ear	48	2%
ankle	47	2%
neck	31	2%
spine	30	1%

PI event details (hover over ● to see event details)



Volume by Location



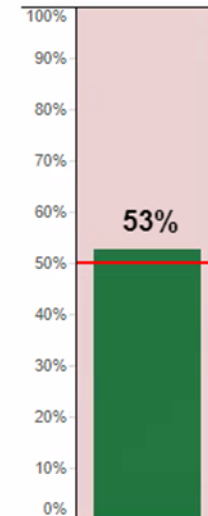
HAPI Stage II or >

Target = 20/38 units

Unit	2020 Q1	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	Sum
Bigelow	■	■	■	■	■	■	6
Bigelow	■	■	■	■	■	■	6
Bigelow	■	■	■	■	■	■	5
Bigelow	■	■	■	■	■	■	4
Bigelow	■	■	■	■	■	■	0
Bigelow	■	■	■	■	■	■	6
Blake	■	■	■	■	■	■	4
Blake	■	■	■	■	■	■	2
Blake	■	■	■	■	■	■	4
Blake	■	■	■	■	■	■	4
Blake	■	■	■	■	■	■	4
Ellison	■	■	■	■	■	■	5
Ellison	■	■	■	■	■	■	5
Ellison	■	■	■	■	■	■	4
Ellison	■	■	■	■	■	■	3
Ellison	■	■	■	■	■	■	3
Ellison	■	■	■	■	■	■	5
Ellison	■	■	■	■	■	■	4
Ellison	■	■	■	■	■	■	2
Ellison	■	■	■	■	■	■	2
Ellison	■	■	■	■	■	■	5
Ellison	■	■	■	■	■	■	6
Ellison	■	■	■	■	■	■	6
Ellison	■	■	■	■	■	■	3
Lunder	■	■	■	■	■	■	4
Lunde	■	■	■	■	■	■	5
Lunde	■	■	■	■	■	■	2
Lunde	■	■	■	■	■	■	4
Lunde	■	■	■	■	■	■	3
Phillips House	■	■	■	■	■	■	5
Phillips House	■	■	■	■	■	■	6
Phillips House	■	■	■	■	■	■	5
White	■	■	■	■	■	■	6
White	■	■	■	■	■	■	6
White	■	■	■	■	■	■	5
White	■	■	■	■	■	■	5
White	■	■	■	■	■	■	6
White	■	■	■	■	■	■	6

Number of Green Quarters

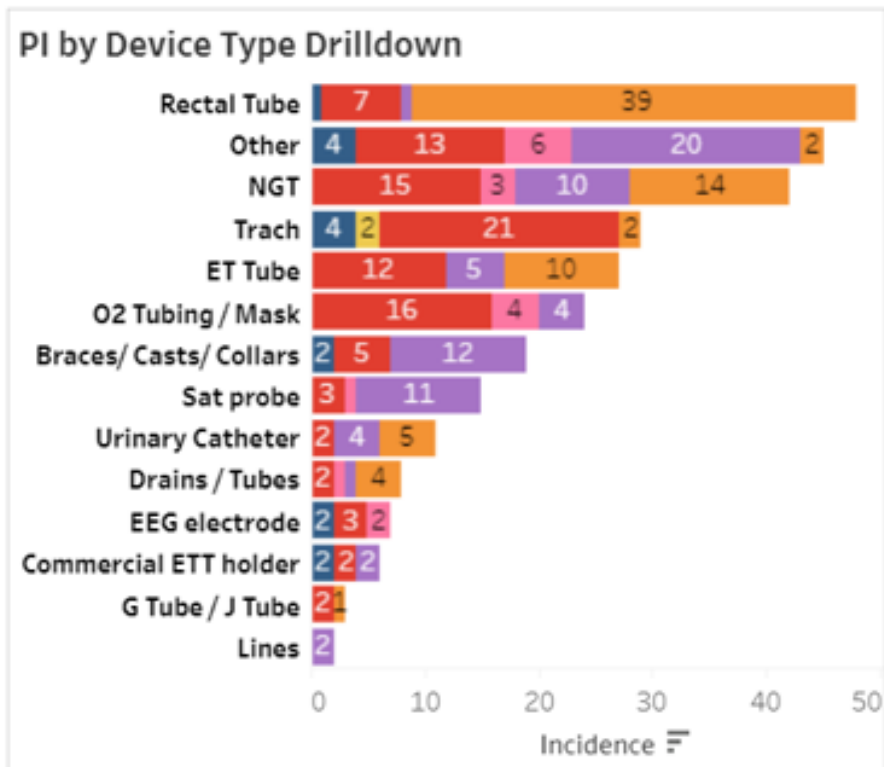
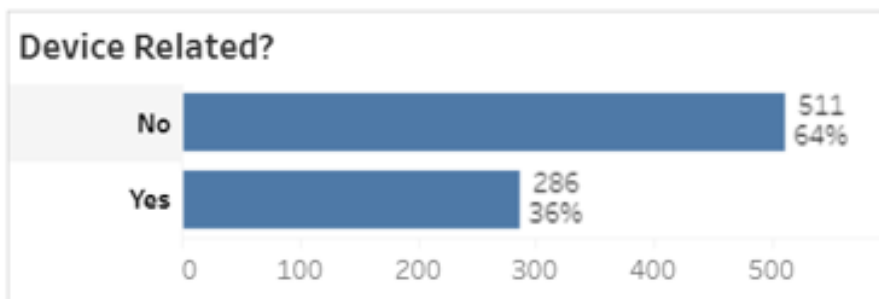
0	2	3	4	5
Bigelow 13	Blake 7 Ellison 12 Ellison 14 Lunder 8	Ellison 8 Ellison 9 Ellison 19 Lunder 10	Bigelow 11 Blake 6 Blake 8 Blake 10 Blake 12 Ellison 7 Ellison 11 Lunder 6 Lunder 9	Bigelow 9 Ellison 4 Ellison 6 Ellison 10 Ellison 16 Lunder 7 Phillips House 20 Phillips House 22 White 8 White 9
1	4	4	9	10



Percent of Units Meeting Goal

Goal = 20 units

Current # of Units Meeting Goal = 20

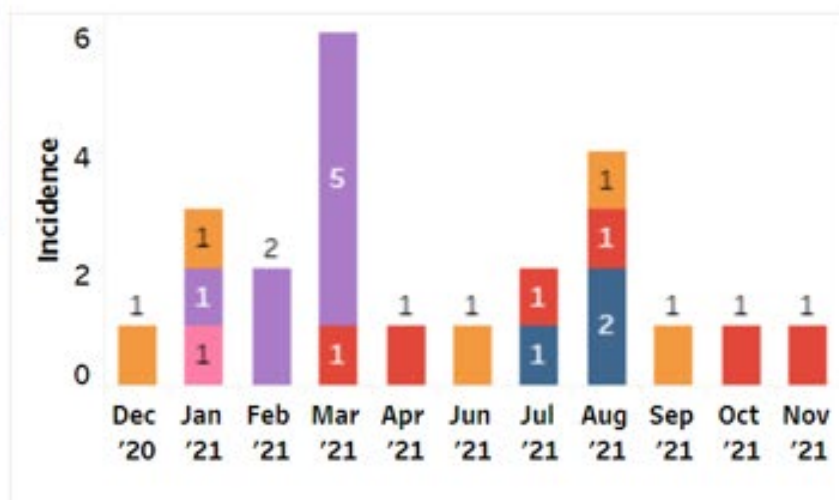


- Formation of **Device-Related Pressure Injury (DRPI) Working Group**
- Targeted quality improvement projects aimed at reducing DRPI incidence
 - New bridle for NGT securement
 - O2 saturation monitoring for patients with low flow
 - Endotracheal securement for intubated patients in the prone position
 - ***Coming soon*** Prophylactic dressings under C-collars

EMBRACING THE BRIDLE



Reimagining O2 Sat Monitoring on High-Risk Patients



Endotracheal Tube Securement for Patients in the Prone Position



PAY SPECIAL ATTENTION TO THE FOLLOWING AREAS



HEAD



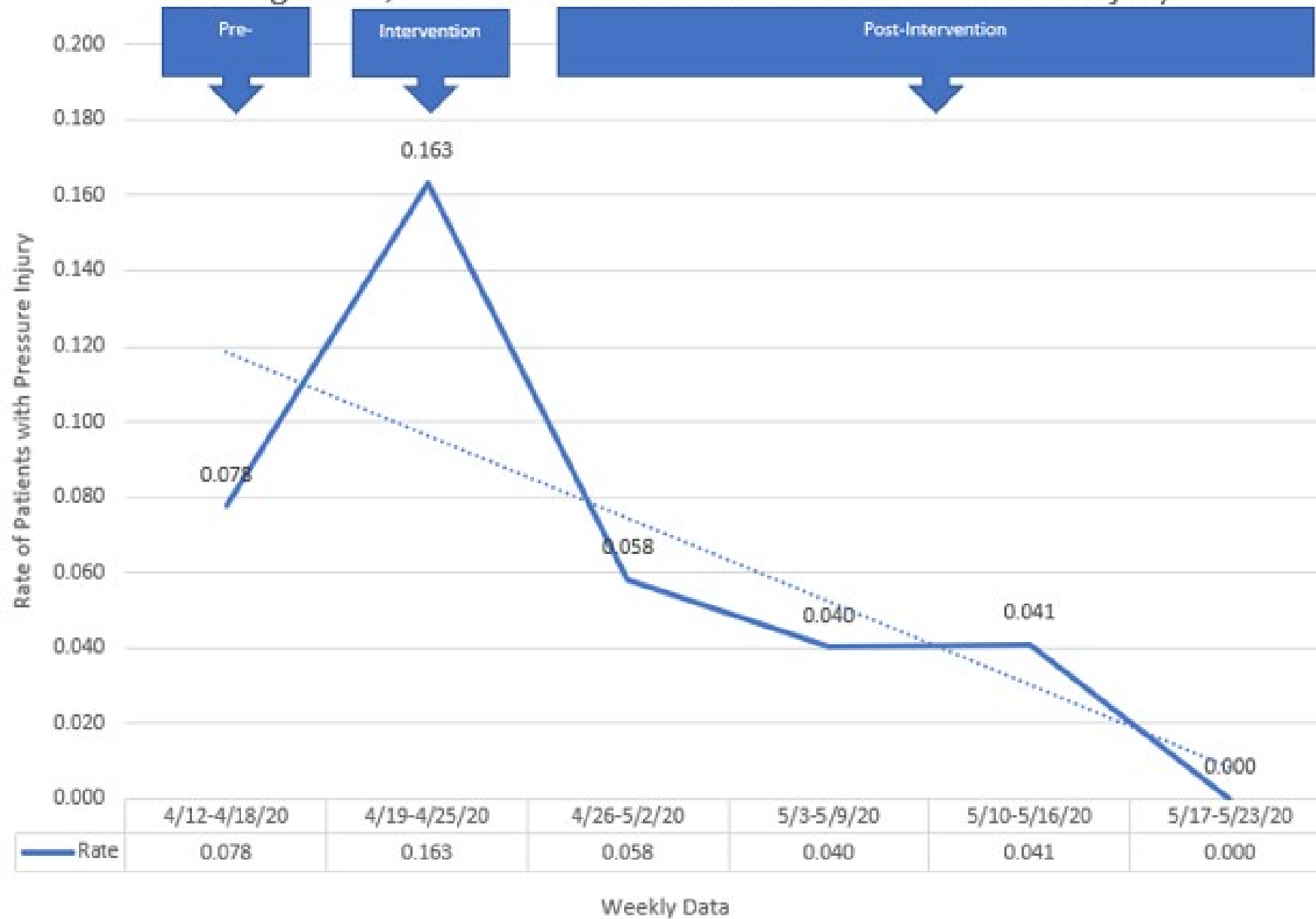
- Apply soft silicone multi-layered foam **prophylactic dressings** to pressure points on face.
- **Manage moisture:** Suction oral secretions. Use liquid skin protectants/sealants on face. Change foam dressing prn. Apply hydrofiber/calcium alginate dressing to manage excess moisture.
- Apply **thin foam dressings under medical devices**. Avoid multiple layers of dressings that increase pressure.
- **Offload head** with offloading device(s): Consider the density of foam, height of the cushion, angle of the face, and endotracheal tube (ETT) positioning when selecting an appropriate device.
- With manual proning, **shift patient's head** q 2 hours; re-position head q 4 hours. May adjust timing to patient needs.
- Note: commercially available ETT securement devices may contribute to increased skin breakdown in prone patients. Assess skin carefully. Consider tape to secure ETT during proning.
- Maintain **eye care** to prevent corneal abrasions. Apply ophthalmic lubricant. Tape eyelids shut horizontally.
- Ensure tongue is inside patient's mouth. A small soft bite block may help. Assess tongue for injury.



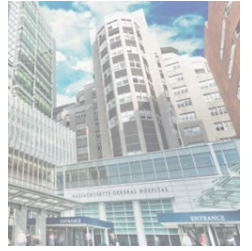
NPIAP (2020)

https://cdn.ymaws.com/npiap.com/resource/resmgr/online_store/posters/npiap_pip_tips_-_proning_202.pdf

Rate of Patients with COVID-19 Related ARDS, Proned by the Proning Team, with Endotracheal Tube Related Pressure Injury



Objectives



At the completion of this session, the participant will be able to utilize the Standardized Pressure Injury Prevention Protocol (SPIPP) to:

- Optimize pressure injury (PI) assessment, prevention, and mitigation of PI progression
- Ensure reliable and consistent staging of PIs
- Improve clinical documentation
- Reduce institutional liability for PI as a hospital-acquired condition (HAC)



Nursing at MGH.
Simply the Best.



Thank you!

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ENTRANCE

ENTRANCE