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2017 UPDATE

PREVENTING HOSPITAL ACQUIRED PRESSURE ULCERS/INJURIES >>> (HAPU/I)

HOSPITAL ACQUIRED PRESSURE ULCERS/INJURIES *CHANGE PACKAGE*

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Accessible at: http://www.hret-hiin.org/

Contact: hiin@aha.org

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How to Use this Change Package

This change package is intended for hospitals participating in the Hospital Innovation and Improvement Network (HIIN) project led by the Centers for Medicare & Medicaid Services (CMS) and the Partnership for Patients (PFP); it is meant to be a tool to help you make patient care safer and improve care transitions. This change package is a summary of themes from the successful practices of high performing health organizations across the country. It was developed through clinical practice sharing, organization site visits and subject matter expert contributions. This change package includes a menu of strategies, change concepts and specific actionable items that any hospital can choose to implement based on need. Hospitals may use it to begin testing for purposes of improving patient quality of life and care. This change package is intended to be complementary to literature reviews and other evidence-based tools and resources.

PART 1: AEA DEFINITION AND SCOPE

In April 2016, the National Pressure Ulcer Advisory Panel changed terminology from pressure ulcer to pressure injury and moved from Roman numerals to Arabic numbers for staging. The 2016 NPUAP definition for 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 results from intense and/or prolonged pressure or pressure in combination with shear. The tolerance of soft tissue for pressure and shear may also be affected by microclimate, nutrition, perfusion, comorbidities and condition of the soft tissue."

It is important to recognize that wounds are caused by many etiologies: pressure injuries, tear injuries, tape injuries, venous ulcers, arterial ulcers and from moisture-associated skin damage. The purpose of this change package is to spread best practices in the prevention of hospital-acquired pressure ulcers/injuries. Outcome data submission should include only pressure related ulcers/injuries and should exclude the other injury or ulcer sources from moisture, tears, tape burns, etc.

Magnitude of the Problem

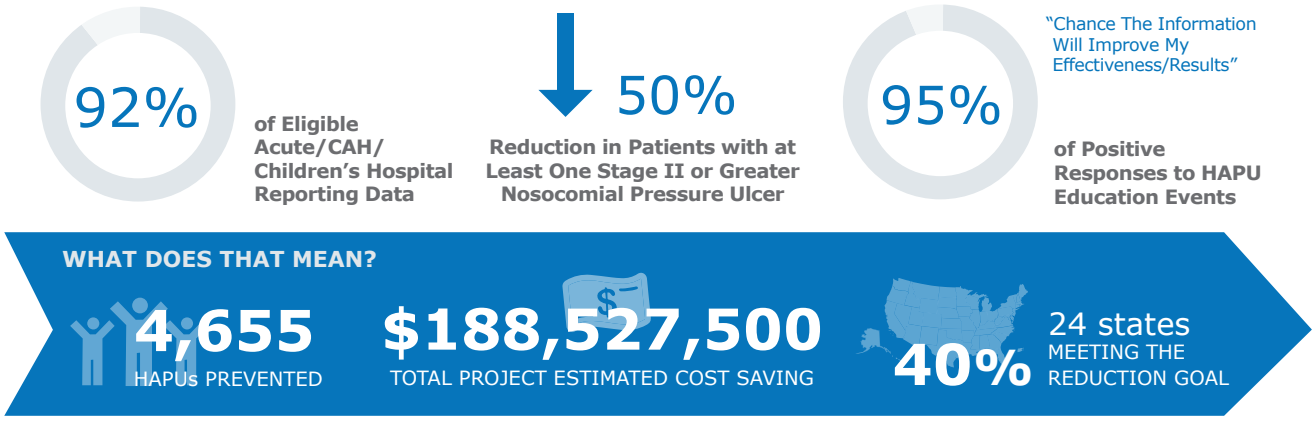
Pressure ulcer/injury incidence rates vary considerably by clinical setting — ranging from 0.4 to 38 percent in acute care, from 2.2 to 23.9 percent in long term care, and from 0 to 17 percent in home care.[1] Risks for the development of pressure ulcers/injuries include advanced age, immobility, incontinence, inadequate nutrition and hydration, neuro-sensory deficiency, device-related skin pressure, multiple comorbidities and circulatory abnormalities.[2]

Hospital-acquired pressure ulcers/injuries (HAPU/I) result in significant patient harm, including pain, expensive treatments, increased length of institutional stay and, in some patients, premature mortality. It is estimated each year more than 2.5 million patients in U.S. acute-care facilities suffer from pressure ulcer/injuries and 60,000 die from their complications[3]. The cost of treating a single full-thickness pressure ulcer/injury can be as high as $70,000, and total costs for treatment of pressure ulcer/injury in the United States is estimated at $11 billion annually.[4,5] As traditional pressure ulcer rates have improved, medical device related pressure ulcers/injuries (MDRPU/I) have become more apparent and contribute to more than 30 percent of overall HAPU/I rates.[6] Interventions that can help prevent or quickly treat pressure injuries can reduce the costs of HAPU/I care and improve quality of life for those affected.

Surgical patients are at heightened risk during preparation, procedure and recovery periods. Surgery is one of the few times when someone not normally at high-risk for pressure ulcer/injury development is at risk. As our population is aging and surgical procedures increasing, the incidence of operating room-acquired pressure ulcers/injuries is increasing and requires our attention. Pressure ulcer/injury incident rates range from 29 percent in cardiac surgeries to 20-55 percent in orthopedic surgeries and 12-36 percent in spine surgeries. The most common locations are heels (14-52 percent), sacrum (22-41 percent) and buttocks (11-47 percent).[7]

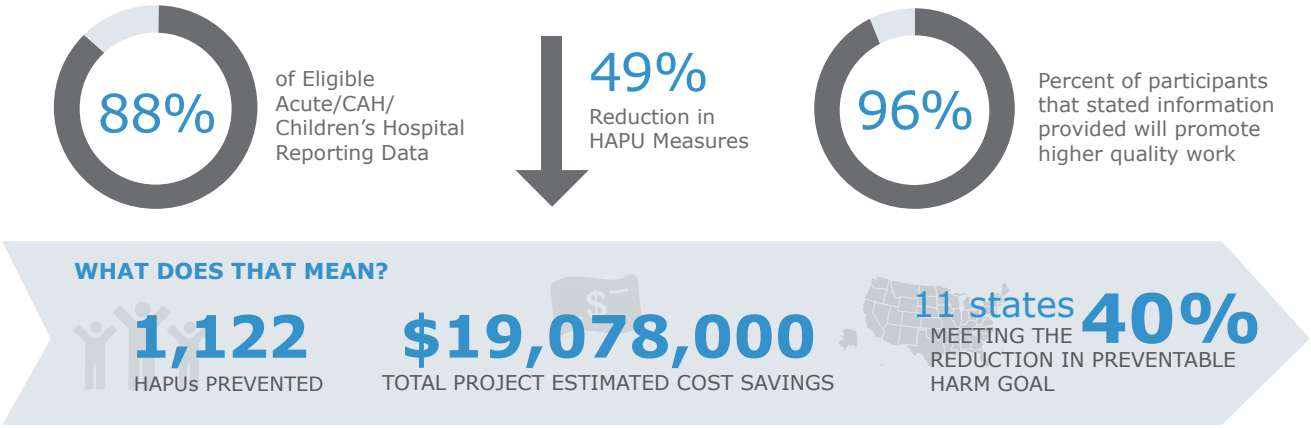
> HEN 1.0 Progress

- Through the work of the AHA/HRET Hospital Engagement Network, from 2011 to 2014, more than 1,400 hospitals worked to prevent and reduce pressure ulcers/injuries. Twenty-four of 31 states participating reduced total pressure ulcer/injury harm by more than 40 percent. Under this initiative, hospitals prevented 4,655 pressure ulcers/injuries and saved an estimated $188,537,500.



> HEN 2.0 Progress

- From 2015 to 2016, more than 1,400 AHA/HRET HEN 2.0 hospitals reduced pressure ulcers/injuries by 20 percent. This equates to 1,122 harms prevented and $19,078,000 in cost savings.



> HIIN Reduction Goals

- Reduce the prevalence of hospital-acquired Stage 2 pressure ulcers/injuries by 20 percent by Sept. 28, 2018.

PART 2: MEASUREMENT

A key component to making patient care safer in your hospital is to track your progress toward improvement. This section outlines the nationally-recognized process and outcome measures you will be collecting and submitting data on for the HRET HIIN. Collecting these monthly data points at your hospital will guide your quality improvement efforts as part of the Plan-Do-Study-Act (PDSA) process. Tracking your data in this manner will provide valuable information you need to study your data across time and determine the effect your improvement strategies are having in your hospital at reducing patient harm. Furthermore, collecting these standardized metrics will allow the HRET HIIN to aggregate, analyze and report its progress toward reaching the project's 20/12 goals across all AEAs.

Nationally Recognized Measures: Process and Outcome

Please download and reference the encyclopedia of measures (EOM) on the HRET HIIN website for additional measure specifications and for any updates after publication at: http://www.hret-hiin.org/data/hiin_eom_core_eval_and_add_req_topics.pdf

HIIN Evaluation Measure

- Pressure ulcer/injury rate, Stage 3 or greater (AHRQ PSI-03).
- Pressure ulcer/injury prevalence (hospital-acquired), Stage 2 or greater (NQF 0201).

> Process Measures

- Patients with skin assessment documented within four hours of admission.
- Patients with pressure ulcer/injury risk assessment completed within 24 hours of admission.
- Percentage of documented prevention intervention for patients assessed at risk for a pressure ulcer/injury.

PART 3: APPROACHING YOUR AEA

Suggested Bundles and Toolkits

- AHRQ Toolkit — Preventing Pressure Ulcers in Hospitals. Retrieved at: https://www.ahrq.gov/professionals/systems/hospital/pressureulcertoolkit/index.html
- National Pressure Ulcer Advisory Panel. (2014) Prevention and Treatment of Pressure Ulcers: Quick Reference Guide. Retrieved at: http://www.npuap.org/wp-content/uploads/2014/08/Updated-10-16-14-Quick-Reference-Guide-DIGITAL-NPUAP-EPUAP-PPPIA-16Oct2014.pdf
- National Pressure Ulcer Advisory Panel. (2014) Prevention and Treatment of Pressure Ulcers: Clinical Practice Guidelines. Available for purchase at: http://www.npuap.org/resources/educational-and-clinical-resources/prevention-and-treatment-of-pressure-ulcers-clinical-practice-guideline/
- Institute for Clinical Systems Improvement — Pressure Ulcer Prevention and Treatment Protocol. Retrieved at: https://www.icsi.org/_asset/6t7kxy/PressureUlcer.pdf
- National Nursing Database of Quality Indicators (NDNQI) Pressure Ulcer Training Modules. Provides education and case studies on pressure ulcer staging, differentiating types of skin injuries. Includes competency evaluation via posttests. Retrieved at: https://members.nursingquality.org/NDNQIPressureUlcerTraining/
- IHI How to Guide Reducing Pressure Ulcers. Retrieved at: http://www.ihi.org/resources/pages/tools/howtoguidepreventpressureulcers.aspx
- Association of Operating Room Nurses (AORN) Prevention of Perioperative Pressure Ulcers Toolkit. Retrieved at: https://www.aorn.org/guidelines/clinical-resources/tool-kits/prevention-of-perioperative-pressure-ulcers-tool-kit
- Pressure Ulcer: Prevention and management. National Institute and Care Excellence (NICE) (2014) UK. Retrieved at : https://www.nice.org.uk/guidance/cg179/chapter/1-Recommendations#prevention-adults
- For key tools and resources related to preventing and reducing pressure ulcers, visit http://www.hret-hiin.org/topics/pu/index.shtml

Investigate Your Problem and Implement Best Practices

DRIVER DIAGRAMS: A driver diagram visually demonstrates the causal relationship between your change ideas, secondary drivers, primary drivers and your overall aim. A description of each of these components is outlined in the table below. This change package is organized by reviewing the components of the driver diagram to (1) help you and your care teams identify potential change ideas to implement at your facility and (2) show how this quality improvement tool can be used by your team to tackle new process problems.

AIM			
	PRIMARY DRIVER	SECONDARY DRIVER	**Change Idea**
		SECONDARY DRIVER	**Change Idea**
	PRIMARY DRIVER	SECONDARY DRIVER	**Change Idea**

AIM: *A clearly articulated goal or objective describing the desired outcome. It should be specific, measurable and time-bound.*

PRIMARY DRIVER: *System components or factors that contribute directly to achieving the aim.*

SECONDARY DRIVER: *Action, interventions or lower-level components necessary to achieve the primary driver.*

CHANGE IDEAS: *Specific change ideas which will support or achieve the secondary driver.*

Drivers in This Change Package

Before jumping into a toolkit or driver diagram for a quick solution, it is important to investigate and understand the factors contributing to pressure ulcer/injury development in your organization or unit. Pressure ulcers/injuries are caused by complex environmental and patient factors that need to be understood so targeted solutions can be tested and applied.

Start with an analysis of pressure ulcer/injury data to uncover the top contributing factors to pressure ulcer/injury development. Data can be pulled from chart audits, adverse event reports, root cause analysis results and in observations collected in leadership rounding. Determine patient-contributing factors such as diagnosis, age, comorbidities and functional abilities. Identify trends by unit, anatomical location of injury and etiology (e.g., moisture associated, operating room associated, etc.) to identify a focus for improvement.

After a review of data, go to the bedside to evaluate how care is being delivered in real time. Conduct a pressure ulcer/injury prevalence study to collect observational data on pressure ulcer/injury prevalence and care processes to assess your organization's reliability in delivering optimal care.

There is value in conducting prevalence studies. Historically, pressure ulcer/injury reporting via event reporting or documentation alone has led to under-reporting. Prevalence data is collected at a single point in time, assessing every patient on the unit on the day of the study to observe for pressure ulcers/injuries and to assess process measures and documentation practices. Prevalence studies are typically completed as a team, including two observers and one documenter. At least one nurse making observational assessments should receive special skin assessment and pressure ulcer/injury staging education. The National Nursing Database of Quality Indicators (NDNQI) has free online training modules to prepare staff for assessing, and the logistics of completing, a prevalence study. Conducting prevalence studies can help skin teams and leaders gain insight into some of the organizational factors that contribute to pressure ulcer/injury development and point to opportunities to improve, such as:

- adequacy of preventative measures such as turning and positioning
- adequacy and timeliness of assessment
- staff skill in recognizing, staging and documenting pressure ulcers/injuries, and differentiating moisture associated skin damage (MASD) from pressure ulcers/injuries
- availability and appropriate use of supplies and equipment to manage moisture, relieve pressure and prevent shear
- adequacy and appropriate use of support surfaces on medical and ICU floors, in the procedural and recovery room and the emergency department

Gather an interdisciplinary team to review the data collected from incidence and prevalence rates and this driver diagram to identify one or two changes that can positively impact the organization or unit's performance in eliminating pressure ulcers/injuries. Start with small changes designed by frontline staff to build a culture of achievement. Small successes will build momentum for larger, more difficult change.

Driver Diagram Table

PREVENT HAPU/I	CONDUCT SKIN AND RISK ASSESSMENTS	IMPLEMENT RISK ASSESSMENT TOOL	**Change Idea**
		ASSESS SKIN ON ADMISSION AND EVERY SHIFT	**Change Idea**
	MANAGE MOISTURE	MAINTAIN DRYNESS	**Change Idea**
		PROMOTE PROTECTION	**Change Idea**
	OPTIMIZE NUTRITION AND HYDRATION	MONITOR WEIGHT, NUTRITION AND HYDRATION STATUS	**Change Idea**
	MINIMIZE PRESSURE, SHEAR AND FRICTION	ALLEVIATE PRESSURE	**Change Idea**
		SUPPORT SURFACES	**Change Idea**
		REDUCE FRICTION AND SHEARING FORCES	**Change Idea**
		GET UP: IMPLEMENT EARLY MOBILITY PROTOCOLS	**Change Idea**
	USE DATA FOR IMPROVEMENT	ANALYZE DATA FOR TRENDS BY UNIT	**Change Idea**
		CONDUCT ROOT CAUSE ANALYSIS ON PRESSURE ULCERS/INJURIES	**Change Idea**

Primary Driver:

CONDUCT SKIN AND RISK ASSESSMENTS

Prevention of pressure ulcers/injuries begins with an assessment of a patient's risk for pressure ulcers/injuries. This assessment must be done upon admission and then at least once daily during a patient's stay and should include evaluation of the condition of the patient's skin.

Secondary Driver > IMPLEMENT RISK ASSESSMENT TOOL

Adequate assessment of a patient's risk with an accurate tool will allow the care team to implement timely prevention strategies for each patient.

Change Ideas

> Use a validated, age-appropriate tool for the skin evaluation and risk assessment. The most widely used is the Braden Scale. Others include the Norton, Gosnell, Knoll and Waterlow Scales.

> Assess risks within four hours of admission and implement preventive measures.

> Analyze data and review cases in which a pressure ulcer/injury developed within 24 hours of admission to identify trends in inadequate admission skin assessment, or for failure to implement interventions for high-risk patients in a timely manner.

> Include risk reassessment documented daily or on every shift.

> Link risk-assessment result to automated referrals to rehabilitation, dietician or wound care specialist.

> Consider patients with a Stage 1 ulcer/injury to be at risk of progression to Stage 2 or greater and at high risk for additional pressure ulcer/injuries.

> Use visual cues to identify patients at risk, including those at risk due to a medical device, on the door or on the patient's white board.

> Develop an individualized care plan for each patient to reduce risks of pressure ulcer/injuries. Include the plan on the patient's whiteboard.

> Conduct nurse-to-nurse shift reports at the bedside and include a total body skin assessment with two sets of eyes.

Suggested Process Measures for Your Test of Change

- Percent of patients who received risk assessment at admission.
- Percent of patients who had daily reassessments performed.

Secondary Driver > ASSESS AND DOCUMENT SKIN CONDITION ON ADMISSION AND EVERY SHIFT

For all patients, complete a skin inspection within six hours of admission and palpate over bony prominences.[13]

For all patients, inspect and palpate for:

> alteration in skin texture, turgor

> alterations in skin moisture

> change in temperature compared to surrounding skin (warmer or cooler)

> consistency, such as bogginess (soft) or induration (hard)

> edema

> open areas, blisters, rash, drainage

> pain or itching

> color changes[14].

- non-blanchable erythema in patients with lightly pigmented skin.
- purplish/bluish discoloration in patients with darkly pigmented skin.

Observe skin in good lighting. Any areas of discoloration or redness should be palpated for change in temperature compared to surrounding skin, or feeling of bogginess (soft) or induration (hard). Pay particular attention to areas over bony prominences. Blanching erythema is an early indicator of the need to redistribute pressure; non-blanching erythema suggests tissue damage has occurred or is imminent; indurated or boggy skin is a sign that deep tissue damage likely occurred. Medical devices can cause pressure damage so close observation around and under medical devices is highly recommended.[12]

With new payment provisions that include non-payment for Stage 3 or 4 HAPU/I, it is crucial for the physician/provider to document the presence of pressure ulcers/injures present at admission. Additionally, the differentiation of moisture versus pressure related skin injuries must be clearly documented. Organizations that incorrectly classify moisture-associated skin damage as Stage 2 ulcers/injuries will have inflated pressure ulcer/injury rates.

Change Ideas

> Establish processes to support a thorough skin assessment upon admission to document present-on-admission accurately. Assign two staff to conduct initial skin assessment and link skin assessment with in person handoff from ED to floor or unit. Conduct real time audits of admission skin documentation to provide immediate feedback to nurses and providers.

> Assess skin under medical devices at least every shift. Take an interprofessional approach, involving rehabilitation and respiratory care services.

> Educate staff on how to conduct a comprehensive skin assessment that includes techniques for identifying blanching response, localized heat, edema, induration and the presence of localized pain.

- Provide annual pressure/ulcer injury assessment education.
- Educate staff on the differential diagnosis of pressure versus moisture-related skin damage.
- Use the "Fruits of Pressure Ulcer/Injury Staging" to teach staff stages using fruit analogies.[15]
- Use NDNQI Training modules to educate and validate nurse competency in staging, documenting and differentiating moisture from pressure injuries.[16]

> Educate staff on medical device related pressure ulcers/injury (MDRPU/I) and the importance of assessing under the device daily and to assess for edema and device tightness with each assessment.

> Include unlicensed personnel in skin inspection responsibilities, emphasizing the importance of reporting early warning signs of pressure or breakdown.

> Engage the patient and family in assessing for early signs of pressure ulcer/injury formation. Use teach-back to validate patient and family understanding.

> Conduct nurse-to-nurse shift reports at the bedside, and include a total body skin assessment with two sets of eyes.

> Assess the need for tools or equipment to support the front-line staff success. For example, provide a mirror for visualizing heels of patients with heavy legs, provide portable lighting, or attach lighting to skin care cart.

> Establish a method to document skin condition using photos to help staff gain confidence in documenting abnormalities. For guidance on this topic see WOCN Photography in Wound Documentation Fact Sheet, 2012.[17]

Suggested Process Measures for Your Test of Change

- Percent of patients with a total body skin inspection documented within four hours of admission.
- Percent of patients with a medical device with documentation of skin inspection under the device.

Hardwire the Process

Incorporate skin and risk assessments in established processes such as admission assessment and bedside handoffs.[4] If using electronic health records, the risk assessment and/or total body assessment can be required or mandatory fields so staff cannot skip over these sections. Pressure ulcer/injury risk assessment results can automatically trigger referrals to rehabilitation services, dietician and skin care specialist or team.

Primary Driver:
MANAGE MOISTURE

Moisture-associated skin damage (MASD) is considered a "top down" injury because it originates from superficial cutaneous injuries versus pressure injuries, which result from "bottom up" from internal pressure over bony prominences. The National Pressure Ulcer Advisory Panel published a consensus statement regarding Stage 2 pressure injury definitions cautioning that this Stage should not be used to describe moisture associated skin damage (MASD), including incontinence associated dermatitis (IAD), intertriginous dermatitis (ITD), medical adhesive-related skin injury (MARSI), or traumatic wounds (skin tears, burns, abrasions).

It is important to educate staff to ensure competencies in differentiating MASD from HAPU/I and in documenting the appropriate terminology. MASD should not be coded as Stage 2 and should not be included in pressure ulcer/injury reporting.

Nonetheless, avoiding inappropriate wetness and optimally moisturizing skin can reduce the risk of developing pressure ulcers/injuries, and therefore is a crucial aspect of prevention.

Secondary Driver > MAINTAIN DRYNESS

Limit exposure of a patient's skin to moisture from sources such as incontinence, wound drainage or perspiration. Use under pads that wick away moisture and present a dry surface to the skin.[18] Topical agents are available that provide a barrier to wetness and simultaneously moisturize the skin.[19]

Change Ideas

> Use high quality underpads with fiber backing, not plastic, that pull fluid away from the patient's skin.

> Involve front-line staff and patients in evaluating and selecting upgraded underpads.

> Maintain adequate supplies at the bedside: moisture barrier cream, underpads and pre-packaged, no-rinse, pH balanced skin cleansers.

> Manage exudate and perspiration around and under medical devices. Use wicking pads and barrier films around the affected area.

> Develop a skin care cart with supplies for assessment, prevention and treatment of injuries.

> Diapers should only be used to preserve a patient's dignity when he or she is in a chair or walking. They should be removed upon returning to bed.

> Develop protocols for managing patients with deep skin folds: improve airflow, keep clean and dry, use wicking products and encourage loose clothing.[20]

> When considering support surfaces, choose surfaces with dynamic microclimate (heat and moisture) control.

> Engage family and caregivers in monitoring skin dryness and providing proper hygiene.

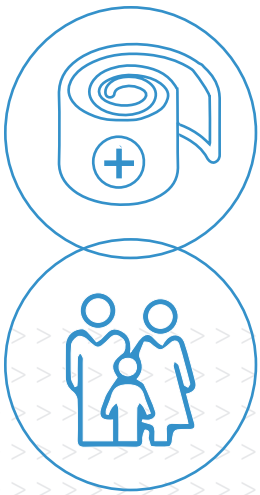
Suggested Process Measures for Your Test of Change

> Percentage of patients with medical devices or deep skin folds with appropriate moisture management interventions in place.

Secondary Driver > USE EVIDENCE BASED BATHING PRACTICES TO OPTIMIZE SKIN PROTECTION

> To maintain optimal skin heath and protection, staff must have the right tools and equipment for patient care. There is some evidence that use of tap water, soap and washcloths for patient hygiene may be suboptimal, citing concerns of the potential contamination from wash basins and tap water.[21,22] The type of soap used can negatively impact the skin pH, encouraging greater colonization of bacteria, and the rough surface of washcloths erodes the skin barrier function.[23]

> Product selection is key. It is essential hospitals make choices that not only support the evidence, but also are effective, affordable and user friendly from the perspective of the patient and the front-line staff.



Change Ideas

> Use topical agents that hydrate the skin and form a moisture barrier to reduce skin damage.

> Consider using all-in-one, pH balanced, no rinse cleaning and moisture-barrier cloths.

> Avoid using a thick paste as a cleansing or moisture barrier (staff may have difficulty cleaning the paste when stool is present, and it may injure the skin).

> Keep supplies readily available at the bedside in case the patient is incontinent.

> Set specific timeframes or create reminder systems to offer frequent toileting, oral fluids and reassess for wet skin. Remember the five P's — pain, position, personal belongings, pathway and potty.

> Involve staff, such as nurse's aides in rounding and checking the five P's every hour.

> Engage patients and families in keeping patients' skin clean and dry. Encourage prompt reporting of patient needs to the staff.

Suggested Process Measures for Your Test of Change

- Percentage of incontinent patients with moisture barrier cream at the bedside.

Hardwire the Process

Make skin care and HAPU/I prevention part of the everyday routine of nursing staff to hardwire the process. Identify periodic activities such as hourly rounding, repositioning, assessing for wet skin, applying barrier agents and offering oral fluids and toileting opportunities. Include these activities in nursing protocols for licensed and non-licensed staff to complete and document, as appropriate. Support staff members' attention to meticulous hygiene through recognition in leader rounds on patients and staff. Listen and respond to staff feedback on availability of supplies, tools and support necessary to maintain excellent patient hygiene.

Primary Driver:

OPTIMIZE HYDRATION AND NUTRITION

Nutrition and hydration status affect skin condition and risks for pressure ulcer/injury. Patients with nutritional deficiency may be twice as likely to develop skin breakdown.[19] Risk assessment for pressure ulcer development should include a review of the patient's nutrition and hydration status.

Secondary Driver > MONITOR WEIGHT, NUTRITION AND HYDRATION STATUS

Adequate calories, protein, fluid, vitamins and minerals are required by the body to maintain tissue integrity and prevent breakdown. Compromised nutritional status such as unintentional weight loss, undernutrition, protein energy malfunction and dehydration deficits are known risk factors for pressure ulcer/injury development.[24]

Change Ideas

> Generate an automatic registered dietician consult for high-pressure ulcer/injury risk or nutritionally-compromised patients.

> Correct nutritional deficiencies by increasing protein and calorie intake and A, C, or E vitamin supplements as needed.[25]

> Give high-protein/high-calorie supplements or tube feedings in addition to the usual diet if nutritional requirements cannot be met by dietary intake.

> Communicate patients' hydration and nutrition needs within the team. Include on whiteboard and in handoffs. Provide at-risk patients with a water container of a unique color so staff and families know to encourage hydration.

> Engage the patient and family in achieving nutrition and hydration goals. Give patients food/liquid preferences to enhance appetite, hydration and nutrition. Encourage snacks.

> Assist the patients with menu completion, meal set up and eating to optimize intake.

> Support a pleasant dining experience. Manage odors that may be present from pressure ulcers/injuries.

> Limit nil per os (NPO) status and progress diets to optimize intake.

> Monitor weight, food and fluid intake and laboratory test results.

> Offer water to the patient when rounding for the five P's.

Suggested Process Measures for Your Test of Change

- Percent of high risk patients with a nutritional consult completed.

Hardwire the Process

To hardwire hydration and nutrition, make the assessment of patient's nutrition and hydration status routine, with admission assessments as well as with other patient care interventions. If a patient is assessed as high risk for a pressure ulcer/injury, an automatic registered dietician consult should be generated. Partner with food service department to deploy resources to support increasing intake for the nutritionally-compromised patients with activities such as rounding at meal times to assess intake and conducting food preference assessments.

Primary Driver:

MINIMIZE PRESSURE, SHEAR AND FRICTION

Minimizing the amount of pressure on bony prominences will help to reduce the possibility of breakdown of the thin overlying skin. By repositioning and using pressure-distribution surfaces, pressure on the skin can be redistributed. This is especially critical for patients with limited mobility, as they are at high risk for developing pressure ulcer/injury. Friction and the stress caused by shearing forces also contribute to pressure ulcer/injury development. Friction is caused when a patient slides or is dragged across a surface, causing damage to underlying tissue which can contribute to pressure ulcer/injury formation.

Secondary Driver > OFF-LOAD PRESSURE OVER BONY PROMINENCES AND UNDER MEDICAL DEVICES.

Turning and repositioning a patient, or their medical device, helps to redistribute pressure on skin surfaces and maintains circulation to tissues in areas at risk for ulcer/injuries.

This includes surgical patients at risk for developing pressure ulcers/injuries during perioperative care.

Change Ideas

> Establish operating room protocols for positioning patients to offload pressure:[12]
  - Ensure the heels are free of the surface of the operating table.
  - Position knees in slight flexion when offloading the heels.
  - Pay attention to pressure redistribution prior to and after surgery.
  - Include in handoff any history of healed pressure ulcer/injury because that skin is vulnerable.
  - If the patient is awake, ask about any complaints of pain that may be due to early pressure injury.
  - Avoid positioning the patient in the operative position, pre- and postoperatively.

> Reposition patients at least every two hours in bed and every hour while seated. If the patient is capable, encourage weight shifting every 15 minutes while seated.[26]
  - Avoid positioning on bony prominences with existing non-blanchable erythema.[12]
  - Use a 30-degree side-lying position (alternately, right side, back, left side).
  - Whenever possible, do not position the patient on an existing pressure ulcer/injury.

> Use auditory cues, (e.g., music, bells or alarms) at the nurse's station as a reminder to turn and reposition the patient.[27]

> Use visual cues at the bedside to remember to turn the patient (e.g., a turning clock or whiteboard reminder).

> Establish 'rules' for which side patients should lie on at certain times (e.g., even hours on right side, odd hours on left side), so adherence can be easily assessed in unit rounds.

> To redistribute pressure, use special beds, mattresses and foam wedges. Use pillows (only for limbs) to redistribute pressure on high risk areas and to prevent bony prominences from touching each other.[28]

> Pay special attention to protecting skin from pressure caused by medical devices.
  - Pad skin under devices with silicone, hydrocolloid, foam or liquid filled dressing prior to application of the device.
  - Use wider foam securement ties.
  - Assess that equipment fits properly and is resized when edema is present.
  - Assess tightness of securement devices at least once every shift.
  - Ensure securement and medical devices are not placed over fragile or impaired skin.
  - Reposition or rotate medical devices when possible. Always ensure the depth of an endotracheal tube does not change with tube manipulation.[12]

> Deploy turn teams that are dedicated to repositioning patients.[29]

Suggested Process Measures for Your Test of Change

- Percent of patients with a medical device with pressure ulcer/injury preventive measures (padding, foam trach ties) in place as observed in rounds.
- Percent of high-risk patients properly positioned observed during leadership rounds.

Secondary Driver > PROVIDE ADEQUATE SUPPORT SURFACES

Support surfaces comprise a variety of overlays, mattresses and integrated bed systems used to redistribute pressure, reduce shearing forces and control heat and humidity. The use of support surfaces is included in nearly all evidence-based clinical practice guidelines as a component of comprehensive pressure ulcer/injury prevention programs and treatment recommendations.[30]

Evidence regarding the efficacy of support surfaces in preventing pressure ulcers/injuries include:[31]

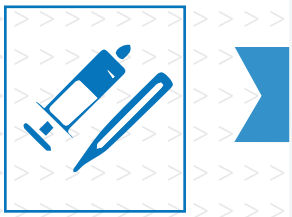
> Patients lying on ordinary foam mattresses are more likely to get pressure ulcer/injuries than those on higher-specification foam mattresses.

> There is insufficient evidence to determine comparative effectiveness of various constant low pressure support surfaces.

> Active support surfaces with an alternating pressure feature are more effective than standard hospital mattresses.

> General recommendations for support surfaces include:[30]

- Consider patient characteristics and risk factors, including weight and weight distribution, fall risk, risk for developing pressure injuries, severity and location of existing pressure injuries, patient ability to turn and be repositioned, past support surface used and patient preference.
- For patients who exceed the weight limit or body dimensions of the current support surface, move the patient to a bariatric support surface.
- Patients who are candidates for progressive mobility should be on a surface that facilitates getting out of bed.



Patients undergoing surgery are at risk for an operating room-acquired pressure ulcer/injury. A perioperative pressure injury is any pressure-related tissue injury that presents (e.g., non-blanchable erythema, purple discoloration or blistering) 48 to72 hours postoperatively and is associated with the surgical position.[32] Evidence supports the following interventions:

> Use a high specification foam mattress on the operating room table for at risk individuals. In a 2006 study, patients were eight times more likely to develop a pressure injury on standard mattresses, rather than on new technology, high-specification mattresses.[32]

Change Ideas

> Use a support surface decision-making algorithm (See Appendix "An Evidence-and Consensus-Based Support Surface Algorithm, WOCN 2015).[30]

- A web based version of the algorithm is available at: http://algorithm.wocn.org/#pressure-ulcer-risk-assessment-b

> Provide appropriate seating support for patients in a chair.

> Provide systems for clinical staff to access appropriate support surfaces 24/7.

> Pilot continuous bedside pressure mapping for highest risk patients (i.e., ICU patients).[33]

> Operating room (OR) tables should be covered by high-specification foam mattresses.[34,35]

> Limit layers of linen and under pads placed over the support surface. Extra layers interfere with the surface's ability to redistribute weight optimally.

Suggested Process Measures for Your Test of Change

- Percentage of patients on the right support surface during patient rounding.

Secondary Driver > REDUCE FRICTION AND SHEARING FORCES

The effect of pressure on underlying structures and tissue is magnified when shear forces are added. Shear forces occur when patients are positioned in such a way that they tend to slide, for example, when the head of the bed is elevated without elevating the feet, as well. Shear forces plus pressure cause stretching and kinking of capillaries and tissue, resulting in more tissue ischemia than would have occurred with pressure alone.

Friction affects only the outermost skin layers by movement of the epidermis against an external surface. Clinically, friction presents as a superficial abrasion or blister (e.g., heel rubbing on sheets). A patient with muscle spasms has an increased risk for friction injury. Shear and friction often go hand-in-hand.

Change Ideas

> Elevate the head of the bed no more than 30 degrees to prevent patients from sliding down in bed, unless contraindicated.

> Use a foam or hydrocolloid dressing on bony prominences such as sacrum, heels and elbows to decrease friction, especially for patients undergoing procedures or likely to be in the OR for more than three hours.

> Ensure proper seating alignment to reduce a patient's tendency to slide down in the chair or bed.

> Collaborate with rehabilitative services/physical therapy to support proper seating and positioning.

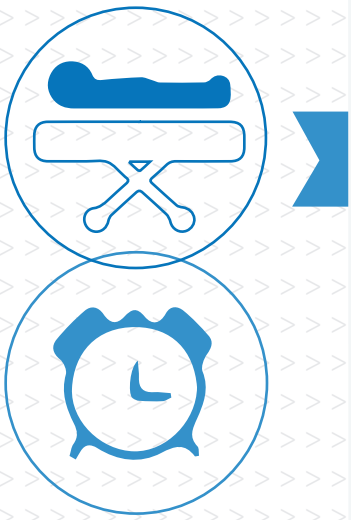
> Provide two-person lift with lift sheet or a device to reduce shear when repositioning patients.

> Use breathable glide sheets and/or lifting devices to prevent shear and friction.

> Use ceiling lifts to encourage mobility and movement and to prevent staff work-related injuries.

> Remove lift sheets or slings from underneath the patient unless the device is designed to stay. Additional layers of linen or a lift device will impair the pressure and moisture control features of specialty or high specification foam mattress.

> Train transport and operating room staff on safe patient handling to prevent shearing forces during patient transfers from cart to table, cart to bed, etc. The CDC National Institute for Occupational Safety and Health provides free resources to support organizations in providing safe patient mobility.[36]



Suggested Process Measures for Your Test of Change

- Percent of high risk patients properly positioned observed during leadership rounds.
- Percent of cart transfers observed in leadership rounds in which preventive measures were taken to prevent shearing forces.

Secondary Driver > GET UP: IMPLEMENT EARLY MOBILITY PROTOCOLS

Reduced mobility is a risk factor for the development of pressure ulcer/injuries and can be optimized by using the Get UP campaign, http://www.hret-hiin.org/engage/up-campaign.shtml, as a cross cutting strategy that provides common language and an interdisciplinary approach to pressure ulcer/injury reduction. Putting a process into place that assesses a patient's mobility and generates recommendations for physical therapy referral will support staff in safely mobilizing patients. Nurse-driven mobility protocols have been demonstrated to be effective in reducing immobility related complications and reducing length of stay.[37,38]

Change Ideas

> Incorporate assessment of gait, balance, lower extremity muscle strength and functional abilities into initial assessments.

> Use automated triggers in the electronic medical record to notify rehabilitation services of the need for a physical therapy/occupational therapy (PT/OT) evaluation.

> Implement nurse-driven protocols that promote patient progressive mobility.

> PT/OT staff should attend daily rounds with charge nurses to discuss patients needing evaluation and intervention.

> Review mobility in inter-disciplinary clinical rounds and include rehabilitation services in these rounds.

> PT/OT staff should recommend and assist with, progressively increasing patients' mobility status and communicate with the team in huddles and on the whiteboard.

> Engage patient and family in progressive mobility and ambulation.

Suggested Process Measures for Your Test of Change

- Percent of patients evaluated by PT/OT within 24 hours of admission who meet high-risk criteria.

Hardwire the Process

Hardwiring can be achieved by increasing the presence of rehabilitation staff on the patient care units and by demonstrating leadership support by reallocating resources to support patient mobility. Schedule ambulation as a daily patient activity and assign staff responsibility (e.g., certified nurse assistant, physical therapist assistant). Engage leadership in rounding to assess and observe activities promoting mobility and patient ambulation, as well as the use of whiteboards, to communicate mobility plans. Allocate capital resources for replacement of support surfaces to assure surfaces are not used beyond their functional lifespan.

Primary Driver:

USE DATA FOR IMPROVEMENT

Analyze trends in data to understand where the greatest opportunity is to improve. Understand the types of patients affected by pressure ulcer/injuries and track trends by unit regarding the anatomical location of ulcer/injuries and contributing factors. Use data collected from prevalence studies or pressure ulcer/injury rates, as well as data from root cause analysis, case review and rounds, to identify opportunities and gaps.

Secondary Drivers > ANALYZE DATA TRENDS BY UNIT

Drill down on data collected in prevalence studies, root cause analysis and adverse event reports to identify key patient characteristics and contributing factors by unit so targeted interventions can be applied.

Change Ideas

> Engage front-line staff in reviewing data trends and to propose targeted solutions. Use the PDSA cycle to implement small tests of change of proposed solutions.

> Engage non-licensed staff in proposing solutions based on trends and to help test proposed solutions.

> Promote sharing of data and solutions between units and peer hospitals to spread learnings and workable solutions.

> Engage patients and caregivers or patient/family advisors to provide input in designing data-driven solutions.

> Encourage patients and families to ask questions and share concerns.

Secondary Drivers > CONDUCT ROOT CAUSE ANALYSIS (RCA) ON PRESSURE ULCER/INJURIES

A thorough review of the timeline of events associated with a serious adverse outcome can provide information for the organization to identify gaps in care that indicate a deviation from the organizations protocols and helps gain insight into opportunities to improve.

Change ideas

> Engage quality and risk management staff in supporting inclusion of Stage 3, 4 and deep tissue injury (DTI) pressure ulcers/injuries in the RCA process.

> Engage key leaders, front-line staff and a patient representative or patient advisor in attending pressure ulcer/injury associated RCAs.

> Maintain a non-punitive learning environment.

> Use the NPUAP Pressure Ulcer Root Cause Analysis Template.[39]

> Use the information learned regarding key contributing factors or gaps in practice to design targeted solutions. Engage staff in recommending and testing solutions.

Suggested Process Measures for Your Test of Change

- Percent of Stage 3, 4 and DTI pressure ulcer/injuries for which a RCA was completed within three days of the incident being reported.

Hardwire the Process

Hardwire the process for treating Stage 3, 4 and DTI injuries as serious adverse events. Collaborate with the leader responsible for RCAs to include these events in the list of events requiring a RCA. Include key leaders in the RCA meeting and share findings and opportunities through reporting at formal quality committees. Schedule follow-up reporting to quality committees to report on testing and implementation of changes to prevent similar occurrences. Integrate process for recommending, testing and implementing changes into shared governance structure to promote staff engagement.

PDSA In Action | Tips on How to use the Model for Improvement

Choice of Tests and Interventions for HAPU/I Reduction:

Use data from a variety of sources to identify where your organization has the greatest opportunity to improve care processes in preventing HAPU/I. Analyze characteristics of the pressure ulcer/injuries (e.g., patient diagnosis, anatomical location of wounds, clinical contributing factors as well as data collected in rounds, audits and RCAs) to identify trends in gaps in care. Form an interdisciplinary team of individuals, including leaders and front-line staff to determine an area of focus. The following are examples of small tests of change that may be used as a template for your organization's improvement efforts:

> Implement an improvement project to improve the timeliness of initial risk assessment and the activation of interventions to address pressure ulcer/injuries developing in the ICU within 24 hours of admission.

- Engage emergency room staff in selecting an appropriate risk assessment tool.
- Test the tool with one patient, one nurse and one certified nursing assistant (CNA). Work with these staff to improve the process for the next patient.
- Test communication processes for activating interventions for high-risk patients that include placing high-risk patients in the emergency room or on an upgraded supportive surface as soon as possible.

> Improve reliability in assessing skin at admission and documenting pressure ulcer/injuries present at admission.

- Explore barriers in completing a thorough skin assessment at admission with staff. If workload is a contributing factor, consider a "buddy" approach to provide physical assistance in completing the head-to-toe assessment.
- Test the buddy approach with one patient, one nurse and one buddy. Test different buddy types to assess which type increases value in the task. Run a PDSA cycle with CNA, RN and MD buddies, and debrief with staff involved to determine criteria to be used in selecting a buddy type to spread.
- Assign a supervisor, manager or charge nurse to review documentation of each admission for the adequacy of the documentation of skin condition and provide immediate feedback to staff.

> Implement an improvement project to reduce MDRPU caused by cervical collars and oxygen tubing.

- Engage a small team of front-line staff and one patient representative or patient/family advisor to select protective dressings to test for application at pressure points. Collaborate to determine criteria to be used to evaluate the products. Select two polyurethane foam dressing products to test with one patient and evaluate the ease of removal, moisture management, patient comfort and best overall performance. Pick the best product, and then test on an additional patient.
- Test the workflow on one high-risk patient that has multiple medical devices (i.e., oxygen, tube feedings and pulse oximetry). Ask the team to determine the best way to communicate the plan within the team and to the oncoming shift. Test how to include the information on the patient's white board, in handoff communication, in team huddles and how to engage the patient and family.

> Implement an improvement project to incorporate no positioning on bony prominences with existing non-blanchable erythema or Stage I pressure ulcer/injury development.

- Work with a RN, CNA and physical therapist to define a workflow that incorporates a team skin assessment and repositioning plan for the shift.
- Determine sequencing of the tests, addressing one care process at a time:
  - team assessment and discussion of plan at the bedside
  - communication using the whiteboard or other visual cues in the patient room
  - handoff communication
  - unit team communication — inclusion in team huddles and other centralized communication structures

IMPLEMENT SMALL TESTS OF CHANGE

PLAN	The objective is to engage emergency room staff in selecting a pressure ulcer/injury risk assessment process or tool that will trigger activation of placing a high-risk patient on a supportive surface within two hours of arrival. Staff involved will evaluate the use of the Braden Scale to identify high-risk patients who need a supportive surface to prevent the early development of a pressure/injury while in the emergency room.
DO	For one shift, one RN and one tech will use the Braden scale as part of the emergency room admission process.
STUDY	After one shift, Braden scales were reviewed and staff identified the Braden scale alone was not an effective predictor of need for a supportive surface. The Braden was abandoned.
ACT	For cycle two, the following criteria will be tested: Emergent admission to the ICU and use of vasopressors as the trigger for placing the patient on a supportive surface in the emergency department.

Potential Barriers

- Changing too much, too fast is not sustainable. Often, organizations or units may apply large scale change to overcome a significant quality issue with the best of intentions. Implementing a comprehensive pressure ulcer/injury prevention program as a single implementation and kickoff can quickly provide success in changing behaviors. However, sustaining the behaviors will be a challenge once leadership shifts attention to the next priority and staff practice drifts to adjust to poorly designed workflows. Furthermore, when changing multiple care processes simultaneously, it is difficult to know which interventions were attributed to successful outcomes. Sustainability can be achieved when workflows are designed and tested by staff before they are implemented organization wide. Incremental changes involving staff will create buy in and build quality improvement capacity within the front-line staff, which further builds upon an infrastructure that supports sustainability.
- Competing organizational priorities can create challenges in implementing and sustaining change. Pressure ulcer/injuries may not receive the organizational attention that newer, more publicly visible patient safety topics receive. By including pressure ulcer/injuries in the quality and risk management RCA process and follow-up reporting processes, organizational support and attention can be shifted. Allocating resources for optimal cleaning and moisture management products, support surfaces and effective lifting devices can be facilitated by determining the current costs of exposure to reimbursement penalties and litigation costs and using that to build a case for investing in pressure ulcer/injury prevention.

Enlist Administrative Leadership As Sponsors to Help Remove or Mitigate Barriers

- An executive sponsor who recognizes the value for the organization and its patients of preventing HAPU/I can help brainstorm solutions, advocate for the allocation of resources such as funding, staffing and supplies, and encourage process adoption. Executive sponsors can provide a "big picture" perspective on the organizational impact of these initiatives and serve as champions across the organization, removing barriers to implementation.
- Respected nurse and physician leaders and champions can promote the adoption of best practice protocols for pressure ulcer/injury prevention. When selecting a unit or area to implement an improvement project, choose the one in which the initiative is supported by a receptive nurse lead and partnering physician. A successful trial will demonstrate the benefits of the new protocols and be more easily disseminated to units across the organization by the nurse and doctor.
- Partner with leaders throughout the organization to improve pressure ulcer/injury prevention. Partner with physicians, physical therapy, materials management, dietary, environmental services and engineering to address the full spectrum of strategies that prevent pressure ulcer/injuries.

Change not only "The Practice," but also "The Culture"

> Integrating pressure ulcer/injury prevention into your organization's commitment to patient safety is essential. Pressure ulcer/injuries cannot be viewed as a nursing issue that good nursing care alone can solve. While the latter is mostly true, execution of the right evidence based practices at the right time, is difficult due to the complexity of the environment and the patients. Caregivers must believe that through the implementation of evidence based practices, HAPU/I can mostly be prevented and the deterioration of a Stage 1 can be halted. For example, an intensive care unit may have the belief that cardiac and respiratory needs outrank pressure ulcer/injury prevention. By shifting the goal from "our patients will survive" to "our patients will survive AND be free of harm," a cultural shift can begin to happen. In addition, the organization must provide the focus and attention to support nurses in their role as caregivers with the tools, equipment and efficient work flows necessary to execute best practices. Interdisciplinary team members, clinical and nonclinical are crucial to provide the infrastructure for optimal pressure ulcer/injury prevention care. This includes:

- dieticians supporting nutrition and hydration
- environmental services monitoring linen layering, underpad utilization and inspecting supportive surfaces during cleaning;
- engineering providing preventive maintenance on beds, carts and lifts
- rehabilitation services overseeing early mobility programs, proper wheelchair seating and monitoring for MDRPU
- respiratory care supporting early mobility with ventilator patients and monitoring MDRUP
- quality staff providing support in RCAs and pressure ulcer/injury trended data
- finance department allocating funding and anticipating bed and supportive surface replacement
- executive leadership in elevating the significance of pressure ulcer/injuries when they occur, promoting transparency in reporting, and supporting engaging patients and families, particularly those who experienced a HAPU in the organization's improvement efforts
- materials management in supporting the procurement and availability of high quality skin care and moisture management supplies, and supporting 24/7 rentals of necessary specialty support surfaces

PART 4: CONCLUSION AND ACTION PLANNING

Eliminating HAPU/I is a complex issue that requires a thoughtful approach in solving. There are many variables that are in play in preventing a pressure/injury: patient environment, including available equipment and supplies, patient characteristics, the staff abilities and the care processes established in the organization.

In deciding next steps, start by looking at the data to determine where to start. Select a focus based on the data. Enlist the organization's data expert to turn HAPU/I data into actionable information. Assemble a team that includes staff, licensed and unlicensed to provide input on selecting a focus based upon data. Once the focus is determined, tap into the front-line experts to identify barriers, propose and test solutions, and spread efficient practices. Enlist a physician and nurse champion to support engagement, effective decision making and to act as a role model in leading change. Include a patient or family member who has experienced a pressure ulcer/injury or a patient/family advisor to be the voice of the patient in action planning and implementation. An executive leader may help remove barriers, allocate resources provide a channel of communication between HAPU/I team and the executive team and the board. Share wins from early changes across the organization. Spread effective work processed to other units.

PART 5: APPENDICES

APPENDIX I: HAPU/I TOP TEN CHECKLIST

Associated Hospital/Organization: HRET HIIN

Purpose of Tool: A checklist to review current or initiate new interventions for HAPU/I prevention in your facility

Reference: www.hret-hiin.org

Hospital-Acquired Pressure Ulcers/Injuries (HAPU/I) Top Ten Checklist

- Conduct prevalence studies to collect data on pressure ulcer/injury occurrences and to observe processes of care in real time to identify opportunities to improve the reliability of care delivery.
- Learn from HAPU/I by conducting a root cause analysis on Stage 3, 4 and unstageable ulcer/injuries and by analyzing HAPU/I data for trends by unit for patient characteristics, anatomical location and other contributing factors.
- Conduct a pressure ulcer/injury risk assessment within four hours of admission. Reassess at intervals defined by patient care need.
- Activate HAPU/I prevention bundles for high-risk patients, including appropriate surface selection, off-loading pressure (turning and repositioning), nutrition and a moisture management plan.
- Assess reliability of documentation of pressure ulcer/injury present on admission and of appropriate classification of moisture versus pressure related skin damage.
- Provide annual education and competency evaluation on early detection of Stage 1, assessing darkly pigmented skin, staging of pressure ulcer/injuries and differentiating pressure from moisture related skin damage.
- Investigate clinical practices regarding skin safety in the operating room and in the prevention and reporting of medical device-related pressure ulcer/injuries.
- Establish a partnership with nutritional services to ensure timely nutritional assessments and implementation of interventions for high-risk patients.
- Assess adequacy of moisture management and skin care products, support surfaces (ER carts, OR Tables, ICU units, medical/surgical units) and shear prevention devices (lifts, glide sheets). Engage executive leadership in planning for upgrading or replacement as needed.
- Engage patients and families in HAPU/I prevention. Design a process to engage patients and families in assessing for early warning signs and participating in preventive measures.

APPENDIX II: HAPU/I PREVALENCE STUDY DATA COLLECTION TOOL

Associated Hospital/Organization: HRET HIIN

Purpose of Tool: Data collection tool for recording HAPU/I prevalence and processes of care

Reference: http://www.hret-hiin.org/resources/display/hospital-acquired-pressure-ulcer-prevalence-study-data-collection-tool

HOSPITAL ACQUIRED PRESSURE ULCER PREVALENCE STUDY DATA COLLECTION TOOL

Hospital: _____Unit & Type: _____ Date: _____ Unit census of day of study: _____ # of patients assessed_____ Page__ /____

Part 1 - Prevalence data collection	Patient Identifiers		Pt ID	22042								
			Admit date	1/12/16								
			Age	72								
			Gender	m								
	# of hospital acquired pressure ulcers at each stage	Ulcer 1	#1 stage	2								
			#1 location	L Heel								
			# 1 POA?	N								
		Ulcer 2	#2 stage	3								
			#2 location	Sacrum								
			#2 POA?	Y								
		Ulcer 3	#3 stage									
			#3 location									
			# 3 POA?									
		Comments See below										
Part 2 – Process Measures	Skin assessed upon admission			y								
	PU RISK assessment upon admit			y								
	Was pt identified to be at risk?			y								
	What was the risk score?			9								
	Interventions (see key)											
	Pt on a pressure redistribution surface			Y								
	Repositioning as prescribed			Y								
	Nutritional support			N								
	Moisture Management			N								

Part 1 PRESSURE ULCER STAGING KEY: **1, 2, 3, 4, U** = Unstageable, **DTI** = Suspected Deep Tissue Injury**. Stage 2 or greater plus U and DTI are reportable**

Part 2 Key: Y=yes **N=** no **NR=** no risk **NA=** Admit w/in 24 hours, not necessary for pt **DC =** Documented contraindicated **R=** refused

Pt ID	Additional comments

Team members completing this tool: _____

APPENDIX III: EDUCATIONAL POSTER [40]

Associated Hospital/Organization: Ascension Health, St. Vincent Medical Center, FL

Purpose of Tool: Example of poster to raise staff awareness and reinforce skin care bundle

Reference: Gibbons W, Shanks HT, Kleinhelter P, Jones. Eliminating facility-acquired pressure ulcers at Ascension Health. Joint Commission Journal on Quality and Patient Safety. 2006; 32:488-496.

APPENDIX IV: CLIPBOARD REMINDER FOR PATIENTS AT RISK OF PRESSURE ULCERS/INJURIES [41]

Associated Hospital/Organization: Ascension Health, St. Vincent Medical Center, FL

Purpose of Tool: Example of elements of skin care bundle

Reference: Gibbons W, Shanks HT, Kleinhelter P, Jones. Eliminating facility-acquired pressure ulcers at Ascension Health. Joint Commission Journal on Quality and Patient Safety. 2006; 32:488-496.

SKIN RISK ALERT

Skin Bundle Interventions In Effect!

SURFACE:

> Be sure the patient is on the correct type of mattress
> Do not use multiple layers of linens under the patient
> Keep linens free of wrinkles
> Be sure the patient is not lying on tubing, telephones or call bells

KEEP TURNING:

> Reposition patient at least every two hours when in bed
> "Self" is not acceptable for documenting repositioning
> Document the actual position the patient is observed in
> Shift patient's weight at least every hour if he/she is up in a chair
> Use a chair pad when patient up in chair

INCONTINENCE:

> Offer toileting assistance every two hours
> If the patient is incontinent, give perineal care every two hours and as needed for stool incontinence
> Apply a moisture barrier after incontinence care
> If the patient is not incontinent, apply moisture barrier every eight hours
> Avoid diapers unless needed for containing excessive amounts of stool, the patient is ambulatory and incontinent, the patient requests a diaper or the patient saturates linens with most urinary incontinence episodes

NUTRITION:

> If the patient has a nutritional deficit or is at high risk for a nutritional deficit, order a nutrition consult. Look at what the patient has been taking in for nutrition and also look at albumin levels.
> Consider recent weight loss as well
> Consider hydration status
> Carry out nutrition orders and record supplement and meal intake

Assess skin every eight hours. Document breakdown description on Skin Flow Sheet daily.
Document all of your interventions. **Not a permanent part of the medical record.**

APPENDIX V: SAVE OUR SKIN BUNDLE

Associated Hospital/Organization: Lee Memorial Health System's Cape Coral Hospital, Cape Coral Florida

Purpose of Tool: Examples of materials that can be used to raise awareness regarding pressure ulcer prevention

Reference: Not applicable

Save Our Skin Bundle

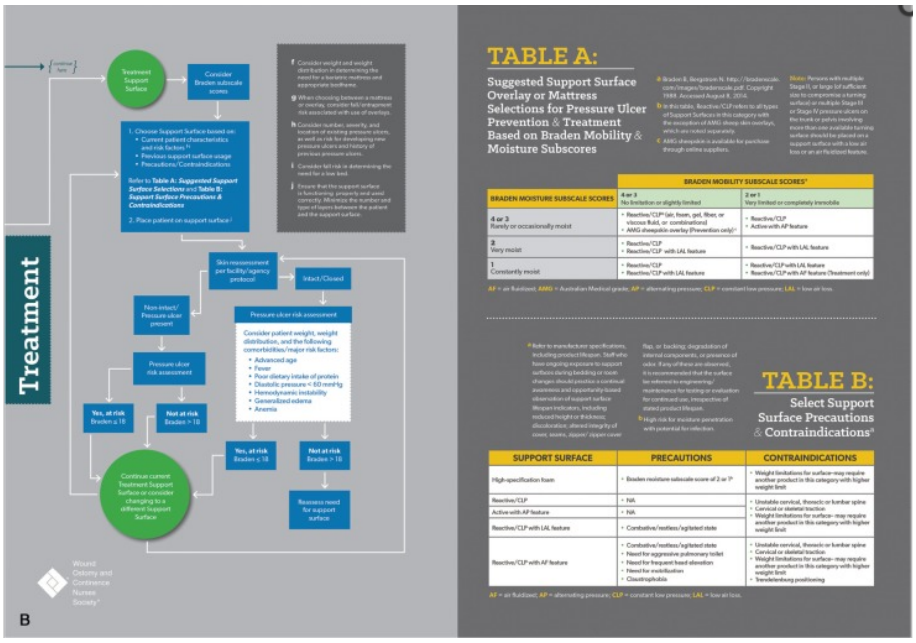
PATIENTS WITH A BRADEN SCORE < 15 OR ON A VENT:

> An S.O.S. sign on the door with a turning clock
> A flat sheet with a disposable blue pad (moisture wicking) is in place
> The patient is repositioned and repositioning is documented q2h
> If the patient is up in chair, repositioned q1h
> Daily mobility assessment is performed
> Daily nutrition assessment is performed
> Toileting offered and perineal care is performed q2h
> Appropriate care plan is in place
> If the patient has a pressure ulcer, the correct order set should be in place

S.O.S. Turn Sign

APPENDIX VI: SUPPORT SURFACE DECISION ALGORITHM

Retrieved at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4845766/



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