

Hospital Acquired Pressure Ulcers (HAPU)

2016 UPDATE

Change Package

PREVENTING HOSPITAL ACQUIRED PRESSURE ULCERS



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How to Use this Change Package

This change package is intended for hospitals participating in the Hospital Engagement Network HEN 2.0 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 and 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: ADVERSE EVENT AREA (AEA) DEFINITION AND SCOPE

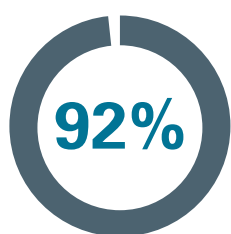
Hospital-acquired pressure ulcers (HAPU) result in significant patient harm, including pain, expensive treatments, increased length of institutional stay and, in some patients, premature mortality. It is estimated that each year more than 2.5 million patients in U.S. acute-care facilities suffer from pressure ulcers and 60,000 die from their complications.¹ The cost of treating a single full-thickness pressure ulcer can be as high as \$70,000, and total costs for treatment of pressure ulcers in the U.S. is estimated at \$11 billion annually.^{2,3} As traditional pressure ulcer rates have improved, medical device related pressure ulcers (MDRPU) have become more apparent and contribute to over 30 percent of overall HAPU rates.⁴ Interventions that can help to prevent or quickly treat pressure ulcers can reduce the costs of HAPU care and improve quality of life for those affected.

Magnitude of the Problem

Pressure ulcer incidence rates vary considerably by clinical setting – ranging from 0.4 percent to 38 percent in acute care, from 2.2 to 23.9 percent in long term care, and from 0 percent to 17 percent in home care.⁵ Risks for the development of pressure ulcers include advanced age, immobility, incontinence, inadequate nutrition and hydration, neuro-sensory deficiency, device-related skin pressure, multiple co-morbidities and circulatory abnormalities.⁶

HEN 1.0 Progress

Through the work of the AHA/HRET Hospital Engagement Network, from 2011 through 2014, over 1,400 hospitals worked to prevent and reduce pressure ulcers. Twenty-four of the thirty-one states participating reduced total pressure ulcer harm by over 40 percent. Under this initiative, 4,655 hospital-acquired pressure ulcers were prevented and an estimated \$188,537,500 was saved.⁷

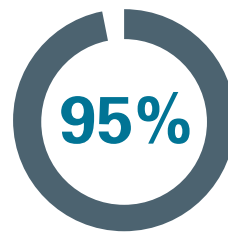


of Eligible
Acute/CAH/
Children's Hospital
Reporting Data



50%

Reduction in Patients with
at least one state II or greater
nosocomial pressure ulcer



"Chance The Information
Will Improve My
Effectiveness/Results"

of Positive
Responses to HAPU
Education Events

What does that Mean?



HEN 2.0 Reduction Goals

Reduce the prevalence of hospital-acquired stage II or greater pressure ulcers by 40 percent by September 23, 2016.

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 on which you will be collecting and submitting data for the AHA/HRET HEN. 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 AHA/HRET HEN to aggregate, analyze and report its progress toward reaching the project's 40/20 goals across all AEAs by September 2016.

Nationally Recognized Measures: Process and Outcome

Please download and reference the encyclopedia of measures (EOM) on the HRET HEN website for additional measure specifications and for any updates after publication at: <http://www.hret-hen.org/audience/data-informatics-teams/EOM.pdf>

HEN 2.0 EVALUATION MEASURE

Pressure ulcer rate, stage III or greater (AHRQ PSI-03)

Pressure ulcer prevalence (hospital-acquired), stage II or greater (NQF 0201)

PROCESS MEASURES

Patients with skin assessment documented within 4 hours of admission

Patients with pressure ulcer risk assessment completed within 24 hours of admission

PART 3: APPROACHING YOUR AEA

Suggested Bundles and Toolkits

- AHRQ Toolkit – Preventing Pressure Ulcers in Hospitals.
Retrieved at www.ahrq.gov/professionals/systems/hospital/pressureulcertoolkit/index.html
- Hartford Institute for Geriatric Nursing – Nursing Standard of Practice Protocol: Pressure Ulcer Prevention & Skin Tear Prevention. Retrieved at http://consultgerirn.org/topics/pressure_ulcers_and_skin_tears/want_to_know_more
- National Pressure Ulcer Advisory Panel. (2014) Prevention and Treatment of Pressure Ulcers: Quick Reference Guide. Retrieved at: 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: 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: www.icsi.org/_asset/6t7kxy/PressureUlcer.pdf
- IHI How-to Guide: Prevent Pressure Ulcers. Retrieved at: www.ihi.org/resources/pages/tools/howtoguidepreventpressureulcers.aspx
- For key tools and resources related to preventing and reducing pressure ulcers, visit www.hret-hen.org/topics/pressure-ulcers.shtml

Investigate Your Problem and Implement Best Practices

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 team identify potential change ideas to implement at your facility and (2) to 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 which 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/achieve the secondary driver.

Drivers in This Change Package

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

- Start with an analysis of pressure ulcer data to uncover the top contributing factors to pressure ulcer development. Data can be pulled from chart audits, adverse event reports, root cause analysis results and in observations collected in leadership rounding. Determine patient-level contributing factors such as diagnosis, age, co-morbidities and functional abilities. Outline other factors contributing to pressure ulcers present in your organization such as:
 - > Adequacy and timeliness of assessment and implementation of preventative measures
 - > Communication of risk and intervention
 - > Adequacy of interdisciplinary collaboration with rehabilitation and nutritional services
 - > Staff attitudes and beliefs about pressure ulcers. Gather an interdisciplinary team to review the data and this driver diagram to identify one or two changes that can positively impact the organization or unit's performance in eliminating pressure ulcers. Start with small changes that are designed by front line staff to build a culture of achievement. Small successes will build momentum for larger, more difficult change.
- Emerging therapies for prevention of pressure ulcers that have a weak positive recommendation include:⁸
 - > Microclimate control — consider your ability to manage moisture and temperature when selecting a support surface or a surface cover. Do not apply heat directly on skin surfaces or pressure ulcers. This includes hot water bottles, heating pads and built-in bed warmers.
 - > Use of prophylactic dressings — consider applying a polyurethane foam to protect bony prominences such as heels and sacrum from friction and shear. Assess the skin under the dressing at least daily and replace as needed.
 - > Use of silk-like fabrics rather than cotton or cotton blend fabrics to reduce friction and shear.
 - > Use of electrical stimulation of the muscles for prevention of pressure ulcers in spinal cord injury patients to help improve micro-circulation.

Prevent HAPU	Conduct Skin and Risk Assessments	Implement Risk Assessment Tool	Change Idea
		Assess Skin on Admission and Every Shift	Change Idea
	Manage Moisture	Maintain Dryness and 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
		Reduce Friction and Shearing Forces	Change Idea
		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	Change Idea

OVERALL AIMS: PREVENT HAPU

Primary Driver > Conduct skin and risk assessments

Prevention of pressure ulcers begins with an assessment of a patient's risk for pressure ulcers. This assessment must be done upon admission and then at least daily during a patient's stay and should include evaluation of the condition of the patient's skin.⁹

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 standard tool for the skin evaluation and risk assessment. The most widely used is the Braden Scale.¹⁰ Others include the Norton, Gosnell, Knoll and Waterlow Scales.¹¹
- + Assess risks within 4 hours of admission and implement preventative measures.
- + Analyze data and review cases in which a pressure ulcer developed in <24 hours of admission to identify trends in inadequate admission skin assessment for present on admission, or for failure to implement interventions for high-risk patients in a timely manner.¹²
- + Include risk reassessment in daily or every shift documentation.
- + Link risk assessment result to automated referrals to rehabilitation, dietician, wound care specialist
- + Consider patients with a stage I to be at risk of progression to stage II or greater, and at high risk for additional pressure ulcers.¹³
- + 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 plan of care for each patient to reduce the risks of pressure ulcers. 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

- + Percentage of patients who received risk assessment on admission
- + Percentage of patients who had daily reassessments performed

Secondary Driver > Assess skin on admission and every shift

Include skin under medical devices in all skin assessments.

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 ER to floor or unit.
- + Assess skin under medical devices at least every shift. Take an interdisciplinary approach, involving rehabilitation and respiratory care services.
- + Educate staff on how to undertake a comprehensive skin assessment that includes techniques for identifying blanching response, localized heat, edema, induration and the presence of localized pain.
- + Educate staff on medical device related pressure ulcers (MDRPU) 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 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.

Suggested process measures for your change ideas:

- + Percentage of patients with daily total body skin inspection documented
- + Percentage of patients with a medical device with documentation of skin inspection under the device

Hardwiring

Incorporate skin and risk assessments in established processes such as admission assessment and bedside handoffs.¹⁴ If using electronic health records, the risk assessment and/or total body assessment can be required or mandatory fields so that staff cannot skip over these sections. Pressure ulcer risk assessment results can automatically trigger referrals to rehabilitation services, dietician and skin care specialist or team.

Primary Driver > Manage moisture

Avoiding inappropriate wetness and optimally moisturizing skin can reduce the risk of developing pressure ulcers.¹⁵

Secondary Driver > Maintain dryness and promote protection

Limit exposure of a patient's skin to moisture from sources such as incontinence, wound drainage or perspiration. Use underpads that wick away moisture and that present a dry surface to the skin.¹⁶ Topical agents are available that provide a barrier to wetness and simultaneously moisturize the skin.¹⁷

Change Ideas

- + Use topical agents that hydrate the skin and form a moisture barrier to reduce skin damage. Consider using all-in-one 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 may injure the skin).
- + Keep supplies readily available at the bedside in case the patient is incontinent.¹⁸
- + Use underpads with fiber backing, not plastic.
- + Manage exudate and perspiration around and under medical devices.
- + Develop a skin care cart with supplies to reduce process variation and a guide for how to manage skin issues according to severity.
- + 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 on returning to bed.
- + Set specific timeframes or create reminder systems to offer frequent toileting, oral fluids and reassess for wet skin. Remember the 5 Ps — pain, position, personal belongings, pathway and potty.
- + Involve staff such as nurses' aides in rounding and checking the 5 Ps every hour.
- + Engage patients and families in keeping patient's skin clean and dry. Encourage prompt reporting of patient needs to the staff.
- + When considering support surfaces, choose surfaces with microclimate (heat and moisture) control.

Suggested Process Measures for Your Test of Change

- + Percentage of patients with incontinence care documented
- + Percentage of incontinent patients with moisture barrier cream at the bedside

Hardwire the Process

Make skin care and HAPU 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.¹⁹ Support staff's attention to meticulous hygiene through recognition in leader rounds on patients and staff. Listen to and respond to staff feedback on availability of supplies, tools and support necessary to maintain excellent patient hygiene.

Primary Driver > Optimize nutrition and hydration

Nutrition and hydration status affect skin condition and risks for pressure ulcers. Patients with nutritional deficiency may be twice as likely to develop skin breakdown.²⁰ 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 development.²¹

Change Ideas

- + Generate an automatic registered dietitian consult, for high-risk or nutritionally compromised patients.
- + Correct nutritional deficiencies by increasing protein and calorie intake and A, C or E vitamin supplements as needed.²²
- + 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 patient's 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 will know to encourage hydration.
- + Engage the patient and family in achieving nutrition and hydration goals. Give patients their food/liquid preferences to enhance appetite, hydration and nutrition; encourage snacks.
- + Monitor weight, food and fluid intake and laboratory test results
- + Offer water to the patient when rounding for the 5 Ps.

Suggested Process Measures for Your Test of Change

- + Percentage of high-risk patients with a nutritional consult

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, an automatic registered dietitian 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.^{23,24} This is especially critical for patients with limited mobility, as they are at high risk for developing pressure ulcers.²⁵ Friction and the stress caused by shearing forces also contribute to pressure ulcer 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 formation.

Secondary Driver > Alleviate pressure

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 ulcers.²⁶

Change Ideas

- + Reposition patients at least every two hours in bed and every one hour while seated. If patient is capable, encourage weight shifting every 15 minutes while seated in a chair.²⁷
 - > Avoid positioning on bony prominences with existing non-blanchable erythema.²⁸
 - > 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.
- + Pilot continuous bedside pressure mapping for highest risk patients, i.e., ICU.²⁹
- + Use auditory cues, (e.g. music, bells or alarms) at the nurse's station as a reminder to turn and reposition the patient.³⁰
- + Use visual cues at the bedside to remember turn the patient. For example, a turning clock or whiteboard that displays the time for the next turn.
- + 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 that adherence can be easily assessed in unit rounds.
- + To redistribute pressure, use special beds, mattresses and foam wedges, and use pillows (only for limbs) to redistribute pressure on high-risk areas and to prevent bony prominences from touching each other.³¹
- + Pay special attention to protecting skin from pressure and moisture 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 every shift.
- > Assure that securement devices and medical devices are not placed over fragile or impaired skin.
- > Reposition or rotate medical devices when possible. Always validate the depth of an endotracheal tube does not change with tube manipulation.³²
- + Operating room tables should be covered by special overlay mattresses.^{33,34}
- + Limit layers of linen and under pads placed over the support surface. Extra layers interfere with the surface's ability to redistribute weight optimally.
- + Deploy turn teams that are dedicated to repositioning patients.³⁵

Suggested Process Measures for Your Test of Change

- + Percentage of patients with a medical device with pressure ulcer preventative measures (padding, foam trach ties) in place as observed in rounds
- + Percentage of high-risk patients properly positioned observed during leadership rounds

Secondary Driver > Reduce friction and shearing forces

When patients slide or are dragged across surfaces, changes and ischemia can occur to the skin and underlying tissues.

Change Ideas

- + Elevate the head of the bed no more than 30 degrees to prevent patients from sliding down in bed, unless contraindicated.
- + Assure proper seating alignment to reduce a patient's tendency to slide down in the chair or bed. Collaborate with rehabilitative services 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.
- + 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.

Suggested Process Measures for Your Test of Change

- + Percentage of high risk properly positioned observed during leadership rounds
- + Percentage of cart transfers observed in leadership rounds in which preventative measures were taken to prevent shearing forces

Secondary Driver > Implement early mobility protocols

Reduced mobility is a risk factor for the development of pressure ulcers. Putting a process into place that assesses a patient's mobility and generates recommendations for physical therapy referral will enable staff to safely mobilize patients. Nurse driven mobility protocols have been demonstrated to be effective in reducing immobility-related complications and reducing length of stay.^{36,37}

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 patients 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 the patients' mobility status and communicate with the team in huddles and on the whiteboard.
- + Engage patient and family in progressive mobility and ambulation.
- + Support proper seating and positioning.

Suggested Process Measures for Your Test of Change

- + Percentage 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 in leadership 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 that 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 being affected by pressure ulcers, and track trends by unit regarding the anatomical location of ulcers, and contributing factors. Use data collected from prevalence studies or pressure ulcer rates and well as data from root cause analysis, case review and rounds to identify opportunities and gaps.

Secondary Driver > 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 that 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 upon 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 advisor to provide input in designing data driven solutions.
- + Encourage patients and families to ask questions and share concerns.

Secondary Driver > Conduct root cause analysis (RCA) on pressure ulcers

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 III, IV and DTI pressure ulcers in the RCA process.
- + Engage key leaders, front line staff and a patient representative or patient advisor in attending pressure ulcer associated RCAs.
- + Maintain a non-punitive learning environment.
- + Use the NPUAP Pressure Ulcer Root Cause Analysis Template.³⁸
- + 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

- + Percentage of stage III, IV and DTI pressure ulcers in which a RCA was completed within 3 days of the incident being reported.

Hardwire the Process

Hardwire the process for treating stage III, IV 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 out 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.

Choice of Tests and Interventions for HAPU Reduction

Use data from a variety of sources to identify where your organization has the greatest opportunity to improve care processes in preventing HAPU. Analyze characteristics of the pressure ulcers such as patient diagnosis, 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.

- Implement an improvement project to improve the timeliness of initial risk assessment and the activation of interventions to address pressure ulcers 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 includes placing high-risk patients on a supportive surface as soon as possible.
- Improve reliability in assessing skin on admission and documenting pressure ulcers present on admission.
 - > Explore barriers in completing a thorough skin assessment on 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, one buddy. Test different buddy types to assess which type increases value in the task. Run a PDSA cycle with a CNA, nurse and physician buddies and debrief with staff involved to determine criteria to be used in selecting a buddy type to spread.
- 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 use 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, then test on an additional patient.
- Implement an improvement project to incorporate no positioning on bony prominences with existing non-blanchable erythema or stage I pressure ulcer development.
 - > Work with a nurse, CNA and physical therapist to define a workflow that incorporates a team skin assessment and repositioning plan for the shift.
 - > Test the workflow on one high-risk patient that has multiple medical devices such as 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.
 - > 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

Example Test The objective is to engage emergency room staff in selecting a pressure ulcer 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 evaluated the use of the Braden Scale to identify high-risk patients who need a supportive surface to prevent the early development of a pressure ulcer while in the emergency room.

Example Test The objective is to engage staff in designing a process for a total body skin assessments to be completed at change of shift with the outgoing and incoming nurse in the ICU.

DO

Example Test For one shift, one nurse and one CNA used the Braden scale as part of the emergency room admission process.

Example Test For one shift, the outgoing and incoming nurses included a head-to-toe skin assessment in the bedside handoff. The nurses assessed the sequencing of the assessment, before or after clinical information exchange, and how the documentation of the assessment occurred.

STUDY

Example Test After one shift, Braden scales were reviewed and staff identified that the Braden scale alone was not an effective predictor of need for a supportive surface. The Braden scale was abandoned.

Example Test After one shift, staff proposed a workflow of physical assessment, documentation and clinical information exchange. They determined that for ventilator patients, a third staff member would be beneficial.

ACT

Example Test 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.

Example Test For cycle two, the proposed workflow will be tested with the inclusion of a Respiratory Therapist or CNA: Respiratory therapy will be requested to be in the ICU at change of shift time.

Potential barriers

- Changing too much, too fast is not sustainable. Oftentimes, organizations or units may put into place large scale change to overcome a significant quality issue with the best of intentions. Implementing a comprehensive pressure ulcer prevention program 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 that involve staff will create buy in and builds quality improvement capacity among front line staff, which further builds upon an infrastructure that supports sustainability.

- Competing organizational priorities can create challenges in implementing and sustaining change. Pressure ulcers may not receive the organizational attention that newer, more publicly visible patient safety topics receive. By including pressure ulcers in the quality and risk management RCA process and follow-up reporting processes, organizational support and attention can be shifted. Allocating capital resources for appropriate support surfaces, beds and effective lifting devices can be facilitated by determining the current cost of exposure to reimbursement penalties and litigation expenses to build a case for investing in pressure ulcer prevention.

Enlist Administrative Leadership as Sponsors to Help Remove or Mitigate Barriers

- An executive sponsor who recognizes the value of preventing HAPU for the organization and its patients 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 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 prevention. Partner with physical therapy, dietary, environmental services and engineering to address the full spectrum of strategies that prevent pressure ulcers.

Change not only “The Practice,” but also “The Culture”

- Integrating pressure ulcer prevention into your organization’s commitment to patient safety is essential. Pressure ulcers 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 can mostly be prevented and the deterioration of a stage I can be halted. For example, an ICU may have the belief that cardiac and respiratory needs out rank pressure ulcer prevention. By shifting the goal from “our patients will survive” to “our patients will survive and be free of pressure ulcers”, 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 workflows necessary to execute best practices. Interdisciplinary team members (clinical and non-clinical) are crucial to provide the infrastructure for optimal pressure ulcer prevention care. This includes:
 - > dietitians supporting nutrition and hydration;
 - > environmental services monitoring linen layering and underpad utilization, and inspecting supportive surfaces during cleaning;
 - > engineering providing preventative 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 trended data;
 - > finance department allocating funding and anticipating bed and supportive surface replacement; and
 - > executive leadership elevating the significance of pressure ulcers 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.

PART 4: CONCLUSION & ACTION STEPS

Eliminating HAPU is a complex issue that requires a thoughtful approach in solving. There are many variables that are in play in preventing a pressure ulcer: patient environment, patient characteristics, 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. Assemble a team that includes licensed and unlicensed front line staff to provide input on selecting a focus based upon data. Enlist the organization's data expert to turn HAPU data into actionable information. 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 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, and provide a channel for communication between the HAPU and executive teams and the board. Share wins from early changes across the organization. Spread effective work processes to other units.

PART 5: APPENDICES

Appendix I: HAPU Top Ten Checklist

Appendix II: Educational Poster

Appendix II: Clipboard Reminder for Patients at Risk of Pressure Ulcers

Appendix III: Skin Bundle Compliance Tool

Appendix IV: Save our Skin Bundle

APPENDIX I: HAPU TOP TEN CHECKLIST

Associated Hospital/Organization: AHA/HRET HEN 2.0

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

Reference: www.hret-hen.org

2016 HAPU Top Ten Checklists				
Process Change	In Place	Not Done	Will Adopt	Notes (Responsible and By When?)
Analyze HAPU data for trends by unit for patient characteristics, anatomical location and other contributing factors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Learn from HAPUs by conducting a Root Cause Analysis on stage III, IV and unstageable ulcers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Conduct a pressure ulcer risk assessment within 4 hours of admission. Reassess at intervals defined by patient care need.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Activate HAPU prevention bundles for high-risk patients. Create bundles that include interventions that mitigate contributing factors identified in trended HAPU data. Involve staff in the creation and implementation of the bundles.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Assess reliability of admission total body skin assessments to identify opportunities to improve present on admission documentation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Assess staff skill in comprehensive skin assessment and provide education, case studies and rounds to increase awareness of early detection of pressure ulcers and the protective measures to be taken to prevent progression.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Investigate clinical practices and reporting of Medical Device Related Pressure Ulcers (e.g., oxygen tubing, trach, cervical collars, orthotics).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Establish a partnership with nutritional services to assure timely nutritional assessments and implementation of interventions for high-risk patients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Conduct an assessment of adequacy of support surfaces (e.g., ER carts, OR Tables, ICU units, med surg units) and shear prevention devices (e.g., lifts, glide sheets). Engage executive leadership in planning for replacement as needed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Design a process to engage patients and families in assessing for early warning signs of HAPU and participating in preventative measures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

APPENDIX II: EDUCATIONAL POSTER³⁹

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 III: CLIPBOARD REMINDER FOR PATIENTS AT RISK OF PRESSURE ULCERS⁴⁰

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 2 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 2 hours.
- If the patient is incontinent, give perineal care every 2 hours and as needed for stool incontinence.
- Apply a moisture barrier after incontinence care.
- If the patient is continent, apply moisture barrier every eight hours.
- Avoid diapers unless necessary 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 in taking for nutrition; also look at albumin levels.
- Consider recent weight loss.
- Consider hydration status.
- Carry out nutrition orders and record supplement and meal intake.

Assess skin every 8 hours. Document breakdown description on Skin Flow Sheet daily.

Document all of your interventions.

Not a permanent part of the medical record

APPENDIX IV: SKIN BUNDLE COMPLIANCE TOOL⁴¹

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

Purpose of Tool: Example of an audit tool used by staff to assess adherence with elements of the 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.

			Patient Identifier
			Braden Score <18
			LOS <24 Hours
			S Surface Type
			S Turning documented every 2 hours
			K Heels off bed documented
			I Incontinence care documented
			N Nutritionally at risk
			N Nutritional consult completed
			N Nutritional orders written
			N Nutritional orders carried out
			Comments

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 every 2 hours.
- If the patient is up in chair, repositioned every hour.
- Daily mobility assessment is performed.
- Daily nutrition assessment is performed.
- Toileting offered and perineal care is performed every 2 hours.
- 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



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