CASE STUDY

GUTHRIE

Intensive Care Unit Quality Improvement Initiative Decreases Incidence of Hospital-Acquired Pressure Ulcers

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INTRODUCTION

Hospital-acquired pressure ulcers (HAPUs) are serious adverse events that impact resources and patient quality of life.[1] The development of HAPUs is associated with increased comorbidities, decreased quality of life, increased length of hospital stay, and increased costs.[2-4] Critically ill patients are at increased risk of HAPU development due to their impaired physiologic status and prolonged periods of immobility.[5] Evidence-based HAPU prevention requires multiple interventions and clinical team collaboration. Pressure redistributing support surfaces are one of the interventions necessary for HAPU prevention in the critically ill patient population.[6]

A quality improvement (QI) initiative was implemented in an intensive care unit (ICU) to prevent HAPUs. This case history describes the methods and results associated with this QI intervention.

METHODS

Clinical setting: This is a 26-bed ICU (3 pods: medical, cardiac, trauma)

Timeline: The QI intervention was initiated on January 1, 2015 and continued through October 31, 2015.

Metrics: The HAPU incidence per 1000 patient-days was compared 10 months before and after the QI initiation date to assess the impact on patient outcomes. Metrics were monitored by the wound ostomy continence team throughout the QI initiative.

Team Collaboration: The wound ostomy continence team consists of Registered Nurses and care partners from various units of the hospital. HAPU rates are shared with the nursing leadership team that meets monthly, which includes chairs from all of the hospital nursing councils, vice president of nursing/chief nursing officer, senior director of clinical operations, all nurse managers, quality and outcome members, clinical coordinators, and clinical nurse educators.

Intervention:

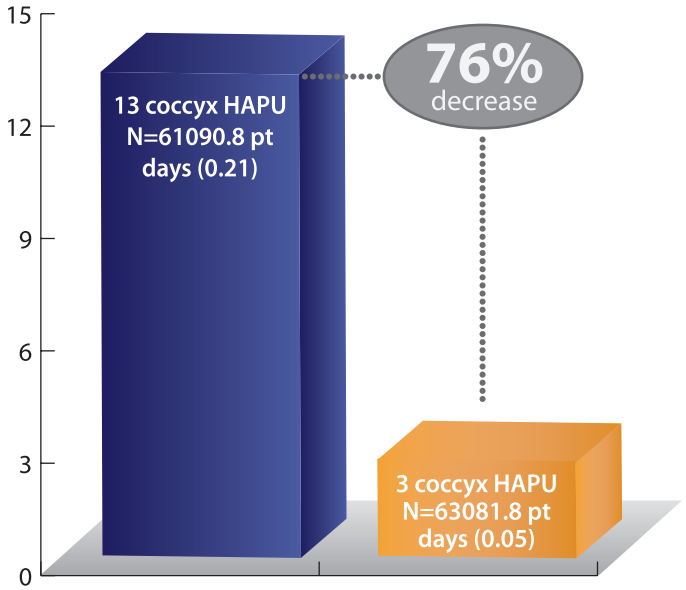
- A Bed Fair was held on November 21, 2013.
- ICU and float pool nurses were invited to trial multiple mattresses. They completed an evaluation form on comfort, durability, and ease of use to select the new products for the ICU.
- New beds* for the 26-bed ICU were purchased.
- Caregiver education was provided on appropriate use of the beds.
- The HAPU prevention bundle was continued as part of standard of care.

*Isolibrium® Support Surface (Stryker Corporation, Kalamazoo, MI)

METHODS *continued*

- Standard of care included the hospital policy for Skin Care Potential for Breakdown and the Skin Care Pressure Ulcer Protocol. These policies address all necessary elements of HAPU prevention including risk assessment and risk-stratified nursing interventions.
- Standardization: The purchase of new beds for the ICU ensured standardization of technology and reduced confusion among clinical caregivers on appropriate bed use.

RESULTS



Parenthetical rate provided per 1000 patient days.

HAPU=hospital-acquired pressure ulcer

CLINICAL IMPLICATIONS

HAPU prevention in the critically ill patient population is complex and requires multiple interventions. Updating patient bed technology is one aspect of HAPU prevention and can be useful for standardizing the type of technology used by clinical staff.

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REFERENCES

1. Englebright J, Westcott R, McManus K, Kleja K, Helm C, Korwek KM, Perlin JB. A Comprehensive Program to Reduce Rates of Hospital-Acquired Pressure Ulcers in a System of Community Hospitals. J Patient Saf. 2015 Mar 16.
2. Jaul E, Calderon-Margalit R. Systemic factors and mortality in elderly patients with pressure ulcers. Int Wound J. 2015 Jun;12(3):254-9.
3. Armour-Burton T, Fields W, Outlaw L, Deleon E. The Healthy Skin Project: changing nursing practice to prevent and treat hospital-acquired pressure ulcers. Crit Care Nurse. 2013 Jun;33(3):32-9.
4. Wang H, Niewczyk P, Divita M, Camicia M, Appelman J, Mix J, Sandel ME. Impact of pressure ulcers on outcomes in inpatient rehabilitation facilities. Am J Phys Med Rehabil. 2014 Mar;93(3):207-16.
5. Manzano F, Pérez-Pérez AM, Martínez-Ruiz S, Garrido-Colmenero C, Roldan D, Jiménez-Quintana Mdel M, Sánchez-Cantalejo E, Colmenero M. Hospital-acquired pressure ulcers and risk of hospital mortality in intensive care patients on mechanical ventilation. J Eval Clin Pract. 2014 Aug;20(4):362-8.
6. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Quick Reference Guide. Emily Haesler (Ed.). Cambridge Media: Perth, Australia; 2014.

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