

# Case Study

**HERCULES PURCHASE AND EASE OF USE, ALONG WITH CHANGING NURSING PRACTICES, RESULTS IN A SIGNIFICANT REDUCTION IN HAPI INCIDENCE RATE.**

## Background and Project Objective

Founded in 1829 as the first community hospital in the Carolinas, Roper Hospital today is part of Roper St. Francis Healthcare located in Charleston, SC. Roper Hospital is a not-for-profit 368-bed hospital that in 2017 was awarded the Healthgrades Outstanding Patient Experience Award for providing an overall outstanding patient experience as reported by patients. Roper has also been named a Top 100 Hospital for the past three years by Truven Health Analytics. The healthcare system’s mission is, “Healing all people with compassion, faith and excellence.”

In May of 2015, Roper became one of the first hospitals in the region to purchase The Hercules Patient Repositioner™, an innovative automated patient repositioning product that allows a single caregiver to quickly and safely boost a patient up in bed with the simple push of a button. Realizing the many positive benefits Hercules provided to both its patients and caregivers, Roper continued purchasing Hercules systems in 2016 while also developing a long-term plan to equip a large percentage of their beds with the Hercules system.

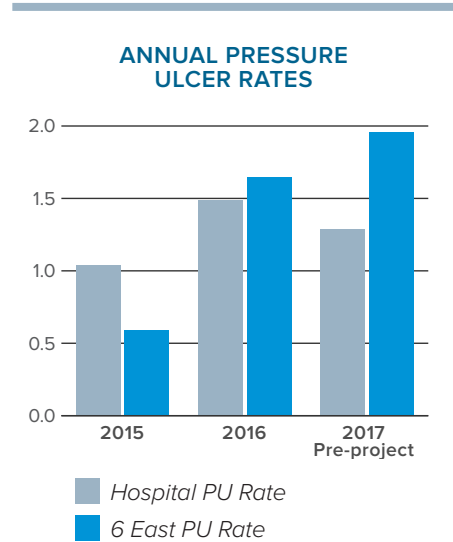
A portion of the Hercules purchased in 2016 were installed in a 22-bed medical surgical unit (6 East) that had experienced a significant increase in their HAPI incidence rate over the prior two years (see chart). The patients on this unit were very high acuity, experienced long lengths of stay and had a high risk of pressure injury development with Braden Scores typically ranging from 7 to 12.

Given the significant increase in the HAPI incidence rate on this unit, Angela Becker, RN, MSN, Manager of the CALM Department and Safe Patient Handling Specialist for Roper St. Francis Healthcare, developed and initiated a 20-week, evidenced-based research project in early 2017 on the 22-bed medical surgical unit. Kimberly Parker, RN-BC, MSN, Nurse Manager of 6 East, Denise Darling, RN, MSN, Clinical Nurse Specialist, and Mary Kate Skinner, RN, BSN, CWOCN, were also very closely involved with developing and executing the study. The purpose of the project was to determine if the ease of use of Hercules would influence nursing practices by removing the following barriers involved in traditional boosting and ultimately improve patient outcomes:

- Having the time to complete the manual boosting task
- Having to find additional caregivers to complete the boosting task
- Caregiver concerns that they might be injured manually boosting patients
- Traditional boosting methods cause patient pain and discomfort

As Ms. Becker explained, based on the latest research in Wounds Magazine July 2016, “HAPIs are considered a preventable injury that have been clinically associated with a lack of frequent boosting. Therefore, we were eager to determine if the simplicity and ease of using Hercules would impact the way our nurses care for their patients and if a nursing practice change would ultimately positively impact patient clinical outcomes.”

Ms. Becker’s belief was that if the project was successful, it would demonstrate that more timely and frequent boosting would result in a decrease in the incidence of HAPIs, improve their department’s HAPI scores and improve the patient experience.



“...the ease of using The Hercules Patient Repositioner™, along with the implemented changes in the patient boosting protocol, have shown that boosting a patient up in bed, even an inch or two every time a caregiver enters the room, produces positive tangible results.”

**Kimberly Parker RN-BC, MSN**  
Nurse Manager, Roper Hospital

## Project Methods

The overall framework for the evidence-based research project was based on Lewin's Theory of Planned Change, which included recognition and acknowledgment that an issue existed (significant increase in HAPI incidence rate), education and communication of a new technology (The Hercules Patient Repositioner™) and the potential benefits the product could provide in increasing boosting frequency, and finally the adoption, implementation and standardization of the changed nursing practices.

The multidisciplinary leadership team of Angela Becker, Denise Darling, Kimberly Parker and Mary Kate Skinner assisted in establishing the methodology of the study and analyzed the data output at its conclusion. To begin, the team held mandatory staff training meetings to collectively educate the caregivers on the department's high HAPI incidence rate, the importance of properly scoring patients at risk and other barriers to preventing HAPIs. The team got the department staff to acknowledge and agree that current nursing practices contained significant barriers that prevented frequent and timely patient boosting and created a sense of urgency in needing to improve.

Next, the team educated all department caregivers on the benefits of frequent and timely boosting and then trained the staff to ensure boosting occurred with every patient interaction. "We told them to boost their patient every time they entered the patient's room, regardless of how little, or how far down the patient was in bed. We just wanted to offload any sustained pressure as often as possible to ensure proper circulation was occurring at the tissue level," said Becker.

At the conclusion of the 20-week study, it was evident that this initiative had been embraced by all caregivers and that they had established a nursing care practice that had become a new standard of care for their patients.

## Results – HAPI INCIDENCE RATE DECREASES TO 0%

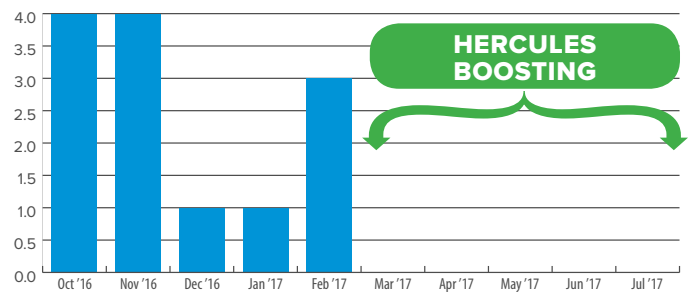
"We were very pleased with the results," cited Denise Darling. At the end of the 20-week study the research project findings showed 0 HAPIs for 5 consecutive months through July of 2017 (see chart). Extending beyond the 20-week study, the 0 HAPI incidence rate continued for two additional months while data was still being gathered and analyzed. "I strongly believe the results clearly show that this simple change in nursing practice made possible by the ease of using The Hercules Patient Repositioner™, along with the implemented changes in the patient boosting protocol, have shown that boosting a patient up in bed, even an inch or two every time a caregiver enters the room, produces positive tangible results," stated Kimberly Parker.

Additionally, given the frequency of patient interactions, Roper experienced an unexpected benefit: Braden Score accuracy in assessing a patient's skin risk was substantially improved (see chart).

Finally, Ms. Becker also commented on the many positive patient and family comments received regarding the comfort of being boosted with Hercules. She added, "I was hopeful that we were correct in our assumption that HAPIs would go down when boosting patients up in bed on a more frequent basis, but to see them basically eliminated from this simple practice change, along with the many positive patient and family responses, provides us the support, data and rationale to plan for a house-wide implementation of Hercules. And from a safety perspective, it sends a message to our team members that we care about their physical health. It's just the right thing to do!"

100%  
Reduction  
in HAPIs

HAPI MONTHLY PREVALENCE



BRADEN SCORE ACCURACY

