

## **COST, QUALITY, AND OUTCOMES LEADING PRACTICES & TOOLS: AN EXECUTIVE SUMMARY**

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### **Collaboration between Supply Chain, Value Analysis and Nursing Leads to Reduction of Hospital Acquired Pressure Ulcers**

#### **PROBLEM SUMMARY**

Hospital acquired infections are a concern primarily from a patient safety/outcomes viewpoint and secondarily for financial stability. In the era of the Accountable Care Act's Value Based Purchasing (VBP) payment system, hospitals must develop and implement strategies to "earn back" the portion of Medicare fees that are withheld. For FY15 CMS has withheld \$1.4 billion in Medicare payment reductions to healthcare institutions to fund incentive payments for good performers. Healthcare institutions must improve their scores in four identified domains: Clinical Care, Patient Care Experience, Outcomes and Efficiency.

Approximately 60,000 individuals die each year due to pressure ulcers. The U.S. spends on average \$9.1-11.6 billion on pressure ulcers annually. At an average 300-bed hospital, each pressure can cost \$10,700. Studies have shown that a reduction of hospital acquired pressure ulcers (HAPUs) by 1 percent point saves \$1.6 million.<sup>1</sup>

Prior to the implementation of VBP, University of Virginia Health System (UVA) was above the National Database of Nursing Quality Indicators (NDNQI) prevalence rate for HAPU in academic medical centers. Nursing leadership charged a group to work on improving this performance.

#### **PROCESS**

UVA Wound Ostomy Continence APN, Nursing Practice Committee, Nurse Managers and the Value Management department of Supply Chain Management collaborated to identify root causes, develop and implement improvement strategies and establish metrics to monitor effectiveness. A Skin Care Bundle matrix was developed (inserted below). Other components of the plan included bed making guidelines, boosting Braden risk assessments to every shift, padded O2 cannulas and silicone border dressings for high-risk ICU patients. A key success factor was the establishment of a network of unit-based nurse skin champions.

The first step was extensive data gathering. The team had to understand all of the factors that contributed to the HAPU rate, including products and practices used in patient care. Data from both supply chain and value management systems was critical to this effort.

Next, all products and practices currently in use to provide patient skin integrity were reviewed for their effectiveness compared to other similar hospital programs, national association recommendations and guidance documents found through archival research. The team had to systematically trial new products one at a time and track patient outcomes in order to determine which products had an impact on the HAPU rate. Each month, the team reviewed product performance and clinical outcomes data. Based on this analysis they selected certain products and practices that worked best to reduce HAPU among specific groups (e.g. adult ICU patients versus pediatric ICU patients).

The team then developed a financial pro forma to document the cost of care for each patient type (e.g. adult ICU patient, pediatric ICU patient), which took into account the products used and patient length of stay. This information was used to both build budgets and understand the costs required to control HAPU rates. Armed with this data, nursing leadership could defend their budgets for the coming fiscal year. Each quarter, the team reports the dollars spent and compares it against the anticipated spend.

When the team sat down to develop a way to calculate how much money UVA could save by reducing a single HAPU, they found the complexity to be overwhelming. There were far too many factors and variations to take into account and it wasn't as simple as analyzing data drawn from clinical and financial systems. They looked for an existing calculator and found the GE Healthcare Partners Cost of Pressure Ulcers Tool was a credible resource that closely met their needs.

Ownership of patient care unit performance by staff was a crucial success factor, which included creative problem solving, linkages between ICUs and acute care units, as well as emphasizing turning and mobility of patients. The nurse skin care champions on each unit were the true owners of this initiative and critical to its success since they were the individuals out there every day ensuring protocols were followed and assisting other staff members as they carried out this work.

Bundle Products	Clinical Indication	Replace/Delete
Wicking Underpads	Fecal and/or urinary incontinence	"Plastic" pads; reusable (laundered) underpads "Plastic " pads re-classified as procedure pads
Skin Care	Patients request and/or WOC determination	Products with no known evidence of efficacy in maintaining healthy skin
Emesis Bags and Personal Cleansing	Standard post-op patients and/or acute nausea vomiting	Wash basin and emesis basin; assist w/compliance of single patient use items
Soap	Showers; traditional baths upon special request vs. standard bag bath/peri-wipes	Soap with known alkaline and ph-unbalance

## **FINDINGS AND CONCLUSIONS**

Fully implemented Q3 CY2011 and monitored quarterly each year through prevalence rounding on every hospitalized patient. Reducing HAPUs is an evolutionary process versus a quick fix. Because current practice data must be collected and evaluated, new practices and products must be trialed one at a time, and outcomes carefully tracked and evaluated, it can take some time before a facility sees improvement and even more time before a critical mass of improvement is achieved.

Each quarter's data collection included the number of patients who acquired a pressure ulcer after admission to differentiate those who were admitted with a pressure ulcer. Additionally the data was further differentiated by adult and pediatric populations. Since the implementation of the skin care bundle, training and support of nurse skin champions and frequency of monitoring overall HAPU was reduced 84 percent. A dollar value of each HAPU prevented was determined using a nationally accepted calculator<sup>2</sup> and compared to the total cost of skin care bundle program. The team found that it has achieved a 4/1 return on investment.

## **HOW DOES YOUR EXAMPLE ADDRESS THE ISSUE FROM A CQO PERSPECTIVE?**

By focusing human and material resources on a specific healthcare quality initiative we have improved patient outcomes, reduced overall costs and "earned back" a portion of Medicare fees. Key success strategies start with executive sponsors and collaboration with high functioning inter-professional clinical and non-clinical groups.

## **RECOMMENDATIONS FOR ACTIONS**

Continually performing prevalence audits to monitor outcomes is crucial to improving HAPU regardless of how well an institution appears to have adopted clinical practice and product controls.

### References:

1. [http://leafhealthcare.com/pdfs/LH\\_WP\\_FinancialOverview\\_1563AA\\_PDF\\_100514.pdf](http://leafhealthcare.com/pdfs/LH_WP_FinancialOverview_1563AA_PDF_100514.pdf)
2. <http://partners.gehealthcare.com/self-assessment-tools/cost-of-pressure-ulcers-tool.php>