Introduction

Urinary and fecal incontinence are common in the acute care setting, occurring in more than one-third of hospitalized adults. The excess moisture associated with incontinence and other related factors, such as an increased pH and the presence of bacteria in stool, can result in skin breakdown and the development of pressure ulcers. Pressure ulcers are a serious complication that reduce patient quality of life and result in increased health care costs. Costs for pressure ulcer treatment vary from increased mean hospital costs of $15,760 to $40,381 per pressure ulcer, depending on the stage and severity of the ulcer. Pressure ulcers that form during hospitalization—known as facility-acquired pressure ulcers (FAPUs)—have been identified as a high-cost, high-volume, hospital-acquired setting, occurring in more than one-third of hospitalized adults. The excess moisture associated with incontinence skin care products makes decision making easier and more consistent. Standardizing many skin care products to use can take a lower priority in acutely ill patients. Standardizing incontinence skin care protocols requires ongoing education and monitoring. Incontinence skin care must be part of pressure ulcer management alone will not prevent pressure ulcers. Incontinence skin care must be part of pressure ulcer prevention. A new era of pressure ulcer accountability in acute care. Baseline data showed that prior to implementing the revised protocol, the mean FAPU rate was 0.35% (range: 0% to 1.2%), despite the fact that the mean number of patients surveyed per quarter increased from 98 before to 105 after implementation of the revised protocol in 5 of the 8 quarters studied after implementation of the revised protocol, the FAPU rate was 0.41%. These rates compare favorably with the Hill-Rom benchmark national averages of 6.5% for the pre-implementation period and 5.6% for the post-implementation period (Figure 1). In addition, cost data and that implementing the revised protocol and movement of product to the bedside resulted in a cost savings of approximately $54,000 for fiscal year 2008 (Figure 2).

Purpose

Mercy’s previous skin care protocol for incontinent patients was evidence-based and included a pH-balanced perineal cleanser and several different moisturizers and barrier ointments; however, an analysis in the third quarter of 2007 showed that, although 22% of patients had some degree of incontinence, only 2% of these patients had treatment products in place. Further investigation revealed that the staff was prompt at initiating the skin care protocol once a patient developed incontinence-associated dermatitis, however, compliance with the protocol as an early preventive measure was low. A Skin team was formed to review pressure ulcer prevention practices on each unit and to make recommendations for improvement.

Methods

An analysis of the facility’s data and practices resulted in the following conclusions:

- Products were not located for easy access
- Too many product choices created confusion for the staff
- Current products did not support the best practice for incontinence care

To improve access, a suggestion was made to move the incontinence products from the central storeroom to the bedside; however, regulatory issues mandated that certain products be secured in units with ambulatory patients (eg, mental health, skilled nursing, and long-term care units). At Mercy, each patient has his or her own locked closet; therefore, to comply with regulations, incontinence products were locked in each patient’s closet. If the patient was or became incontinent, the products were moved to the bedside.

In addition, no-re-use dimethicone-impregnated barrier cloths were instituted system-wide for incontinence care. This change reduced the number of product choices and streamlined the protocol, which resulted in less confusion for the staff.

Once the product change was made and the product was moved to the bedside, the staff was re-educated regarding revisions to the incontinence skin care protocol and the use of the new product. The revised protocol was initiated on the first day of the second quarter of 2008.

Quarterly data obtained during the use of the old protocol (pre-implementation period: third quarter of 2005 through the first quarter of 2008) were used as a baseline and were compared with quarterly data obtained after implementation of the revised protocol (post-implementation period: second quarter of 2008 through the first quarter of 2010). Pre- and post-implementation cost data were also compared to determine the cost savings resulting from the revised protocol.

Figure 1. Comparison of FAPU:
Mercy Medical Center vs. Hill-Rom International PU Benchmark

| Time Period       | FAPU%   | Savings
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<td>Pre-implementation</td>
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<td>Post-implementation</td>
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<td>Mercy’s Medical Center vs. Hill-Rom International PU Benchmark</td>
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Figure 2. Pressure Ulcer Prevention Program Savings for Fiscal Year 2008

Cost Savings: Nursing Time, Therapeutics, Pharmaceuticals, Disposables

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<th>Cost Component</th>
<th>Savings</th>
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<td>Nursing Time</td>
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<td>Disposables</td>
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Results

Moving the product to the bedside increased staff compliance with the treatment protocol. Baseline data showed that prior to implementing the revised protocol, the mean FAPU rate was 2.8% (range: 0% to 4.8%). After implementation of the revised protocol, the FAPU rate decreased to 0.35% (range: 0% to 2.1%), despite the fact that the mean number of patients surveyed per quarter increased from 98 before to 105 after implementation of the revised protocol in 5 of the 8 quarters studied after implementation of the revised protocol, the FAPU rate was 0.41%. These rates compare favorably with the Hill-Rom benchmark national averages of 6.5% for the pre-implementation period and 5.6% for the post-implementation period (Figure 1). In addition, cost data and that implementing the revised protocol and movement of product to the bedside resulted in a cost savings of approximately $54,000 for fiscal year 2008 (Figure 2).

Conclusion

Implementing the use of a dimethicone-impregnated barrier cloth and providing bedside availability of the product enhanced staff compliance with the incontinence skin care protocol and resulted in a near-zero FAPU rate. This rate has been maintained over time and has resulted in significant cost savings.

Clinical Implications

1. Although many therapeutic incontinence skin care products are commercially available, none of them are efficacious without consistent use. Providing a system of easy access to the skin care products at the bedside has encouraged timely and consistent use.

2. Moisture is a known risk factor for pressure ulcer development; however, moisture management alone will not prevent pressure ulcers. Incontinence skin care must be part of a broader pressure ulcer prevention plan that includes pressure redistribution, incontinence containment, and nutritional support.

3. Nursing staff make many clinical decisions in the course of a day. Decisions about which of many skin care products to use can take a lower priority in acutely ill patients. Standardizing incontinence skin care products makes decision making easier and more consistent.

4. Pressure ulcer prevention is a journey and not a destination. Maintaining a near-zero FAPU rate requires ongoing education and monitoring.

References


6. O’Farrell M, Sams A. Current products did not support the best practice for incontinence care. Too many product choices created confusion for the staff


9. Sage Products, Cary, IL. * Comfort Shield® Barrier Cloths. Note: the revised protocol (post-implementation period: second quarter of 2008) was used as a baseline and was compared with quarterly data obtained after implementation of the revised protocol (post-implementation period: second quarter of 2008 through the first quarter of 2010). Pre- and post-implementation cost data were also compared to determine the cost savings resulting from the revised protocol.