Case Study

Title: Conversion from Disposable to Reusable Washcloths Produces Significant Savings

Facility: Health System – Midwest Region

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BACKGROUND

This Hospital & Health System is made up of several facilities consisting of nearly a dozen community health centers, a major outpatient building with more than 20 clinics, and a large 495-bed academic hospital located in the Midwest Region. As a leader in patient care, research and education, the Health System is committed to making positive and lasting differences in health science and in people's lives.

The Health System is dedicated to the mission health equity. They believe everyone should have access to world-class health care, which is why they aim to be more accessible, and more reliable, all while providing the best care. The Health System combines academic health care and community care, providing the benefit of being connected to your care provider and to researchers.

With a mission of providing better, more accessible, and more affordable patient care for the community, The Health System is continuously looking for opportunities to achieve cost savings while maintaining high levels of patient satisfaction.

OBJECTIVE

During the month of March 2013 at the request of the Health System, consultants from Standard Textile conducted an evaluation of the hospital’s linen services operation to identify service and quality improvement opportunities. One issue that came up during this evaluation was the overall dissatisfaction with the disposable washcloths currently used at the Health System. Patient care staff indicated the washcloths did not have adequate absorbency needed for effective patient care. This lack of absorbency required the use of a tremendous amount of disposable washcloths per patient day at significant cost to the facility. In addition, nursing felt the disposable washcloths created a tremendous amount of trash resulting in a negative impact on the environment.
Due to feedback from nursing and the results of the service quality analysis, materials management staff at the Health System decided to investigate potential cost effective alternatives to the current disposable washcloth. As part of their investigation into alternatives, the materials management group at the Health System asked Standard Textile to complete a cost analysis comparing the total costs of disposable washcloths to the total cost of reusable washcloths.

**STRATEGY**

As requested, Standard Textile completed the analysis. The disposable costs were calculated using the cost to purchase the disposable washcloth and cost to dispose of the washcloth once used. The reusable costs were calculated using the purchase, replacement, and processing costs. The initial cost comparison analysis indicated the total annual costs for reusable washcloths would be 47% less than the current costs for disposable washcloths over a projected five-year period.

When the results of the reusable washcloth cost analysis were presented to the materials management team at the Health System and compared to other alternatives, the decision was made to move forward and present the results at the appropriate committees for approval. The cost analysis was first presented to the Value Analysis Committee. The Value Analysis Committee was responsible for determining whether the conversion made financial sense. The committee vetted the numbers presented, verifying the accuracy of the cost analysis and ultimately approved the conversion from disposable to the reusable washcloths from a financial perspective. After the Value Committee gave their approval, the washcloth conversion project needed to receive clinical approval. To gain clinical approval, the cost analysis and reusable washcloth samples were presented to the Nursing Management Committee. The Nursing Management Committee felt the reusable washcloth would meet goals of improving clinical performance, cost effectiveness, patient satisfaction and environmental impact.

After the conversion from disposable to reusable washcloths was approved by all of the necessary management committees at the Health System, a conversion date was scheduled. Prior to the actual conversion date, the linen distribution management team worked with the consultants at Standard Textile to develop a project plan with two key phases that needed to be completed to ensure a successful conversion to the reusable product:

- Procurement & Linen Distribution
- Nursing In-service
Procurement & Linen Distribution

The first step in managing the logistics of getting reusable washcloths into the Health System was the calculation of the initial startup order quantity. Significantly less reusable washcloths would be used per patient activity when compared to the disposable usage numbers. Therefore, it was determined the Standard Textile benchmarks for washcloths used per patient activity would be used to calculate the appropriate startup order quantity. To ensure no shortages would occur during the initial conversation, a ten-par startup quantity of washcloths was ordered.

After the startup order quantities were determined, the next step was the analysis of current disposable washcloth usage throughout the facility. The analysis determined which patient care and ancillary areas within the facility would receive the reusable washcloths. In addition, the analysis also determined the appropriate par levels of reusable washcloths needed for each linen distribution point within the facility. Once par levels were determined for each distribution point, space was allocated on each cart and closet to store the product.

Nursing In-service

One of the primary concerns which came up during the clinical approval process was the fact the current disposable washcloths were thrown in the trash or bio-hazard containers after use. Nursing management was concerned this practice would continue with the reusable washcloth. In addition, nursing felt that in some instances (isolation patients with C. diff, patients excreting excessive body fluids, etc…) having a disposable washcloth would be beneficial. Working with the nursing management team at the Health System, an in-service was developed to train the end-users on the proper utilization techniques for the reusable washcloths. The reusable washcloth in-service specifically addressed the following:

- Storage of product in the units
- Proper use of the product; disposable and reusable washcloths
- Returning washcloths back to laundry (After use, all washcloths should be placed in soiled linen hamper and returned back to laundry for processing)
- Cleaning process at the laundry
- Environment Impact (Less trash going to landfills)
- Potential Cost Savings

It was decided the nursing in-service should occur one week prior to the conversion to the reusable product so the relevant information would be still be fresh in nursing minds for the conversion date. Over the course of a week, the linen distribution team from the laundry and consultants from Standard Textile visited with each unit receiving the reusable product, meeting with nursing to cover the topics outlined above and addressing any questions or concerns.
RESULTS

End User Satisfaction

The initial feedback from nursing has been mostly positive since the conversion. The following is a synopsis of the comments made regarding the reusable washcloths:

- Improved product performance; new washcloth is more absorbent
- Improved patient satisfaction
- Decreased amount of trash; positive environmental impact.

Cost Savings

In addition to the improved end user satisfaction, one of the main benefits of the conversion was the significant cost savings realized by the Health System. The following graph compares the cost per patient day for disposable and reusable washcloths.

After the conversion to reusable washcloths, the annual purchase of disposable washcloths decreased by 98%. Comparing the total annual disposable costs to the total reusable costs for the first year after the conversion, the Heath System achieved a net savings of $36,675.
Environmental Impact

Another benefit of the conversion to the reusable product has been the significant reduction in trash going into the environment. Over the course of a year, the conversion eliminated over 213,368 pounds of waste.

Reduced Waste

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual Reduction in Disposable Washcloths</th>
<th>Pounds of Waste Eliminated</th>
<th>Estimated Cost Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2014 (July ’13 – June ’14)</td>
<td>4,267,350</td>
<td>213,368</td>
<td>*$11,735</td>
</tr>
</tbody>
</table>

*Savings based on average cost to dispose of non-regulated medical waste ($0.055/lb.)*

Summary

The conversion to the reusable washcloth has been extremely successful at the Health System, with a total estimated savings of $48,410. Due to this success, the Health System is now looking at converting the current disposable isolation gown to a reusable isolation gown. Moving forward, Standard Textile will continue to partner with the Health System and the laundry to identify opportunities to reduce cost, reduce waste and improve end user satisfaction.