Case Study

Title: Confirmed Savings Utilizing Standard Textile’s Reusable Precaution Gown

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BACKGROUND

This not-for-profit healthcare leader in the Northeast region provides a wide range of medical services including cardiovascular, cancer, orthopedics and rehabilitation, pediatrics, respiratory care, sleep care, surgical weight loss and women’s services.

In 2015, the healthcare system recorded 93,715 emergency department visits, 19,131 patient admissions and 3,101 births. As a not-for-profit health system, they are committed to fulfilling the organization’s mission to improve the health status of all members of the community. With the growing demand for precaution gowns throughout the healthcare market, the health system analyzed their current reusable precaution gown program and could confirm substantial cost savings over a disposable gown.

OBJECTIVE

Each year, thousands of patients are treated for healthcare-associated infections (HAI's). HAI's are infections patients acquire while receiving treatment for medical or surgical conditions. They are among the leading causes of preventable deaths in the United States and are associated with a substantial increase in health care costs each year. HAI's occur in all types of care settings, including:

- Acute care within hospitals
- Same-day surgical centers
- Ambulatory outpatient care in health care clinics
- Long-term care facilities (e.g., nursing homes and rehabilitation facilities)

Infections such as MRSA occur most frequently among patients in healthcare settings. MRSA infections are caused by a type of staph bacteria that becomes resistant to many antibiotics used to treat ordinary staph infections. Because organisms such as MRSA can survive as long as several months on virtually any surface with patient or healthcare worker contact, proper use of personal protective equipment (PPE) is crucial in preventing the contact transfer of infection to patients, visitors and fellow healthcare workers.
The Occupational Safety and Health Administration (OSHA) requires employers protect their employees from workplace hazards that can cause injury as part of their standard regulations. These regulations require use of PPE in healthcare settings to protect healthcare personnel from exposure to infectious agents.

The role for infection control programs has grown and continues to grow as rates of antimicrobial resistance rise and HAIs lead to increasing risks to patients. Due to the growing need for precaution gowns throughout the health system, the healthcare system’s infection prevention committee, along with their value analysis team (VAT) decided to analyze their current reusable precaution program. The goal of the analysis was to determine if their current reusable program is the most cost effective approach versus a single-use disposable program.

**STRATEGY**

Standard Textile worked with the linen management team to gather the necessary information to complete the analysis. The team utilized Standard Textile’s Reusable Maximization Analysis (RMA). An RMA is the process of comparing total costs associated with both reusable and disposable products to see which item yields the lowest cost and highest service. This information consisted of collecting the following:

- Annual Purchase of Disposable Gowns (Eaches)
- Annual Purchase of Disposable Gowns (Dollars)
- Average # of Disposables Used Per change
- Laundry Processing Cost Per Pound
- Weight of Disposable Gowns
- Disposal Cost Per Pound

The disposable cost per use was determined by taking the acquisition cost of the disposable gown and the cost to dispose once the product was used. The reusable cost per use was calculated using purchasing price, processing cost per pound and the number of washing per gown (100). Since the system is already using the reusable Compel precaution gown, they could document an average number of washings per gown for quality control. Both figures were then annualized to obtain a true one-for-one comparison.
**RESULTS**

The results from the RMA revealed a significant cost savings utilizing the current reusable precaution gown. This is due to a much lower cost per use of the reusable, a $0.496 difference. The reusable precaution gown has saved the system $542,791 annually over the single-use disposable gown. The following grid compares the cost associated for both reusable and disposable precaution gowns.

<table>
<thead>
<tr>
<th>Year</th>
<th>Reusable Precaution Gown</th>
<th>Disposable Precaution Gown</th>
<th>Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>$381,060</td>
<td>$923,851</td>
<td>$542,791</td>
</tr>
</tbody>
</table>

Due to the analysis, it has been determined continuing with their current reusable system is the most cost-effective way of providing precaution gowns to their healthcare personnel. Not only are the reusable gowns more cost-effective, but they help lessen the hospitals’ environmental footprint. Because disposables are only used once, the constant manufacturing of these products uses more energy, water and chemicals. In 2015, the system eliminated over 273,000 pounds of waste. Depending on how and where the gown was worn in the hospitals, disposable gowns can be considered regulated medical waste. Regulated medical waste adds more costs to dispose due to compliance regulations.

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\text{Annual Disposable Gown Usage} \times \frac{\text{Disposable Gown Weight}}{0.25} = \text{Annual Pounds of Waste Reduced}
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1,095,000 \times \frac{0.25}{0.25} = 273,750
\]

**CONCLUSION**

In today’s healthcare environment, it is more important than ever for clinicians to be equipped with the proper protective apparel to help reduce the spread of HAI’s. PPE is a critical component used to protect healthcare workers from infectious hazards. Due to increasing cost constraints, hospitals are constantly searching for cost-effective programs to reduce operating costs. This healthcare system was very pleased to see that utilizing Standard Textile’s engineered products realized significant savings.