CONTAINING THE COSTS AND WASTE ASSOCIATED WITH CAMERA HEAD STERILIZATION

Executive Summary

OBJECTIVE:

To demonstrate the savings across multiple cost areas at NorthShore University HealthSystem after converting to the sterilization container system.

MATERIALS AND METHODS:

In an effort to control costs, increase efficiencies, maintain compliance and modernize processes in its Sterile Processing Department (SPD), NorthShore University HealthSystem converted 25 blue-wrapped camera head sterilization trays to camera head sterilization containers. NorthShore will continue to track the resulting cost-savings over the next three years, specifically across cost areas related to labor, blue-wrap materials, wrapping tapes, tray protectors, chemical indicators, rewraps and disposables associated with blue-wrapped sterilization trays.

RESULTS:

Based on early indicators, NorthShore expects to capture $39,372 in savings over the next three-year period. NorthShore additionally expects to achieve a return on its investment in sterilization containers after just 14 months of use.

CONCLUSION:

The sterilization container system improves SPD and OR staff efficiency while reducing costs and waste associated with the use of blue-wrapped sterilization trays.

> OBJECTIVE:

Find a More Cost-Effective, Compliant and Convenient Method for Sterilizing Camera Heads

On the leading edge of cancer, neurological, cardiovascular and orthopedic treatments, Chicago-based NorthShore University HealthSystem employs an extensive collection of highly sophisticated camera heads used in endoscopic procedures. In an effort to maintain the operational and visual quality of the camera heads, as well as ensure the highest level of patient safety, NorthShore’s Sterilization Processing Department (SPD) had been using blue-wrapped sterilization trays to sterilize the camera head equipment.

In evaluating both the effectiveness and cost of using blue-wrapped trays, however, NorthShore quickly came to the conclusion that a better system was needed. The trays currently used by NorthShore’s SPD were outdated and did not offer complete sterilization validation and clearance to accommodate all current sterilization modalities. As a result, the SPD was not able to ensure that the camera heads could be sterilized outside of their current STEERRAD 109NX machines should they wish to change modalities in the future and maintain compliance.

EVALUATING THE EFFECTIVENESS AND COST OF USING BLUE WRAP, NORTHSHORE CONCLUDED A BETTER SYSTEM WAS NEEDED

What’s more, the blue-wrapped trays only work with the STEERRAD sterilization system, limiting their applications. Should NorthShore acquire new equipment, such as an automobile camera, in the future, its existing blue-wrapped trays would not be able to easily or adequately sterilize the equipment and maintain compliance.

While current and future compliance were key issues, NorthShore was additionally concerned about controlling waste and costs in the SPD. In evaluating the expense associated with blue-wrapped trays, NorthShore identified multiple opportunities for improved savings and efficiencies. Blue-wrapped tray systems incur costs across a number of areas, including labor, materials and waste. In fact, NorthShore estimated that its SPD was losing approximately $6.97 per wrap.

After careful analysis of its current blue-wrapped sterilization tray system, NorthShore concluded that a more comprehensive, modern and efficient system was needed to reduce costs, ensure compliance and embrace technology advancements.

> MATERIALS & METHODS:

Converting Tray to Containers

While NorthShore suspected its current blue-wrapped sterilization trays were generating significant costs in materials and inefficiencies, as well as potential compliance violations, the organization wanted to demonstrate and validate that suspicion. To test its assumptions, NorthShore converted 25 of its blue-wrapped sterilization trays to Camera Head Sterilization Container Sets.

NorthShore will continue to measure the cost-savings resulting from this conversion for the next three years. Specifically, the organization will be tracking cost-savings related to:

- Blue-wrap materials
- Wrapping tape
- Tray protectors
- Chemical indicators
- Labor
- Disposables
- Rewraps

Breakdown of Cost Savings

<table>
<thead>
<tr>
<th>Cost Item</th>
<th>Estimated Total Cost Per Wrap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue Wrap Sterilization Cost per Wrap</td>
<td>$6.97</td>
</tr>
<tr>
<td>Wrapping Tape Per Use</td>
<td>$0.11</td>
</tr>
<tr>
<td>Tray Protectors Per Box</td>
<td>$60.00</td>
</tr>
<tr>
<td>Chemical Indicators Each</td>
<td>$0.11</td>
</tr>
<tr>
<td>Trays Per Container</td>
<td>$20.00</td>
</tr>
<tr>
<td>Indicators Strips (2 per use)</td>
<td>$237.00</td>
</tr>
<tr>
<td>Disposable Filters (2 per use)</td>
<td>$122.00</td>
</tr>
<tr>
<td>Tamper Seals (2 per use)</td>
<td>$1.11</td>
</tr>
<tr>
<td>Lidgrip Tape (2 of 3 per use)</td>
<td>$0.11</td>
</tr>
<tr>
<td>Gasket Tape (2 of 3 per use)</td>
<td>$0.11</td>
</tr>
<tr>
<td>Total Cost Per Use</td>
<td>$29.372 (£)</td>
</tr>
</tbody>
</table>

NorthShore projects nearly $30,000 savings using only 25 of the Sterilization Containers in just three years.

> THE SOLUTION

Sterilization Containers Control Costs, Reduce Waste and Ensure Compliance

In its bid to reduce wastes and leaks in its SPD, NorthShore turned to the Camera Head Sterilization Container system for several reasons. First and foremost, the KARL STORZ system is specified for the KARL STORZ camera heads used by NorthShore, and offers complete sterilization validation to ensure compliance. What’s more, the containers are fully compatible with both high and low temperature sterilization.

This allows the containers to be used with a variety of sterilization systems including, STEERRAD®, 109NX, 309NX, and 409NX, as well as the KARL STORZ® ASPCO® V-PRO® Systems. This also means that should NorthShore decide to switch to autoclavable camera heads in the future, the organization can continue using the same sterilization containers, with a different blue wrap, without compromising compliance-saving the cost of purchasing new sterilization systems.

In terms of reducing costs and waste, the sterilization containers eliminate the need for blue wraps, wrapping tapes, tray protectors, as well as disposal-related costs for these materials. The containers additionally eliminate the need for rewraps, saving SPD and OR staff the time and effort of checking for holes in wraps, replacing seal tabs, sealing for new equipment and rewrapping the camera heads for proper sterilization. By eliminating blue wraps and related materials, NorthShore is also reducing a significant source of waste, allowing the organization to be more environmentally friendly and support its green initiatives.

Sterilization container sets promise future savings as well. The durable sterilization container systems are designed aluminum to prevent pitting and corrosion for long lasting productive life, extended wear protection for delicated camera heads and uncompromised identity.

> RESULTS

Significant Saving and Quick Return on Investment

Based on its early findings following the conversion to sterilization containers, NorthShore projects a total savings of $29,372 over the next three years. The organization additionally expects to make a return on its investment after just 14 months of use.

In addition to these substantial cost savings, NorthShore expects to improve OR staff efficiency by eliminating the need to check and rewrap trays; support the organization’s green initiative by eliminating material wastes generated by the OR; and prepare for a seamless transition to future camera head technologies with a complete system that supports multiple sterilization methods with low and high temperatures.

> CONCLUSION

KARL STORZ Sterilization Containers Prove to be a Smart Investment

Continuing to evolve costs, unwanted waste and compliance monitoring concerns in its Sterile Processing Division, NorthShore University HealthSystem made the strategic decision to convert 25 of its blue-wrapped sterilization trays with KARL STORZ sterilization container sets. As a result of this switch, NorthShore projects the organization will save nearly $30,000 over the next three years, and recoup its initial investment in just 14 months.

In addition to these substantial cost savings, NorthShore expects to improve OR staff efficiency by eliminating the need to check and rewrap trays; support the organization’s green initiative by eliminating material wastes generated by the OR; and prepare for a seamless transition to future camera head technologies with a complete system that supports multiple sterilization methods with low and high temperatures.

ABOUT KARL STORZ

KARL STORZ is a leading medical technology company that manufactures and distributes medical instruments, endoscopes, and disposables for a variety of surgical and diagnostic disciplines. KARL STORZ provides comprehensive repair and services and can be found online at www.karlstorz.com.

KARL STORZ is dedicated to providing surgical and diagnostic solutions for hospitals and other health care providers around the world. KARL STORZ products are backed by their own service solutions through PROTecTIOn1®.

To ensure complete solutions in minimally invasive surgery, KARL STORZ provides comprehensive repair and service. KARL STORZ is the leading manufacturer and provider of surgical instruments and endoscopic solutions worldwide. KARL STORZ is headquartered in Germany.

ABOUT NORTHSHORE UNIVERSITY HEALTHSYSTEM

NorthShore University HealthSystem is a Chicago-based, multi-specialty health care system with four hospitals: NorthShore University HealthSystem, Glenbrook Hospital, Highland Park Hospital, and NorthShore University HealthSystem, Evanston Hospital, employing almost 10,000 people and including more than 1,000 physicians. NorthShore’s health system includes significant capabilities in a range of specialty and subspecialty services, including NorthShore - West Suburban Medical Center, Glenbrook Hospital, Highland Park Hospital, NorthShore University HealthSystem, Evanston Hospital, NorthShore - North Lake Shore Hospital and NorthShore - Palatine Hospital. For more information, call (773) 714-0800 or visit us online at northshore.com.

As the principal teaching affiliate for the University of Chicago Pritzker School of Medicine, NorthShore is devoted to excellence in medical education and research. NorthShore is committed to improving community health through leadership in health research, patient care, health education and health policy. NorthShore University HealthSystem, Glenbrook Hospital, Highland Park Hospital, NorthShore University HealthSystem, Evanston Hospital, NorthShore - West Suburban Medical Center, Glenbrook Hospital, Highland Park Hospital, NorthShore - North Lake Shore Hospital and NorthShore - Palatine Hospital. For more information, call (773) 714-0800 or visit us online at northshore.com.

As the principal teaching affiliate for the University of Chicago Pritzker School of Medicine, NorthShore is devoted to excellence in medical education and research. NorthShore is committed to improving community health through leadership in health research, patient care, health education and health policy. NorthShore University HealthSystem, Glenbrook Hospital, Highland Park Hospital, NorthShore University HealthSystem, Evanston Hospital, NorthShore - West Suburban Medical Center, Glenbrook Hospital, Highland Park Hospital, NorthShore - North Lake Shore Hospital and NorthShore - Palatine Hospital. For more information, call (773) 714-0800 or visit us online at northshore.com.