UCLA Health Reusable Isolation Gowns

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Logistics / Materials Management

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Sustainability
Resiliency Reframed

- Climate Resiliency
- Emergency Preparedness
- Disposable vs. Reusables
- Blue Wrap to Masks
- COVID-19 Reusable ISO Gowns
- Reprocessing of PPE Items
- UV Light Sterilization
- Collection and Reprocessing
Disposable Isolation Gowns

- Yellow single-use isolation gowns with white cuffs and ties
- 100% cotton or 50/50 cotton poly that may absorb liquids
- Used by caregivers and visiting family members as a cover gown in L&D, OB/GYN, NICU and isolation cases.
- Offers very little protection to the end user
- Each gown creates solid waste
  - UCLA Health purchased 2.6 M disposable gowns annually prior to transition to reusables and sent 234 tons sent to landfill
- Costs $5 to 6 each
- No recycling or reprocessing program existed
Transition to Reusables

- Invited several vendors to present their selection of isolation gowns and feedback on best practice
- Compared products specs, benefits and cost
- AAMI standards for barrier protection (1-4)
- Formed a sub-committee to evaluate products
  - Infection Control, Nursing Leadership, Caregivers, Sustainability leadership, Environmental Services, Laundry Processing Plant, Materials Management
- Evaluated delivery method, space requirement, folding, bundling, washing/drying requirements, and overall cost
- Established a pilot in areas of high-utilization (Liver Transplant, Peds, Med Surg, ICUs) to evaluate process flow and caregiver feedback
Life Cycle Assessment

- Studies on Reusable Textiles (Surgical Gowns)*
  - Six studies concluded reusable gowns are less of an environmental burden than disposable gowns
  - According to these studies, disposable gowns consume more than reusable gowns in all areas of sustainability
    - 200-300% more energy
    - 250-330% more water
    - 200-300% higher carbon footprint

* A Comparison of Reusable and Disposable Perioperative Textiles: Sustainability State-of-the-Art 2012; Michael Overcash, PhD
Custom made Single Use Washable Precaution Gowns

- Manufactured from a 99% tightly woven micro-denier polyester fluid resistant fabric
- 1% Carbon fibers added to help prevent static electricity that builds up in polyester materials
- One size fits all and a 3X size option
- Shorter cuffs for increased protection and to allow for double gloves (under the cuff and over the cuff)
- Snaps (no ties) to make the gowns easy to take off quickly
- Reversible gown, no right or wrong way to put them on
- Grid on the bottom of the gown to mark number of uses
- Cost $7 to $10 depending on size
Implementation of Program (May 2012 to May 2015)

Iso Gowns analysis as January 2016

Jan 2014, 100% conversion achieved for RRUCLA

Infection control policy went into effect July 1, 2014

SMUCLA accelerated conversion to reusable Gowns January 2015

Jun 2015, 100% conversion achieved for SMUCLA

Usage EACH
Buy-In, Acceptance, and Use Reduction

• **Initial Resistance**
  • Staff did not like initial gowns proposed
    • “Disposables are easier to remove”
    • “Washables are slippery”
    • “Washables are too hot”

• **Acceptance**
  • Sustainability helped push the initiative further
  • Nursing leadership support
  • Cost savings for senior leadership
  • Infection prevention support

New isolation protocols introduced in July ‘14 reduced usage by 49%

<table>
<thead>
<tr>
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<th>Estimated</th>
<th>Actual</th>
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<tbody>
<tr>
<td>Avg Daily Use</td>
<td>5,786</td>
<td>3,300</td>
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<tr>
<td>Inventory Level</td>
<td>40,502 (7 Par Level)</td>
<td>23,100 (7 Par Level)</td>
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<tr>
<td>Savings – 5 yr Projection</td>
<td>35%</td>
<td>49%</td>
</tr>
<tr>
<td>Savings – 3 yr Actual</td>
<td>35%</td>
<td>49%</td>
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</table>
Disposable to Washable Savings

<table>
<thead>
<tr>
<th>Years 1-4</th>
<th>Acq/Replacement Cost</th>
<th>Processing Cost</th>
<th>Disposable Cost</th>
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- Disposable Gowns
- Washable Gowns Years 1-4

UCLA Health
Laundry

• Use Local Laundry Processing Plant
  • HLAC Accreditation & Hygienically Clean Healthcare Certification

• What do we do with the Reusable Precaution gowns once they can no longer be used?
  • Current linen is never thrown out, use a recycler
  • Linen is often donated to different organizations and countries
  • Evaluating other uses with vendors i.e. grocery bags, etc.
Total Savings

• Issued over 9 million washable isolation gowns since May 2012
  • Diverted from landfill
• Conversion reduced gown utilization volume by 50% from 2.6 to 1.3 million gowns annually
  • 1.3 million excess gowns not purchased, 2.6 million not landfilled
• Conversion reduced gown utilization cost from $1.6 million annually to $500,000 for reusable.
  • $1.1 million initial savings from rollout of program
  • Rollout took from May 2012 to May 2015 (Slide 17), IP policy* July 2014
• Total Cumulative Savings of Program: $3 million
  • Average annual savings $450,000

*IP standard precaution protocols for MRSE (Methicillin-resistant Staphylococcus Aureus) and VRE (Vancomycin Resistant Enterococci)
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