Infection Prevention Efforts in Colorado

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Infection Prevention Unit Manager

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Objectives

• Understand current Infection Prevention Efforts at the Colorado Dept of Public Health and Environment

• Surgery Centers through review of case studies

• Increase awareness of opportunities for assessments of current infection prevention practice at the individual facility level

• Develop an understanding of risks specific to Ambulatory Surgery Centers through review of case studies
Healthcare has moved beyond hospitals

- Hospitals
- Dialysis Facilities
- Ambulatory Facilities
- Long-term Care
Surgical procedures are increasingly performed in outpatient settings

* 2005 values are estimates.
Changing Landscape of Healthcare

- Growing populations at risk
  - Immunocompromised individuals
  - Low birthweight, premature neonates
  - Transplant recipients on immunosuppressive therapy

- Special environments
  - Intensive care and burn units
  - Long-term care
  - Ambulatory surgery, endoscopy, and infusion services
Outbreaks due to errors in outpatient settings

- Private medical practice (HBV): NYC 2001
- Oncology clinic (HCV): Nebraska, 2002
  - State authorities notified and tested thousands of patients

Common themes
- “Obvious” violations in standard procedures
- Preventable with basic infection control practices
- HCWs not aware that practices were in error
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>No. of Procedures</td>
<td>No. of Infections</td>
<td>SIR</td>
</tr>
<tr>
<td>Breast Surgery</td>
<td>9,083</td>
<td>94</td>
<td>1.3</td>
</tr>
<tr>
<td>Colon Surgery</td>
<td>3,287</td>
<td>128</td>
<td>0.7</td>
</tr>
<tr>
<td>Artery Bypass Graft</td>
<td>1,538</td>
<td>26</td>
<td>0.9</td>
</tr>
<tr>
<td>Replacement</td>
<td>8,735</td>
<td>85</td>
<td>0.8</td>
</tr>
<tr>
<td>Replacement</td>
<td>13,129</td>
<td>102</td>
<td>0.8</td>
</tr>
<tr>
<td>Hysterectomy</td>
<td>5,217</td>
<td>60</td>
<td>0.7</td>
</tr>
<tr>
<td>Hysterectomy</td>
<td>4,303</td>
<td>45</td>
<td>1.3</td>
</tr>
<tr>
<td>Ambulatory Surgery Centers</td>
<td>Breast Surgery</td>
<td>5,771</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Hernia</td>
<td>5,700</td>
<td>15</td>
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<tr>
<td></td>
<td>Replacement</td>
<td>169</td>
<td>0</td>
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<tr>
<td></td>
<td>Replacement</td>
<td>367</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Hysterectomy</td>
<td>36</td>
<td>0</td>
</tr>
</tbody>
</table>

SIR: Standardized Infection Ratio, the ratio of observed to expected infections adjusted for procedure risk factors.
HAI’s.....Just the tip of the iceberg
Culture change

“Many infections are inevitable; some might be preventable”

“Each infection is potentially preventable, unless proven otherwise”

Image courtesy: CDC
<table>
<thead>
<tr>
<th>Hand Hygiene</th>
<th>Standard Precautions</th>
<th>Organism Specific Isolation</th>
<th>Employee Education</th>
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Effective Policies & Procedures to Prevent Infections

- Hand Hygiene
- Standard Precautions
- Organism Specific Isolation
- Employee Education
When Infections are Identified

<table>
<thead>
<tr>
<th>Develop Case Definitions</th>
<th>Establish Outbreak Thresholds</th>
<th>Notify Public Health/Implement Control Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pathogen Specific Issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bed Bugs?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C. diff</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MRSA &amp; Other MDRO’s</strong></td>
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<td></td>
</tr>
</tbody>
</table>
## Day to Day Issues

<table>
<thead>
<tr>
<th>Pressure Ulcer Prevention</th>
<th>Antimicrobial Use</th>
<th>Aspiration Precautions</th>
<th>Invasive Device Use and Proper Care</th>
</tr>
</thead>
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**Notes:**

- Pressure Ulcer Prevention
- Antimicrobial Use
- Aspiration Precautions
- Invasive Device Use and Proper Care
## Non-Nursing Issues

<table>
<thead>
<tr>
<th>Food Preparation &amp; Storage</th>
<th>General Maintenance</th>
<th>Plumbing And Ventilation</th>
<th>Laundry</th>
<th>Infectious Waste Collection and Storage</th>
<th>Housekeeping And Disinfection Of Equipment</th>
</tr>
</thead>
</table>

*Note: The table above categorizes different non-nursing issues such as food preparation and storage, general maintenance, plumbing and ventilation, laundry, infectious waste collection and storage, and housekeeping and disinfection of equipment.*
Reprocessing of Equipment

- Decontamination
- Sterilization
- High-Level Disinfection
Occupational Health

TB Screening

Immunizations

Exposures
What can you do???

Image courtesy: CDC
Infection Prevention and Control Assessment Tool for Outpatient Settings

This tool is intended to assist in the assessment of infection control programs and practices in outpatient settings. In order to complete the assessment, direct observation of infection control practices will be necessary. To facilitate the assessment, health departments are encouraged to share this tool with facilities in advance of their visit.

Overview

Section 1: Facility Demographics

Section 2: Infection Control Program and Infrastructure

Section 3: Direct Observation of Facility Practices

Section 4: Infection Control Guidelines and Other Resources

Infection Control Domains for Gap Assessment

I. Infection Control Program and Infrastructure

II. Infection Control Training and Competency

III. Healthcare Personnel Safety

IV. Surveillance and Disease Reporting

V.a/b. Hand Hygiene

VI.a/b. Personal Protective Equipment (PPE)

VII.a/b. Injection Safety

VIII.a/b. Respiratory Hygiene/Cough Etiquette

IX.a/b. Point-of-Care Testing (if applicable)

X.a/b. Environmental Cleaning

XI.a/b. Device Reprocessing (if applicable)

XII. Sterilization of Reusable Devices (if applicable)

XIII. High-level Disinfection of Reusable Devices (if applicable)
ICAR Assessment Program

- Free, confidential, Infection Control Assessment, with subject matter experts in Infection Prevention

- Facility Specific

- Training available to help close the identified gaps

- No burden on the facility, no corrective actions, no plan of correction required

- Friendly, provided one on one support and training as assessment is occurring, opportunity for staff to ask questions

- Assist facility with training needs following the assessment
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Drug Diversion

Image courtesy: CNN
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Environmental Cleaning & Disinfecting for MRSA

What’s the difference between cleaners, sanitizers, and disinfectants?

- **Cleaners or detergents** are products that are used to remove soil, dirt, dust, organic matter, and germs (like bacteria, viruses, and fungi). Cleaners or detergents work by washing the surface to lift dirt and germs off surfaces so they can be rinsed away with water. The same thing happens when you wash your hands with soap and water or when you wash dishes. Rinsing is an important part of the cleaning process. Use these products for routine cleaning of surfaces.

- **Sanitizers** are used to reduce germs from surfaces but not totally get rid of them. Sanitizers reduce the germs from surfaces to levels that are considered safe.

- **Disinfectants** are chemical products that destroy or inactivate germs and prevent them from growing. Disinfectants have no effect on dirt, soil, or dust. Disinfectants are regulated by the U.S. Environmental Protection Agency (EPA). You can use a disinfectant after cleaning for surfaces that have visible blood or drainage from infected skin.

Which disinfectants should I use against MRSA?

Disinfectants effective against *Staphylococcus aureus* or staph are most likely also effective against MRSA. These products are readily available from grocery stores and other retail stores. Check the disinfectant product's label on the back of the container. Most, if not all, disinfectant manufacturers will provide a list of germs on their label that their product can destroy. Use disinfectants that are registered by the EPA (check for an EPA registration number on the product's label to confirm that it is registered).

How should cleaners and disinfectants be used?

**Read the label first.** Each cleaner and disinfectant has instructions on the label that tell you important facts:

- How to apply the product to a surface.
YEAH, IF YOU COULD SIGN ME UP

THAT'D BE GREAT
To schedule an ICAR assessment......

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Questions???