Environmental Services (EVS) and Infection Prevention (IP): The Importance of Partnerships

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Before We Begin

Housekeeping

Please do not put us on hold.

Write any questions into the “chat” box.
– Discussion portion is at the end of the presentation.
– Participants will be muted until the discussion.

We will email responses to questions to all participants.

A portion of the presentation from today’s webinar will be posted on the HSAG website by next week.
Introductions

Angela Vassallo, MPH, MS, CIC, FAPIC
Nationally recognized expert in Infection Prevention

• Certified in Infection Control (CIC) and Fellow of APIC (FAPIC)
• Association for Professionals in Infection Control and Epidemiology (APIC)
  – Past-president, CA APIC and Greater LA APIC chapter
  – Vice-chair, national APIC Communications Committee
• Infectious Disease Association of California (IDAC)
  – First and only Infection Prevention board member
• LA County Department of Public Health Healthcare-Acquired Infection (HAI) Advisory Committee
  – Founding member who represents Infection Preventionists in LA County
• Faculty, MPH, MHA, and MS programs
  – West Coast University and Providence University
• Education
  – MPH, University of Texas Health Science Center, School of Public Health, Houston, TX
  – MS, Healthcare Management, West Coast University, Los Angeles, CA
  – BA, International Service, American University, Washington, DC
Webinar Objectives

• Describe partnership opportunities between EVS and IP.
• Create a competency for annual EVS staff member education.
• Build a partnership and implement a competency process with EVS.
Live Tweetchat

- HSAG will be Live Tweeting during this webinar.
- Tweet us with questions.
- Webinar’s hashtags:
  - #ASCevsIP
  - #ASCinfectionprevention
Step One

1

Defining Clean
APIC¹: Keep Patient’s Environment and Equipment Clean

1. Association for Professionals in Infection Control and Epidemiology (APIC)
Webster’s Definition of Clean

1a: Free from dirt or pollution
   – Changed to clean clothes
   – Clean solar energy

b: Free from contamination or disease
   – A clean wound

c: Free or relatively free from radioactivity
   – A clean atomic explosion

Centers for Disease Control and Prevention’s (CDC’s) Definition of Clean

What is 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.

Dr. Earle H. Spaulding, Microbiologist
Temple University, Philadelphia

• He wrote a landmark paper in 1939 that proposed an approach to disinfection and sterilization of patient care items.
  – This paper turned into the “Spaulding Criteria,” which was created in 1957 to determine when re-usable medical devices should be disinfected or sterilized based upon infection risk.

• Criteria used to establish EPA and Food and Drug Administration (FDA) guidelines.

• Established germicidal activity for disinfection: low, intermediate, and high-level disinfection (scopes)
## Spaulding Classification (cont.)

<table>
<thead>
<tr>
<th>Requirement</th>
<th>FDA device class</th>
<th>Body Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low-level disinfection</strong></td>
<td>Non-critical</td>
<td>Intact skin</td>
</tr>
<tr>
<td>High-level disinfection</td>
<td>Semi-critical</td>
<td>Mucous membranes</td>
</tr>
<tr>
<td>Sterilization</td>
<td>Critical</td>
<td>Sterile body areas</td>
</tr>
</tbody>
</table>

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CDC. A Rational Approach to Disinfection and Sterilization. Available at: [https://www.cdc.gov/infectioncontrol/guidelines/disinfection/rational-approach.html](https://www.cdc.gov/infectioncontrol/guidelines/disinfection/rational-approach.html). Accessed on: September 17, 2018
What Exactly Is Clean?

• Healthcare versus Home
  – Healthcare cleaning products have EPA/FDA approved “kill claims” for resistant bacteria, viruses, and etc.

• Cleaning versus Disinfecting
  – Physically removing soil/bioburden versus actually killing/eliminating the germs it carries

• Clean versus Dirty
  – What does MRSA\(^1\) look like? Can you see it?

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1. Methicillin-resistant *Staphylococcus aureus* (MRSA)
CDC’s Recommendations on Product Use

How should cleaners and disinfectants be used?

• *Read the label first*. Labels have important instructions!
  – How to apply the product to a surface.
  – How long you need to leave it on the surface to be effective (contact time).
  – If the surface needs to be cleaned first and rinsed after using.
  – If the disinfectant is safe for the surface.
  – Whether the product requires dilution with water before use.

• *Follow manufacturer’s recommendations*
  – Wear personal protective equipment (PPE), if required.
  – Assure there is good ventilation during application.

Source: CDC. Environmental Cleaning & Disinfecting for Methicillin-resistant *Staphylococcus aureus* (MRSA).
Evaluating Cleaning Products

• IP and EVS must thoroughly review all cleaning products together.

• There must be a clear understanding of the contact time for each product.
  – This will involve a review of the Material Safety Data Sheet (MSDS) for each product.
  – Grocery store products are not appropriate for healthcare environments. Most do not have the “kill claims” for highly resistant organisms.

• There must be a clear understanding from all involved of why each product is used.
  – High touch surfaces
  – Floors
  – Special equipment considerations
Evaluating Cleaning Products (cont.)

• More products do not create a cleaner environment—especially if their contact time is not being met.

• Assure that **key products** to clean surfaces have been **reviewed and approved** by leadership such as, IP/Quality Assurance & Performance Improvement (QAPI)/Medical Executive Committee.
Step Three

Policies and Procedures
Policy

• **Purpose**
  
  – To **set standards** and provide guidelines
  
  – To **identify** the roles of **staff members** who are expected to clean and when.
  
  • This is especially important in regards to nurses and nurse technicians who clean between cases.
  
  • Most have never been formally trained, but they think they know how to clean because they have sophisticated clinical training.
  
  • Is cleaning in their job description or is it considered, **“other duties as needed?”**
– What are your facility’s expectations?
  • Have you clearly articulated them to all staff members who clean?
  • Are you monitoring expectations?
  • Are you sure everyone is cleaning the same way all the time?

– Policies exist to clarify expectations.
  • Such as, when using cleaning solutions/products
    – Does all staff members (who clean) understand the difference between cleaning and disinfecting?
    – Does all staff members (who clean) know the solution contact time?
    – Is the contact time being met by all staff members who use it every time they do?
      • Are germs being killed to create a safe environment for every patient every time we care for them?
Procedure

Step-by-step instructions

• All staff members who clean will clean the following items in the following order
  – 1, 2, 3

• All staff members who clean will clean the following items between each patient
  – A, B, C

• All staff members who clean will clean the following items at the end of each day ("terminal clean")
  – A, B, C
Procedure (cont.)

Step-by-step instruction examples

• **First, clean** the equipment that is going to be disinfected. Contaminated equipment must be thoroughly cleaned before disinfection/sterilization. This can be achieved by following the product contact time.
  – Such as, items must remain wet for 3 minutes with product X.

• Manually pre-clean all equipment immediately following the procedure in order to remove all body fluids. If transported, the cleaning product must remain on the item so that it is wet during transport. **If blood and body fluids dry before disinfection/sterilization occurs adequate cleaning was not achieved, which means that disinfection/sterilization is not possible.**

• Always follow the manufacturer’s guidelines.
Do Not Forget to Review Personal Protective Equipment (PPE) and Hand Hygiene!

- **PPE**
  - What should staff members use and when?

- **Hand Hygiene**
  - When and how frequently?
    - First scrub of the day versus in between cases
    - Is anyone watching/guiding the circulators?
    - Are the dispensers accessible and easy to reach?
    - Are staff members performing hand hygiene between each case?
CDPH\(^1\) Adherence Monitoring tool

Healthcare-Associated Infections Program Adherence Monitoring
Environmental Cleaning and Disinfection in the Perioperative Area

Regular monitoring with feedback of results to staff can maintain or improve adherence to environmental cleaning practices. Use this tool to identify gaps and opportunities for improvement. Monitoring may be performed in any type of patient care location.

**Instructions:**
- Observe at least two different environmental services (EVS) staff members.
- Check a box for each practice observed. Leave cell blank if unable to observe. In the column on the right, record the total number of adherent practices observed (Yes) and the total number of observations (Yes + No).
- Calculate adherence percentage in the bottom row. Select appropriate setting (Pre-op, OR, PACU) for each opportunity (column).

<table>
<thead>
<tr>
<th>Environmental Cleaning and Disinfection Observations</th>
<th>Observation 1</th>
<th>Observation 2</th>
<th>Observation 3</th>
<th>Adherence by Task # Yes # Observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>EV1. Detergent/disinfectant solution is mixed, stored according to manufacturer’s instructions.</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>EV2. Solution remains in wet contact with surfaces according to manufacturer’s instructions.</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>EV3. A new clean, saturated cloth is used in each patient area. The cloth is changed when visibly soiled.</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>EV4. A checklist of high-touch surfaces* is used when cleaning and disinfecting.</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>EV5. High-touch surfaces* in Pre-OP, OR, and PACU, are thoroughly cleaned/disinfected after each patient.</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

*Some examples of high touch surfaces:
- Anesthesia cart top & drawer handles
- Anesthesia machine controls
- OR table & pad
- OR table safety strap
- OR table attachments
- Postanesthesia devices
- Transfer devices
- BP cuff & tubing
- Mayo stands and back tables
- Robotic equipment controls
- Storage cabinet handles
- Light switches
- Warming devices
- Room door handle or push plate
- Telephone & computer keyboards
- Chairs and stools
- Trash and linen receptacle handles
- Video device control panels
- Supply cart handles
- Gurney and side rails
- Monitoring, pump & video device controls and cables
- Pulse oximeter

**# of Correct Practice Observed # Yes:** _____

**Total # Environmental Services Observations # Yes:**

**Adherence %**

(Total # Yes + Total # Observed x 100)

\(1.\) California Department of Public Health (CDPH)

CDPH. Environmental Cleaning and Disinfection in the Perioperative Area. Available at:
Step Four

Annual Competency and Return Demonstration
Problem:
We Have a Cleaning “Free for All” in ASCs!

Does your cleaning team receive annual training and conduct return demonstration?

• There are often only 1–2 housekeepers who clean at night and several different staff members who clean in the daytime.
  – These teams rarely receive annual training.
  – These teams almost never receive return demonstration training.
  – These teams rarely meet to define expectations or assign tasks.
    • Example: Clinical technicians clean equipment between cases while EVS staff members (or whichever nurse is available) empties the trash.
    • Example: Nurse uses disinfectant wipe to quickly clean equipment between cases while EVS staff members are simultaneously wiping blood away from the bed and floor.

• Blaming EVS for not cleaning correctly does not help if we have never rounded with them, provided training to them, nor set clear expectations for them.
Solution: IP and EVS Need a Team Approach

Is the follow up a team approach or just a frustrated IP?

• Who meets with staff members when items are found that appear dirty after “cleaning” in OR suites between cases?
• Who meets with staff members when there are still blood spots on the floor?
• Who meets with staff members when the trash has not been emptied in the OR in the morning?
  – Have tasks been assigned so you know exactly whom missed these items?
Solution: IP and EVS Need a Team Approach (cont.)

Things to consider with contracted EVS teams:

• If your EVS team is contracted, **have you reviewed their policies and procedures?**
  – Does your facility have a separate set of cleaning policies?
  – If so, do they match up?

• Have you verified that they have **annual training that clearly explains cleaning expectations?**
  – This is **not** the standard annual training we all receive about basic things like bloodborne pathogens, etc.

• Have you met with their leadership to assure that everyone is on the same page?
  – This is **not** the same as calling to complain that the trash was not emptied again when you came to work in the morning.
Policy Versus Practice

5 Simple Steps

1. **Create your team:** identify subject-matter experts (such as, EVS manager and IP) and others who clean (lead nurse and/or nurse technician)
   
   - EVS and IP should partner throughout the process.
   - Most IPs have never terminally cleaned an OR suite and should take time to learn how it is done before advising on what to do.

   - IP should round with EVS at least once to actually clean with them.
     
     - This is the best way to learn how and what they clean.
     - This also allows EVS to teach IP their process so that if/when IP needs to teach EVS there is a true bi-directional partnership.
     - How can we educate—or lead a return demonstration—on something we have never done?
2. **Write the policy as a team** with clear, step-by-step instructions.
   - Make sure the policy is not just words on paper to appease surveyors.
   - The policy needs to represent actual practice.

3. **Use the policy to create a competency with a return demonstration component** to assure that staff members are trained to clean.
   - If we can do this for blood glucose monitoring why don’t we do this for cleaning our OR suites?

4. **Conduct a competency and return demonstration annually** for everyone who cleans.
   - Whom will sign off on competencies and lead the return demonstration process?

5. **Keep everyone’s records** to prove completion and to use during evaluations and surveys.
   - Provide **ongoing feedback** to staff members on their progress.
Realistic Expectations

• No one can be in more than one place at the same time.
  – Be fair to your sole housekeeper.

• No one can be expected to succeed if we have not clearly defined our expectations of success.
  – How often do you conduct IP training, such as Hand Hygiene or PPE usage for EVS?

• Asking people to clean is not enough.
  – We must define what we mean.
  – We must set clear expectations.
  – We must assign tasks.
    • Once we have done these things, we can assess progress and hold people accountable.
    • This is why we must provide productive ongoing feedback—both good and bad—instead of just complaining that the trash was missed.
Supplemental Strategies

• Monitoring
  – **Glow Germ**
    • Substance that glows when exposed to ultraviolet light (UV)
  – **Adenosine Triphosphate** (ATP)
    • Present in all organic material
    • Relative Light Units (RLUs)—measure the amount of ATP that is present

• Additional approach to disinfection
  – **UV equipment**
  – **Hydrogen Peroxide Vapor** (HPV)
Playbook EVS Optimization Toolkit

The San Francisco Chapter of the Association for Professionals in Infection Control and Epidemiology (APIC) agreed to focus on optimization of EVS programs as the annual project in 2016. The project objective was to support reliable design (standardization of evidence-based practices) for environmental cleaning and disinfection in local hospitals to reduce the risk of HAI (healthcare associated infection). The approach taken was to identify 10 key elements of a successful EVS program and build an improvement project around those. The elements were drawn from evidence-based materials provided by the Association for the Healthcare Environment (AHE) and the Centers for Disease Control and Prevention (CDC). Two hospitals volunteered to participate in the project, and Contec was identified as the sponsor. The project plan and timeline were guided by a self-assessment performed by the EVS Manager at each of two local hospitals. The project concluded with creation of a playbook to enable replication of the project by APIC chapters and/or individual hospitals or hospital systems.
References


Knock Out Infections
ASC Infection Prevention Initiative

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