Empower Through Connections

Empowerment is the development of confidence in one’s own abilities. Last year, we looked at empowerment through effective communication, leadership, motivation of others and proactive attitudes. This year we continue this series by discussing empowerment through connections with people, places and things. We’ll explore various incidents (scenarios) of improper infection prevention and safety that could occur in a dental facility. Then we’ll describe how empowerment through connections can help prevent such incidents and include a listing of related regulations and recommendations. The first three issues were titled “Connect with Policies and Training”, “Empower by Connecting with Places” and “Empower by Connecting with Compliance”. Following the current issue will be “Empower by Connecting with People” and “Empower by Connecting with Research”.

Empower by Connecting with Products

Scenario 1

The Incident:

Dr. Bookrail promoted Sherry Mae to take over for the head dental assistant who recently got married and moved to Western North Dakota to “strike it rich” in the new oil fields. One of Sherry Mae’s new responsibilities was to order the office clinical supplies. She was happy about this, since there were several infection prevention items she would like to replace. She didn’t like the latex exam gloves because the cuffs seemed too short and were not rolled so she found them difficult to put on. She also didn’t like the smell of the spray disinfectant being used, and she thought the protective eyewear available was a little on the heavy side and often slipped down on her nose. She also didn’t like the fit of the elastic band on their cone-shaped masks, for it always gave her a “bad hair day”. So the day after her promotion she got out the catalog and within 20 minutes she had placed an on-line order for a six month supply of a different brand of latex exam gloves, spray disinfectant, protective eyewear and ear-loop masks. She was excited when the items arrived in just a few days.

Potential Consequences:

Sherry Mae opened a box of the new gloves and tried them on. Much to her surprise they were the same gloves they had been using. The box coloring and brand name were different than those of the original gloves, but the gloves were the same. Talk about being upset! Then she tried out the new disinfectant. She liked the style of the

Learning Objectives

After reading this publication, the reader should be able to:

► describe the problems with overstocking.
► describe what is meant by private labeling.
► describe the value of product labeling.
► describe the proper use of disposables.
► describe one approach to selecting infection prevention products.

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Empower by Connecting with Products

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She ordered a blue low-level disinfectant concentrate that the sales rep said was OSHA-approved and non-toxic. This was less expensive than the ready-to-use intermediate-level spray disinfectant currently used.

When the new disinfectant arrived she diluted it, placed it in inexpensive spray bottles purchased at the dollar store and poured the excess into rinsed-out bottles previously containing mouthwash used for preprocedure rinsing. She used a permanent marker to label all the bottles “Dis”. Dr. Touly hired a new dental assistant (Lockley) who had some allergies. She wanted to know what chemicals were in the new disinfectant and how to use it but felt awkward about asking anybody.

Kayli also decided to switch from disposable to reusable air/water syringe tips to eliminate the cost of the disposables. Additionally, she decided the office should clean and reuse the disposable high-volume evacuator tips without sterilizing them since they only have brief contact with the patient. Finally she reviewed the sterilization monitoring service that the office used, which had been providing one test spore strip and one control spore strip and decided to switch to a less expensive service that provided one test spore strip.

Kayli went ahead and started using the new disinfectant even though she didn’t know its contents. In the absence of a label containing directions she just assumed she didn’t need to pre-clean a surface before disinfecting it. However, the original label did state to use the product on a pre-cleaned surface. If a product is not used according to the label directions, it may not perform as expected. Fortunately the disinfectant did not make Lockley’s allergies flare up.

Switching from disposable to reusable air/water syringe tips might turn out to be initially less expensive for this office, but Kayli didn’t take the time to compare the costs of both approaches including the labor costs of cleaning the reusable tips and determining the extra cost of the metal tips and sterilization packaging. Disposable (single-use) high-volume evacuator tips were not designed to be cleaned and reused since the soft plastic cannot be adequately cleaned, and the tips would be destroyed during heat sterilization. Thus, patient-to-patient transmission could occur with inadequately processed items previously used intraorally.

Effective use of spore tests includes the use of a control. Not using a control for biological monitoring is unacceptable. The control validates the effectiveness of the spores and the procedures utilized in the testing process. Each spore test process involves the use of two spore strips or vials. One test is placed in the sterilizer and processed per package directions. The control strip or vial (which has the same lot number as the test strip or vial) is not placed in the sterilizer but both are placed in an incubator to complete the testing process. The control should always show bacterial growth, while the spore test placed in the sterilizer should not show any evidence of bacterial growth. These results constitute an acceptable spore test result. Thus, not using a control for biological monitoring is risky.

Using a positive control strip that is stored and handled just like the test strip (except for processing through the sterilizer) is standard operating procedure for all types of scientific testing. It helps confirm that the results of the testing are valid by controlling extraneous variables that could affect the results.

Prevention and Empowerment:
- Kayli could have empowered herself if she had reviewed recommendations from the Centers for Disease Control and Prevention (CDC) about when to use an intermediate-level disinfectant. She was not aware that the CDC recommends weekly use of the biological indicator with a matching control for spore testing. She also would have known how to properly label bottles of the disinfectant had she reviewed OSHA’s Hazard Communication Standard.
- It may be tempting for some to try to reuse a heat-labile plastic disposable (e.g., high-volume evacuator tips) by processing it in a liquid high-level disinfectant/sterilant. But this is very risky, since the “soft” plastic in disposables easily scratches and does not lend itself to adequate cleaning.
- Microbial kill using a liquid high-level disinfectant/sterilant cannot be verified in the office like heat sterilization can with biological, chemical and mechanical monitoring. Contaminated items need to be cleaned and sterilized before being used on another patient. If an item is used in a patient’s mouth and it cannot be heat sterilized, it should be covered during use with a proper disposable barrier to prevent contamination or be discarded after use on a single patient.

Potential Consequences:
Eliminating the use of an intermediate-level disinfectant in the office can cause problems, for intermediate-level, rather than low-level disinfectants, are recommended for use on surfaces visibly contaminated with blood or saliva. Using a low-level disinfectant may not kill some pathogens, like those associated with a common cold (rhinovirus) or other oral conditions (coxsackie virus). Placing the disinfectant in poorly labeled bottles is dangerous and was in non-compliance with OSHA’s Hazard Communication Standard’s secondary container labeling requirement. For example, the bottles containing the excess diluted disinfectant looked just like the bottles of blue mouthwash the practice had been using and could have been mistakenly given to a patient.

Lockley’s allergies flare up.

continued on page 4
12 Helpful Steps for Selecting an Infection Prevention Product:

1. Determine what you want the product to do.
2. Determine what regulations and recommendations may apply.
3. Determine what products are available to accomplish the task.
4. Review and substantiate any claims made about the products. (Beware of anecdotal and unsubstantiated statements such as “OSHA-approved”, “non-toxic”, “safe”. OSHA does not approve specific brands of products.)
5. Review how the product is to be used and if any related items are needed in order to use the product effectively.
6. Involve the office team in the selection process.
7. Make sure the product has the appropriate registrations or clearances (e.g., registration of intermediate-level and low-level disinfectants by the Environmental Protection Agency [EPA]; clearance of sterilants/high-level disinfectants and medical devices by the Food and Drug Administration [FDA]).
8. Determine long term availability so stocking/storage can be planned.
9. Consider other factors such as cost, and depending upon the product, shelf-life, use-life, color, smell, sterilizability, cleanability, disposability, etc.
10. Make your choice.
11. Try before you buy.
12. Read the label. For example, a sample label can contain:
   - contents and active ingredients.
   - what the item can do.
   - how to mix or activate the product.
   - how to use the product.
   - warnings such as poisonous, toxic, flammable.
   - treatments for accidental contact.
   - expiration dates (shelf-life and use-life).
   - how to store the product.
   - how to dispose of the product.
   - how to dispose of the product container.
   - the EPA registration and establishment numbers.
   - reorder numbers.
   - lot numbers.
   - manufacturer/distributor name, address, phone.

Some Related Regulations and Recommendations

- The employer shall ensure that each container of hazardous chemicals in the workplace is labeled, tagged or marked with the identity of the hazardous chemical(s) contained therein; and, appropriate hazard warnings, or alternatively, words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which provide employees with the specific information regarding the physical and health hazards of the hazardous chemical (OSHA).¹
- Follow the manufacturers’ instructions for correct use of cleaning and EPA-registered hospital disinfecting products (CDC).²
- Clean and disinfect clinical contact surfaces that are not barrier-protected, by using an EPA-registered hospital disinfectant with a low (i.e., human immunodeficiency virus and hepatitis B virus label claims) to intermediate-level (i.e., tuberculocidal claim) activity after each patient. Use an intermediate-level disinfectant if visibly contaminated with blood (CDC).²
- Before single-use medical devices can be reprocessed and reused, a third-party or hospital reprocessor must comply with the same requirements that apply to original equipment manufacturers, including:
  - submitting documents for pre-market notification or approval;
  - registering reprocessing firms and listing all products;
  - submitting adverse event reports;
  - tracking devices whose failure could have serious outcomes; and
  - correcting or removing from the market unsafe devices (FDA).³

Reader’s Poll Question

Does your practice consider infection control in the evaluation process for every new product?

Text your response to 22333.

YES = 277381
SOMETIMES = 277382
NO = 277383

Results are posted at the OSAP website at www.OSAP.org!

(Regular text costs apply)
What’s Wrong with this Picture?

Can you identify any breach in infection prevention and safety procedures in this photo? Check your answers below.

ANSWERS

1) The patient is not wearing protective eyewear.
2) The dentist and dental assistant forearms are exposed.
3) In this view, it appears that the dentist’s protective eyewear may not provide adequate protection.

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**Glossary**

**High-level disinfectant/sterilant:** A germicide that when used at shorter exposure times (e.g., 20 min) inactivates vegetative bacteria, mycobacteria, fungi, and viruses on precleaned items but not necessarily high numbers of bacterial spores. When used at longer exposure times (e.g., 10 hours) can kill high numbers of bacterial spores on precleaned items.

**Intermediate-level disinfectant:** Disinfectant that inactivates vegetative bacteria, most fungi, mycobacteria, and most viruses but not bacterial spores. In the United States, it is registered with the EPA as a hospital disinfectant with tuberculocidal activity.

**Low-level disinfectant:** Disinfectant that inactivates vegetative bacteria, most fungi, and most viruses but cannot be relied upon to inactivate resistant microbes such as mycobacteria and bacterial spores. In the United States, it is registered with the EPA as a hospital disinfectant.

**Use-life:** Period of time a product is effective after it has been opened, activated, or otherwise prepared for use.

**Links to Resources**


2. CDC. Guidelines for Infection Control in Dental Health-Care Settings – 2003. Accessed June 2012 at: [http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5217a1.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5217a1.htm)
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For each item, pick the best answer.

1. **Low-level disinfectants cannot be relied upon to inactivate:**
   a. vegetative bacteria.  
   b. most fungi.  
   c. mycobacteria.  
   d. most viruses.

2. **According to OSHA’s Bloodborne Pathogens Standard which of the following properties is required for protective eyewear?**
   a. Tinted lenses  
   b. An attached mask  
   c. A neck strap  
   d. Solid side shields

3. **Private labeling is when a retailer/supplier:**
   a. puts their own brand name on a product purchased from a manufacturer.  
   b. sells a product to a manufacturer under a different brand name.  
   c. manufactures a product using different brand names.  
   d. labels all of its products as a private rather than a public company.

4. **Which U.S. agency regulates the reuse of single-use medical devices?**
   a. FDA  
   b. CDC  
   c. EPA  
   d. OSHA

5. **Why is it important to use a positive control with each spore test?**
   a. to measure the total number of spores on the strips  
   b. to help confirm that the results of the testing are valid  
   c. to assure that the spores on the control strip are dead and do not grow  
   d. to show that processing through the sterilizer kills spores on the control strip

6. **Intermediate-level and low-level disinfectants are registered by the U.S.:**
   a. FDA  
   b. CDC  
   c. EPA  
   d. OSHA

7. **Sterilants/high-level disinfectants and medical devices are cleared for sale by the U.S.:**
   a. FDA  
   b. CDC  
   c. EPA  
   d. OSHA

8. **According to the CDC an intermediate-level disinfectant should be used:**
   a. on all environmental surfaces under all conditions.  
   b. for hand hygiene before putting on and after removing patient care gloves.  
   c. to sterilize instruments in an ultrasonic cleaner.  
   d. on surfaces contaminated with blood.

9. **When a disinfectant is transferred to other containers for use, how should the other containers be labeled?**
   a. “Disinfectant”  
   b. “Disinfectant” plus the expiration date  
   c. “Disinfectant” plus the expiration date plus the manufacturer’s name and address  
   d. “Disinfectant” plus the identity of the chemical and information about the physical and health hazards

10. **Use-life for a disinfectant is defined as the period of time it is effective after it has been:**
    a. manufactured but before it has been sold to the end user.  
    b. sold to the end user but before it has been opened.  
    c. opened, activated, or otherwise prepared for use by the end user.  
    d. applied to a surface for disinfection.

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What's It All About?

Discover the importance of following an established protocol and proper instructions when evaluating and using products in the workplace. Empower yourself and others in the office with knowledge of correct product use and how this impacts safe delivery of oral healthcare.

- Do you know about private labeling?
- Can you legally reuse disposables?
- Do you know the importance of product labeling?
- Do you know the steps to take when selecting and evaluating infection prevention products?

Read On!

In the next issue: Empower by Connecting with People