IN PRACTICE
Dentistry’s Newsletter for Infection Control and Safety

SPECIAL SERIES
This issue begins a series of six articles intended to help you with infection control by compartmentalizing the issues and procedures. We’ll look through the eyes of the employer, the staff and the patient, and we’ll start with “Before you Walk in the Door” followed by “The Patient Reception Area”, “The Operatory”, “The Instrument Processing Room”, “Support Equipment” and “Ending the Day”.

Before You Walk in the Door
Be prepared! Just unlocking the office door in the morning means that considerable work has taken place to get ready for the day. These efforts for safety and asepsis procedures are mostly behind the scenes and are unrecognized by patients. However, this work gives you satisfaction that the healthcare you’re about to provide will be safe and effective for patients and will help protect the entire office staff. Behind the scenes efforts will be mentioned in all of the upcoming articles in 2008. Those discussed here include the required infection control training; staff vaccinations and health programs; managing the exposure control program; safety device evaluations; and proper handling of hazardous chemicals.

Compliance and required training
An effective infection control coordinator or safety officer must be aware of the infection control and safety regulations and recommendations set forth by the Occupational Safety and Health Administration (OSHA)1 and the Centers for Disease Control and Prevention (CDC)2. These help provide safety for the office staff and patients.

Infection control is primarily based upon common sense, but having a foundation in microbiology and disease prevention enhances understanding and efficiency of infection control and safety procedures. It’s always better to know the why and how rather than just the how to do something. This is particularly true if you need to teach or reinforce procedures to other staff as is typical of infection control coordinators.

OSHA presents rules about providing training for those employees who may be exposed to human body fluids at work (see “Putting it All Together” on pages 4-5). This training will help you and other office staff protect yourselves from contact with potentially

Learning Objectives
After reading this article, the reader should be able to:

- recognize what general efforts are needed to develop a sound safety and infection control program for the office.
- access copies of official infection control rules and regulations.
- understand the general OSHA requirements for bloodborne pathogens training, a written exposure control plan and for hazard communications.
- recite what vaccinations should be considered for healthcare workers.
harmful microbes while providing safe care to your patients. Yes, we love our patients, but as you know they can carry harmful microbes that we would just as soon they keep to themselves.

Vaccinations, health programs and right-to-know
Besides having proper training about disease prevention and safety, being vaccinated also helps establish confidence in your work with patients knowing you’re protected against certain diseases. Again OSHA specifically requires employers to offer the hepatitis B vaccination to employees, but there are additional immunizations to consider for broader protection (see “Putting it All Together” on page 5). Remember your being vaccinated can also help protect your patients by eliminating you as a prime source of a particular disease.

Managing the development of the office health program recommended by CDC for the staff (see pages 4-5) gives the entire office confidence in addressing staff illnesses as well as patient safety.

All office employees have a “right-to-know” the hazards and identities of the chemicals used in the office so they can be used safely. Managing this program carefully is beneficial to all (see the hazard communication information on page 4).

Exposure Control Plan and evaluation of safety devices
Assuring compliance with the Exposure Control Plan as required by OSHA (see page 5) is very important for all in the office. It’s the written description of how the office will minimize employee exposure to patients’ body fluids. Related to this is a description of what to do if an exposure does occur. Scrambling around trying to decide what to do after an actual sharps injury does occur is not good for anyone involved. Also related to this is the evaluation of safety devices that may become available for use in the office.

— OSAP
Communicating for Compliance

Communication is important in any business. In the dental office it involves expressing correct information to the boss, the rest of the staff and to patients.

**Employer**

Make sure the boss knows what you’re doing in regard to coordinating the office safety program. Consider providing a brief but regular (e.g., monthly) report that includes many of the behind the scenes efforts such as:

- identification of new infection control products or safety devices for evaluation;
- any training/reinforcement needed;
- compliance issues in regard to OSHA rules and CDC recommendations;
- sterilization monitoring results;
- sterilizer maintenance schedule;
- progress on any safety promotions among the staff;
- inventory issues.

**Staff**

The hygienists, assistants, receptionists, managers and doctors have different roles in the office, but they all need to “buy in” to safety on a regular basis. Periodic communications to fight complacency about safety and emphasize behind the scenes efforts can include:

- signs posted in the lunch/break rooms reminding everyone about safety;
- a free lunch for whoever comes up with the coolest new safety sign each month;
- an in-depth review of a different safety procedure during each staff meeting.

**Patients**

Indiana has a law requiring that the following written information be displayed or made available to dental patients:

- a list of the State-required infection control efforts to be provided in the office;
- a description of the patient’s rights under this law;
- information on how to report violations of the required infection control procedures to the State Department of Health;
- a notice that the Department of Health is required to investigate the complaints.

Some patients are inquisitive about disease prevention efforts, so it might not be a bad idea to prepare written information describing some of those behind the scenes efforts mentioned in this issue.
Rules and recommendations
Make sure you have a copy of the OSHA and CDC infection control and hazardous chemicals rules and recommendations.

1 The OSHA bloodborne pathogens standard has the following seven main sections.
• Written Exposure Control Plan
• Exposure prevention methods
• Hepatitis B vaccination
• Post-exposure medical evaluation
• Hazard communication
• Training
• Recordkeeping
Since this standard must be made available to all in the office, go online and print off a copy (see Links to Resources).

2 The OSHA Hazard Communication standard concerning hazardous chemicals is composed of six sections.
• Hazard determination
• Written hazard communication program
• Labels and other forms of warning
• Material safety data sheets (MSDS)
• Employee information and training
• Trade Secrets
For a copy of this standard see Links to Resources.

3 The CDC infection control recommendations are organized into 9 sections.
• Personnel health program
• Preventing transmission of bloodborne pathogens
• Hand hygiene
• Personal protective equipment
• Sterilization and disinfection of patient-care items
• Contact dermatitis and latex hypersensitivity
• Environmental infection control
• Dental unit waterlines, biofilm and water quality
• Special considerations
For a copy of this standard see Links to Resources.

Training = better compliance + greater safety
The OSHA required initial and annual infection control training can be provided in a variety of ways but must contain:
• a copy of the standard and an explanation of its contents;
• a general explanation of the epidemiology and symptoms of bloodborne diseases;
• an explanation of the modes of transmission of bloodborne pathogens;
• an explanation of the employer’s Exposure Control Plan and how the employees can obtain a written copy;
• an explanation of appropriate methods of recognizing tasks and other activities that may involve exposure to blood and saliva;
• an explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment (PPE);
• information on the types, proper use, location, handling, decontamination and disposal of personal protective equipment;
• an explanation of the basis for selection of personal protective equipment;
• information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccination will be offered free of charge;
• information on the appropriate action to take and persons to contact in an emergency involving blood or saliva;
• an explanation of the procedure to follow if an exposure incident occurs, including the method of reporting continued on page 5
the incident and the medical follow-up that will be made available;
• information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident;
• an explanation of the signs and labels and/or color coding required to identify biohazards;
• an opportunity for interactive questions and answers with the person conducting the training session.

Personnel health program and immunizations
OSHA's bloodborne pathogens standard relates only to bloodborne diseases. While this standard does not outline a specific personnel health program, it does require offering office staff the vaccination series against hepatitis B and maintaining medical records related to the hepatitis B vaccination, and to any exposure incidents. CDC's personnel health program is much more extensive. CDC recommends that each office develop a written health program for the staff that includes policies, procedures, and guidelines for education and training; immunizations; exposure prevention and post-exposure management; medical conditions, work-related illness, and associated work restrictions; contact dermatitis and latex hypersensitivity; and maintenance of records, data management, and confidentiality.

According to CDC health-care personnel are considered to be at substantial risk for acquiring or transmitting: hepatitis B, influenza, measles, mumps, rubella, and varicella.

Since all of these diseases are vaccine-preventable, immunizations or demonstrated immunity should be considered.

The Exposure Control Plan
The OSHA bloodborne pathogens standard requires your office to have a written Exposure Control Plan that contains the following information.
• A determination of who in the office may have occupational exposure to blood or saliva
• A description of all methods of compliance to eliminate or reduce exposure of employees
• Hepatitis B vaccination program
• Post-exposure medical evaluation and follow-up procedures
• How biohazards will be communicated to employees
• A description of recordkeeping activities related to this standard
• Procedures to evaluate circumstances surrounding exposure incidents
• Annual documentation that any commercially available safety device designed to eliminate or minimize exposures have been considered for use in the office
• Documentation that “front line” employees involved in patient care are asked to provide input about identification, evaluation, and selection of effective engineering and work practice controls that may eliminate or minimize exposure.

Evaluation of safety devices
As described above under Exposure Control Plan the office is required to evaluate safety devices (e.g., safety syringes) that may become commercially available. This is described in the bloodborne pathogens standard with the step-by-step procedures summarized here.
1. Identify new safety devices
2. Evaluate new safety devices
3. Write up results of evaluation
4. Prepare a written justification for use or non-use of device
5. Describe how “front-line” staff are involved in the evaluations

In this issue, see page 8 for a creative “Practice Tip” from Eve Cuny on how to get your team involved in identifying and evaluating safety devices.

Do You Have a Written Plan?
✓ OSHA requires you to have a written Exposure Control Plan in the office.
✓ If you don’t have one, access the OSHA website, print off a boilerplate template form and fill in the blanks.
http://www.osha.gov/publications/osha3186.html
A first for the new flu vaccine
A trivalent influenza vaccine is developed two times a year -- one for the northern hemisphere’s flu season (November 2008 to April 2009) and one for the southern hemisphere’s flu season (May 2009 to October 2009). The vaccines contain two influenza type A strains and one type B strain. From September 2007 to January 2008 influenza A(H1N1) viruses predominated in most parts of the northern hemisphere and were associated with outbreaks in some countries. Influenza A(H3N2) was sporadic in many countries, but outbreaks were reported in the U.S. Influenza B viruses circulated at low levels in most countries throughout the period while outbreaks were reported in China, Hungary and the U.S. of America. In the U.S. 53% of analyzed strains were type A(H3H2) while 31% were type A(H1N1) and 16% type B. This is the first time all three virus strains in the vaccine have been changed compared to the previous vaccine.

WHO has recommended that vaccines for use in the 2008-2009 influenza season (northern hemisphere winter) contain the following:
- an A/Brisbane/59/2007 (H1N1)-like virus;
- an A/Brisbane/10/2007 (H3N2)-like virus*;
- a B/Florida/4/2006-like virus.#

* A/Brisbane/10/2007 is a current southern hemisphere vaccine virus
# B/Florida/4/2006 and B/Brisbane/3/2007 (a B/Florida/4/2006-like virus) are current southern hemisphere vaccine viruses

Further details are at:

Anti-HBs: Antibody against the hepatitis B surface antigen.

Engineering controls: Controls that isolate or remove the bloodborne pathogens hazard from a workplace; examples include sharps disposal containers and safer medical devices (such as self-sheathing needles and needless systems).

Exposure Control Plan: A healthcare facility’s written protocol for reducing the risk of occupational exposure.

Infection control coordinator: Person within a dental practice setting responsible for establishing infection control policies and standard operating procedures, managing exposure incidents, coordinating infection control training and record-keeping, and ensuring compliance with all applicable regulations and recommendations.

H1N1 and H3N2: These represent strains of the influenza A virus based on the nature of two components on the virus. One is the hemaglutinin or H antigen and the other is the neuraminidase or N antigen.

Trivalent: “Tri” means three and “valence” is a measure of the number of items present. This describes the number of protective antigens (e.g., strains of microbes) present in a vaccine. The influenza vaccine contains three (“tri”) microbes.

Work practice controls: Practices that reduce the likelihood of exposure by changing the manner in which a task is performed (for example, recapping needles with a one-handed scoop technique instead of using two hands).
If you wish to obtain one (1) hour of continuing-education (CE) credit, complete the following test by selecting the best answer and fax or mail it to the OSAP Central Office for grading. Please include a check or credit card to cover the appropriate fee as indicated below. Pending satisfactory results (at least seven out of ten), you will be issued a letter for one (1) CE credit hour. OSAP is recognized by the American Dental Association as a CERP Provider. For more information, call OSAP at 800-298-6727 (410-571-0003).

For each question, pick the best answer.

1. The bloodborne pathogens standard was developed by the:
   a. CDC  b. FDA  c. OSHA  d. EPA

2. The CDC suggests healthcare workers should consider immunizations or demonstration of immunity against all of the following except:
   a. influenza  b. tuberculosis  c. measles  d. rubella

3. OSHA requires employers to provide training to healthcare employees on:
   a. influenza  b. respiratory diseases  c. hepatitis B  d. typhoid fever

4. This OSHA training is required at the time of initial employment and thereafter:
   a. annually  b. bimonthly  c. monthly  d. weekly

5. Material Safety Data Sheets are required by which of the following?
   a. bloodborne pathogens standard  b. CDC guidelines  
   c. drinking water standard  d. hazard communication standard

6. Documentation that any new safety devices have been evaluated by the office must occur in which of the following?
   a. Exposure Control Plan  b. staff medical records  
   c. spore-testing logs  d. training records

7. Immunologic memory from the hepatitis B vaccinations lasts for at least:
   a. 2 years  b. 13 years  c. 23 years  d. 45 years

8. Indiana requires that information on infection control procedures used in the office and instructions on how to report violations be made available to:
   a. patients  b. office staff  c. housekeeping  d. dental laboratories

9. Which agency requires the office to have a written Exposure Control Plan?
   a. CDC  b. FDA  c. EPA  d. OSHA

10. What types of strains are present in the influenza vaccines?
    a. one type A and one type B  b. two type A and one type B  
    c. three type A  d. three type B

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One way to comply with the OSHA rule on evaluating safety devices is to first organize a scavenger hunt, in this case known as a “dental hunt”, for safety devices. This can best be done at your local, state or national dental meeting where vendors are showing their infection control products. Everyone from the office can browse through the exhibits identifying engineered devices that may enhance safety.

Once devices have been identified everyone from the office can participate in the screening of the devices by physically examining them and comparing them to the devices currently being used and established evaluation criteria. This screening is greatly facilitated by using CDC’s sample screening form as a guideline (http://www.cdc.gov/Oral-Health/infectioncontrol/pdf/screening.pdf). This form collects the opinions and observations of everyone on the dental hunt to determine the devices’ acceptability in a dental setting. Criteria for the screening phase will help determine whether the device is safe to use on patients, has safety features to protect dental personnel from sharps injury, is readily available for purchase, is easy and practical to use, and is compatible with other equipment.

Once the screening phase is completed, perform an evaluation for clinical use. Device evaluation involves a trial (or pilot test) to determine the acceptability of a safer dental device in an actual clinical setting. Criteria for the evaluation phase help determine impact on patient care, acceptability by users, and cost. The device evaluation should provide the infection control/safety coordinator with enough information to make an informed decision on whether to change devices. This evaluation is greatly facilitated by using CDC’s sample evaluation form as a guideline (http://www.cdc.gov/OralHealth/infectioncontrol/pdf/device.pdf).

Do you have a practice tip you’d like to share with other OSAP members and subscribers? Send your suggestions for enhancing dental infection control and safety in practice to editor@OSAP.org. Be sure to include contact information, a photo, and a brief bio. Thanks!