Infection Control

Dentistry’s Newsletter for Infection Control and Safety

OSAP’s Safety and Infection Control Report Card

The beginning of the New Year seems the perfect time to pull information together into a comprehensive checklist that dental offices may use to "grade" and if necessary, improve their infection control and safety programs.

Throughout the year, OSAP brings readers vital information related to health and safety for dental personnel and dental patients. OSAP does this with efforts such as its website, Infection Control in Practice (ICIP), OSAP Online Report, Annual Symposium, Federal Services Boot Camp, frequently asked questions (FAQs), press releases and electronic communiqués.

Agencies such as the Centers for Disease Control and Prevention (CDC) issue guidelines and recommendations that assist healthcare providers understand current concepts in safety. Regulatory agencies such as the Occupational Safety and Health Administration (OSHA) and the various state and regional licensure agencies issue minimum standards for infection control and other safety requirements.

The checklist in this issue assists the dental office in their compliance and safety efforts, but does not represent a comprehensive safety program. Place a checkmark next to each item on the checklist that represents a practice that your office is currently following. Add up your checkmarks at the end to see what grade your office receives for infection control and safety management.

INFECTION CONTROL

Exposure control plan

The plan lists job categories with occupational exposure to blood or other potentially infectious materials (OPIM) (i.e., dentist, dental assistant, dental hygienist).

The plan lists job categories in which some employees have exposure to blood or OPIM (i.e., receptionist, if the office employs two receptionists, one of whom occasional assists chairside or handles contaminated instruments).

Documentation of annual review and updating of the plan is in place.

Annual training includes a review of the epidemiology and transmission of infectious diseases and protective

Learning Objectives

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

- Understand the various health and safety issues in dental offices.
- Conduct a self-inspection of their infection control and safety program and practices.
- Discuss with other members of the dental team the opportunities for improving safety.
measures to prevent transmission in the workplace.

Records reflect annual training and provide a summary of training topics.

Contract employees and students addressed in plan.

Personnel protection

Personnel use Standard Precautions in the treatment of all patients.

Employee immunization records are up to date and complete for all employees with occupational exposure to blood or OPIM.

The employer offers the hepatitis B vaccine to all employees with occupational exposure to blood and OPIM within ten days of hire.

Personnel wear utility gloves when processing instruments or disinfecting operatories.

Employees who choose not to receive the vaccine sign the hepatitis B vaccine declination form.

Personal protective attire

Clinical personnel use exam (patient care) gloves for all procedures and for contact with contaminated surfaces and patient care items.

Personnel discard patient care gloves after each use, and do not wash or decontaminate gloves.

If gloves are cut, torn or punctured, personnel remove gloves, wash hands and place new gloves as soon as possible.

Personnel use sterile surgical gloves for surgical procedures.

Clinical personnel wear a surgical mask when there is a possibility of spray, droplet or spatter during patient treatment (i.e., when using handpieces or air/water syringes, when root planing, etc.).

Hand hygiene

Sinks, soap and disposable towels are available in each treatment room/area.

Personnel conduct hand washing (either soap and water or alcohol-based hand rub) before donning gloves, after removal of gloves and after barehanded contact with contaminated surfaces or equipment.

Personnel use antimicrobial soap and/or alcohol-based hand rubs in preparation for surgical procedures.

Personnel with weeping dermatitis or exudative lesions refrain from patient care and direct contact with patient care items.

Surface disinfection and barriers

Personnel place barriers on touch surfaces that are not disinfected between patients

Personnel change barriers between each patient

Personnel clean contaminated touch surfaces and equipment to remove visible and nonvisible debris before surface disinfection.

Personnel disinfect contaminated touch surfaces and equipment between each use.

Disinfectants used on surfaces contaminated with blood are EPA registered and indicate activity against TB.

Personnel discard single-use items after each use and do not attempt to reprocess for additional usage.

Sterilization of instruments

Transport of instruments to the cleaning area is in a container that is leak proof and puncture proof on the sides and bottom.

Personnel clean instruments with a mechanical device such as ultrasonic...
Infection Control In Practice

OSAP Report Card
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Injury prevention

✓ Personnel wear heavy-duty gloves when handling used instruments throughout the process of cleaning, packaging and loading the sterilizer.
✓ Personnel rinse and dry instrument upon removal from the ultrasonic cleaner, if one is used.
✓ Personnel place instruments in packaging made of appropriate materials for the sterilization process.
✓ The office does not reuse disposable packaging materials such as pouches and nylon tubing.
✓ The use of sterilization processes, including time, temperature, pressure, etc. are in accordance with the manufacturer’s instructions.
✓ The office uses biological monitoring (spore testing) weekly for each heat sterilizer.
✓ The method of storage for sterilized instruments prevents contact with moisture or contamination.

Dental Practice

✓ Personnel refrain from bending, breaking or manipulating used instruments, unless necessary for the success of the procedure.
✓ Personnel use a device such as forceps or needle holders if it is necessary to manipulate used needles.
✓ Clinical personnel routinely evaluate and, if found effective, implement the use of devices with sharps protection mechanisms (i.e., safety syringes, safety IV catheters, safety scalpels, etc.).

Exposure management

✓ The exposure control plan includes a procedure for reporting and responding to bloodborne exposures.
✓ The exposure control plan identifies an individual in the practice as the first responder to whom an exposed worker may report an exposure incident.
✓ A designated individual asks the source patient if they are willing to go to a healthcare professional for testing for bloodborne diseases to assist in the follow-up and evaluation of the exposure incident.
✓ The exposure control plan identifies a qualified healthcare professional (i.e., occupational health physician) to conduct the medical follow-up after an exposure incident.
✓ First aid materials such as antisepsic are available in the office.
✓ Eyewash stations are available in clinical areas.

Dental Treatment Water

✓ Output water from dental units does not exceed EPA drinking water standards (500 CFU/mL of heterotrophic water bacteria) for routine dental procedures.
✓ The office uses sterile saline or sterile water when performing oral surgical procedures.

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The office uses methods and equipment to maintain dental water quality as recommended by CDC, OSAP, licensing agencies and other authorities.

The office monitors water quality as recommended by the equipment manufacturer, the manufacturer of the waterline treatment product in use or CDC, OSAP and other agencies and organizations qualified to make recommendations on infection control issues.

Personnel discharge water and air through devices that connect to the water system and enter patients' mouths for at least 20-30 seconds between patients.

Dental radiology

Personnel use barriers on switches, knobs and control boxes.

Personnel use barriers on x-ray head, digital sensors and other objects that may become contaminated.

Personnel change barriers between each patient.

Film and digital sensor holders and positioning devices are heat sterilized between patients if heat stable or disinfected with an intermediate-level disinfectant if they are not heat stable.

Dental laboratory

The office has established a protocol for dental laboratory items that includes:

A dedicated receiving and disinfecting area.

Cleaning and disinfecting all impressions, prosthesis, etc. before handling in the laboratory.

Cleaning and sterilization or disinfection of contaminated laboratory items such as burs and polishing wheels after use.

Barrier protection or cleaning and disinfecting environmental surfaces subject to contamination.

Availability of a sharps container.

Communication with outside laboratories to determine what procedures they follow when returning cases to the office.

Training

Annual training includes the following:

An explanation of the contents of the OSHA Bloodborne Pathogens Standard.

A general explanation of the epidemiology and symptoms of bloodborne diseases.

An explanation of the modes of transmission of diseases.

An explanation of the exposure control plan and the means by which an employee can obtain a copy of the written plan.

An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.

An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practice controls, and personal protective equipment.

Information on the types, proper use, location, removal, handling, 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 and the benefits of being vaccinated, and that the vaccine was offered free of charge.

Information on the appropriate steps to take and the person(s) to contact in an emergency involving blood or other potentially infectious materials.

An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up available.

Information on the post-exposure evaluation and follow-up that the employer provides for employees following an exposure incident.

An explanation of the signs and labels and/or color-coding used to identify containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious materials, and other containers used to store, transport or ship blood or other potentially infectious materials.

An opportunity for interactive questions and answers with the person conducting the training session.

HAZARD COMMUNICATION

Hazardous materials inventory and the MSDS

The office has a written hazard communication program.

The office has a list (inventory) of all hazardous materials.

For each of the chemicals appearing on the list there is a corresponding Material Safety Data Sheet (MSDS).

Personnel review the safety information on the MSDS before working with a chemical product.

Containers of chemical products display labels with the product name and hazard warning statement (e.g., avoid contact with eyes, harmful if swallowed, etc.).

Secondary containers (such as spray bottles) also contain the product name and hazard warning statement.

Training in the hazard communication program includes:

Effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard presents in the workplace.

Either classifications of chemicals

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(i.e., flammables, corrosives, reac-
tives, toxins) or specific chemicals in
the workplace.
❖ A description of any operations in
work areas where hazardous chemi-
cals are present.
❖ The location and availability of the
written hazard communication pro-
gram, including the required list of
hazardous chemicals, and MSDS’s
required.
❖ Methods and observations to detect
the presence or release of a haz-
ardous chemical in the work area
(such as monitoring conducted by
the employer, continuous monitor-
ing devices, visual appearance or
odor of hazardous chemicals when
being released, etc.).
❖ Discussion of the physical and
health hazards of the chemicals in
the work area.
❖ The measures employees can take to
protect themselves from these haz-
ards, including specific procedures
the employer has implemented to
protect employees from exposure to
hazardous chemicals, such as appro-
priate work practices.
❖ Emergency procedures, and person-
al protective equipment to be used.
❖ The details of the hazard communi-
cation program, including an expla-
nation of labels and MSDS’s, and
how employees can obtain and use
the appropriate hazard information.

Clean-up materials
❖ Absorbents, containers and other
materials necessary for clean up of a
hazardous material release are avail-
able in areas where hazardous ma-
terials are present.

GENERAL SAFETY
❖ Electrical cords are free from dam-
age and outlets are not overloaded.
❖ Aisles and exits allow for rapid
egress in the event of an emergency.
❖ The office has an emergency plan
that defines the role of individuals
in emergencies such as fire, earth-
quake, hurricane, tornado, etc.
❖ Lighted signs clearly indicate the lo-
cation of exits.
❖ Location of eyewash stations allow
employees access within ten seconds
when using hazardous chemicals.

EXPOSURE MONITORING AND
PREVENTION
❖ Employees remain outside the active
beam when exposing radiographs.
❖ X-ray equipment is collimated to
produce most effective and safest
active beam.
❖ Employees do not hold patient or
film during x-ray exposure.
❖ The office employs the use of high-
speed film.
❖ When appropriate, the office moni-
tors personnel exposure to radiation.
(Note: additional monitoring is not
necessary unless equipment or pro-
cedures change that could result in a
change in exposure levels).
❖ Nitrous oxide equipment has fail-
safe mechanism that prevents less
than 30% concentration of oxygen
delivered in conjunction with deliv-
er of nitrous oxide.
❖ Nitrous oxide equipment has scav-
enging system integrated into nose-
piece placed on patient’s face.
❖ The office conducts personnel test-
ing for nitrous oxide to establish ex-
posure does not exceed the recom-
   mended levels (25 parts per million
   over an 8-hour time weighted aver-
ga)
❖ The office repeats monitoring for
over exposure to nitrous oxide when
a change in procedures, a change in
equipment or regulatory mandate
indicates a need.

ERGONOMICS
❖ Placement of dental equipment pre-
vents the need for excessive reaching
and use of awkward postures by
dental team.
❖ Positioning of patient and patient
chair allows dental team to avoid
excessive leaning.
❖ The operator maintains a 12-14”
focal distance when working in the
patient’s mouth.
❖ Assistant and operator stools allow
adjustment of height, backrest and
seat pan angle.
Infection Control In Practice provides this calendar listing typical schedules for periodic maintenance, record-keeping, and infection control activities. This schedule is intended only to serve as a guide. Proper practices, procedures, and maintenance schedules can vary according to the kinds of products used, the practice type, and patient volume.

### January 2006

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<td>Monthly: read water test results; retreat lines if necessary Weekly: clean evacuation traps</td>
<td>Martin Luther King Day observed</td>
<td>Monthly: foil test ultrasonic cleaners</td>
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<td>Weekly: clean evacuation traps</td>
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**Chicago Midwinter Meeting, Chicago, IL**
If you wish to obtain one (1) hour of continuing-education (CE) credit, complete the following test and fax or mail it to the OSAP Central Office for grading. Please include a check or credit card to cover handling charges. 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).

1. The exposure control plan must be updated at least:
   a. monthly   b. semi-annually   c. annually   d. biannually

2. Training in the Bloodborne Pathogens Rule must be provided:
   a. monthly   b. semi-annually   c. annually   d. biannually

3. The Hepatitis B vaccine must be offered to employees with occupational exposure within ____ days of hire.
   a. one   b. five   c. ten   d. fourteen

4. Before disinfecting contaminated touch surfaces in dental treatment rooms, personnel must first:
   a. place impervious barriers   b. clean the surfaces
   c. remove impervious barriers   d. wipe with a dry towel

5. The government agency that registers surface disinfectants is the:
   a. FDA   b. CDC   c. OSHA   d. EPA

6. Biological monitors (spore tests) should be used at least how often to verify the sterilization process?
   a. daily   b. weekly   c. semi-monthly   d. monthly

7. What is one type of medical professional qualified to conduct follow-up for exposure incidents?
   a. occupational health physician   b. family practitioner
   c. internist   d. industrial engineer

8. The EPA standard for drinking water is no more than ____ CFU/mL of heterotrophic water bacteria.
   a. 100   b. 300   c. 500   d. 1,000

9. The Hazard Communication Standard requires offices to maintain an inventory of:
   a. hazardous materials   b. dental materials
   c. hazardous waste   d. personal protective attire

10. The recommended exposure limits for nitrous oxide are ____ ppm over an 8-hour time weighted average.
    a. 10   b. 25   c. 75   d. 100

Mail or Fax completed test to receive (1) hour of continuing-education credit, or visit www.OSAP.org to test online.

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MAIL TO: OSAP CE • P.O. Box 6297 • Annapolis, MD 21401 • USA  FAX TO: 410.571.0028
By now we all know that the 2003 Centers for Disease Control and Prevention’s (CDC) Guidelines for Infection Control in Dental Health-Care Settings-2003 recommend using water that meets the Environmental Protection Agency’s (EPA) regulatory standards for drinking water (i.e., <500 CFU/mL of heterotrophic water bacteria) for routine dental treatment output water. What is not always as clear is how the dental team can select products, maintain the equipment and assure they meet this goal.

Currently, there is no universally accepted product or protocol for improving dental water quality. Many experts feel it is likely that dental practices will use a combination of approaches. Some of the things to consider besides effectiveness in reducing bacterial contamination of the water are cost, ease of use, registration by the appropriate government agencies such as the EPA, compatibility with equipment and dental materials and safety to the patient. Uncovering this information about the myriad products currently on the market is a daunting task for a busy dental office.

There are two highly useful and free resources for finding information about the various treatment products on the market today. To help clinicians choose a dental unit waterline treatment product, the USAF Dental Evaluation and Consultation Service (DECS) recently surveyed manufacturers and compiled a list comparing over twenty commercially available products. The synopsis of dental unit waterline treatment products is available by visiting https://decs.nhgl.med.navy.mil/2QT R04/P PRODUCTEVALUATIONS/waterlineattachment.htm.

OSAP also has a listing of products on its website.

Jennifer Harte, DDS is the chief military consultant for dental infection control to the Air Force Surgeon General, US Air Force Dental Evaluation and Consultation Service (DECS), Great Lakes, IL. She has been an OSAP member since 2000.

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!