Our series of topics for this year is designed to help you with infection control and safety by addressing some different circumstances that can occur in the office. This issue explores the important infection control considerations when “Bringing the Outside In” to the office. Earlier issues were “So you just became the Office Safety Coordinator—What do you do now?”, “When Stuff Happens” and “Special Patients”. This issue will be followed by “High Tech Infection Control” and “Frequently Asked Questions”.

Bringing the Outside In

Here are some examples of items that come into a dental office. How to manage these from an infection control point of view is discussed under Putting it All Together.

PEOPLE
Patients are arguably the most important people who enter the dental office. They not only present with their dental needs but, unfortunately, also bring in their associated microbes. This is one of the most important reasons why we perform infection control procedures – to reduce the spread of those microbes to others. Additional persons who come in from the outside include the regular and temporary office staff, house cleaning crews, student trainees, sales representatives, medical waste haulers and repair persons. Since these persons work in or at least pass through the clinical areas of the office, they need to be protected by, aware of and adhere to proper infection control procedures. Other people including delivery persons, patients’ family members and visitors enter the office and usually remain in the waiting room, except sometimes a delivery person may enter through a back door or a parent may accompany their child to the operatory. All of the people who enter the office may use the restroom facilities, so maintaining cleanliness there is essential for both image and preventing microbe spread.

NATURAL RESOURCES
There are many other things besides people that come into the office and appropriate management of these is the topic of our discussion. Examples include air, water, sunlight and soil. We can’t do without air, but it can carry microbes in dental aerosol particles and droplet nuclei and on dust particles. Water coming into the office is usually of fairly good microbial quality. However, it is not sterile, and can become heavily contaminated.

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Bringing the Outside In
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as it passes through the dental unit. Soil is tracked into the office on everyone's shoes and is commonly deposited on the waiting room carpeting. This contributes to the dust particles in the office that can carry microbes. Sunlight is great except when it heats up areas of the office or directly hits some materials such as latex gloves decreasing their life span.

FOOD
Food brought into the office for lunch or parties is usually low in microbial contamination. But the low level can increase if the food items are not stored properly or they can become contaminated with new microbes or hazardous materials. It is also not appropriate to take food or drink into the dental operatory or laboratory.

DELIVERIES
Items received from a dental lab have usually been disinfected at the lab, but this needs to be confirmed. Supplies, new equipment, repaired equipment and mail also “bring the outside in” to the office.

Did You Know?

Did you know that the Occupational Safety and Health Administration (OSHA) has a model Exposure Control Plan and a model Hazard Communication Plan on its Web site? You can print these off and fill in the blanks relative to your office situation. Even if you already have such written documents, it might be good to check out the ones from OSHA to make sure yours are complete.

What’s Wrong With This Picture?

Can you identify any safety or infection control violations in this photo? Check your answers below.
Putting It All Together

PEOPLE
Reducing the spread of microbes from patients to staff, staff to patients and patients to patients involves the familiar procedures of barrier techniques, sterilization, surface asepsis, proper waste management, sharps safety, aseptic techniques, lab asepsis, radiographic asepsis and dental unit water asepsis.

STAFF
Offices may consider developing a “no scent policy” to eliminate the use of perfumes at work, as some patients may find these unpleasant and they can trigger allergic reactions. Additionally, patients who are allergic to perfumes often react by sneezing, thereby spreading airborne microbes.

Consider leaving bracelets and rings at home for they may contribute to cross-contamination or interfere with the gloving process. Any cosmetics, lip balm or contact lenses used in the office should be applied only with clean hands and not in areas where there is a chance for exposure to blood, saliva or other body fluids.

TEMPS
Temporary hygienists, assistants, dentists and student trainees who may be in the office should already have sufficient infection control knowledge, but this should be confirmed. New and temporary personnel need training to ensure office knowledge for location of personal protective equipment (PPE), Material Safety Data Sheets (MSDS) and eyewash stations, and who to report to in the event of exposures and to assist with any other special aspects of the office’s infection control and safety program. A one-page summary sheet with this information is useful to assure that temporary staff stay informed whereas trainees should become familiar with the office infection prevention and control manual.

HOUSEKEEPING
The housekeeping staff must be trained by their original employers, but this training should be confirmed by you. Their training should include how to safely manage waste, how to recognize hazardous materials and situations, how to properly use cleaning/disinfecting materials and equipment, and what personal protective barriers should be used plus whatever other OSHA-required training is needed. Also confirm exactly what the cleaning crew is supposed to clean and know what procedures and products they will use. For example if they are into “green cleaning”, make sure they are not just using products that have been diluted to add lower amounts of chemicals to the environment. Dilution frequently leads to lowered effectiveness. You also need to inform them of any areas they should not touch (e.g., items in the sterilizing room; disinfected and covered dental units; certain countertops or work areas). You also need to continually remind the office personnel to use appropriate sharps containers and never place sharps in the regular trash, for this can result in serious exposure/injury of housekeeping staff. Sharps containers should also be exchanged prior to becoming completely full to prevent significant exposures to both regular and housekeeping staff.

OBSEVERS
Observers (e.g., persons interested in becoming a dental professional or family members of patients) usually lack sufficient dental infection control knowledge. So they need to be instructed about what they can and cannot touch, and they should be provided PPE if there is any chance they may become exposed to patient’s body fluids.

DELIVERY/REPAIR PERSONNEL
Delivery persons need to be instructed where to enter the office (e.g., the back door) to minimize disruption. They along with sales representatives should be instructed not to touch any clinical or laboratory surfaces. Active treatment areas should be cleaned and disinfected before and after any repair activities. Repair/service persons should know not to work on clinical equipment without wearing gloves or confirming that the equipment has been disinfected. Medical waste haulers coming to pick up sharps containers should already be trained on how to properly handle hazardous materials.

NATURAL RESOURCES
Fresh air is great, but open windows in the office allow entry of airborne dust particles and insects. Having fans in the office is not a good idea, especially in the sterilizing room or clinical areas, for they distribute contaminants in the air to multiple surfaces. Also hot air hand dryers (sometimes placed in restrooms) draw in air and any contaminants therein and blow them directly onto your previously cleaned hands. Hand drying after routine handwashing is best accomplished Continued on page 5
Communicate and Educate

Educate the staff about all of the things that should be done to protect the office environment from people and things coming in from the outside. Thus, when they detect a breach of a given policy or procedure they can communicate this to you for correction. Check out the “Bright Ideas” section for tips to visually educate and communicate.

Here are some ideas for a “checklist” that can be displayed in the office break room:

### How NOT to Bring the Outside In

**(Personal)**
- Wear office clothing only in the office
- Cover uniforms or remove clinic jackets when eating
- Store food appropriately and only in food friendly spaces
- Use welcome mats
- Avoid wearing perfume
- Avoid wearing bracelets and rings
- Use sharps containers
- Supply PPE for ‘guests and visitors’ when needed
- Supply gloves to outside reps when necessary

**(Environment)**
- Unpack boxes in non-clinical areas
- Food containers in the refrigerator must be dated and labeled
- Dehumidify rooms when necessary
- Display “no touch zone” signs for housekeeping staff

### Around the World

In developing and underdeveloped countries, the flow of people through the dental operatory remains a challenge, particularly in the public health sector. It is necessary to emphasize that infection prevention and control begins with defining who/when/how people can be in the clinical areas. In this regard, many dental schools I have visited perpetuate unsafe behaviors that the local society sees as normal, including food vendors in waiting rooms and food consumption in the clinic. Educational efforts are needed to train authorities, faculty, students and patients to understand that the functioning of dental clinics must reflect the highest standards of safety. Hopefully, safer behavior and infection control will follow our graduates into their private practice.

On September 23rd Mexico’s Ministry of Health, the Pan-American Health Organization and the Mexican Network of Patients for Patient Safety will hold the First National Workshop on Patients for Patient Safety. For further information contact: curiel@servidor.unam.mx.

Enrique Acosta-Gio, DDS, PhD
National University, Mexico

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What are your “Bright Ideas”? Sometimes the simplest changes to daily routine can make a big difference! What changes or ideas have you implemented in your office or clinic to make it easier to comply with infection control and safety procedures?

Do you have a bright idea about infection control/safety you’d like to share with us?

Email it to office@osap.org and be sure to include your contact information, a 10-word description of your title and role, and a jpeg photo (if you choose).

Or, fax your “Bright Idea” to OSAP at 1-410-571-0028.

We look forward to your input!
Putting It All Together

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by using disposable paper towels.

In humid, hot climates it may be necessary to control humidity levels to prevent the growth of mold in storage rooms or basement areas where supplies may be stored. Humidity control may also be a concern in carpeted patient reception areas, since some patients may be sensitive or allergic to mold. Although mold growth is a normal occurrence in nature, some types of mold may be toxic. Mold test kits or mold testing services are available to determine mold toxicity if you suspect or observe mold growth indoors.

Water that is piped into the office is supposed to be potable, but can become highly contaminated as it passes through the dental unit waterlines. As the water flows through these waterlines it can pick up microbes from the waterline biofilm and carry them to the mouth of the patient. One of the microbial properties of good quality drinking water is having less than 500 total bacteria per mL, a standard established by the Environmental Protection Agency (EPA). While good quality drinking water can come into the office, water coming out of the high-speed handpiece or air/water syringe could have a million bacteria per mL unless steps are taken to keep the microbial level in dental unit water low. There are a variety of equipment and chemicals available to help maintain good quality dental unit water.

Soil on the bottom of shoes can contain numerous microbes that are mainly deposited on the waiting room carpeting and elsewhere. The International Sanitary Supply Association reports that most of the dirt within a building is tracked in on people’s shoes, and that 85% of this can be removed if entry floor mats are properly designed and maintained. Scraper, absorbent and finishing mats that can collect dirt or moisture are described by the (EPA). Daily vacuuming of carpeting also helps maintain a good indoor air quality.

FOOD

Food in the office (as in the home) should be protected from the environment and some should be kept frozen or refrigerated until used. If food is kept out in the open, it should be covered. Food and drink should not be kept in refrigerators, shelves, cabinets, countertops or benches where blood, saliva, other body fluids or hazardous chemicals are present.

DELEIVERABLES

Items received from a dental lab should be placed at a specific receiving area in the office that is kept clean and disinfected. The decontamination status of these items needs to be confirmed with the lab to determine if disinfection and rinsing is needed before delivering to the patient. Supply and equipment items that are shipped to the office should be unpackaged and bulk-stored in non-clinical areas. Items stored for use in a clinical area need to be covered and retrieved only with an aseptic technique such as using cotton forceps, clean gloves or overgloves.
Roadmap to OSAP

If you have received this newsletter from a friend or associate, you can access other helpful resources and timely information on infection control and safety by becoming a member of the OSAP community.

**Member resources include:**
- Topical updates such as recent information on Influenza A(H1N1)/swine flu
- Written references responses to your IC questions (“Ask OSAP”)
- Surface disinfectants chart
- Free online CDC Guidelines course
- Weekly and monthly online IC news round-ups
- Annual infection prevention symposium - June 10-13, 2010 in Tampa, FL!
- Infection Control Educator’s Kit
- Free downloads of mission trip IC guide, traveler’s guide and **much more**!

**Member registration is easy.**
Online at [www.osap.org](http://www.osap.org) or by phone: 1-800-298-OSAP (6727) within the U.S. or 1-410-571-0003 outside the U.S.

**Current membership levels:**
- Individual member (within the U.S.) $110
- Individual member (outside the U.S.) $160
- Web-only member (anywhere) $100
- Student member $25
- Corporate memberships are welcome; please contact OSAP for more information.

Glossary

**Dental aerosols:** Particles of a size that can be inhaled (less than 10 micrometers in diameter) generated by both humans and environmental sources that can survive and remain airborne for extended periods in the indoor environment. Sources of aerosols in the dental setting include the use of handpieces, ultrasonic scalers and air/water syringes.

**Droplet nuclei:** Potentially infectious microscopic particles (5 micrometers or less in diameter) that can remain suspended in the air for long periods of time; formed by dehydration of airborne droplets containing microorganisms.

**Green cleaning:** Use of those products and services that have a lesser or reduced impact on human health and the environment when compared with competing products or services that serve the same purpose.

**Potable:** Water that is of sufficiently high quality that it can be consumed or used without risk of immediate or long-term harm is commonly called potable water (water suitable for drinking).

**Material Safety Data Sheet (MSDS):** A document prepared by the manufacturer of a hazardous chemical that provides information on the manufacturer, properties, and health hazards of the chemical; precautions needed when handling the chemical; and emergency and first aid procedures to use if exposure occurs. You need to have an MSDS for each hazardous chemical present in the office as required by OSHA’s Hazard Communication Standard.

**Links to Resources**

# Continuing Education

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 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 (1-410-571-0003).

For each item, pick the best answer.

1. **What item(s) should dental office personnel consider not wearing to work?**
   a. Corrective eye glasses
   b. Strong perfume or cologne
   c. Clog-type shoes
   d. Slacks

2. **Which of the following natural resources that enter a dental office contain microbes?**
   a. Air
   b. Water
   c. Soil
   d. a, b and c

3. **Dental aerosols are best defined as:**
   a. Large visible particles that are generated from some dental procedures and that settle out quickly.
   b. Small particles less than 10 micrometers in diameter that are generated from some dental procedures and can remain airborne for a long time.
   c. Small, partially dehydrated particles less than 5 micrometers in diameter that are generated from some dental procedures and can remain airborne for a long time.
   d. Spatter droplets

4. **Droplet nuclei are best defined as:**
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   c. Small, partially dehydrated particles less than 5 micrometers in diameter that are generated from some dental procedures and can remain airborne for a long time.
   d. Spatter droplets

5. **What is potable water?**
   a. Water that is carried in a metal pot
   b. Water that can remain clear (no cloudy bacterial growth) when stored at room temperature for 30 or more days
   c. Water that has been heat sterilized
   d. Water suitable for drinking

6. **Which agency established the drinking water quality standard for the United States?**
   a. OSHA
   b. CDC
   c. EPA
   d. FDA

7. **One of the microbial standards for drinking water is that it should have:**
   a. Less than 500 total bacteria per mL.
   b. At least 500 total bacteria per mL.
   c. Less than 500 total bacteria per liter.
   d. Less than 500 total bacteria per gallon.

8. **Green cleaning is:**
   a. Cleaning a surface for the very first time.
   b. Cleaning with products that have been shown to be friendlier to the environment than other products used for the same purpose.
   c. A procedure involving the placement of a green sticker on those operatory surfaces that need to be cleaned after each patient.
   d. Using green soap to clean a contaminated surface.

9. **The International Sanitary Supply Association reports that most of the dirt within a building enters the building:**
   a. In the air.
   b. In the water.
   c. On delivered packages and mail.
   d. On people's shoes.

10. **Who can provide model plans for the Bloodborne Pathogens and Hazard Communication Standards?**
    a. OSHA
    b. CDC
    c. EPA
    d. FDA

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Please mail or fax completed test with the appropriate payment to receive one (1) hour of continuing education credit.

Your Name: ___________________________  OSAP Member Name: ___________________________

Address: ___________________________  City: ___________________________  State: ______  ZIP: ______

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Fees:  
  - OSAP MEMBER, $15  
  - NON-MEMBER, $20

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  - MASTERCARD  
  - VISA  
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After completing the information above:
mail to: OSAP CE, P.O. Box 6297, Annapolis, MD 21401, USA  or fax to: 1-410-571-0028
(NEW! Members can now complete this CE test conveniently online at www.osap.org.)
Bright Ideas

Action items
An office bulletin board can be a central location to display an “Action Items” sheet where office staff can quickly jot down things that need follow-up. For example, someone may notice that the cleaning staff is neglecting a room, or more non-clinical storage space is needed to take advantage of bulk pricing on items. These observations and ideas can then be discussed at the next staff meeting. Be sure to attach a pen to the bulletin board to facilitate use of this important internal communications tool.

Customize your own safety signs
To keep staff reminded of items that need attention or to reinforce infection control and safety practices, short one-line reminders can be helpful. You can make your own hand printed reminders, or make customized signs using a template supplied at one of the medical safety sign websites to create your own signs using an inkjet printer. Some suggestions are:

- spore test this Friday
- recap safely
- look before you reach
- check your gloves
- clean your hands
- check eye-wash stations

Please forward this issue of ICIP to other dental professionals involved in infection control and safety.