Other Infection Prevention & Control Questions

Question: Can you review Transmission Based Precautions and explain how they differ from Standard Precautions?

Answer: Using Standard Precautions is the primary infection control strategy and is designed for all patients regardless of their diagnosis or presumed infectious status. Standard Precautions are sometimes referred to as the first tier of precautions because when patients present with documented or suspected infection with highly transmissible pathogens additional measures, or a second tier of precautions, are necessary to prevent the potential spread of these diseases. In other words, when the routes of transmission cannot be completely interrupted with Standard Precautions alone, it is necessary to use Transmission Based Precautions. There are three categories of Transmission Based Precautions: Airborne, Droplet, and Contact which mirror the modes of disease transmission. More than one Transmission Based Precaution category may apply because some diseases are spread by multiple routes of transmission. It is important to note that when used alone or in combination, Transmission Based Precautions are always used in addition to Standard Precautions.

Contact Precautions are intended to prevent transmission of infectious agents spread by direct or indirect contact with the patient or the patient’s environment. The goal of Droplet Precautions is to prevent transmission of pathogens spread through close respiratory or mucous membrane contact with respiratory secretions. Person-to-person transmission can occur when an infected person coughs, sneezes, or talks and generates large particle droplets (> 5 µm). Spatter of blood and saliva are frequently generated during dental treatment and if these materials from an infected patient contact unprotected broken skin or mucous membranes, disease transmission may occur. Generally, special ventilation requirements are not needed to prevent droplet transmission because these pathogens do not remain infectious over long distances in a health care facility. Airborne transmission involves smaller particles (< 5µm) called droplet nuclei or aerosols. Transmission occurs when these particles, which can remain suspended in the air for long periods of time, are inhaled by dental health-care personnel or patients. Exposure to aerosols containing microorganisms from patient’s blood or saliva may occur when using rotary instruments including dental handpieces or ultrasonic scalers. Airborne Precautions are used to prevent transmission of infectious agents that remain infectious over long distances when suspended in the air. The following table presents representative conditions and disease requiring Transmission Based Precautions.
## Select Conditions/Diseases Requiring Transmission Based Precautions*

<table>
<thead>
<tr>
<th>Disease/Condition</th>
<th>Contact Precautions</th>
<th>Droplet Precautions</th>
<th>Airborne Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Clostridium difficile</em></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Herpes simplex (muco-cutaneous, disseminated</td>
<td>X</td>
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<tr>
<td>or primary, severe)</td>
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<tr>
<td>Influenza Human (seasonal)</td>
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<td>X</td>
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<tr>
<td>H1N1 Influenza</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Lice (Head—pediculosis)</td>
<td>X</td>
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<tr>
<td>Methicillin-resistant <em>Staphylococcus aureus</em></td>
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<td></td>
<td>X</td>
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<tr>
<td>(MRSA)</td>
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<td></td>
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<tr>
<td>Mumps</td>
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<td></td>
<td>X</td>
</tr>
<tr>
<td>Pertussis</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Rubella</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Severe acute respiratory syndrome (SARS)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Smallpox (variola)</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Tuberculosis (confirmed pulmonary or laryngeal)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Varicella Zoster (chicken pox)</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

* Transmission based precautions are always used in addition to Standard Precautions.


The Centers for Disease Control and Prevention (CDC) published isolation precaution guidelines addressing Transmission Based Precautions in 2007. This guideline includes Ebola virus Disease Update [2014], Measles Update [November 2011] and Tdap vaccine Recommendations [2011]. Recommendations are made for ambulatory care settings which include dental offices/clinics. Several challenges exist for ambulatory care/out-patient settings including not being able to identify infectious patients immediately; patients frequently stay in common waiting areas for prolonged periods; and treatment rooms may be turned around quickly with limited cleaning.

This guideline includes a comprehensive review and recommendations for prevention of transmission of multidrug resistant organisms (MDROs), most notably MRSA.

Traditionally, patients with diseases requiring Transmission Based Precautions were too ill to seek routine outpatient dental care, however with the emergence of new pathogens and more patients seeking care in ambulatory care facilities dental healthcare personnel need to be aware of additional measures to take when treating these patients in an outpatient setting to fully protect other patients, their staff, and themselves. The *Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings, 2007* and *Management of Multidrug-Resistant Organisms in Healthcare Settings, 2006* can be downloaded by visiting: https://www.cdc.gov/infectioncontrol/guidelines/index.html.

### References

Infection Control Challenges When Sharpening Instruments UPDATED (10/17)

**Question:** Do you have any safety and infection control tips to share regarding instrument sharpening?

**Answer:** Sharpening a contaminated instrument puts individuals at risk for disease spread from accidental cuts and punctures. The safest option is to clean, sterilize, sharpen, and resterilize the instrument. If an instrument is dull during patient care, the best option is to provide extra instruments (e.g., scalers) in each instrument kit rather than sharpening contaminated instruments chairside. Since this may not be possible from a logistics standpoint, if you do have to sharpen a contaminated scaler, Dr. Chris Miller suggests taping the sterile sharpening stone to the countertop and using one hand to sharpen the instrument. If using two hands, great care must be taken to prevent accidental cuts or punctures and appropriate Personal Protective Equipment (PPE), including puncture and chemical resistant gloves, should be worn. As a reminder, any time that a sharpening stone is used with contaminated instruments it must be cleaned and heat sterilized between patients.

**Reference**


Food & Drinks in the Dental Operatory UPDATED (10/17)

**Question:** I know we can't eat in the dental operatory, but can we store a bottle of water in a cabinet if we label it “Water, For Personal Use”?

**Answer:** No, Ideally, all clinics should establish a designated lunch/break area. As a reminder, the goals of the USAF Infection Control Program are to protect the health of all patients, staff, volunteers and visitors to comply with applicable federal, state, and local regulations. According to the OSHA Bloodborne Pathogens (BBP) Standard, “eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.” The BBP Standard also states: “Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on countertops or benchtops where blood or Other Potentially Infectious Materials (OPIM) are present.” This includes dental operatories, radiology, laboratory, and instrument processing areas. It is important to understand that in addition to the food or drink becoming contaminated; the containers may become contaminated, resulting in unsuspected contamination of your hands. Another concern of having food and drink in patient-care and other work areas is the attraction of insects to any debris or spillage. Additionally, according to OSHA, personnel are not allowed to consume food or beverages in any area exposed to a toxic material. In summary, the above items must be stored and consumed outside of areas where there is the potential for contamination.
References

CDC Dental Infection Control Guidelines REVISED (3/16)

Question: I can't find the 2016 Centers for Disease Control and Prevention (CDC) dental infection control guidelines. Can you please send us a copy for our clinic notebook?

Answer: Click Here for the Summary of Infection Prevention Practices in Dental Settings- Basic Expectations for Safe Care-2016. This is also available on the DECS Website under Infection Control Resources.

Click Here for the 2003 Centers for Disease Control and Prevention (CDC) dental infection control guidelines.

Setting Up Instruments Before the Procedure UPDATED (10/17)

Question: I've heard that some dental clinics follow the practice of setting up instruments, covered by a wrap, before leaving for lunch. What is the general opinion of this type practice?

Answer: This practice is not acceptable because all sterile supplies, including sterile reusable dental items, must be stored in a manner that will preserve their sterility until used. The purpose of packaging is to protect instruments from contamination after removal from the sterilizer and during storage. Instruments and devices should be kept wrapped until they are needed during the procedure, thus reducing the chance of contamination. Several sources provide guidance about whether or not this practice is acceptable.

From the Centers for Disease Control and Prevention Guidelines for Infection Control in Dental Health-Care Settings—2003: When sterile items are open to the air, they will eventually become contaminated. Storage, even temporary, of unwrapped semicritical instruments is discouraged because it permits exposure to dust, airborne organisms, and other unnecessary contamination before use on a patient.

From Infection Control and Management of Hazardous Materials for the Dental Team (2018, p.133): “Sterilized instrument cassettes are distributed to and opened at chairside. Placement of unwrapped or wrapped instruments in drawers or cabinets for direct use at chairside during patient care is not recommended. The drawers or cabinets and their contents are contaminated too easily from retrieval of items with saliva-coated fingers and from contaminated aerosols. This type of storage/distribution system at chairside for instruments or supplies is fraught with great potential for cross contamination.” Dr. Miller also addresses procedures for opening packages: “One should open the packages with clean, ungloved hands after the patient is seated and then put on gloves just before first contact with the patient’s mouth. Alternatively, one may open the packages with ungloved hands and immediately cover the instruments.
with a sterile drape before seating the patient. If one opens instrument packages with gloved hands, the gloves will become contaminated with any microorganisms on the outside of the packaging." For additional details about opening sterile instrument packages click here.

From Cottone’s Practical Infection Control in Dentistry (2009): “Proper care and storage of packaged, sterilized instruments will ensure that they will remain sterile until the package is opened at the time of use.”

References

Respiratory Hygiene/Cough Etiquette REVIEWED (10/17)

Question: Do you recommended placing signs in the dental clinic to help prevent the transmission of respiratory infections in healthcare settings? If yes, where can I obtain these signs?

Answer: Several visual alerts are available from the Centers for Disease Control and Prevention (CDC) for use in outpatient healthcare facilities, such as dental offices. These instruct patients and visitors to inform healthcare personnel if they are experiencing any symptoms of a respiratory infection and to practice respiratory hygiene and cough etiquette. This is an excellent idea, especially during cold and flu season. Links to these signs can be found in the Influenza InControl Fact Sheet. These infection control measures are a component of Standard Precautions.

A notice for patients to report flu symptoms, emphasizing covering coughs and sneezes and hand hygiene is available by visiting: www.cdc.gov/flu/protect/covercough.htm.

Plants in Patient-Care Areas REVIEWED (10/17)

Question: Is it acceptable to have live plants in the dental operatory?

Answer: Bacteria have been associated with flowers in vases and potted plants, however minimal or no evidence indicates that the presence of plants in immunocompetent patient-care areas poses an increased risk of health-care-associated infection. Nonetheless, according to the 2004 Centers for Disease Control and Prevention Guidelines for Environmental Infection Control in Health-Care Facilities several precautions should be implemented. These include advising staff members to wear gloves when handling plants and washing hands after handling plants. Additionally, if fresh flowers are placed in a patient-care area, consider changing the vase water every
two days and discharging the water into a sink outside the immediate patient environment. Cleaning and disinfecting vases after use is also recommended.

Reference

Frequency of Infection Control Inspections UPDATED (10/17)
Question: How often should we perform infection control inspections in the dental clinic?

Answer: The goals of the USAF Dental Service Infection Prevention and Control (IC) Program are to protect the health of all patients, staff, volunteers and visitors and to comply with applicable federal, state, and local regulations. Creating and maintaining a safe workplace requires oversight. Inspections at periodic intervals provide an opportunity to identify unsafe practices and conditions and ensure that written policies are up-to-date and appropriate.

The USAF Guidelines for Infection Prevention and Control in Dentistry state: “Conduct and document routine scheduled or unscheduled inspections of Dental Treatment Rooms (DTRs), dental laboratory radiology and instrument processing areas”. While the frequency for inspection of the DTRs, laboratory and radiology areas has never been specified, most facilities conduct weekly inspections of DTRs. According to the USAF Dental Management Guide, instrument processing areas are inspected twice a month by the Chief of Dental Services (CDS) and weekly by other dental leadership (e.g., support flight OIC/NCOIC, clinical flight OIC/NCOIC, Dental Infection Prevention and Control (OIC/NCOIC).

Weekly inspections of the dental IC program (including DTRs, dental labs, radiology etc.) are not required by regulatory agencies. Inspections should be performed in accordance with the Medical Treatment Facility (MTF) Infection Prevention and Control Program guidelines (e.g., monthly, quarterly). MTF IC Personnel will continue to perform periodic inspections and provide feedback to the area being inspected and appropriate agencies within the MTF. Treatment and work areas should always meet standards, therefore unannounced inspections may provide a more realistic view of day-to-day activities when compared with announced inspections where individuals have time to prepare for the inspection. However, this does not mean that scheduled “clean-up” times should be discontinued. Individuals should still be given time to perform general cleaning, restocking of supplies, routine dental unit waterline maintenance, and other necessary tasks.

Some items inspections should focus on are the following: instrument pre-cleaning; instrument preparation for transport; instrument transport to the centralized processing area; verification and monitoring of all instrument processing steps (to include instrument decontamination, cleaning, preparation, packaging, and sterilization); evaluation of use and availability of manufacturer’s Instructions for Use (IFUs); Instrument Processing Center (IPC) personnel training certificates; maintenance records; monitoring for expired or soon to expire supplies/medications; and general cleanliness. Inspections can be performed all at once or broken down into manageable numbers using a rotating schedule that ultimately covers all areas in the specified time period. For example, if monthly inspections are required by the MTF and the dental clinic has 40 work areas, it may be more efficient to inspect 10 areas each week instead of all 40 on one day. See the USAF Dental Management Guide for more details. Inspections provide an opportunity to improve the effectiveness of both the IC program and dental-practice protocols, while ensuring the safety of our patients, staff, volunteers and visitors. If deficiencies or problems with IC procedures are identified, provide feedback and consider re-evaluation.
Missing and Damaged Instruments in Cassettes REVISED (10/17)

**Question:** A lot of times during a procedure, a provider discovers that he/she needs an instrument that isn't in the kit. This delays patient treatment because we have to get the instrument for the provider. Is there a way to keep this from happening?

**Answer:** Yes, dental clinic personnel must work together to identify policies and procedures to address concerns regarding missing or damaged instruments. Knowing at all times where instruments are and their status is crucial. This is the responsibility of both the dental assistant and dental Instrument Processing Technician (IPT). Dental assistants must notify the dental IPT when instruments need to be replaced because they have been damaged or are missing from a cassette. This must be done prior to the next cycle of instrument reprocessing. It is also imperative that the dental IPT confirm that all required instruments are in the cassette before reprocessing.

From the point of view of the dental IPT, it is important to have an organized, easy-to-clean, effective cassette system. This is easily accomplished by using standardized, organized cassette systems with protective inserts. Visual aids (i.e., count sheets and illustrations/photos of instrument set layouts) can significantly improve instrument management. Also, simplifying the instrument sets saves time, money, duplication, and excess inventory.

The goal of instrument processing is to serve and protect the patient. By addressing the issue of missing and damaged instruments, we can reduce stress in our clinics, while at the same time save money, and provide a better level of care for our patients.

Infection Control Notebook UPDATED (10/17)

**Question:** What documents should be kept in the dental clinic infection control notebook?

**Answer:** The following items should be maintained in the dental infection control notebook:

- CDC *Guidelines for Infection Control in Dental Health-Care Settings*—2003
- Installation and/or MTF regulations on infection prevention and control, occupational exposure to bloodborne pathogens, management of regulated medical waste and other relevant guidance.
- Appointment letter(s) (Letters of appointment for the dental infection control officer (ICO) and dental noncommissioned officer)

Also maintain access to the following:

- OSHA 29 CFR Part 1910.1030 and other regulatory and advisory documents (this can be accomplished through the internet).
- Instructions for Use (IFU) for products, reusable instruments and devices to be reprocessed in instrument processing centers (consider electronic access)
- Policy letters and dental infection control consultant’s updates (e.g., InControl newsletters). Available at
- Monthly or quarterly reports to the MTF Infection Control Function/Committee
- Infection Control related memos or correspondence (e.g., clinical/support flight meeting minutes, policy changes within the clinic, MTF infection control function/committee meeting minutes)
- Training certificate(s) for Instrument Processing Center (IPC) personnel
- Initial and periodic training records, including the lesson plan or a copy of the presentation with a sign-in sheet or post-test attached
- Results from inspections, dental unit waterline monitoring, and refrigerator temperature monitoring
- Health-care-associated infection program documentation (i.e., clinic acquired/nosocomial infections)
- Sterilization monitoring records (i.e., Biological Indicator (BI)/spore test and other sterilizer monitoring results)

It is not required that all of these items be maintained in a single notebook. The ICO could maintain some items (e.g., health-care-associated infection program, training documentation) and the NCO of infection control the others (e.g., inspection results, sterilization monitoring results).

¹Maintain training records for three years IAW current OSHA and MTF guidelines.
²Maintain sterilizer documentation for a period dictated by local statutes and MTF policy or 2 years, whichever is longer.