The Role of the Infectious Disease Specialist

Organize and utilize the appropriate Occupational Safety and Health Administration (OSHA) Guidelines for Dental Offices (29 CFR Standards) (abbreviated listing)

I. OSHAs Bloodborne Pathogen Exposure Control Plan (29 CFR 1910.1030)
   - Written exposure control plan (ECP) safety manual
   - Safety Universal/Standard Precautions
   - Engineering Controls/Work Practice Controls
   - Hepatitis B Vaccine
   - Employee training
   - Post exposure policies and procedures/Employee files
   - Special medical waste

   - Written Hazard Communication Program
   - List of all chemicals in the office
   - Safety Data Sheets (hard copy or electronic)
   - Employee training
   - The Globally Harmonized System (updated 2013)

Introduction

Infection Control Specialist should be available in each out-patient facility.

In July 2011, The CDC released new guidelines for the outpatient medical setting, “The Guide to Infection Prevention for Outpatient Settings: Minimum Expectations for Safe Care”, which are based on existing, evidence-based CDC guidelines that apply to a wide range of health care facilities but are mostly used by hospitals.
In 2014 these guidelines were updated and state that “all outpatient practices should ensure that at least one individual with specific training in infection control is on staff or regularly available”. This individual should be involved in developing a written infection control policy and have regular communication with health care providers to address specific issues or concerns.” Does your practice have one individual who is designated at the OSHA/Infection control officer, who coordinates and administers policies and practices in the office?

**The Role of the Infection Control Coordinator (ICC)**

**Organization of Regulatory and Professional Guidelines**

**I. The OSHA Standards:**

If your dental practice consists of 2 or 200 employees, the Occupational Safety and Health Administration (OSHA) standards apply to you. The complete outline of the regulations can be accessed in Title 29 of the Code of Federal Regulations (29 CFR) or on the website at [www.osha.gov](http://www.osha.gov) or by calling the toll-free number at 1-800-674-2 (OSHA). There are numerous OSHA Standards but the one most frequently utilized in the health care setting is the **Bloodborne Pathogen Standard (29 CFR 1910.1030)**. Understanding and implementing this standard should be a primary focus of the infection control coordinator. Everyone should be aware of the ICC in the practice. The components of this standard include the following:

- A written exposure control plan (ECP) contains an overview of the protocols designed to eliminate or reduce occupational exposure. It must be updated annually, and reflect current policies. All employees should be aware of the location of the ECP.

- The use of Personal Protective Equipment (PPE) (1910.102), Standard Precautions (SP), including gloves, mask, safety eyewear and gown. SP’s are to be utilized in the clinical setting for potential contact with blood and body fluids, secretions, excretions, mucous membranes and non-intact skin, all of which must be considered as being potentially infectious. Standard precautions are used for most patient care procedures, however, transmission based precautions have been added for specific pathogens. These are to be used in conjunction with Standard Precautions. They include: Contact, Droplet and Airborne Precautions. New elements of the standard include Respiratory Hygiene/Cough Etiquette and Safe Injection Practices. [http://www.cdc.gov/ncidod/dhqp/gl_isolation_standard.html](http://www.cdc.gov/ncidod/dhqp/gl_isolation_standard.html)

**Airborne Precautions (AP).** APs are used for patients known or suspected to have microorganisms spread by the airborne route. These small particles (5 microns or smaller) can remain suspended in the air for long periods of time and are spread by air currents within a room or over a long distance. Picture #1 illustrates the distance a sneeze can travel, emitting aerosols. At a minimum, health care providers entering the room of a patient with a known or suspected airborne infection, should be wearing an N95 respirator. Examples of airborne pathogens include: Measles (Rubeola), Varicella (chicken pox), Tuberculosis (TB), Herpes Zoster (shingles), Smallpox and Swine flu. A CDC’s written TB elimination plan must also be included in the office policy. Rates of TB in the United States in 2014 and the comprehensive approach for eliminating TB is illustrated in picture #2.
**Airborne Precautions include:**
- Adequate room ventilation (hospital, air exchange 6-12 times per hour)
- Rooms with monitored negative air pressure in relation to corridor with air exhausted directly outside or have re-circulated air filtered by HEPTA filter
- Ultraviolet lights
- Personal protective attire based upon procedure and anticipated amount of occupational exposure, protective eyewear, gloves, gown, N95 respirator or equivalent
- Tuberculocidal surface disinfectant

**Droplet Precautions** are used for patients known or suspected to have microorganisms transmitted by droplets larger than 5 microns. These droplets may be produced during coughing, sneezing or during certain procedures such as suctioning or bronchoscopy. These particles are propelled a short distance, less than 3 feet, and do not remain suspended in the air. Any health care provider coming within 3 feet of a patient suspected or known to have a droplet-transmitted infectious disease should wear a surgical mask and eye protection. Prescription eyewear is not considered adequate eye protection. Examples include: Diphtheria Influenza, Meningococcal meningitis, Mumps, Pertussis, Rubella, Upper respiratory Infections** (Adenovirus, Parainfluenza, Rhinovirus, RSV) and Parvovirus B-19.

**Respiratory Hygiene/Cough Etiquette Standards are recommended for patients on Airborne and/or Droplet Precautions**
- Post signage notifying patients of policies (picture #3)
- Patient screening/diagnosis
- Patient placement (e.g. isolation), encourage coughing persons to sit at least 3 feet away from other persons in common waiting areas
- Patient mask
- Instruct the patient to cover the nose/mouth when coughing or sneezing
- Use tissues to contain respiratory secretions and dispose of tissues in the nearest waste receptacle after use
- Provide access to hand sanitizers
- Recommend hand hygiene after contact with respiratory secretions
- Respiratory protection (N-95 respirator or equivalent), fit-tested for health care workers
- Annual influenza vaccination and TB testing for health care workers routinely exposed to high risk TB patients. Varicella vaccination should be offered to non-immune staff.

[www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm](http://www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm)
Photo #1 courtesy CDC Public Library: Mr. Brian Judd. Large droplets travel 6’ on average. Small flu particles from aerosols can also infect on close contact.

Picture #2: courtesy CDC library. Tuberculosis in the United States in 2014.
Contact Precautions are used for patients known or suspected to have microorganisms that can be spread by direct contact with the patient or by indirect contact with environmental surfaces or patient care equipment. Any health care provider likely to have direct skin-to-skin contact with a patient suspected or known to have a contact transmitted infectious disease should wear, at a minimum, gloves and a fluid resistant gown. Examples include: MRSA, Herpes Zoster, Varicella, Scabies, Hepatitis A, E, C. difficile, Salmonella, etc.

- **Engineering Controls**-Methods used to control a hazard. Items include: needless systems, safety needles, sharps containers, waste containers and biological safety cabinets. A schedule must also be established for evaluation of all items to assure that they remain in working order.

- **Work Practice Controls**-Procedures that reduce the likelihood of exposure, i.e. prohibiting the bending, breaking or manually recapping a needle.
# Vaccines

**Vaccinations: Hepatitis B vaccination will:**

- Be made available to all employees with occupational exposure within 10 days of hire and following training
- Be provided at no charge, and at a reasonable place and time
- Employees who decline the Hepatitis B vaccination are required to sign the waiver
- Employees who decline the Hepatitis B vaccination may request it at a later date

<table>
<thead>
<tr>
<th>Vaccines</th>
<th>CDC Recommended Vaccines for Healthcare Providers (HCP’s) 2015/16</th>
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<tbody>
<tr>
<td><strong>Hepatitis B</strong></td>
<td>HCP’s without documented evidence of a complete hep B vaccine series, or if you don’t have an up-to-date blood test that shows you are immune to hepatitis B you should:</td>
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<td>- Get the 3-dose series (dose #1 now, #2 in 1 month, #3 approximately 5 months after #2).</td>
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<td>- Get anti-HBs serologic tested 1–2 months after dose #3.</td>
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<td><strong>Flu (Influenza)</strong></td>
<td>Get 1 dose of influenza vaccine annually.</td>
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<td><strong>MMR (Measles, Mumps, &amp; Rubella)</strong></td>
<td>HCP’s born in 1957 or later without the MMR vaccine, or serologic evidence that demonstrates immunity to measles or mumps or vaccination, get 2 doses of MMR (1 dose now and the 2nd dose at least 28 days later).</td>
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<td>HCP’s born in 1957 or later without the MMR vaccine, or serologic evidence of immunity to rubella, only 1 dose of MMR is recommended. However, you may end up receiving 2 doses, because the rubella component is in the combination vaccine with measles and mumps.</td>
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<td>For HCWs born before 1957, see the <a href="#">MMR ACIP vaccine recommendations</a>.</td>
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<td><strong>Varicella (Chickenpox)</strong></td>
<td>If you have not had chickenpox (varicella), or the varicella vaccine, or if you have no serologic evidence that shows you are immune to varicella, get 2 doses of varicella vaccine, 4 weeks apart.</td>
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<td><strong>Tdap (Tetanus, Diphtheria, Pertussis)</strong></td>
<td>A one-time dose of Tdap as soon as possible if you have not received Tdap previously (regardless of when previous dose of Td was received).</td>
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<td>Get Td boosters every 10 years thereafter.</td>
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<td>Pregnant HCWs need to get a dose of Tdap during each pregnancy.</td>
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<tr>
<td><strong>Meningococcal</strong></td>
<td>Those who are routinely exposed to isolates of <em>N. meningitidis</em></td>
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</tbody>
</table>
Employee training for occupational exposures. Training should be completed within 10 days of hire, at least one a year thereafter, and if and when job responsibilities change, placing an employee at risk for occupational exposure to bloodborne pathogens. The program trainer, qualifications, date, contents and name of trainees must be recorded. In addition to numerous other protocols, hand hygiene, a critical component to controlling infections must be thoroughly reviewed. Recommendations can be accessed at http://www.cdc.gov/handhygiene. Evidence of all training should be maintained for 3 years.

-Post Exposure Policies and Procedures. Recommendations relating to the protocols to be utilized in the event an employee suffers an occupational exposure should be reviewed. They include: emergency first aid, the name of the person to whom the injury should be reported, necessary documents, the location and contact information for the provider selected to care for injured employee.

-Employee File. All exposure documents are placed in the employee file and must not be released without their signed permission (HIPAA). Employees may decline to be tested. If they decline, a declination statement should be signed and placed in the employee file. The file should contain: the dates of all immunizations, including Hepatitis B vaccine, medical conditions, work related illnesses, and associated work restrictions, including latex allergies. Files must be maintained for the duration of the employment, plus 30 years.

-Special Medical Waste (SMW). The office must have policies that comply with all state, local and federal guidelines. The hazards associated with SMW must be explained to employees as well as PPE, handling, containment, disposal and exposure policies. Regulations for management of contaminated non-sharp biohazards as well as contaminated sharps, including the placement of needles, scalpel blades, orthodontic bands, broken instruments, burs, glass anesthetic carpules, extracted teeth and any other object capable of causing injury, in the sharps containers, must be outlined. A manifest for a special medical waste hauler should be on file, as well as verification of any on-site sterilization of regulated medical waste prior to disposal. Note, teeth containing amalgam, or amalgam scraps must not be placed in the biohazard box or regular trash. Both are incinerated, which may release mercury vapors into the environment from burning amalgam; an Environmental Protection Agency (EPA) violation. A special biohazard container must be utilized and disposed according to regulations. Files must be maintained for 3 years.


The Globally Harmonized System (GHS): New 2013

The Hazard Communication Standard requires the following:
- A written Hazard Communication Program
- A list of chemicals used or stored in the office
- Safety data sheets (SDS) for products containing hazardous chemicals regardless of the material’s or product’s origin or the agency in charge of regulation. Copies of SDS in languages other than English are permitted, as long as they are maintained in English as well. Hard copies as well as electronic files are permitted.
  • Containers of products with hazardous chemicals should be labeled according to OSHA requirements EXCEPT PRODUCTS REGULATED BY THE FOOD AND DRUG ADMINISTRATION (FDA) OR THE EPA, which have their own labeling protocols
-Employee training deadline for new GHS protocols, December 13, 2013. Records must be maintained for 3 years.

In 2013 OSHA updated the Hazard Communication Standard to include the GHS. Three major changes were implemented. They include:

1. The method by which a Hazard is classified. The definitions of hazard have been changed to provide specific criteria for classification of health and physical hazards, as well as classification of mixtures.

2. Labels- (deadline June 1, 2015)
   • Pictograms (picture #4)
   • Signal words
   • Hazard and precautionary statements
   • The product identifier
   • Supplier identification * Use a code on the secondary container so that the employee can identify it with the original product or material (when the container is too small to have a label with the necessary information)

3. Safety Data Sheets: Will now have a specified 16-section format. However, the SDS format is the same as the ANSI format, formerly used in the United States.

**Employers are not required to create the label for products in their original containers, only to ensure that the label is on the container received from the company/distributor.** The only time an employer is required to create a label is when the product is removed from the original container and transferred to a secondary container, unless it is for the immediate use of the person who made the transfer. Ref. [www.osha.gov](http://www.osha.gov) OSHA Sample Pictogram #4

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**Christine Wisnom, RN**
**Conclusion:**
While the infection control specialist is a critical component of the office OSHA program, everyone must play an active role. From the first patient contact during appointment confirmation to the dismissal of the patient following treatment, each person must be cognizant of their role. Patient safety and prevention of disease transmission is a shared responsibility. In addition to organizing and implementing policies and procedures, and adhering to the OSHA Standards, multiple other guidelines must be utilized. Working together, dentistry can be the standard bearer of safety in healthcare.