Hand Hygiene, Infection Control, and CDC Guidelines

Leslie Canham is sponsored in part by

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About Leslie

Leslie Canham is a Certified and Registered Dental Assistant with over 40 years of experience in dentistry. She is an international speaker and has participated in numerous continuing dental education seminars. Leslie speaks to dental societies, associations, and study clubs. She is the moderator of the Infection Control Forum on Dentaltown.com. She is authorized by the Department of Labor as an OSHA Outreach Trainer in General Industry Standards. Her memberships include: The Organization for Safety, Asepsis and Prevention, The Speaking, Consulting Network, The Academy of Dental Management Consultants, the National Speakers Association, the California Dental Assistants and California Dental Association, and the California Association of Dental Assistant Teachers. Leslie is a registered provider of continuing education with the California Dental Board. Leslie is the founder of Leslie Canham & Associates providing dental professionals with:

- Mock Inspections
- In Office Training
- Tele-Consulting and Coaching
- Remote Training by Live Webinar
- Manuals and Training DVDs
- Online Home Study Courses and Webinars
- 8 Hour Infection Control Course for Unlicensed Dental Assistants
Hand Hygiene, Infection Control & CDC Guidelines

Program Leader Leslie Canham, CDA, RDA

Where Do I Start?

Use these Infection Control resources and follow the steps listed to meet and exceed CDC infection control guidelines. Find at www.CDC.gov


Visit the OSAP website www.OSAP.org

Get the From Policy to Practice OSAP Guide to the Guidelines Workbook for implementing the 2003 CDC guidelines

Take the FREE online CDC Guidelines training course go to http://osaplms.ts.karta.com/

Visit the OSHA website www.OSHA.gov

Print a copy of the Bloodborne Pathogen Standard Regulations (Standards - 29 CFR) Bloodborne pathogens 1910.1030


Need more assistance? Contact Leslie Canham www.LeslieCanham.com or call 209-785-3903
Use the forms provided with this handout:

1. Instrument Processing Protocol
2. Written Protocol for Exposure Incidents
3. Appendix B of the 2003 CDC Guidelines
4. Table 1 of the 2003 CDC Guidelines

The CDC Guidelines for Infection Control include information about educating and protecting Dental HealthCare Workers. Review each area in your office.

- Initial OSHA training provided
- Annual Bloodborne Pathogen training
- Policy on work restrictions
- Transmission of Bloodborne Pathogens
- Immunization of DHCW (See Appendix B- CDC Guidelines)
- Exposure incidents
- Hand hygiene and contact dermatitis
- Sterilization and disinfection of patient care items
- Environment infection control
- Special considerations

Appoint an Infection Control Coordinator. The responsibilities the Infection Control Coordinator are:

- Review the office infection control for employee and patient safety
- Plan and organize an infection control and safety meeting
- Provide information to employees about OSHA, infection control, immunizations and protective attire
- Learn the key federal and state regulations for infection control (OSHA and Dental Board)
Follow these steps to meet and exceed CDC Guidelines

1. **Conduct OSHA Bloodborne Pathogen Training**
   Review the Bloodborne Pathogen Standard, either read it or take a course. Training is documented and repeated annually.

2. **Explain Work restrictions**
   For employees who are infected with or are exposed to major infectious diseases in the absence of state or local regulations—(see Table 1 of the CDC guidelines)

3. **Explanation of how Bloodborne Pathogens are transmitted in a dental office**
   **Modes of transmission**

4. **Explanation of the benefits of immunizations**
   - Hepatitis B
   - Influenza
   - (see Appendix B of CDC Guidelines)

5. **Explain Exposure Incident Protocol**
   - Needlesticks
   - Bites
   - Splashes to mucous membranes or non intact skin
   - (see the Exposure Incident Protocol form)

6. **Discuss Hand Hygiene and Contact Dermatitis**
   - Alcohol Hand Sanitizers
   - Soap
   - Gloves Integrity
   - Types of gloves
     - Utility Gloves
     - Exam Gloves
     - Nitrile
     - Sterile Surgeon Gloves
     - Over gloves
   - Contact Dermatitis/Irritant Dermatitis/Latex Sensitivity

7. **Review Sterilization and Disinfection of Patient Care Items**
   - Classification of instruments
   - Instrument Processing Protocol (form attached)
   - Methods of sterilization or disinfection
   - Storage
   - Spore Testing
8. **Review Environment Infection Control**
   - Clinical contact surfaces
   - Housekeeping surfaces
   - Disinfectants
   - Barriers

9. **Discuss Special Considerations**
   - Dental handpieces & other devices
   - Radiology
   - Parental medications
   - Oral surgical procedures
   - Dental laboratories
EXPOSURE INCIDENT PROTOCOL

An exposure incident as a specific incident involving contact with blood or other potentially infectious materials (OPIM) to the eye, mouth, other mucous membrane, non-intact skin, or parenteral under the skin (e.g. needlestick) that occurs during the performance of an employee’s duties.

When an exposure incident occurs, immediate action must be taken to assure compliance with the OSHA Bloodborne Pathogen Standard and to expedite medical treatment for the exposed employee.

1. Provide immediate care to the exposure site.
   • Wash wounds and skin with soap and water.
   • Flush mucous membranes with water.
   • DO NOT USE Instrument involved on patient!
   • Employee must report incident immediately to supervisor/employer

2. Determine risk associated with exposure by
   • Type of fluid (e.g., blood, visibly bloody fluid, or other potentially infectious fluid or tissue).
   • Type of exposure (e.g., percutaneous injury, mucous membranes or non-intact skin exposure, or bites resulting in blood exposure).

3. Evaluate exposure source
   • Assess the risk of infection using available information.
   • The source individual (patient) must be asked if they know their status re: Hepatitis B, C, or HIV, if not known, will they consent to testing.

4. The exposed employee is referred as soon as possible * to a health care provider who will follow the current recommendations of the U.S. Public Health Service Centers for Disease Control and Prevention recommendations for testing, medical examination, prophylaxis and counseling procedures. Note “ASAP*” because certain interventions that may be indicated must be initiated promptly to be effective. The exposed employee may refuse any medical evaluation, testing, or follow-up recommendation. This refusal is documented.

5. Send all of the following with the exposed employee to the health care provider:
   • A copy of the Bloodborne Pathogen Standard.
   • A description of the exposed employee’s duties as they relate to the exposure incident. (Accidental Bodily Fluid Exposure Form)
   • Documentation of the route(s) of exposure and circumstances under which exposure occurred. (Accidental Bodily Fluid Exposure Form).
   • All medical records relevant to the appropriate treatment of the employee including HBV vaccination status records and source individual’s HBV/HCV/HIV status, if known. (Forms listed above can be found in your OSHA manual)

6. Health Care Provider (HCP)
   • Evaluates exposure incident.
   • Arranges for testing of employee and source individual (if status not already known).
   • Notifies employee of results of all testing.
   • Provides counseling and post-exposure prophylaxis.
   • Evaluates reported illnesses.
   • HCP sends written opinion to employer:
     ▪ Documentation that employee was informed of evaluation results and the need for further follow-up.
     ▪ Whether Hepatitis B vaccine is indicated and if vaccine was received.

7. Employer
   • Receives HCP’s written opinion.
   • Provides copy of HCP written opinion to employee (within 15 days of completed evaluation).
   • Documents events on:
     ▪ Employee Accident/Bodily Fluid Exposure and Follow-Up Form and Employee Medical Record Form.
     ▪ If the exposure incident involved a sharp, a Sharps Injury Log is completed within 14 days. (If required by your State OSHA Plan)
   • Treat all blood test results for employee and source individual as confidential.
Written Protocol for Instrument Processing

Don personal protective equipment – protective gown or apron, chemical resistant utility gloves, face mask, and protective eyewear – when processing contaminated dental instruments.

Step One - Transporting

Transport contaminated instruments on a tray to the sterilization area. Do not carry contaminated sharp instruments by hand.

Step Two – Cleaning

Place instruments in an ultrasonic unit or instrument washer for ______________ minutes.
- If manual scrubbing is necessary, use a long-handled brush.
- If instruments cannot be cleaned immediately presoak in ______________.
- Visually inspect instruments for residual debris and damage; re-clean/replace as necessary.
- Make sure that instruments are rinsed and dried thoroughly prior to packaging.
- Follow manufacturer’s recommendations to lubricate and/or use rust inhibitors as needed.

Step Three – Packaging

After cleaning, instruments must be packaged or wrapped before sterilization if they are not to be used immediately after being sterilized. The packages/wraps must remain sealed until the day they will be used and must be stored in a way so as to prevent contamination.
- Packaging/wrap materials should be designed for the type of sterilization process being used.
- Loose instruments should be packaged so that they lay in a single layer, and not wrapped up so tightly as to prevent exposure to the sterilizing agent. Date of sterilization /which sterilizer on package.
- Hinged instruments should be processed opened and unlocked.
- Use chemical indicators to distinguish processed vs. unprocessed instruments.
- Conduct biological monitoring (spore testing) weekly to evaluate the effectiveness of the sterilizer.

Step Four – Sterilizing

Place instruments in sterilizer and use the __________________________ cycle for _________ minutes
- Load the sterilizer according to manufacturers’ instructions. Do not overload. Use the manufacturers’ recommended cycle times for wrapped instruments.
- Allow packages to dry before removing them from the sterilizer.
- Allow packages to cool before handling.

Step 5 – Storing

Store instruments in a clean, dry environment to maintain the integrity of the package. Rotate packages so that those with the oldest sterilization dates are used first.
- Clean supplies/instruments should be stored in closed cabinets.
- Dental supplies/instruments should not be stored under sinks or in other locations that they might become wet or torn.
- Packages containing sterile supplies should be inspected before use to verify barrier integrity and dryness.
- If packaging is compromised, instruments should be re-cleaned, repackaged, and sterilized again.
<table>
<thead>
<tr>
<th>Disease/problem</th>
<th>Work restriction</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conjunctivitis</td>
<td>Restrict from patient contact and contact with patient’s environment.</td>
<td>Until discharge ceases</td>
</tr>
<tr>
<td>Cytomegalovirus infection</td>
<td>No restriction</td>
<td></td>
</tr>
<tr>
<td>Diarrheal disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute stage (diarrhea with other symptoms)</td>
<td>Restrict from patient contact, contact with patient’s environment, and food-handling.</td>
<td>Until symptoms resolve</td>
</tr>
<tr>
<td>Convalescent stage, <em>Salmonella</em> species</td>
<td>Restrict from care of patients at high risk.</td>
<td>Until symptoms resolve; consult with local and state health authorities regarding need for negative stool cultures</td>
</tr>
<tr>
<td>Enteroviral infection</td>
<td>Restrict from care of infants, neonates, and immunocompromised patients and their environments.</td>
<td>Until symptoms resolve</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>Restrict from patient contact, contact with patient’s environment, and food-handling.</td>
<td>Until 7 days after onset of jaundice</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personnel with acute or chronic hepatitis B surface antigenemia who do not perform exposure-prone procedures</td>
<td>No restriction, refer to state regulations. Standard precautions should always be followed.</td>
<td></td>
</tr>
<tr>
<td>Personnel with acute or chronic hepatitis B e antigenemia who perform exposure-prone procedures</td>
<td>Do not perform exposure-prone invasive procedures until counsel from an expert review panel has been sought; panel should review and recommend procedures that personnel can perform, taking into account specific procedures as well as skill and technique. Standard precautions should always be observed. Refer to state and local regulations or recommendations.</td>
<td>Until hepatitis B e antigen is negative</td>
</tr>
<tr>
<td>Hepatitis C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herpes simplex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Genital</td>
<td>No restriction</td>
<td></td>
</tr>
<tr>
<td>Hands (herpetic whitlow)</td>
<td>Restrict from patient contact and contact with patient’s environment.</td>
<td>Until lesions heal</td>
</tr>
<tr>
<td>Orofacial</td>
<td>Evaluate need to restrict from care of patients at high risk.</td>
<td></td>
</tr>
<tr>
<td>Human immunodeficiency virus; personnel who perform exposure-prone procedures</td>
<td>Do not perform exposure-prone invasive procedures until counsel from an expert review panel has been sought; panel should review and recommend procedures that personnel can perform, taking into account specific procedures as well as skill and technique. Standard precautions should always be observed. Refer to state and local regulations or recommendations.</td>
<td></td>
</tr>
<tr>
<td>Measles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>Exclude from duty</td>
<td>Until 7 days after the rash appears</td>
</tr>
<tr>
<td>Postexposure (susceptible personnel)</td>
<td>Exclude from duty</td>
<td>From fifth day after first exposure through twenty-first day after last exposure, or 4 days after rash appears</td>
</tr>
<tr>
<td>Meningococcal infection</td>
<td>Exclude from duty</td>
<td>Until 24 hours after start of effective therapy</td>
</tr>
<tr>
<td>Mumps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>Exclude from duty</td>
<td>Until 9 days after onset of parotitis</td>
</tr>
<tr>
<td>Postexposure (susceptible personnel)</td>
<td>Exclude from duty</td>
<td>From twelfth day after first exposure through twenty-sixth day after last exposure, or 9 days after onset of parotitis</td>
</tr>
</tbody>
</table>


* Modified from recommendations of the Advisory Committee on Immunization Practices (ACIP).

† Unless epidemiologically linked to transmission of infection.

‡ Those susceptible to varicella and who are at increased risk of complications of varicella (e.g., neonates and immunocompromised persons of any age).

¶ Patients at high risk as defined by ACIP for complications of influenza.
### TABLE 1. (Continued) Suggested work restrictions for health-care personnel infected with or exposed to major infectious diseases

<table>
<thead>
<tr>
<th>Disease/problem</th>
<th>Work restriction</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pediculosis</td>
<td>Restrict from patient contact</td>
<td>Until treated and observed to be free of adult and immature lice</td>
</tr>
<tr>
<td>Pertussis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>Exclude from duty</td>
<td>From beginning of catarrhal stage through third week after onset of paroxysms, or until 5 days after start of effective antibiotic therapy</td>
</tr>
<tr>
<td>Postexposure (asymptomatic personnel)</td>
<td>No restriction, prophylaxis recommended</td>
<td></td>
</tr>
<tr>
<td>Postexposure (symptomatic personnel)</td>
<td>Exclude from duty</td>
<td>Until 5 days after start of effective antibiotic therapy</td>
</tr>
<tr>
<td>Rubella</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>Exclude from duty</td>
<td>Until 5 days after rash appears</td>
</tr>
<tr>
<td>Postexposure (susceptible personnel)</td>
<td>Exclude from duty</td>
<td>From seventh day after first exposure through twenty-first day after last exposure</td>
</tr>
<tr>
<td>Staphylococcus aureus infection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active, draining skin lesions</td>
<td>Restrict from contact with patients and patient’s environment or food handling.</td>
<td>Until lesions have resolved</td>
</tr>
<tr>
<td>Carrier state</td>
<td>No restriction unless personnel are epidemiologically linked to transmission of the organism</td>
<td></td>
</tr>
<tr>
<td>Streptococcal infection, group A</td>
<td>Restrict from patient care, contact with patient’s environment, and food-handling.</td>
<td>Until 24 hours after adequate treatment started</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active disease</td>
<td>Exclude from duty</td>
<td>Until proved noninfectious</td>
</tr>
<tr>
<td>PPD converter</td>
<td>No restriction</td>
<td></td>
</tr>
<tr>
<td>Varicella (chicken pox)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>Exclude from duty</td>
<td>Until all lesions dry and crust</td>
</tr>
<tr>
<td>Postexposure (susceptible personnel)</td>
<td>Exclude from duty</td>
<td>From tenth day after first exposure through twenty-first day (twenty-eighth day if varicella-zoster immune globulin [VZIG] administered) after last exposure.</td>
</tr>
<tr>
<td>Zoster (shingles)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Localized, in healthy person</td>
<td>Cover lesions, restrict from care of patients at high risk</td>
<td>Until all lesions dry and crust</td>
</tr>
<tr>
<td>Generalized or localized in immunosuppressed person</td>
<td>Restrict from patient contact</td>
<td>Until all lesions dry and crust</td>
</tr>
<tr>
<td>Postexposure (susceptible personnel)</td>
<td>Restrict from patient contact</td>
<td>From tenth day after first exposure through twenty-first day (twenty-eighth day if VZIG administered) after last exposure; or, if varicella occurs, when lesions crust and dry</td>
</tr>
<tr>
<td>Viral respiratory infection, acute febrile</td>
<td>Consider excluding from the care of patients at high risk or contact with such patients’ environments during community outbreak of respiratory syncytial virus and influenza</td>
<td>Until acute symptoms resolve</td>
</tr>
</tbody>
</table>


* Modified from recommendations of the Advisory Committee on Immunization Practices (ACIP).
† Unless epidemiologically linked to transmission of infection.
¶ Those susceptible to varicella and who are at increased risk of complications of varicella (e.g., neonates and immunocompromised persons of any age).
§ Patients at high risk as defined by ACIP for complications of influenza.
### Appendix B

**Immunizations Strongly Recommended for Health-Care Personnel (HCP)**

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Dose schedule</th>
<th>Indications</th>
<th>Major precautions and contraindications</th>
<th>Special considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis B recombinant vaccine*</td>
<td>Three-dose schedule administered intramuscularly (IM) in the deltoid; 0.1 mL second dose administered 1 month after first dose; third dose administered 4 months after second. Booster doses are not necessary for persons who have developed adequate antibodies to hepatitis B surface antigen (anti-HBs).</td>
<td>Health-care personnel (HCP) at risk for exposure to blood and body fluids.</td>
<td>History of anaphylactic reaction to common baker’s yeast. Pregnancy is not a contraindication.</td>
<td>No therapeutic or adverse effects on hepatitis B virus (HBV)-infected persons; cost-effectiveness of prevaccination screening for susceptibility to HBV depends on costs of vaccination and antibody testing and prevalence of immunity in the group of potential vaccinees; health-care personnel who have ongoing contact with patients or blood should be tested 1–2 months after completing the vaccination series to determine serologic response. If vaccination does not induce adequate anti-HBs (&gt;10 mIU/mL), a second vaccine series should be administered.</td>
</tr>
<tr>
<td>Influenza vaccine (inactivated)</td>
<td>Annual single-dose vaccination IM with current vaccine.</td>
<td>HCP who have contact with patients at high risk or who work in chronic-care facilities; HCP aged ≥50 years or who have high-risk medical conditions.</td>
<td>History of anaphylactic hypersensitivity to eggs or to other components of the vaccine.</td>
<td>Recommended for women who will be in the second or third trimesters of pregnancy during the influenza season and women in any stage of pregnancy who have chronic medical conditions that are associated with an increased risk of influenza.</td>
</tr>
<tr>
<td>Measles live-virus vaccine</td>
<td>One dose administered subcutaneously (SC); second dose ≥4 weeks later.</td>
<td>HCP who were born during or after 1957 without documentation of 1) receipt of 2 doses of live vaccine on or after their first birthday; 2) physician-diagnosed measles, or 3) laboratory evidence of immunity. Vaccine should also be considered for all HCP who have no proof of immunity, including those born before 1957.</td>
<td>Pregnancy; immunocompromised state (including human immunodeficiency virus [HIV]-infected persons with severe immunosuppression); history of anaphylactic reactions after gelatin ingestion or recent receipt of neomycin; or recent receipt of antibody-containing blood products.</td>
<td>Measles, mumps, rubella (MMR) is the recommended vaccine.</td>
</tr>
<tr>
<td>Mumps live-virus vaccine</td>
<td>One dose SC; no booster.</td>
<td>HCP believed susceptible can be vaccinated; adults born before 1957 can be considered immune.</td>
<td>Pregnancy; immunocompromised state</td>
<td>MMR is the recommended vaccine.</td>
</tr>
<tr>
<td>Rubella live-virus vaccine</td>
<td>One dose SC; no booster.</td>
<td>HCP, both male and female, who lack documentation of receipt of live vaccine on or after their first birthday, or lack of laboratory evidence of immunity can be vaccinated. Adults born before 1957 can be considered immune, except women of childbearing age.</td>
<td>Pregnancy; immunocompromised state</td>
<td>Women pregnant when vaccinated or who become pregnant within 4 weeks of vaccination should be counseled regarding theoretic risks to the fetus; however, the risk of rubella virus-associated malformations among these women is negligible. MMR is the recommended vaccine.</td>
</tr>
<tr>
<td>Varicella-zoster live-virus vaccine</td>
<td>Two 0.5 mL doses SC 4–8 weeks apart if aged ≥13 years.</td>
<td>HCP without reliable history of varicella or laboratory evidence of varicella immunity.</td>
<td>Pregnancy; immunocompromised state</td>
<td>Because 71%–93% of U.S.-born persons without a history of varicella are immune, serologic testing before vaccination might be cost-effective.</td>
</tr>
</tbody>
</table>


CDC. Immunization of health-care workers: recommendations of the Advisory Committee on Immunization Practices (ACIP) and the Hospital Infection Control Practices Advisory Committee (HICPAC). MMWR 1997;46(No. RR-18).


* A federal standard issued in December 1991 under the Occupational Safety and Health Act mandates that hepatitis B vaccine be made available at the employer’s expense to all HCP occupationally exposed to blood or other potentially infectious materials. The Occupational Safety and Health Administration requires that employers make available hepatitis B vaccinations, evaluations, and follow-up procedures in accordance with current CDC recommendations.

* Persons immunocompromised because of immune deficiencies, HIV infection, leukemia, lymphoma, generalized malignancy; or persons receiving immunosuppressive therapy with corticosteroids, alkylating drugs, antimetabolites; or persons receiving radiation.

* Vaccination of pregnant women after the first trimester might be preferred to avoid coincidental association with spontaneous abortions, which are most common during the first trimester. However, no adverse fetal effects have been associated with influenza vaccination.

* A live attenuated influenza vaccine (LAIV) is FDA-approved for healthy persons aged 5–49 years. Because of the possibility of transmission of vaccine viruses from recipients of LAIV to other persons and in the absence of data on the risk of illness and among immunocompromised persons infected with LAIV viruses, the inactivated influenza vaccine is preferred for HCP who have close contact with immunocompromised persons.