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Infection Control for 2023

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In the dental field since 1972, Leslie helps simplify complex regulations. She provides in office training, compliance audits, consulting, workshops, and mock inspections. For the 12th year in a row, she has been listed as a "Leader In Consulting" by Dentistry Today. She is authorized by the Department of Labor, The Academy of General Dentistry, and the California Dental Board to provide continuing education. Leslie is the founder of Leslie Canham and Associates, LLC and founder member of The Compliance Divas™ Podcast.

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How to Make Infection Control Sticky with Teamwork!

1. **Appoint an Infection Control Coordinator**

2. **Access training** tools to understand the "role and responsibilities" of the Infection Control Coordinator

   A. Utilize free resources on CDC website https://www.cdc.gov/oralhealth/infectioncontrol/index.html Look for Summary of Infection Prevention Practices in Dental Settings and:

   - Download the Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care (44 pages).
   - Take the two CDC Training Courses for Infection Prevention and Control in **Dental Settings: Foundations: Building the Safest Dental Visit** and **Basic Expectations for Safe Care Training Modules.**

   B. Join OSAP https://www.osap.org/membership-types for access to OSAP checklists, charts, publications, FAQs, and reduced tuition to Boot Camp and Annual Conference. OSAP is dentistry's number one resource for Infection Control and Safety.

   C. Get the **Dental Infection Prevention and Control Certificate™** https://dentalinfectioncontrol.org/education/ Once you complete A and B above you're halfway there!

3. Using the CDC checklist, see **"A"** above, evaluate your dental practice infection control and safety. Identify successes and gaps by checking "Yes" or "No" to each question. You can make notes in the checklist too!

4. Schedule a team meeting on findings of the Infection control and safety audit.

   A. Review Gaps and Successes. Here is where we are doing well and where we need to improve.

   B. Share the responsibility to correct gaps by assigning team members to take charge specific areas and reporting progress at the next scheduled training day (Be sure to set a follow-up training date). Examples of assignments:

   - Hand hygiene performed properly
   - Proper use of PPE, donning, and doffing
   - Sharps Safety
   - Use of Disinfectants, following manufacturer's directions for use
   - Proper Cleaning & Sterilization of Instruments
   - Dental Equipment and Waterline maintenance

*Hint – have each person review the CDC "Basic Expectations for Safe Care Training Module" (**see "A" above**) on their topic for better understanding of what to look for and how to correct!*

Infection Prevention Checklist

Section II: Direct Observation of Personnel and Patient-Care Practices

Facility name:.....

Completed by:.....

Date:.....

II.1 Hand Hygiene is Performed Correctly

Elements To Be Assessed	Assessment	Notes/Areas For Improvement
A. When hands are visibly soiled	❑ Yes ❑ No	
B. After barehanded touching of instruments, equipment, materials and other objects likely to be contaminated by blood, saliva, or respiratory secretions	❑ Yes ❑ No	
C. Before and after treating each patient	❑ Yes ❑ No	
D. Before putting on gloves	❑ Yes ❑ No	
E. Immediately after removing gloves	❑ Yes ❑ No	
F. Surgical hand scrub is performed before putting on sterile surgeon's gloves for all surgical procedures **Note:** *Examples of surgical procedures include biopsy, periodontal surgery, apical surgery, implant surgery, and surgical extractions of teeth.*	❑ Yes ❑ No	

II.2 Personal Protective Equipment (PPE) is Used Correctly

Elements To Be Assessed	Assessment	Notes/Areas For Improvement
A. PPE is removed before leaving the work area (e.g., dental patient care, instrument processing, or laboratory areas)	❑ Yes ❑ No	
B. Hand hygiene is performed immediately after removal of PPE	❑ Yes ❑ No	
C. Masks, Protective Eyewear, and Face Shields		
a. DHCP wear surgical masks during procedures that are likely to generate splashes or sprays of blood or other body fluids	❑ Yes ❑ No	
b. DHCP wear eye protection with solid side shields or a face shield during procedures that are likely to generate splashes or sprays of blood or other body fluids	❑ Yes ❑ No	
c. DHCP change masks between patients and during patient treatment if the mask becomes wet	❑ Yes ❑ No	

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FOIL TEST

Sterility of patient-care items depends on complete cleaning. Do this simple foil test periodically to be sure your ultrasonic cleaner is doing its job.

1. Cut a piece of lightweight aluminum foil using scissors. It should be about the width of the ultrasonic cleaning tank and about an inch deeper.
2. Prepare a fresh tank of the cleaning solution that you normally use in your ultrasonic unit. Fill roughly about 1-1½ inches from the top of the tank.
3. Turn the unit on; set the timer to 5 minutes to degas.
4. When the time has elapsed, insert the foil vertically into the tank. Hold the sheet of foil lengthwise across the long side of the tank and centered against the tank width. Extend the foil down toward the tank bottom. Be care that you do not the foil touch the bottom of the tank.
5. Turn on the unit and hold the foil steady for exactly 20 seconds. When the time has elapsed, turn off the cleaner, remove the foil, and carefully dry it. Avoid wrinkling it.
6. Examine the foil. Uniform pitting and indentions across the part of the foil that was immersed indicates that the unit is delivering uniform cleaning power while smooth areas are a sign of ultrasonic “blind spots.
    a. Uniform pebbling of the foil that was immersed means that your unit is working properly.
    b. If it appears that there are blind spots, immediately retest the unit. If a second test confirms the presence of blind spots, schedule service. Send the foil sample along with the repair request so that it can help the technician locate the trouble spot.

Regular foil testing of your ultrasonic cleaner helps to identify any mechanical problems that may arise.

Consult the manufacturer for function tests specific to your unit.

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.
- Hinged instruments should be processed opened and unlocked.
- Use chemical indicators to distinguish processed vs. unprocessed instruments.
- Place date of sterilization on the package or wrap and indicate which sterilizer was used if more than one sterilizer in the facility.
- Heat sensitive instruments that are processed in liquid chemical sterilant (cold sterile) should be dried, then packaged/wrapped and dated.
- 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.

Sterilization of Instruments: Pitfalls

Pit falls in achieving sterilization

- Interrupting the sterilization cycle, inadequate time, temperature or pressure
- Inadequate pre-cleaning of instruments
- Overloading the sterilizer
- Inadequate drying cycle (Autoclaves)
- Faulty gaskets or seals
- Improper packaging
- Bulky packaging
- Inadequate spacing of instruments
- Improper operation of unit
- Using the wrong types of sterilization packaging material can hinder achieving sterilization.
    - Some packaging may prevent the sterilizing agent from reaching the instruments inside
    - Some plastics may melt
    - Some paper may burn or char
    - Thick cloths may absorb too much steam
    - Closed containers are not appropriate for steam or unsaturated chemical vapor sterilizers
    - Cloths absorb too much chemical vapor
    - Lint fibers may cause post-operative complication and serve as vehicles for microorganisms, increasing the risk of infection for surgical patients.

Sterilization of unwrapped instruments.

An unwrapped cycle (sometimes called flash sterilization) is a method for sterilizing unwrapped patient-care items for immediate use. Unwrapped sterilization should be used only under certain conditions: 1) thorough cleaning and drying of instruments precedes the unwrapped sterilization cycle; 2) mechanical monitors are checked and chemical indicators used for each cycle; 3) care is taken to avoid thermal injury to Dental workers or patients; and 4) items are transported aseptically to the point of use to maintain sterility. [1]

1 Centers for Disease Control and Prevention. Guidelines for Infection Control in Dental Health-Care Settings 2003. MMWR 2003;52 (No. RR-17): 21-23

(a) Definitions of terms used in this section:

(1) "Standard precautions" are a group of infection prevention practices that apply to all patients, regardless of suspected or confirmed infection status, in any setting in which healthcare is delivered. These include hand hygiene, use of gloves, gown, mask, eye protection, or face shield, depending on the anticipated exposure, and safe handling of sharps. Standard precautions shall be used for care of all patients regardless of their diagnoses or personal infectious status.

(2) "Critical items" confer a high risk for infection if they are contaminated with any microorganism. These include all instruments, devices, and other items used to penetrate soft tissue or bone.

(3) "Semi-critical items" are instruments, devices and other items that are not used to penetrate soft tissue or bone, but contact oral mucous membranes, non-intact skin or other potentially infectious materials (OPIM).

(4) "Non-critical items" are instruments, devices, equipment, and surfaces that come in contact with soil, debris, saliva, blood, OPIM and intact skin, but not oral mucous membranes.

(5) "Low-level disinfection" is the least effective disinfection process. It kills some bacteria, some viruses and fungi, but does not kill bacterial spores or mycobacterium tuberculosis var bovis, a laboratory test organism used to classify the strength of disinfectant chemicals.

(6) "Intermediate-level disinfection" kills mycobacterium tuberculosis var bovis indicating that many human pathogens are also killed. This process does not necessarily kill spores.

(7) "High-level disinfection" kills some, but not necessarily all, bacterial spores. This process kills mycobacterium tuberculosis var bovis, bacteria, fungi, and viruses.

(8) "Germicide" is a chemical agent that can be used to disinfect items and surfaces based on the level of contamination.

(9) "Sterilization" is a validated process used to render a product free of all forms of viable microorganisms.

(10) "Cleaning" is the removal of visible soil (e.g., organic and inorganic material) debris and OPIM from objects and surfaces and shall be accomplished manually or mechanically using water with detergents or enzymatic products.

(11) "Personal Protective Equipment" (PPE) is specialized clothing or equipment worn or used for protection against a hazard. PPE items may include, but are not limited to, gloves, masks, respiratory devices, protective eyewear and protective attire which are intended to prevent exposure to blood, body fluids and OPIM, and chemicals used for infection control. General work attire such as uniforms, scrubs, pants and shirts, are not considered to be PPE.

(12) "Other Potentially Infectious Materials" (OPIM) means any one of the following:

(A) Human body fluids such as saliva in dental procedures and any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids;

(B) Any unfixed tissue or organ (other than intact skin) from a human (living or dead);

(C) Any of the following, if known or reasonably likely to contain or be infected with HIV, HBV, or HCV:

(i) Cell, tissue, or organ cultures from humans or experimental animals;

(ii) Blood, organs, or other tissues from experimental animals; or

(iii) Culture medium or other solutions.

(13) "Dental Healthcare Personnel" (DHCP) are all paid and non-paid personnel in the dental health-care setting who might be occupationally exposed to infectious materials, including body substances and contaminated supplies, equipment, environmental surfaces, water, or air. DHCP includes dentists, dental hygienists, dental assistants, dental laboratory technicians (in-office and commercial), students and trainees, contractual personnel, and other persons not directly involved in patient care but potentially exposed to infectious agents (e.g., administrative, clerical, housekeeping, maintenance, or volunteer personnel).

(b) All DHCP shall comply with infection control precautions and enforce the following minimum precautions to minimize the transmission of pathogens in health care settings mandated by the California Division of Occupational Safety and Health (Cal/OSHA).

(1) Standard precautions shall be practiced in the care of all patients.

(2) A written protocol shall be developed, maintained, and periodically updated for proper instrument processing, operatory cleanliness, and management of injuries. The protocol shall be made available to all DHCP at the dental office.

(3) A copy of this regulation shall be conspicuously posted in each dental office.

Personal Protective Equipment:

(4) All DHCP shall wear surgical facemasks in combination with either chin length plastic face shields or protective eyewear whenever there is potential for aerosol spray, splashing or spattering of the following: droplet nuclei, blood, chemical or germicidal agents or OPIM. Chemical-resistant utility gloves and appropriate, task specific PPE shall be worn when handling hazardous chemicals. After each patient treatment masks shall be changed and disposed. After each patient treatment, face shields and protective eyewear shall be cleaned, disinfected, or disposed.

(5) Protective attire shall be worn for disinfection, sterilization, and housekeeping procedures involving the use of germicides or handling contaminated items. All DHCP shall wear reusable or disposable protective attire whenever there is a potential for aerosol spray, splashing or spattering of blood, OPIM, or chemicals and germicidal agents. Protective attire must be changed daily or between patients if they should become moist or visibly soiled. All PPE used during patient care shall be removed when leaving laboratories or areas of patient care activities. Reusable gowns shall be laundered in accordance with Cal/OSHA Bloodborne Pathogens Standards (Title 8, Cal. Code Regs., section 5193).

Hand Hygiene:

(6) All DHCP shall thoroughly wash their hands with soap and water at the start and end of each workday. DHCP shall wash contaminated or visibly soiled hands with soap and water and put on new gloves before treating each patient. If hands are not visibly soiled or contaminated an alcohol based hand rub may be used as an alternative to soap and water. Hands shall be thoroughly dried before donning gloves in order to prevent promotion of bacterial growth and washed again immediately after glove removal. A DHCP shall refrain from direct patient care if conditions are present that may render the DHCP or patients more susceptible to opportunistic infection or exposure.

(7) All DHCP who have exudative lesions or weeping dermatitis of the hand shall refrain from all direct patient care and from handling patient care equipment until the condition resolves.

Gloves:

(8) Medical exam gloves shall be worn whenever there is contact with mucous membranes, blood, OPIM, and during all pre-clinical, clinical, post-clinical, and laboratory procedures. When processing contaminated sharp instruments, needles, and devices, DHCP shall wear heavy-duty utility gloves to prevent puncture wounds. Gloves must be discarded when torn or punctured, upon completion of treatment, and before leaving laboratories or areas of patient care activities. All DHCP shall perform hand hygiene procedures before donning gloves and after removing and discarding gloves. Gloves shall not be washed before or after use.

Needle and Sharps Safety:

(9) Needles shall be recapped only by using the scoop technique or a protective device. Needles shall not be bent or broken for the purpose of disposal. Disposable needles, syringes, scalpel blades, or other sharp items and instruments shall be placed into sharps containers for disposal as close as possible to the point of use according to all applicable local, state, and federal regulations.

Sterilization and Disinfection:

(10) All germicides must be used in accordance with intended use and label instructions.

(11) Cleaning must precede any disinfection or sterilization process. Products used to clean items or surfaces prior to disinfection procedures shall be used according to all label instructions.

(12) Critical instruments, items and devices shall be discarded or pre-cleaned, packaged or wrapped and sterilized after each use. Methods of sterilization shall include steam under pressure (autoclaving), chemical vapor, and dry heat. If a critical item is heat-sensitive, it shall, at minimum, be processed with high-level disinfection and packaged or wrapped upon completion of the disinfection process. These instruments, items, and devices, shall remain sealed and stored in a manner so as to prevent contamination, and shall be labeled with the date of sterilization and the specific sterilizer used if more than one sterilizer is utilized in the facility.

(13) Semi-critical instruments, items, and devices shall be pre-cleaned, packaged or wrapped and sterilized after each use. Methods of sterilization include steam under pressure (autoclaving), chemical vapor and dry heat. If a semi-critical item is heat sensitive, it shall, at minimum, be processed with high level disinfection and packaged or wrapped upon completion of the disinfection process. These packages or containers shall remain sealed and shall be stored in a manner so as to prevent contamination, and shall be labeled with the date of sterilization and the specific sterilizer used if more than one sterilizer is utilized in the facility.

(14) Non-critical surfaces and patient care items shall be cleaned and disinfected with a California Environmental Protection Agency (Cal/EPA)-registered hospital-grade disinfectant (low-level disinfectant) labeled effective against HBV and HIV. When the item is visibly contaminated with blood or OPIM, a Cal/EPA-registered hospital-grade intermediate-level disinfectant with a tuberculocidal claim shall be used.

(15) All high-speed dental hand pieces, low-speed hand pieces, rotary components and dental unit attachments such as reusable air/water syringe tips and ultrasonic scaler tips, shall be packaged, labeled and heat-sterilized in a manner consistent with the same sterilization practices as a semi-critical item.

(16) Single use disposable items such as prophylaxis angles, prophylaxis cups and brushes, tips for high-speed evacuators, saliva ejectors, air/water syringe tips, and gloves shall be used for one patient only and discarded.

(17) Proper functioning of the sterilization cycle of all sterilization devices shall be verified at least weekly through the use of a biological indicator (such as a spore test). Test results shall be documented and maintained for 12 months.

Irrigation:

(18) Sterile coolants/irrigants shall be used for surgical procedures involving soft tissue or bone. Sterile coolants/irrigants must be delivered using a sterile delivery system.

Facilities:

(19) If non-critical items or surfaces likely to be contaminated are manufactured in a manner preventing cleaning and disinfection they shall be protected with disposable impervious barriers. Disposable barriers shall be changed when visibly soiled or damaged and between patients.

(20) Clean and disinfect all clinical contact surfaces that are not protected by impervious barriers using a California Environmental Protection Agency (Cal-EPA) registered, hospital-grade low- to intermediate-level disinfectant after each patient. The low-level disinfectants used shall be labeled effective against HBV and HIV. Use disinfectants in accordance with the manufacturer's instructions. Clean all housekeeping surfaces (e.g. floors, walls, sinks) with a detergent and water or a Cal-EPA registered, hospital-grade disinfectant. Products used to clean items or surfaces prior to disinfection procedures shall be clearly labeled and follow all material safety data sheet (MSDS) handling and storage instructions.

(21) Dental unit water lines shall be anti-retractive. At the beginning of each workday, dental unit lines and devices shall be purged with air or flushed with water for at least two (2) minutes prior to attaching handpieces, scalers, air water syringe tips, or other devices. The dental unit lines and devices shall be flushed between each patient for a minimum of twenty (20) seconds.

(22) Contaminated solid waste shall be disposed of according to applicable local, state, and federal environmental standards.

Lab Areas:

(23) Splash shields and equipment guards shall be used on dental laboratory lathes. Fresh pumice and a sterilized or new ragwheel shall be used for each patient. Devices used to polish, trim, or adjust contaminated intraoral devices shall be disinfected or sterilized, properly packaged or wrapped and labeled with the date and the specific sterilizer used if more than one sterilizer is utilized in the facility. If packaging is compromised, the instruments shall be re-cleaned, packaged in new wrap, and sterilized again. Sterilized items will be stored in a manner so as to prevent contamination.

(24) All intraoral items such as impressions, bite registrations, prosthetic and orthodontic appliances shall be cleaned and disinfected with an intermediate-level disinfectant before manipulation in the laboratory and before placement in the patient's mouth. Such items shall be thoroughly rinsed prior to placement in the patient's mouth.

(c) The Dental Board of California and Dental Hygiene Committee of California shall review this regulation annually and establish a consensus.

Note: *Authority cited: Section 1614, Business and Professions Code. Reference: Section 1680, Business and Professions Code.*

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Important COVID Resources (updated February 7, 2023)

CDC Interim Infection Prevention and Control Recommendations for Healthcare Personnel During COVD-19 Pandemic
https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html#print

CDC COVID-19 Community Levels
https://www.cdc.gov/coronavirus/2019-ncov/science/community-levels.html

CDC Covid Data Tracker Community Transmission (use this for healthcare settings including dental practices)
https://covid.cdc.gov/covid-data-tracker/#county-view?list_select_state=California&data-type=Risk&list_select_county=6107

CDC Interim Guidance for Managing Healthcare Personnel with SARS-CoV-2 Infection or Exposure to SARS-CoV-2 Work Restrictions https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html

CDC updates on Isolation and Quarantine period for General Population
https://www.cdc.gov/media/releases/2021/s1227-isolation-quarantine-guidance.html

CDC Guidance on Types of masks and Respirators (General Population)
https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/types-of-masks.html

OSAP COVID-19 Toolkit and Resources https://www.osap.org/topics-coronavirus-disease-covid-19

OSAP Best Practices Infection Control in Dental Clinics during the COVID-19 Pandemic
https://www.osap.org/best-practices-for-infection-control-in-dental-clinics-during-the-covid-19-pandemic

CDA COVID-19 Resources https://www.cda.org/Home/Resource-Library/Resources/category/covid-19

How to Make a Surgical mask fit better Knot and Tuck Video https://youtu.be/GzTAZDsNBe0

Don/Doff PPE Posters
https://www.cdc.gov/coronavirus/2019-ncov/hcp/using-ppe.html

OSHA N95 Seal Check Video
https://www.youtube.com/watch?v=Tzpz5fko-fg

List of FDA Authorized and Banned Imported N95 Respirators
https://www.fda.gov/medical-devices/coronavirus-disease-2019-covid-19-emergency-use-authorizations-medical-devices/personal-protective-equipment-euas#appendixa

EPA List N: Disinfectants for Use Against COVID-19
https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2

EPA List Q: Disinfectants for Emerging Viral Pathogens (EVPs) Mpox
https://www.epa.gov/pesticide-registration/disinfectants-emerging-viral-pathogens-evps-list-q

EPA List B: Antimicrobial Products Registered with EPA for Claims Against Mycobacterium tuberculosis (TB)
https://www.epa.gov/pesticide-registration/list-b-antimicrobial-products-registered-epa-claims-against-mycobacterium

National Institute of Health New coronavirus (SARS-CoV-2) stable for hours on surfaces
https://www.nih.gov/news-events/news-releases/new-coronavirus-stable-hours-surfaces#.XnJJzk-uf14.email

Cal/OSHA Aerosol Transmissible Diseases
https://www.dir.ca.gov/dosh/dosh_publications/ATD-Guide.pdf

Federal OSHA Dentistry Workers and Employers
https://www.osha.gov/coronavirus/control-prevention/dentistry

Cal/OSHA COVID-19 Regular Standards https://www.dir.ca.gov/dosh/coronavirus/Non_Emergency_Regulations/