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### ABSTRACT

The Centers for Disease Control and Prevention (CDC) have supported nearly the same guidelines for dental infection control since 2003, updated in 2016. These guidelines are the minimum standard for patient safety during dental visits and are included in many states' practice acts. When establishing best practices for infection prevention, an office must first establish a safety culture, recognize the critical role of an infection control coordinator, and exceed the guidelines established by the CDC. This course will discuss the creation of a safety culture, assignment of the infection control coordinator role to the appropriate team member, and establishment of standard operating procedures and checklists. In addition, it will examine ways to elevate each CDC guideline from basic expectations to best practices.

### EDUCATIONAL OBJECTIVES

Upon completion of this course, the dental professional should be able to:

1. Identify the key aspects for creating a safety culture in dental health care.
2. Recognize the importance of the infection control coordinator's role in creating safe dental visits.
3. Describe basic expectations for safe care as defined by the Centers for Disease Control and Prevention.
4. Identify key standard operating procedures needed to establish best practices in each unique dental practice.



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# Best practices in dental infection control

A PEER-REVIEWED ARTICLE | by Michelle Strange, MSDH, RDH, CDIPC

The Centers for Disease Control and Prevention (CDC) have supported almost the same guidelines for dental infection control since 2003, with its most recent update in 2016.<sup>1</sup> These guidelines are the minimum standard for patient safety during dental visits and are part of many states' practice acts.

Many factors differentiate the dental industry from other areas of health care, one of which is that dentistry seemingly lags behind when it comes to creating policies and procedures for patient safety and infection control within clinical practices.<sup>2</sup> From a patient safety perspective, injury and illness within dentistry are usually less severe than what may be found in hospitals, as the type of care provided is less invasive and

aggressive. Nevertheless, clinicians and patients may still come into contact with bodily fluids capable of spreading infectious diseases.

Many small individual practices provide dental care, where organized oversight is not as thorough as it is in a hospital setting. This limits the knowledge gained by learning about adverse events in institutions. Some dental professionals may also be unaware of the importance of a culture of patient safety due to the lack of frequency and severity of adverse events. Patient safety is an integral part of the concept of quality care, and the relationship between quality of care and the success of treatment outcomes is closely linked.

When establishing best practices for infection prevention, an office

must first establish a safety culture, recognize the critical role of an infection control coordinator (ICC), and exceed the guidelines established by the CDC.

### Identify the key aspects for creating a safety culture in dental health care

“Safety culture” is a relatively new term in dentistry, and refers to “the attitude, beliefs, perceptions, values, and behaviors that employees share in relation to safety.”<sup>3</sup> Since the creation of the Occupational Safety and Health Administration (OSHA) in 1970, the emphasis on creating regulated health and safety procedures has helped to create a culture of safety in workplaces.<sup>4</sup> These policies and procedures must comply with the mandates of the regulatory body, and the principles and values must be shared by the entire team rather than only imposed by the team leader. Education, training courses, and regular staff meetings centered around patient safety are vital to foster a sense of safety culture.<sup>3</sup>

Surveys on attitudes toward patient safety culture performed by the Agency for Healthcare Research and Quality (AHRQ) found that the patient safety attitudes of dental school participants were actually higher than that of their hospital counterparts, suggesting that awareness of its importance is being taught.<sup>5</sup> However, it is not consistently part of ongoing professional development once in the workplace.

A comprehensive review of safety literature within a hospital setting has identified various subcultures of patient safety. These subcultures are leadership, teamwork, evidence-based, communication, learning, and patient-centered.<sup>6</sup> The challenge is to establish frameworks to effectively implement these subcultures into the overall culture of the practice.

The basic definitions that should be at the foundation of these frameworks are:<sup>2</sup>

**Patient safety:** The reduction or elimination of damage to patients resulting from health-care processes or accidents.

**Health risk management:** Identification, evaluation, and treatment of health problems that can cause harm to patients, lead to malpractice claims, and cause unnecessary economic loss to health-care providers.

**Adverse event:** Unexpected result of medical treatment that causes prolonged treatment, morbidity, mortality, or any other kind of damage to which the patient should not have had exposure.

**Error:** Mistake by omission or commission, whether in planning or execution.

**Incident (near miss):** An event that almost causes harm to the patient but is avoided by luck or by an act at the last moment.

**Accident:** A random unforeseen and unexpected event that causes harm to the patient, staff, or facility.

**Negligence:** A mistake that is difficult to justify as it is due to a lack of knowledge or skills, the omission of precautions, or neglect.

**Safety culture:** The product of individual and group values that leads to a level of commitment to the health and safety of an organization.

**Safety climate:** Shared perceptions of what an organization is like concerning safety.

Examples of events that may be considered a breach of patient safety in dentistry include:

- Failure to check past medical history
- Inhalation or swallowing of a crown or instrument
- Restoring the wrong tooth
- Oxygen and/or emergency drugs unavailable
- Allergic reaction due to not checking medical history
- Extracting the wrong tooth
- Iatrogenic damage to an adjacent tooth
- Delay in routine referral
- Delay in an urgent referral
- Using dirty instruments
- Treating the wrong patient

Failing to check the medical history is the leading cause of harm.<sup>7</sup>

### The infection control coordinator’s role in creating safe dental visits

According to OSHA, a safety officer must oversee any programs that fall under the OSHA General Workplace Safety Standard, specifically the Hazard Communication Standard and the Bloodborne Pathogens Standard. The CDC recommends that an ICC be formally named within the clinic’s plans.

OSHA primarily focuses on the safety of employees, while the ICC oversees all areas of infection control and prevention for staff and patients. However, both employee and patient safety fall under the same scope of practice and can be led by an individual, with tasks assigned to different team members, or depending

**TABLE 1: Suggested infection control coordinator roles and responsibilities<sup>9</sup>**

<b>Training</b>	Annual updates; additional training if new procedures or products are introduced into the practice
<b>Documentation</b>	Exposure determination, exposure/infection control plan, employee records (training, HBV vaccinations or declinations, exposure incidents and follow-up, hazard assessment for personal protective equipment [PPE])
<b>Monitoring</b>	Employee compliance with PPE requirements, instrument cleaning and sterilization, spore testing of sterilizers, appropriate storage and disposal of medical and other hazardous waste, dental unit water quality
<b>Enforcement</b>	Appropriate remediation (e.g., disciplinary action) for employees not following PPE requirements or infection control protocols

**TABLE 2: Examples of good and suboptimal practice<sup>16</sup>**

Area of patient safety	Basic expectations as defined by the CDC	Examples of best practices	Examples of suboptimal practices
<b>Hand hygiene</b>	<p>Perform hand hygiene:</p> <ul style="list-style-type: none"> <li>• When hands are visibly soiled</li> <li>• After barehanded touching of instruments, equipment, materials, and other objects likely to be contaminated</li> <li>• Before and after treating each patient</li> <li>• Before putting on gloves and again immediately after removing gloves</li> </ul> <p>Use soap and water when hands are visibly soiled; otherwise, an alcohol-based hand rub may be used.</p>	<p>Place hand-washing stations or hand rubs throughout the office</p> <p>Hold team members accountable if they don or doff gloves without performing hand hygiene.</p> <p>Have written SOPs for hand hygiene readily available</p> <p>Perform hand hygiene audits and enforce SOPs.</p>	<p>Inaccessible or empty dispensers</p> <p>No accountability for team members who do not follow hand hygiene SOPs</p>
<b>PPE</b>	<p>Provide sufficient and appropriate PPE.</p> <p>Educate all DHCPs on proper selection and use of PPE.</p> <p>Wear gloves whenever there is potential for contact with blood, body fluids, mucous membranes, nonintact skin, or contaminated equipment.</p> <p>Perform hand hygiene immediately after removing gloves.</p> <p>Wear protective clothing that covers the skin and personal clothing during procedures or activities where contact with bodily fluids is anticipated.</p> <p>Wear mouth, nose, and eye protection during procedures likely to generate bodily fluid splashes.</p> <p>Remove PPE before leaving the work area.</p>	<p>Practice donning and doffing as a team to ensure everyone becomes unconsciously competent on how to wear PPE without causing cross-contamination.</p> <p>Ensure all team members have PPE that fits properly.</p> <p>Ensure masks are fitted properly and ear loops are not crossed.</p> <p>Ensure that gloves fit and are ergonomic, and therefore not at risk of causing instruments to be dropped or creating musculoskeletal disorders.</p> <p>Ensure eyewear does not hang around the neck, resting on contaminated jackets.</p>	<p>Limited instruction and practice donning and doffing</p> <p>Masks that have not been fitted and are considered one-size-fits-all</p> <p>Reuse of eyewear for multiple patients without cleaning and sanitizing in between</p>
<b>Cough etiquette</b>	<p>Implement measures to contain respiratory secretions in patients.</p> <p>Post signs at entrances with instructions to patients with respiratory infection symptoms on coughing etiquette, tissue disposal, and hand hygiene.</p> <p>Provide tissues and no-touch receptacles for disposal of tissues.</p> <p>Provide resources for performing hand hygiene in or near waiting areas.</p> <p>Offer masks to symptomatic persons.</p> <p>Encourage persons with symptoms of respiratory infections to sit as far away from others as possible.</p> <p>Educate DHCPs on the importance of infection prevention measures to contain respiratory secretions.</p>	<p>Foster a safety culture that extends to patients being aware that they must postpone their dental visit until they are sure they are not carrying a communicable disease.</p> <p>As the hierarchy of control explains, elimination is the most effective method of preventing disease transmission.</p>	<p>Allowing patients to attend their appointment knowing that they are unwell</p>
<b>Sharps injuries</b>	<p>Consider sharp items contaminated with patient blood and saliva as potentially infective and establish engineering controls and work practices to prevent injuries.</p> <p>Do not recap used needles by using both hands and any other technique that involves directing the point of a needle toward any part of the body.</p> <p>Use either a one-handed scoop technique or a mechanical device designed for holding the needle cap when recapping needles.</p> <p>Place used disposable syringes and needles, scalpel blades, and other sharp items in appropriate containers located as close as possible to the area of usage.</p>	<p>Utilize needle-recapping engineering controls or safety needles that retract after use.</p> <p>Create a safety culture where team members do not feel guilty and are not shamed by others if they do experience a percutaneous injury.</p> <p>ICC strategies are in place to prevent injury</p> <p>If the injury happens, the ICC has a written plan so the team member and patient can be examined and treated.</p>	<p>Using nonretractable needles or needles with poor engineering controls</p> <p>Not having an SOP in place for sharps injuries</p> <p>Letting team members do what they have always done when handling sharps</p> <p>Not auditing engineering controls and work practice behaviors</p>

on the size and scope of the practice, a specifically formed committee.<sup>1</sup>

Team members who accept the role of ICC will need comprehensive training,

in-depth knowledge of OSHA standards and CDC guidelines, and advanced training in infection control theory and practice. It is also imperative that they

have the full support of the rest of the clinic, particularly doctors and owners.

The role's success depends on the authoritative figures within the practice

**TABLE 2: Examples of good and suboptimal practice<sup>16</sup> (continued)**

Area of patient safety	Basic expectations as defined by the CDC	Examples of best practices	Examples of suboptimal practices
<b>Safe injection practices</b>	<p>Prepare injections using an aseptic technique in a clean area.</p> <p>Disinfect the rubber septum on a medication vial with alcohol before piercing.</p> <p>Do not use needles or syringes for more than one patient.</p> <p>Medication containers are entered with a new needle and new syringe.</p> <p>Use single-dose vials for parenteral medications when possible.</p> <p>Do not use single-dose medication vials, ampules, and bags or bottles of intravenous solution for more than one patient.</p> <p>Do not combine the leftover contents of single-use vials for later use.</p> <p>Dedicate multidose vials to a single patient whenever possible.</p> <p>Do not use fluid infusion or administration sets for more than one patient.</p>	<p>Provide staff with skills to intervene when they see unsafe injection practices through education.</p> <p>Prepare injections only when they are ready to be administered instead of before the patient's arrival.</p> <p>Discard the single-dose vial after withdrawing one dose from the vial, even if there is some fluid left in the vial.</p>	<p>Drawing partial doses from separate vials to make one full dose</p> <p>Transferring medication from one syringe to another syringe</p> <p>Entering a vial with a used needle or syringe</p>
<b>Sterilization and disinfection</b>	<p>Clean and reprocess reusable dental equipment appropriately before use on another patient.</p>	<p>Have manufacturer instructions for reprocessing reusable dental instruments/ equipment readily available.</p> <p>Assign responsibilities for reprocessing of dental equipment to DHCPs with appropriate training.</p> <p>Wear appropriate PPE when handling and reprocessing contaminated patient equipment.</p> <p>Use mechanical, chemical, and biological monitors according to manufacturer instructions to ensure the effectiveness of the sterilization process.</p> <p>Maintain sterilization records in accordance with state and local regulations.</p>	<p>Have SOPs, labels, and diagrams readily available so every person who steps into the sterilization area knows which items are to be reprocessed and which are to be disposed of.</p> <p>Proper training on how to disassemble, clean, and inspect all reusable instruments</p> <p>In-office biological monitoring and a quarterly mail-in for third-party confirmation that the autoclave is working properly</p> <p>Have an autoclave with a digital record or printout for mechanical monitoring.</p> <p>Use class 5 integrators in cassettes.</p>
<b>Environmental infection prevention</b>	<p>Establish policies and procedures for routine cleaning and disinfection of environmental surfaces in dental health-care settings.</p> <p>Use surface barriers to protect clinical contact surfaces.</p> <p>Clean and disinfect clinical contact surfaces that are not barrier protected after each patient.</p> <p>Use an intermediate-level disinfectant (i.e., tuberculocidal claim) if visibly contaminated with blood.</p> <p>Select EPA-registered disinfectants or detergents/disinfectants with label claims for use in health-care settings.</p> <p>Follow manufacturer instructions for using cleaners and EPA-registered disinfectants.</p>	<p>Always use audit wraps on surfaces such as suction and air/water syringes.</p> <p>Allow adequate time between patients for team members to clean and reset the operatory properly</p> <p>Discuss with team members if a disinfectant has changed.</p> <p>Perform consistent training and audits to ensure proper operatory turnover</p>	<p>Surface barriers used in place of properly cleaning and sanitizing the treatment area</p> <p>Reusing surface barriers after patient contact</p> <p>Making disinfecting wipes</p> <p>Not using EPA-registered, hospital-grade disinfectants</p> <p>Not cleaning and disinfecting surfaces without barrier wraps</p> <p>Not wearing proper PPE to perform environmental infection prevention</p>
<b>Dental unit water quality</b>	<p>Use water that meets EPA regulatory standards for drinking water (i.e., <math>\leq 500</math> CFU/mL of heterotrophic water bacteria).</p> <p>Consult the dental unit manufacturer for appropriate methods and equipment to maintain dental water quality.</p> <p>Follow recommendations for monitoring water quality provided by the manufacturer of the unit or waterline treatment product.</p> <p>Use sterile saline or sterile water as a coolant/ irrigant when performing surgical procedures.</p>	<p>Use water that has less than 200 CFU of heterotrophic water bacteria.</p> <p>Test and shock every three months, and treat the water with a low-level chemical daily.</p> <p>Use a third-party water lab annually to ensure dental unit waterline protocols are working.</p>	<p>Not being aware of manufacturer recommendations</p> <p>Not treating the water daily with chemicals</p> <p>Not shocking waterlines</p> <p>Not testing waterlines</p>

communicating to staff that the ICC has the authority to enforce infection control procedures and that safety must be a priority within the practice.<sup>8</sup> For this reason, training in effective communication and leadership skills is also essential.

The role of the ICC is to develop policies and standard operating procedures (SOPs) for infection control appropriate to the clinic and its services, following the guidelines and standards from the CDC and OSHA. Communication of these SOPs to the staff and any further training required need to be arranged, including training new employees.

### Basic expectations for safe care

The basic expectations for safe care, as defined by the CDC, form the basis of the principles of infection prevention and control in dental health-care settings. The expectations include hand hygiene, PPE, respiratory hygiene and cough etiquette, sharps safety, safe injection practices, sterilization and disinfection, environmental infection prevention and control, and dental unit water quality.<sup>1</sup>

Hands are the most common mode of pathogen transmission.<sup>10</sup> Hand hygiene refers to both the washing of hands with soap and water and the use of alcohol-based hand sanitizers to reduce the possible spread of infections from hand contact.

PPE should be used whenever the dental health-care professional (DHCP) is likely to come in contact with bodily fluids or contaminated equipment. PPE is usually nonreusable, such as disposable gloves and masks, and staff must have full training on how to appropriately apply, wear, then remove and dispose of these items. Employment of hand hygiene before and after the use of PPE is essential.

Implementing respiratory hygiene and cough etiquette is essential to reduce the spread of airborne or droplet-transmitted pathogens and should apply to anyone showing signs of illness.

Sharps injuries pose a risk of blood-borne pathogen transmission such as hepatitis B and C and HIV. While most exposure within dentistry is preventable, it is something that continues to occur. For the most part, engineering controls are in place with the equipment used to prevent injuries, such as sharps disposal containers and self-sheathing anesthetic needles.

The 2003 CDC dental guidelines cover safe injection practices in the Special Considerations section.<sup>11</sup> However, reports of infectious disease transmission due to mishandling injectable medications still occur.<sup>12</sup>

Every dental clinic should have SOPs with multiple steps in place for sterilization and disinfection of patient care devices using specialized equipment. These SOPs should include procedures for containing, transporting, and handling.

Environmental infection prevention and control focuses on routine cleaning and disinfecting of environmental surfaces. Clinical contact surfaces should be barrier-protected or cleaned between every patient, and policies and procedures should be in place for the cleaning of blood or other infectious material spills.

Finally, dental unit water quality focuses on the quality of water used and the cleanliness of the waterlines that carry fluid to specialized equipment.<sup>13</sup>

### SOPs needed for optimal safety in each unique dental practice

Four strategic areas are crucial for improving patient safety when identifying and creating SOPs for a dental office.<sup>14</sup> They include identifying threats to safety by incident reporting, evaluating incidents to identify best practices, communicating and educating about patient safety, and creating a safety culture in the workplace. The aim when creating SOPs is to use the CDC guidelines as a base, and then find ways to elevate them from basic

practices to best practices for each individual clinic. Therefore, the final SOPs should differ from clinic to clinic depending on their scope of practice and their own unique needs.

It is suggested that the SOPs be written and implemented by the clinic's ICC and reviewed annually or should the need arise based on adverse events.<sup>15</sup> Table 2 provides a summary of differentiating suboptimal practices from best practices based on the CDC guidelines.

### References

- Summary of infection prevention practices in dental settings: basic expectations for safe care. Centers for Disease Control and Prevention. October 2016. <https://www.cdc.gov/oralhealth/infectioncontrol/pdf/safe-care2.pdf>
- Yamalik N, Perea Pérez B. Patient safety and dentistry: what do we need to know? Fundamentals of patient safety, the safety culture and implementation of patient safety measures in dental practice. *Int Dent J*. 2012;62(4):189-196. doi:10.1111/j.1875-595X.2012.00119.x
- Garland KV. Create a culture of safety. *Dimens Dent Hyg*. March 10, 2016. Accessed October 17, 2022. <https://dimensionsofdentalhygiene.com/article/create-a-culture-of-safety/>
- About OSHA. United States Department of Labor Occupational Safety and Health Administration. Accessed October 17, 2022. <https://www.osha.gov/aboutosha>
- Leong P, Afrow J, Weber HP, Howell H. Attitudes toward patient safety standards in U.S. dental schools: a pilot study. *J Dent Educ*. 2008;72:431-437. doi:10.1002/j.0022-0337.2008.72.4.tb04508.x
- Sammer CE, Lykens K, Singh KP, et al. What is patient safety culture? A review of the literature. *J Nurs Scholarsh*. 2010;4(2):156-165. doi:10.1111/j.1547-5069.2009.01330.x
- Black I, Bowie P. Patient safety in dentistry: development of a candidate 'never event' list for primary care. *Br Dent J*. 2017;222(10):782-788. doi:10.1038/sj.bdj.2017.456
- Govoni M. Creating a culture of safety in dental practice settings. *Dent Econ*. January 17, 2018. Accessed October 17, 2022. <https://www.dentaleconomics.com/science-tech/article/16385163/creating-a-culture-of-safety-in-dental-practice-settings>
- Govoni M. Creating a culture of safety in dental practice settings: defining the role of the infection control coordinator. *Dent Econ*. February 14, 2018. Accessed October 17, 2022. <https://www.dentaleconomics.com/science-tech/article/16385074/creating-a-culture-of-safety-in-dental-practice-settings-defining-the-role-of-the-infection-control-coordinator>
- Clack L, Scottoni M, Wolfensberger A, et al. "First-person view" of pathogen transmission and hand hygiene – use of a new head-mounted video capture and coding tool. *Antimicrob Resist Infect Control*. 2017;6:108. Accessed March 30, 2023. doi:10.1186/s13756-017-0267-z
- Siegel JD, Rhinehart E, Jackson M, et al. 2007 guideline for isolation precautions: preventing transmission of infectious agents in health care settings. *Am J Infect Control*. 2007;35(10 Suppl 2):S65-164.
- Schaefer MK, Perkins KM, Perz JF. Patient notification events due to syringe reuse and mishandling of injectable medications by health care personnel—United States, 2012–2018: summary and recommended actions for prevention and response. *Mayo Clin Proc*. 2020;95(2):243-254. doi:10.1016/j.mayocp.2019.08.024
- Dental unit water quality. Centers for Disease Control and Prevention. March 25, 2016. Accessed October 17, 2022. <https://www.cdc.gov/oralhealth/infectioncontrol/faqs/dental-unit-water-quality.html>
- Bailey E, Dungarwalla M. Developing a patient safety culture in primary dental care. *Prim Dent J*. 2021;10(1):89-95. doi:10.1177/2050168420980990
- Schrubbe K. Standard operating procedures for infection prevention. DEO. Accessed October 17, 2022. <https://www.>

dentalgrouppractice.com/standard-operating-procedures-for-infection-prevention.html

16. Standard precautions. Centers for Disease Control and Prevention. Reviewed June 18, 2018. Accessed December 7, 2022. <https://www.cdc.gov/oralhealth/infectioncontrol/summary-infection-prevention-practices/standard-precautions.html>



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**CDIPC**, has more than two decades of dental expertise, beginning as a dental assistant and completing a bachelor's degree in health science from the Medical University of South Carolina and a master's in dental hygiene education from the University of Bridgeport.

She continues to invest in ongoing education, gaining certifications such as her Certificate in Dental Infection Prevention and Control. Her community and global endeavors demonstrate her passion for dentistry, from volunteer work to worldwide missions. She is the owner of Level Up Infection Prevention, MichelleStrangeRDH, a practicing dental hygienist, and was the cofounder of the *A Tale of Two Hygienists* podcast.

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### QUESTIONS

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- The term "safety culture" refers to:
  - Establishing best practices for infection prevention
  - The relationship between quality of care and the outcome of treatment
  - Recognizing the critical role of an ICC
  - The attitude, beliefs, perceptions, values, and behaviors that employees share in relation to safety
- What aspects are vitally important to foster a sense of safety culture?
  - Education, training courses, and regular staff meetings centered around patient safety
  - Regular cleaning and sanitization of floors
  - Proper disposal of sharps
  - Additional questions on patient intake forms
- What is an adverse event?
  - An unexpected environmental disaster
  - An unexpected result of medical treatment that causes prolonged treatment, morbidity, mortality, or any other kind of damage to which the patient should not have been exposed
  - An event that almost causes harm to the patient but is avoided by luck or by an act at the last moment
  - A mistake that is difficult to justify as it is due to a lack of knowledge or skills, the omission of precautions, or neglect
- What are some examples of events that may be considered a breach of patient safety in dentistry?
  - Failure to check medical history, inhalation or swallowing of a crown or instrument, restoring the wrong tooth, refusing to attend to an abusive patient
  - Failure to check medical history, inhalation or swallowing of a crown or instrument, restoring the wrong tooth, oxygen and/or emergency drugs not being available
  - Failure to check medical history, not having a hospital bed on standby for a possible adverse event, restoring the wrong tooth, oxygen and/or emergency drugs not being available
  - Failure to check medical history, inhalation or swallowing of a crown or instrument, failure to diagnose a patient's mental health condition, oxygen and/or emergency drugs not being available
- What is the leading cause of harm to dental patients?
  - Not washing your hands
  - Not wearing a mask
  - Failing to check medical history
  - Failing to administer oxygen appropriately
- According to OSHA, what is a safety officer required to oversee?
  - The safety of employees
  - The safety of employees and patients
  - The cleanliness of the facility
  - Any programs that fall under the OSHA General Workplace Safety Standard
- What does the ICC need to be trained in?
  - The most up-to-date dentistry practices
  - How to speak to patients before treatment
  - OSHA standards and CDC guidelines
  - How to clean the water filtration machine
- The success of the role of the ICC is dependent upon:
  - The full support of staff and management
  - Creating easy-to-read policies and procedures
  - Creating cleaning checklists
  - Organizing weekly training sessions
- What are the responsibilities of the ICC?
  - Allocating daily health and safety tasks to staff
  - Making sure the area is always clean and staff are always following procedure
  - Developing policies and procedures for infection control appropriate for the clinic and its services
  - Reporting incidents to the clinic manager
- What are the principles of infection prevention and control in dental health-care settings?
  - Hand hygiene, PPE, respiratory hygiene and cough etiquette, sharps safety, safe injection practices, sterilization and disinfection, environmental infection prevention and control, and dental unit water quality
  - Hand hygiene, oral hygiene, respiratory hygiene and cough etiquette, sharps safety, safe injection practices, sterilization and disinfection, environmental infection prevention and control, and dental unit water quality
  - Hand hygiene, PPE, disinfecting bathrooms, sharps safety, safe injection practices, sterilization and disinfection, environmental infection prevention and control, and dental unit water quality
  - Hand hygiene, PPE, respiratory hygiene and cough etiquette, sharps safety, creating engineering controls, sterilization and disinfection, environmental infection prevention and control, and dental unit water quality
- What is the most common mode of pathogen transmission?
 

A. Hands	C. Blood
B. Droplets	D. Surfaces
- What does hand hygiene refer to?
  - Wearing gloves
  - Washing hands with soap and water and the use of alcohol-based hand sanitizers
  - Avoiding handshakes
  - Applying fragrance-free hand lotion to prevent cracked skin
- When should PPE be used?
  - At all times while at work
  - Before work, during work, and disposed of after work
  - Whenever the practitioner is likely to come into contact with bodily fluids or contaminated equipment
  - When the patient presents with a high temperature

14. What resources should be provided to patients showing signs of illness?

- A. Cold and flu medication
- B. Referral to the nearest medical clinic
- C. Respiratory hygiene and cough etiquette
- D. Water and an area to lie down

15. What are some infections that can be passed through improper use of sharps?

- A. Hepatitis B and C
- B. Gum disease
- C. COVID-19
- D. Influenza

16. Safe \_\_\_\_ practices were covered in the Special Considerations section of the 2003 CDC dental guidelines.

- A. Dental
- B. Culture
- C. Sharps
- D. Injection

17. What is the focus of environmental infection protection?

- A. Sanitizing hands after going outside of the clinic
- B. Environmentally friendly disposal of sharps
- C. Routine cleaning and disinfection of environmental surfaces
- D. Auditing cleaning staff's SOPs

18. Which is a surface barrier?

- A. Dental chair covers
- B. Sports mouthguard
- C. Dental chair upholstery
- D. A special kind of cleaning product

19. What is the aim when creating SOPs?

- A. Have all information organized into a checklist
- B. Implement the best practices for each individual clinic
- C. Increase customer satisfaction
- D. Avoid lawsuits

20. Which is not an area of patient safety?

- A. Incident reporting
- B. Safety checklists
- C. Patient's mood
- D. Training

21. Which is an example of suboptimal patient safety?

- A. Regular audits are carried out and results are reported back to the team.
- B. Clinicians do not feel able to discuss patient safety issues due to concerns about punitive or regulatory actions.
- C. Training and teaching of patient safety starts at the undergraduate level.
- D. Checklists are seen as a meaningful tool for patient safety.

22. Which is not one of the reasons safety culture in dentistry is behind that of its medical counterparts?

- A. There is a lack of undergraduate education on the topic.
- B. Private practices mean less shared knowledge.
- C. Dental clinics are underfunded.
- D. The severity of adverse events is less.

23. Which sentence best describes the difference between an accident and negligence?

- A. There is no difference; an accident comes from negligence.
- B. An accident is the result of forgetting to do something.
- C. Negligence is a human error and accidents are not.
- D. Accidents are random, unforeseen, and unexpected, whereas negligence is a mistake that is hard to justify.

24. What does ICC stand for?

- A. Incident control crew
- B. Inbound customer complaint
- C. Infection cleaning committee
- D. Infection control coordinator

25. In what year were the CDC guidelines for dental infection control last updated?

- A. 2016
- B. 2004
- C. 2015
- D. 2003

26. Having a culture of patient safety results in which of the following?

- A. Patients are more likely to adhere to treatment protocols.
- B. An increased sense of patient satisfaction
- C. Financial benefits from increased patient retention and reduced lawsuits
- D. All of the above

27. An ICC should not have the power to:

- A. Implement training for staff
- B. Carry out safety checks
- C. Terminate staff not adhering to the SOPs
- D. Enforce infection control procedures

28. How often should audits be done?

- A. Regularly and after any near misses or incidents occur
- B. Every six months, after an incident occurs
- C. Once a year
- D. Only after an incident or near miss occurs

29. How often should the ICC carry out staff training?

- A. For all new staff and whenever there is an update in procedure
- B. Once a week
- C. Once a month
- D. Only for new hires

30. What is not important for the ICC to monitor when it comes to dental water units?

- A. Use water that meets EPA regulatory standards for drinking water (i.e.,  $\leq 500$  CFU/mL of heterotrophic water bacteria) for routine dental treatment output water.
- B. Ensuring the taste and temperature of the water is to the patient's liking
- C. Follow recommendations for monitoring water quality provided by the manufacturer of the unit or waterline treatment product.
- D. Use sterile saline or sterile water as a coolant/irrigant when performing surgical procedures.

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#### PROVIDER INFORMATION

**Dental Board of California:** Provider RP5933. Course registration number CAcode:03-5933-22159. Expires 7/31/2024. "This course meets the Dental Board of California's requirements for three (3) units of continuing education."



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Approved provider through December 31, 2024

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## Best practices in dental infection control

NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_ SPECIALTY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ EMAIL: \_\_\_\_\_ AGD MEMBER ID (IF APPLIES): \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_ COUNTRY: \_\_\_\_\_

TELEPHONE (PRIMARY): \_\_\_\_\_ TELEPHONE (OFFICE): \_\_\_\_\_

**REQUIREMENTS FOR OBTAINING CE CREDITS BY MAIL/FAX:** 1) Read entire course. 2) Complete info above. 3) Complete test by marking one answer per question. 4) Complete course evaluation. 5) Complete credit card info or write check payable to Endeavor Business Media. 6) Mail/fax this page to DACE.

If you have any questions, please contact [dace@endeavorb2b.com](mailto:dace@endeavorb2b.com) or call (800) 633-1681. A score of 70% or higher is required for CE credit.

**COURSE CAN ALSO BE COMPLETED ONLINE AT A LOWER COST.** Scan the QR code or go to [dentalacademyofce.com](http://dentalacademyofce.com) to take advantage of the lower rate.



### EDUCATIONAL OBJECTIVES

1. Identify the key aspects for creating a safety culture in dental health care.
2. Recognize the importance of the infection control coordinator's role in creating safe dental visits.
3. Describe basic expectations for safe care as defined by the Centers for Disease Control and Prevention.
4. Identify key standard operating procedures needed to establish best practices in each unique dental practice.

### COURSE EVALUATION

1. Were the individual course objectives met?
- Objective #1: Yes No      Objective #3: Yes No
- Objective #2: Yes No      Objective #4: Yes No

Please evaluate this course by responding to the following statements, using a scale of Excellent = 5 to Poor = 0.

- |  |   |   |   |   |     |    |
|--|---|---|---|---|-----|----|
| 2. To what extent were the course objectives accomplished overall?       | 5 | 4 | 3 | 2 | 1   | 0  |
| 3. Please rate your personal mastery of the course objectives.           | 5 | 4 | 3 | 2 | 1   | 0  |
| 4. How would you rate the objectives and educational methods?            | 5 | 4 | 3 | 2 | 1   | 0  |
| 5. How do you rate the author's grasp of the topic?                      | 5 | 4 | 3 | 2 | 1   | 0  |
| 6. Please rate the author's effectiveness.                               | 5 | 4 | 3 | 2 | 1   | 0  |
| 7. Was the overall administration of the course effective?               | 5 | 4 | 3 | 2 | 1   | 0  |
| 8. Please rate the usefulness and clinical applicability of this course. | 5 | 4 | 3 | 2 | 1   | 0  |
| 9. Please rate the usefulness of the references.                         | 5 | 4 | 3 | 2 | 1   | 0  |
| 10. Do you feel that the references were adequate?                       |   |   |   |   | Yes | No |
| 11. Would you take a similar course on a different topic?                |   |   |   |   | Yes | No |

12. If any of the continuing education questions were unclear or ambiguous, please list them.

\_\_\_\_\_

13. Was there any subject matter you found confusing? Please describe.

\_\_\_\_\_

14. How long did it take you to complete this course?

\_\_\_\_\_

15. What additional dental continuing education topics would you like to see?

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Mail/fax completed answer sheet to:

### Endeavor Business Media

Attn: Dental Division; 7666 E. 61st St. Suite 230, Tulsa, OK 74133  
Fax: (918) 831-9804

Payment of \$69 is enclosed (this course can be completed online for \$39. Scan the QR code or go to [dentalacademyofce.com](http://dentalacademyofce.com) to take advantage of the lower rate).

### Make check payable to Endeavor Business Media

If paying by credit card, please complete the following:

MC     Visa     AmEx     Discover

Acct. number: \_\_\_\_\_

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Charges on your statement will show up as Endeavor.

- |                     |                     |
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| 1. (A) (B) (C) (D)  | 16. (A) (B) (C) (D) |
| 2. (A) (B) (C) (D)  | 17. (A) (B) (C) (D) |
| 3. (A) (B) (C) (D)  | 18. (A) (B) (C) (D) |
| 4. (A) (B) (C) (D)  | 19. (A) (B) (C) (D) |
| 5. (A) (B) (C) (D)  | 20. (A) (B) (C) (D) |
| 6. (A) (B) (C) (D)  | 21. (A) (B) (C) (D) |
| 7. (A) (B) (C) (D)  | 22. (A) (B) (C) (D) |
| 8. (A) (B) (C) (D)  | 23. (A) (B) (C) (D) |
| 9. (A) (B) (C) (D)  | 24. (A) (B) (C) (D) |
| 10. (A) (B) (C) (D) | 25. (A) (B) (C) (D) |
| 11. (A) (B) (C) (D) | 26. (A) (B) (C) (D) |
| 12. (A) (B) (C) (D) | 27. (A) (B) (C) (D) |
| 13. (A) (B) (C) (D) | 28. (A) (B) (C) (D) |
| 14. (A) (B) (C) (D) | 29. (A) (B) (C) (D) |
| 15. (A) (B) (C) (D) | 30. (A) (B) (C) (D) |

### CUSTOMER SERVICE: (800) 633-1681

**EXAM INSTRUCTIONS.** All questions have only one answer. If mailed or faxed, grading of this examination is done manually. Participants will receive confirmation of passing by receipt of a Verification of Participation form. The form will be mailed within two weeks after receipt of an examination.

**COURSE EVALUATION AND FEEDBACK.** We encourage participant feedback. Complete the evaluation above and e-mail additional feedback to Rachel McIntyre ([rmcintyre@endeavorb2b.com](mailto:rmcintyre@endeavorb2b.com)) and Laura Winfield-Roy ([lwinfield@endeavorb2b.com](mailto:lwinfield@endeavorb2b.com)).

**COURSE CREDITS AND COST.** All participants scoring 70% or higher on the examination will receive a verification form for three (3) continuing education (CE) credits. Participants are urged to contact their state dental boards for CE requirements. The cost for courses ranges from \$20 to \$110.

**CANCELLATION AND REFUND POLICY.** Participants who are not 100% satisfied can request a refund by contacting Endeavor Business Media in writing.

**RECORD KEEPING.** Endeavor Business Media maintains records of your successful completion of any exam for a minimum of six years. Please contact our offices for a copy of your CE credits report. This report, which will list all credits earned to date, will be generated and mailed to you within five business days of receipt.

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