

Proceedings of the
Infection Control Consortium:
*Core Competencies, Learning Objectives and
Curriculum Elements*

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*Proceedings of the Infection Control Consortium
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Overview

Serious infection control breaches in a small number of dental offices have been highlighted in the mainstream media over the past few years. Non-compliance with federal guidelines and regulations likely represents a very small percentage of oral healthcare settings. However, these reports, together with passage of legislation in several states requiring designated personnel in Federally Qualified Health Centers (FQHCs) to hold a certification in central services sterilization processing¹, stimulated interest in conducting a national conversation about infection control in oral healthcare settings.

To this end, seven dental organizations² and the Centers for Disease Control and Prevention (CDC) convened as an Infection Control Consortium (“the Consortium”) in Chicago in August 2014, following months of preparation and preliminary discussion. The charge for the meeting was “to provide a framework for infection control education of oral healthcare professionals responsible for performing and/or overseeing infection control procedures in oral healthcare settings.”

Outcomes of the August 2014 meeting included agreement:

1. On the importance of patient and provider safety.
2. That all dental health care personnel should obtain education in infection control that is based on federal standards, regulations, and evidence-based guidelines.³
3. On defined educational components related to infection control in oral healthcare settings, including:
 - a. Overarching core competencies
 - b. Broad learning objectives
 - c. Suggested list of essential elements of an infection control curriculum.

In March 2016, CDC introduced a “*Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care*” (hereafter referred to as the “*Summary*”), which summarizes current infection prevention recommendations and includes a checklist that can be used to evaluate compliance.⁴ The information presented is based primarily upon the 2003 Guidelines and represents infection prevention expectations for safe care in dental settings. This Summary does not replace CDC’s *Guidelines for Infection Control in Dental Health-Care Settings—2003* but is intended as a supplement to the guidelines.

The Infection Control Consortium expresses its appreciation to the CDC for its work to develop the CDC 2016 *Summary*. The Consortium offers the outcomes of its work to help advance the safe provision of oral health care. These broad competencies, learning objectives and curriculum elements developed by the Consortium are consistent with the CDC *Summary* and the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogens standard and can serve as a practical resource for all types of dental health care personnel (DHCP), as well as educators, consultants, and patients.

Competencies

The Infection Control Consortium identified the following overarching core competencies:

Knowledge-based competence in the infection control curriculum will be measured by the ability to demonstrate:

- *Knowledge of disease transmission and principles of infection prevention and control in oral healthcare settings*

- *Application of relevant infection control laws, regulations, guidelines, standards and best practices*
- *Use of quality assurance measures (e.g., direct observation and feedback) to ensure accurate implementation of recommended infection control practices*

Learning Objectives

The Infection Control Consortium outlined the following learning objectives:

Upon successful completion of the course, participants would be able to describe:

- *The chain of infection*
- *Differences between standard and transmission-based precautions*
- *Infection control practices and precautions that prevent transmission of infectious agents*
- *Identification of and response to breaches in infection control*
- *Relevant infection control laws, regulations, guidelines and standards and their integration into best practices*

Curriculum Elements

The following curriculum elements provide a framework for the infection control education of professionals responsible for infection control procedures in oral healthcare settings and those who supervise them:

Transmission and Prevention of Infectious Diseases

- *Patient safety overview*
- *Principles of infection control*
- *Microbiology:*
 - *Types of pathogens*
 - *Modes of transmission*
- *Chain of infection*
- *Standard precautions*
- *Antibiotic resistance*

Overview of Laws and Guidelines Applicable to Oral Healthcare Settings

- *Federal*
- *State/regional*
- *Local*
- *Manufacturers' Instructions for Use (IFUs)*

Personnel Health Elements of an Infection Control Program

- *Education & training*
- *Immunization programs*
- *Exposure prevention and post-exposure management*
- *Medical conditions, work-related illness and work restrictions*
- *Maintenance of records, data management and confidentiality*

Preventing Transmission of Bloodborne Pathogens

- *Hepatitis (A-E)*
- *HIV*
- *Preventing exposures to blood and other potentially infectious materials*
- *Post-exposure management and prophylaxis*

Hand Hygiene

- *Methods and indications*
- *Selection of antiseptic agents*
- *Storage and dispensing of hand care products*
- *Special considerations (e.g., lotions, fingernails, jewelry)*

Personal Protective Equipment

- *Types (e.g., masks, protective eyewear, face shields, protective clothing, gloves)*
- *Appropriate use for adherence to Standard Precautions*

Respiratory Hygiene/Cough Etiquette

- *Measures to limit the transmission of respiratory pathogens spread by droplet or airborne routes*

Contact dermatitis and latex hypersensitivity

Sharps Safety and the Needlestick Prevention Act

- *Engineering and work practice controls*

Safe Injection Practices

- *Key CDC recommendations*

Sterilization and Disinfection of Patient-care Items

- *Spaulding classification*
- *Transporting and processing contaminated critical, semi-critical and non-critical patient-care items*
- *Manufacturers' Instructions for Use*
- *Instrument processing area*
 - *Receiving, cleaning and decontamination*
 - *Preparation and packaging*
 - *Sterilization*
 - *Procedures*
 - *Types*
 - *Sterilization of unwrapped instruments*
 - *Sterilization monitoring*
 - *Storage of sterilized items and clean dental supplies*
- *Administrative measures in instrument processing*

Environmental infection control

- *Clinical contact surfaces*
- *Housekeeping surfaces*
- *Cleaning and disinfection strategies for blood spills*
- *Carpeting and cloth furnishings*
- *Non-regulated and regulated medical waste*
- *Discharging blood or other body fluids to sanitary sewers or septic tanks*

Dental unit waterlines, biofilm and water quality

- *Strategies to improve dental unit water quality*
- *Maintenance and monitoring of dental unit water*
- *Delivery of sterile surgical irrigation*
- *Boil-water advisories*

Special considerations

- *Dental handpieces and other devices attached to air and waterlines*
- *Saliva ejectors*
- *Dental radiology*
- *Aseptic technique for parenteral medications*
- *Single-use or disposable devices*
- *Preprocedural mouth rinses*
- *Oral surgical procedures*
- *Handling of biopsy specimens*
- *Handling of extracted teeth*
- *Dental laboratory*
- *Laser/Electrosurgery plumes or surgical smoke*
- *M. tuberculosis*
- *Creutzfeldt-Jakob Disease and other prion diseases*
- *Program evaluation*

Written procedures – policies, procedures and record keeping

- *Exposure control plan*
- *Employee health records*
- *Training documentation*
- *Chemical safety records*
- *Workplace emergency procedures*
- *Work-related injury and illness record keeping*
- *Dental waste record keeping*
- *Housekeeping records*
- *Evaluation of safer sharps documentation*

Hazard communication

- *Major changes in new standard*
- *Chemical hazard communications program*
- *Hazard assessment*
- *Safety data sheets*
- *Hazard abatement and containment*

Conclusion

The Infection Control Consortium considers this work to be a significant step forward in promoting a unified message from the profession that the protection of the public and the dental team is paramount and that a basic evidence-based curriculum is necessary for the safe delivery of oral healthcare. While this report concludes the Consortium's original charge, all organizations and individuals who support or are involved in implementing infection control protocols in oral healthcare settings are encouraged to:

- Work to ensure compliance with the related standards and guidelines cited in these Proceedings
- Refer to the Consortium's overarching core competencies, learning objectives and curriculum elements when considering educational programs for any infection control training for DHCP, including training upon hire and annual training mandated by OSHA for all dental practices

How to Access the Proceedings and Other Resources

The *Proceedings of the Infection Control Consortium* is available to any interested individuals, educators, employers, organizations and agencies to reference in developing education in infection control in oral healthcare settings. Additional resources that may be available through the individual participating organizations can be obtained by contacting the Executive Director of any participating organization or visiting the organizations' websites.

1. *Certified Registered Central Service Technician Credential administered by the International Association of Healthcare Central Service Materiel Management (IAHCSMM), the Certified Sterile Processing and Distribution Technician Credential administered by the Certification Board for Sterile Processing and Distribution (CBSPD). 8:43A-14.5(b)5. The individual responsible for reprocessing reusable medical instruments shall be certified by a national central service certification program upon hire or within two years of employment.*
2. *Academy of General Dentistry (AGD; agd.org), American Association of Dental Boards (AADB; dentalboards.org), American Dental Assistants Association (ADAA; adaausa.org), American Dental Association (ADA; ada.org), American Dental Education Association (ADEA; adea.org), Dental Assisting National Board (DANB; danb.org), Organization for Safety, Asepsis and Prevention (OSAP; osap.org)*
3. *Federal standards and guidelines in infection control include those promulgated by OSHA, EPA, FDA, CDC, and other relevant agencies, or other organizations that develop ANSI recognized national standards. Examples of such standards and guidelines include OSHA Bloodborne Pathogens Standard (1910.1030) and the CDC Guidelines for Infection Control in Dental Health-Care Settings, 2003.*
4. *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care. Centers for Disease Control and Prevention. 2016. (cdc.gov/oralhealth/)*