Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care

MODULE 1 — Introduction
Modules in the Slide Series

1. Introduction (this module)
2. Hand Hygiene
3. Personal Protective Equipment
4. Respiratory Hygiene/Cough Etiquette
5. Sharps Safety
6. Safe Injection Practices
7. Sterilization and Disinfection of Patient-Care Items and Devices
8. Environmental Infection Prevention and Control
9. Dental Unit Water Quality
10. Program Evaluation
Importance of Infection Prevention in Dentistry

- Both patients and dental health care personnel (DHCP) can be exposed to disease-causing organisms.

- Contact with blood, oral and respiratory secretions, and contaminated equipment occurs.

- Proper procedures can prevent transmission of infections among patients and DHCP.
Bloodborne Pathogens

Bloodborne viruses such as hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV):

- Are transmissible in health care settings.
- Can produce chronic infection.
- Are often carried by persons unaware of their infection.
Potential Routes of Bloodborne Pathogens

- Patient to Patient
- Patient to DHCP
- DHCP to Patient
Standard Precautions

- Primary way to prevent transmission of infectious agents.
- **MUST** be used in the care of all patients, regardless of their infection status.

**Elements include:**

- Hand hygiene.
- Using personal protective equipment.
- Respiratory hygiene/cough etiquette.
- Sharps safety, including engineering and work practice controls.
- Safe injection practices.
- Sterilization and disinfection of instruments and devices.
- Cleaning and disinfecting environmental surfaces.
Transmission-Based Precautions

- Some patients require additional measures: transmission-based precautions.
- Second tier of infection prevention.
- Always used in addition to standard precautions to interrupt the spread of certain pathogens.
- Three categories:
  - Airborne.
  - Droplet (larger than 5 microns).
  - Contact.
- More than one transmission category may apply.
Administrative Measures

- Make infection prevention a priority in all dental settings.
- Assign at least one person as the infection control coordinator.
- Tailor policies to each dental setting.
- Reassess on a regular basis (e.g., annually).
Infection Prevention Education and Training

- Critical to ensure that infection prevention practices are understood and consistently followed.

- Provide job or task-specific education and training
  - Upon hire for all new staff.
  - When new tasks or procedures are introduced.
  - At least annually.

- Include both DHCP and patient safety.
Dental Health Care Personnel Safety

- Immunizations.
- Exposure prevention and postexposure management.
- Medical condition management and work-related illnesses and restrictions.
- Health record maintenance.
Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care

- Summary of basic infection prevention expectations for safe care in all dental settings.
- Supplements existing CDC recommendations (not a replacement).
- Based on standard precautions.
- Links to references and additional resources.

Source: Infection Prevention & Control Guidelines & Recommendations
Summary Objectives

- Provides basic infection prevention principles and recommendations for dental health care settings.
- Reaffirms standard precautions as the foundation for preventing transmission of infectious agents during patient care in all dental health care settings.
- Provides links to full guidelines and source documents that readers can reference for more detailed background information and recommendations.
Summary Contents

- Introduction and objectives.
- Fundamental elements needed to prevent transmission of infectious agents in dental settings.
- Risk assessment.
- Conclusions.
- Source documents.
- Appendices.
Appendices

- Appendix A: Infection Prevention Checklist for Dental Settings: Basic Expectations for Safe Care
  - Section I: Policies and Practices
  - Section II: Direct Observation of Personnel and Patient-Care Practices
- Appendix B: Relevant Recommendations Published by CDC Since 2003
- Appendix C: Selected References and Additional Resources by Topic Area
Additional Resources

- In addition to the summary document, the following resources are available:
  - Separate printable version of the Infection Prevention Checklist for Dental Settings.
  - Fillable PDF format of the Infection Prevention Checklist for Dental Settings.
  - Mobile App version of the Infection Prevention Checklist for Dental Settings.
  - Compendium document: *Recommendations from the Guidelines for Infection Control in Dental Health-Care Settings – 2003*

- All documents are available on the DOH website:
  - Infection Prevention & Control Guidelines & Recommendations
Infection Prevention Checklist for Dental Settings

Checklist to evaluate compliance with infection prevention practices

- **Section 1: Policies and Practices**
- **Section 2: Direct Observation of Personnel and Patient-Care Practices**

Source: Infection Prevention & Control Guidelines & Recommendations
Electronic Fillable Checklist

Source: Infection Prevention & Control Guidelines & Recommendations
CDC DentalCheck—Mobile App

- Interactive version of the Infection Prevention Checklist for Dental Settings.
- Available for all mobile iOS compatible devices.
- Free download at the iTunes App and Google Play Stores.
CDC DentalCheck Key Features

- Allows users to check Yes or No to acknowledge adherence with a list of administrative policies or observed practices.
- Provides basic infection prevention principles and recommendations for dental health care settings.
- Allows users ability to export results for records management.
- Provides links to full guidelines and source documents that users can reference for more detailed background and recommendations.
Conclusion

- Infection prevention must be a priority in all dental settings.
- Reports from dental settings are rare.
- Transmissions that occurred were likely the result of lack of compliance.
- Standard precautions remain the major infection prevention strategy to prevent transmissions.
- CDC tools and resources can help DHCP with compliance.
Resources

- CDC. *Guidelines for Infection Control in Dental Health-Care Settings—2003*

- CDC. *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care*

- Organization for Safety, Asepsis and Prevention. *Interactive Online Article – Understanding CDC’s Summary of Infection Prevention Practices in Dental Settings*

- Organization for Safety, Asepsis and Prevention. *New CDC Tool for Dentistry webinar*
End of Module 1

For more information, contact Centers for Disease Control and Prevention (CDC).
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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the CDC.
Summary of Infection Prevention Practices in Dental Settings:
Basic Expectations for Safe Care

MODULE 2 — Hand Hygiene
Modules in the Slide Series

1. Introduction
2. Hand Hygiene (this module)
3. Personal Protective Equipment
4. Respiratory Hygiene/Cough Etiquette
5. Sharps Safety
6. Safe Injection Practices
7. Sterilization and Disinfection of Patient-Care Items and Devices
8. Environmental Infection Prevention and Control
9. Dental Unit Water Quality
10. Program Evaluation
Hand Hygiene Is Key for Prevention

Hand Hygiene

- Is a critical practice for preventing the transmission of pathogens in health care settings.
- Reduces harmful microorganisms on the hands.
- Compliance with hand hygiene practices is routinely used as a clinical performance indicator in hospital settings.
- Is expected by patients to be performed by all dental health care personnel (DHCP).
Why Is Hand Hygiene Important?

Hand Hygiene

- Hands are the most common mode of pathogen transmission.
  - Reduce spread of antimicrobial resistance.
  - Prevent health care-associated infections.
Hand Hygiene

The term “hand hygiene” includes both handwashing with either plain soap or antimicrobial soap and use of alcohol-based hand rubs that do not require the use of water.
Key Recommendations for Hand Hygiene

- Perform hand hygiene:
  - When hands are visibly soiled.
  - After barehanded touching of instruments, equipment, materials, and other objects likely to be contaminated by blood, saliva, or respiratory secretions.
  - Before and after treating each patient, even if gloves are worn.
  - Immediately after removing gloves.

- Use soap and water when hands are visibly soiled (e.g., blood, body fluids). Otherwise, an alcohol-based hand rub may be used.
### Hand Hygiene for Routine Dental Procedures

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Soap and Water</th>
<th>Antimicrobial Soap and Water</th>
<th>Alcohol-Based Hand Rub</th>
</tr>
</thead>
<tbody>
<tr>
<td>If hands are visibly soiled (e.g., dirt, blood, body fluids).</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>If hands are not visibly soiled.</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>
## Hand Hygiene for Surgical Procedures

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Soap and Water Alone</th>
<th>Antimicrobial Soap and Water</th>
<th>Soap and Water Followed by Alcohol-Based Hand Rub</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical hand antisepsis before gloving</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>

Note: soap and alcohol-based hand rubs should have a persistent effect and broad spectrum of activity.
Hand Washing Technique

- Wet hands with water, apply soap, and rub hands together for at least 15 seconds.
- Rinse hands and dry with a disposable towel.
- Use towel to turn off faucet.
Using an Alcohol-Based Hand Rub

- Apply to palm of one hand and rub hands together covering all surfaces until dry.
- Use amount recommended by manufacturer’s instructions.
- Do not use if hands are visibly soiled.
Surgical Hand Hygiene

- Antimicrobial soap—scrub hands and forearms for length of time recommended by manufacturer.
  
  OR

- Alcohol-based hand rub—follow manufacturer’s recommendations.
  - Before applying, prewash hands and forearms with nonantimicrobial soap.
Efficacy of Hand Hygiene Preparations in Reducing Bacteria

Alcohol-Based Hand Rubs Are More Effective in Killing Bacteria Than Soap and Water

GOOD
REGULAR SOAP

BETTER
ANTIMICROBIAL SOAP

BEST
ALCOHOL-BASED HAND RUB (FOAM OR GEL)

Source: CDC Hand Hygiene Interactive Education
Alcohol-Based Preparations

Benefits
- Rapid and effective antimicrobial action.
- Improved skin condition.
- More accessible than sinks.

Limitations
- Cannot be used if hands are visibly soiled.
- Must be stored away from high temperatures or flames.
- Hand softeners and glove powders may build up on hands.
Special Hand Hygiene Considerations

- Use hand lotions to prevent skin dryness.
- Consider compatibility of hand care products with gloves (e.g., mineral oils and petroleum bases may cause early glove failure).
- Keep fingernails short.
- Avoid artificial nails.
- Avoid hand jewelry that may tear gloves.
Reminders in the Workplace

- Reminders can be used to prompt DHCP about the importance of hand hygiene.
- Reminders also inform patients about the standard of care they should expect.

Source: Clean Hands Count Promotional Materials
Hand Hygiene Resources

- CDC. *Guideline for Hand Hygiene in Health-Care Settings*
- CDC. *Guidelines for Infection Control in Dental Health-Care Settings—2003*
- CDC. *Hand Hygiene in Healthcare Settings website*
  - Hand Hygiene Training Course
  - Clean Hands Count Campaign
- CDC. *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care*
Summary of Infection Prevention Practices in Dental Settings:
Basic Expectations for Safe Care

MODULE 3 — Personal Protective Equipment
Modules in the Slide Series

1. Introduction
2. Hand Hygiene
3. Personal Protective Equipment (this module)
4. Respiratory Hygiene/Cough Etiquette
5. Sharps Safety
6. Safe Injection Practices
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Personal Protective Equipment (PPE)

- Protects the skin and mucous membranes from exposure to infectious materials in spray or spatter.
- Should be worn whenever there is potential for contact with spray or spatter.
- Should be removed when leaving work areas.
Masks, Protective Eyewear, Face Shields

- Wear a surgical mask and either eye protection with solid side shields or a face shield to protect mucous membranes of the eyes, nose, and mouth.
- Change masks:
  - Between patients.
  - If mask becomes wet during patient treatment.
- Clean reusable face protection:
  - Between patients (with soap and water).
  - If visibly soiled (by cleaning and disinfecting).
Protective Clothing

- Wear gowns or lab coats that cover skin and personal clothing likely to become soiled with blood, saliva, or infectious material.
- Change if visibly soiled.
- Remove all barriers before leaving the work area.
Gloves

- Prevent contamination of DHCP’s hands when touching mucous membranes, blood, saliva, or other potentially infectious materials.

- Reduce the likelihood that microorganisms present on the hands of DHCP will be transmitted to patients during surgical or other patient-care procedures.

- Do not eliminate or replace the need for handwashing.
## Glove Types – Patient Examination Gloves

<table>
<thead>
<tr>
<th>Glove Type</th>
<th>Indications</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient examination gloves</td>
<td>Patient care, examinations, other nonsurgical procedures involving contact with mucous membranes, and laboratory procedures.</td>
<td>Medical device regulated by the Food and Drug Administration (FDA). Nonsterile and sterile single-use disposable. Use for one patient and discard appropriately.</td>
</tr>
</tbody>
</table>

Source: *Guidelines for Infection Control in Dental Health-Care Settings—2003*
## Glove Types – Surgeon’s Gloves

<table>
<thead>
<tr>
<th>Glove Type</th>
<th>Indications</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgeon’s gloves</td>
<td>Surgical procedures</td>
<td>Medical device regulated by FDA. Sterile and single-use disposable. Use for one patient and discard appropriately.</td>
</tr>
</tbody>
</table>

Source: Guidelines for Infection Control in Dental Health-Care Settings—2003
## Glove Types – Nonmedical Gloves

<table>
<thead>
<tr>
<th>Glove Type</th>
<th>Indications</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonmedical gloves</td>
<td>Housekeeping procedures (e.g., cleaning, disinfection).</td>
<td>Not a medical device regulated by FDA.</td>
</tr>
<tr>
<td></td>
<td>Handling contaminated sharps or chemicals.</td>
<td>Commonly referred to as utility, industrial, or general purpose gloves.</td>
</tr>
<tr>
<td></td>
<td>Not for use during patient care.</td>
<td>Should be puncture or chemical resistant, depending on the task.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Latex gloves do not provide adequate chemical protection.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sanitize after use.</td>
</tr>
</tbody>
</table>

Source: *Guidelines for Infection Control in Dental Health-Care Settings—2003*
Glove Recommendations

- Wear gloves when contact with blood, saliva, and mucous membranes is possible.
- Wear a new pair of gloves for each patient.
- Remove gloves after patient care and perform hand hygiene immediately.
Glove Recommendations

Remove gloves that are torn, cut, or punctured.  
Do not wash, disinfect, or sterilize medical gloves for reuse.
Putting On and Removing PPE

- Follow recommended sequences for PPE donning and removal.
- Recommended sequences and related material available at Protecting Healthcare Personnel.
SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

1. GOWN
   - Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
   - Fasten in back of neck and waist

2. MASK OR RESPIRATOR
   - Secure ties or elastic bands at middle of head and neck
   - Fit flexible band to nose bridge
   - Fit snug to face and below chin
   - Fit-check respirator

3. GOGGLES OR FACE SHIELD
   - Place over face and eyes and adjust to fit

4. GLOVES
   - Extend to cover wrist of isolation gown

USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene
HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE)

EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. Remove all PPE before exiting the patient room except a respirator, if worn. Remove the respirator after leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GLOVES
   - Outside of gloves are contaminated!
   - If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
   - Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
   - Hold removed glove in gloved hand
   - Slide fingers of un gloved hand under remaining glove at wrist and peel off second glove over first glove
   - Discard gloves in a waste container

2. GOGGLES OR FACE SHIELD
   - Outside of goggles or face shield are contaminated!
   - If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
   - Remove goggles or face shield from the back by lifting head band or ear pieces
   - If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container

3. GOWN
   - Gown front and sleeves are contaminated!
   - If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
   - Unfasten gown ties, taking care that sleeves don’t contact your body when reaching for ties
   - Pull gown away from neck and shoulders, touching inside of gown only
   - Turn gown inside out
   - Fold or roll into a bundle and discard in a waste container

4. MASK OR RESPIRATOR
   - Front of mask/respirator is contaminated — DO NOT TOUCH!
   - If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
   - Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
   - Discard in a waste container

5. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE

PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE
How to Safely Remove Personal Protective Equipment (PPE) Example 2

Here is another way to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Remove all PPE before exiting the patient room except a respirator, if worn. Remove the respirator after leaving the patient room and closing the door. Remove PPE in the following sequence:

1. **Gown and Gloves**
   - Gown front and sleeves and the outside of gloves are contaminated!
   - If your hands get contaminated during gown or glove removal, immediately wash your hands or use an alcohol-based hand sanitizer.
   - Grasp the gown in the front and pull away from your body so that the ties break, touching outside of gown only with gloved hands.
   - While removing the gown, fold or roll the gown inside-out into a bundle.
   - As you are removing the gown, peel off your gloves at the same time, only touching the inside of the gloves and gown with your bare hands. Place the gown and gloves into a waste container.

2. **Goggles or Face Shield**
   - Outside of goggles or face shield are contaminated!
   - If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer.
   - Remove goggles or face shield from the back by lifting head band and without touching the front of the goggles or face shield.
   - If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container.

3. **Mask or Respirator**
   - Front of mask/respirator is contaminated — DO NOT TOUCH!
   - If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer.
   - Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front.
   - Discard in a waste container.

4. **Wash Hands or Use an Alcohol-Based Hand Sanitizer Immediately After Removing All PPE**

Perform hand hygiene between steps if hands become contaminated and immediately after removing all PPE.
Safe Work Practices

- Keep gloved hands away from face.
- Limit surfaces and items touched.
- Change gloves when torn.
- Remove PPE when leaving work areas.
- Perform hand hygiene immediately after removing PPE.
PPE Resources

- CDC. *Guidelines for Infection Control in Dental Health-Care Settings—2003*
- CDC. *Guidance for the Selection and Use of Personal Protective Equipment in Healthcare Settings*
- CDC. *2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings*
  - Figure. Example of Safe Donning and Removal of Personal Protective Equipment (PPE)
- CDC. *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care*
End of Module 3

For more information, contact Centers for Disease Control and Prevention (CDC).
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MODULE 4 — Respiratory Hygiene/Cough Etiquette
Modules in the Slide Series

1. Introduction
2. Hand Hygiene
3. Personal Protective Equipment
4. **Respiratory Hygiene/Cough Etiquette (this module)**
5. Sharps Safety
6. Safe Injection Practices
7. Sterilization and Disinfection of Patient-Care Items and Devices
8. Environmental Infection Prevention and Control
9. Dental Unit Water Quality
10. Program Evaluation
New Elements Added to Standard Precautions in 2007

- Infection control problems that are identified in the course of outbreak investigations often indicate the need for new recommendations or reinforcement of existing infection control recommendations to protect patients.

- Two areas of practice relevant to dentistry were added:
  - Respiratory hygiene/cough etiquette.
  - Safe injection practices.

Respiratory Hygiene/Cough Etiquette

Based on observations made during severe acute respiratory syndrome (SARS) outbreaks, where failures to implement simple source control measures with patients, visitors, and health care personnel with respiratory symptoms may have contributed to SARS transmission.

Respiratory Hygiene/Cough Etiquette

- Combination of infection prevention measures designed to limit the transmission of respiratory pathogens spread by droplet or airborne routes.
- First point of encounter.
- Strategies target:
  - Patients and visitors who might have undiagnosed transmissible respiratory infections.
  - **Anyone** with signs of illness, including cough, congestion, runny nose, or increased production of respiratory secretions.

*Source: Respiratory Hygiene/Cough Etiquette in Healthcare Settings*
Measures to Contain Respiratory Secretions

- Cover mouth and nose with a tissue when coughing or sneezing.
- Use the nearest waste receptacle to dispose of tissues after use.
- Perform hand hygiene after having contact with respiratory secretions and contaminated objects or materials.
- Offer masks to coughing patients and other symptomatic people when they enter the dental setting.
- Encourage people with symptoms to sit as far away from others as possible.

Source: Respiratory Hygiene/Cough Etiquette in Healthcare Settings
Visual Alerts

- Display visual cues to remind staff and patients of proper ways to prevent spread of respiratory pathogens.

- Related materials are available at Cover Your Cough and Important Notice to All Patients.
Supplies

Dental health care facilities should ensure the availability of:

- Tissues and no-touch waste receptacles for disposing of used tissues.
- Dispensers of alcohol-based hand rub and handwashing materials (when a sink is available).
- Masks (for coughing patients and other people with symptoms).
Additional Considerations

- DHCP should be educated on how to prevent the spread of respiratory pathogens when in contact with people with symptoms.
- CDC recommends that health care workers get one dose of influenza vaccine annually.
Respiratory Hygiene and Cough Etiquette Resources

- CDC. *2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings*
- CDC. Influenza (Flu) website: Respiratory Hygiene/Cough Etiquette in Healthcare Settings
- CDC. Influenza (Flu) website: Cover Your Cough
- CDC. *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care*
End of Module 4

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MODULE 5 — Sharps Safety
Modules in the Slide Series

1. Introduction
2. Hand Hygiene
3. Personal Protective Equipment
4. Respiratory Hygiene/Cough Etiquette
5. Sharps Safety (this module)
6. Safe Injection Practices
7. Sterilization and Disinfection of Patient-Care Items and Devices
8. Environmental Infection Prevention and Control
9. Dental Unit Water Quality
10. Program Evaluation
Percutaneous Injuries Among Dental Health Care Personnel

- Defined as needlestick or cut with sharp object.
- Most involve burs, needles, and other sharp objects.
- The Occupational Safety and Health Administration (OSHA’s) Bloodborne Pathogens Standard helps to protect dental health care personnel (DHCP) from blood exposure and sharps injuries.
- These injuries pose the risk of bloodborne pathogen transmission to DHCP and patients.
Sharps Safety

- Most exposures in dentistry are preventable.
- Each dental practice should have policies and procedures in place that address sharps safety:
  - Take precautions while using sharps.
  - Take precautions during cleanup.
  - Take precautions during disposal.
- Prevention is primary
Engineering Controls

- Whenever possible, engineering controls should be the primary method to reduce exposure to bloodborne pathogens.
- These controls remove or isolate the hazard.
- They are frequently technology-based, for example:
  - Self-sheathing anesthetic needles, safety scalpels, and needleless IV ports.
  - Sharps containers and needle recapping devices.
Engineering Controls

- Use sharps devices that have safety features engineered into them.
- Be sure to know how to use these safety features.
- Related materials are available at Now You See It, Now You Don’t
Work Practice Controls

- Change the way you perform tasks.
- Examples include:
  - Not bending or breaking needles.
  - Not passing a syringe with an unsheathed needle.
  - Removing burs before disassembling the handpiece from the dental unit.
  - Using instruments in place of fingers for tissue retraction or palpation.
Sharps Safety Practices

- Be Prepared
- Be Aware
- Dispose with Care

Source: Sharps Safety for Healthcare Settings Teaching Tools
Be Prepared

Before beginning a procedure:

- Organize equipment.
- Ensure adequate lighting.
- Keep sharps pointed away from user.
- Locate a sharps disposal container.
Be Aware

During a procedure:

- Maintain visual contact with sharps.
- Be aware of nearby personnel.
- Control the location of sharps to avoid injury.
- Do not pass needles unsheathed.
- Consider alerting others when passing sharps and consider a neutral zone for placing and retrieving sharps.
- Activate the safety feature of devices as soon as procedure is completed.

Source: Sharps Safety for Healthcare Settings Teaching Tools
Cleanup—Dispose with Care

- Check procedure trays and waste materials for exposed sharps before handling.
- Look for sharps and equipment left behind inadvertently.
- Transport reusable sharps in a closed, labeled container.
- Secure the container to prevent spilling contents.
Sharps Containers

- Keep hands behind sharps during disposal.
- Never put hands or fingers into sharps containers.
- Visually inspect sharps containers for overfilling.
- Replace containers before they become overfilled.
Evaluating Safety Devices

The Needlestick and Prevention Act mandated changes to the OSHA Bloodborne Pathogens Standard in 2001:

- DHCP directly responsible for patient care (e.g., dentists, hygienists, dental assistants) must identify, evaluate and select devices with engineered safety features at least annually and as they become available.
Developing Programs to Prevent Sharps Injuries

- Assign a staff person knowledgeable about or willing to be trained in injury prevention (i.e., a safety coordinator or an infection control coordinator) to:
  - Promote safety awareness.
  - Facilitate prompt reporting and postexposure management of injuries.
  - Identify unsafe work practices and devices.
  - Coordinate the selection and evaluation of safer dental devices.
  - Organize staff education and training.
  - Complete the necessary reporting forms and documentation.
  - Monitor safety performance.
Identifying Safer Dental Devices

- Developing evaluation criteria.
- Screening devices.
- Evaluating devices.
CDC Sample Screening and Device Evaluation Forms for Dentistry

Source: Sample Screening and Device Evaluation Forms for Dentistry
Occupational Exposure Incident

- Percutaneous injury:
  - Needlestick, puncture wound, or cut.
- Splash of blood or body fluid onto:
  - Mucous membranes of the eyes, nose, or mouth.
  - Non-intact skin (e.g., chapped, abraded, dermatitis).
Postexposure Management Program

- Clear policies and procedures.
- Education of DHCP.
- Rapid access to qualified health care professional who can provide:
  - Clinical care.
  - Postexposure prophylaxis (PEP).
  - Testing of source patients and DHCP.
Postexposure Management

- Wound management.
- Exposure reporting.
- Assessment of infection risk:
  - Type and severity of exposure.
  - Bloodborne pathogen status of source person.
  - Susceptibility of exposed person.
Sharps Safety Resources

- CDC. *Guidelines for Infection Control in Dental Health-Care Settings*–2003
- CDC. Oral Health website. Screening and Evaluating Safer Dental Devices
- CDC. National Institute for Occupational Safety and Health. Bloodborne Infectious Diseases website. HIV/AIDS, Hepatitis B, Hepatitis C: Preventing Needlesticks and Sharps Injuries
- CDC. Sharps Safety for Healthcare Settings website
- CDC. *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care*
End of Module 5

For more information, contact Centers for Disease Control and Prevention (CDC).
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Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care

MODULE 6 — Safe Injection Practices
Modules in the Slide Series

1. Introduction
2. Hand Hygiene
3. Personal Protective Equipment
4. Respiratory Hygiene/Cough Etiquette
5. Sharps Safety
6. Safe Injection Practices (this module)
7. Sterilization and Disinfection of Patient-Care Items and Devices
8. Environmental Infection Prevention and Control
9. Dental Unit Water Quality
10. Program Evaluation
New Elements Added to Standard Precautions in 2007

- Infection control problems that are identified in the course of outbreak investigations often indicate the need for new recommendations or reinforcement of existing infection control recommendations to protect patients.

- Two areas of practice relevant to dentistry that were added:
  - Respiratory hygiene/cough etiquette
  - Safe Injection Practices

Source: Isolation Precautions
Safe Injection Practices

A set of measures intended to prevent transmission of infectious diseases between one patient and another or between a patient and dental health care personnel (DHCP) during preparation and administration of injectable (e.g., intravenous, intramuscular injection) medications.

Source: Safe Injection Practices to Prevent Transmission of Infections to Patients
Injectable Medications

- Medications that are injected into the body—most frequently by intravenous or intramuscular routes.

- DHCP most frequently handle injectable medications when administering local anesthesia.
  - Handle safely to prevent transmission of infections.

- Cases of disease transmission have been reported.
  - A 2013 patient-to-patient transmission of hepatitis C virus in a dental health care setting likely occurred through a combination of unsafe injection practices.
Administration of Local Anesthesia

Needles and anesthetic cartridges are used for one patient only, and the dental cartridge syringe is cleaned and heat sterilized between patients.
Single and Multidose Medication Vials

- **Single Dose Vials**
  - A vial of liquid medication intended for injectable administration (injection or infusion) that is meant for use in a single patient for a single case, procedure, or injection. Single-dose or single-use vials are labeled as such by the manufacturer.

- **Multidose Vials**
  - A vial of liquid medication intended for injectable administration (injection or infusion) that contains more than one dose of medication. Multidose vials are labeled as such by the manufacturer.
Unsafe Injection Practices

*that have led to patient harm...*

- Mishandling and inappropriate sharing of medication vials and containers.
- Reuse of syringes and needles.
- Preparation of medications in close proximity to contaminated supplies or equipment.
Unsafe Injection Practice

1. Clean needle and syringe are used to draw medication.
2. When used on an HCV-infected patient, backflow from the injection or removal of the needle contaminates the syringe.
3. When again used to draw medication, a contaminated syringe contaminates the medication vial.
4. If a contaminated vial is subsequently used for other patients, they can become infected with HCV.

Source: Acute Hepatitis C Virus Infections Attributed to Unsafe Injection Practices at an Endoscopy Clinic --- Nevada, 2007
Safe Injection Practices – Recommendations

- Prepare injections using aseptic technique in a clean area.
- Disinfect the rubber septum on a medication vial with alcohol before piercing.
- Do not use needles and syringes for more than one patient.

NOTE: When using a dental cartridge syringe to administer local anesthesia, do not use the needle or anesthetic cartridge for more than one patient. Ensure that the dental cartridge syringe is appropriately cleaned and heat sterilized before use on another patient.
Safe Injection Practices – Recommendations (Continued)

- Medication containers (single and multidose vials, ampoules, and bags) are entered with a new needle and new syringe, even when obtaining additional doses for the same patient.
- Use single-dose vials for injectable medications when possible.
- Do not use single-dose (single-use) medication vials, ampoules, or bags or bottles of intravenous solution for more than one patient.
- Do not combine (pool) leftover contents of single-dose vials for later use.
Safe Injection Practices—
Recommendations for Multidose Vials

Dedicate multidose vials to a single patient whenever possible.
Safe Injection Practices – Recommendations for Multidose Vials (Continued)

- If multidose vials will be used for more than one patient, they should be restricted to a centralized medication area and should not enter the immediate patient treatment area to prevent inadvertent contamination.
- If a multidose vial enters the immediate patient treatment area, it should be dedicated for single-patient use and discarded immediately after use.
- Date multidose vials when first opened. Discard within 28 days unless the manufacturer specifies a shorter or longer date for that opened vial.
Safe Injection Practices

Fluid Infusion Recommendations

Do not use fluid infusion or administration sets (e.g., IV bags, tubings, connections) for more than one patient.
Safe Injection Practices Resources

- CDC. *2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings*
- CDC. Injection Safety website
- CDC. *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care*
- CDC and the Safe Injection Practices Coalition. One & Only Campaign website
- World Health Organization. Injection Safety website
End of Module 6

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Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care

MODULE 7 — Sterilization and Disinfection of Patient-Care Items and Devices
Modules in the Slide Series

1. Introduction
2. Hand Hygiene
3. Personal Protective Equipment
4. Respiratory Hygiene/Cough Etiquette
5. Sharps Safety
6. Safe Injection Practices
7. **Sterilization and Disinfection of Patient-Care Items and Devices (this module)**
8. Environmental Infection Prevention and Control
9. Dental Unit Water Quality
10. Program Evaluation
Categories of Patient-Care Items

- Three categories:
  1. Critical.
  2. Semicritical.

- Based on intended use and the potential risk of disease transmission
Critical Items

- Penetrate soft tissue or contact bone, enter into or contact the vascular system or other normally sterile tissue.
- Greatest risk of transmitting infection.
- Must be heat sterilized between use, or sterile single-use, disposable devices must be used.
- Examples: surgical instruments and periodontal scalers.
Semicritical Items

- Contact mucous membranes or non-intact skin (e.g., exposed skin that is chapped, abraded, or has dermatitis).
- Lower risk of transmission.
- Should be heat sterilized or high-level disinfected.
- Examples: mouth mirrors, amalgam condensers, and reusable impression trays.

NOTE: If a semicritical item is heat-sensitive, DHCP should replace it with a heat-tolerant or disposable alternative. If none are available, the item should, at a minimum, be processed using high-level disinfection.
Semicritical Items
Special Considerations—Dental Handpieces

- Follow manufacturer’s instructions to safely reprocess dental handpieces and accessories (e.g., low-speed motor, reusable prophylaxis angles).
- Clean and heat sterilize between patient uses.
- Do not subject the handpiece to high-level disinfection and do not simply wipe the surface with a low-level disinfectant.
Semicritical Items

Special Considerations—Digital Sensors

- Follow manufacturer’s instructions to safely reprocess digital radiography equipment.

- Ideally, barrier protection should be used, followed by cleaning and heat sterilization or high-level disinfection between patients.
  - If the item cannot tolerate these procedures, then at minimum, barrier protection should be used, followed by cleaning and disinfection with an intermediate-level disinfectant between patients.
Noncritical Items

- Contact intact skin.
- Barrier protect or clean and disinfect (if visibly soiled) using a low to intermediate-level (i.e., tuberculocidal) disinfectant.
- Examples: x-ray head or cone, facebows, blood pressure cuff.
Single-Use (Disposable) Devices

- Intended for use on one patient during a single procedure.
- Usually not heat-tolerant.
- Cannot be reliably cleaned.
- Do **NOT** reprocess.
- Examples: syringe needles, prophylaxis cups, and plastic orthodontic brackets.
Instrument Processing

- Follow manufacturer’s instructions for reprocessing (i.e., cleaning, packaging, disinfecting, sterilizing) reusable dental instruments and equipment.
  - Maintain manufacturer’s instructions (ideally) in or near the reprocessing area.

- Use FDA-cleared devices and supplies for cleaning, packaging, and heat sterilization.

- Should be assigned to DHCP with training in the required reprocessing steps.
Instrument Processing Area

- Use a designated processing area to control quality and ensure safety.

- Divide processing area into work areas:
  - Receiving, decontamination, and cleaning.
  - Preparation and packaging.
  - Sterilization.
  - Storage.

- Devices and instruments should flow from high contamination areas to clean and sterile areas.
Cleaning

- Cleaning should always occur before disinfection or sterilization.
  - Presence of soil can compromise the disinfection or sterilization process.

- Automated or manual.

- Minimize exposure potential.

- Use carrying containers to transport contaminated instruments.

- Wear personal protective equipment (e.g., heavy duty utility gloves, mask, protective eyewear and clothing).
Automated Cleaning

- Ultrasonic cleaner.
- Instrument washer.
- Washer-disinfector.
Manual Cleaning

- If not performed immediately, soak instruments until ready to clean to prevent debris from drying on instruments.
- Wear heavy-duty utility gloves, mask, eyewear, and protective clothing.
Preparation and Packaging

- Wrap, package, or place instruments in containers before heat sterilization.
  - Instruments should be thoroughly dry before they are packaged, wrapped, or otherwise contained.

- Follow manufacturer’s instructions.
  - For example: open hinged instruments, disassemble instruments if required, and ensure that packaging materials are compatible with the method of heat sterilization being used.
Preparation and Packaging (Continued)

- Place a chemical indicator inside each package.
  - If the internal chemical indicator cannot be seen from the outside, place another indicator on the outside of the package.

- Label the package with the following:
  - Sterilizer number.
  - Cycle or load number.
  - Date of sterilization.
  - Expiration date, if applicable.
Heat-Based Sterilization

- Use FDA-cleared devices and follow manufacturer’s instructions.
- Steam under pressure (autoclaving):
  - Gravity displacement.
  - Pre-vacuum.
- Dry heat.
- Unsaturated chemical vapor.
Liquid Chemical Sterilant or Disinfectants

- Only for heat-sensitive critical and semicritical devices.
- Highly toxic.
- Follow manufacturer’s instructions (e.g., regarding dilution, immersion time, and temperature) and safety precautions precisely.
- Heat-tolerant or disposable alternatives are available.
Sterilization Monitoring: Types of Indicators

- **Mechanical:**
  - Measures time, temperature, and pressure.

- **Chemical:**
  - Change in color when physical parameter is reached.

- **Biological (spore tests):**
  - Uses biological spores to assess the sterilization process directly.

- **Indicators are specific to the type of sterilization used.**
Mechanical Monitoring

- Monitor each load with mechanical (physical) indicators:
  - Time.
  - Temperature.
  - Pressure.
Chemical Monitoring

- Use an internal chemical indicator in every package. If the internal indicator is not visible from the outside, then also use an external indicator.
  - Chemical indicators may be integrated into the package design.
- Inspect indicator(s) after sterilization and at time of use.
- If the appropriate color change did not occur, do not use the instruments.
Biological Monitoring

- Assess sterilization process directly by killing known highly resistant microorganisms.
- Use biological indicators (spore tests) at least weekly.
Record Keeping

- Sterilization monitoring (e.g., biological, mechanical, chemical) and equipment maintenance records are important components of a dental infection prevention program.

- Ensures cycle parameters have been met and establishes accountability.

- If there is a problem with a sterilizer, documentation helps to determine if an instrument recall is necessary.
Storage of Sterile and Clean Items and Supplies

- Store clean items in dry, closed, or covered cabinet.
- Use date- or event-related shelf-life practices.
- Examine wrapped items carefully before use.
- When packaging of sterile items is damaged, clean, repackage, and heat sterilize again.
Resources

- CDC. *Guidelines for Infection Control in Dental Health-Care Settings—2003*
- CDC. *Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008*
- CDC. *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care*

- Resources to use in the event of a reprocessing error or failure:
  - CDC. Health Care-Associated Infections website: [Outbreaks and Patient Notifications](#)
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Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care

MODULE 8 — Environmental Infection Prevention and Control
Modules in the Slide Series

1. Introduction
2. Hand Hygiene
3. Personal Protective Equipment
4. Respiratory Hygiene/Cough Etiquette
5. Sharps Safety
6. Safe Injection Practices
7. Sterilization and Disinfection of Patient-Care Items and Devices
8. Environmental Infection Prevention and Control (this module)
9. Dental Unit Water Quality
10. Program Evaluation
Environmental Surfaces

- A surface or equipment that does not contact patients directly.
- Can become contaminated through touch, splash, or droplets generated during patient care.
- Can serve as reservoirs of microbial contamination.
Categories of Environmental Surfaces

- **Clinical contact surfaces:**
  - High potential for direct contamination from spray or spatter or by contact with gloved hands of dental health care personnel (DHCP).
  - Emphasis for cleaning and disinfection should be placed on these surfaces.
  - Examples: light handles, bracket trays, switches on dental units, computer equipment.

- **Housekeeping surfaces:**
  - Do not come into direct contact with patients or devices.
  - Can be decontaminated with less rigorous methods than those used on dental patient-care items and clinical contact surfaces.
  - Examples: floors, walls, and sinks.
Clinical Contact Surfaces
Housekeeping Surfaces
Surface Barriers

- Barriers protect clinical contact surfaces, especially those that are difficult to clean (e.g., switches on dental chairs, computer equipment).
- Change barriers between patients.
General Cleaning Recommendations

- Use personal protective equipment (e.g., heavy-duty utility gloves, masks, protective eyewear).
- Cleaning should always come before disinfection.
- Follow manufacturer’s instructions for proper use of hospital disinfectants registered by the US Environmental Protection Agency (EPA).
  - EPA-registered disinfectants
- Do not use liquid chemical sterilants or high-level disinfectants.
Cleaning Clinical Contact Surfaces

- Risk of transmitting infections greater than for housekeeping surfaces
- Barrier protect and change between patients
- Clean followed by disinfection with an EPA-registered low-level (HIV/HBV claim) to intermediate-level (tuberculocidal claim) hospital disinfectant.

NOTE: HIV/HBV=human immunodeficiency virus/hepatitis B virus.
Cleaning Housekeeping Surfaces

- Routinely clean with soap and water or an EPA-registered hospital detergent/disinfectant.
- Disinfect if visibly contaminated with blood.
- Clean mops and cloths after use and allow to dry thoroughly before reusing (or use single-use disposable options).
- Prepare fresh cleaning and disinfecting solutions daily and according to manufacturer’s instructions.
Regulated Medical Waste Management

- Infectious waste that carries a substantial risk of causing infection during handling and disposal.
  - Examples: gauze soaked in blood, extracted teeth, and contaminated sharp items.

- Requires special storage, handling, neutralization, and disposal and is covered by federal, state, and local rules and regulations.
  - Proper containment to prevent injuries and leakage.

- Never include extracted teeth with amalgam in waste that will be treated with heat or incinerated.
Environmental Infection Prevention and Control Resources

- CDC. Guidelines for Infection Control in Dental Health-Care Settings—2003
- CDC. Guidelines for Environmental Infection Control in Health-Care Facilities
- CDC. Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care
- EPA. Medical Waste website
- EPA. Where You Live – State Medical Waste Programs and Regulations website
End of Module 8

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Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care

MODULE 9 — Dental Unit Water Quality
Modules in the Slide Series

1. Introduction
2. Hand Hygiene
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7. Sterilization and Disinfection of Patient-Care Items and Devices
8. Environmental Infection Prevention and Control
9. Dental Unit Water Quality (this module)
10. Program Evaluation
Dental Unit Waterlines

- Narrow-bore plastic tubing that carries water to:
  - High-speed handpiece.
  - Air or water syringe.
  - Ultrasonic scaler.

- Factors that promote bacterial growth and development of biofilm:
  - System design.
  - Flow rates.
  - Materials.
Dental Unit Waterlines and Biofilm

- Microbial biofilms form in narrow-bore tubing of dental units.
- Biofilms serve as a microbial reservoir.
- Primary source of microorganisms is municipal water supply.

Photo credit (bottom): Center for Biofilm Engineering, MSU-Bozeman
Microorganisms of Concern

- **Legionella** species:
  - Transmission occurs primarily through inhalation of infectious aerosols.
  - Pontiac Fever, Legionnaires’ disease.

- **Pseudomonas** species:
  - Bacterial infection that usually occurs in a hospital setting or in people with weakened immune systems.
  - Most common type infecting humans is *Pseudomonas aeruginosa*.
  - Can be mild or severe

- **Nontuberculous Mycobacteria**:
  - Can cause infection on skin and in soft tissue and organs.
  - Associated with outbreaks in health care and dental settings.
Dental Unit Water Quality

- Using water of uncertain quality is inconsistent with infection prevention principles.
- Colony counts in water from untreated systems can exceed 1 million CFU/mL (CFU = colony forming unit).
- Untreated dental units cannot reliably produce water that meets drinking water standards.
- Removal or inactivation of dental waterline biofilms requires use of chemical germicides.
Recent Disease Transmission Associated with Dental Unit Waterlines

- **2011 transmission of *Legionella*, Italy\(^1\):**
  - 82-year-old woman.

- **2015 transmission of *Mycobacterium abscessus*, Georgia\(^2\):**
  - 23 cases—all children.
  - All received pulpotomy procedures.

- **2016 transmission of *Mycobacterium abscessus*, California\(^3\):**
  - Infections reported in children who had pulpotomy procedures.
  - As of May 2, 2017, 68 potential cases have been reported.

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CDC Recommendations for Dental Unit Water Quality

- Use water that meets US Environmental Protection Agency (EPA) regulatory standards for drinking water (i.e., <500 CFU/mL of heterotrophic water bacteria) for routine dental treatment output water.
- Consult with the dental unit manufacturer for appropriate methods and equipment to maintain the recommended quality of dental water.
- Follow recommendations for monitoring water quality provided by the manufacturer of the unit or waterline treatment product.
CDC Recommendations for Dental Unit Water Quality (Continued)

- Discharge water and air for a minimum of 20–30 seconds after each patient, from any device connected to the dental water system that enters the patient’s mouth (e.g., handpieces, ultrasonic scalers, air or water syringes).

- Consult with the dental unit manufacturer on the need for periodic maintenance of antiretraction mechanisms.
Available Technology to Improve Dental Unit Water Quality

- Independent reservoirs.
- Chemical treatment.
- Filtration.
- Combinations of technologies.
- Sterile water delivery systems.

DHCP should always consult with the dental unit manufacturer for appropriate methods to maintain the recommended dental unit water quality.
Monitoring Options

- Water-testing laboratory.
- In-office testing with self-contained kits.
- Follow recommendations provided by the manufacturer of the dental unit and the waterline treatment product for monitoring water quality.
Oral Surgical Procedures

- Involve the incision, excision, or reflection of tissue that exposes the normally sterile areas of the oral cavity.

- Examples:
  - Biopsy.
  - Periodontal surgery.
  - Apical surgery.
  - Implant surgery.
  - Surgical extractions of teeth (e.g., removal of erupted or nonerupted tooth requiring elevation of the mucoperiosteal flap, removal of bone or section of tooth, and suturing if needed).

- Use sterile irrigating solutions.
Sterile Irrigating Solutions

- Use sterile saline or sterile water as a coolant/irrigator when performing surgical procedures.
- Use devices designed for the delivery of sterile irrigating fluids.
Dental Unit Water Quality Resources

- CDC. *Guidelines for Infection Control in Dental Health-Care Settings—2003*
- CDC. Dental Unit Water Quality website
- CDC. *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care*
- Montana State University Center for Biofilm Engineering website
End of Module 9

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Summary of Infection Prevention Practices in Dental Settings
Basic Expectations for Safe Care

MODULE 10 — Program Evaluation
Modules in the Slide Series

1. Introduction
2. Hand Hygiene
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4. Respiratory Hygiene/Cough Etiquette
5. Sharps Safety
6. Safe Injection Practices
7. Sterilization and Disinfection of Patient-Care Items and Devices
8. Environmental Infection Prevention and Control
9. Dental Unit Water Quality
10. Program Evaluation (this module)
Program Evaluation

A systematic way to ensure that procedures are useful, feasible, ethical, and accurate.

- Develop standard operating procedures.
- Evaluate infection prevention practices.
- Document adverse outcomes.
- Document work-related illnesses.
- Monitor health care-associated infections.
Examples of Methods for Evaluating Infection Prevention Programs

<table>
<thead>
<tr>
<th>PROGRAM ELEMENT</th>
<th>EVALUATION ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate immunizations of dental health care personnel (DHCP).</td>
<td>Conduct an annual review of individual personnel records to ensure up-to-date immunizations.</td>
</tr>
<tr>
<td>Education and training.</td>
<td>Conduct an annual review to ensure that all DHCP received training on initial employment, when new tasks or procedures affected the employee’s occupational exposure, and, at a minimum, annually.</td>
</tr>
<tr>
<td>Assessment of occupational exposures to infectious agents.</td>
<td>Report occupational exposures to infectious agents. Document the steps that occurred around the exposure and plan how such exposures can be prevented in the future.</td>
</tr>
<tr>
<td>Adherence to hand hygiene before and after patient care.</td>
<td>Observe and document circumstances of appropriate or inappropriate handwashing. Review findings in a staff meeting.</td>
</tr>
</tbody>
</table>

Source: Guidelines for Infection Control in Dental Health-Care Settings — 2003
Key Recommendations for PROGRAM EVALUATION in Dental Settings.

1. Establish routine evaluation of the infection prevention program, including evaluation of DHCP adherence to infection prevention practices.

Program evaluation strategies and tools:

- Checklists to document procedures.
- Periodic observational assessment.
- Constructive review and feedback to staff.
Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care

Includes a checklist to evaluate compliance with infection prevention practices:

- **Section 1**: Policies and Practices
- **Section 2**: Direct Observation of Personnel and Patient-Care Practices
Checklist Section I: Policies and Practices.
Checklist Section II: Direct Observation of Personnel and Patient-Care Practices.
Electronic Fillable Checklist

Infection Prevention Checklist

Section I: Policies and Practices
I.1 Administrative Measures

Elements To Be Assessed | Assessment | Notes/Areas For Improvement
--- | --- | ---
A. Written infection prevention policies and procedures specific for the dental setting are available, current, and based on evidence-based guidelines (e.g., CDC/Healthcare Infection Control Practices Advisory Committee [HICPAC]), regulations, or standards
- Yes □ No □
- Notes: Policies and procedures should be appropriate for the services provided by the dental setting and should exceed beyond the Occupational Safety and Health Administration (OSHA)/Bloodborne Pathogen exposure control training.

B. Infection prevention policies and procedures are reassessed at least annually or according to state or federal requirements, and updated if appropriate
- Yes □ No □
- Notes: This may be performed during the required annual review of the dental setting's OSHA Exposure Control Plan.

C. At least one individual trained in infection prevention is assigned responsibility for coordinating the program
- Yes □ No □
- Notes: This individual is responsible for providing education and training to employees on the infection control policies and procedures.

D. Supplies necessary for adherence to Standard Precautions are readily available
- Yes □ No □
- Notes: Supplies include, but are not limited to, hand hygiene products, safe disposal of sharps, proper use of personal protective equipment (PPE), and other infection control equipment.

E. Facility has systems for early detection and management of potentially infectious persons:
- Initial points of patient encounter
- Yes □ No □
- Notes: System may include taking a travel history and screening for symptoms of infectious diseases.
Use of Checklists

- Identify an infection control coordinator.
- Assess policies and practices at least annually, or more often, according to state or federal requirements.
- Identify all procedures performed in your setting and refer to those sections of the checklist.
  - Certain sections may not apply.
Example of Direct Observation

Personal Protective Equipment (PPE)

What are your observations?
Direct Observation of Personnel and Patient-Care Practices
Example of a completed checklist
If the Answer to Any of The Questions is “No”...

- Determine why correct practice was not being performed.
- Correct the practice.
- Educate DHCP.
- Reassess practice to ensure compliance.
- Determine if risk is posed to patients by the deficient practice.
  - Certain lapses can result in bloodborne pathogen transmission. Measures to address lapses should be taken immediately.
  - May warrant consultation with state or local health department.
CDC DentalCheck Mobile App

- Interactive version of the Infection Prevention Checklist for Dental Settings.
- Portable, easy-to-use, and streamlined format.
- Available for free download at the iTunes App Store.
- For use on all mobile iOS devices.
CDC DentalCheck Key Features

- Allows users to check Yes or No to acknowledge compliance with a list of administrative policies or observed practices.
- Provides basic infection prevention principles and recommendations for dental health care settings.
- Allows users ability to export results for records management.
- Provides links to full guidelines and source documents that users can reference for more detailed background and recommendations.
Program Evaluation Resources

- CDC. *Guidelines for Infection Control in Dental Health-Care Settings—2003*; and Table 5: Examples of methods for evaluating infection control programs
- CDC. *Guide to Infection Prevention for Outpatient Settings: Minimum Expectations for Safe Care*; and Appendix A: Infection Prevention Checklist for Outpatient Settings
- CDC. *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care*; and Appendix A: Infection Prevention Checklist for Dental Settings: Basic Expectations for Safe Care
- Centers for Medicare and Medicaid Services. Exhibit 351. Ambulatory Surgical Center (ASC) Infection Control Surveyor Worksheet
- The Joint Commission. *Measuring Hand Hygiene Adherence: Overcoming the Challenges*