Update of CDC’s Infection Prevention Guidelines for Dental Health Care Settings

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OSAP Annual Symposium
June 14, 2013
Disclosures

The findings and conclusions of this presentation are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

Neither I nor members of my immediate family have any financial relationships with commercial entities that may be relevant to this presentation.
Presentation Objectives

- Discuss the scope and purpose of the update
- Review potential topics
- Present current status of the update
- Seek stakeholder input
Scope and Purpose of Update

- Guidelines are ten years old
- Recommendations are generally consistent with existing CDC guidelines
- Need to review scientific evidence concerning risk of transmission in dental settings
- Some areas in need of clarification
- Unresolved issues
- Emerging issues not covered in 2003 guidelines
Categories of Potential Topics

- Risk of Transmission
- Intervention
- Equipment

Chain of Infection:
- Infectious Agent
- Susceptible Host
- Portal of Entry
- Reservoir
- Portal of Exit
- Mode of Transmission
Potential Topics by Category

Risk of Transmission
- Surgical smoke
- Burs and endo files
- MRSA, CJD, C. difficile

Intervention
- Double gloves

Equipment
- Dental unit waterlines
- Sterilization monitoring
Surgical Smoke

- **Current infection prevention problem / concern**
  - Risk of occupational infection from smoke created during laser or electrosurgical procedures

- **Discussed in 2003**
  - Some viruses and bacteria detected in laser plumes

- **What was recommended**
  - No recommendation – unresolved issue

- **What is planned: Literature review and update**
Burs and Endodontic Files

- Current problem / concern
  - Overarching issue: Single vs Repeated Use
  - Risk of disease transmission

- Discussed in 2003 - Special Considerations
  - Difficult to clean

- What was recommended
  - No recommendation

- What is planned:
  - Continue discussions with FDA
  - Update and Review of Literature
Prions
Creutzfeldt-Jakob Disease

- **Current infection prevention problem / concern**
  - Risk of disease transmission
    - Pulpal tissue
    - Contaminated instruments

- **Discussed in 2003 guidelines – Special Considerations**
  - Resistant to standard sterilization procedures

- **What was recommended**
  - No recommendation – unresolved issue

- **What is planned:**
  Review and update of literature
Methicillin-Resistant Staphylococcus Aureus

- Infection prevention problem / concern
  - Risk of disease transmission

- Not covered in 2003 Guidelines

- CDC Review published 2008 *
  - Strict adherence to standard precautions

- What is planned:
  - Review and update literature

* Klevens RM, Gorwitz RJ, Collins A. Methicillin-Resistant Staphylococcus aureus: A Primer for Dentists JADA 2008;139;1328-37
Clostridium difficile

- Infection prevention problem / concern
  - Risk of disease transmission

- Not covered in 2003 Guidelines

- CDC Guidelines for C. diff

- What is planned
  - Review guidelines and literature
Double Gloving

- Infection prevention problem / concern
  - Effectiveness in preventing disease transmission

- Discussed in 2003
  - Perforation studies suggested additional protection from blood contact
  - Effectiveness in preventing disease transmission not demonstrated

- What was recommended
  - No recommendation – unresolved issue

- Plan: Review of Literature
Problem: frequency of monitoring

Discussed in 2003 guidelines
- Clinical monitoring of water quality can ensure that procedures are correctly performed and that devices are working in accordance with manufacturer's previously validated protocol
- Lack of information to determine optimal frequency for each type of water maintenance system

What was recommended
- Consult with manufacturer to determine best method for maintaining acceptable water quality (<500 CFU/mL) and recommended frequency of monitoring.

Current Plan:
- Review and update of literature
- Discussion with FDA and EPA
Sterilizers

- Current infection prevention problem / concern
  - Since 2003
    - Guidelines and standards made additional recommendations (i.e. daily monitoring when processing multiple loads)
    - New classes of chemical indicators since 2003

- What was recommended
  - Monitor at least weekly using BI
  - Monitor each load with mechanical and chemical indicators

- Current Plan:
  - Search the Literature
  - Review 2008 CDC guidelines
  - Review ANSI/AAMI standards
  - Consult with FDA
Potential Topics by Category

Risk of Transmission
- Surgical smoke
- Burs and endo files
- MRSA, CJD, C. difficile

Intervention
- Double gloves

Equipment
- Dental unit waterlines
- Sterilization monitoring
Now what?
Current Status of Update

- Reviewing all related CDC Guidelines
- In process of conducting systemic review of literature
- Developing plans for discussions with FDA and EPA
Groups or individuals whose activities could be affected by implementation of the guidelines have legitimate reasons for providing input.

- Organized Dentistry
- Academia and Research
- Industry
- Non-Governmental Organizations
- Federal Agencies
Stakeholder Engagement

- Professional meetings
- Ad hoc discussions
- Personal communication
TIMELINE

Discussions with Stakeholders and Subject Matter Experts

2011
- Review 2003 GL
- New CDC GL process

2012
- Draft possible research topics

2013
- Assess Evidence of Evidence

2014
- Grade Evidence
- Review Evidence

2015
- Propose Recommendations
TIMELINE

Discussions with Stakeholders and Subject Matter Experts

- 2011: Review 2003 GL
- 2012: Draft possible research topics
- 2013: Assess Evidence
- 2014: Grade Evidence
- 2015: Propose Recommendations

New CDC GL process
Availability of Evidence
Review Evidence
Draft possible research topics

2003 GL
New CDC GL process
Draft possible research topics
Assess Evidence
Grade Evidence
Questions?

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