Bloodborne Pathogens/Infection Control
Tuberculosis Awareness

CDM Staff
March 22nd 2017

I WANT YOU TO TURN OFF YOUR CELL PHONE

Please
TURN OFF CELL PHONES MUTE ALL ELECTRONICS
Training Outline

- Infection Control
- Bloodborne Pathogens
- Sharps Safety
- Environmental Surfaces
- Spills
- Personal Protective Equipment
- Hand Hygiene
- TB Transmission in Dentistry
Why Is Infection Control Important in Dentistry?

- Contact with blood, oral and respiratory secretions, and contaminated equipment can occur.
- Both patients and dental health care personnel (DHCP) can be exposed to pathogens.
- Proper procedures can prevent transmission of infections among patients and DHCP.
Infection Control
➢ First documented report of patient-to-patient transmission of hepatitis C virus associated with a dental setting in the United States

➢ Improper sterilization techniques

➢ Using single vials of medications on multiple patients

➢ No written infection control protocol

Columbia University Environmental Health and Safety
Tomah VA testing veterans for infection after dentist failed to sterilize tools

- Replacement dental technician noted improper sterilization techniques
- Hundreds of patients require bloodborne pathogen testing
- Dentist removed from clinical care
Commission on Dental Accreditation (CODA)

- Accreditation visit in Sept. 2016
- Formally “No recommendations” made by CODA accreditors – Congratulations!
- However….. Areas of improvement were noted including infection control
Infection control compliance and outcome assessments rolled out in January 2017

Potential disciplinary action, loss of clinic privileges
- Hand hygiene
- Use of PPE
- Sharps Safety
- Safe Injection Practices
- Sterile instruments and devices
- Clean and disinfected environmental surfaces

Courageous conversations welcomed
Did You Just Double Dip That Chip?
Infection Control: Standard Precautions

- Apply to all patients regardless of actual or perceived risk factors; treat all blood or OPIM as if infectious
- Otherwise potentially Infectious Material (OPIM)
- Body fluids, secretions incl. saliva, and excretions (except sweat), whether or not they contain blood
- Non-intact (broken) skin
- Mucous membranes
Infection Control: Elements of Standard Precautions

- Hand washing
- Use of gloves, masks, eye protection, and gowns
- Disinfection of patient care equipment
- Disinfection of environmental surfaces. Alternatively, cover what you can
- Injury prevention
Bloodborne Pathogens
Bloodborne Pathogens: HBV Vaccine

- Vaccine Efficacy >90%
- Now part of childhood schedule
- OSHA requirement to offer to employees with potential occupational exposure
Bloodborne Pathogens: Occupational Exposure

- Refers to: ‘stick’ from any contaminated item; mucous membrane, non-intact skin exposure
- Clean with Betadine and antimicrobial soap
- Rinse eyes/mucous membranes 10 minutes
- Inform supervisory person
- All patients, students or faculty/staff injured in the clinical facility should file an "Accident Report - Qualtrics"
- Online submission
- Workforce Health and Safety - HIV, HBV, HCV response scenarios
- File University Accident Report
Bloodborne Pathogens: Accident Reporting

Departmental Accident Report Form
for Workers’ Compensation Benefits

Employee Information

To be completed by the employee

Employee ID: Date of Birth: Home Phone: ( ) –
Address: Apt. #:
City, State, ZIP:
Employment Date: CU Department: Occupation:
Work Phone: ( ) –
Wages per week: $ Days per week worked: Regular Days Off:

Accident Information

To be completed by the employee—all questions required

Date of injury/illness: Time of injury/illness: Time you started work:
Location (building, room) where injury/illness occurred:
What were you doing when injury/illness occurred?:
How did the injury/illness occur?:
Was the injury caused by a sharp object (needle, scalpel, razor, etc.)? If so, you must specify the device type and brand:
Describe the object or substance (chemical, blood, etc.) which directly injured you:
Describe the injury/illness—indicate type of injury, specify left or right, and so on, for example, “upper right leg”:

Columbia University Human Resources
Columbia University Environmental Health and Safety

Biosafety
www.ehs.columbia.edu
Bloodborne Pathogens: Post Exposure Evaluation

- Baseline HIV, HBV, HCV testing (titers/viral load)
- HIV Post exposure prophylaxis; anti-retroviral treatment may be indicated and is effective if given immediately (2 hour window) – **REPORT IMMEDIATELY**
- Source patient name and MRN# is helpful
- HBV Vaccination/Ig may be indicated
- HCV No post exposure prophylaxis; anti-viral treatment may be indicated for established infections
- Follow up testing
Sharps Safety
Regulated Medical Waste Management

- Properly labeled containment to prevent injuries and leakage
  - Red bag waste
  - Sharps waste
- Medical wastes are “treated” in accordance with state and local EPA regulations
- Processes for regulated waste include autoclaving and incineration
Red Bag Bins Are Not a Place to Store:

- Coats
- Bags
- Dental trays
- Anything!
What Goes in Here?

No food or drink permitted in the clinic
Categories of Environmental Surfaces

- Clinical contact surfaces
  - High potential for direct contamination from spray or spatter or by contact with DHCP’s gloved hand
- Housekeeping surfaces
  - Do not come into contact with patients or devices
  - Limited risk of disease transmission
Environmental Surfaces: Clinical Contact Surfaces
Environmental Surfaces: Housekeeping Surfaces
Spills

- Small blood spills on clinical contact surfaces can be cleaned up by CODM staff/students
- Cleaning materials and PPE are available in the clinics
  - Gloves, paper towels, bleach
- When to ask for help?
  - Spills on housekeeping surfaces, large spills, aspiration system failure
Spills

- TITLE: Biological Spills

- POLICY: This policy identifies responsibility and procedures for cleaning biological spills such as blood and saliva.

- PURPOSE: To ensure that biological spills are cleaned and disinfected promptly as an infection control measure. This policy is in agreement with the Columbia University Policy – Biological Spills; Response and Clean-up (see REFERENCES).

- RESPONSIBILITIES:

1. Clinicians are generally responsible for cleaning up biological spills that contact their equipment (e.g., dental chairs) and work surfaces. Facilities are generally responsible for cleaning up biological spills that are on the floor. Clinicians should call Facilities for service (212-305-4357). Facilities will then reach out to EH&S if a consultation on clean-up procedures is warranted. Departments are encouraged to contact Facilities to establish specific agreements regarding the scope of spill clean-up services.

2. Facilities are generally responsible for cleaning up biological spills that are in common areas, for example, on the hallway floor or in a bathroom. EH&S is available to consult on clean-up procedures and will assume responsibility for the spill if it is large.

- PROCEDURE:

1. Materials for clean-up should be assembled in one place, and personnel should
Personal Protective Equipment (PPE)
Personal Protective Equipment (PPE)

- Disposable gowns should also be changed daily or when they become visibly soiled; They can be disposed of in normal (non-red bag) waste
- Gowns are either front or rear-opening; NOT reversible
- Surgical masks and protective eyewear (providers and patients) must be worn at all times when splatter, splash or aerosol producing procedures are being performed, or observations of procedures are being made

Side shields required
PPE is to be removed when leaving patient care areas.
Personal Protective Equipment (PPE): Gloves

- Minimize the **two-way transmission** of microorganisms between patients and providers

- Reduce contamination of the hands of health care personnel by microbial flora that can be transmitted from one patient to another

- **Are not a substitute for hand washing or sanitizing**
When removing gloves, no glove is 100% effective

Change ASAP after visible contamination

‘Purell’ or soap and water?

Technique is important
TB Transmission in Dentistry
Transmission of *Mycobacterium Tuberculosis*

- Spread by droplet nuclei
- Immune system usually prevents spread
- Latent infection: Bacteria can remain alive in the lungs for many years (not transmissible)
TB Transmission in Dentistry: Risk

- Risk in dental settings is low
- Only one documented case of transmission
- Tuberculin skin test conversions among DHCP are rare
TB Transmission in Dentistry: Prevention

- Baseline medical surveillance of DHCP (PPD/quantiferon)
- Assess patients for history of TB
- Defer elective dental treatment
- If patient must be treated:
  - DHCP should wear a respirator
  - Isolation; separate patient from others/mask
  - Refer to facility with proper TB infection control precautions
Questions?