



PRESENTER'S SCRIPT

Module 6 Safe Injection Practices

SLIDE 1

This slide series was created to complement the Centers for Disease Control and Prevention's (CDC's) publication titled, *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care*. This publication was developed to help increase adherence with established infection prevention practices.

This slide series provides an overview of the basic principles of infection prevention and control that form the basis for CDC recommendations for dental health care settings. It can be used to educate and train infection prevention coordinators, educators, consultants, and other dental health care personnel (DHCP).

The *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care* can be found at www.cdc.gov/oralhealth/infectioncontrol/pdf/safe-care2.pdf.

SLIDE 2

This slide series is divided into 10 modules. The first module provides an introduction to infection prevention for dental settings. It is followed by 9 additional slide modules—one for each element of standard precautions, as well as for dental unit water quality and program evaluation. Module 6 provides information on safe injection practices.

SLIDE 3

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. In 2007, CDC published updated guidelines

for preventing the transmission of infectious agents in health care settings. As a result, two areas of practice relevant to dentistry were added to the set of standard precautions: respiratory hygiene/cough etiquette and safe injection practices. Respiratory hygiene/cough etiquette was discussed in Module 4.

Source: 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings, available at <http://www.cdc.gov/hicpac/pdf/isolation/Isolation2007.pdf>.

SLIDE 4

Safe injection practices are intended to prevent transmission of infectious diseases between one patient and another or between a patient and DHCP during preparation and administration of injectable, such as intravenous or intramuscular injection, medications.

More information on safe injection practices can be found at www.cdc.gov/injectionsafety/IP07_standardPrecaution.html.

SLIDE 5

Injectable medications are medications that are injected into the body. DHCP most frequently handle injectable medications when administering local anesthesia, during which needles and anesthetic cartridges are used for one patient only and the dental cartridge syringe is cleaned and heat sterilized between patients. However, many dental practices also administer procedural sedation, involving administration of medication through a patient's IV.

Cases of disease transmission following improper administration of injectable medications have been reported in medical settings. One instance of patient-to-patient transmission of hepatitis C virus in a dental

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health care setting occurred in 2013 in an oral surgery office. Although the mode of transmission was not clearly identified, investigators concluded that transmission likely occurred through a combination of unsafe injection practices.

For this reason, it is critical that DHCP always follow safe injection practices when preparing and administering injectable medication.

SLIDE 6

DHCP most frequently handle injectable medications when administering local anesthesia, during which needles and anesthetic cartridges are used for one patient only, and the dental cartridge syringe is cleaned and heat sterilized between patients.

SLIDE 7

A single-dose or single-use vial is a vial of liquid medication intended for injectable administration, either 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 and typically lack an antimicrobial preservative. CDC recommends using single-dose vials for injectable medications whenever possible.

A multidose vial is a vial of liquid medication intended for injectable administration, either injection or infusion, that contains more than one dose of medication. Multidose vials are labeled as such by the manufacturer and typically contain an antimicrobial preservative to help prevent the growth of bacteria. The preservative has no effect on viruses and does not protect against contamination when health care personnel fail to follow safe injection practices. CDC recommends dedicating multidose vials to a single patient whenever possible.

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Unsafe injection practices that have led to patient harm include:

1. Mishandling and inappropriate sharing of medication vials and containers, such as administration of medication from a single-dose vial to multiple patients;

2. Use of a single syringe, with or without the same needle, to administer medication to multiple patients;
3. Reinsertion of a used syringe, with or without the same needle, into a medication vial or solution container (such as a saline bag) to obtain additional medication for a single patient and then using that vial or solution container for subsequent patients; and
4. Preparation of medications in close proximity to contaminated supplies or equipment.

SLIDE 9

This figure shows how indirect syringe reuse can lead to hepatitis C virus or HCV contamination of a shared medication vial through the following steps:

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 used again 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. *MMWR* 2008; 57 (19): 513–517, available at www.cdc.gov/mmwr/preview/mmwrhtml/mm5719a2.htm.

SLIDE 10

CDC recommends the following safe injection practices:

- Prepare injections using aseptic technique in a clean area free from contamination or contact with blood, body fluids, or contaminated equipment.
- Disinfect the rubber septum on a medication vial with alcohol before piercing.
- Do not use needles and syringes for more than one patient.

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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.

SLIDE 11

Additional safe injection practices:

- Medication containers, such as 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 or single-use medication vials, ampoules, and bags or bottles of intravenous solution for more than one patient.
- Do not combine or pool leftover contents of single-dose vials for later use.

SLIDE 12

CDC recommends the following safe injection practices for multidose vials:

- Dedicate multidose vials to a single patient whenever possible.

SLIDE 13

CDC recommends the following safe injection practices for multidose vials:

- 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.
- 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.

SLIDE 14

Precautions to prevent disease transmission associated with the use of injectable medications also include treating fluid infusion and administration sets, including IV tubings, bags, connections; needles; and syringes as single-patient, disposable items. CDC recommends not using fluid infusion or administration sets, such as IV bags, tubings and connections, for more than one patient.

SLIDE 15

For more information on safe injection practices, see:

- CDC. *2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings* at www.cdc.gov/hicpac/pdf/isolation/Isolation2007.pdf.
- CDC. Injection Safety website at www.cdc.gov/injectionsafety/.
- CDC. *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care* at www.cdc.gov/oralhealth/infectioncontrol/pdf/safe-care2.pdf.
- CDC and the Safe Injection Practices Coalition. One & Only Campaign website at www.oneandonlycampaign.org/.
- World Health Organization. Injection Safety website at www.who.int/injection_safety/en.