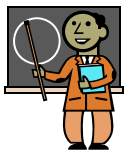
Module 8: Infection Control

Time: 60 minutes

Learning Objective:
Perform an oral health screening and fluoride varnish application for infants and toddlers using the principles of infection control.

Additional Materials Needed:

- Powerpoint presentation
- PowerPoint handout
- Infection Control handout
- **Supplies**
  Alcohol hand rub
  Gloves
  2X2 gauze
  Paper towels
  Fluoride varnish with applicator
  Child-size toothbrushes

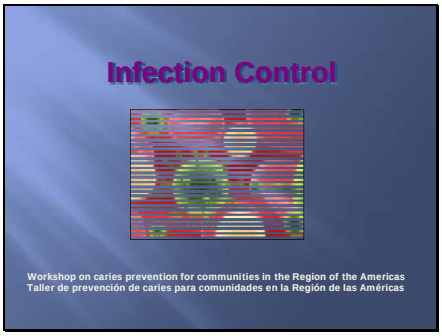


Training Tip: Be sure and have all the necessary supplies before beginning this module. You will be demonstrating the principles of infection control for fluoride varnish application. Participants will then practice to become competent in using the principles of infection control.

Now that you have learned about the benefits of fluoride varnish and how to apply it, let's talk about the importance of infection control when working with patients.

Turn on the projector.

Slide 1



Infection control involves everything we do to create a safe environment when treating patients. The goal of infection control is to prevent or reduce the risk of transmitting microorganisms that could cause disease.

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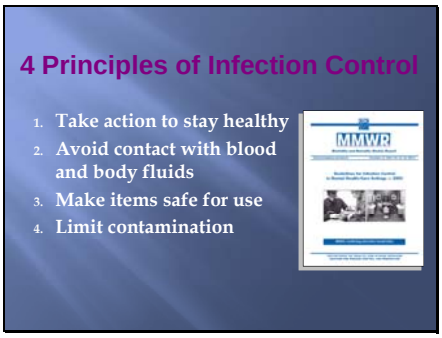


The information we will be discussing in this module follows the four principles of infection control recommended by the U.S. Centers for Disease Control:

•Take action to stay healthy
•Avoid contact with blood and body fluids
•Make items safe for use
•Limit contamination

Slide 3

1. Take Action to Stay Healthy

Hand hygiene is considered the single most important way to reduce the risk of disease transmission. Why? The primary defense against infection and transmission of germs is healthy, unbroken skin.

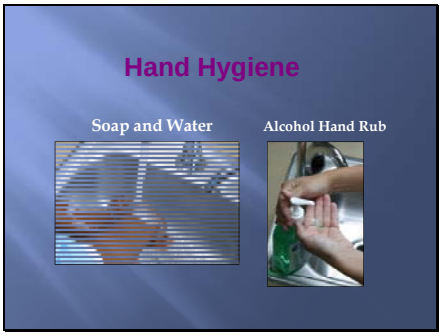
Slide 4

1. Take Action to Stay Healthy

Handwashing is part of hand hygiene. You need to wash your hands:

•When hands are visibly soiled
•If hands have touched contaminated items or surfaces
•Before and after treating a patient
•Before putting on and after removing gloves
•When leaving a clinic
•Using the bathroom

Slide 5



Handwashing can be done with plain soap and water. It is not necessary to use antimicrobial soap. Alcohol-based hand rubs can also be used. Either method is effective for removing the microorganisms which live on our own hands and the microorganisms we get from coming in contact with other people. The only time an alcohol-based hand rub is not effective is if hands are visibly soiled. In that situation, washing hands with soap and water is recommended.

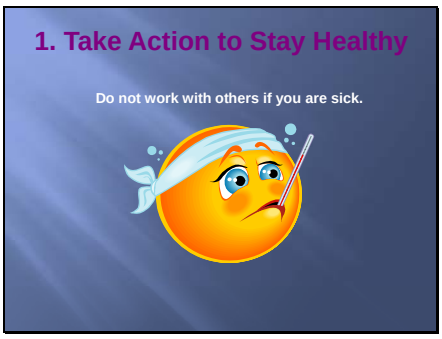
Trainer Note: It is not necessary to use antibacterial soap because the mechanical action of washing hands with soap and water or cleaning hands with alcohol-based hand rub removes the microorganisms. It has been found that routine use of antibacterial soap dries out the skin on the hands causing chapped hands.

It's important to consider the compatibility of lotions with antiseptic products and glove materials. Petroleum or other oil emollients in hand lotions may cause defects in gloves and reduce their effectiveness as a barrier. That is why hand lotions are not recommended when wearing gloves.

Slide 6

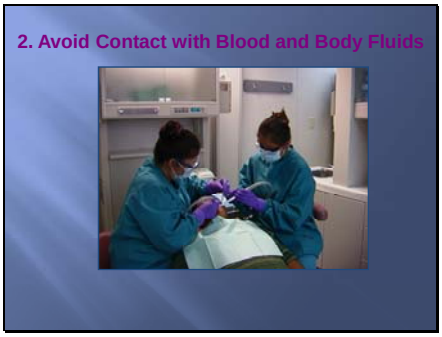
Hand hygiene also involves regular use of hand lotion to improve the health of our skin and to prevent skin dryness. However, do not use hand lotions and moisturizers when wearing gloves. It is best to use hand lotions and moisturizers during non-clinical times. Finally, hand hygiene includes keeping fingernails short. Multiple outbreaks involving fungal and bacterial infections have been associated with artificial nails. For that reason, it is recommended not to wear artificial fingernails when working in clinical situations.

Slide 7



When we are not feeling well because of a cold or the flu we try to stay away from family and friends so we do not give them our cold or the flu. This also applies when we are working with patients. We do not want to transmit our illness to others. **It is a good idea to not work with others if you are sick.**

Slide 8

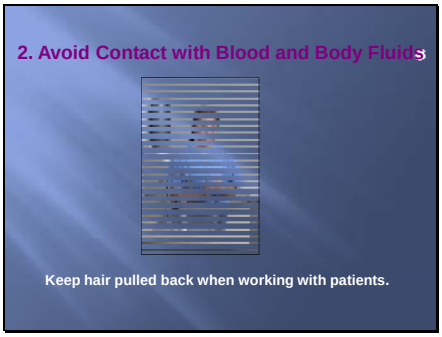


The second principle of infection control is to avoid contact with blood and body fluids.
You may have noticed dental staff wear PPE (Personal Protection Equipment) when treating patients. PPE includes gloves, masks, protective eyewear and clothing. PPE prevents exposure of blood or other potentially infectious material to the skin and mucous membranes of the eyes, nose and mouth of dental health-care personnel. The exposure can happen from aerosols and spatter when dental staff uses a dental handpiece and other dental equipment like the air-water syringe.

Slide 9

When we apply fluoride varnish to children's teeth, we use 2x2 gauze and a varnish applicator. Because neither an air-water syringe nor a dental handpiece is used, we are not at risk of exposure to aerosols or spatter. We do not have to wear masks or protective eyewear and clothing. However, our hands could be at risk of exposure. **That is why gloves are worn when applying fluoride varnish.**

Slide 10



We often touch our face or hair during the day. However, when working with patients, we do not want to do this. **It is a good idea to make sure our hair is pulled back.** This also makes it easier to see because hair does not get in the way when you bend over a child.

Slide 11

The third principle of infection control is to make items safe for use. In a dental office, contaminated instruments are sterilized and equipment is disinfected and contaminated disposable items are replaced with new ones before a patient is seated for an appointment. Because only disposable items are used when applying fluoride varnish, there is no need to learn sterilization procedures. Disposable items are intended for use only on one person. They are **not** intended to be cleaned, disinfected or sterilized and used on another person. Gloves are single-use items. This means we do not wash

gloves and reuse them. Other disposable single-use items include 2x2 gauze, fluoride varnish mix, and applicators.

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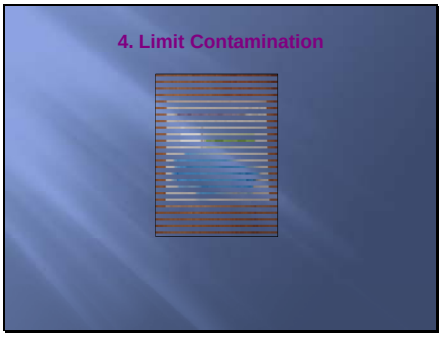


The fourth principle of infection control is limit contamination. In a dental office, staff either clean and disinfect surfaces or cover them with barriers. Why do they do that? If surfaces are not covered with barriers or cleaned and disinfected, there is a risk that other patient-care items, devices or gloved hands may become contaminated. Surface barriers protect surfaces and are changed between patients.

We limit contamination when we set-up materials for fluoride varnish on a paper towel. The paper acts like a barrier covering the work surface, and limiting contamination. It also makes clean-up easier. All the single-use disposable items (including gloves) can be wrapped in the paper towel, and disposed of in a trash container.

Slide 13

Now let's talk about how to use these principles of infection control when setting up, applying fluoride varnish, and cleaning up.

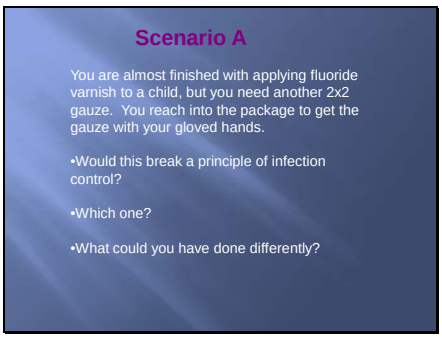
Set-Up
•Make sure hands are cleaned before placing a paper towel on the work surface. Place the 2x2 gauze, fluoride varnish and applicator, a child's toothbrush, and a pair of gloves on the paper towel. Cover the set-up with a clean paper towel.

Fluoride Varnish Application
•Wash hands and put on gloves before applying the fluoride varnish.

Clean-Up
•Give the toothbrush to the child to take home.
•Wrap used materials including gloves in the paper towels. Wash hands and set-up for next child.

Seems simple but let's consider some situations to test your knowledge about the principles of infection control.

Slide 14



Scenario A
You are almost finished with applying fluoride varnish to a child, but you need another 2x2 gauze. You reach into the package to get the gauze with your gloved hands.

Would this break a principle of infection control? ***(Yes)***

Which one? ***(Limit contamination)***

What could you have done differently? ***(You could have asked someone whose hands were clean to get you the 2x2 for you. You could have taken your gloves off, washed your hands, gotten the 2x2, and put on new gloves.)***

The take-away message is once you have started the fluoride varnish application, your gloves have come in contact with the patient's germs. You do not want to spread those germs to other patients by contaminating the 2x2 gauze package. Make sure you have all the supplies included in the set-up before starting to apply the fluoride varnish.

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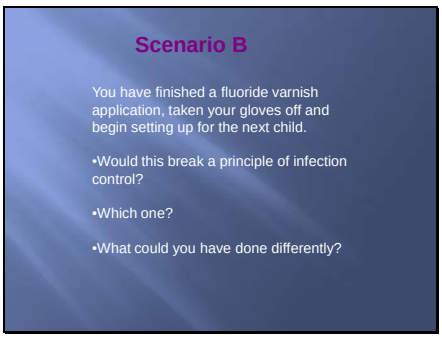


Scenario B
You have finished a fluoride varnish application, taken your gloves off and begin setting up for the next child.

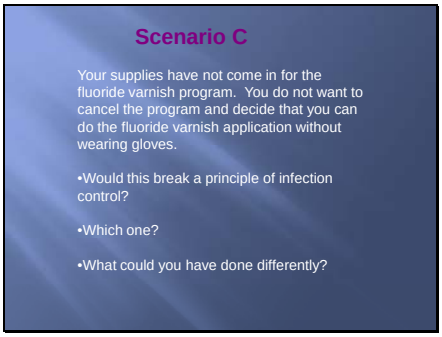
Would this break a principle of infection control? ***(Yes)***

Which one? ***(Take action to stay healthy)***

What could you have done differently? ***(You need to wash your hands after removing gloves. Your gloves may have had defects which reduce their effectiveness as a barrier.)***

The take away message is to remember to wash your hands after taking off gloves, and before setting up for the next child.

Slide 16



Scenario C
Your supplies have not come in for the fluoride varnish program. You do not want to cancel the program and decide that you can do the fluoride varnish application without wearing gloves.

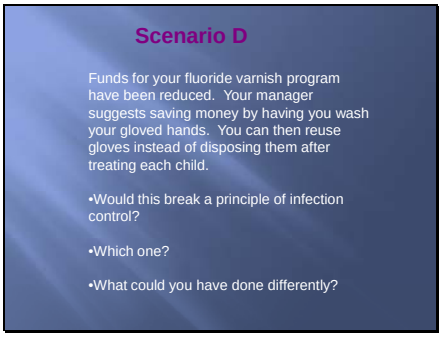
Would this break a principle of infection control? ***(Yes)***

Which one? ***(Avoid contact with blood and body fluids)***

What could you have done differently? ***(You need to wear gloves when applying fluoride varnish. You may have small cuts on your hands or hangnails around your fingernails that become openings for microorganisms to enter your body.)***

The take away message is to remember that gloves protect the skin on the hands from coming in contact with body fluids and germs.

Slide 17



Scenario D

Funds for your fluoride varnish program have been reduced. Your manager suggests saving money by having you wash your gloved hands. You can then reuse gloves instead of disposing them after treating each child.

Would this break a principle of infection control? ***(Yes)***

Which one? ***(Make items safe for use)***

What could you have done differently? ***(You will have to educate your manager on the principles of infection control.)***

The take away message is gloves are a single-use disposable item. This means gloves are to be used only on one patient and then disposed.

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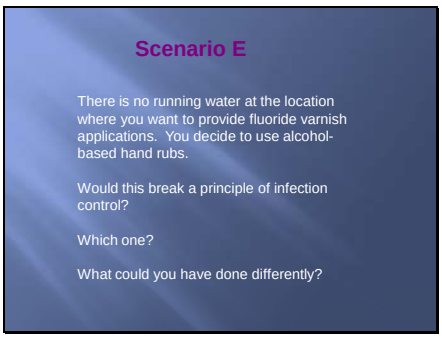

Scenario E
There is no running water at the location where you want to provide fluoride varnish applications. You decide to use alcohol-based hand rubs.

Would this break a principle of infection control? ***(No)***

The take away message is alcohol-base hand rubs are a viable alternative to washing hands with soap and water. The only exception is if hands are visibly soiled then washing hands with soap and water is recommended.

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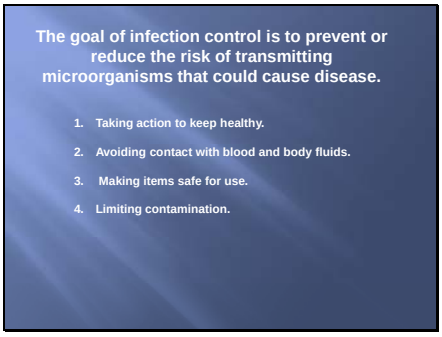

Remember, the goal of infection control is to prevent or reduce the risk of transmitting microorganisms that could cause disease. We do this by:
Taking action to keep healthy. This involves washing hands with soap and water or using alcohol-based hand rub, using hand lotion, and not working when sick.
Avoiding contact with blood and body fluids. This includes wearing gloves when applying fluoride varnish.
Making items safe for use. This consists of using single-use disposable items so every item is clean and has not been used by another person.
Limiting contamination. This involves using a paper towel as a barrier to cover a work surface to prevent spreading germs from one patient to another.

Slide 20

Turn off projector.

You will be using the principles of infection control when working with infants and children this afternoon. Let me demonstrate how to do a set-up for a fluoride varnish application, and then you will have time to practice. You can refer to the Infection Control handout as we demonstrate and practice.

> ***Demonstrate set-up, application and clean-up for fluoride varnish application following the Infection Control handout. After the demonstration have participants work in teams of 2 to practice. Have one person go through the process with the other person observing and using the handout to coach. Observe the practice session, and give positive feedback and offer helpful tips. Offer the feedback to individuals rather to the entire group.***
>
> ***Before having the team switch who will be observing and coaching, ask if anyone has any questions or comments. Answer any questions, and then continue with the practice session.***

Is everyone feeling ready to use the infection control principles when we practice on young children this afternoon?