

Course

Health Science I

Unit Asepsis**Essential Question**

How can health care workers keep infection from spreading?

TEKS

121.3 (c)
10(B&C), 11(G)

TAKS

ELA 1

Prior Student Learning

Students should have a basic understanding of the chain of infection.

Estimated time

1.5-3 hrs.

Rationale

In order to prevent hazardous situations, the health care worker must maintain a safe environment by complying with standard precautions.

Objectives

Upon completion of this lesson, the student will be able to:

- Demonstrate donning sterile gloves without contaminating the gloves;
- Demonstrate removal of gloves without contaminating their hands;
- Evaluate a peer using skills check; and
- Compare and contrast when sterile and protective gloving should be used.

Engage

When should a health care worker use sterile gloving rather than normal gloving?

What is the advantage of using sterile gloving for the patient?

What is the disadvantage of using sterile gloving for the patient?

Why are we concerned with the removal of sterile gloves?

Key Points

- I. Sterile gloves should be worn when there is direct contact with other sterile supplies and equipment, and when there is risk of contaminating the patient. Examples include surgery and most invasive procedures such as catheterization. Sterile gloving protects both the patient and the health care worker. Any time sterile gloves touch an unsterile surface, they must be changed.
- II. As nosocomial infections are on the rise, health care workers need to pay careful attention to proper procedures.
- III. Sterile gloving is not required when drawing blood or handling most body fluids; however, in order to protect the health care worker, it is important to use gloves as personal protective equipment.
- IV. Standard gloving protects the health care worker from pathogens that the patient may be harboring. Standard gloving should be utilized anytime the health care worker comes in contact with:
 - A. Blood
 - B. Body fluids
 - C. Secretions
 - D. Excretions
 - E. Mucous membranes
 - F. Tissue specimen
 - G. When cleaning any contaminated items or surfaces.

Activity

- I. Demonstrate putting on sterile gloves without contaminating the gloves.
- II. Demonstrate removal of the gloves. Gloving Procedure
- III. Have students work in groups to discuss the following case studies found at <http://www.engenderhealth.org/IP>.

Assessment

Students will put on gloves without contaminating gloves, and remove the gloves without contaminating themselves.

Gloving Procedure/RubricAnswers to Case studies

<http://www.engenderhealth.org/IP>

Materials

Sterile gloves and handwashing materials
Gloving Procedure/Rubric

Accommodations for Learning Differences

For enrichment, the student will research the advantages and disadvantages and the effects of using latex gloves. The report should be presented to the class.

For enrichment the student will illustrate the procedure by posters or technical presentation.

National and State Education Standards

National Health Science Cluster Standards

HLC06.01

Health care workers will understand the existing and potential hazards to clients, co-workers, and self. They will prevent injury or illness through safe work practices and follow health and safety policies and procedures.

HLC06.02

Health care workers will understand the fundamentals of wellness and the prevention of disease processes. They will practice preventive health behaviors among their clients.

TEKS

121.3 (c) 10B The student is expected to identify guidelines or standards

Precautions.

121.3 (c)10 C The student is expected to demonstrate skills related to infection control.

121.3 (c) 11G The student is expected to practice personal and client safety.

Texas College Readiness Standards

English Language Arts

II. B. Understand new vocabulary and concepts and use them accurately in reading writing and speaking.

III. B. Develop effective speaking styles for both group and one on one situations.

IV. A. Apply listening skills as an individual and as a member of a group in a variety of settings.

Science

I. A. 1. Utilize skepticism, logic and professional ethics in science.

Case Studies

Case Study #1:

There is often no running water in the postoperative ward of the local maternity hospital. When running water is not available, the doctors generally do not wash their hands before and after examining each client. When examination gloves are available, the doctors wear them while examining the clients, but do not wash their hands after taking off the gloves.

Who is at risk of infections in this situation? Why?

Case Study #2:

Anita works in a woman's health clinic and is responsible for charting client's blood pressure, temperature, and weight, and for drawing a few drops of blood from clients' fingers to check their hematocrit. She does not wear gloves during any part of this process, but does wash her hands before seeing the next client.

Is this an appropriate infection prevention practice? Why?

Case Study #3:

A rural health clinic has difficulty keeping supplies adequately stocked and sometimes has more condoms than examination gloves. When glove supplies run low, the doctors use the condoms to cover the fingers of the vaginal examination hand and use their bare hand to examine the pelvic/abdominal area.

Is this an acceptable infection prevention practice? Why?

Case Study #4:

A local hospital that has its own laundry department that routinely picks up and delivers clean linens to the various departments in the afternoon. It is common practice for the laundry employee to use bare hands to collect the dirty linens since they are stored in plastic bags. After picking up the bags, the employee assesses how much clean linen is needed and leaves an adequate supply before moving to the next department. The clean linen is kept on the top shelf of the pick-up cart.

Is this an appropriate practice? Why?

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Answers to Case Studies

Answer to Case Study #1:

Direct contact is the most common way that infections are transmitted. Doctors can easily pass microorganisms from one client to another if they do not wash their hands between client examinations. Doctors are also at risk of infection when they do not wash their hands after removing gloves, since small holes in the gloves can expose the doctors to infections.

Answer to Case Study #2:

Anita should not draw blood from a client without wearing gloves, regardless of the amount of blood being drawn. Anita should put gloves on after charting the weight and before drawing the blood. She should also wash her hands after removing the gloves and before picking up a pen to continue charting vitals.

Answer to Case Study #3:

Condoms do not cover enough area to adequately protect the fingers or hand and are difficult to remove without the risk of contamination. This should not be considered an acceptable infection prevention practice. However, if there are no gloves at all, condoms are better than bare hands for the vaginal exam. It is acceptable to exam a client's pelvic/ abdominal area without gloves if the examiner and the client both have intact skin. If there is a lesion, sore, cut, or break on either person's skin, then gloves must be worn.

Answer to Case Study #4:

The employee should always wear gloves when handling dirty or contaminated laundry. All the dirty linen bags should be collected on a cart designated for contaminated linens only. Once the linens are deposited in the laundry room, the employee should wash the gloves while still wearing them, remove them, and place them in a decontaminating solution for 10 minutes. The employee should then wash his hands with soap and water. The clean replacement linen should have its own designated cart and should be delivered either before or after all the dirty linen bags are collected so there is no potential for cross-contamination.

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Procedure VI Put on Sterile Gloves	Possible	Allocated
1. Removed rings, used alcohol-based hand rub for hand hygiene.	2	
2. Opened sterile glove package.	2	
3. Grasped glove for dominant hand by fold of cuff with finger and thumb of non-dominant hand.	3	
4. Inserted dominant hand, pulling glove on with other hand, keeping cuff turned back.	3	
5. Placed gloved fingers under cuff of other glove.	2	
6. Inserted non-dominant hand.	2	
7. Eased glove on by pushing on inside fold of cuff.	2	
8. Smoothed gloves over wrists and fingers for better fit.	2	
9. Kept hands above waist level.	2	
10. Maintained sterile technique throughout procedure.	3	
TOTAL POINTS -- PROCEDURE VI	23	

***If a student jeopardizes the patient's or his/her own safety or fails to perform a critical step and does not take immediate action to correct the error, the total points for the procedure or specific subpart(s) of the procedure will be deducted by the judge(s).*

<http://www.hosa.org>

Removal of Gloves	Possible	Allocated
1. Insert fingers of one gloved hand under the cuff of the other glove and roll glove off the hand. (glove to glove technique)	2	
2. Insert fingers of the bare hand between the cuff of the glove and the wrist to roll glove off hand. (skin to skin technique)	2	
3. Hold gloves only by inside surface after removal then dispose of gloves.	2	
TOTAL POINTS	6	