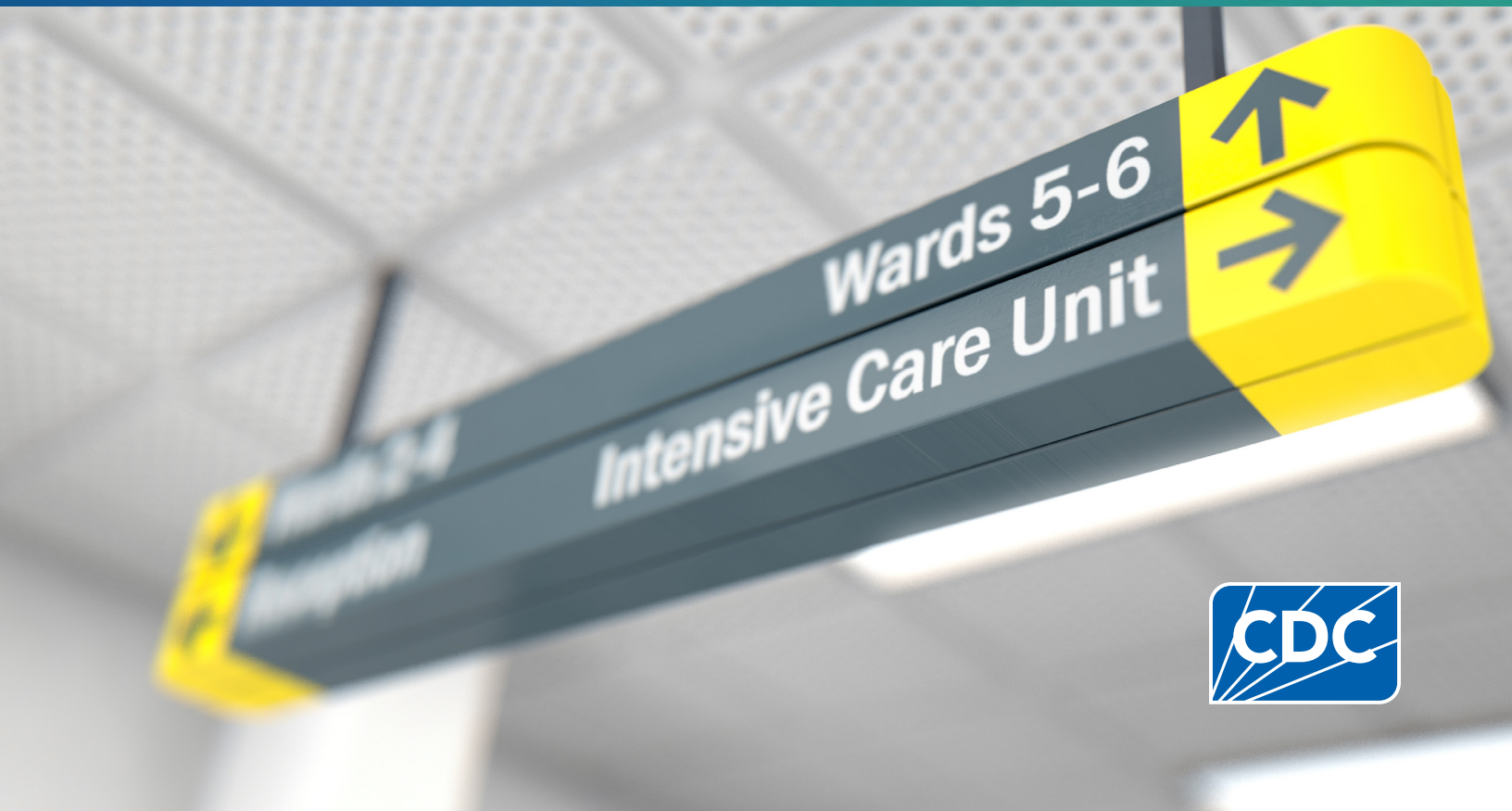


Infection Control Case Study:

Early Mobilization of a Critically Ill Patient



Getting Started

Overview:

In this activity, students will practice identifying infection risks in a realistic case study and propose appropriate actions to reduce risks in a team-based environment. Drawing on the case study and associated references, teams of students will gain experience in applying knowledge of infection reservoirs and pathways to the scenario. This learning activity includes [Learning Activity Instructions](#), a [Learning Activity Handout](#), and [Instructor's Notes](#).

Course Type Recommendation: Courses for clinical healthcare students

Underlying Principle: Keeping patients, workers, and visitors safe from infections in healthcare settings requires recognizing risk and taking action.

Learning Objectives:

- Demonstrate how to recognize infection risks in a healthcare setting.
- Apply appropriate infection control actions to identified infection risks in the healthcare settings.

Key Terms:

- **Reservoir:** places on and in our bodies and in the environment where germs live and grow
- **Pathway:** how germs spread or get from one place to another
- **Early mobilization:** the application and intensification of physical activity within the first 2 to 5 days of critical illness or injury

Key Resources:

[Infection Control in Health Care: An Overview | Project Firstline | CDC](#)

Recommended Rubric(s) for Assessment:

[VALUE Rubrics - Critical Thinking | AAC&U](#)

[VALUE Rubrics - Integrative Learning | AAC&U](#)



Learning Activity Instructions

- 1. Case Study Presentation:** Present the infection control case study to students, as noted in the learning activity handout. Explain the context, the goals of the early mobilization program, and the multidisciplinary teams involved. Adapt as needed to align with your course curriculum and structure. You may wish to draw on the references and resources provided in this activity to further enhance student learning.
- 2. Case Study Discussion:** Assign students to groups. Have groups discuss the questions noted in the learning activity handout related to infection control in the context of the early mobilization program. You may choose to have each group focus on a particular healthcare role in addressing these questions or alternatively, have all groups answer questions across all healthcare roles in the Early Mobility Team.
- 3. Group Presentation:** Each group should choose a spokesperson to present their findings and recommendations to the class. Encourage students to provide practical solutions and strategies for infection control. As teams present, invite other classmates to take notes on the similarities and differences in approach across the presentations.
- 4. Discussion and Feedback:** As a class discuss:
 - What stands out as similar across the teams' presentations?
 - Where do the teams' presentations differ?
 - What can we learn about recognizing risks and proactive action to prevent the spread of infections?
- 5. Instructor Follow Up:** As needed, draw on the instructor's notes on the following pages to further engage students on these topics, clarify recommended actions, or answer questions.
- 6. Extension Activity Scenario Role-play:** If desired, consider challenging students to take their learning a step further. Invite them to regroup in the same teams and act out this scenario, drawing on their original responses as well as the class discussion and other teams' presentations.

Each group member should have a role to play in the Early Mobility Team, and together their skit should demonstrate the implementation of early mobilization while implementing infection control actions to prevent the spread of infection.

Once the scenario role-playing activity is done, have students discuss and reflect on what they learned. Students should compare their responses from the original activity to their responses in the role-play scenario activity. If needed, remind students that role-plays can help us internalize our learning and better prepare us for our future role as healthcare workers, so it is important to take this role-play practice seriously.

Learning Activity Handout

Early Mobilization of a Critically Ill Patient

Scenario:

A surgical intensive care unit is planning to begin an early mobilization program, which is the application and intensification of physical activity within the first two to five days after critical illness or injury. The team's goal is to get patients up and walking within the first three days of being on respiratory support.

The Early Mobility Team will consist of a respiratory therapist, a physical therapist, a physician, and a nurse. After patients have been evaluated to determine their eligibility to participate in the program, the team must decide how to implement early mobilization while protecting the patient and themselves from infection risks.

Patients eligible for early mobilization have been recently (one to three days) placed on mechanical ventilation via an endotracheal tube or a tracheostomy and have undergone complicated surgical procedures. Additional temporary medical devices that may be in use include central venous catheters, peripherally inserted central catheters (PICC), midline catheters, wound drains, and urinary catheters.

Discussion Prompts:

- What reservoirs might be encountered during early mobilization of intensive care patients?
- What are the potential infection risks of early mobilization in the surgical intensive care unit?
- Identify the various pathways that might allow germs to spread.
- How can interdisciplinary teamwork be leveraged to lessen infection risks during patient mobilization?
- Create a detailed plan for mobilization that describes ways in which these pathways can be interrupted:
 - Before getting the patient out of bed
 - While the patient is out of bed
 - After putting the patient back to bed



Instructor's Notes



Early mobilization of a critically ill patient

The following talking points are intended to assist you in guiding students through the questions in Step 2 and Step 5 of the corresponding learning activity. Use or adapt as needed.

Case Study Scenario Questions:

1. What reservoirs might be encountered during early mobilization of intensive care patients?

- Skin – the activity requires close contact
- Blood – patients will likely have invasive devices
- Respiratory system – endotracheal (ET) tubes may become dislodged; tracheostomies may become disconnected or spray around the trach
- Gastrointestinal (GI) system – percutaneous endoscopic gastrostomy (PEG)/gastrostomy (G) tube dressings may become saturated or require cleaning/changing
- Dry surfaces – gait belts and walkers
- Water and wet surfaces – ventilator circuit and humidifier
- Medical equipment – reusable hygienic wheelchairs and ventilator equipment
- Dirt and dust – laundered textiles or improperly stored linens

2. Identify various pathways that might allow infectious germs to spread.

- Touch – close contact between the patient and healthcare worker is anticipated
- Breathing in – coughing, exposure to germs in the air
- Splashes and sprays – coughing, suctioning, bath water

3. Create a detailed plan for early ambulation that describes how these pathways will be interrupted.

Before getting the patient out of bed

- Make sure that the mobilization path (corridor) is free from clutter and not obstructed by beds or equipment.
- All personnel should clean their hands upon entering the patient room.
- Gowns and gloves may be worn and should be worn if the patient is known to have an infection that requires Contact Precautions.
- A patient should wear a clean gown if they are on Contact Precautions. Healthcare worker should put on their PPE and clean their hands prior to ambulating in the hallway. Alternatively, if they wear their gowns and gloves, an additional person is needed to open doors or press buttons - also mentioned below as a "clean buddy". A mask and eye protection may be needed if the patient is expected to cough, or if splashes and sprays are anticipated. If patients can tolerate it, a mask can be placed over a tracheostomy.
- Make sure all intravenous dressings are dry and secure. Make sure the tubing is free from interference by gowns or other items so that the patient can move about.
- Make sure urinary catheters are secured according to facility policy.

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While the patient is out of bed

- Watch carefully to make sure all tubing remains free while the patient moves about.
- Consider having one member of the team designated to remain “clean”. This person will not have direct patient contact and will not wear gloves or a gown. They are responsible for moving anything that blocks the hallway, opening doors, pressing buttons, or bringing along a wheelchair in case it is needed.

After putting the patient back to bed

- If linen is soiled, change it before putting the patient back to bed.
- Ask nursing staff to place intravenous pumps where they want them.
- If applicable, make sure the ventilator circuit is connected in a manner that keeps it free from water buildup.
- If applicable, make sure urinary catheter drainage bag is attached to the bed and that tubing is free from kinks or dependent loops.
- Remove and discard PPE, then clean hands.
- Use new gloves while cleaning and disinfecting dry surfaces like gait belts and walkers.
- Clean hands immediately after taking gloves off.



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