

AHCA/NCAL Clinical Scenario Teaching Tool – Cleaning and Disinfection of Shared Medical Equipment

Clinical Scenario – Cleaning and Disinfection of Shared Medical Equipment

Greenfield Long-Term Care Facility (LTCF) is home to 150 residents, many of whom require regular blood glucose monitoring due to diabetes. One of these residents, Betty Phillips, was recently admitted to an acute care hospital for jaundice and gastrointestinal symptoms. After viral testing was completed, she was diagnosed with acute Hepatitis B. She had never received blood transfusions and was not sexually active. Molly Jones, an epidemiologist at the state department of health, was notified. To determine the source, an investigation was initiated, and 141 of the 150 residents were screened for HBV; three additional acute HBV cases and one unidentified chronic infection with hepatitis B of unknown duration were identified. Genetic testing of the new HBV revealed that all four new cases (one in the hospital and 3 in the facility) were related and also related to one of the two chronic cases in the facility. All residents who tested positive for HBV were diabetic and receiving regular blood glucose checks. An internal investigation revealed that blood glucose meters might not be adequately cleaned and disinfected between every use on residents. Some staff were using alcohol swabs to clean the equipment and others admitted to not always cleaning between residents since there was no visible blood. You are the Infection Preventionist at Greenfield. The Director of Nursing has asked you to take over the investigation and work with Molly at the Department of Health.

Questions

- 1. What immediate actions should be taken if an outbreak is suspected due to improper blood glucose meter disinfection?**
 - a. Place all the residents in Contact Precautions for Hepatitis B.
 - b. Take existing blood glucose meters out of circulation from use until proper disinfection has been confirmed.
 - c. Take all the blood glucose meters out of use indefinitely.
 - d. Buy all new blood glucose meters
 - e. Nothing. You have already identified the additional cases.

- 2. Using an alcohol pad for disinfection of blood glucose meter surfaces is appropriate when you have limited time.**
 - a. True
 - b. False

- 3. What are the most important mitigation strategies in this scenario in terms of possible transmission? Check all that apply.**
 - a. Ensuring staff clean and disinfect all blood glucose meters after every resident use.
 - b. Ensuring access to and use of an EPA-approved disinfectant for bloodborne pathogens.

- c. Cleaning and disinfecting blood glucose meters in between residents only when they are contaminated with visible blood.
 - d. Following the manufacturer's instructions for use (IFU) to develop cleaning and disinfection protocols. Resume normal operations.
- 4. Molly has informed the facility that you need to conduct education and training for the staff related to blood glucose meter cleaning and disinfection. What should you include in your training?**
- a. Importance of standard precautions for injection and medication safety.
 - b. Validated competency of cleaning skill/practice.
 - c. Use of appropriate disinfectants to clean medical equipment
 - d. Where to find information on manufacturer instructions for cleaning reusable medical equipment.
 - e. All of the above.
- 5. Which of the following is not a good practice to ensure compliance with blood glucose meter cleaning and disinfection?**
- a. Regular audits
 - b. Direct observation
 - c. Feedback
 - d. Culturing blood glucose meters monthly
- 6. Describe what actions you would take if Molly reported this issue to you as the IP.**
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- 7. List any additional resources that would assist you in mitigating this type of situation.**
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