



Simulation: Effects of Improper Skin Antisepsis

Time: 10 minutes

Max number of people per station: 10

Number of facilitators per station: 1-2

Supplies Needed:

- Mannequin arm
- two 2% CHG/70% alcohol prep sponge
- Gloves
- Fluorescein oil or washable paint
- two 2x2 gauze pads
- foam paint brush
- UV flashlight
- wet wipes x 2

During this simulation we will prep blood cultures from three different sites with proper and improper skin antisepsis to show contamination risks. Proper skin antisepsis should consist of a 2% CHG/70% alcohol prep sponge scrub for 30 seconds of back and forth vigorous scrubbing.

Steps to Perform Simulation

1. Place fluorescein oil or washable paint on mannequin skin in three different locations using gauze or foam paint brush
2. Have learner prep three sites for blood culture procedure
 - a. One location clean with CHG as advised-for 30 seconds vigorous scrubbing
 - b. The next only clean for 10 seconds
 - c. Last site, do not clean at all
3. Evaluate the sites for residual contamination. Use the handheld UV light if fluorescein oil is used.
4. Remove remaining washable paint or fluorescein oil with wet wipe or soap and water.

Debriefing Script*:

Facilitator: Thank you for participating in this debriefing session about the importance of Skin Antisepsis for Blood Cultures. Let's discuss the key points and address any questions or concerns you may have.

Question 1: Why is skin antisepsis important for blood culture collection?

Answer: Skin antisepsis can prevent blood culture contamination. Because skin is a reservoir for germs, those germs can easily be transferred from the skin into the blood culture causing contamination.

Question 2: What are the implications of improper skin antisepsis?

Answer: Improper skin antisepsis can lead to contamination. Contamination can lead to inappropriate management and unnecessary antibiotic use causing harmful side effects for the patient and over increase in antibiotic resistance.

Question 3: What are the key steps to ensuring effective skin antisepsis?

Answer: Proper skin antisepsis at the phlebotomy site with 2% alcoholic chlorhexidine or 70% isopropyl alcohol, followed by 2% chlorhexidine is imperative. Chlorhexidine scrub requires a vigorous back and forth scrubbing motion. Allow at least 30 seconds for dry time.

Question 4: What would be a potential benefit of using sterile gloves when collecting blood cultures?

Answer: The use of sterile gloves is not required, but has been shown to decrease contamination rates when implemented in contamination reduction programs. Generally though, hand hygiene with clean nonsterile gloves are recommended. Sterile gloves should be used if re-palpation of the disinfected skin site is necessary. Best practices for glove use in phlebotomy include: performing hand hygiene at the correct five moments and using one pair of gloves per procedure. It would not be appropriate to reuse gloves or use the same pair of gloves for another patient.

Facilitator: Thank you for your participation. Understanding the importance of Skin Antisepsis for Blood Culture Collection is imperative to ensuring no contamination of the blood culture. If you have any further questions or need clarification on any topic, please feel free to ask.

***Disclaimer:** Please follow this debriefing script. The skill of debriefing is a process that takes time and experience to learn. Please do not use these debriefing tools outside of this situation without appropriate knowledge and experience.

Blood Culture Contamination: An Overview for Infection Control and Antibiotic Stewardship Programs Working with the Clinical Laboratory. (n.d). CDC. Retrieved from [Blood Culture Contamination: An Overview for Infection Control and Antibiotic Stewardship Programs Working with the Clinical Laboratory \(cdc.gov\)](#)

World Health Organization (WHO). (2010). *Infection prevention and control practices*. WHO. [Table 2.2, Infection prevention and control practices - WHO Guidelines on Drawing Blood - NCBI Bookshelf \(nih.gov\)](#)

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