



Simulation: Cleaning and disinfection of medical devices and surfaces

Time: 15 minutes

Max number of people per station: 10

Number of facilitators per station: 1-2

Supplies Needed:

- Hospital grade disinfectant
- Bleach wipes
- Medical equipment (i.e. bedside time, glucometer, pulse ox, thermometer, stethoscope, blood pressure cuff, dinamap, scale)
- Turmeric
- Cup
- Water
- Paint brush

Steps to Perform Simulation

1. Facilitator contaminates random surfaces of the medical equipment before the participants arrive for the simulation. The contamination is done with turmeric and water mixture, and painted on in a few areas.
2. Facilitator discusses the labeling of the hospital grade disinfectant and bleach wipe containers.
3. Participants identify the dwell time, kill claim, and the PPE required for use on the canister.
4. Participant clean the medical equipment and/or surface with the appropriate wipe and observe for dry time.
5. Facilitator should note how the turmeric continues to show yellow on the wipe until the surface is clean.
6. Reinforce the importance of using enough wipes in the appropriate manner.

Debriefing Script*:

Facilitator: Thank you for participating in this debriefing session about the importance of Cleaning and Disinfecting Medical Equipment and Surfaces. Let's discuss the key points and address any questions or concerns you may have.

Question 1: Why is important to understand how to read the label of a disinfectant?

Answer: Reading the label of a disinfectant tells you important information about how to use the disinfectant and if the disinfectant is appropriate for the organism you might be targeting. The kill claim tells the user what specific organisms the disinfectant is effective against. The dwell or contact time tells the time a surface should remain wet to be fully effective. Lastly, the label will explain the personal protective equipment required to use the product.

Question 2: What is the significance of dwell time?

Answer: Dwell time is important because it tells the amount of time a surface need to remain wet then dry in order to kill the targeted organisms. Using an item before the dwell time is up increases the risk that germs are still present and could be spread.

Question 3: When cleaning and disinfecting medical equipment, how do you know what level of disinfectant that particular equipment requires?

Answer: CDC guidelines recommend sterilizing critical medical and surgical devices, as well as instruments that enter sterile tissue or vascular system. This is a complex task and should be completed by individuals with specialized training. Furthermore, semi-critical patient-care equipment that touch mucous membranes or broken skin (e.g. gastrointestinal endoscopes and ET tubes) require high-level disinfection. Low level disinfection is done on noncritical surface or items that touch intact skin. Visit the CDC's website for more information on disinfection and sterilization.

Question 4: Why is cleaning and disinfecting reusable medical equipment important?

Answer: Reusable medical equipment can harbor germs. If not cleaned and disinfected appropriately, those germs can easily spread to the next patient. This can lead to infections.

Facilitator: Thank you for your participation. Understanding the importance cleaning and disinfecting reusable medical equipment and surface is vital to preventing the spread of infection. 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.

Centers for Disease Control and Prevention (CDC). (n.d.) How to Read a Disinfectant Label. *CDC*. Retrieved from [How to Read a Disinfectant Label \(cdc.gov\)](https://www.cdc.gov/infection-control/guidelines/disinfection-and-sterilization/how-to-read-a-disinfectant-label)

CDC (2008). *Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008*. Retrieved November 23, 2022, from http://www.cdc.gov/hicpac/pdf/guidelines/Disinfection_Nov_2008.pdf

Centers for Disease Control and Prevention (CDC). (September 18, 2016). Factors Affecting the Efficacy of Disinfection and Sterilization. *CDC*. Retrieved from [Efficacy | Disinfection & Sterilization Guidelines | Guidelines Library | Infection Control | CDC](https://www.cdc.gov/infection-control/guidelines/guidelines-library/infection-control/cdc-efcacy-disinfection-sterilization-guidelines)

Rutala WA, Weber DJ. (2016). Disinfection and Sterilization in Health Care Facilities: An Overview and Current Issues. *Infect Dis Clin North Am*. Sep; 30(3):609-37.

Spaulding EH. (1968). Chemical disinfection of medical and surgical materials. In: Lawrence C, Block SS, eds. *Disinfection, sterilization, and preservation*. Philadelphia: Lea & Febiger, 1968:517-31.

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