



Infection Control Assessment and Response (ICAR) Facilitated Discussion Leader Guide

The three Infection Control Assessment and Response (ICAR) videos were created to start a dialogue between the ICAR team and healthcare/direct patient care professionals in various settings. The videos cover topics included on ICAR assessments that are recognized as important to patient safety to decrease disease transmission, but are not always followed in practice. Glucometer use, medication preparation, and injection safety are areas of nursing practice that are separate, but have significant overlap.

This Leader Guide was created to stimulate discussion among health care staff. These three scenarios were developed to assist with identifying poor infection prevention practices and to foster a better understanding of why infection prevention is a key element in reducing disease transmission. We hope that facility “Leaders” (e.g., those responsible for monitoring staff competencies) will find this guide helpful. Please view the videos on the New Jersey State Government YouTube page and then refer to this guide to lead discussion with staff.

Video #1: Glucometer

This discussion should take approximately 20-30 minutes.

You just watched a short [video](#) with two different scenarios. The health care professional was tasked with testing the patient’s blood sugar. This is an activity that health care professionals do on a regular basis. Let me ask you a few questions about what you’ve just viewed:

- 1. Can you identify at least three poor practices that the health care professional used in the first scenario?**
 - Not performing hand hygiene before contact with the patient/resident.
 - Not performing hand hygiene after contact with the patient/resident.
 - Not cleaning and disinfecting the equipment/glucometer after using it.
 - Setting equipment/glucometer down in the immediate patient/resident area (e.g., bed, table, tray) without a barrier.
- 2. List at least three things that you learned from watching the video (examples of appropriate responses below):**
 - Use appropriate hand hygiene before and after patient/resident contact (in this case performing blood sugar testing).
 - Alcohol-based hand rub is appropriate hand hygiene before and after interaction with patients if hands are not visibly soiled, and the patient/resident does not have norovirus or *Clostridium difficile*.

- Clean and disinfect point-of-care equipment, such as glucometers, after each use.
- Clean and disinfect equipment/glucometer using manufacturer's instructions.
- Use a barrier between equipment/glucometer and the patient/resident area (e.g., bed, table, tray).

Ask participants the following questions about shared equipment/glucometers:

3. How often do you clean and disinfect the shared equipment/glucometer before you use it?

- Sometimes
- Always
- Never

Answer: You should always clean and disinfect equipment/glucometer after using it. If you are unsure if it was cleaned and disinfected, you should do so before using it. Blood can be microscopic and you can't always tell if it is present by just looking. Cleaning and disinfecting blood glucose monitoring equipment after each use reduces the likelihood of there being blood leftover from earlier testing.

4. What is your facility's policy about cleaning and disinfecting equipment/glucometer?

- The facilitator should have the policy available to provide to participants and to demonstrate that the policy is consistent with the manufacturer's recommendations. Participants should be told how they may access the facility policy. If the manufacturer does not specify how the device should be cleaned (e.g., soap and water) and disinfected (e.g., EPA registered disinfectant) then it should not be shared. Healthcare personnel should consult the manufacturers of blood glucose meters in use at their facilities to determine what products, meeting the criteria specified by the FDA, are compatible with their meter prior to using any EPA-registered disinfectant for disinfection purposes. If manufacturers are unable to provide this information, then the meter should not be used for multiple patients.
 - NOTE: Insulin pens and lancet devices must **never be shared** even if the needles are changed. These are single-patient use devices.

The following questions discuss personal protective equipment (PPE), the cleaning and disinfection of equipment/glucometer, and the preference for dedicated equipment/glucometers.

5. If a patient/resident is on isolation precautions, what is different when monitoring blood glucose?

- The response varies depending on the type of isolation the patient/resident is on. Gloves should be worn when handling a glucometer. Additional PPE may include:
 - Contact precautions: Gown
 - Droplet precautions: Gown and mask

- Airborne precautions: Mask or respirator
 - Wearing additional PPE, cleaning and disinfecting equipment with additional products, or using dedicated equipment (as is the best practice for glucometers) may be required.
- 6. Ask participants if they can locate PPE in their facility.**
- The facilitator should have this information available and provide participants with correct information.
- 7. Ask participants about when they were last trained and tested on how to properly don and doff PPE.**
- Was it on hire? Or at a skills day or in-service?
 - Ask if anyone needs a refresher.
 - Let them know that annual retraining with return demonstration is considered a best practice.
- 8. What solution/chemicals should be used for patients/residents under isolation precautions? Where are these supplies kept in your facility?**
- The facilitator should have this information available and provide participants with facility specific information.

Takeaway lessons – blood glucose equipment/glucometers and infection prevention:

- Whenever possible, blood glucose equipment/glucometers should not be shared. If meters are shared, they must be approved for multiple patient use and have specific cleaning and disinfection instructions.
- **Reminder that:**
 - Insulin pens and single-use lancet devices **MUST** be patient dedicated.
 - Items for multiple patients **MUST NOT** be stored together in the same storage container.
 - When possible multiple-dose insulin vials should be patient dedicated. If not dedicated, multiple-dose insulin vials should be properly stored and labeled. Insulin injections should be prepared in a clean, designated medication preparation area, away from immediate patient care.
 - Hand hygiene **MUST** be performed before preparing injections and after administering medication.
- **Poor practices associated with disease transmission when using equipment for monitoring blood glucose include:**
 - Use of lancet devices or insulin pens on multiple persons
 - Failure to adequately clean and disinfect blood glucose testing equipment/glucometers between each use
 - Failure to change or use gloves and perform hand hygiene between procedures

- Failure to clean equipment (wearing gloves) per manufacturer’s instructions (or in the manner described in the facility’s policy)

Resources:

Infection Prevention during Blood Glucose Monitoring and Insulin Administration

- <https://www.cdc.gov/injectionsafety/blood-glucose-monitoring.html>

Frequently Asked Questions-Assisted Blood Glucose Monitoring and Insulin Administration

- https://www.cdc.gov/injectionsafety/providers/blood-glucose-monitoring_faqs.html

Safe Injection Practices Coalition/One & Only Campaign

- www.oneandonlycampaign.org
- Insulin pen safety: <http://www.oneandonlycampaign.org/content/insulin-pen-safety>
- CDC guidelines: <http://www.oneandonlycampaign.org/content/cdc-guidelines>

Infection Prevention in Outpatient Settings

- <https://www.cdc.gov/infectioncontrol/pdf/outpatient/guide.pdf>
- <https://www.cdc.gov/infectioncontrol/pdf/outpatient/guidechecklist.pdf>

Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings – Recommendations of the HICPAC

- <https://www.cdc.gov/hicpac/recommendations/core-practices.html>

Video #2: Medication Preparation Areas

This activity should take approximately 10-15 minutes.

You just watched a [video](#) that mentioned that medication should be prepared in a clean designated area or room. Preparing medications in the patient care/treatment area increases the chances of the medication or equipment becoming contaminated.

1. What is a result of preparing medication in an unclean area?

- This is a break in aseptic technique. Medication may become contaminated which could lead to the patient/resident becoming ill.
- Microorganisms may be spread from the unclean area to the patient/resident or equipment via cross-contamination.

2. What are your facility's policies about medication preparation?

- The facilitator should have the policy available to provide to participants and to demonstrate that the policy is consistent with the manufacturer's recommendations. Participants should be told how they may access the facility policy.
- Questions that the facilitator should be prepared to answer may include:
 - Is medication cart/room cleaned a certain number of times during the day?
 - Is it cleaned before or after certain/all shifts?
 - Who is responsible for cleaning the medication cart/room?
 - How does the next shift know if the medication cart/room has been cleaned?

3. How are your facility's policies about medication preparation enforced/monitored?

- The facilitator should have this information available to provide to participants.

4. When did participants receive training about the facility's policies regarding cleaning and disinfecting the medication preparation areas?

- Responses may include:
 - New employee orientation/Upon hire
 - Staff in-services
 - Skills day
 - Remedial training, as needed

5. What role does the cleaning and disinfection of the medication preparation area play in patient safety?

- Preparing medications in a clean space reduces the likelihood of contaminating the medication, injection needles and syringes, and medication vials, and therefore lowers the risk of causing a healthcare associated infection.

Resource:

Frequently Asked Questions-Medication Preparation Questions

- https://www.cdc.gov/injectionsafety/providers/provider_fags_med-prep.html

Infection Prevention for Outpatient Settings

- <https://www.cdc.gov/infectioncontrol/pdf/outpatient/guide.pdf>
- <https://www.cdc.gov/infectioncontrol/pdf/outpatient/guidechecklist.pdf>

Video #3: Injection Safety

This activity should take approximately 20-30 minutes.

You just watched a [video](#) about injection safety. The professional featured in the video gave you some good information about how to safely store, prepare, and administer medications. Injection safety is an important part of patient safety. Poor injection practices have led to outbreaks across the country. Practicing good injection safety is key to reducing infections for our patients/residents.

1. List three things that you learned about injection safety from this video?

- Clean top of vial with alcohol and let dry before piercing the septum. Even newly opened medication vials must be cleaned prior to entry. The cap is not a sterility seal.
- **Use one needle, and one syringe, only one time.**
- Medications should be prepared as close as possible to the time of administration. If not immediately administered by the person who prepared the medication, the medication should be appropriately labeled with your initials, and the date and time.
- Multiple-dose vials must be discarded, or dedicated as single-patient use only, if they enter the immediate patient care area. Multiple-dose vials should be dated and stored in a designated clean area in accordance with manufacturer's instructions. It is best practice to label multi-dose vials with the beyond use date (BUD), which is 28 days after opening or as per manufacturer's instructions.
- Single-use vials must be immediately discarded after the medication preparation, even if there is medication left in the vial.
- Begin the administration of medication from single-dose vials within one hour after drawing up.
- Don't unwrap needles and syringes in advance. Needles and syringes should be opened immediately prior to medication preparation. Needles and syringes should be stored in their sterile wrapper to prevent contamination. The wrapper keeps them sterile.
- IV bags are single-use items and therefore **NOT** used for multiple patients.
- Hand hygiene should be performed before both drawing up and administering medications. If gloves are used, hand hygiene must be performed immediately before and after glove use.

2. What is aseptic technique?

- Aseptic technique refers to the manner of handling, preparing, and storing of medications and injection equipment/supplies, such as syringes, needles, and IV tubing, to prevent microbial contamination. Hand hygiene is an essential component of aseptic technique.

3. Why is it important to use aseptic technique when preparing medications?

- Using aseptic technique ensures that the vials are free from contamination, or contact with blood, body fluids, or contaminated equipment.
- Disinfecting the septum of the medication vial is a key component of safe injection practices and keeping patients safe.

4. Regarding preparing medications, at what point should you perform hand hygiene?

- A. Before preparing medication
- B. After preparing medication
- C. Not necessary

Answer: Proper hand hygiene should be performed before handling medications. Hand hygiene is an essential component of aseptic technique.

5. Why is it important to use one needle and one syringe only one time when administering injections?

- To prevent the spread of microorganisms, especially blood borne pathogens, needles and syringes are used for only one patient. This includes manufactured prefilled syringes and cartridge devices such as insulin pens.
- When entering a multiple-dose vial, a new needle and new syringe should be used each time.

6. The video mentioned that single-dose vials are meant to be used for one dose for one person ONLY. Why shouldn't single-dose vials be used for more than one patient/resident? What if medication is left in a single-dose vial?

- Always check the label of a medication vial to see if it is single-dose or multiple-dose.
- The size of the vial does not distinguish its designation of single or multiple-dose. Single-dose vials are meant to be accessed for one patient only and only one time, and discarded upon use. Single-dose vials do not contain antimicrobial preservative.
- Accessing the septum of a single-dose vial more than one time increases the likelihood of contaminating the medication.
- If there is medication left over in a single-dose vial, it must be thrown away and not used for another patient.
- United States Pharmacopeia recommends not drawing up medication from a single dose vial more than one (1) hour in advance of the start of the procedure to maintain sterility.

7. Do you have single-dose vials and multiple-dose vials of medication used in your facility?

- The facilitator should have this information available to provide to the participants.
- Always check the label of a medication vial to see if it is single-dose or multiple-dose. Check the date on the vial to make sure it is not expired. If an opened multiple-dose

vial does not have the beyond use date noted on the vial, it must be discarded. Vials can be the same size and be different. Single-dose vials are meant to be accessed for only one patient, only one time.

8. Can you list one reason why you should not draw up medication far in advance, before it will be administered?

- Medication should be drawn up as it is needed. It should not be drawn up too far in advance, as exposing the unwrapped needles/syringes to the environment may expose the injecting equipment to microorganisms such as bacteria, viruses and fungus.
- Also, United States Pharmacopeia recommends beginning medication from single-dose vials within one hour after drawing it up to ensure sterility.

Takeaway lessons – injection safety:

- Multiple-dose vials are formulated so that they can be entered and re-entered more than one time.
- Use a new needle and new syringe every time when entering a multiple-dose vial. Never enter a vial with a used syringe or needle.
- Never leave a needle, cannula, or spike device inserted into a medication vial septum.
- IV bags are single-use items and should be used for one patient only. This means never use intravenous solution containers (bags or bottles) to access flush solutions for more than one patient.
- Always perform hand hygiene before drawing up medications, before administering injections, and after administering injections. If you wear gloves, you must put on a new pair for each patient and perform hand hygiene immediately before and after glove use.

Resources:

Attached is an injection safety checklist developed by the Centers for Disease Control & Prevention: https://www.cdc.gov/injectionsafety/PDF/SIPC_Checklist.pdf

- Notice that the checklist includes everything from hand hygiene, aseptic technique, use of injecting equipment for one patient only and information about single-dose/single-use and multiple-dose vials.
- A lot of this information is basic and therefore taught to healthcare professionals early in their career. However, because of multi-tasking and trying to save time, these basic practices are sometimes not performed.

Safe Injection Practices Coalition/One & Only Campaign

- www.oneandonlycampaign.org
- Single-dose or Multi-dose:
<http://www.oneandonlycampaign.org/single-dose-multi-dose-vial-infographic>

<http://www.oneandonlycampaign.org/content/endorsement-cdc-position-statement-single-dosesingle-use-vials>

- CDC guidelines: <http://www.oneandonlycampaign.org/content/cdc-guidelines>
- Health Professional Frequently Asked Questions:
<http://www.oneandonlycampaign.org/content/healthcare-professional-faqs>
- Bloodborne pathogens Training Activity:
<http://www.oneandonlycampaign.org/content/bloodborne-pathogens-training>

New Jersey Department of Health
Communicable Disease Service
(609) 826-5964
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