

4. ASEPTIC TECHNIQUE

Aseptic technique, sometimes referred to as sterile technique, refers to practices designed to render the patient's skin, medical supplies and surfaces as maximally free from microorganisms. These practices are required when performing procedures that expose the patient's normally sterile sites (e.g., intravascular system, spinal canal, subdural space, urinary tract) to minimize contamination with microorganisms).

Components of aseptic technique involve the following:

- Hand hygiene, preferably with alcohol-based hand rub (ABHR), or if not accessible, an antimicrobial soap
- Preparing the patient's skin with an antiseptic
- Sterile gloves
- Gowns, where required
- Masks, where required, to prevent microorganisms carried in the HCW's nose and mouth from contaminating the sterile field
- Sterile drapes, used to prevent transferring microorganisms from the environment to the patient while the procedure is being performed
- Maintaining a sterile field

Infections may result from failure to use proper skin antisepsis prior to injection of medications, vaccines or venipuncture. Chlorhexidine in alcohol inactivates microorganisms on the skin more effectively than most other antiseptics and is the preferred antiseptic for skin preparation prior to insertion of central venous catheters and pulmonary artery catheters.

Transmission of hepatitis B and hepatitis C virus has followed the reuse of needles and/or syringes for withdrawing from multi-use vials.

a) Recommendations for Injection Safety include:

- Never administer medications from the same syringe to more than one patient, even if the needle is changed
- Consider a syringe or needle contaminated after it has been used to enter or connect to a patient's intravenous infusion bag or administration set
- Do not enter a vial with a syringe or needle which has been previously used
- Never use medications packaged as single use vials for more than one patient
- Assign medications packaged as multi-use vials to a single patient whenever possible
- Do not use bags or bottles of intravenous solution as a common source of supply for more than one patient

b) Aseptic Technique for Invasive Procedures and Handling Injectable Products:

- Perform hand hygiene, preferably with alcohol-based hand rub (ABHR) prior to opening supplies
 - When ABHR is not accessible, perform hand hygiene with antimicrobial soap and water
- Open tray and supplies only when ready to use to ensure a sterile field
- Perform hand hygiene prior to applying PPE, as indicated by the specific procedure
- Prepare the patient's skin with an appropriate antiseptic before performing an invasive procedure
- Use the appropriate size drape when a drape is required, to maintain a sterile field
- Do not administer medications or solutions from single dose vials, ampules or syringes to multiple patients or combine leftover contents for later use
- Use a sterile, single use disposable needle and syringe for each medication/fluid withdrawal from vials or ampules

- Clean the stoppers or injection ports of medication vials, infusion bags, etc., with alcohol before entering the port, vial or bag
- Use single dose medication vials, prefilled syringes, and ampules in clinical settings. If the product is only available as multi-dose vials, see *multi-dose vials below

c) When a product is only available for purchase in multi-dose vials:

- Restrict the multi-dose vial to single patient use whenever possible
- Prepare syringes from multi-dose vials from a centralized medication preparation area (i.e., do not take multi-dose vials to the patient)
- Store the multi-dose vial to restrict access (e.g., in a secure location away from patient bedside and where access is restricted, such as a medication room or locked cart)
- Use a sterile, single use needle and syringe each time the multi-dose vial is entered
 - Do not re-enter the multi-dose vial with a previously used needle or syringe
- Label the multi-dose vial with date of first opening
- Inspect the multi-dose vial for clouding or particulate contamination prior to each use and discard multi-dose vial if clouding or particulate contamination present
- Discard the multi-dose vial if sterility or product integrity is compromised

d) Single Patient Multi-Use Devices:

- Assign single patient multi-use devices (e.g., glucose sampling devices, finger stick capillary blood sampling devices) to only one patient. If not feasible to assign glucose meters to individual patients, clean and disinfect before use between patients.

e) Insertion of Peripheral Venous Catheters:

- Perform hand hygiene, prepare the skin with an antiseptic and wear clean disposable gloves

f) Storage, Assembly or Handling Components of Intravenous Delivery Systems:

- Use intravenous bags, tubing and connectors for one patient only and dispose appropriately after use
- Consider a syringe, needle or cannula as contaminated once it has been used to enter or connect to one patient's intravenous infusion bag or administration set and do not reuse
- Store sterile intravenous equipment components in a clean, dry and secure environment