



DEDER GENERAL HOSPITAL

Aseptic Techniques in Healthcare Settings

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1. Purpose

The purpose of this SOP is to provide a **detailed guide for healthcare workers (HCWs) on aseptic techniques** used in clinical procedures to prevent contamination and reduce the risk of infection. These techniques are crucial in minimizing the introduction of pathogens during medical and surgical procedures, improving patient outcomes, and ensuring a safe environment for both patients and staff.

2. Scope

This SOP applies to **all healthcare professionals involved in direct patient care, including but not limited to physicians, nurses, surgical staff, and technicians**, in any healthcare setting where invasive procedures or contact with sterile body sites occurs. It includes all patient areas such as hospitals, clinics, outpatient facilities, and laboratories.

3. Definitions

Aseptic Technique:

A method used to prevent the contamination of sterile sites by microorganisms, maintaining a microorganism-free environment during clinical procedures.

Sterile Field:

A designated area maintained free from microorganisms, often created with sterile drapes or barriers during medical procedures.

Sterilization:

The complete elimination of all forms of microbial life, including spores, from instruments and surfaces.

4. Responsibilities

➤ Healthcare Workers (HCWs):

- Adhere strictly to aseptic techniques during procedures.
- Use appropriate personal protective equipment (PPE) and follow hand hygiene protocols.
- Ensure sterility of instruments and maintenance of sterile fields.

➤ Infection Control Team:

- Conduct training and ensure continuous education on aseptic practices.
- Monitor compliance through audits and feedback systems.
- Investigate and manage breaches of aseptic protocols.

➤ Facility Management:

- Ensure availability and maintenance of sterilization equipment and materials.
- Provide adequate resources for maintaining aseptic conditions (e.g., PPE, disinfectants).

5. Procedure:

5.1 Preparation for Aseptic Procedures:

5.1.1 Hand Hygiene:

➤ When to Perform Hand Hygiene:

- Before and after all patient contact.
- Before donning sterile gloves and PPE.
- After removal of gloves and PPE, and between procedures on different patients.

➤ Technique:

- Use an alcohol-based hand rub (ABHR) for hand disinfection if hands are not visibly soiled.
- Wash hands with soap and water for at least 20 seconds if visibly soiled or after contact with body fluids.

5.1.2 Personal Protective Equipment (PPE):

➤ Sterile Gloves:

Sterile gloves must be worn for any procedure involving direct contact with sterile body sites, invasive devices, or sterile instruments.

➤ Sterile Gown:

Wear a sterile gown during invasive procedures and surgeries to prevent contamination from skin, clothing, or body fluids.

➤ Masks and Eye Protection:

Wear a surgical mask to prevent contamination from respiratory droplets. Use goggles or a face shield when splashes of blood or body fluids are anticipated.

5.2 Establishing and Maintaining a Sterile Field:

5.2.1 Sterile Draping:

- Place sterile drapes around the procedural site to establish a sterile field.
- The drapes must cover all surrounding surfaces, including the patient's body, equipment, and the work area.

5.2.2 Maintaining the Sterile Field:

- Only sterile items should come into contact with the sterile field.
- Avoid reaching across or above the sterile field to prevent contamination.
- If the sterile field is compromised (e.g., touched by a non-sterile item or person), it must be immediately re-established with new sterile drapes and equipment.

5.2.3 Sterile Equipment and Instrument Handling:

- Sterile instruments should be handled only with sterile gloves or sterile instruments (e.g., forceps).
- Sterile instruments should be kept on a sterile surface or tray until used.
- Avoid placing sterile instruments near non-sterile areas to prevent contamination.

5.3 Sterilization Procedures for Instruments:

5.3.1 Steam Sterilization (Autoclaving):

➤ Preparation:

Instruments must be cleaned of organic material (e.g., blood, tissue) before sterilization.

Place instruments in sterile packaging and label with the sterilization date.

➤ Sterilization:

Use a steam sterilizer (autoclave) with the correct time, pressure, and temperature settings according to the manufacturer's instructions (**typically 121°C at 15 psi for 30 minutes**).

5.3.2 Chemical Sterilization:

- Use chemical sterilization methods (e.g., ethylene oxide, hydrogen peroxide gas) for heat-sensitive instruments.
- Ensure that sterilized items are properly aerated following chemical sterilization to eliminate residual chemicals before use.

5.4 Procedure Techniques for Aseptic Practices:

5.4.1 Patient Preparation:

- Clean the patient's skin at the procedural site using an appropriate antiseptic solution (e.g., chlorhexidine, iodine) in a circular motion, starting from the center and moving outward.
- Allow sufficient drying time for the antiseptic to ensure effectiveness.

5.4.2 Donning Sterile Gloves and Gowns:

- After performing hand hygiene, don sterile gloves using the closed-gloving technique to avoid contamination.
- Wear a sterile gown when performing surgical or invasive procedures. Ensure the gown covers all parts of the body, except for the face and hands.

5.4.3 Conducting the Procedure:

- Use only sterile instruments and supplies throughout the procedure.
- Minimize unnecessary movement and conversation near the sterile field to reduce the risk of contamination.

5.4.4 Intra-Procedural Monitoring:

- Continuously monitor the sterile field during the procedure. If a breach of sterility occurs, immediately correct it by replacing contaminated materials or re-sterilizing the area.

5.5 Post-Procedure Protocols:

5.5.1 Wound Dressing:

- Apply sterile dressings to the wound using sterile gloves and instruments.
- Follow the facility's aseptic dressing change protocols for post-operative care.

5.5.2 Disposal of Contaminated Items:

- Dispose of all contaminated waste (e.g., used gloves, dressings, instruments) in designated biohazard containers according to facility waste management policies.

5.5.3 Room Disinfection:

- After the procedure, clean and disinfect the procedural area, including surfaces, instruments, and equipment, using hospital-grade disinfectants.
- Ensure the proper sterilization of reusable instruments before the next use.

6. Education and Training:

6.1 Initial and Periodic Training:

All HCWs must receive initial and annual training on aseptic techniques, including hand hygiene, sterilization, and sterile field maintenance.

6.2 Competency Assessment:

Conduct competency evaluations for HCWs performing procedures that require aseptic techniques, ensuring adherence to the facility's infection control guidelines.

7. Compliance Monitoring and Auditing:

7.1 Routine Audits:

The Infection Control Team will perform routine audits of aseptic practices during invasive procedures to ensure compliance with this SOP.

7.2 Feedback Mechanism:

Provide real-time feedback to HCWs who fail to adhere to aseptic protocols. Implement corrective actions as necessary.

7.3 Reporting Non-Compliance:

Non-compliance with aseptic protocols should be reported to the Infection Control Team, who will investigate and recommend appropriate corrective actions.

8. Record Keeping:

8.1 Procedure Documentation:

Maintain records for each procedure documenting the aseptic techniques followed, including the date and time of sterilization of instruments and the use of PPE.

8.2 Sterilization Logs:

Record details of instrument sterilization, including the sterilization method, date, and individual responsible for ensuring sterility.

9. Incident Reporting:

9.1 Breach of Aseptic Technique:

Any breach in aseptic technique (e.g., compromised sterile field, non-sterile instruments) must be immediately reported to the Infection Control Team.

9.2 Investigation and Remediation:

The Infection Control Team will investigate the incident, document findings, and implement corrective measures to prevent recurrence.

10. Review and Updates:

This SOP will be reviewed every **two years** or as required to incorporate new guidelines or best practices. Updates will be approved by the Infection Control Team and communicated to all relevant staff.

Approval:

Name: _____

Position: _____

Date: _____