Student Protocol for the Operating Room

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Objectives

- To observe and gain an understanding of the patient’s surgical process experience.
- To have an understanding of the “surgical team environment” and the roles each member plays.
- A basic understanding of the areas in surgery: restricted, semi-restricted & unrestricted and requirements of each.
Objectives

- Basic understanding of the hazards in the peri-operative environment and ways to protect yourself during observation.
- Basic understanding of traffic flow in the OR to maintain the sterile field.
Surgical Services Team

The Surgical Services team consists of the:

- **Sterile team:**
  - Surgeon
  - Surgical assistant
  - Scrub personnel.

- **Unsterile team: Anesthesia:**
  - MD/CRNA/PA
  - Circulator
  - Others.
Staff

- Registered nurse: RN
- Scrub: RN or CST
- First assistant: RN
- Unlicensed assistive personnel
  - Surgical technologist
  - Nursing assistant/orderly
  - Housekeeping
  - Instrument technician
  - Central sterile staff
- Support staff
  - Surgical scheduler
  - Desk coordinator
Surgical Suite Traffic Patterns

The OR is divided into three areas for staff and visitors:

- Unrestricted
- Semi-restricted
- Restricted
Surgical Suite Traffic Patterns

Unrestricted Area

- Street clothes are permitted in this area.
- Traffic is not limited.
- This area is isolated by doors from the main hospital door corridor.
- This area permits access for communication with department and hospital personnel.
- Examples include:
  - Locker rooms.
  - Surgical scheduling office.
  - Operating room supervisor’s office.
Surgical Suite Traffic Patterns

Semi-Restricted Area

- Traffic is limited to properly attired personnel.
  - You must wear scrub attire and caps in this area.
- This area includes the support areas of the surgical suite.
- Examples include:
  - Corridors outside the OR.
  - Storage areas for clean and sterile supplies.
  - Clean cores and sub sterile rooms as designated by the facility.
Surgical Suite Traffic Patterns

Restricted Area

- Appropriate OR attire required.
  - You must wear scrub attire, caps and masks in this area.

- Includes areas where procedures are performed and where there are unwrapped sterile supplies.

- Examples include:
  - Operating room.
  - Procedure room.
  - Scrub area.
  - Clean cores and sub sterile rooms as designated by the facility.
Operating Room Areas

- **Preoperative (Preop/Holding)**
  - Where patient is prepared for the OR

- **Intraoperative (OR Suite)**
  - Where the operative procedure is done

- **Postoperative (Recovery/PACU)**
  - Where patient recovers from surgery and anesthesia

- **Support areas**
  - Where surgical instruments are prepared
  - Areas of patients’ rooms
Operating Room Areas, cont.

- **Sterile/Central Processing**
  - Where sterile instruments are prepared
- **Outpatient and Inpatient Department**
  - Patient care areas
- **Patient units**
  - Where patient rooms are located
Invasive Departments

Invasive departments are areas within the hospital that support our patient care. Examples include:

- Endoscopy.
- Lithotripsy.
- Cardiac catheterization.
- Lab and electro physiology.
- Imaging.
**Appropriate OR Attire**

- Don clean, fresh OR attire each time on arrival in the OR suite and as necessary when attire is soiled.
- Change masks between patients and whenever mask becomes wet or soiled.
- Keep fingernails short and clean.
- Cover hair and keep it contained within head cover.
Appropriate OR Attire, cont.

- Do not wear artificial nails.
- If you wear a cloth hat, it must be laundered daily.
- Never hang masks loose around your neck.
Appropriate OR Attire, cont.

Proper attire for the OR includes:

- OR scrubs (shirt and pants)
- Cover jacket
- Shoe covers
- Eye protection
- Hair covers
- Personnel protective equipment (PPE)
OR Clothing Tips

- Wear comfortable shoes.
- Do not wear personal scrubs or reusable head covering.
- Before leaving the OR for the day, change back into your street clothes.
- Place used scrub attire into the appropriate receptacle for laundering.
Additional Tips

- Wear only necessary jewelry.
- Wear minimal make-up.
- Do not wear perfume or cologne.
- Do not chew gum.
- Always wear name badge.
Additional Tips

- Eat Breakfast! Not just toast, something with protein that will last.
- If you feel faint, light headed or very warm, **please tell someone**. It is fairly common for students to have a fainting spell. We will take you some where private until you feel better, then you will return to the room.
Chemical Hazards in the OR

Chemical hazards associated with the OR include:

- Anesthetic gases
- Cleaning agents
- Formaldehyde
- Bone Cement (methyl Methacrylate)
Chemical Hazards in the OR

- If there is **ANY** chance that you might be pregnant - **you must leave the room prior** to the start of the mixing of the bone cement.
- These fumes are strong and contain carbon monoxide, hydrogen and methane.
- It is **your responsibility** to protect yourself. Please tell the clinician, or the charge nurse. No one else needs to know.
Biological Hazards in the OR

Biological hazards associated with the OR include:

- Patient
- Pathogens
- Latex sensitivities
- Cuts and needle sticks
- Surgical smoke
- Infectious wastes
- Radiation exposure.
Patient Pathogen Hazards

- Blood and body fluids:
  - Blood
  - Pericardial
  - Spinal
  - Saliva
  - Dental procedures
  - Synovial
  - Semen
  - Urine
  - Vaginal secretions
  - Pleural
  - Peritoneal
  - Amniotic fluid
  - Non-intact mucous membranes or any other visibly contaminated with blood.

- Airborne:
  - Tuberculosis

- Other:
  - VRE, MRSA
Transmission of Infections

Three elements must be present for an infection to occur:

1. An infectious agent
2. Transmission from one person to another
3. A susceptible host
Routes of Transmission

Routes of transmission of infection include:

- Accidental injury that results in a puncture or cut of the skin by a sharp object soiled with infectious material.
- Infectious material contacting:
  - Open cuts
  - Nicks
  - Skin abrasions
  - Dermatitis.
- Exposure of mucous membranes – eyes, nose, mouth – to infectious material.
Routes of Transmission, cont.

- Routes of transmission, continued:
  - Touching an object soiled with infectious material and then indirectly transmitting the infectious material to your:
    - Eyes
    - Nose
    - Mouth
    - Open skin lesion.

- Casual contact with infected patients **does not cause infection.**
Barriers to Transmission of Infection

Hand washing is your best defense against transmission of infection!
Barriers to Transmission of Infection

Use of PPE:
- Gloves
- Gowns
- Masks
- Hair covers
- Eye protection
Principles of Asepsis

- Asepsis is the absence of disease-causing microorganisms.

- Aseptic technique:
  - Uses methods of preventing contamination from microorganisms.
  - Is used to achieve a sterile environment.
Sterile Field, Defined

A sterile field is defined as the areas that surround and include the surgical site in which aseptic/sterile technique must be maintained.
OR Sterile Area

The sterile area in the OR includes:

- Back table
- Mayo stand
- Surgical team
- OR bed with sterile drapes
- Draped radiological equipment.
Sterile OR Technique

Principles of sterile OR technique:

- Scrub person functions within the sterile field.
- Use sterile gowns and gloves within the sterile field.
- Use sterile drapes to establish a sterile field.
Sterile OR Technique, cont.

- Open, dispense and transfer all items introduced onto the sterile field by methods that maintain sterility and integrity.

- Gowns are sterile only:
  - From the chest to the level of the sterile field in the front, and
  - From 2 inches above the elbows to the cuffs on the sleeves.

- Sterile persons should sit only when the entire procedure will be performed at this level.
Sterile OR Technique, cont.

- Consider sterile barriers contaminated after penetration.
- Consider the edges of a sterile package or container contaminated after opening.
- **Sterile** persons touch only **sterile** items.
- **Non-sterile** persons touch only **non-sterile** items.
Monitoring the Sterile Field

Monitor the sterile field constantly.

- Prepare as close to use as possible.
- Constantly observe field.
- Do not cover sterile fields.
- Keep conversation to a minimum.
- Secure surgical equipment to the field.
Moving within a Sterile Field

When moving within or around a sterile field, do so in a manner to maintain the sterility and integrity of the field.

- Scrubbed persons stay close to the sterile field.
- Move from sterile area to sterile area.
- Avoid changing levels.
- Pass back-to-back or front-to-front.
- Un-scrubbed persons face the sterile field at all times.
- Do not walk between two sterile areas.
- Minimize number of people in the OR.
Protecting the Patient

To protect the patient:

- Wear correct OR attire.
- Use sterile drapes when doing surgery.
- Limit traffic in and out of the OR rooms.
- Decrease growth of pathogens in room by maintaining:
  - Proper temperature,
  - Ventilation, and
  - Humidity in room.
Our Patients are Our First Priority

- Direct all attention toward the patient.
- We in the OR work as a team to ensure the most positive outcome for the patient.
- All of us are accountable for our actions while in the surgical arena.
Congratulations!

- You have completed this CBL module.
- To continue, click on & complete the Acknowledgement Form. Surg Techs also complete the Checklist.
- Questions? Contact:
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