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Owner	Sherie Goldbach: Project Coordinator
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Applicability	UNC Medical Center

Infection Prevention Invasive Imaging

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I. Description

Describes policies and practices followed in certain procedural areas (i.e., Vascular Interventional Radiology (VIR), Endovascular Center, Cardiac Catheterization lab, Electrophysiology Lab) to reduce the risk of healthcare-associated infections and prevent work-related exposures to infectious diseases

II. Policy

A. Definition of Areas

1. These procedural areas may consist of procedure rooms, control rooms, scrub areas, with contiguous areas that may include the hallway, holding bays, staff lounge, clean and dirty utility rooms, offices, outpatient exam and waiting areas, conference area, and storage areas.

B. Procedure Area Environment

Procedural areas are broken down into several zones. The unrestricted, semi-restricted, and restricted zones vary based on the activities performed, how the area is accessed (i.e., pathway), the attire worn, the HVAC parameters needed, and the surface requirements.

1. Zones:

    a. **Unrestricted Zone:** Defined as the hallways outside of the semi-restricted and restricted zones, holding bays, staff lounge, clean and dirty utility rooms, offices, outpatient exam and waiting areas, conference area, and storage

areas.

b. **Semi-restricted Zone:** If applicable per department specific processes, is defined as areas directly connected to the Restricted Zone.

c. **Restricted Zone:** Defined as the procedure room. Procedure rooms (restricted zone) may be entered either through an Unrestricted or Semi-Restricted zone depending on the department specific processes.

2. Restricted Zone:

    a. Access will be limited to the minimum number of persons needed to safely perform the procedure and, on occasion, observers. The physician in charge of the procedure, the Technical Supervisor, or the procedure RN is responsible for controlling the number of persons present by approving observers, consultants, product representatives, etc.

        i. **Observers:** All persons not directly involved in the procedure will be considered observers. These will include consultants, students, photographers, police guards, parents approved to accompany children, and others wishing to watch procedures.

            - Observers shall perform hand hygiene.
            - If a control room exists, observers should be encouraged to remain in the control areas.
            - If the observer(s) must enter the restricted area, the appropriate attire (e.g., disposable jumpsuit or clean scrubs, hair cover, and mask) must be worn.
            - If observers are assisting, they must follow all relevant surgical attire, surgical hand antisepsis, and protocols.
            - Observers exhibiting obvious signs of illness will not be allowed.

        ii. **Air control:** The procedure rooms will be maintained at positive pressure with respect to the corridors. Movement in and out of the procedure room should be kept to an absolute minimum. Doors are to remain closed at all times.

3. Surgical Attire:

    a. Refer to the Perioperative Services policy: PeriOperative Services Surgical Attire Policy

    b. Radiology aprons will be worn under sterile gowns. These will be cleaned with an EPA-registered disinfectant on a routine basis (e.g., weekly) and when visibly soiled.

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4. Surgical Hand Antisepsis:

    a. Surgical hand antisepsis, using either an alcohol-based waterless surgical hand antiseptic or an antimicrobial soap, will be performed before donning sterile gloves when performing surgical procedures. Refer to the Infection Prevention policy: Hand Hygiene.

5. Cleaning:

    a. Procedure Rooms:

Frequency	Responsible Staff	Process
Before and after (i.e., between) every patient	Shared cleaning (clinical staff and/or Environmental services staff)	• Clean and disinfect high touch surfaces inside the patient zone (e.g., procedure table/station, countertops, external surfaces of fixed equipment) • Clean and disinfect surfaces that are visibly soiled with blood or body fluids. • Wet mop floors if visibly soiled. • Pull trash
After the last patient (terminal clean)	Shared cleaning (clinical staff and Environmental services staff)	• Clean and disinfect high and low touch surfaces (e.g., procedure table/station, countertops, external surfaces of fixed equipment, light switches, door handles) • Clean and disinfect any surface that is visibly soiled with blood or body fluids. • Clean and disinfect the floor. • Clean and disinfect handwashing sinks. • Change trash bags

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Scheduled cleaning (weekly rotating)	Environmental Services	• Clean high surfaces (above shoulder height) such as tops of cupboards, imaging equipment, vents. • Clean Walls, baseboard, corners, and ceilings

b. Other Spaces in the Procedural Suite:

i. Hallways, contiguous spaces, and patient prep/recovery areas will be cleaned daily by Environmental Services (ES) per the Infection Prevention policy: Environmental Services.

ii. Offices, conference rooms, and other spaces will be cleaned per the Infection Prevention policy: Environmental Services.

C. Patient Management

1. Patient Attire

a. All patients entering the semi-restricted and restricted zone should be dressed in a clean hospital gown. Pediatric patients may have clean pajamas or diapers and clean t-shirts.

b. A patient's personal clothes should not accompany the patient into the restricted area (i.e., procedure room).

c. All patients will have their head covered with a surgical cap.

d. Patients who are undergoing a procedure near the head or neck (i.e., central line insertion) should wear a surgical mask until covered with a sterile drape. After draping, the mask may be removed if the patient is able to keep the head turned away from the site.

2. Skin Preparation and Drape: Sites to be used will be identified by the physician in charge of the procedure.

a. If hair removal is necessary, it will be removed by using hair clippers.

b. The site will then be cleansed with an appropriate antimicrobial agent. Refer to Infection Prevention policy: Chlorhexidine Gluconate (CHG) Treatments and Skin Antisepsis.

c. A sterile drape will be used to isolate the site as well as to cover the patient and any hardware attached to the procedure table.

3. Patients on isolation precautions will be managed per the Infection Prevention policies: Isolation Precautions and the Tuberculosis Control Plan.

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D. Equipment

1. The Spaulding classification scheme is a rational approach to disinfection and sterilization of reusable patient care equipment and/or devices. Based on the degree of risk of infection involved in the use of items, the scheme divides reusable patient care items into three distinct categories: 1) critical; 2) semi-critical; 3) non-critical. Manufacturer instructions for use (MIFU) must be followed for processing all reusable instruments and devices between each use.

a.

Critical Items: require sterilization	Enter/contact normally sterile tissue or the vascular system. Examples include but are not limited to surgical instruments, certain catheters, implants, laparoscopes, arthroscopes. For sterilization of critical items, refer to Infection Prevention policy: Sterilization of Reusable Patient Care Items
Semi-critical Items: require at least high-level disinfection	Contact intact mucous membranes or non-intact skin. Examples include but are not limited to some endoscopes, endocavitary probes, diaphragm fitting rings, laryngeal blades. For High Level Disinfection of Semi-Critical items, refer to Infection Prevention policy: High Level Disinfection (HLD) – Manual reprocessing of reusable semi-critical medical devices.
Non-critical Items: require low-level disinfection	Contact intact skin but not mucous membranes. Examples include but are not limited to bed pans, blood pressure cuffs, and stethoscopes. For non-critical items, refer to Infection Prevention Policy: Cleaning And Disinfection of Non-Critical Items.

2. Instrument Control
    a. While setting up the procedure tray, the technologist will use aseptic technique.
    b. Procedure trays should be set up immediately prior to case.
    c. Once trays are set up for a procedure, if not being used immediately, they must be covered with a sterile drape to prevent contamination of opened supplies. Upon completion of the case, all open, unwrapped supplies are to be discarded.
    d. **While a sterile field is present,** unscrubbed individuals should stay as far from the sterile field and scrubbed persons as possible, face the sterile field

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as they approach, avoid walking between sterile fields or scrubbed persons, and avoid reaching over an uncovered sterile field.

e. In VIR, an electric teakettle may be utilized to boil sterile water. The steam from the teakettle is used to modify the shape of certain catheters. To ensure sterility of the water vapor, the water must be boiled at a vigorous, rolling boil for 5 minutes prior to use. After each use, the kettle is emptied, rinsed out and dried. The external surface will be cleaned with an EPA-registered disinfectant (i.e., Sani-Cloth*)* and stored in an upside-down position in a designated clean area.

f. Sterile disposable supplies opened, but not used due to cancellation of a case can be used for the following case only if both criteria below are met:

    i. The canceled case never entered the room

    ii. The sterile disposable supplies have not been left unattended.

g. Reuse of Single Use Catheters/Equipment

    i. Single use items should not be reused.

    ii. If catheters are reprocessed it must be done in accordance with the Infection Prevention policy: Reuse of Single Use Devices (SUDs).

    iii. Equipment which has been used and is going to be sent for reprocessing by a third party must be labeled as used and stored in a manner which will prevent accidental reuse prior to reprocessing.

h. Pressure Monitoring Flush System

    i. Sterile disposable transducers are utilized for pressure monitoring.

    ii. The transducer cable must be disinfected between uses with an EPA-registered disinfectant (i.e., Sani-Cloth)

    iii. Hand hygiene should be performed before handling the pressure monitor set.

    iv. Set-up of the system takes place in a clean area, away from sinks and other possible contaminants.

    v. Retrograde back-up of blood is prevented by frequently checking for leaks and loose connections and by maintaining continuous adequate pressure within the flush system.

3. IV Fluids

    a. New IV fluids and connectors will be opened for each case in the procedure

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room. The flush used for cases is supplied to the table in a closed tubing system.

b. A new bottle of IV contrast is opened at the beginning of each case and is only used for one patient.

E. Implementation and Monitoring

The responsibility for both the implementation and monitoring of this policy belongs to the Physician, Technologist, and Nursing Leadership of the individual procedure area.

III. References

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IV. Related Policies

Infection Prevention Policy: Endoscope

Infection Prevention Policy: Chlorhexidine Gluconate (CHG) Treatments and Skin Antisepsis

Infection Prevention Policy: Cleaning and Disinfection of Non-Critical Items

Infection Prevention Policy: Environmental Services

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Infection Prevention Policy: Hand Hygiene

Infection Prevention Policy: High-Level Disinfection (HLD) - Manual Reprocessing of Reusable Semi-Critical Medial Devices

Infection Prevention Policy: Infection Prevention Guidelines for Safe Patient Care

Infection Prevention Policy: Isolation Precautions

Infection Prevention Policy: Reuse of Single Use Devices (SUDs)

Infection Prevention Policy: Sterilization of Reusable Patient-Care Items

Infection Prevention Policy: Tuberculosis Control Plan

Occupational Health Services Policy: Infection Prevention and Screening Program – Occupational Health Service

PeriOperative Services Surgical Attire Policy

V. Responsible for Content

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Approval Signatures

Step Description	Approver	Date
Policy Stat Administrator	Judith Strubin: Mgr Program-IP	10/2026
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Applicability

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Standards

No standards are associated with this document

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