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Policy Area Infection Prevention
Applicability UNC Medical Center

Imaging Services

I. Description

Describes guidelines to minimize the risk for transmission of infection among patients and personnel in Imaging Services areas.

II. Policy

A. Infection Prevention Considerations for Imaging Services

1. Whenever possible, elective imaging procedures on patients with communicable diseases should be deferred until the patient is no longer infectious.
2. The unit requesting imaging services must notify the Imaging Services department of the isolation precautions status prior to the patient's arrival.
3. Ideally, procedures on patients on Isolation Precautions will be done in the patient's room. If patients on Isolation Precautions must have an imaging procedure performed in the Imaging Services department, they should be scheduled at a time when activity is at a minimum to prevent contact with others, and the waiting time be kept to a minimum, when possible based on the patient's acuity.
4. Waiting room areas will be monitored by all staff for patients with signs or symptoms of communicable diseases (e.g., coughing, sneezing, vesicular lesions), and whenever possible, these patients will be moved to private areas. For patients with signs of respiratory illness, refer to the Infection Prevention policy: [Ambulatory Care Clinical Services](#) for details of respiratory hygiene/cough etiquette.

5. In Nuclear Medicine, when the patient is to receive radioactive-tagged blood cells, the following is to occur:
- a. The technologist goes to the patient's room, verifies the patient's name and medical record number with the patient's nurse present, secures a wrist band from Cardinal Health to match a pre-labeled number on a blood tube, draws the blood, packages it in a container from Cardinal Health, places a new secure tab on the container, and calls Cardinal Health so they can transport the specimen to their lab.
 - b. Upon return receipt of the radioactive-tagged blood from Cardinal Health, the blood is transported to the patient's room in an appropriately shielded container placed in a biohazard bag or container displaying a biohazard symbol. Prior to the administration of the blood, the patient's name and medical record number are verified by the technologist and the patient's nurse simultaneously. The technologist who withdrew the blood must also perform the reinjection.
 - c. When the radioactive-tagged blood has been administered to the patient, the empty syringe is then transported back to the Nuclear Medicine Lab in the appropriately shielded container or bag displaying a biohazard symbol for disposal.
 - d. The interior and exterior of the appropriately shielded container must be disinfected with an EPA-registered disinfectant before and after it is used to carry a blood sample.
 - e. Countertops, workspaces and equipment in the Nuclear Medicine Radiopharmacy should be cleaned with an EPA-registered disinfectant daily, when visibly soiled, or when known to be contaminated following Nuclear Medicine Pharmacy Protocols.

B. Reusable Equipment and Devices

NOTE: Refer to the [Infection Prevention Policy: Cleaning and Disinfection of Non-Critical Items](#) for additional guidance on items not addressed here.

1. All radiological equipment must be cleaned after every procedure in the operating room.
2. Lead aprons should be cleaned weekly, when visibly soiled, and after use on a patient requiring Isolation Precautions (if worn without a cover gown).
3. Cassettes, grids, and positioning equipment should be placed in plastic bags before placed in contact with the patient and cleaned with an EPA-registered disinfectant after use.

4. Portable Machines:

- a. Upon completion of the procedure, the cover should be removed before placing the equipment into the portable machine. This can be done by opening the compartment, sliding the cassette out of the bag and into the compartment, and then closing it with a gloved hand, discard the plastic cover while inside the patient's room.
- b. Remove and discard in the regular trash all personal protective equipment including the cover used for the procedure and perform hand hygiene before leaving the patient's room.
- c. Move the machine into the hallway for cleaning. The parts of the portable x-ray machine that have been touched by the tech or patient or may have come into contact with contaminated items in the room will be cleaned. Using a new pair of gloves, wipe down the portable machine, taking care to include the control pad, hand held device, and push bar, as well as the compartment handle. After removal of gloves, immediately perform hand hygiene.
- d. Portable radiography equipment must be cleaned before entering the room of a patient on Protective Precautions.

C. Invasive Imaging Services Procedures (e.g., Fluoroscopy, Myelogram, CT Scan, Ultrasound Image-Guided Biopsies)

The following guidance applies to all individuals entering the procedure rooms.

1. **Dress code:** Upon entering the procedure room, personnel must wear clean apparel. Hair on the head and face must be fully covered to prevent shedding of hair and squamous cells. **Surgical masks should be worn when performing a myelogram or a lumbar puncture.**
2. **Air Control:** Movement in and out of the room should be kept at a minimum. Doors must remain closed to the procedure room when at all possible.
3. **Patients' Dress:** Patients entering the procedure room should be dressed in clean attire such as a clean hospital gown or other hospital attire (e.g. pajamas). For certain procedures or injections, the physician may allow the patient to wear their personal clothing into the procedure area.
4. **Skin preparation and drape:** Skin preparation of the procedure site will be performed using aseptic technique. Two percent CHG and alcohol (Chloraprep) is the preferred antiseptic agent for skin preparation. Tincture of iodine 1% - 2%, iodophors or 70% alcohol may be used. Sterile towels will be used to isolate the site. The patient will

then be covered with the exception of prepared areas, using sterile sheets.

5. **Instrument Control:** All opened reusable instruments and supplies regardless if they are used or not during the case must be properly reprocessed before re-use. Refer to the Infection Prevention policy: [Sterilization of Reusable Patient-Care Items](#). While a case is in progress in the procedure room, only personnel performing the procedure may have access to the instrument tables with open instruments. Single-use devices/ supplies may not be reprocessed.
6. **Equipment**
 - a. **Sterile Tray:** A sterile tray appropriate for the procedure will be set up by the technologist. A sterile drape covers the tray. A sterile field should be prepared as close as possible to the time of use.
 - b. **Transducers:** Perform hand hygiene with an antimicrobial product before handling the transducer. During the procedure, the transducer will be covered with a sterile probe cover or drape, as appropriate. After the procedure, the device and cable will be wiped per manufacturer's instructions for use and UNC Medical Center policies followed for disinfection or reprocessing prior to reuse.
 - c. **IV Fluids/Contrast Media:** All IV fluids and connectors will be newly opened for each case using the closed system in the special procedures rooms.
 - d. **Medications** Aseptic technique must be used when entering medication vials. Vials should be handled with clean hands or clean gloves. Cleanse the rubber diaphragm of the medication vial with sterile alcohol before withdrawing contents of vial. Use a new sterile syringe with a new needle for each access. Single use medication vials must be discarded immediately after initial use. For multi-dose vials, refer to the Patient Care -Medication Management policy: [Medication Management: Use of Multi-Dose Vials/Pens of Injectable Medications and Vaccines in Acute Care and Ambulatory Care Environments](#).

D. Implementation and Monitoring

The responsibility for both the implementation and monitoring of this policy belongs to the Medical Director, the Section Chiefs, as well as the Administrative Director of Imaging Services. New staff will be instructed in the method of compliance to this policy. The technical supervisor, Patient Services Managers, and chief technologists serve with the Director as monitors.

III. Related Policies

[Infection Prevention Policy: Ambulatory Care Clinical Services](#)

[Infection Prevention Policy: Cleaning and Disinfection of Non-Critical Items](#)

[Infection Prevention Policy: Environmental Services](#)

[Infection Prevention Policy: Exposure Control Plan for Bloodborne Pathogens](#)

[Infection Prevention Policy: Guidelines for Disposal of Regulated Medical Waste](#)

[Infection Prevention Policy: Hand Hygiene and Use of Antiseptics for Skin Preparation](#)

[Infection Prevention Policy: Infection Prevention Guidelines for Attire in Semi-Restricted and Restricted Zones](#)

[Infection Prevention Policy: Infection Prevention Guidelines for Adult and Pediatric Inpatient Care](#)

[Infection Prevention Policy: Infection Prevention Guidelines for Perioperative Services](#)

[Infection Prevention Policy: Isolation Precautions](#)

[Infection Prevention Policy: Sterilization of Reusable Patient-Care Items](#)

[Infection Prevention Policy: Tuberculosis Control Plan](#)

[Occupational Health Services Policy: Infection Control and Screening Program: Occupational Health Service](#)

[Patient Care Policy: Medication Management: Use of Multi-Dose Vials/Pens of Injectable Medications and Vaccines in Acute Care and Ambulatory Care Environments](#)

[Radiology Policy: Infection Prevention Mammography](#)

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Approval Signatures

Step Description	Approver	Date
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