GENERAL STATEMENT

The Department of Radiology adheres to the Duke Infection Control policies and the DUMC Exposure Control Plan as found on the Duke Intranet under policies Infection Control Manual. All personnel are responsible for knowledge of and compliance with these policies as well as their department’s specific policies. Specific engineering controls, work practices, personal protective equipment, and infection control practices are discussed below.

HAND HYGIENE

The term "hand hygiene" replaces "hand washing" to reflect the acceptance of waterless hand cleaning agents, such as alcohol foam, as appropriate hand cleaning agents. These waterless agents decontaminate hands of bacteria as effectively as the traditional soap-and-water hand wash.

INDICATIONS

1. When hands are visibly dirty or contaminated with blood, body fluids, or other material, wash hands with antimicrobial soap and water.
2. If hands are not visibly soiled, use an alcohol based hand rub or antimicrobial soap and water for cleaning hands.
3. All personnel must clean hands:
   - Before and after any patient care, including contact with intact skin
   - Before performing invasive procedures
   - Before and after contacting wounds
   - After contact with inanimate objects (including medical equipment) in the immediate vicinity of the patient
   - After contact with an invasive device
   - Between sites on a single patient
   - After removing gloves
   - Any time hands are contaminated with blood or body fluids
   - Before beginning work
   - Before eating or smoking
   - After using the lavatory
   - Alcohol hand rubs are NOT indicated:
     - If hands are visibly dirty or contaminated with blood, body fluids, or other material
     - After contact with patients with Clostridium difficile (C. diff)
     - After exposure to known or suspected Bacillus anthracis (anthrax)
   - Hand hygiene requires repeating immediately before patient care is provided when tasks such as handling charts, supplies, documentation, etc. are performed.
ISOLATION AND PRECAUTIONS

CONTACT ISOLATION
Contact isolation is required in addition to Standard Precautions for patients known or suspected to be infected or colonized with epidemiologically important microorganisms such as MRSA, VRE, C. Diff or multidrug resistant organisms (MDRO’s) that can be transmitted by direct contact with the patient when performing care activities or indirect contact (touching) with environmental surfaces or patient care items. The following guidelines are written for patients that require Contact isolation:

- Radiology is notified in advance of the patient’s status and the need for contact precautions
- Place a contact isolation sign on the procedure room door
- Gowns and gloves are required prior to entering the patient’s room
- Remove gowns and gloves prior to exiting the patient’s room and dispose of in the waste receptacle
- Appropriate barriers (masks, impervious dressings, etc.) to prevent transmission should be used by the patient and transport personnel
- Gowns and gloves should not be worn by employees or personnel during transport
- Clean gloves are optional to transport patients if handling equipment such as beds, pumps, wheelchairs etc.
- Occasionally, healthcare workers may need to wear gown and gloves if patient care is provided during transport (e.g., ICU & PACU patients)
- Use dedicated equipment (stethoscope, thermometer)
- Shared equipment requires cleaning and disinfection after each patient use
- All horizontal surfaces in patient rooms, curtains, and bedside equipment of patients on Contact Isolation are cleaned using a hospital-approved disinfectant in accordance with Standard Precautions. Multiple-antibiotic resistant organisms are as susceptible to disinfectants as antibiotic-sensitive strains

AIRBORNE ISOLATION
Airborne isolation is required in addition to Standard Precautions for patients known or suspected to be infected with organisms such as TB, chicken pox or varicella zoster. The airborne droplets remain suspended in the air and can be widely dispersed by air currents transmit these organisms. The following guidelines are written for patients that have ordered procedures that are on Airborne precautions:

- Radiology is notified in advance of the patient’s status and the need for airborne precautions
- If possible, the patient should be scheduled at end of the day.
- The patient requires a surgical mask during transport to the Radiology department when the technologist is ready.
• Place an Airborne isolation sign on the door
• The patient is placed immediately in an exam room, not a common waiting area
• Keep the doors closed while the patient is in the procedure room
• Place a portable HEPA filter in the procedure room prior to the patient’s arrival
• The HEPA filter should remain on for one hour after the procedure and patient exits the room, per Safety policy (Please refer to the Safety website for more specific information). If possible, the patient should be instructed to keep mask on the entire time while in radiology, if the patient is able to tolerate it.
• If the patient is unable to tolerate the mask, the HEPA filter should remain on for one hour after the procedure after the patient exits the room.
• The doors are required to remain closed during the one hour after the procedure
• During transport, the patient should wear a surgical mask unless he/she are intubated
• If possible, the patient continues to wear the mask after arrival in Radiology
• All personnel in the room with the patient must wear a N95 respirator mask (if fit tested) or a PAPR
• As soon as the radiograph is complete, the patient is returned to their isolation room

DROPLET ISOLATION
Droplet precautions are required in addition to Standard precautions; and are used for patients infected with known or suspected microorganisms transmitted by droplets, i.e., meningitis, influenza and pertussis. The following guidelines are written for patients that require Droplet isolation:

• Radiology is notified in advance of the patient’s status and the need for droplet precautions
• A Droplet Isolation sign is required on the door and the door remains closed
• In addition to using Standard Precautions a mask is required at all times by anyone entering the patient’s room.
• Patients are required to wear a surgical mask during transport to the Radiology Department
• The patient is immediately placed in an exam room upon arrival and then transported back to their isolation room as quickly as possible.

Duke Hospital Policy for Safe Injection

• Aseptic must be used to prevent contamination of sterile injection equipment
• Do not administer medications from a syringe to multiple patients—single use only
• Use fluid infusion and administration sets for one patient only and dispose after use
• Single use vials as much as possible

Important tips for safe injection practice:

• Introducing a – One syringe: One patient policy
• Empowering practitioners and nurses to report poor injection procedures
• Improved training and education on good injection practices
• For expensive injectable drugs that are dosed on a per-kilogram basis should only be prepared by the pharmacist under strict aseptic conditions in the pharmacy.
OTHER TYPES OF ISOLATION
For other types of isolation, please refer to the Infection Control manual.

ENGINEERING CONTROLS/WORK PRACTICES/PERSONAL PROTECTIVE EQUIPMENT

PERSONAL PROTECTIVE EQUIPMENT
Gloves are used for phlebotomy and anytime there is the potential for exposure of the hands to blood or other potentially infectious materials such as when cleaning soiled equipment, handling soiled linens, etc.

Maximal Sterile Barrier techniques are required for invasive procedures:
- Sterile gloves and gown are required when performing invasive procedures such as biopsies and arteriograms
- Gowns are required whenever there is the potential for spraying or splashing of blood or other body fluids such as during procedures on trauma cases and when cleaning contaminated equipment where uniforms may become soiled
- Health care workers performing myelographic/lumbar puncture procedures require a mask.
- Full drape of patient is required for invasive procedures
- Face protection is required whenever there is the potential for exposure to the eyes or mucous membranes of the mouth and nose of blood or body fluid such as during certain trauma cases where there is a potential for splashing and spraying of blood, and for cleaning contaminated equipment when brushes or scrubbers are used.
- Either additional PPE (booties, hats, respirator masks, etc.) are required under certain circumstances for infection control or to provide additional employee protection under certain circumstances such as codes, traumas, etc.

PPE is available in the following areas: Each section of Radiology (Vascular, Neuroradiology, Pediatrics, CT, MR, GI, Ultrasound, GU, Diagnostic, and Nuclear Medicine).

EQUIPMENT MANAGEMENT

CONTAMINATED EQUIPMENT
- All equipment (including the MRI table, MRI scanner and MRI tube), in the Radiology Department requires cleaning between each patient use with a hospital grade disinfectant.
- Please following the manufacturers guidelines when cleaning radiographic equipment
- The approved agents are Dispatch®, Caviwipes®, and T-Spray
- Equipment contaminated with blood or other body fluids that is transported for reprocessing (e.g. IV infusion pumps, etc.), is first decontaminated immediately after use by first cleaning and then disinfecting with an appropriate disinfectant solution such as the Dispatch® or Caviwipes® as outlined in the spill protocol above.
- If this is not possible, and the equipment requires transport to another department such as Respiratory Care for cleaning and processing, it requires transporting in an appropriate secondary container labeled with a biohazard sign, or covered in such a manner that prevents potential exposure to employees, patients and visitors and labeled appropriately.
- All reusable equipment that is exposed to mucus membranes or sterile body areas requires high-level disinfection or sterilization. (Please following the Disinfection and Sterilization Guidelines in the Duke Hospital Infection Control on-line manual along with the manufacturers guidelines of the equipment)
EDUCATION REQUIREMENTS

INFECTION CONTROL
All hospital employees are required to have infection control training at orientation and then annually thereafter.

INFECTION CONTROL POLICY APPROVED:

Director

Chairman, Hospital Infection Control Committee

Date

Date