

Department of Radiology
Ultrasound

I. PERSONNEL**A. Dress Code**

1. All personnel required to enter a controlled area outside the department will change into the designated uniform, i.e., Surgery, NICU, etc
2. If an employee contaminates their uniform during the workday, they will change into another uniform and place contaminated clothing in a plastic bag and send to the Laundry. At no time will an employee wear contaminated clothing off the premises. Refer to IC Policy 5.0: Care of Personal Clothing Soiled with a Patient's Blood/Body Fluids.
3. All personnel shall practice good personal hygiene. Refer to IC Policy 2.0: Hand Hygiene.

B. Personal Precautions

1. Occupational Health Guidelines are followed.
2. All new employees are initially evaluated by the Occupational Health Clinic. Annual evaluations are required thereafter. All employees are urged to keep immunizations current. Supervisors should promptly schedule all employees with OHC for evaluation; immunization or follow-up as appropriate.
3. Employees should not come to work if they are known or suspected of having a communicable disease. Any employee with a skin infection, weeping lesions or potentially transmissible infection must report to their supervisor who will refer to OHC as appropriate.
4. Standard precautions must be observed at all time.

II. PATIENT ASSESSMENT

- A. Patients are assessed when they arrive in the Ultrasound Department for possible infection. If the assessment indicates an infectious process, the patient is placed in a private room and seen immediately.

III. ENVIRONMENT**A. Department Work Areas**

1. Examination rooms are to be kept clean and neat at all times with care taken to prepare the room for each patient according to the nature of the examination to be performed.
2. No food or drink will be allowed in the patient treatment or examination areas.
3. Food and drinks will be kept covered and will be stored in the employee refrigerators until consumption.

B. Linen

1. All dirty linen will be stored in the linen container within the workroom. Contaminated linen will be placed in a plastic bag before being placed in the linen container. At the end of the day all linen will be placed in the linen chute to the laundry.
2. All clean linen must be kept covered or stored in an enclosed cabinet or closet. Refer to Infection Control B.I.T. and Nursing Policy L-15 Linen Use/Bed Change Policy.

IV. HANDWASHING-Refer to IC 2.0 Hand Hygiene

A. Routine Patient Care

1. For routine patient contact, handwashing for 15-20 seconds with soap and water before and after contact with any patient is recommended. Alcohol-based hand wash is available and may be used when hands are not visibly soiled.

B. Invasive Procedures

1. A surgical hand scrub is performed before all invasive procedures
2. Hands are scrubbed using Hibiclens (chlorhexidine gluconate 4%) surgical scrub for 6 minutes or Iodophor for 5 minutes.

V. PATIENT SKIN PREPARATION

A. Procedure for Invasive Procedures in Order of Recommendation (Refer to IC 22.0 Skin Preparation for Invasive Procedures)

1. Chlorhexidine Prep
 - a. Used full strength and not diluted.

- b. Apply scrub to the operative site using standard surgical prepping technique and scrub thoroughly for 2 minutes
 - c. Wipe off all surgical scrub with sterile sponge.
 - d. Repeat above procedure.
 - e. Wipe dry with sterile sponge.
2. Chloraprep One Step
- a. Assure skin is thoroughly clean. Pinch wings on applicator to break ampul. Do not touch the sponge. Wet the sponge by repeatedly pressing and releasing the sponge against the treatment area until liquid is visible on the skin.
 - b. Dry surgical sites (such as abdomen): Starting at the site of incision or puncture, apply the antiseptic using concentric circles, working outward, making certain that the entire prepared area is completely wet. Allow the area to dry completely, approximately 2 minutes. Do not blot or wipe off.
 - c. Moist surgical sites (such as the inguinal fold): Starting at the site of incision or puncture, apply the antiseptic using concentric circles, working outward, making certain that the entire prepped area is completely wet for two minutes. Allow the area to completely dry, approximately one minute. Do not blot or wipe away.
 - d. Discard the applicator after a single use. Do not use a single applicator to prep multiple sites, such as bilateral groin biopsies or bilateral breast biopsies.
 - e. The maximum treatment area for one applicator is approximately 130 cm² (about 4" x 5"). Multiple applicators may be used for larger prep area.
3. Povidone Iodine or Betadine Prep
- a. Used full strength and not diluted.
 - b. Apply scrub to operative site using standard surgical prepping technique.
 - c. Procedure is not repeated. Refer to IC Policy 22.0: Skin Preparation for Invasive Procedures.

VI. PROCESSING OF EQUIPMENT

A. Disposable

Disposables are used once then discarded, never reused. Refer to IC Policy 7.1: Reuse of Disposable Items and Equipment.

B. Reusable Items

1. Reusable items, i.e., gel containers are sent to Central Medical Supply for cleaning and processing before refilling; they are not to be refilled before being sterilized. These items are never cleaned in the ultrasound department.
2. When filling gel containers, gloves are worn.

C. Transducers

1. The transducer head is cleaned thoroughly with hospital approved disinfectant (T-Spray) between patients.
2. Open Wounds: Where possible, avoid placing the transducer in an open wound. If this is unavoidable, cover the transducer with a disposable latex-free probe cover. After completion of scan, clean thoroughly with hospital approved disinfectant (T-Spray).
3. Endocavity transducers
4. A. Endovaginal Probe

The transducer is placed in a latex-free probe cover before use. Ultrasound gel is placed inside the probe cover to maximize conduction. The integrity of the cover is assured before use in high-risk areas and on non-intact skin. Probes are soaked in Glutaraldehyde (Cidex) for 45 minutes.

B. Processing with Glutaraldehyde (Cidex 2.4%)

1. Personal protective equipment (gloves, gown, eyewear, mask) is worn during the decontamination phase and when working with glutaraldehyde.
2. Glutaraldehyde is kept in a controlled area. Containers are kept covered to prevent the fumes of glutaraldehyde from disseminating into the air. The room should have at least 10 air exchanges.
3. The door to the processing room is kept closed at all times.
4. Used instruments are cleaned thoroughly with instrument cleaner solution, rinsed and dried. Hands are washed between the decontamination stage and the disinfectant stage.
5. The instrument is soaked for 45 minutes in Glutaraldehyde (2.4%)

6. Glutaraldehyde is tested daily before placement of instruments using test strips with results recorded in a logbook.
7. Glutaraldehyde is monitored before each use using test strips.
8. The dry instrument is stored in a clean dry area.
9. Glutaraldehyde is discarded in the appropriate container every 14 days or sooner if solution becomes diluted or soiled. Safety Office picks up used Glutaraldehyde for disposal.
10. Discard date is placed on disinfectant containers upon opening for initial use.
11. Safety Office is notified immediately and cleans all spills.

D. Portable Ultrasound Examinations

Transducers are covered with a non-latex probe cover for each patient in the NICU. The integrity of the cover is assured before use. Individual sterile gel packages are used on each patient. After scan, the transducer is wiped clean and non-latex probe cover is replaced for subsequent examinations. After returning to the department, the transducer is cleaned with the T-Spray.

VII. SPECIFIC INFECTION CONTROL PROCEDURES FOR ULTRASOUND

Invasive Procedures

- A. Paracentesis, Thorocentesis, Abscess drainage and Biopsies (Liver, Thyroid and Kidney)
 1. A thorough handwashing with an antiseptic.
 2. Attire consists of appropriate PPE. ex.: sterile gloves, gowns, mask
 3. Large sterile drapes are used for all procedures.
 4. Sterile gel is used throughout the procedures and care is taken that only sterile personnel handle the transducer.
 5. After the procedure the transducer is ~~cleaned with soap and water~~ and wiped with the T-Spray.

VIII. ISOLATION PROCEDURES

All isolation procedures are done portable.

- A. Infection Control techniques for bedside ultrasound
 1. Soiled equipment is not taken into the patient room. Care is taken that ultrasound machines are kept clean daily by ultrasound personnel using a housekeeping disinfectant.

2. Transducers and any parts of the equipment that touch a patient must be wiped with a clean wet cloth with T-Spray between each patient use.
3. When a mobile ultrasound machine is taken to a patient in isolation, the technologist wears proper attire, as outlined on the isolation card attached to the door or as otherwise directed by Nursing Service personnel. Refer to Infection Control B.I.T.

IX. GENERAL INFECTION CONTROL GUIDELINES

- A. Standard Precautions are used for all patients.
- B. If patient has a respiratory infection he is placed in a private room as soon as possible.
- C. Personnel maintaining good personal hygiene habits while working with patients, such as the wearing of clean uniforms or scrub suits and turning the head to cough or sneeze into a disposable tissue.
- D. Personnel should wear disposable gloves when there is contact with any patient's secretions or other potentially infectious material.
- E. Goggles and splash-proof gowns are available and should be worn when there is a possibility of splashing of body fluids.
- F. Clinical Care of patient Includes:
 1. IVs should not be disturbed. If they stop, call the physician in charge or the nurse in charge of patient.
 2. When handling patient with indwelling urinary catheters, care should be taken not to elevate the urine bag above the bladder in order to reduce the incidence of reflux back into the bladder.
 3. When in intensive care units such as NICU, PICU, SICU, or MICU that requires special attire, the persons doing the procedure must follow recommendations for infection control for that unit. Individual packets of sterile gel are used in NICU and sterile areas.
 4. The hospital linen policy is followed.

X. DISPOSAL OF WASTE

Material saturated with any patient's body fluids are considered contaminated waste and is placed in a contaminated trash box for incineration. The hospital policies for contaminated linen and sharps are followed. Refer to IC Policy 6.0: Contaminated/Regular Waste.

XI. ROUTINE CLEANING DONE BY HOUSEKEEPING PERSONNEL

- A. Routine cleaning of rooms with housekeeping disinfectant is done daily.
- B. Floors are to be mopped daily or more often as needed.
- C. Housekeeping personnel clean all spills of body fluids.
- D. Shelves and other storage areas are cleaned monthly.

XII. ROUTINE CLEANING DONE BY ULTRASOUND PERSONNEL

- A. Ultrasound personnel clean ultrasound machines and equipment.
- B. Shelves and other storage areas are checked and cleaned monthly.
- C. Exam tables are cleaned when visibly soiled.

References:

LSUHSC IC 2.0 Hand Hygiene

LSUHSC Infection Control Blood borne Pathogen, Isolation, Tuberculosis Control Plan (B.I.T.)

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