2.21 Pathology/Clinical Services

Purpose  To provide all employees in Pathology/Clinical Services guidelines for prevention of infection by minimizing the risk of exposure to blood, tissue and body fluids.

Audience  All UTMB employees, contract workers, volunteers, and students of Pathology/Patient Services.

Personnel
- All Pathology/Clinical Services staff shall document attendance at a Universal Precautions inservice at the time of initial employment and annually thereafter.
- Employees with patient contact will also receive an annual class in Infection Control.
- Personnel shall comply with Employee Health Center guidelines for their area.
- Eating, drinking, smoking, application of cosmetics or lip balm is not allowed in the laboratory area.
- Suspected or known work-related exposure to or acquisition of an infectious disease shall be reported to the supervisor, Employee Health Center, and Healthcare Epidemiology immediately.
- Employees working in certain areas will be subject to additional monitoring/immunization procedures as detailed in Pathology Clinical Services Policy 03.18.02, Communicable Disease Control.
- Handling of food, reagents, and specimens shall be in accordance with laboratory medicine policy.
- The Standard Precautions policy shall be followed whenever there is a potential for contact with any and all blood and body fluids.
- The Exposure Control Plan will be followed in accordance with policy.

General Laboratory Practice
- All pipetting shall be performed by using a mechanical pipetting device (mouth pipetting is prohibited).
- Laboratory work surfaces shall be decontaminated with an appropriate hospital-grade disinfectant after a blood/body fluid spill and at the end of each work shift.
- Laboratory test request slips that have been contaminated by blood or body fluids shall not be used. Replacement forms shall be requested from the ordering unit or transcribed onto a clean request slip by the receiving department.
• Hands and other skin surfaces shall be washed immediately and thoroughly if skin surfaces are contaminated with blood or body fluids. Hands should also be washed after gloves are removed (see policy: Handwashing for All Hospital Employees).

• Avoid centrifugation of uncovered tubes of specimens (blood, body fluids). Use caps or parafilm at low speeds only.

• Disposable needles and other sharps (pipettes, slides, etc.) shall be placed into puncture-resistant containers for disposal. Containers must be changed when ¾ full. Needles shall never be recapped, bent, broken, removed from syringes or otherwise manipulated by hand. All Phlebotomy will be performed using hospital approved materials and safety precautions.

• Any non-disposable item that requires reprocessing must be done following the hospital policy for reprocessing non-disposable items (see policy: Cleaning and Reprocessing of Patient Care Equipment and Medical Devices).

• Autoclaves used to sterilize diagnostic patient equipment or other equipment must be routinely monitored with spore testes (see policy: Monitoring of Sterilizers).

• Incubators, refrigerators, centrifuges and other equipment which may become contaminated from spills of blood and body fluids shall be cleaned followed by disinfection with an EPA-registered tuberculocidal (hospital-grade) disinfectant solution whenever soiling or spillage occurs and on a regularly scheduled basis.

• All refrigerators and freezers containing specimens or reagents shall have a thermometer and a temperature recorded weekly (see policy: Care of Refrigerators and Freezers).

• All clean and sterile supplies shall be stored on shelves or pallets at least 5” above the floor. Clean and sterile supplies shall be kept dust free. Clean and dirty supplies shall always be separated.

• To reduce the risk of injury due to breakage of capillary tubes, FDA, NIOSH, and OSHA recommend that users consider blood collection devices less prone to accidental breakage, including:
  – Capillary tubes that are not made of glass
  – Glass capillary tubes wrapped in puncture-resistant film
  – Products that use a method of sealing that does not require manually pushing one end of the tube into putty to form a plug

OR
– Products that allow the blood hematocrit to be measured without centrifugation

- Handwashing shall be performed before and after each patient contact (see policy: Handwashing for All Hospital Employees). Gloves shall also be changed between patients.

- Personnel entering patient rooms shall try to keep their attire free from patient contact and soilage with patients’ blood, other body fluids or excretions.

- All personnel shall follow the instructions posted on the door of a patient in isolation. Disposable supplies shall be discarded appropriately in the room and not used on another patient.

- Collection trays shall never be placed on the patients’ beds or overbed tables. Collection trays shall be disinfected routinely and more often if soiled. Tourniquets and vacutainer holders shall be discarded or disinfected immediately upon soiling. Hands contaminated with blood or other body fluids shall not touch the collection tray or its contents.

- Blood, fluid, and tissue specimens delivered to the central labs shall be placed in plastic bags for transport. Requisition slips shall not be enclosed in bags but shall be placed in the outside pocket.

- Gloves shall be worn to avoid skin contact with blood/body fluid specimens during:
  - Blood collection
  - Receiving and initial processing of specimens
  - Centrifuging, pipetting, pouring, or otherwise preparing a sample for testing

**Note:** Gloves may be of the non-sterile, latex or vinyl variety. Cuts and lacerations of hands shall also be covered with a waterproof dressing. Gloves shall be worn while performing tests directly on patient specimens but are not required after a specimen has been fixed, treated or cultured. Gloves shall be removed when soiled and before leaving the work area. Hands shall be washed after gloves are removed.

- Protective outerwear (coats/aprons) shall be worn while receiving or preparing specimens for testing and shall be removed and discarded appropriately before leaving the laboratory. Such outerwear shall be worn while performing tests if there is a potential for splash or splatter. This is not required if the specimen is fixed.

- Protective eye wear and masks and/or shields shall be used (in the absence of a biologic safety cabinets [BSC]) whenever procedures
that are likely to generate aerosols are performed. These include: opening centrifuged tubes, grinding tissue, vigorous shaking or mixing, sonicating, opening containers under pressure, cleaning up spills, and handling specimens contaminated or spilled in transport. Hand to face contact shall be avoided while working. Plexiglas shields are acceptable in place of a mask and goggles.

- Alternatively and preferably, BSC shall be available in each laboratory for any specimen processing which may generate aerosols. These BSC’s shall be certified annually by a certified inspector with appropriate documentation.
- Any exposure to blood or other body fluid (i.e. needlestick, splash) shall be immediately reported to the supervisor. After initial first aid for the exposure, the employee shall report to the Employee Health Center.

Surgical Pathology

- Personal protective equipment, PPE (gloves, gowns, mask and eye protection) must be worn during procedures.
- All scalpel blades used on unfixed tissue will be discarded into a sharps container between cases. Scalpel blade handles, scissors and other contaminated non-sharp instruments used during a procedure on unfixed tissue must be cleaned and soaked in a quaternary ammonium solution prior to use on the next specimen.
- Cutting boards and tabletops soiled by body fluids must be washed with a detergent and disinfected with a hospital-grade disinfectant prior to examination of the next tissue.
- The tips and blades of knives and other sharps must be protected during storage (knives should not be stored in a drawer without tip/blade protection).
- Reusable blades, knives and other sharps must be either sent to sterile processing for sterilization or soaked in glutaraldehyde solution for 20 minutes prior to examination of the next tissue.
Autopsy

Personal protective equipment (PPE)

- Wear standard autopsy PPE, including a scrub suit worn under an impervious gown or apron, eye protection (i.e., goggles, face shield), double surgical gloves with an interposed layer of cut-proof synthetic mesh gloves, N-95 mask, and shoe covers.

- Add respiratory protection if aerosols might be generated. This includes N-95 or N-100 disposable particulate respirators or PAPR. Autopsy personnel who cannot wear a disposable particulate respirator because of facial hair or other fit limitations should wear a loose-fitting (i.e., helmeted or hooded) PAPR.

- Remove PPE before leaving the autopsy suite and dispose in accordance with facility policies and procedures.

Engineering controls

- Whenever possible, perform autopsies on human remains infected with an EID in autopsy settings that have an adequate air-handling system. This includes a minimum of 6 (old construction) to 12 (new construction) ACH, negative pressure relative to adjacent areas as per recommendations for AIIRs and direct exhaust of air to the outside or passed through a HEPA filter if air is recirculated. Exhaust systems around the autopsy table should direct air (and aerosols away from healthcare workers performing the procedure (e.g., exhaust downward).

Use containment devices whenever possible. Use Biosafety cabinets for the handling and examination of smaller specimens. When available, use vacuum shrouds for oscillating saws to contain aerosols and reduce the volume released into the ambient air environment.