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BROOKE ARMY MEDICAL CENTER  
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Medical Services  
INFECTION CONTROL MANUAL

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## CHAPTER 1

### INFECTION CONTROL PROGRAM

1. Purpose. The Infection Control Program is designed to identify, control, and prevent health care associated infections. It provides guidelines for the practice of infection control.

2. Applicability. All BAMC personnel.

3. Definitions of Infection.

a. Healthcare associated infection refers to a health-acquired infection that was neither present nor incubating on admission or prior to a procedure. This infection can develop during the hospitalization or within 30 days after a surgical procedure or hospitalization depending on the incubation period of the organism. If a device is implanted during the surgical procedure, an infection that develops in the subsequent year is classified as nosocomial. More than one healthcare associated infection may be recorded for a patient when (1) the patient develops a new infection at a different site or (2) there is a change of infecting organisms at a previously infected site accompanied by symptom exacerbation. Healthcare associated infection also refers to an infection that develops related to a clinic procedure in a patient who was not exhibiting signs or symptoms of the infection prior to the procedure. This also includes a communicable (infectious) disease acquired by a patient as a direct result of a clinic exposure.

b. Community-Acquired Infection refers to an infection that is not directly attributed to a previous hospitalization, treatment, procedure, or clinic visit.

c. The BAMC Infection Control Program (ICP) uses the Center for Disease Control and Prevention (CDC) definitions of healthcare associated infections, which are maintained in the Infection Control Office.

4. Reporting Infections.

a. Notify the Infection Control Service (ICS) of healthcare associated infections by telephone (ext. 6-2130 or 6-3562) or by Fax 6-1430.

b. Providers must notify Preventive Medicine (PM) Department (phone 295-2587) of significant diseases and conditions IAW BAMC Memo 40-136, Chapter 4, Section 5.

5. Authority.

a. Each employee is responsible for control of healthcare associated infections.

b. The BAMC Commander has overall authority and responsibility for the Infection Control Program.

c. The appointed Infectious Disease physician serves as Medical Director of the Infection

Control Service (ICS). The Medical Director and the Chief of Infection Control have responsibility for implementing and managing the Infection Control Program.

d. The Infection Control Functional Management Team (IC FMT) has the authority to institute any surveillance, prevention, and control measures or studies when a patient or personnel may be in danger from a potential or actual outbreak of or exposure to infectious disease. The Medical Director and/or the Chief of the Infection Control Service ensure that the BAMC Commander is promptly notified of any condition that places the facility, patients, visitors, or personnel in jeopardy.

e. Members of the ICS and the physician or nurse responsible for the care of the patient have the authority to initiate the appropriate isolation precautions and to culture suspected infected sites. Sites include, but are not limited to: urine, sputum, wound, stool, peripheral and central intravenous sites, and other external drainage. Only the patient's provider does the probing of a deep wound. Documentation of culture submission is required in the medical record. The patient's physician is advised when a culture is submitted and when isolation procedures are instituted.

6. Environmental Cultures. Unless directed by the ICS, no random or routine environmental cultures are taken.

7. Responsibilities of all Medical Center Civilian and Military Personnel.

a. Each department employee, contract personnel, agency worker, student, or volunteer assigned or attached to work in any capacity within BAMC is individually responsible for knowledge of and compliance with the Infection Control Program. All employees are oriented to Infection Control during hospital orientation, unit orientation given by the individual areas and refamiliarized annually via SynQuest training.

b. Report any suspected cluster or outbreak of infection or diseases among patients or personnel to the immediate supervisor and Infection Control Service.

c. Accomplish periodic health examinations, immunizations, and clinical laboratory studies as deemed necessary by appropriate medical authority to prevent, detect, or control infections or communicable diseases. Obtain required, prompt medical evaluation and treatment. Notify immediate supervisor of any duty restrictions or limitations as a result of an infectious and/or communicable disease.

d. All department employees, contract personnel, agency workers, students, or volunteers assigned or attached to work in any capacity within BAMC and who are assigned to areas of occupational risk for exposure to bloodborne diseases require annual training on the Occupational Blood and Body Fluid Exposure Control Plan per the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogen Final Rule, 29 CFR Part 1910.1030. Documentation of this initial and annual training is required on Form 999, Employee Safety and Health Record.

e. Employees receive annual training and fit testing for personal respiratory protection if on the Respiratory Protection Program.

f. Employees providing care to patient populations at increased risk (i.e., critical care areas) for healthcare associated infections may require more frequent education on risk reduction for healthcare associated infections. An appointed person on the units/clinics must provide initial infection control orientation.

g. Department, Service, Clinic or Unit Standard Operating Procedures (SOPs): Managers of patient care units, clinics, and patient care support areas maintain written practice or procedure guidelines specifically related to that work area. This manual provides overall guidance for facility infection control policies and practices. Unit specific SOPs are reviewed every two years and as needed for significant changes in procedures, equipment, or construction that impacts on infection control practices.

8. Responsibility of Infection Control Coordinators.

a. Assure orientation of new personnel in their work area.

b. Act as a point of contact to area personnel on issues of infection control.

9. Infection Control Membership to the Environment of Care (EOC) Committee. The Chief, Infection Control or appointed representative is a member to the Medical Center EOC Committee for the purpose of information cross-flow, data sharing, and consultation.

10. Infection Control Membership to the Tri-Service Regional Product Standardization Committee (TRPSC). The Chief, Infection Control or appointed person is a member to the Tri-Service Regional Product Standardization Committee for the purpose of clinical expertise and consultation on equipment and supplies purchased for use with the Great Plains Region and Region 6 for the Air Force.

11. Infection Control Functional Management Team (IC FMT). The IC FMT meets at least six times a year. The meeting is opened to all interested persons.

12. Pet Policy. No pets are allowed in this facility, except Delta dogs sponsored through the Department of Ministry program (see BAMC Memo 40-202 Canine Visitation Program) or a service animal as defined by the Americans with Disabilities Act (ADA) of 1990.

## CHAPTER 2

### PATIENT CARE PRACTICES

#### 1. HANDWASHING

a. Handwashing is the single, most important practice in infection control. Handwashing protects patients from the resident and transient flora on the hands of personnel and protects personnel from organisms carried by the patient.

b. When hands are visibly dirty, contaminated with proteinaceous material, or are visibly soiled with blood or other body fluids, wash hands with either an antimicrobial or non-antimicrobial soap and water.

c. If hands are not visibly soiled, use either an alcohol-based hand rub or soap and water for routinely decontaminating hands.

d. Decontaminate hands:

(1) Between contacts with different patients.

(2) Before having direct contact with patients.

(3) Between procedures on same patient with contaminated body sites.

(4) Before donning sterile gloves when inserting a central intravascular catheter.

(5) Before inserting indwelling urinary catheters, peripheral vascular catheters, or other invasive devices that do not require a surgical procedure.

(6) After contact with a patient's intact skin (e.g., when taking a pulse or blood pressure and lifting a patient).

(7) After contact with bloody fluids, excretions, mucous membranes, non-intact skin, and wound dressing if hands are not visibly soiled.

(8) If moving from a contaminated body site to a clean body site during patient care.

(9) On leaving the room or handling articles from a patient on isolation and/or communicable disease precautions.

(10) After contact with inanimate objects, including medical equipment, in the immediate vicinity of the patient.

(11) After removing gloves.

(12) Before eating and after using the restroom, wash hands with a non-antimicrobial

or antimicrobial soap and water.

e. Wash hands with soap and water if exposure to *Bacillus anthracis* and if *Clostridium difficile* is suspected or proven. The physical action of washing and rinsing hands under such circumstances is recommended because alcohols, chlorhexidine, iodophors, and other antiseptic agents have poor activity against spores.

f. Hand Hygiene Procedures with Alcohol-based Hand Rubs.

When decontaminating hands with an alcohol-based hand rub, apply product to palm of one hand and rub hands together, covering all surfaces of hands and fingers, until hands are dry.

(1) Follow the manufacturer's recommendations, regarding the volume of product to use.

g. Handwashing Procedure with Soap and Water.

(1) Wet hands with water. Avoid using hot water because it may increase the risk of dermatitis.

(2) Apply 3 to 5 ml handwashing agent, as recommended by the manufacturer, to hands.

(3) Rub hands together vigorously, generating friction on all surfaces of the hands, fingers, and wrists for at least 15 seconds.

(4) Rinse hands with water.

(5) Dry thoroughly with a disposable towel.

(6) Use a clean towel to turn off the faucet and discard towel in waste receptacle.

h. Nail Policy for healthcare workers who provide direct patient care.

(1) Fingernails are kept clean and short (less than ¼-inch long).

(2) Artificial nails and extenders are not allowed.

i. Surgical Hand Antisepsis.

(1) Remove rings, watches, and bracelets before beginning the surgical hand scrub.

(2) Remove debris from underneath fingernails, using a nail cleaner under running water.

When performing surgical hand antisepsis using an antimicrobial soap, scrub hands and forearms for the length of time recommended by the manufacturer, usually 2–6 minutes. Long scrub times (e.g., 10 minutes) are not necessary.

- (2) Rinse washed area (fingertips to elbows) with water.
- (3) Dry thoroughly with a sterile towel before donning sterile gloves.

If using brush-less, waterless hand antiseptic, follow manufacturer's label instructions for proper hand scrub use.

## 2. PERSONAL PROTECTIVE EQUIPMENT (PPE), PPE CABINETS, AND DECONTAMINATION OR DISPOSAL OF PPE.

- a. Personal protective equipment cabinets contain basic PPE required in that area.
- b. Healthcare personnel stock the following as a minimum:
  - (1) Box of non-sterile, latex free, and powder free gloves
  - (2) Masks, to include the N95 respirators where needed
  - (3) Protective eyewear/face shields
  - (4) Protective clothing/impervious gowns
- c. Gloves
  - (1) Wear gloves when contact with blood or other potentially infectious materials (OPIM), mucous membranes, and non-intact skin could occur.
  - (2) Remove gloves after caring for a patient. Do not wear the same pair of gloves for the care of more than one patient. Do not wash gloves between uses with different patients.
  - (3) Change gloves during patient care if moving from a contaminated body site to a clean body site on the same patient.
  - (4) Remove gloves after use by grasping at the wrist and stripping off the glove "inside-out".
  - (5) Place gloves in general waste containers when not grossly contaminated with blood or OPIM.
- d. Mask
  - (1) Remove mask by elastic or cloth tie strings without touching the mask.
  - (2) Change mask between each patient or when contaminated.
  - (3) Place mask in general waste container.

e. Protective Reusable Eyewear/Face Shields

(1) Remove by headband or side arms without touching shield or lens area.

(2) Wash with soap and water.

(3) Dry thoroughly before reuse.

f. Protective Clothing/Impervious Gowns

(1) Touch the front part as little as possible when removing. If tied on garment, use the tie strings to remove and peel off garment inside out.

(2) Change between each patient or when contaminated.

(3) Place garment in general waste container or regulated medical waste container when visibly contaminated with blood or OPIM.

3. CULTURE POLICY AND PROCEDURES.

a. Microbiological sampling is only done with a specified goal and after consultation with the Infectious Disease Service, Chief of Microbiology, or the Infection Control Service.

b. Environmental culture

(1) Steam, Steris, STERRAD, and gas sterilizers: Biological indicators are routinely processed with normal workloads IAW specific SOP.

(2) Hydrotherapy: Routine culturing is not done. Microbiological sampling of equipment may be requested to confirm disinfection procedures are effective.

(3) Dialysis Water: Water is monitored IAW Dialysis Unit SOP.

(4) Specific environmental cultures determined by Infectious Disease, Infection Control or Microbiology may be done as part of a potential healthcare associated infection investigation.

c. Personnel Culturing: Specific personnel cultures determined by Infectious Disease Service, Microbiology, and Infection Control Service may be accomplished as part of a potential healthcare associated infection investigation.

d. Guidance applicable to all culture procedures:

Prepare specimen labels with patient's name and social security number (i.e., stamp plate if available) and place on container WITHOUT COVERING CONTAINER BAR CODES.

(1) Prepare laboratory slip with date and time culture was obtained, site of culture, amount of specimen in each vial, and current antibiotic therapy.

(2) Collect specimen appropriately.

(3) HAND CARRY specimens to the laboratory in a biohazard bag.

4. INFECTION CONTROL MEASURES FOR THE OPERATIVE PATIENT.

a. The following interventions are recommended to prevent post-operative complications. Any patient care provider may give these instructions.

(1) Taking deep breaths, sighing, and coughing up secretions.

(2) Turning and moving about in the bed.

(3) Using the incentive spirometer.

(4) Implementing the breathing exercises during the recovery period.

(5) Applying appropriate abdominal wound support during coughing exercises.

(6) Performing postural drainage and percussion to remove retained pulmonary secretions.

(7) Administering prescribed analgesics to relieve pain limiting breathing exercises.

(8) Ambulating the patient as soon as medically indicated after surgery.

(9) Avoiding routine systemic antibiotic prescription to prevent post-operative pneumonia.

(10) Handwashing.

(11) Stopping smoking.

(12) Showering with an antibacterial soap (e.g., Dial, Purell, Soft Soap) or 2% chlorhexidine gluconate (CHG) provided by the clinic the night before surgery and again the morning of the surgery. Clean the surgical area 6-12 inches around where the incision will be made. Scrub the area for a minimum of 30 seconds with a good lather. If the patient cannot reach the surgical site, he/she informs the nurse upon arrival at the hospital. The staff assists the patient with the appropriate skin preparation of the surgical site area as described above.

(13) Avoid hair removal at the incisional site

(a) If necessary , clip excessive hair around the incisional site just before surgery

preferably in the pre-op holding area. The airborne dissemination of hair can contribute to wound granulomas and wound infections.

(b) Avoid close dry or wet razor shaves as they result in micro abrasions, providing a portal of entry for microorganisms.

(14) Washing hands before all dressing changes. Wear sterile gloves if direct contact with the incision is necessary. Sterile occlusive dressings are secured over the incision until the wound edges have approximated and sealed. An open wound requires sterile technique for dressing change. For current recommendations on wound care, please refer to the BAMC Wound/Ostomy Nurse at 916-1281 or pager 513-3524.

## 5. URINARY CATHETER PROCEDURES.

a. Urinary catheters are inserted and left in place only for as long as necessary and not used for the convenience of patient care personnel.

b. Follow strict, aseptic technique.

c. Use the smallest bore catheter that is not associated with leakage.

d. Female patients: If the catheter is inadvertently inserted into the vagina, leave it there temporarily as a mapping aid. Obtain another sterile catheter and insert it properly into the meatus. Secure the catheter to the thigh with an elastic "Shur-hold" device or tape.

e. Male patients: Never force the catheter when there is resistance; pause before advancing into the bladder. Anchor male patient's catheter to the abdomen with an elastic "Shur-hold" device or tape.

f. Secure the catheter to follow the normal urethra curvature, to reduce the potential for erosion of the mucous membrane, to allow slack for movement, to prevent stricture formation, to avoid meatal irritation and urethra trauma. Ensure there are no catheter kinks or catheter occlusions before securing. Arrange tubing by coiling it on the bed or laying it straight out for the free flow of urine into the bag.

g. Daily Catheter Care

(1) ALWAYS wash hands before and after providing catheter care and when handling urinary catheters and/or drainage bags to prevent cross contamination.

(2) ALWAYS use standard precautions (i.e., gloves) when handling catheters, drainage bags, and urine specimens.

(3) Daily catheter care consists of cleansing the urinary meatus with soap and water. It is not necessary to use antiseptic soaps, such as Betadine. Do NOT create catheter traction when performing care. Patients are instructed to perform daily catheter care. Remind uncircumcised males to retract their foreskin when cleaning and replace it in the normal position.

h. ALWAYS hang the bag below the bladder level.

(1) DO NOT LEAVE COLLECTION BAG SITTING ON THE FLOOR.

(2) Instruct ambulatory patients to carry the bag below bladder level.

i. Provide an individual measuring container (urinal) for each patient. Place the patient's identifier on the container. Don gloves. Ensure the spigot does not touch the container when the urine is draining from the drainage bag into the container. After emptying the container in the toilet, rinse the container with tap water and store the container at the bedside. DO NOT PLACE URINAL ON TRAY TABLE OR AT HEAD OF BED. Discard the measuring container upon patient discharge.

j. When a patient is admitted with an indwelling urinary catheter, change the entire system only if it functions poorly, is obstructed, or is encrusted. Likewise, during hospitalization, change the catheter and entire system when it no longer functions properly, if encrustation accumulates, or if disconnection occurs. Inform the physician.

k. Bladder Irrigation.

(1) Intermittent irrigation is NEVER performed without a physician's order and instructions. Irrigation requires aseptic technique and sterile solutions.

(2) Continuous irrigation requires a 3-way catheter. The third lumen is for the irrigation solution connection. This is a closed system, performed by gravity drainage only.

l. Intermittent Catheterization.

(1) A hospitalized patient's self-catheterization is done using sterile technique and equipment unless otherwise instructed.

(2) A home patient's self-catheterization uses clean, non-sterile technique and equipment.

m. Specimen Collections.

(1) Routine urine cultures are not required. Foley catheter tips are not cultured.

An indwelling urine catheter culture specimen is obtained by clamping the catheter to allow collection of urine in the bladder. Wearing non-sterile gloves to cleanse the aspirating port of the drainage system with an alcohol swab. DO NOT use Betadine. Allow to air dry. Aspirating urine from the port, using a small gauge needle. NEVER breaking the closed system by disconnecting the catheter from the drainage tubing. Avoid collecting a specimen from the drainage bag to send for culture. Placing the urine specimen in a sterile container, transporting the specimen in a biohazard bag to the lab. Urine that cannot be transported immediately is

placed in a specimen refrigerator. Urine left sitting for greater than one hour may have a false positive culture result. It is critical that the specimen be labeled “cath urine.” The lab handles these specimens differently from clean catch specimens.

(2) Intake and output urine collection or routine emptying of drainage bag occurs when the desired amount of urine accumulates in the bag. Don non-sterile gloves. Unclamp the spout at the bottom of the collection bag and aim the spout into a collection container. Do not allow the bag and/or the spout to drag on the floor. Close the spout clamp after emptying the drainage bag.

(3) 24-hour urine collection: Don non-sterile gloves. Empty and discard all urine from the bag prior to starting the timed collection. Label the specimen container with the time the specimen was discarded before collecting all urine for the next 24 hours. Keep the specimen in a specimen refrigerator or on ice.

n. Disposal of Urinary Equipment.

(1) Urinary catheters, collection tubing/bags, irrigation tubing/solution, specimen containers, irrigation syringes, emptying containers (i.e., urinals, toilet hats, etc.) are emptied into the bathroom toilet or dirty utility room hopper.

(2) With a physician’s order to discontinue urinary equipment and/or procedures, don non-sterile gloves, empty all residual urine equipment into an emptying container or toilet, and discard equipment in general waste receptacles. Only empty urinary equipment with visible blood is discarded in a regulated medical waste (RMW) red container.

6. MEDICATIONS, MULTI-DOSE VIALS, UNIT DOSE AMPULES AND SYRINGES, AND DROPPERS.

a. All medications must be labeled and identification is not assumed if unlabeled. DO NOT use unlabeled or defaced labeled medications.

b. Check for turbidity, discoloration, and rubber stopper seal integrity before using.

c. Check prior to use and monthly for an expiration date to ensure outdated medications are not used. When medications only have a lot number, that number is checked by pharmacy for expiration date.

d. Read instructions for the temperature range at which the medications are to be stored. Some medications are labeled: DO NOT REFRIGERATE; thus, the refrigerator is not used arbitrarily as a storage place.

e. Refer to Memo 40-22, Administration of Medication, for current guidelines on dating and initialing a multiple dose medication.

f. Multi-dose vials.

(1) All multi-dose vial rubber stoppers must be thoroughly swabbed with 70% alcohol before inserting a sterile needle.

(2) Multi-dose vials may be kept for a period not exceeding the expiration date printed on the vial, if properly stored, and aseptic technique is used when entering the vial.

(3) A multi-dose vial labeled to expire in a given month expires on the last day of that month. Expired multi-dose vials are returned to Pharmacy and disposed of according to Pharmacy Policy Memo 40-22.

(4) Allergen Extract Testing and Treatment Biological Materials in a 50% glycerin base or 0.4% phenol are sterile for the stated life of the extract, if prescribed aseptic technique and storage precautions are strictly adhered to.

(5) Enter all multi-dose vial containers with a sterile needle attached to a sterile syringe. Multiple entries with the same needle or syringe are unsafe, can cause contamination of the medication, and cross-contamination among patients.

(6) Single dose containers are preferred over multi-dose containers. If this is not possible, the smallest multi-dose container available is used.

(7) Discard multi-dose medication vials:

(a) IAW with Memo 40-22 Administration of Medication.

(b) If contaminated during use.

(c) If the stopper no longer reseals (leaks).

(d) If used during a CODE.

g. Unit dose glass ampules are for single dose only. Discard any unused medication. Use a 0.5-micron filter needle to withdraw medications from glass ampules; obtain filter needles from Logistics. The filter needle must be replaced with a regular sterile needle prior to administration of the medication to the patient.

h. Unit dose syringes are for single use only. Discard any unused medication.

i. Multi-dose ophthalmic drops are used only for one patient.

## 7. INTRAVASCULAR ACCESS THERAPY.

a. Infection is the major complication of intravascular (IV) therapy. Factors that increase the infection risk include: underlying illness, poor insertion technique, multiple lumens, catheter use for total parenteral nutrition (TPN), placement site, frequency/type of dressing changes, skin

disinfection method, and catheter replacement frequency.

b. Change Emergency Room and field environment IV sites as soon as possible and after no longer than 48 hours, IF adherence to aseptic technique cannot be ensured.

c. Do NOT use intravenous cannulae when oral therapy will suffice or maintain a “keep open” IV line in the absence of specific therapeutic requirements.

d. The site is monitored every shift (at least twice in a 24 hour period) to evaluate functionality and the integrity of the IV site, system, and dressing.

e. Physicians and nurses maintain a high index of suspicion for device-related infections.

(1) Signs and symptoms of infection may include any of the following: localized pain and tenderness, redness, swelling or heat, purulent drainage, or fever not associated with infection at another site.

(2) The evaluation for infection may include any of the following: site culture, peripheral blood culture, and semi-quantitative catheter tip culture. For catheter tip cultures, cleanse the skin at the skin-cannula junction with 70% isopropyl alcohol and allow drying before cannula removal. After cannula removal, cut the cannula with sterile scissors from a suture removal kit and send to the lab immediately in a sterile urine specimen cup container.

(3) If the catheter is replaced over a guide wire and the subsequent culture is negative, the catheter may remain in place.

(4) If the catheter is removed over a guide wire and the subsequent culture is positive and suggests infection (>15 CFUs and/or signs or symptoms of infection at the site), a new catheter is inserted at a new site.

f. In general, all infected lines are removed.

g. Promptly remove any IV catheter that is no longer essential.

h. Site Care: Clean central line access devices, to include peripherally inserted central catheter (PICC) lines, with Chloraprep (2% CHG product). A Biopatch impregnated disc is used under the semi-permeable transparent dressing.

i. Gloves, Gown, Mask:

(1) Wear exam gloves to insert any peripheral intravascular device.

(2) Central lines, to include PICC lines and cut-down placements, are sterile surgical procedures, requiring sterile gown, mask with eye protection, sterile gloves, and sterile drapes.

j. Synopsis of IV Access Therapy. See Table 1

TABLE 1: SYNOPSIS OF INTRAVASCULAR ACCESS THERAPY

<u>Catheter Type</u>	<u>Indication</u>	<u>Duration of Use</u>	<u>Insertion Site Prep</u>	<u>Admin Sets applicable to all lines unless noted</u>	<u>Site Care; Dressings</u>	<u>Information applicable to all IV access devices.</u>
Peripheral IV; Normal Saline Locks	Fluids, meds, IV therapy, phlebotomy, blood transfusion	<p>Change catheter site every 72–96 hours. Remove earlier if signs of phlebitis at the insertion site.</p> <p>In adults, replace heparin locks every 72-96 hours.</p> <p><b>NOTE:</b> Replace catheters inserted under emergency conditions or in the Emergency Room as soon as possible (48 hours)</p> <p>No guide wire changes.</p>	<p>First, clean with alcohol swabs X 3 <b>or</b> use 1 step ChoraPrep.</p> <p>If using betadine, allow betadine to dry; do NOT wipe off betadine.</p> <p><b>NOTE:</b> Do not apply alcohol after a povidine-iodine prep.</p> <p><b>NOTE:</b> Defatting skin site with acetone causes patient discomfort and removes natural antimicrobial activity of fatty acids; not recommended.</p>	<p>Admin set including piggyback tubing: Change every 72–96 hours;</p> <p>Luer locks: Change every 24 hours.</p> <p>Fluid: Change every 24 hours.</p> <p>Lipids: Change every 12 hours.</p> <p>TPN/Lipid admixture solutions: Change every 24 hours.</p> <p>Blood tubing: Change tubing used to administer blood or blood products within 24 hours of completing the infusion.</p>	<p>Transparent Site Membrane (TSM) (Opsite 3000 or product or choice): Leave dressing in place until the catheter is removed, changed, or the dressing becomes damp, loosened, or soiled.</p> <p>Gauze: Change every 72 hours.</p> <p><b>NOTE:</b> Do not routinely apply antimicrobial ointments to catheter site.</p>	<p>Maintain IV system as a closed system.</p> <p>Extending a vascular device beyond the recommended site change guideline must be based on clinical assessment of the cath site. The primary physician writes a site extension order and renews that order every 24 hours.</p> <p>Use aseptic technique.</p> <p>Change tubing or components anytime there is suspicion of contamination.</p>

TABLE 1: SYNOPSIS OF INTRAVASCULAR ACCESS THERAPY (cont.)

<u>Catheter Type</u>	<u>Indication</u>	<u>Duration of Use</u>	<u>Insertion Site Prep</u>	<u>Admin Sets applicable to all lines unless noted</u>	<u>Site Care; Dressings</u>	<u>Information applicable to all IV access devices.</u>
Peripherally Inserted Central Catheter (PICC)	Intermediate access	Indefinite  No guide wire changes.	See above remarks	See above remarks	TSM: Change every 7 days after initial dressing is changed after 24 hours.  Sterile dressing: Change includes use of masks, 2 pair of sterile gloves.  Gauze: Change every 72 hours.	Stopcocks are not incorporated unless absolutely essential.  Extension tubing without a stopcock is available for extra tubing length.  <b>NOTE:</b> Avoid use of TPN line or port for any other purpose.
Non-tunneled and tunneled Central Venous Catheters, (Hickman, Ports, Groshong)	Long term venous access, long term IV therapy	Indefinite	See above remarks	See above remarks	TSM: Change every 7 days or if dressing is soiled, damp or loose.  Gauze: Change every 2 days.	
Central Arterial Catheters, pulmonary artery catheters (PAC), and Swan Ganz	Pressure monitoring in critical care units	Replace PAC at least every 5 days.  If feasible, replace the arterial catheter introducer sheath every 5 days, even if the catheter is not removed.	See above remarks	See above remarks	TSM: Change every 7 days or if dressing is soiled, damp or loose.  Gauze: Change every 2 days.	Refer to previous section above for information applicable to all intravascular access devices.

TABLE 1: SYNOPSIS OF INTRAVASCULAR ACCESS THERAPY (cont.)

<u>Catheter Type</u>	<u>Indication</u>	<u>Duration of Use</u>	<u>Insertion Site Prep</u>	<u>Admin Sets applicable to all lines unless noted</u>	<u>Site Care; Dressings</u>	<u>Information applicable to all IV access devices.</u>
Peripheral Arterial Catheters and Pressure-Monitoring Devices	Pressure monitoring in critical care units	No recommendation for the frequency of replacement these catheters.  No guide wire changes.	See above remarks	Admin set and transducer: Change every 72-96 hours.  Flush Solution: Change every 72 hours.	TSM: Change every 7 days or if dressing is soiled, damp or loose.  Gauze: Change every 2 days.	
Epidural Pain Management	Post-op and pain control	Change when pain management solution changes or is discontinued; usually not left in more than 6 days.	See above remarks	Replace bag when empty.  No routine bag/ tubing change times.  Do not inject any medications or solutions through this catheter.  Catheter and tubing are clearly labeled epidural tubing.	Inspect dressing routinely and notify pain service of problems.  No routine dressing change times.	

TABLE 1: SYNOPSIS OF INTRAVASCULAR ACCESS THERAPY (cont.)

<u>Catheter Type</u>	<u>Indication</u>	<u>Duration of Use</u>	<u>Insertion Site Prep</u>	<u>Admin Sets applicable to all lines unless noted</u>	<u>Site Care; Dressings</u>	<u>Information applicable to all IV access devices.</u>
Central Hemodialysis Catheters	Hemo-dialysis ONLY	Indefinite	Use Chloraprep one step antiseptic	Use of hemodialysis catheters for other purposes (e.g., admin of fluids, blood, or TPN) is restricted to circumstances where no alternative vascular access is feasible.		
Needleless IV Devices		Change the needleless components at least as frequently as the administration set.  Change caps every 72 or IAW manufacturer's recommendation.	Wipe the access port with alcohol antiseptic.  Access the port only with sterile devices.	.		

8. ENTERAL FEEDINGS.

- a. Unopened cans and containers of tube feeding may be stored at room temperature.
- b. Any opened containers of tube feeding must be discarded after 24 hours.
- c. Wash hands and don disposable gloves before setting up tube feedings and prior to administering a feeding. Avoid touching any part of the container or administration system that will come in contact with the tube feeding.
- d. Solutions are discarded after eight hours of hang time.
- e. Replace feeding kit and tubing every 24 hours, discarding used equipment in general waste.

9. CARE OF RESPIRATORY THERAPY (RT) EQUIPMENT.

a. Patients with chronic lung disease, who are current or past smokers, those having abdominal or thoracic surgical procedures, and have long-term intubation or tracheostomy, have the highest risk for respiratory infections secondary to RT procedures.

b. Equipment used to nebulize liquids poses the greatest infection hazard. The risk may be increased when the aerosols are very small, can bypass the respiratory defense mechanisms, and easily reach the lungs.

c. Equipment parts where fluid can collect (e.g., ventilator tubing or fluid reservoirs) are potential sources of infectious organisms that can deliver contaminated effluent, resulting in colonization or infection of the patient.

d. Fluids and Medications:

(1) Sterile fluids are used for nebulization and in equipment that is properly cleaned and disinfected.

Date and time fluid bottles once opened.

Discard unused fluid within 24 hours.

(4) Single dose or multi-dose vials are stored in the refrigerator or at room temperature IAW manufacturer's directions or package insert.

e. Maintenance of In-use Respiratory Therapy Equipment:

(1) Oxygen equipment is primarily disposable.

(2) All disposable masks, nasal cannulas, small bore tubing, and connecting tubing are

changed as needed if soiled and discarded when the patient is discharged.

(3) Pre-filled, disposable wall oxygen humidifiers may be used for a maximum of 10 days or until the water is gone, whichever comes first, and discarded upon patient discharge.

Small volume medication nebulizers are changed every 72 hours. Small volume medication nebulizers left at the bedside are rinsed with sterile water and air dried between treatments.

(5) Pressure-cycled and volume-cycled ventilators use disposable circuits that are changed at a minimum of every seven days on the same patient. A Heat Moisture Exchanger with Bacteriostatic Properties is used for the first 48 hours. Water heated humidifiers with water traps placed in line for collection of condensation are utilized after 48 hours and emptied according to policy.

(6) Drain water condensed in tubing on a mechanical ventilator every two hours with the ventilator check, using an inline closed drainage system.

(7) Reusable bacterial ventilator filters are replaced after seven days on the same patient and between patients. Filters are sent to Central Materiel Service (CMS) for steam sterilization.

(8) Disposable resuscitation (ambu) bags used with ventilator patients remain with the patient throughout the hospitalization.

f. Cleaning of RT equipment:

(1) The using activity places dirty, contaminated RT equipment into protective biohazard for RT pick-up.

(2) RT personnel transport RT equipment to CMS for reprocessing

(3) Dirty ventilators are returned to RT for terminal cleaning.

(4) Wearing gloves and an impervious gown, RT personnel clean all contaminated equipment returned to them IAW RT SOPs.

g. See Table 2 for Synopsis of RT Equipment Procedures

**TABLE 2: SYNOPSIS OF RESPIRATORY THERAPY EQUIPMENT PROCEDURES**

<b><u>Equipment</u></b>	<b><u>Circuit Changes</u></b>	<b><u>Terminal Cleaning</u></b>	<b><u>Device Specific Information</u></b>	<b><u>General Information Applies to all RT Equipment</u></b>
All Nasal Cannulas, Venturi Masks, and Simple O2 Masks	Use until the treatment changes, patient discharge, or device is soiled.	Discard if treatment is completed or device becomes soiled		Aseptic technique is required for any procedure or manipulation of the respiratory tract.  Wear appropriate PPE depending on the procedures being performed and patient diagnosis.
Small Volume, Hand Held Nebulizers	Change M, W, F.  Date and time when opened or replaced.	Discard if treatment is changed, completed, or device becomes soiled.	During treatment, run until dry.  Rinse with <b>sterile</b> water (not tap water) after each treatment.  Place in RT bag until next treatment.	All devices entering sterile tissue are to be sterile.  All devices touching mucous membranes are sterilized or high-level disinfected.  Use <b>STERILE WATER</b> to rinse off liquid chemical disinfectant (e.g., Cidex OPA) from devices that will touch mucous membranes.
Prefilled Humidifier Bottles	Single patient use.  Replace when empty.  Date and time when opened or replaced.	Discard if treatment is changed, completed, or device becomes soiled.	Change every Monday in multi-patient use areas (e.g., PACU).  Change nasal cannula tubing between each patient.	Disposable items are single patient use only and are used whenever possible.  Disposable items are <b>NOT</b> reprocessed.  Only sterile fluids (i.e., water, normal saline, medications, etc.) are aseptically placed in any reservoir.
Large Volume Nebulizer Bottles	Single patient use.  Replace every 24 hours or when empty.  Date and time when opened or replaced.	Discard if treatment is changed, completed, or device becomes soiled	Changed every Monday in multi-patient use areas (e.g., PACU).  Change nasal cannula tubing between each patient.	Water condensed in the tubing is periodically drained and discarded taking precautions not to allow condensate to drain toward the patient or back into the reservoir.  If multi-dose medication vials are used, handle, dispense, and store according to directions on the vial label or package insert.
Face Tent, Trach Collar, Aerosol Mask, Accompanying Large Bore Tubing	Change M-W-F.  Date and time when opened or replaced.	Discard if treatment is changed, completed, or device becomes soiled		The event related shelf life is followed for all respiratory sterile supplies.  <b>NOTE:</b> Topping off of any reservoirs is not permitted.
Oxyhood and Accompanying Large Bore Tubing	Change every 24 hours; date and time when replaced	Discard		

TABLE 2: SYNOPSIS OF RESPIRATORY THERAPY EQUIPMENT PROCEDURES (cont.)

<u>Equipment</u>	<u>Circuit Changes</u>	<u>Terminal Cleaning</u>	<u>Device Specific Information</u>	<u>General Information Applies to all RT Equipment</u>
Oxyhood and Accompanying Small Bore Tubing	Change every 7 days; date and time when replaced	Discard		
Ambu Bags	Single patient use only	Discard		
Inline and Suction Catheters	Single use.  Change inline suction catheters every 24 or 72 hours.  Date and time	Discard	Clear suction catheter with sterile water after each use. RT uses a 24 or 72 hour catheter, change catheter per label recommendations.	
Pulse Oximeter Sensor Probe	Monitoring	Reusable: clean unit with Wexcide-RTU.		
Suction Canister and Tubing	Single patient use: Change canister when full. Change tubing daily and when soiled.  Multi-patient use: Change canister when full. <b>Change tubing between patients.</b>	Seal suction canister closed; do not attempt to empty; discard in red bag trash.  Multi-pt use canister, (e.g., PACU): change every 24 hours or when full	If suction catheter needs to be cleared while suctioning a patient, use sterile water.	**Refer above to general information
Tracheostomy Tube	Single patient use	Cleaning per manufacturer's instructions.  Discard on discharge.	Tracheostomies are performed under sterile conditions. Elective trach. performed in the Operating Room.	
Yankauer Suction Tip	Single patient use.  Change daily.	Discard daily, if treatment is changed, completed, or device becomes soiled		

TABLE 2: SYNOPSIS OF RESPIRATORY THERAPY EQUIPMENT PROCEDURES (cont.)

<u>Equipment</u>	<u>Circuit Changes</u>	<u>Terminal Cleaning</u>	<u>Device Specific Information</u>	<u>General Information Applies to all RT Equipment</u>
Ventilators		Clean external surfaces and tubing IAW manufacturer's guidance.	Minimize aspiration of secretions by positioning pt. with HOB elevated 30 degree, except during postural drainage procedures.	**Refer above to general information
Ventilator Circuit	Every 7 days or earlier when soiled or 2 hours after being discharge.	Discard all disposables.  Reusable items are cleaned per manufacturer's guidance.	Avoid total deflation of E-T Tube cuff on a routine basis.	
Heat Moisture Exchanger	Date and time changes every 24 hours or when soiled.	Discard		
Respironics BiPAP	Change as needed and in between patients	Discard all disposables.  Wipe unit and cord with Wexcide-RTU.		
Universal Fiber Optic Bronchoscope		Terminal cleaning IAW manufacturer's instructions before high level disinfection.		
Universal Optical Light Source		Clean IAW manufacturer's instructions.		
Wright's Spirometer		Clean IAW manufacturer's instructions.		
Cuff Manometer		Clean unit with a Sani-Cloth.		

## 10. ADMINISTRATION OF RIBAVIRIN (VIRAZOLE).

### a. Safety Precautions:

(1) A particulate respirator (N-95) or a High Efficiency Particulate Air (HEPA) mask is worn by all caregivers in an area where Ribavirin is being administered to prevent inhalation of micro sized particles. Discard the N-95 immediately after use.

(2) Wear protective goggles.

(3) A Ribavirin spill is handled using chemotherapy precautions. Consult the Material Safety Data Sheet (MSDS) and notify the BAMC Safety Officer. For small solid or liquid spills, wipe up with a wet paper towel, rinse the soiled area with water, and dispose of the refuse in the RMW container. For large spills of solid material (powder), sweep up material and discard into RMW container.

(4) Post a sign on the door to the room where Ribavirin is being administered. Pregnant individuals are prohibited from entering the area. Caregivers and individuals entering the room during Ribavirin administration wear the N-95 mask or HEPA respirator. Visitors report to the nurse's station for instructions.

(5) When discontinuing a tent or tubing used for Ribavirin administration, discard disposable items in general waste and return reusable items to the RT for reprocessing.

b. Administration Procedure: Place patient in a private room. RT administers Ribavirin with a head isolation unit that can scavenge and exhaust Ribavirin via a vacuum system. If that system is not available, administration is in a double tent canopy over the patient's head.

## 11. MANAGEMENT OF STERILE SUPPLIES AND SETS.

a. According to event related sterilization, users are responsible for checking the integrity of the packaging and expiration date of sterile supplies and sets before use. Items labeled to expire in a given month expire on the last day of that month if no day is noted. Where indicated, areas pull outdated items monthly. Expired items are returned to CMS for reprocessing and re-issue.

### b. Sterile items are not used if:

- (1) The wrapper is torn, worn, or soiled.
- (2) There is evidence of moisture contamination.
- (3) When opened, instruments appear soiled.
- (4) Wrapped item is dropped on the floor.
- (5) An expiration date has elapsed.

c. Pre-sterilized items.

(1) Sterile items pre-packaged in paper are sterile until the expiration date is reached or the package integrity is compromised. Sterile items without expiration date can be used as long as the integrity of the packaging material is not compromised.

(2) The user must inspect any pre-packaged, sterile product for evidence of damage that potentially compromises the sterility of the item. The manufacturer's guarantee sterility only if package integrity is not compromised.

(3) Store sterile items prepackaged in paper in their original container if possible. Do not use rubber bands around paper-packaged sterile items since this will tear the paper wrapper when applied too tightly.

d. Precautions for Maintaining Integrity of Pre-sterilized Items.

(1) Intravenous Solutions. Use aseptic technique for mixing and administration of Parenterals; Pharmacy mixes drugs when at all possible. Check parenteral fluid containers for sediment, leaks, cracks, particulate matter, and passed expiration date. Do not use parenteral fluid containers that exhibit defects in integrity. Use all parenterals completely or discarded within 24 hours of opening or accessing.

(2) Sterile Irrigation Solutions. Opened irrigation bottles are dated and discarded 24 hours after opening. Unopened bottles expire on the manufacturer's expiration date.

Drugs. Use clearly labeled drugs. Discard unlabeled or defaced labeled drugs. Check for sediment or discoloration of bottle and ampule contents; discard if either condition is noticed. Check drugs prior to use and monthly for expiration dates to ensure outdated drugs are not used. Validate drugs without expiration dates with Pharmacy Service prior to use. Use aseptic technique to prepare and administer all medications. Discard reconstituted drugs according to manufacturer's instructions.

(3) Unit dose syringes and single unit dose ampules. The single use, unit dose syringe and ampules are recommended for parenteral administration system. Use unit dose ampules immediately after opening; discard any remaining solution in the appropriate manner.

(5) Pre-filled normal saline flushes are used for all flushing of IVs or port access.

(6) Ophthalmic preparations: Ophthalmic preparations are labeled with patient's name and only used on that patient.

e. Shelf Life: Shelf life is event-related, not time related, meaning any event can compromise or destroy the microbial barrier effectiveness of the packaging material (e.g., package is torn or wet) and renders the item unsafe to use and must be reprocessed or discarded.

(1) Do not use items with snagged or torn wrappers; return items to CMS.

(2) CMS personnel, with assistance from users, retrieve CMS-recalled items.

(3) All items wrapped by CMS or submitted to CMS pre-wrapped by the users are IAW TB MED 2 and BAMC Memo 40-121.

(4) All items are packaged for sterilization in One-Step wrappers, approved peel-packsterilization pouches, or rigid sterilization containers. Items in One-Step wrappers and in peel-pack pouches are sealed with heat sensitive indicator tape. Rigid containers have a heat sensitive indicator applied. A chemical monitor is a heat sensitive indicator; place the designated chemical indicator for either steam or STERRAD sterilization in each item for sterilization. Items received from CMS without an indicator or with only partially turned indicators are not used and returned immediately to CMS for reprocessing.

f. Storage of Sterile Items.

(1) Store sterile equipment and supplies in clean areas away from contaminated areas.

(2) Keep cabinets closed and covers down to protect storage area from dust collection.

Check each item for expiration date or signs of contamination prior to use on a patient. Sterile supplies may become contaminated from package deterioration or cracks due to mishandling or poor storage.

(4) Clean sterile supply storage areas periodically with an approved disinfectant.

g. Cardboard Shipping Boxes.

(1) Shipping boxes are **not** brought into sterile supply rooms. Remove all outer shipping boxes from clean storage areas.

(2) Cardboard dividers are not used in sterile or clean supply rooms and areas.

h. Stock Rotation.

(1) Place newly sterilized supplies in the bottom left rear of the storage area.

(2) Fill back to front and pull right to left.

(3) Ward and clinic policies reflect evidence of stock rotation and monthly systematic checks for expiration dates to identify and use the oldest supplies first.

i. Infection Control.

(1) Do not use any sterile product if the sterility is in question. If it appears to be a manufacturing or shipping problem, notify Infection Control for follow-up.

(2) If a patient reacts to a medication or solution and the sterility of the product is questionable, retain the product for microbiological testing; and notify Infection Control immediately.

12. RECALL/EMERGENCY COLLECTION OF POSSIBLE UNSTERILE IN-HOUSE PROCESSED ITEMS.

a. In the event of a potential sterilization failure (e.g., positive biological spore test), the individual in CMS making the discovery immediately notifies the Chief and/or NCOIC of CMS.

b. The individual identifies:

(1) The sterilizer load control number and the contents of the load.

(2) Expiration date (if applicable).

(3) All clinics/wards that received any items from the sterilizer load in question.

c. The individual then:

(1) Calls the using agencies to recall the items according to the load number, processing date, and the number and type of items that must be retrieved and returned to CMS.

(2) Requests that unused items be returned in their intact packages in order to verify the number and type of items recovered.

d. As soon as the recall is complete, a list of all the items recovered and those items that were used and not recovered is provided to the Chief of CMS. The Chief of CMS coordinates with the Infection Control Service for evaluation of any potential adverse outcomes.

e. All recalled items must be completely reprocessed, repackaged, and resterilized.

13. POLICY ON SINGLE USE DEVICES (SUDS).

a. Items designated as disposable, one-time-use, or for single-patient-use only, which are approved for resterilization, reprocessing or reuse are accomplished by a contracted third party that meets current FDA guidelines on SUDS. The FDA definitions for SUDS include:

(1) Resterilization: the packaging and sterilization of an unopened single use sterile device that has expired.

(2) Reprocessing: the repackaging and re-sterilization of a single use device that has been opened, but not used on a patient.

(3) Reuse: the cleaning, repackaging, and re-sterilization of a single use medical device after use on one patient for the intended purpose of using it on another patient.

b. Resterilization of a SUD that has expired or one that has been opened but not used is an acceptable practice at BAMC if there are specific resterilization instructions available from the manufacturer.

c. CMS is responsible for oversight of all SUD reprocessing practices in BAMC.

d. Reuse of single-use items is **not** practiced at BAMC.

#### 14. ENDOSCOPE REPROCESSING.

a. Required Personal Protective Equipment (PPE).

(1) Gloves: Natural rubber, latex, butyl rubber, nitrile rubber, or man made copolymer gloves are acceptable.

(2) Fluid shield masks and protective eyewear

(3) Fluid-resistant full sleeve gowns/apron

b. Mechanical decontamination of endoscopes:

(1) Mechanical cleaning is the first and most important step in preventing cross-transmission of infection during endoscopy.

(2) Immediately after the endoscope is removed from a patient, flush the air and water channel with copious amounts of cool water. Wipe down the entire endoscope with gauze soaked in enzymatic detergent. Pay particular attention to removing any saliva, mucous, or stool from the distal end of the endoscope. If applicable, remove the protective hood and clean the inside of the hood and the threads on the distal end of the scope (e.g., colonoscope).

(3) Measure enzymatic instrument detergent per manufacturer's directions and pour into the soaking container. Fill the container with warm (less than 160<sup>0</sup> F) water to hasten the dissolution of proteinaceous material.

(4) Disassemble endoscopic instruments per manufacturer's instructions. Remove all connectors and place in cleaning solution. Open valves on the endoscopes according to manufacturer's guidelines.

(5) Soak scope for no more than 10 minutes in enzymatic detergent.

(6) Flush enzymatic cleaner through all channels of the endoscope in order to remove gross contamination.

(7) Use a cleaning brush to clean inside the lumens of endoscopes to remove debris following flushing with enzymatic cleaner. This may require multiple passes of the brush

through the lumens.

(8) Attach syringe and flush all lumens several times with enzymatic detergent or disinfectant.

(9) Discard enzymatic detergent solution per manufacturer's recommendation.

(10) Using a brush moistened with detergent, clean the inside of the biopsy port cover. Use a soft toothbrush to clean the air, water, suction, biopsy port cover, biopsy ports, and the two buttons.

(11) Drain the instrument over a white towel or paper. If any colored fluid still drips from the instrument, repeat the soaking procedure.

(12) If clear fluid drips on the paper, the lumen is clean. Proceed to the next step.

(13) Thoroughly rinse with tap water all immersable parts of the scope.

(14) Dry the scope completely before immersing in disinfectant.

(15) Brushes used for cleaning the endoscopic channel are either disposable or cleaned and high level disinfected after each use.

(16) Inspect the scope for damage at all stages of handling.

(17) Leak test flexible endoscopes with ports prior to submersion.

(18) Clean the plastic container with enzymatic detergent and water, rinse, and dry thoroughly before reuse.

(19) Reusable accessories and water bottles that penetrate mucosal barriers (i.e., biopsy forceps, cytology brushes, etc.) are cleaned in the ultrasonic unit after each use and are then sent to CMS for sterilization.

c. Manual Disinfection of Endoscopes:

(1) Completely immerse DRY scope (if submersible) and all component parts in Cidex OPA solution for the required 12 minutes at room temperature.

(2) Flush the lumens with Cidex OPA solution to displace trapped air.

(3) Cover the container. Label with start-stop times and type of solution.

(4) Clean lens with sterile cotton tip applicator and dry with sterile lens paper. NOTE: Cleaning the lens with any substance containing alcohol may dissolve the cement around the lens.

(5) After soaking, don nitrile gloves. Remove the scope from solution and rinse at least twice with sterile water or tap water followed by 70% alcohol.

(6) Use forced air to dry entire scope and lumens.

(7) Wipe and dry the scope exterior with clean towels.

(8) Store scope vertically in a designated scope cabinet to prevent recontamination. Wipe the exterior of the scope with alcohol prior to use.

d. Automated Processors with Water Filtration System.

(1) Any automated processor of scope equipment is reviewed by IC FMT before purchase and use.

(2) Meticulous manual cleaning as described above in b. precedes the use of automated machines.

(3) Follow detailed step-by-step instructions in the Operator's Manual.

(4) Add 3 oz Tergal 800 to the Custom Ultrasonic Processor.

(5) Set each load to 12 minutes for disinfecting with Cidex OPA at room temperature.

(6) Flush EACH scope with at least 30 cc of 70% alcohol.

(7) Force air via the compressor through each channel for one minute prior to storage or reuse.

(8) Wipe and dry the scope exterior with clean towels.

(9) At the end of the day, all scopes are completely air dried prior to storage.

e. Automated Processor Maintenance.

(1) Test activated Cidex OPA or Sporox daily to ensure efficacy. Replace solution if test reveals concentration is below acceptable limit or it is more than the recommended days to change after activation.

(2) Clean processing chamber, filter screens, and outer surfaces DAILY, using chlorine based scouring powder (Comet or Ajax) and a soft cloth. Thoroughly rinse off residual cleaning agent and cycle the unit to eliminate traces of cleaning powder that could clog the inner channel of the scope. Allow the tubs to air dry.

(3) Clean processor chamber with a chlorine-based scouring powder after each Cidex

OPA change before thoroughly rinsing with water to remove the scouring powder.

(4) Automated disinfection of the internal plumbing is required daily to prevent colonization of the internal plumbing IAW manufacturer's recommendation. Select "Special Programs" on the processor to purge Cidex OPA into the system. Allow the chemical to remain in the lines for the required time. At the end of the decontamination period, press "Special Programs" to return the disinfectant to the reservoir.

f. ERCP Scope Requirements.

(1) ERCP endoscopes are equipped with special components that require manual cleaning and disinfecting of the elevator channel.

(2) ERCP elevator's distal tip is meticulously brushed in both the closed and open positions.

(3) Connect the automatic processor to the ERCP scope, using the elevator channel adapter to permit detergent, disinfectant, and air to travel through the scope during processing.

(4) Store scope with caps and buttons removed vertically in designated cabinet to prevent recontamination. Wipe endoscope exterior with alcohol 1/2 hour prior to use.

15. 2% CIDEX OPA AND SPOROX.

a. Cidex OPA provides high-level disinfection for endoscopes, respiratory and pulmonary equipment, transducers, anesthesia equipment, and other types of heat sensitive equipment.

b. Sporox provides high-level disinfection for endoscopes and other types of heat sensitive equipment. Because of having hydrogen peroxide in the solution, Sporox can destroy some lenses and discolor equipment with brass, copper or silver plating. Users must consult with their equipment manufacturer prior to using Sporox to determine if they can use Sporox for reprocessing without negating the equipment warranty.

c. Maintain a log that verifies the minimal effective concentration (MEC) of these high level disinfectants and ensures the user with a reliable way to detect unintentional dilution or contamination of disinfectant solution.

d. In order to maintain the same standard of care throughout the facility, standardized cleaning and disinfecting steps for reusables are accomplished after each patient use regardless of patient's diagnosis.

e. Notify Preventive Medicine Industrial Hygiene Section to coordinate monitoring ambient air concentrations of disinfectant in the work environment.

f. Required Personal Protection Equipment (PPE).

(1) Wear high quality impervious gloves that provide adequate hand and arm protection when direct contact with contaminated items occurs. Natural rubber, latex, butyl rubber, nitrile rubber, or man made copolymer gloves are acceptable.

(2) Wear fluid shield masks or protective eyewear during reprocessing.

(3) Wear fluid-proof full sleeve gowns or aprons to protect clothing and skin.

g. Cidex OPA Activation.

(1) Cidex OPA when "activated" to a pH of 7.5 to 8.5 becomes sporicidal. Activate the solution by adding the contents of the activator vial to the container of Cidex OPA solution. Upon mixing, a color change occurs to indicate it is ready for use.

(2) Immediately record the date the solution was activated and when the solution expires IAW manufacturer's label found on the bottle or on a label placed on the disinfectant tray. Maintain a log with this information. Logs can be obtained from the vendor or copied.

(3) Don PPE and submerge the clean, dry instrument or object completely in Cidex OPA for 12 minutes at room temperature (68<sup>0</sup> - 77<sup>0</sup> F) to obtain high level disinfection. Remove all bubbles from the surfaces and lumens to permit complete contact of the disinfectant with all surfaces.

h. Sporox Activation.

(1) Sporox is a premixed, ready to use liquid chemical germicide.

(2) Immediately record the date the solution was opened and when the solution will expire on the manufacturer's label found on the bottle or on a label placed on the disinfectant tray. Maintain a log with this information. Logs can be obtained from the vendor or copied.

(3) Don PPE and submerge the clean, dry instrument or object completely in Sporox for 30 minutes at room temperature (68<sup>0</sup> - 77<sup>0</sup> F) to obtain high level disinfection. Remove all bubbles from the surfaces and lumens to permit complete contact of the disinfectant with all surfaces.

i. Instrument Handling.

(1) To determine if an effective concentration of the disinfectant is present, test the disinfectant solution with a solution test strip. The frequency of testing depends on the frequency of use. Test the solution at least daily and whenever excessive dilution or heavy contamination is suspected; low volume areas test prior to each use. Record test results in a log. Maintain these records for one year.

(2) Don PPE and submerge the pre-cleaned, dry instrument or object completely in the Cidex OPA. Remove all bubbles from the surfaces and lumens to permit complete contact of the

disinfectant with all surfaces. Avoid splashing. Never put an instrument in Cidex OPA that has not been pre-cleaned.

(3) Replace the lid securely covering the disinfecting solution to contain the vapors.

(4) Note the start and stop soaking times.

(5) Upon completion of the disinfection phase, don the appropriate PPE, remove the object, and rinse with copious amounts of sterile water or potable tap water to eliminate any chemical residue.

(6) Correctly reassemble the instrument for immediate use or air dry and store appropriately.

g. Disposal.

(1) Wear appropriate PPE (mask, gown, goggles, nitrile gloves) when disposing of disinfectant solutions.

(2) Discard the disinfectant solution into a sink or hopper when expired or visibly contaminated or when concentration is below proper level based on testing IAW manufacturer's recommendations.

(3) Pour bulk fluids gently into a sink or hopper to avoid splashing and keep the water running for several minutes to limit vapor release from the sink and sink trap.

(4) After discarding the disinfectant, remove any labels from the plastic container and clean it with enzymatic detergent and water, rinse, and air-dry before reuse.

## CHAPTER 3

### ISOLATION PRECAUTIONS

1. FUNDAMENTALS OF ISOLATION PRECAUTIONS. Isolation Precautions are infection control measures used to decrease the risk of transmission of microorganisms in the outpatient and inpatient environment.

a. Handwashing. Handwashing is the single, most important measure for preventing spread of infection. Hands are washed with either an antimicrobial soap or the alcohol hand gel prior to entering and upon leaving the isolation room. The use of gloves does not replace the need for proper hand washing.

b. Gloves. Wear gloves when touching blood, body fluids, secretions, excretions, mucous membranes, non-intact skin, and contaminated items. Wear the appropriate type of glove for the procedure being performed, such as sterile gloves for invasive procedures, examination gloves for patient contact, utility gloves for cleanup. Gloves are also worn to reduce the likelihood that microorganisms present on the hands of personnel are transmitted to the patient during invasive procedures. Gloves must be changed between patient contact and between procedures with the same patient. Always wash hands immediately upon glove removal to avoid transfer of microorganisms to other patients or environments. Never leave a patient or treatment room wearing gloves unless carrying a specimen.

c. Personal Protective Equipment (PPE). Various types of protective attire are used separately or in combination to provide barrier protection to personnel. Wear the appropriate PPE depending on the procedure; the patient's clinical status, age and mental competence; the likelihood of contaminating clothing, skin or mucous membranes with blood and body fluids; and to reduce the possibility of transmitting microorganisms.

d. Admission of the Patient Requiring Isolation. Patient placement on inpatient nursing units and in the clinic setting is an important part of reducing the potential spread of infection. Use appropriate transmission based isolation sign(s) (Contact, Droplet, Airborne or Special Precautions) on the door to the clinic or inpatient room. When isolation is initiated, the provider and nurse brief the patient and all visitors on the purpose, need, and techniques for isolation.

(1) Notify the staff physician or the Nursing Bed Coordinator (NBC) if necessary of the diagnosis and specifications for isolation (e.g., private negative pressure room required).

(2) The Admission and Dispositions (A & D) office and the Pre-admission Clinic assist in room arrangements with the receiving unit and notify the admitting clinic of the time and place for admitting the patient. A & D notifies the Infection Control Service (ICS) and the ward when known *Methicillin-Resistant Staphylococcus aureus (MRSA)* and *Vancomycin-Resistant Enterococcus (VRE)* patients are admitted. They also inform the ward what kinds of isolation precautions are necessary (i.e., Contact Precautions for MRSA and Special Precautions for VRE).

(3). All patients identified colonized or infected with MRSA and VRE are identified in the command interest of the Composite Healthcare System (CHCS) and Computer Information System (CIS). The healthcare worker can access the status of the patient in the admission data under command interest in CIS. These patients are removed from isolation only by the ICS.

e. Transmission Based Isolation Signs. The designated transmission based isolation sign(s) (Airborne, Contact, Droplet or Special Precautions) is posted on the door to the patient's room, on the bed if the patient is not in a private room, and the cover of the chart. Personnel, visitors, and patients are required to read and comply with the stated directions of the posted sign. When isolation is discontinued or the patient is discharged, the sign is left in place until housekeeping completes cleaning of the room.

f. Transporting Patients.

(1) The patient is restricted to the room during isolation. Deviations from this policy must be approved on a case-by-case basis by the ICS (phone 6-2130 or 6-3562) with consultation provided by Infectious Disease physicians.

(2) The benefits of the procedure must be weighed against the potential for disease transmission. If the patient must leave the room for a necessary, ordered medical procedure, the sending unit must instruct the receiving unit of the type of precautions currently being used. The patient must be instructed on ways by which he/she can assist in preventing the transmission of their infectious microorganism to others.

(3) The extent of barrier precautions worn by the patient and personnel when the patient is transported varies with the diagnosis of the patient, type of procedure, and means of transport. Place a clean sheet over the gurney and a clean gown and appropriate mask, if required, on the patient. Masks are not required for patients with MRSA or VRE in the sputum.

(4) Personnel change into new, clean appropriate PPE prior to leaving the isolation room after the patient is properly clothed. See Table 1, Maximum Barrier Precautions for Patient Transport. Refer to specific Transmission Based Isolation Precautions (Airborne, Contact, Special, or Droplet) for appropriate barriers during patient transport.

(5) The sending unit and receiving unit coordinate when the patient is sent for the procedure. The isolation patient is taken directly to the procedure room and not left unaccompanied in a community waiting area. The sending unit personnel wait for the patient unless arrangements are made by the receiving unit to call when the procedure is over.

Table 3: Maximum Barrier Precautions for Patient Transport.

<b><u>PRECAUTION</u></b>	<b><u>GLOVES</u></b>	<b><u>SURGICAL MASKS</u></b>	<b><u>N95/TB MASKS</u></b>	<b><u>ISOLATION GOWNS</u></b>
<b><u>CONTACT</u></b>				
PATIENTS	NO	NO	NO	NO
PERSONNEL	YES	NO	NO	<u>YES only if close contact anticipated</u>
<b><u>DROPLET</u></b>				
PERSONNEL	NO	NO	NO	NO
PATIENTS	NO	YES	NO	NO
<b><u>AIRBORNE</u></b>				
PATIENTS	NO	YES	NO	NO
PERSONNEL	NO	NO	YES	NO
<b><u>SPECIAL</u></b>				
PATIENTS	NO	NO	NO	NO
PERSONNEL	YES	NO	NO	<u>YES only if close contact anticipated</u>

(6) Transporting personnel clean the wheelchair or stretcher with an approved detergent or disinfectant before returning it to the clinic area. Do not remove the isolation sign until after the wheelchair or stretcher are properly cleaned.

(7) Notify housekeeping to terminally clean the room or area of the clinic serving as the isolation unit. Do not remove the isolation sign until after the room is properly cleaned.

g. Patient Care Equipment and Supplies.

(1) Disposable Equipment. Disposable articles are only brought into the patient's room when needed. Clean, uncontaminated supplies remain outside the isolation room. Any disposable articles left in the patient room that have been contaminated is discarded or sent with the patient.

(2) Sphygmomanometer and Stethoscope. Disposable blood pressure cuffs are available. Discard disposable blood pressure cuffs and disposable stethoscopes after patient use.

(3) Reusable Equipment. Reusable equipment is cleaned immediately with an approved disinfectant upon removal from the isolation room. When isolation is discontinued or the equipment is removed, articles not processed by CMS are disinfected with an approved detergent or disinfectant in the isolation room; housekeeping does this as part of terminal cleaning.

Linen. Bring in only the required amount of linen for the patient. When isolation is discontinued, all excess linen is washed.

(5) Computers in patient's room. Ensure all the computer terminals in the patient rooms are equipped with a plastic keyboard cover. Nursing personnel wipe keyboard covers with Sani-Cloth or hospital approved disinfectant at least every day.

(6) Food Trays. Disposable dishes or trays are not required IAW CDC Guidelines for Isolation and Precautions, Feb. 1996.

(a) The person picking up the tray wears gloves and immediately places the tray in the enclosed patient tray cart. Trays are not kept in the kitchen or community areas or placed on shelves outside of the isolation room.

(b) If the tray is visibly soiled with blood or body fluids, ward personnel clean the tray with an approved detergent or disinfectant in the isolation room. When clean, place the tray in the enclosed patient tray cart.

h. Laboratory Specimens. All laboratory specimens are handled IAW Standard Precautions. Gloves are the minimum barrier precautions to be worn when handling any specimen.

i. Waste. Handle trash as with other patients. Transport full trash containers directly to pick-up point. DO NOT leave trash containers in hallways or other interim areas.

j. Housekeeping. Use "Wexcide" or "Sani-Cloth" for disinfection of environmental

surfaces.

(1) Routine Daily Cleaning. Housekeepers adhere to the posted isolation sign for proper PPE to don before performing their routine daily cleaning procedures. Unit personnel ensure that isolation signs are posted correctly to provide proper direction to all personnel. After cleaning the isolation room, the disinfectant is discarded; mop and cloths are bagged for laundering.

(2) Terminal Cleaning. Upon termination of isolation, notify housekeeping personnel to perform terminal cleaning. Isolation signs are left in place until housekeeping completes terminal cleaning. There is no requirement to close, air-out, or block these rooms after terminal cleaning EXCEPT after patients have been in airborne isolation. The room will be closed for at least 70 minutes after the patient has left.

k. Duration of Isolation Precautions. The duration of Isolation Precautions for each disease requiring Contact, Airborne, Droplet or Special transmission based isolation is outlined in Appendix D, Transmission Based Isolation Precautions Guideline. Standard Precautions are practiced all of the time on every patient at BAMC and all adjoining and satellite units.

(1) Isolation Precautions. The principle for isolation is containment of pathogen spread by confining the patient to a specific space until the infection is cured or the colonization state is eliminated.

(2) Authority to Initiate. The BAMC Commander is responsible for ensuring patients are placed in appropriate isolation precautions. The primary physician is responsible for ordering the appropriate isolation for the patient. Any nurse, Infectious Diseases physician, and Infection Control Personnel may initiate isolation precautions based on patient assessment and suspected presentation of an infectious and/or communicable disease. The primary physician is notified of patient's isolation status as soon as possible.

(3) Type of Isolation. Standard Precautions are used on every patient all the time. In addition to Standard Precautions, we use four transmission based isolation types (Airborne, Contact, Special and Droplet) if needed to prevent the spread of infection. For example, chicken pox requires both contact and airborne isolation signs. All personnel are responsible for complying with the requirements of isolation precautions and for tactfully calling observed infractions to the attention of the offenders. Healthcare providers serve as role models by complying with proper isolation precautions at all times; lead by example.

l. Standard Precautions. Standard Precautions (SP) apply to the handling of all blood, body fluids, secretions, excretions (regardless of whether or not they contain visible blood), non-intact skin and mucous membranes. SP are designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection. SP are used at BAMC and all adjoining and satellite clinics. SP are to be used with every patient, every time they receive care, inpatient or outpatient, regardless of their diagnosis or presumed infection status.

m. Transmission Based Precautions.

(1) Airborne Precautions. In addition to SP, use Airborne Precautions for patients known or suspected to be infected with microorganisms transmitted by airborne particles that can be widely dispersed by air currents. Airborne isolation is used for any patient with suspected or confirmed *Mycobacterium tuberculosis* (TB), varicella (chicken pox), measles, and disseminated varicella zoster (shingles). Any HIV infected patient admitted for evaluation of a new undiagnosed pulmonary process is placed in Airborne Isolation and evaluated for active TB. See Airborne Precaution sign and Appendix D, Transmission Based Isolation Precautions Guideline.

(a) Room Requirements. A NEGATIVE PRESSURE ROOM IS REQUIRED. If the monitor outside the room is at least  $-0.002$ , the required parameters are met for negative pressure. If the reading is  $-0.001$  or  $0.000$ , the room is NOT negative. THE ALARM MUST BE ON when a patient requiring negative flow is in the room. An "Airborne Precautions" sign is posted on the door. The door to the patient's room is kept CLOSED in order to maintain negative pressure. Bathroom doors are left open. Refer to Chapter 3, Table 7 for Location of Negative Pressure Rooms.

(b) Mask Requirements. A NIOSH-approved N95 particulate respirator (e.g., Tecno N95) is worn by personnel and visitors when entering the room of a patient with a probable, suspected, or confirmed diagnosis of TB, varicella, measles, and/or disseminated zoster. If the patient has a probable or confirmed diagnosis of TB, proper fit of the mask around the nose and mouth of the healthcare worker must be assured with a "FIT TEST." This is part of an OSHA directed Respiratory Protection Program (RPP) and is coordinated by Safety Office. The mask is worn once per patient contact and is discarded in the clear bag or office trash waste receptacle after each use. Visitors are limited to family members and the patient is masked.

(c) Transporting the Patient. The patient who requires Airborne Precautions wears a surgical mask properly fitted to cover the nose and mouth while being transported. Only healthcare workers who have been "Fit Tested" for the NIOSH-approved N95 respirator mask transport a patient being isolated for TB and wear a N95 mask.

(2) Contact Precautions. In addition to SP, use Contact Precautions for patients known or suspected to have serious illnesses easily transmitted by direct patient contact or by indirect contact with items in the patient's environment. See Appendix D, Transmission Based Isolation Precautions Guideline.

(a) Room Requirements. The patient is restricted to his private room during Contact Isolation. In the event a room is not available for isolation, patients with the same organism may be cohorted; call ICS (phone 6-2130 or 6-3562) for guidance on cohorting patients. A negative pressure airflow room is NOT indicated. A "Contact Precautions" sign is posted on the door.

(b) Personal Protective Equipment (PPE). Gloves are required when entering the patient's room. Gown and gloves are required for all personnel and visitors when in close or direct contact with the patient, used patient equipment (e.g., bed rails, over bed table, etc.), or supplies. Close contact is defined as within three feet of the patient or contaminated equipment or furniture. If the patient has an ileostomy, colostomy, or diarrhea, gowns are required at all times. Wear masks only if splashing/spraying is anticipated. Wearing masks for all patients with

MRSA pneumonia or MRSA in the sputum is not required.

(c) Transporting the Patient. Personnel transporting the patient wear at minimum clean gloves. The patient is changed into a clean patient gown and covered with a clean sheet.

(d) Duration of Isolation. Duration of isolation is outlined in Appendix D, Transmission Based Isolation Precautions Guideline. Patients colonized or infected with MRSA are placed in Contact Precautions until all surveillance cultures (right and left nares and any previously positive culture sites) are negative two consecutive times separated by five days. Only the Infection Control Service can remove the patient from isolation.

(e) When culturing the patient, use aerobic dacron swab sticks to culture previously positive sites and the nares. Use one swab to culture both the left and right nares.

(3) Special Precautions. In addition to SP, Special Precautions are implemented for the isolation of patients infected or colonized with *Vancomycin Resistant Enterococcus (VRE)*. It may also be implemented at the discretion of ICS when stringent measures are needed to control an outbreak.

(a) Room Requirements. The patient is restricted to a private room during Special Precautions. A "Special Precautions" sign is placed on the door. In the event a room is not available for isolation, patients with the same organism may be cohorted; call ICS (phone 6-2130 or 6-3562) for guidance on cohorting patients.

(b) Personal Protective Equipment (PPE). Each time a staff or visitor enter the patient's room, they must don gloves and wear a new gown. Wear masks ONLY if splashing/spraying is anticipated.

(c) Dedicated Patient Equipment. Use of disposable equipment is highly encouraged. Blood pressure cuff, stethoscope, thermometer, IV pumps, etc. are dedicated to the patient and remain in the room.

(d) Transporting the Patient. Personnel transporting the patient don new gloves as a minimum. See Table 3.

(e) Duration of Isolation. Duration of isolation is outlined in Appendix D, Transmission Based Isolation Precautions Guideline. Patients colonized or infected with VRE are always placed in Special Precautions.

(4) Droplet Precautions. In addition to SP, Droplet Precautions are designed for patients known or suspected to have serious illnesses transmitted by large particle droplets. Droplets are generated from the source person primarily during coughing, sneezing, or talking and during the performance of certain procedures, such as suctioning and bronchoscopy. Droplets do not remain suspended in the air and generally travel only short distances, usually three feet or less. See Appendix D, Transmission Based Isolation Precautions Guideline.

(a) Room Requirements. A private room is required. Negative pressure airflow room is not indicated. A "Droplet Isolation" sign is posted on the door.

(b) Personal Protective Equipment (PPE). A surgical mask is indicated for close or direct patient contact within three (3) feet of the patient's head.

(c) Transporting the Patient. The extent of barrier precautions varies with the diagnosis of the patient, the type of procedure, and the means of transport. The patient who requires Droplet Precautions wears a cup style surgical mask. See Table 3

(5) Neutropenic Precautions: CDC no longer recognizes or recommends protective isolation of persons who are immunosuppressed or neutropenic. Although most neutropenic patients become infected with their own organisms, they are at increased risk of acquiring infectious agents from the staff, visitors, their family members, or the environment. Diligent handwashing is the single most important action healthcare workers (HCWs), visitors, family members, and the patient can take to reduce the risk of acquiring infectious agents. Any patient with an absolute neutrophil count (ANC) of 1,000/cmm or less is considered neutropenic and placed on "Neutropenic Precautions." Positive pressure rooms are not required; but if they are used, the pressure reading should read at a minimum + 0.006. Call BAMC Maintenance Contractor for any problems with the rooms. Keep the door shut at all times.

(a) Document "neutropenic" on the diet roster. Do not give fresh fruit or vegetables to the patient.

(b) Flowers and potted plants are restricted from the patient's room.

(c) No visitors with communicable diseases are permitted.

(d) Children under 12 years of age can transmit infection unknowingly and have controlled, limited access to visit neutropenic patients. Children cannot, in the previous 4 weeks, have had or been exposed to chickenpox, German measles, measles, mumps, hepatitis A, streptococcal throat infection, upper respiratory tract infection, diarrhea, vomiting, fever, rash, live virus immunization (i.e., oral polio, measles).

n. Postmortem Identification. IAW Texas Department of Health (TDH), certain diseases are identified as communicable and require special handling. These communicable diseases are:

AIDS (Acquired Immune Deficiency Syndrome)	Anthrax
Brucellosis	Creutzfeldt-Jakob Disease (CJD)
HIV Infection	Plague
Q fever	Rabies
Rocky Mountain Spotted Fever	Syphilis
Tuberculosis (TB)	Tularemia
Viral Hepatitis B, C, and D	Viral Hemorrhagic Fevers (VHF)

(1) All patients, who at the time of death, are diagnosed with a communicable disease

from the list above require the Death Tag to include the following words; "COMMUNICABLE DISEASE--BLOOD/BODY SUBSTANCE PRECAUTIONS REQUIRED."

(2) The tag is affixed to the body and to the outside of the impervious shroud, so personnel handling the body at any point, especially the individuals who transport the body to the mortuary, are notified to follow the appropriate precautions.

(3) All personnel performing postmortem care follow SP. If the patient was in isolation, the appropriate barriers required for that isolation category are worn.

(4) For a TB patient, even if the patient is deceased and is no longer generating new TB organisms into the air, there is still the potential that previously expelled organisms remain airborne in the patient's room. The N95 respirator is required until the room air has cleared the organisms ( at least 70 minutes).

TABLE 4: SYNOPSIS OF TYPES OF PRECAUTIONS AND PATIENTS REQUIRING THE PRECAUTIONS\*

Standard Precautions

Use Standard Precautions for the care of all patients.

Airborne Precautions

In addition to the Standard Precautions, use Airborne Precautions for patients known or suspected to have serious illnesses transmitted by airborne droplet nuclei. Examples of such illnesses include:

- Measles
- Varicella (including disseminated varicella zoster)\*
- Tuberculosis\*

Droplet Precautions

In addition to Standard Precautions, use Droplet Precautions for patients known or suspected to have serious illnesses transmitted by large particle droplets. Examples of such illnesses include:

- Invasive *Hemophilus influenzae* type to disease, including meningitis, pneumonia, epiglottitis, and sepsis
- Invasive *Neisseria meningitidis* disease, including meningitis, pneumonia, and sepsis
- Invasive multi-drug resistant *Streptococcus pneumonia* disease, including meningitis, pneumonia, sinusitis, and otitis media
- Other serious bacterial respiratory infections spread by droplet transmission, including:
  - Diphtheria (pharyngeal)
  - Mycoplasma pneumonia*
  - Pertussis
  - Pneumonic plague
  - Streptococcal pharyngitis, pneumonia, or scarlet fever in infants and young children
- Serious viral infection spread by droplet transmission, including:
  - Adenovirus\*
  - Influenza
  - Mumps
  - Parvovirus B19
  - Rubella

Contact Precautions

In addition to Standard Precautions, use Contact Precautions for patients known or suspected to have serious illnesses easily transmitted by direct patient contact or by contact with items in the patient's environment. Examples of such illnesses include:

- Gastrointestinal, respiratory, skin, or wound infections or colonization with *multi-drug resistant bacteria (MRDO)* (*MRSA*, resistant Gram negative rods, etc.) judged by the Infection Control Program, based on current state, regional, or national recommendations, to be of special clinical and epidemiologic significance.

TABLE 4: SYNOPSIS OF TYPES OF PRECAUTIONS AND PATIENTS REQUIRING THE PRECAUTIONS\* (CONT.)

Enteric infections with a low infectious dose or prolonged environmental survival, including:

*Clostridium difficile*

For diapered or incontinent patients, enterohemorrhagic *Escherichia coli* O157:H7, *Shigella*, hepatitis A, or rotavirus

Respiratory syncytial virus (RSV), parainfluenza virus, or enteroviral infection in infants and young children

Skin infections that are highly contagious or that may occur on dry skin, including:

Diphtheria (cutaneous)

Herpes simplex virus (neonatal or mucocutaneous)

Impetigo

Major (non-contained) abscesses, cellulitis, or decubiti

Pediculosis

Scabies

Staphylococcal furunculosis in infants and young children

Staphylococcal scalded skin syndrome

Zoster (disseminated or in the immunocompromised host)

Viral/hemorrhagic conjunctivitis

Viral hemorrhagic fever (Lassa fever or Marburg virus\*)

Special Precautions: *Vancomycin Resistant Enterococcus (VRE)*

**TABLE 5: CLINICAL SYNDROMES OR CONDITIONS WARRANTING ADDITIONAL EMPIRIC PRECAUTIONS TO PREVENT TRANSMISSION OF EPIDEMIOLOGICALLY IMPORTANT PATHOGENS PENDING CONFIRMATION OF DIAGNOSIS**

<b><u>Clinical Syndrome or Condition</u></b>	<b><u>Potential Pathogens</u></b>	<b><u>Empiric Precautions</u></b>
<b>DIARRHEA:</b> (1) Acute diarrhea with a likely infectious cause in an incontinent or diapered patient (2) Diarrhea in an adult with a history of broad spectrum or long term antibiotics	Enteric pathogen  <i>Clostridium difficile</i>	Contact  Contact
<b>MENINGITIS:</b>	<i>Neisseria meningitidis</i>	Droplet
<b>RASH OR EXANTHEMS, GENERALIZED, ETIOLOGY UNKNOWN:</b> (1) Petechial/ecchymotic with fever  (2) Vesicular  (3) Maculopapular with coryza and fever	<i>Neisseria meningitidis</i>  <i>Varicella</i>  <i>Rubeola</i> (measles)	Droplet  Airborne <u>and</u> Contact  Airborne
<b>RESPIRATORY INFECTIONS:</b> (1) Cough, fever, upper lobe pulmonary infiltrate in an HIV-negative patient and a patient at low risk for HIV infection  (2) Cough, fever, pulmonary infiltrate in any lung location in an HIV-infected patient or a patient at high risk for HIV infection *  (3) Paroxysmal or severe persistent cough during period of <i>pertussis</i> activity  (4) Respiratory infections, particularly bronchiolitis and croup, in infants and young children	<i>Mycobacterium tuberculosis</i> (TB)  <i>Mycobacterium tuberculosis</i> (TB)  <i>Bordetella pertussis</i>  Respiratory syncytial or parainfluenza virus	Airborne  Airborne  Droplet  Contact

**TABLE 5: CLINICAL SYNDROMES OR CONDITIONS WARRANTING ADDITIONAL EMPIRIC PRECAUTIONS TO PREVENT TRANSMISSION OF EPIDEMIOLOGICALLY IMPORTANT PATHOGENS PENDING CONFIRMATION OF DIAGNOSIS (cont.)**

<b><u>Clinical Syndrome or Condition</u></b>	<b><u>Potential Pathogens</u></b>	<b><u>Empiric Precautions</u></b>
<b>RISK OF MULTI-DRUG RESISTANT ORGANISMS (MDRO)*:</b> (1) History of infection or colonization with MDRO  (2) Skin, wound, or urinary tract infection in a patient with a recent hospital or nursing home stay in a facility where MDRO are prevalent	Resistant bacteria	Contact
	Resistant bacteria	Contact
	<u>VRE</u>	<u>SPECIAL</u>
<b>SKIN OR WOUND INFECTION:</b> (1) Abscess or draining wound that cannot be covered	<i>Staphylococcus aureus, Group A Streptococcus</i>	Contact
<ul style="list-style-type: none"> <li>Discontinue precautions only when TB patient is on effective therapy, is improving clinically, has 3 consecutive negative sputum smears collected on different days, or TB is ruled out. Also see CDC Guidelines for Preventing the Transmission of Tuberculosis in Healthcare Facilities.</li> <li>MDRO: For Gram negative rods, resistance to all antibiotics, except 2; susceptibility to &lt;2 major categories of antibiotics.</li> </ul>		

2. PATIENT PLACEMENT IN NEGATIVE PRESSURE ROOMS.

a. Negative pressure rooms are designed for patients with potential airborne diseases. Negative pressure rooms may be used for isolating patients on droplet or contact isolation; however, priority is always given to patients requiring Airborne Precautions.

b. Neutropenic patients requiring isolation ARE NOT placed in negative pressure rooms. These patients are placed in private rooms with positive pressure or HEPA filter, if indicated.

c. All negative pressure rooms have HEPA filters and pre-filters.

d. Keep the isolation room and anteroom door to the patient closed at all times for the proper negative pressure relationship to be maintained.

e. Keep the restroom door ajar/open when unoccupied to improve the exhaust air flow.

f. Keep the alarms on at all times when the room is used for isolation. When checking the rooms, the green light indicates acceptable negative pressures.

g. Reset the alarm when you hear the audible alarm. The red light indicates an alarm sounded or the alarm is silenced. It takes approximately 1-5 minutes for the negative pressure to adjust after the doors have been opened for a prolonged time.

h. Call BAMC Maintenance Contractor (phone 6-5747) if the alarm does not clear after trying to reset the alarm.

i. Power Outage Affecting the Negative Flow Ventilation System.

(1) During a power outage, the door must remain closed at all times. Other precautions are to have the patient wear a cup style surgical mask every time a staff member enters the room. Healthcare personnel wear the N95 respirator each time they enter the room. Contact the Nursing Bed Coordinator (NBC) to relocate the patient to a functioning negative airflow room, if one is available. Group activities together to reduce the number of people and times the room is entered during the power outage.

(2) Because positive airflow rooms with HEPA filters may also be affected by a power outage, patients and visitors may need to wear surgical masks.

TABLE 6: ISOLATION ROOMS

Nursing Unit	Room Number	Pressure Status
2 North	247-5(#8), 248-6(#3)	negative or positive
2 South	245-6(#8), 246-5(#3)	negative or positive
3 South	345-6(#8), 346-5(#3)	negative or positive
3 North	347-5(#8), 348-6 (#3)	negative or positive
Electrical Physiology Lab	343-19	negative or positive
2 East (PCU)	215-17(203), 215-18 (202)	negative
2 West	210-18(252), 210-15(253)	negative
PACU	239-8	negative or positive
3 East	315-17(303)	negative
Old BMTU (5 <sup>th</sup> floor)	531-15,532-7, 536-2, 535-3	negative or positive
6 West	610-19 (652), 610-14(653)	negative or positive
6 East	615-19(602), 615-14(603)	negative
7 East	715-14(703), 715-19(702)	negative
7 West	710-19(752), 710-14(753)	negative
Dialysis	325-13, 325-14	negative

3. MANAGEMENT OF STAFF TB SKIN TESTING (TST) AND ISOLATION OF SUSPECTED TB PATIENTS.

a. All employees, except contract or agency staff, maintain in their competency folder an Employee Safety Health Record, BAMC Form 999:

(1) Tuberculin Skin Test (TST) testing dates

(2) Annual TB training

(3) Fit test of N-95 particulate respirator or powered respirator as required by National Institute of Occupational Safety and Health (NIOSH).

b. All employees who have potential hospital exposure to the TB must complete initial and annual continuing education on occupational exposure to TB or more frequently as outlined in the BAMC Memo 40-401.

c. All employees are responsible for following the TB isolation requirements.

d. Preventive Medicine Service responsibilities.

(1) Determine initial and ongoing Tuberculin Skin Test (TST) status IAW BAMC PAM 40-401.

(2) Provide an initial pulmonary function health screening and physical assessment of personnel, except contract and agency personnel, who are required to wear a respirator.

(3) Maintain employee, except contract or agency staff, records of purified protein derivative (PPD) skin testing and applicable preventive therapy for positive skin test converters and chest radiographs as pertains to symptoms suggestive of pulmonary or laryngeal TB.

(4) Perform post-exposure follow-up for all employees in areas at risk.

(5) Conduct and report the annual risk assessment on the risk of transmission of *Mycobacterium tuberculosis* in the facility to the IC FMT.

(6) Provide routine monitoring of designated negative pressure patient care areas. Industrial Hygiene assesses these areas and documents air exchange rates and pressure patterns every six months. BAMC Maintenance Contractor monitors the Bioshield Digital Pressure Room Monitors.

(7) Both Industrial Hygiene and the Safety Office provide qualitative fit testing to all personnel and training on the uses and limitations of approved particulate respirators.

e. Airborne Isolation Procedure.

(1) Place the patient in a negative pressure private room. Cohorting is done only as a last resort if private rooms are not available. See Chapter 3, section 2, Patient Placement in Negative Pressure Rooms. Keep the doors to the room and anteroom closed at all times. Place an Airborne Precautions sign outside the room and on patient's chart.

(2) Only essential healthcare workers, support personnel, and services associated with the care of the patient enter the isolation room. All wear a N-95 respirator.

(3) Instruct patients to cover their nose and mouth with a tissue during coughing and sneezing. If the patient must leave the room for a medical procedure, the patient wears a standard type surgical mask.

(f) Patients remain in Airborne Precautions until considered non-infectious by Infectious Disease physician and/or Infection Control Services.

#### 4. MANAGEMENT OF SMALLPOX PATIENT.

a. Notification. The attending physician or charge nurse notifies Infectious Diseases (ID) Service or ID Consult Attending or ID fellow (beeper 513—2717) and the Infection Control Officer (beeper 513-6040 or 513-1580) for any suspected case. The Emergency Preparedness Plan (EPP) notification is followed.

#### b. Isolation Protocol.

(1) For suspect rashes of smallpox on the face or upper extremities, personnel request the patient put on a fitted surgical mask before immediately placing the patient in Airborne and Contact Precautions.

(2) If an Airborne Precautions holding room is not immediately available in the clinic, the patient dons a molded surgical mask and is placed in an empty patient exam room with the door closed. The patient WILL NOT continue to wait in a common area with other patients. See Table 3. Maximum Barrier Precautions for Patient Transport.

(3) For Airborne and Contact Precautions, personnel wash hands with an antimicrobial soap (i.e., 2% CHG) or alcohol hand gel (i.e., Prevacare) before donning N-95 mask, gown, gloves, and shoe covers and entering the patient's room.

(4) Mask, gown, gloves, and shoe covers are removed in the isolation anteroom and placed in a red biohazard bag before washing hands with an antimicrobial soap (i.e., 2% CHG) or alcohol hand gel (i.e., Prevacare).

(5) Equipment is either disposable or cleaned, using the hospital-approved Environmental Protection Agency (EPA) disinfectant.

(6) Disposable linen is used wherever possible, treated as potentially infectious, and labeled with biohazard symbol. Soiled linen handlers wear PAPR/N95 mask. Reusable linen is

autoclaved to render it non-infectious IAW with CDC recommendations for smallpox.

(4) Patient Placement and Transport. Hospitalized patients who may have been exposed to smallpox are cohorted. Staff caring for suspected or confirmed smallpox patients and/or hospitalized smallpox-exposed patients care for only this designated group of patients. Transport of these patients within the facility is limited as much as possible to only initial placement transport movement. When transport is necessary, patients are covered in a sheet after donning gloves and fitted surgical mask. Transport personnel wear gowns, gloves, and N95 masks. Transport elevators are secured using the key system and patients are transported as the sole occupants of the elevator. The transport route used is the one with the least amount of contact with other individuals. Transport of patients to a designated location outside of the facility is determined by a joint decision of TDH and Chief, Infectious Disease.

c. Employee and Patient Exposures.

(1) Preventive Medicine, Infection Control, and Infectious Disease establish patient and employee exposure cohorts. Individuals are considered infectious from the onset of their eruptive exanthema (rash) until separation of all scabs.

(2) Preventive Medicine Service manages and tracks employee cohorts and vaccination.

(3) Infection Control, Nursing, and Preventive Medicine manage patient exposures within the facility.

## CHAPTER 4

### OCCUPATIONAL HEALTH

#### 1. OCCUPATIONAL HEALTH RESPONSIBILITIES.

a. Occupational Health Section (OHS), Preventive Medicine Service, provides:

- (1) Civilian employee pre-placement evaluations and examinations.
- (2) Inprocessing for Active Duty and Department of the Army Civilians (DACs).
- (3) Immunization screening for all personnel.
- (4) Medical evaluations/screening to include:
  - (a) Periodic medical surveillance evaluations.
  - (b) Worksite visits.
  - (c) Reproductive hazard surveillance.
  - (d) Return to duty evaluations.
  - (5) Respirator Medical Questionnaire clearances.
  - (6) Maintenance of civilian medical records.

b. Preventive Medicine (PM) Service also performs epidemiologic investigations and reports communicable and occupational diseases and outbreaks as required by Army, state, and federal regulations and statutes. See Chapter 4, Section 5, Procedure for Reporting Communicable Diseases.

c. Infection Control Service (ICS) is responsible for:

- (1) Working with Preventive Medicine in the investigation of outbreaks of communicable diseases among patients and/or staff.
- (2) Consulting with Occupational Health and Infectious Disease concerning staff and patients with communicable diseases.
- (3) Assisting with patient and employee infectious health hazards within BAMC's environment and recommending corrective actions to the EOC or the IC FMT.
- (4) Initiating or performing cultures of personnel or the environment as deemed necessary in the investigation of any outbreak occurring in patients or employees.

(5) Assisting supervisors and OHS with patient and employee exposure management.

d. Employees and their specific personnel offices are responsible for:

(1) Sending all military personnel to in-process through OHS (phone 295-2437) with their medical records.

(2) Sending DAC employees (if indicated by Civilian Personnel Advisory Center/CPAC and OHS) to OHS (phone 295-2437) for in-processing with their medical records.

(3) The contractor and agency ensure their employees are in compliance with preventive, prophylactic, and follow-up procedures as well as Infection Control and Occupational Health Program procedures. All employees follow the post-exposure protocol (PEP) in the event they have an exposure to blood or body fluids in the course of their duty within BAMC.

e. Employees having or suspected of having a communicable disease are evaluated by OHS (phone 295-2437) prior to engaging in direct patient care.

(1) Employees exposed to a communicable disease may be placed on work restrictions with no direct patient care.

(2) Supervisory personnel contact OHS for guidance in managing work restrictions. See Table 7. Personnel Work Restriction Guidelines with Infectious Diseases.

(3) DACs with work restrictions are referred to the Civilian Personnel Advisory Center (CPAC) for leave policies and procedures.

## 2. IMMUNIZATIONS FOR HEALTHCARE PERSONNEL.

a. All healthcare workers who provide direct patient contact are required to have evidence of immunity (immunizations or serologic testing) as indicated below.

(1) Hepatitis B vaccine series and/or confirmation of antibody to hepatitis B surface antibody.

(2) Mumps, measles, and rubella (MMR) vaccine or evidence of immunity via titer.

(3) Influenza vaccine recommended annually.

(4) Tetanus and Diphtheria vaccine every 10 years.

(5) TB screening required annually in birth month IAW BAMC Memo 40-401.

(6) Varicella vaccine date, evidence of immunity via titer, or history of disease.

(7) Any other immunizations required for deployment status.

b. Department and Service Chiefs ensure that all new personnel and volunteers in-process through Occupational Health prior to engaging in direct patient contact.

c. Healthcare Contract Liaison assures contract and agency healthcare personnel possess immunization requirements as noted above.

d. GME/MOS Directors ensure students comply with these requirements.

e. Smallpox vaccinations of the Healthcare Worker (HCW).

(1) All HCWs who have direct patient care are required to wear a gauze and transparent dressing over the vaccination site until the scab falls off.

(2) If HCWs have an adverse reaction to the semi-permeable dressing, report the reaction, and discontinue the dressing. HCWs are removed from patient care until the scab falls off and they are released back to duty by an Infectious Disease physician.

(3) All dressings are disposed of in a red medical waste (RMW) bag in the hospital.

(4) All adverse events are reported to Preventive Medicine or Infection Control.

### 3. OCCUPATIONAL HEALTH GUIDELINES FOR PREGNANT HEALTHCARE PERSONNEL.

a. Under routine conditions, pregnant healthcare personnel can safely perform direct patient care duties utilizing Standard Precautions.

b. All pregnant civilian and military personnel must schedule an appointment with Occupational Health (phone 916-6897) for a Reproductive Hazard Assessment. The Reproductive Hazard Program is designed to protect the health of the worker and the unborn baby by early identification and control of potential reproductive hazards in the workplace. Substances or agents that affect the reproductive health of women or men or the ability of couples to have healthy children are called reproductive hazards. Radiation, some chemicals, certain drugs, cigarettes, alcohol, and certain viruses are a few examples of reproductive hazards. This program is conducted through the coordination of Occupational Health, Industrial Hygiene, Safety, Obstetric/Gynecology (OB/GYN), and the supervisor. Pregnant personnel are referred to the Family Advocacy Program, BAMC OB/GYN Clinic for final Army pregnancy profile, or a private healthcare provider. The supervisor is notified if any special precautions or work assignment changes are necessary.

- c. Pregnant personnel who do not have immunity to rubella should avoid contact with persons with this disease.
- d. Personnel who lack varicella (chickenpox) immunity should avoid exposure to persons who have active varicella (chickenpox, shingles) infections. Respirator/masks are not protective.
- e. Do not care for patients on aerosolized Ribavirin for Respiratory Syncytial Virus (RSV).
- f. Personnel who have direct patient contact are screened during initial in-processing for TB, mumps, measles, rubella, varicella, and Hepatitis B vaccines. If any immunizations are lacking, they are provided upon return to duty postpartum.
- g. See Table 7 for guidelines when caring for selected patients.

**TABLE 7: PERSONNEL WORK RESTRICTION GUIDELINES FOR INFECTIOUS DISEASES**

<b>Disease Problem</b>	<b>Relieve From Direct Patient Contact</b>	<b>Partial Work Restriction</b>	<b>Duration</b>
Conjunctivitis, infectious	Yes		Until discharge ceases
Cytomegalovirus (CMV) infection	No		
Diarrhea* Acute stage (diarrhea with other symptoms)	Yes		Until symptoms resolve with other symptoms and infection with Salmonella is ruled out
Convalescent stage Salmonella (non-typhoidal)	No	Personnel should not take care of high-risk patients	Until stool is free of the infecting organism on two consecutive cultures not less than 24 hours apart
Other enteric pathogens**	No		
Enteroviral infections	No	Personnel should not take care of infants and newborns	Until symptoms resolve
E coli 0157:H7	Yes		Until 2 consecutive fecal samples or rectal swabs are obtained (collected > or = 24 hours apart and not sooner than 48 hours after last dose of antimicrobials)
Group A streptococcal disease	Yes		Until 24 hours after adequate treatment is started
Hepatitis			
Viral Hepatitis A	Yes		Until 7 days after onset of jaundice

**TABLE 7: PERSONNEL WORK RESTRICTION GUIDELINES WITH INFECTIOUS DISEASES (cont.)**

<b>Disease Problem</b>	<b>Relieve From Direct Patient Contact</b>	<b>Partial Work Restriction</b>	<b>Duration</b>
Hepatitis B (acute)	No	Personnel wear gloves for procedures that involve trauma to tissues, membranes, or non-intact skin	Until antigenemia resolves
Chronic antigenemia	No	Same as acute illness	Until antigenemia resolves
Hepatitis C	No	Same as Hepatitis B	Periodic infectivity has not been determined
Herpes Simplex			
Genital	No		
Hands (herpetic whitlow)	Yes	Note: It is not known if gloves prevent transmission	Until lesions heal
Orofacial	No	Personnel should not take care of high-risk patients	Until lesions heal
HIV-antibody (AB) positive	Yes	Same as HBV	Same as HBV.
Impetigo	Yes		24 hours after antibiotics start.
Measles			
Active	Yes		Until 7 days after the rash appears
Postexposure (susceptible personnel)	Yes		From the 5 <sup>th</sup> through the 26 <sup>th</sup> day after exposure and/or 7 days after the rash appears
Mumps			
Active	Yes		Until 9 days after onset of parotitis

**TABLE 7: PERSONNEL WORK RESTRICTION GUIDELINES FOR INFECTIOUS DISEASES (cont.)**

<b>Disease Problem</b>	<b>Relieve From Direct Patient Contact</b>	<b>Partial Work Restriction</b>	<b>Duration</b>
Postexposure (suspected or proven)	Yes		From the 12 <sup>th</sup> through the 26 <sup>th</sup> day after exposure or until 9 days after onset of parotitis
Pertussis (whooping cough)			
Active	Yes		From the beginning of the catarrhal stage through the 3rd week after onset of paroxysms or until 7 days after start of effective therapy.
Postexposure (asymptomatic personnel)	No		
Postexposure (symptomatic personnel)	Yes		Same as active pertussis
Rubella			
Active	Yes		Until 5 days after rash appears
Postexposure (susceptible personnel)	Yes		From the 7 <sup>th</sup> through the 21 <sup>st</sup> day after exposure and/or 5 days after rash appears
Salmonella	Yes		Until 2 consecutive fecal samples or rectal swabs are obtained (collected > or = 24 hours apart and not sooner than 48 hours after last dose of antimicrobials)
Scabies	Yes		Until treated

**TABLE 7: PERSONNEL WORK RESTRICTION GUIDELINES WITH INFECTIOUS DISEASE (cont.)**

<b>Disease Problem</b>	<b>Relieve From Direct Patient Contact</b>	<b>Partial Work Restriction</b>	<b>Duration</b>
Shigella	Yes		Until 2 consecutive fecal samples or rectal swabs are obtained (collected > or = 24 hours apart and not sooner than 48 hours after last dose of antimicrobials)
<i>Staphylococcus aureus</i> (skin lesion)	Yes		Until lesions have resolved
Tuberculosis, pulmonary	Yes		Until receiving adequate therapy, 3 consecutive daily negative acid-fast bacilli (AFB) smears, cough is resolved
Upper respiratory infections (URI) ***(high-risk patients)	Yes	Personnel with URIs should not take care of high-risk patients	Until acute symptoms resolve
Zoster (shingles)			
Active  Note: Depending upon evaluation by IC/ID	No	Appropriate barrier desirable, personnel should not take care of high-risk patients	Until lesions dry and crust
Postexposure (susceptible personnel)	Yes		From the 10 <sup>th</sup> through the 21 <sup>st</sup> day after exposure or if varicella occurs, until all lesions dry and crust

**TABLE 7: PERSONNEL WORK RESTRICTION GUIDELINES WITH INFECTIOUS DISEASE (cont.)**

<b>Disease Problem</b>	<b>Relieve From Direct Patient Contact</b>	<b>Partial Work Restriction</b>	<b>Duration</b>
Varicella (chickenpox)			
Active	Yes		Until all lesions dry and crust
Postexposure	Yes		From the 10 <sup>th</sup> through the 21 <sup>st</sup> day after exposure or if varicella occurs, until all lesions dry and crust

\* Various agents may cause diarrhea.

\*\* Generally, personal hygiene, particularly hand washing before and after ALL patient contact, minimizes risk of transmitting enteric pathogens to patients.

\*\*\* High-risk patients with upper respiratory tract infections are neonates, young infants, patients with chronic pulmonary disease, and immunocompromised patients.

Reference: APIC Text of Infection Control and Epidemiology, 2000

**TABLE 8: RECOMMENDATIONS FOR PREGNANT EMPLOYEE INTERACTION WITH PATIENTS HAVING COMMUNICABLE DISEASES:**

Patient Disease	Employee Susceptibility <sup>a</sup>	Recommendations <sup>b</sup>
Varicella (Chickenpox/Zoster)	S	A
Cytomegalovirus	S	B, D
Enterovirus	S	C
Hepatitis B	S	B, D
Herpes Simplex	S	C or A
Influenza	S	B
Measles	S	A
Mumps	S	A
Parvovirus	S	A
Poliovirus	S	A
Rubella	S	A
Syphilis	S	C
Toxoplasmosis	S	C
Tuberculosis	S or I	A

<sup>a</sup> S = Susceptible

I = Immune

<sup>b</sup> A = Do not enter patient's room

B = No direct patient care

C = Direct patient care using appropriate isolation precautions

D = Seronegative pregnant women may wish to transfer out of a high-risk area for the duration of pregnancy; and during the third trimester, follow recommendation B.

#### 4. BLOOD AND BODY FLUID EXPOSURE MANAGEMENT.

##### a. Definitions

(1) Engineering controls are those measures designed to minimize or eliminate the exposure of bloodborne pathogens in the workplace (e.g., sharps containers, needle-free intravenous systems, safety design devices, and PPE).

(2) Exposure incident refers to a contact with blood or body fluids that occurs in the workplace. In addition to parenteral exposures, these incidents may involve skin, eye, or mucous membranes.

##### b. Reporting an Exposure Incident.

(1) All military, civilian, contract, students, and volunteers experiencing a blood or body fluid exposure incident refer to BAMC MEMO 40-135 for details.

(2) Immediately initiate first aid by thoroughly washing the exposed area with soap and water and irrigating exposed mucous membranes with water.

(3) Report exposure to blood/other potentially infectious material (OPIM) immediately to the supervisor. The supervisor initiates the Blood and Body Fluid Exposure Checklist (Appendix A of BAMC Memo 40-135).

(4) The supervisor contacts the primary physician of the source patient to have the patient's blood drawn. The source patient is NOT sent to the Emergency Room. When ordering tests in CHCS, select "needlestick" to ensure a SUDS (a lipid HIV test) test is performed and correct labs are ordered.

(5) Report to the Emergency Room and identify himself or herself to the charge nurse as soon as possible. If the source of exposure is known or suspected to be HIV positive, individual should report within one hour to the Emergency Room.

##### c. Work Practice Controls

(1) Standard Precautions. All patients and patient specimens are considered to be potentially infected with a bloodborne pathogen or other potentially infectious materials (OPIM); and therefore, are all treated the same. See Chapter 3, Isolation and Precautions.

(2) Personal Protective Equipment (PPE) is provided by BAMC and made readily available to all workers who may be potentially exposed to blood or other body fluids. The wearing of PPE is mandatory in all instances when exposure to blood or body fluids can be reasonably anticipated. Guidelines for use of PPE are:

(a) Gloves are donned prior to any patient care event in which blood or body fluid exposure to the hands can be anticipated, such as drawing blood. Wear the appropriate glove for

the task being performed. Examples of the various types of gloves are powder free examination or surgical cuffed gloves. If latex sensitivity or allergy is documented by a dermatologist and/or allergist, other Food and Drug Administration (FDA) approved gloves may be substituted. Gloves are changed between patients and when the integrity of the barrier is compromised. Gloves worn for patient care are not washed.

(b) After removing gloves, employees immediately wash their hands with an approved soap or alcohol hand gel.

(c) Protective eyewear is worn for any invasive procedure or activity that produces aerosolization of blood or body fluids in which exposure to the eyes can be anticipated. Examples include suctioning patients, dental treatment with any rotary or ultrasonic instruments, or cleaning contaminated instruments. Protective eyewear provides peripheral as well as direct protection from exposure. Employees use either personally issued goggles, glasses with side shields, complete face shields which extend to the chin, or masks with attached eye protection. If goggles are shared within a work center, they are disinfected between users with soap and water. Personal prescription glasses are not considered PPE because they do not protect from peripheral splash exposures.

(d) All masks procured by the facility must meet the minimal standards required by PPE. When a mask is worn for PPE, protective eyewear is worn. Individual masks and mask-eyewear combinations are available.

(e) Fluid resistant or impervious gowns, jumpsuits, or other body coverings with full length sleeves are worn in every instance in which exposure of one's body or arms are anticipated, such as dressing changes. Gowns are marketed as fluid resistant and meet industry standards for hydrostatic repellency and spray impact testing. Scrubs are not considered PPE because they are not fluid resistant.

(f) Fluid resistant or impervious shoes (e.g., galoshes) or shoe covers are worn when gross contamination may occur.

(g) Fluid resistant, disposable hair coverings are worn when contamination may occur.

(h) Location of PPE is in the PPE cabinets; see Chapter 2, Section 2. Evaluation of PPE is an ongoing process within the facility. Anytime an employee identifies a problem with PPE, they notify Infection Control, ext. 6-3562.

(3) Sharps Safety: Refer to Chapter 5, Section 1.

(4) Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is reasonable likelihood of occupational exposure.

(5) Likewise, food and drink are not kept in refrigerators, freezers, shelves, cabinets, or on countertops or bench tops where blood or OPIM are present.

(6) Food and drink are prohibited in any work area where medication is prepared or administered, except as required to administer the medication to the patient.

5. PROCEDURE FOR REPORTING COMMUNICABLE DISEASES.

a. BAMC is legally responsible for reporting certain infectious diseases and outbreaks as required by the Army, state, and federal regulations and statutes.

b. Timely reporting provides the opportunity for contact investigation, and if warranted, the initiation of control measures to stop further transmission of the disease.

c. Reporting Communicable Disease/Conditions to the Preventive Medicine Service.

(1) All providers promptly (same day during normal duty hours or next duty day during non-duty hours) notify Preventive Medicine Service (295-2587/2742/2619) of significant diseases and conditions IAW BAMC Memo 40-136.

(2) See Table 9 for Tri-Service Conditions and Diseases that require reporting.

(3) See Table 10 for Texas Conditions and Diseases that require reporting.

(4) See Table 11 for List of Uncommon Conditions that require reporting.

TABLE 9: TRI-SERVICE REPORTABLE CONDITIONS AND DISEASES:

AIDS	Influenza	Rocky Mt. Spotted Fever
Amebiasis	Injuries (spinal cord,	Rubella
Anthrax	near drowning,	
Asbestosis exposure	lead poisoning)	Salmonellosis
		Schistosomiasis
Biowar agent exposure	Lead poisoning	Shigellosis
Botulism	Legionellosis	Silicosis
Brucellosis	Leishmaniasis	Smallpox
	(all cutaneous,	Streptococcus, Grp A
Campylobacter	mucocutaneous,	Syphilis (all primary,
Carbon monopoison	visceral,	secondary, latent,
Chancroid	unspecified)	tertiary, congenital)
Chemical agent exposure	Leprosy	
Chlamydia	Leptospirosis	Tetanus
Cholera	Listeria	Toxic Shock Syndrome
Coccidioidomycosis	Lyme disease	Trichinosis
Cold weather injury		Trypanosomiasis
(all frostbite, hypothermia	Malaria	Tuberculosis (pulmonary)
immersion, unspecified)	(all falciparem,	Tularemia
Cryptosporidiosis	malariae, ovale,	Typhoid fever
Cylospora	unspecified,	Typhus fever
	vivax)	
Dengue fever	Measles	Urethritis (non-gonococcal)
Diphtheria	Meningococcal dz	
	Meningitis	Varicella Vaccine
Entameoba coli	Septicemia	(adult only adverse event)
Ehrlichiosis	Mumps	Vibrio infection
Encephalitis		
	Pertussis	Yellow fever
Filariasis	Pesticide poisoning	(acute, occup)
	Plague	
Giardiasis	Pneumococcal pneumonia	
Gonorrhea	Poliomyelitis	
	Q fever	
H. influenzae (invasive)		
Hantavirus infection		
Heat injury (stroke, exhaustion)		
Hemolytic uremic syndrome	Rabies (human)	
Hemorrhagic fever	Relapsing fever	
Hepatitis A, B, C	Rheumatic fever (acute)	
Herpes simplex (genital)	Rift Valley Fever	
Human Immunodeficiency Virus		

TABLE 10: TEXAS REPORTABLE CONDITIONS:

a. Report reportable diseases immediately by telephone to local health departments or Texas Department of Health(TDH) by name, age, sex, race/ethnicity, date of birth (DOB), address, telephone number, disease, date of onset, physician, and method of diagnosis. TDH Infectious Disease Epidemiology & Surveillance Division (call TOLL FREE 1-800-252-8239) or TDH Immunization Division (call TOLL FREE 1-800-252-9152).

Botulism, foodborne	Pertussis
Cholera	Plague
Diphtheria	Poliomyelitis, acute paralytic
Haemophilus influenza, type b infections, invasive <sup>1</sup>	Viral hemorrhagic fevers
Measles (rubeola)	Yellow fever
Meningococcal infections, invasive <sup>1</sup>	Rabies, human

b. Report immediately outbreaks, exotic diseases, and unusual group expressions of illness, which may be of public health concern.

c. Diseases reportable to local health departments by name, age, sex, race/ethnicity, DOB, address, telephone number, disease, date of onset/occurrence, physician, and method of diagnosis. Report these diseases on a weekly basis, except for rubella and tuberculosis, which are reported within one working day.

Acquired immunodeficiency syndrome (AIDS) <sup>2</sup>	Ehrlichiosis
Amebiasis	Encephalitis (specify etiology)
Anthrax	Entamoeba coli O157:H7 infection
Asbestosis	Gonorrhea <sup>3</sup>
Botulism (infant)	Hansen's disease (leprosy)
Brucellosis	Hantavirus infection
Campylobacteriosis	Hemolytic uremic syndrome (HUS)
Chickenpox (by number only)	Hepatitis, acute viral (specify type) <sup>4</sup>
Chancroid <sup>3</sup>	Injuries (specify type)
Chlamydia trachomatis infection <sup>3</sup>	Spinal cord injury
Cryptosporidiosis	Near drowning
Dengue	Salmonellosis, including typhoid
Lead, adult elevated blood	Shigellosis
Lead, childhood elevated blood	Silicosis
Legionellosis	Streptococcal disease, invasive Group A
Listeriosis	Syphilis <sup>3</sup>
Lyme disease	Tetanus
Malaria	Trichinosis
Meningitis (specify type) <sup>5</sup>	Tuberculosis
Mumps	Tuberculosis, in persons < 15 years
Pesticide poisoning, acute occupational	Typhus

TABLE 10: TEXAS REPORTABLE CONDITIONS (cont.)

Relapsing feve	Vibrio infections
Rocky Mountain Spotted fever	
Rubella	

<sup>1</sup> Includes meningitis, septicemia, cellulitis, epiglottis, osteomyelitis, pericarditis, and septic arthritis.

<sup>2</sup> Reported by physician only once per case, following initial physician diagnosis.

<sup>3</sup> Syphilis, gonorrhea, chancroid, and laboratory-confirmed chlamydia trachomatis infections are reported IAW sections 97.132, 97.134, and 97.135 of TAC Form STD-27, "Confidential Report of Sexually Transmitted Disease." Questions may be directed to (512) 490-2505.

<sup>4</sup> Includes types: A; B; C; D; E; and unspecified.

<sup>5</sup> Includes aseptic/viral, bacterial (specify etiology), fungal, and other.

2. Suspected cases of long-term care (nursing home) neglect or abuse.

3. Occupational illness either hospitalized or more than two cases from the same exposure.

4. Any outbreak or cluster (usually 5 or more) of disease or injury of public health or military significance.

TABLE 11: LIST OF UNCOMMON CONDITIONS REQUIRING REPORTING

Anthrax  
Asbestosis

Botulism  
Brucellosis

Coccidioidomycosis

Dengue  
Diphtheria

Histoplasmosis  
Hansen's Disease (Leprosy)

Leishmaniasis  
Leptospirosis  
Listeria Infections

Melioidosis

Plague  
Poliomyelitis  
Psittacosis

Q Fever

Rabies  
Relapsing Fever

Smallpox and adverse reactions to vaccination  
Silicosis

Trichinosis  
Trypanosomiasis  
Tularemia  
Typhoid Fever  
Typhus: endemic (murine) and epidemic

Vibrio Infections  
Viral Hemorrhagic Fever

Yellow Fever

**CHAPTER 5**  
**CONTROL OF THE ENVIRONMENT**

1. SHARPS SAFETY.

a. Sharps safety relates not only to needlesticks, but also to cutaneous puncture due to other medical devices, such as trocars, scalpel blades, and broken glass. Such injuries can result in transmission of bloodborne pathogens, such as human immunodeficiency virus (HIV) and hepatitis B virus (HBV).

b. Sharps Handling:

(1) Place sharps in designated receptacle by the user as soon as possible after use. Personnel performing invasive procedures outside of the Operating Room are responsible for disposing of all sharps on the procedure tray, rather than left for someone else to discard.

(2) DO NOT Recap, Bend, or Break Needles! DO NOT use Destruct-o-clips.

(3) If recapping is necessary, use a single-handed scoop technique, whereby the protective cap is laid on a flat surface and, with one hand, the needle is introduced into the opening and the cap scooped up over the needle and secured. NEVER recap with two hands.

(4) When injecting blood into a specimen tube, use a wire rack to secure the tube, thus keeping the second hand well away from the rubber cap of the tube.

(5) NEVER carry loose sharps and/or needles in your pocket.

(6) Obtain assistance with injections of uncooperative patients.

(7) Let falling sharp objects fall.

(8) Handle laundry with care.

(9) Glass or rigid plastic contaminated with blood or body fluids that may poke through a plastic bag is discarded in a sharps container.

c. Engineering controls:

(1) Sharps containers are locked in brackets or secured to prevent spillage.

(2) NEVER reach into the trash bags or autoclave bags with bare hands to retrieve misplaced sharps. Wear gloves and use available tongs or sponge sticks for retrieval.

(3) Use safety devices as provided.

(4) Use Needleless IV components and protective devices.

(5) Immediately report all occupational exposures to your supervisor for treatment, documentation, and follow-up. See Chapter 4, Section Blood and Body Fluid Exposure Management.

(5) Obtain free Hepatitis B vaccine available through Occupational Health; call 295-2313 for additional information.

d. Disposal of hospital sharps:

(1) Immediately dispose of sharps into a sharps container after use.

(2) Watch for protruding sharps in the sharps containers. Sharps containers are closed, taped, and removed when three-fourths full.

(3) NEVER reach into sharps containers.

(4) NEVER place used sharps in a trash receptacle.

(5) DO NOT place trash cans under sharps containers. If a sharps misses the sharps container and lands in the trash, it may be incorrectly left in the trash.

(6) Housekeepers ask hospital staff to pick up sharps they find on the floor or elsewhere.

(7) If a sharp is found on a food tray returned to the Dining Facility, the tray is set aside. The Nutrition Care supervisor calls the nursing unit to send a staff member, along with a sharps container, to pick up the sharp. Nutrition Care also notifies ICS.

(8) Broken glass (i.e., cups, laboratory glassware, etc.) is picked up by tongs or broom and dust pan before placement in a sharps container to prevent physical injury to others.

2. VITAL SIGN EQUIPMENT.

a. Colin Press Mate Electronic thermometers with disposable probe covers are the first choice for temperature measurement. Temp-A-Dot disposable thermometers may be used for patients on isolation precautions.

b. All equipment is cleaned with Sani-Cloth before returning to storage.

c. Clean the station and thermometer surface with Sani-Cloth or with alcohol DAILY and when visibly soiled.

3. CARE OF PATIENT CARE EQUIPMENT.

a. Spaulding's Classification scheme for disinfection or sterilization

(1) Critical items: instruments/objects that are introduced directly into the blood stream or into other normally sterile areas of the body. Require meticulous physical cleaning before

sterilization by steam, Steris, or STERRAD.

(2) Semi-critical items: instruments/objects that come in contact with intact mucous membranes or non-intact skin and do not ordinarily penetrate body surfaces. Require meticulous physical cleaning, followed by sterilization or appropriate high level disinfection, such as chemical disinfection of endoscopy equipment using Cidex.

(1) Non-critical items: touch only intact skin. Require intermediate or low level disinfection, such as cleaning with a hospital-approved disinfectant/detergent agent using Wexcide-RTU or Sani-Cloth.

b. Reusable supplies for sterilization are transported to CMS daily via a closed container. Containers are supplied by CMS. Clean reusable supplies of gross blood, dirt, and protein matter prior to sending to CMS.

c. Reusable equipment, which is not to be returned to CMS for terminal sterilization, is disinfected in the using area with Wexcide-RTU or Sani-Cloth prior to reuse.

d. Disposable items are discarded after single patient use. Empty bed pans, urinals, and other containers with liquid or semi-solid waste into a sanitary sewer source (hopper) prior to placing into general waste containers.

#### 4. MANAGEMENT OF REGULATED MEDICAL WASTE (RMW).

a. All RMW generated on the installation is treated and disposed of through a contract managed by BAMC. Alternate disposal methods must be approved by the BAMC Commander. Proper waste management should not pose an infectious hazard to anyone. The Infection Control Service has a consultative, not operational, responsibility. See MEMO 40-403 and 40-408 for details.

b. Definitions and Guidelines for Regulated or Red Bag Waste.

(1) RED BAG OR REGULATED WASTE: Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or OPIM in a liquid or semi-liquid state if compressed; items that are caked with dried blood or OPIM and are capable of releasing these materials during handling; contaminated sharps (see below for disposal of sharps); and pathological and microbiological wastes containing blood or OPIM are red bag or regulated waste. The important thing is whether the blood or body fluid is self-contained in the dressing or gauze. If the gauze or dressing is saturated to the point where the blood or body fluid drips from it, then it belongs in a red bag.

(2) SATURATED. Thoroughly wet, such that liquid or fluids flow freely from the item or surface without compression, as defined by OSHA.

(3) OPIM: Other potentially infectious material (OPIM) refers to the following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that

visibly contaminated with blood, and all body fluids where it is difficult or impossible to differentiate between body fluids.

#### 5. SPILL CLEANUP.

a. Pick up broken, contaminated glassware with a brush and dustpan, tongs, or forceps and discard in a sealable impervious sharps container. Deposit large intact, broken glass, not considered contaminated, in an impervious container for disposal. Do not discard glass in plastic bags. Deposit small glass pieces in sharps container for disposal.

#### b. Cleanup Procedure.

(1) Don appropriate PPE. At a minimum, use gloves. Gowns or other protective clothing are worn when splash or soiling dangers exist. A mask and protective eyewear are worn if splashes or aerosols could contact the worker's face or eyes.

(2) Secure area around the spill. If aerosolization occurred, allow the aerosol to settle and isolate the spill until it is safe to begin the cleanup.

(3) Blot up spill, using an approved disinfectant (e.g., Wexcide-RTU) solution whenever possible. Dispose of blotting materials in RMW or general waste containers, depending upon amount of saturation and type of spill.

(4) Pour a detergent-disinfectant over the leak or broken container. Clean the spill area with an approved tuberculocidal agent (e.g., 10% solution of 5.25% sodium hypochlorite--common household bleach or Wexcide).

(5) Spread sufficient absorbent to absorb and contain the remaining spill. Collect the absorbent with the shovel and cardboard from spill kit and place it in a RMW receptacle.

(6) If a commercial blood/OPIM spill kit is used, follow the kit instructions.

#### 6. EMERGENCY EYE/FACE WASH FOUNTAIN.

a. The initial first aid treatment for chemical splashes, contact with blood, or other potentially infectious materials is to wash the eyes and face for 15 minutes prior to medical treatment.

b. All personnel in an area with an emergency eye/face wash fountain are instructed in the proper use of this unit.

c. The eye/face wash fountain provides a concentrated, soft stream volume of water to help flush away eye contaminants.

(1) The flag handle is highly visible and goes from off to on in one second or less.

(2) Once the flag handle is activated, the flow remains activated for 15 minutes or until intentionally shut off.

(3) The unit is placed in an area large enough to allow the eyelids to be held open with the hands.

d. The heads can swivel 90<sup>0</sup> out of the way to keep the sink accessible when the eyewash is not in use.

e. The location of the emergency eye/face wash fountain is identified with a highly visible sign.

f. Maintenance.

(1) All plumbed eye/face wash fountains are activated weekly to verify proper operation.

(2) All units are inspected annually IAW manufacturer's instructions.

(3) A monitoring record is maintained to identify the date and who performed weekly maintenance.

(4) The documentation record is available from the Safety Office (phone 6-5678).

7. PNEUMATIC TUBE SYSTEM (PTS). Refer to BAMC Memo 25-72.

a. The computer controlled Pneumatic Tube System (PTS) has 80 interconnected stations for automatic transmission of carriers from one station to another station.

b. This system is used to transport the following materials:

(1) STAT laboratory samples, except those materials listed below. Before sending specimens through a pneumatic tube, two criteria must be fulfilled: The specimen results must be unaffected by their journey and the only approved blood container is the Vacutainer System.

(2) Parenteral doses less than 1000 cc.

(3) Unit dose medications allowed.

(4) Emergency requests, especially those requiring action within one hour.

(5) Small amounts of paperwork.

c. Non-Transportable Materials are:

(1) Breakable items that are not bagged (leak-proof, biohazard bag) and protected by properly paired foam inserts.

- (2) Materials that could force carrier open (i.e., packed towels etc.)
- (3) Irretrievable specimens.
- (4) Tissue specimens and/or pap smears.
- (5) Fluids in excess of 15 ml; food or drink in any quantity.
- (6) Externally contaminated specimen containers. All laboratory specimens are considered contaminated and must be contained in a bio-hazard bag.
- (7) Controlled substances.
- (8) Blood Bank/Transfusion Service products and request forms.
- (9) Culture specimens.
- (10) Electrically charged materials (i.e. batteries within an item).
- (11) Materials that could come loose and scatter (i.e., nails, pins, etc.).
- (12) Vegetation, such as flowers, plants, etc.
- (13) Hazardous materials, flammable liquids, or carcinogenic materials.
- (14) Type of plaster of Paris, glues, or other adhesive materials.
- (15) Materials that could force carriers open by bouncing around in the carrier (i.e., tools, silverware, parts, instruments, etc.).

d. Responsibilities. The BAMC Maintenance Contractor is responsible for:

(1) Maintenance of the PTS. Contact 24 hours a day, seven days a week at 916-5747 or through the Administrative officer of the day/Non-commissioned officer of the day (AOD/NCOD).

(2) Spill clean up within the PTS.

e. Procedures.

(1) Instructions for transporting are posted at each station. BAMC Form 1079, Jun 96, Pneumatic Tube Routing Slip, may be used for proper directing of contents.

(2) Only properly paired foam inserts are used for padding in the carriers.

(3) If a spill or contamination is found in the system during duty or non-duty hours, call BAMC Maintenance Contractor at 6-5747 immediately, so the system can be closed and procedures followed to clean the system.

## 8. LINEN MANAGEMENT

### a. Definitions.

(1) Clean linen: Linen processed by Laundry Service using approved methods and has been received with care to minimize contamination by the environment and/or personnel.

(2) Contaminated linen: Linen that has contacted a patient or the environment is considered contaminated.

### b. Clean linen is:

(1) Handled as little as possible

(2) Stored in an enclosed room or covered receptacle.

(3) Stored away from direct patient care areas.

(4) Always transported in covered clean linen containers. Linen that is shrink wrapped is considered covered.

(5) All clean, torn, unserviceable linen is placed into a light blue nylon bag. Do not throw away unserviceable linen. The blue laundry bag is located in the clean linen room.

### c. Contaminated linen is:

(1) Handled as little as possible and carried away from the body.

(2) Collected in impervious, labeled linen bags (linen hampers) at the point of use and transported (via hampers) to the soiled linen collection point (soiled utility room).

(3) Not stored or accumulated in any container over 72 hours.

(4) Not thrown away, except smallpox contaminated linen.

(5) Linen bags are not overloaded; fill bags 3/4 full to permit the top of linen hamper bags to be closed and prevent spilling.

(6) The linen hamper top is cleaned with an approved disinfectant

### d. Miscellaneous.

(1) Wash hands IAW BAMC policy and wear appropriate PPE when handling contaminated linen.

(2) Consult BAMC MEMO 32-1 and 32-2 for additional linen management information.

9. HOUSEKEEPING.

a. The Hospital Housekeeping Officer:

(1) Submits telephone requests for service, repairs, correction of hazards, and defects that exist in the hospital.

(2) Acts as a point of contact for emergency or special housekeeping requirements, such as a disaster clean up and flooding from broken pipes, etc.

b. The AOD or NCOD (916-4141) contacts housekeeping service (916-3890 or pager 916-1996-0510) after duty hours, weekends, and/or holidays for emergency service.

c. The BAMC Staff:

(1) Clean durable equipment as needed with Sani-Cloth. Place used, discontinued equipment no longer needed in dirty utility rooms for terminal cleaning by housekeeping. In clinics, staff are responsible for reprocessing equipment.

(2) Conduct inspections for a hygienic and safe environment.

(3) Annotate housekeeping discrepancies on BAMC Form 926, through Microsoft Outlook, or with any automated word processor and submit to Housekeeping.

(4) Dispose of needles and sharp instruments only in needles and sharp instruments containers. Needles and sharps are not placed in trash receptacles.

(5) Request housekeeping services after duty hours by calling the Housekeeping (6-3898).

d. The Housekeeping Contract Staff:

(1) Provide service as prescribed in the Performance Work Statement.

(2) EMERGENCY RESPONSE. Report for emergency housekeeping services within 10 minutes from notification. After duty hours, call 916-3890 or the AOD.

(3) DEDICATED LOCK-IN PERSONNEL. Lock-In means employee(s) remain in the specified area during the hours required by the contract. Dedicated means employee(s) are assigned to an area of primary responsibility and complete all routine work in that area before leaving that area. The employee(s) may work within the general area of the medical treatment

facility, but responds immediately when requested to support the dedicated area.

(4) HANDLING AND CLEANING OF FURNITURE AND EQUIPMENT.

Housekeeping personnel do not move, clean, or handle surgical instruments, anesthesia machine, dental operating instruments, or any physiological monitoring equipment. Any equipment used in diagnosis and/or treatment of patients is not cleaned when in use on a patient. Such equipment items are cleaned after use IAW manufacturers' instructions.

(5) SCHEDULES. Housekeeping schedules are posted in janitor's closet.

(6) TOTAL DISINFECTION CLEANING OF SURGICAL/MINOR SURGICAL AREAS. Consist of initial cleaning each day before cases begin, between case cleaning, terminal end-of-day cleaning, and weekly cleaning during each shift assignment.

(7) TOTAL DISINFECTION CLEANING STANDARD FOR ISOLATION ROOM. Is done daily. Remove waste in entire room, damp wipe inside and out of receptacles, and reline receptacles with a clean liner. Damp wipe all surfaces. Clean bathroom. Service all dispensers. Wet mop entire room, using a disposable mop head.

(8) TOTAL DISINFECTION CLEANING STANDARD FOR PATIENT ROOMS AND AREAS. Is done daily. Remove waste in entire room, damp wipe inside and out of receptacles, and reline receptacles with a clean liner. Damp wipe all surfaces. Clean bathroom. Service all dispensers. Sweep and wet mop entire room. Vacuum cubical curtains with microstatic filter, hospital quiet vacuum. Re-hang and straighten cubical curtains anytime they have become unhooked or placed in disarray. Remove cubical curtains for cleaning and re-hang at least every six months. If the patient was in Special or Contact isolation, remove the curtains for cleaning. Vacuum carpet daily; clean immediately if spills occur; and shampoo at needed intervals. Change mopping solution, mop, and cleaning cloths when visibly soiled. Some rooms or areas are more heavily soiled than others and may require frequent solution changes and more frequent cleaning than once daily, if not constant policing. Flatten cardboard boxes before placing in trash carts for transporting to compactors.

(9) TERMINAL DISCHARGE UNIT CLEANING. Provided 24 hours per day, 7 days per week. Begin the patient discharge cleaning within 10 minutes of the time the Government notifies Housekeeping the room/area is ready for cleaning. After normal duty hours, call 916-3890 or the AOD. When more beds are requiring cleaning than available housekeeping staff, the NBC determines the priority.

(10) QUALITY STANDARDS FOR ROUTINE HOUSEKEEPING SERVICES PERFORMED IN ANCILLARY AREAS. Is done daily. Remove waste in the entire room, damp wipe inside and out of receptacles, and reline with a clean liner. Damp wipe all surfaces. Clean bathroom. Service all dispensers. Sweep and wet mop entire room. Vacuum carpet daily; clean immediately if spills occur; and shampoo at needed intervals. Change cleaning cloths, mopping solution, and mop when visibly soiled. Some rooms or areas are more heavily soiled than others and may require more than once daily cleaning, if not constant policing.

(11) WINDOW AND WALL DRAPES AND CURTAINS. Remove wall drapes and curtains within 24 hours after notification and give to the linen department. Re-hang within 24 hours after cleaning to the same window/wall from which they were removed. Vacuum drapes and curtains with microstatic filter, hospital quiet vacuum. Re-hang and straighten drapes and curtains anytime they become unhooked or placed in disarray.

(12) REGULATED MEDICAL WASTE (RMW) AND NON-REGULATED, GENERAL MEDICAL WASTE. Removed from the facility from 0600-2400 hours, seven days per week.

#### 10. MICROWAVE OVENS.

a. IAW the housekeeping contract, housekeepers only clean the outside of a microwave oven.

b. Personnel using a microwave oven immediately wipe up spills as they occur. Do not allow particles or grease to collect on any of the surfaces. Clean daily with disinfectant or soap and water on a clean cloth. Wipe all internal oven surfaces. Wipe the inside of the oven door. Rinse with water. Towel dry.

c. Supervisors ensure cleaning and maintenance of their areas microwave oven.

#### 11. ICE MACHINES.

a. DO NOT use intermediate tubs or basins to carry ice for patient water pitchers.

b. Precautions for ice handlers:

(1) Wash hands immediately prior to touching ice.

(2) Do not handle ice if hands have open sores or rashes.

c. Chute-type ice machines:

(1) Cleaning contractor is BAMC Maintenance Contractor, who cleans and sanitizes internal components on a schedule according to manufacturer's recommendations.

(2) Housekeeping personnel cleans all external surfaces daily, using established damp wiping procedures with Wexcide-RTU or a 1:10 solution of sodium hypochlorite (household bleach) and water mixed fresh daily. Rinse with clear water.

d. Bin ice machines:

(1) Housekeeping personnel clean all external surfaces daily, using established damp wiping procedures with Wexcide-RTU or a 1:10 solution of sodium hypochlorite (household bleach) and water mixed fresh daily.

(2) BAMC Maintenance Contractor cleans the internal bin ice machines IAW a posted cleaning schedule and initials when completed. Disconnect machine from electricity, empty the bin, and discard the ice. Using clean disposable cloths, first clean the scoop; and then wipe all internal surfaces with a freshly prepared solution of one-quarter cup bleach to one gallon of tap water, giving special attention to tracks, recesses, and crevices. Allow to dry. Reconnect ice machine to the electrical outlet.

e. Hospital Engineering performs routine maintenance and acidification cleaning on a scheduled basis. The Unit NCOIC maintains a log/record and documents routine service and maintenance. This log is retrievable for inspection purposes.

## 12. REFRIGERATORS.

a. All refrigerators are cleaned at least monthly with a disinfectant and defrosted as needed. The cleaning of the inside of refrigerators and monitoring of temperatures are responsibilities of each section.

b. Drugs, specimens, and food each have their own refrigerators.

c. Specimen refrigerators have a biohazard label placed on the front of the refrigerator.

d. Food refrigerators are maintained at a temperature range at 32<sup>0</sup> to 38<sup>0</sup> F (0<sup>0</sup> to 3<sup>0</sup> C) IAW TB Med 530, change dated 24 Feb 97.

e. Freezers are kept at 0<sup>0</sup> to 10<sup>0</sup> F (-18<sup>0</sup> to -12<sup>0</sup> C), if used.

f. Medication and specimen refrigerators are maintained at a temperature range of 35<sup>0</sup> to 45<sup>0</sup> F (2<sup>0</sup> to 8<sup>0</sup> C) IAW 1995 Food Code Guide of the U.S. Public Health Service.

g. Blood refrigerators are maintained at a temperature range of 34<sup>0</sup> to 43<sup>0</sup> F (1<sup>0</sup> to 6<sup>0</sup> C).

h. The temperature is documented daily (normal duty days for clinics).

i. Staff food refrigerator temperatures need not be monitored nor documented.

j. If a refrigerator does not fall within the appropriate temperature, as listed above, attempt to readjust the temperature setting, then re-evaluate in two hours. If there is still a problem, remove items from the refrigerator and place in another refrigerator with the proper temperature. Report the malfunctioning refrigerator to the Logistics Area Manager (LAM) for repair. Notify pharmacy if it is a refrigerator for medications for directions. Notify Preventive Medicine for concerns about patient food.

## 13. TUB CLEANING

a. Hydrotherapy equipment and bathtubs are cleaned after each patient use.

b. Special tubs used in Physical Therapy are cleaned and maintained IAW manufacturer's recommendations and unit specific protocols.

c. Housekeeping Personnel are primarily responsible for tub cleaning.

d. BAMC Personnel are ultimately responsible to ensure tubs are cleaned prior to each patient use.

e. To clean the ARJO lift (chair):

(1) Move ARJO lift hygiene chair and bath trolley to the tub.

(2) Spray with water to remove loose debris, soap scum, and stains.

(3) Wipe down chairs and trolley with Wexcide-RTU.

(4) Rinse thoroughly with water before damp drying with a clean cloth.

(5) Move ARJO lift (chair) from tub.

f. To clean tub:

(1) Rinse thoroughly all interior surfaces.

(2) Wipe down all control knobs and tub surfaces with disinfectant solution. Remove all soap scum to prevent progressive build up of stains.

(3) Rinse tub thoroughly.

(4) Wipe dry with a clean cloth.

(5) Mop or have floor mopped to prevent patient, staff, or visitor falls.

#### 14. TOY CLEANING.

a. As children often put toys in their mouths, toys are cleaned on a frequent basis.

b. Toys are washed with liquid detergent and hot water after each use and at least weekly.

c. If the toy is contaminated with blood or feces, it is cleaned, then disinfected with 1:10 hypochlorite solution (one part household bleach to nine parts of water), rinsed, and dried.

d. Children may play with their own plush, cloth, or other non-washable toys as long as these are not shared among children.

#### 15. STERILIZERS.

- a. Central Material Service (CMS) is the primary source for sterilization and is a resource for sterilization questions and issues.
- b. CMS has steam and vapor phase hydrogen peroxide (STERRAD) sterilization capabilities.
- c. The Operating Room has steam sterilization capability and STERIS.
- d. Final sterilization is performed in CMS, except for the Oral Surgery Clinic.

16. COMPUTERS.

- a. Ensure all the computer terminals in the patient rooms are equipped with a plastic keyboard cover.
- b. Nursing personnel wipe keyboard covers with Sani-Cloth or hospital approved disinfectant at least daily.
- c. All other computers are dust and visibly soil free.

## APPENDIX A

### REFERENCES

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2. TB Med 2, *Sterilizing, Medical-Surgical, Dental, and Veterinary Material*
3. TB Med 530, *Food Service Sanitation*
4. BAMC Pam 40-4, *Guide for Obtaining Laboratory Support*
5. BAMC Memo 40-48, *Management of Hazardous Material and Regulated Medical Waste (RMW)*
6. BAMC Memo 40-403, *Regulated Medical Waste (RMW)*
7. BAMC Memo 40-121, *Central Material Services (CMS)*
8. BAMC Memo 40-135, *Parenteral and Mucous Membrane Exposure*
9. BAMC Memo 40-136, *Communicable and Occupational Disease Reporting*
10. BAMC Memo 40-169, *Bloodborne Pathogen Exposure Control Plan*
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24. CDC Guidelines for Environmental Infection Control in Health-Care Facilities. *MMWR* June 6, 2003.
25. Federal Register 29 CFR Part 1910.1030 Occupational Exposure to Bloodborne Pathogens; Final Rule. Vol 56, No 235. 6 December 1991. pp 64175-64182.
26. Federal Register 29 CFR Part 1910.1030 Occupational Exposure to Bloodborne Pathogens; Needlesticks and Other Sharps Injuries; Final Rule. 18 January 2001. pp 5318-5325.
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**APPENDIX B****GLOSSARY**

Antisepsis:	The prevention of sepsis by the inhibition or destruction of the causative organism. Usually refers to substances of human origin.
Antiseptic:	An antimicrobial that will inhibit the growth and development of microorganisms or kill them. Used on human tissue.
Asepsis:	Freedom from infection; the prevention of contact with microorganisms.
Bacteremia:	The presence of bacteria in the blood.
Communicable:	Capable of being transmitted from one person to another.
Community acquired:	Infection resulting from the acquisition of the responsible infectious infection agent before hospitalization. The infection may manifest before hospitalization or be in the incubation period at the time of admission to the hospital.
Contamination:	The presence of a microorganism on a body or an inanimate surface, including water or food.
Cross-infection:	Infection transferred from one person to another.
Decontamination:	The removal of infectious agents from body surfaces and inanimate articles or substances.
Detergent:	Any of a large number of synthetic water-soluble or liquid organic surface active agents for use in washing which emulsify oils and suspend dirt particles.
Disinfect:	To free from pathogenic organisms or render them inert.
Disinfectant:	An antimicrobial agent applied to inanimate environmental surfaces that inhibits or kills organisms.
Disinfection:	Killing of infectious agents outside the body by direct application, either physically or chemically.
Fomite:	An inanimate object, book, wooden object, or article of clothing, that in itself is not harmful but is able to harbor pathogenic microorganisms and thus serve as an infectious agent transmitter.

## **GLOSSARY(cont.)**

- Germicide:** An antimicrobial agent that kills pathogenic organisms.
- Infection:** The entry and development or multiplication of an infectious agent in the body of man or animal. Infection is not synonymous with infectious disease. The result may be subclinical; no recognizable clinical signs or symptoms, the infectious agent may be identifiable only by laboratory means; or clinical, the host-parasite interaction causes sufficient host injury to produce a parasite specific response.
- Infectious:** Capable of producing infection. Characterized by pathogen presence.
- Infectious agent:** A microorganism and sometimes helminthes capable of producing an infection or an infectious disease.
- Infectious disease:** A disease of man or animal resulting from an infection.
- Implant:** A non-human-derived implantable foreign body that is permanently placed in a patient during surgery.
- Healthcare associated:** Infection developing during hospitalization that was not present or incubating at the time of admission. Infection may not manifest clinically until after discharge. It may also be the residual of an infection acquired during a previous admission.
- Opportunist:** Capable of adapting to the tissue or host different than the normal host.
- Waste:** Regulated Medical; stocks and cultures of etiologic biologic agents, tissues, body parts, bulk blood greater than 20 cc, and all materials, secretions, excretions from a patient with CDC Risk Group IV disease.
- Sanitize:** Reduce the bacterial count on a surface to safe levels based on public health standards.
- Sepsis:** A patient condition resulting from the presence of pathogenic organisms or their toxins in the blood or other tissues.
- Septicemia:** Systemic disease associated with the presence and persistence of pathogenic microorganisms or their toxins in the blood.
- Soap:** Any compound of one or more fatty acids or their equivalents with an alkali. Useful in the emulsification of fat and suspension of dirt particles during cleaning/washing.

## **GLOSSARY(cont.)**

Sterilant:	A sterilizing agent.
Sterile:	Aseptic. Free from living organisms.
Sterility:	The state of being free from viable microorganisms.
Sterilization:	The complete elimination of microbial viability.
Sterilize:	To render sterile.

## APPENDIX C

### ABBREVIATIONS

AB	antibody
ADA	Americans with Disabilities Act
A & D	Admission and Dispositions
AIDS	acquired immune deficiency syndrome
ANC	absolute neutrophil count
AOD	administrative officer of the day
APIC	Association for Practitioners in Infection Control and Epidemiology
AR	Army Regulation
BAMC	Brooke Army Medical Center
<sup>0</sup> C	degrees Celsius
CDC	Centers for Disease Control and Prevention
CFR	Code of Federal Regulations
CFUs	Colony Forming Units
CHCS	Composite Healthcare System
CHG	chlorhexidine gluconate
CIS	Computer Information System
CJD	Creutzfeldt-Jakob Disease
CMS	Central Materiel Service
CMV	cytomegalovirus
CPAC	Civilian Personnel Advisory Center
DAC	Department of the Army Civilian
DOB	date of birth
<sup>0</sup> F	degrees Fahrenheit
EOC	Environment of Care
EPA	Environmental Protection Agency
EPP	Emergency Preparedness Plan
ESO	Environmental Safety Office
FDA	Food and Drug Administration
HBV	Hepatitis B virus
HCW	healthcare worker
HEPA	high-efficiency particulate air
HICPAC	Hospital Infection Control Practices Advisory Committee
HIV	human immunodeficiency virus
HOB	head of bed
HUS	Hemolytic uremic syndrome

**ABBREVIATIONS (cont.)**

IAW	in accordance with
IC FMT	Infection Control Functional Management Team
ICP	Infection Control Program
ICS	Infection Control Service
ID	Infectious Diseases
IH	industrial hygiene
IV	intravascular
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
LAM	Logistics Area Manager
MDRO	multi-drug resistant organisms
MEC	minimal effective concentration
MEMO	memorandum
MMR	measles, mumps, rubella
MRSA	Methicillin Resistant <i>Staphylococcus Aureus</i>
MSDS	Material Safety Data Sheet
NBC	Nursing Bed Coordinator
NIOSH	National Institute of Occupational Safety and Health
OH	Occupational Health
OHS	Occupational Health Section
OPIM	other potentially infectious materials
OSHA	Occupational Safety and Health Administration
PEP	post-exposure protocol
PICC	peripherally inserted central catheter
PM	Preventive Medicine
PPD	purified protein derivative
PPE	personnel protective equipment
PTS	Pneumatic Tube System
RMW	regulated medical waste
RPP	Respiratory Protection Program
RSV	respiratory syncytial virus
RT	respiratory therapy
SP	Standard Precautions
SOP	Standard Operating Procedure
SUD	single use devices

**ABBREVIATIONS (cont.)**

TB	Tuberculosis
TDH	Texas Department of Health
TST	Tuberculin skin testing
TPN	total parenteral nutrition
TRPSC	Tri-Service Regional Product Standardization Committee
TSM	transparent semipermeable membrane
URI	upper respiratory infection
VHF	Viral Hemorrhagic Fevers
VRE	Vancomycin Resistant <i>Enterococci</i>

**APPENDIX D****Transmission Based ISOLATION AND PRECAUTIONS Guidelines  
REVISED CDC GUIDELINES OCTOBER 1997**

Appropriate Personal Protective Equipment (PPE) is dependent upon the patient and procedure being performed. PPE used for Standard Precautions includes gloves when touching blood, body fluids, secretions, excretions, and contaminated items. Wear a mask and eye protection to protect mucous membranes of eyes, mouth, and nose for procedures likely to generate splashes or sprays of blood or body fluids. A gown is worn to protect skin and clothing during procedures likely to generate splashes or sprays of blood and body fluids.

**S** = Standard Precautions

**Special** = Special Precautions

**D** = Droplet Precautions

**C** = Contact Precautions

**A** = Airborne Precautions

**\*\*BW\*\*** = Potentially Used For Biological Warfare

**IC** = Infection Control (phone 6-2130 or 6-3562)

**OH** = Occupational Health (phone 6-6897)

**CH** = Community Health (phone 5-4461)

**Duration of Precautions:** Standard precautions are practiced continuously on all patients; therefore, the duration of precautions applies to contact, droplet, airborne, and special isolation precautions.

**CI** = Contact Infection Control to determine patient status

**CN** = Until off antibiotics and culture negative

**DI** = Duration of Illness (with wound lesions until drainage stops)

**U** = Until time specified in hours (Hrs) after initiation of effective therapy

**F** = See footnote number

<b>INFECTION/CONDITION</b>	<b>PRIVATE ROOM</b>	<b>TYPE</b>	<b>DURATION</b>	<b>NOTIFY IC/OH/CH</b>
<b>Abscesses</b>				
Draining Major <sup>a</sup>	Y	C	DI	
Draining Minor <sup>b</sup>	N	S	DI	
<b>Acquired Immune Deficiency Syndrome (AIDS)</b>				
<b>Human Immunodeficiency Virus (HIV)</b>	N	S		CH
<b>Actinomycosis</b>	N	S		

**APPENDIX D - Transmission Based ISOLATION AND PRECAUTIONS Guidelines**  
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<b>INFECTION/CONDITION</b>	<b>PRIVATE ROOM</b>	<b>TYPE</b>	<b>DURATION</b>	<b>NOTIFY IC/OH/CH</b>
<b>Adenovirus</b> (Infants/Children)	Y	D, C	DI	
<b>Amebiasis</b>				
<b>Dysentery</b>	Y	S		CH
See Abscess	Y	S		CH
<b>Anthrax</b> <b>**BW**</b>				
Cutaneous Or Pulmonary	N	S		CH + IC
<b>INFECTION/CONDITION</b>	<b>PRIVATE ROOM</b>	<b>TYPE</b>	<b>DURATION</b>	<b>NOTIFY IC/OH/CH</b>
<b>Arthropod Borne Encephalitis</b>				
Bacterial/Viral	N	S		
<b>Ascariasis (Roundworm)</b>	N	S		
<b>Aspergillosis</b>	N	S		
<b>Babesiosis</b>	N	S		
<b>Blastomycosis</b>	N	S		
<b>Boils</b> (see Staphylococcal infections)	N	S		
<b>Botulism</b> <i>In Adults</i> <b>**BW**</b>	N	S		CH + IC
<b>Brucellosis (Undulant Fever, Malta Fever, Mediterranean Fever, Bang's Disease, Draining Lesions)</b>	N	S		CH
<b>Burns</b>				
Major	Y	S		
Infected Or Colonized	Y	S		
<b>Campylobacter</b>				
Diarrhea (Adults)	N	S <sup>j</sup>		
Diarrhea (Children, Incontinent Patients, Patients With Poor Hygiene)	Y	C		CH
<b>Candidiasis</b>	N	S		
<b>Cat Scratch Disease</b>	N	S		
<b>Cellulitis</b> (uncontrolled drainage)	N	C	DI	
<b>Cellulitis</b> (Intact Skin)	N	S		
<b>Chickenpox</b> - see <b>Varicella</b>	Y	A+C	F <sup>f</sup>	IC/OH/CH
<b>Chlamydia Trachomatis</b>				
Genital	N	S		CH
Neonatal Pneumonia	N	S		

**APPENDIX D - Transmission Based ISOLATION AND PRECAUTIONS Guidelines**  
**REVISED CDC GUIDELINES OCTOBER 1997 (CONT.)**

INFECTION/CONDITION	PRIVATE ROOM	TYPE	DURATION	NOTIFY IC/OH/CH
<b><i>Cholera**BW**</i></b>				
Adult	N	S <sup>j</sup>		CH + IC
Child	Y	C		
<b>Closed-cavity infection</b>	N	S		
<b><i>Clostridium difficile</i> (C. diff.)</b>	Y	C	DI	IC
<b><i>Clostridium perfringens</i></b>				IC
Food Poisoning	N	S		
<b>Coccidioidomycosis (Valley Fever)</b>	N	S		CH
Draining lesions				
Pneumonia				
<b>Congenital Rubella</b>	Y	C	F <sup>f</sup>	
<b>Conjunctivitis</b>				
Etiology Unknown	Y	C		CH
Etiology Known:				
Viral	Y	C	DI	CH
Bacterial	N	S		CH
<b>Coxsackievirus Disease</b>				
Adult	Y	S		
Children	Y	C	DI	
<b>Creutzfeldt-Jakob Disease (CJD)</b>	N	S <sup>g</sup>		CH + IC
<b>Croup Children</b>	Y	C		
<b>Cryptococcosis</b>	N	S		
<b>Cytomegalovirus (CMV) Infection</b>	N	S		
Neonatal Or Immunosuppressed				
<b>Decubitus Ulcer, infected</b>				
Major <sup>a</sup>	N	C	DI	
Minor <sup>b</sup>	N	S		
<b>Dermatitis</b>				
Non draining lesions, no vesicles	N	S		
Draining lesions, vesicles	N	C		
<b>Dengue Fever</b>	N	S <sup>d</sup>		CH
<b>Dermatophytosis (Ringworm) (Tinea)</b>	N	S		
<b>Diphtheria</b>				
Cutaneous	Y	C	CN <sup>h</sup>	
Pharyngeal	Y	D	CN <sup>h</sup>	

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<b>INFECTION/CONDITION</b>	<b>PRIVATE ROOM</b>	<b>TYPE</b>	<b>DURATION</b>	<b>NOTIFY IC/OH/CH</b>
<b>Ebola viral hemorrhagic fever</b>	Y	C <sup>I</sup>	DI	IC
<b>Echinococcosis (Hydatidosis)</b>	N	S		
<b>Echovirus Disease</b> (enteroviral)				
Adult	N	S		
Infant/Children	Y	C	DI	
<b>Eczema Vaccinatum</b> (Vaccinia-Immunizing agent to eradicate Smallpox)	Y	C	DI	CH + IC
<b>Encephalitis</b>				
Herpes And Other	N	S		
Suspected Enterovirus	N	S		CH
<b>Endometritis</b>	N	S		
<b>Enterobiasis (Oxyuriasis, Pinworms)</b>	N	S		
<b>Enteroviral infections</b>				
Adults	N	S		
Infants/children	Y	C	DI	
<b>Epiglottitis</b> In Infants & Young Children Due To <i>Haemophilus influenzae</i>	Y	D	U <sup>24Hrs</sup>	
<b>Epstein-Barr viral infection</b> Including infectious mononucleosis	N	S		
<b>Erysipelas</b> (See Cellulitis And Streptococcal Infections)				
Intact Skin	N	S		
Draining	Y	C	DI	
<b>Erythema Infectiosum</b> (*Fifth Disease) (Human Or Parvo Virus)	Y Y	D D	DI <sup>x</sup>	
<b>Food Poisoning</b>	N	S		CH + IC
<b>Furunculosis</b>				
Newborns	Y	C	DI	
Adults	Y	D	DI	
<b>Furunculosis</b>				
Newborns	Y	C	DI	
Adults	Y	D	DI	
<b>Gas Gangrene</b>	N	S		

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INFECTION/CONDITION	PRIVATE ROOM	TYPE	DURATION	NOTIFY IC/OH/CH
<b>German Measles</b>				
Acquired	Y	D	F <sup>v</sup>	
Congenital	Y	D	F <sup>v</sup>	
INFECTION/CONDITION	PRIVATE ROOM	TYPE	DURATION	NOTIFY IC/OH/CH
<b>Giardiasis</b>	Y	S <sup>j</sup>		
<b>Gonococcal Ophthalmia</b>	N	S		
<b>Gonorrhea</b>	N	S		
<b>Granuloma Inguinale</b>	N	S		
<b>Guillain-Barré Syndrome</b>	N	S		
<b>Hand, Foot And Mouth Disease</b>				
Adults	N	S		
Children	Y	C		
<b>Hansen's Disease (Leprosy)</b>	N	S		
<b>Hemorrhagic Fevers **BW**</b> (Exotic Communicable Diseases)	Y	C <sup>i</sup>	DI <sup>i</sup>	CH + IC
<b>Helicobacter pylori</b>	N	S		
<b>Hepatitis A</b>				
Continent	Y	S		
Diapered Incontinent	Y	C	F <sup>k</sup>	
<b>Hepatitis B (HBV)</b>	N	S		
<b>Hepatitis Non A Non B</b>				
<b>Hepatitis C (HCV)</b>	N	S		
<b>Hepatitis E (HEV)</b>	N	S		
<b>Herpes Simplex</b>				
Encephalitis No Lesions Elsewhere	N	S		
Neonatal F <sup>l</sup>	N	C	DI	
Mucocutaneous, disseminated or primary, severe	Y	C	DI	
Mucocutaneous, recurrent (skin, genital, oral)	N	S		
<b>Herpes Zoster / Varicella zoster</b>				
<u>Shingles (Immunocompromised Patient and Disseminated In</u>	Y	A+C	DI <sup>m</sup>	
<u>Normal Patient)</u>	N	S		
Shingles (Localized In Normal Host)				

**APPENDIX D - Transmission Based ISOLATION AND PRECAUTIONS Guidelines**  
**REVISED CDC GUIDELINES OCTOBER 1997 (CONT.)**

<b>INFECTION/CONDITION</b>	<b>PRIVATE ROOM</b>	<b>TYPE</b>	<b>DURATION</b>	<b>NOTIFY IC/OH/CH</b>
<b>HTLV I and II</b>	N	S		CH
<b>Histoplasmosis</b>	N	S		
<b>HIV<sup>c</sup></b>	N	S		
<b>Impetigo</b>	Y	C	U <sup>24Hrs</sup>	
<b>Infectious Mononucleosis (Epstein-Barr)</b>	N	S		
<b>Influenza</b>				
Adults	Y	D	DI	
Infants, Children	Y	D	DI	
<b>Jakob-Creutzfeldt Disease (Slow Virus)</b>	N	S <sup>g</sup>		IC + CH
<b>Kawasaki's Disease (Mucocutaneous Lymph Node Syndrome)</b>	N	S		CH
<b>Lassa Fever<sup>i</sup></b>	Y	C	DI	IC + CH
<b>Legionnaire's Disease</b>	N	S		CH
<b>Leprosy (Hansen's Disease)</b>	N	S		CH
<b>Leptospirosis</b>	N	S		CH
<b>Lice</b>	Y	C	U <sup>24Hrs</sup>	
<b>Listeriosis</b>	N	S		
<b>Lyme Disease</b>	N	S		CH
<b>Lymphocytic Choriomeningitis</b>	N	S		
<b>Lymphogranuloma Venereum</b>	N	S		
<b>Malaria</b>	N	S		CH
<b>Marburg Virus Disease**BW**</b>	Y	C <sup>l</sup>	DI	IC
<b>Measles (Rubeola) All Presentations</b>	Y	A	DI	CH
<b>Melioidosis</b>	N	S		

**APPENDIX D - Transmission Based ISOLATION AND PRECAUTIONS Guidelines**  
**REVISED CDC GUIDELINES OCTOBER 1997 (CONT.)**

INFECTION/CONDITION	PRIVATE ROOM	TYPE	DURATION	NOTIFY IC/OH/CH
<b>Meningococcal Pneumonia, Sepsis</b>	Y	D	U <sup>24Hrs</sup>	CH
<b>Meningitis</b>				IC + CH
Aseptic (Viral)	N	S		
Bacterial	N	S		
Fungal	N	S		
Haemophilus Influenzae, known or suspected	Y	D	U <sup>24Hrs</sup>	
<i>Listeria monocytogenes</i>	N	S		
<i>Neisseria meningitidis</i>	Y	D	U <sup>24Hrs</sup>	
Pneumococcal	N	S		
Tuberculosis <sup>o</sup>	N	S		
Other Diagnosed Bacterial	N	S		
<b>Mononucleosis (Mono)</b>	N	S		
<b>Methicillin Resistant <i>Staphylococcus Aureus</i> (MRSA)</b>	Y	C	CI	IC
<b>Multiple Resistant Organisms (MRO)</b>	Y	C	CI + CN	IC
<b>Mumps</b>	N	S		
<b>Murcormycosis</b>	N	S		
<b>Mycoplasma</b>	Y	D	DI	
<b><i>Mycotoxins (T2) **BW**</i></b> (Trichothecene Mycotoxins)	N	S		
<b>Necrotizing Enterocolitis (NEC)</b>	N	S	DI	
<b>Neisseria</b>				
Gonorrhea	N	S		CH
Meningitidis	Y	D	U <sup>24Hrs</sup>	CH
<b>Neutropenic Precautions</b> (Not an Isolation Precaution)	Y	S		
<b>Parainfluenza</b>	N	C	DI	
<b>PAROVIRUS B19</b>	Y	D	F <sup>f</sup>	
<b>Pediculosis (Lice)</b>	Y	C	U <sup>24Hrs</sup>	
<b>Pertussis (Whooping Cough)</b>	Y	D	F <sup>s</sup>	CH
<b>Pharyngitis</b>				
Adults	N	S		
Infants and young children	Y	D	DI	

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INFECTION/CONDITION	PRIVATE ROOM	TYPE	DURATION	NOTIFY IC/OH/CH
<b>Pinworms</b> Children	N	S		
<b>Plague (<i>Yersinia Pestis</i>)**BW**</b> Pneumonic	Y	D	U <sup>72Hrs</sup>	CH + IC
Bubonic	N	S		
<b>Pneumonia</b> Normal Host	N	S	DI	
Outbreak	N	D	DI	
Immunocompromised Host If Suspected RSV or Adenovirus	Y	S	DI	
Unknown Etiology	N	S	DI	
<b>Poliomyelitis</b>	Y	S	DI	CH
<i>Pseudomonas cepacia</i> (see <i>Burkholderia cepacia</i> )		S <sup>t</sup>		
<b>Pseudomembranous Colitis</b>	Y	C	DI	
<b>Psittacosis (Ornithosis)</b>	N	S		CH + IC
<b>Q Fever**BW**</b>	N	S		
<b>Rabies</b>	Y	S		CH
<b>Respiratory infectious disease, acute</b> (if not covered elsewhere) Adults		S		
Infants and young children <sup>c</sup>		C	DI	
<b>Respiratory Syncytial Virus (RSV)</b> Adults (Intact Immune System)	N	S	DI	
Infant/Children	Y	C	DI	
Immunocompromised Host	Y	C	DI	
<b>Reye's Syndrome</b>	N	S		CH
<b>Rhinovirus Infection (Respiratory)</b> Adults	Y	S		
Infants and children	Y	S		
<b>Rheumatic Fevers</b>	N	S		CH
<b>Rickettsial Fevers</b> <b>Rocky Mountain Spotted Fever</b>	N	S		CH
<b>Tickborne Typhus Fever</b>	N	S		N
<b>Ringworm (Tinea)</b>	N	S		
<b>Rocky Mountain Spotted Fever</b>	N	S		CH

**APPENDIX D - Transmission Based ISOLATION AND PRECAUTIONS Guidelines**  
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INFECTION/CONDITION	PRIVATE ROOM	TYPE	DURATION	NOTIFY IC/OH/CH
<b>Roseola Infantum</b>	N	S		
<b>Roundworm (Ascariasis)</b>	N	S		
<b>Rubella</b>				
-Acquired	Y	D	F <sup>v</sup>	CH
-Congenital	Y	D	F <sup>v</sup>	CH
<b>Rubeola Red Measles</b>				
Normal host	Y	A	U <sup>4 Days</sup>	CH
Immunocompromised	Y	A	DI	CH
<b>Salmonella</b>	Y	S		CH
<b>Scabies</b>	Y	C	U <sup>24Hrs</sup>	
<b>Scarlet Fever</b>	Y	D	U <sup>24Hrs</sup>	CH
<b>Shigellosis</b>				
Adults	Y	S		CH
Children	Y	C	DI, CN	CH
<b>Shingles (See Herpes zoster)</b>				
<b>Smallpox **BW**</b>	Y	C+A		CH + IC
<b>Stomatitis</b>	N	S		
<b>Staphylococcal Infections</b>				
Lung Abscess	N	S		
Pneumonia	N	S		
Skin, wound, burn				
Major <sup>a</sup>	Y	C	DI	
Minor <sup>b</sup>	N	S		
<b>Staphylococcal Enterotoxin B (SEB) **BW**</b>	N	S		CH + IC
<b>Streptococcal Infections</b>				
<b>Puerperal Sepsis Group A</b>	N	S		
<b>Staphylococcal Infections</b>				
Lung Abscess	N	S		
Pneumonia	N	S		
Skin, wound, burn				
Major <sup>a</sup>	Y	C	DI	
Minor <sup>b</sup>	N	S		
<b>Staphylococcal Enterotoxin B (SEB) **BW**</b>	N	S		CH + IC
<b>Streptococcal Infections</b>				
<b>Puerperal Sepsis Group A</b>	N	S		

**APPENDIX D - Transmission Based ISOLATION AND PRECAUTIONS Guidelines**  
**REVISED CDC GUIDELINES OCTOBER 1997 (CONT.)**

INFECTION/CONDITION	PRIVATE ROOM	TYPE	DURATION	NOTIFY IC/OH/CH
<b>Streptococcal Infections</b> Scarlet Fever Group A	Y	D	U <sup>24Hrs</sup>	
<b>Streptococcal Infections</b> Skin/Wound: Major <sup>a</sup> Minor <sup>b</sup>	N N	C S	U <sup>24Hrs</sup>	CH CH
<b>Syphilis</b> Skin And Mucus Membrane Congenital, Primary, Secondary Latent (Tertiary) = seropositive without Lesions	N N N	S S S		CH CH CH
<b>Tapeworm</b> Hymenolepis Nana, Taenia Saginata, Taenia Solium	N	S		
<b>Tinea</b>	N	S		
<b>Toxic Shock Syndrome</b> Staphylococcal Streptococcal	N N	S C		CH
<b>Toxoplasmosis</b>	N	S		
<b>Trench Mouth (Vincent's Angina)</b>	N	S		
<b>Trichinosis (whipworm)</b>	N	S		CH
<b>Trichomoniasis</b>	N	S		
<b>Trichuriasis (Whipworm)</b>	N	S		
<b>Tuberculosis</b> Extrapulmonary <sup>o</sup> Draining Lesion Pulmonary, confirmed or suspected Skin test positive, no s/s of pulm disease	N N Y N	S S A S	F <sup>w</sup>	OH/IC/CH
<b>Tularemia**BW**</b>	N	S		CH + IC
<b>Typhus</b>	Y	S		
<b>Typhoid/Paratyphoid Fever</b> Adults Diapered children and incontinent patients	Y Y	S C		CH

**APPENDIX D -Transmission Based ISOLATION AND PRECAUTIONS Guidelines**  
**REVISED CDC GUIDELINES OCTOBER 1997 (CONT.)**

INFECTION/CONDITION	PRIVATE ROOM	TYPE	DURATION	NOTIFY IC/OH/CH
<b>Vancomycin Resistant <i>Enterococcus</i></b>	Y	Special	CI	IC
<b>Vancomycin Intermediate <i>Staphylococcus Aureus</i> (VISA)</b>	Y	Special	CI	IC
<b>Vancomycin Resistant <i>Staphylococcus Aureus</i> (VRSA)</b>	Y	Special	CI	IC
<b>Varicella</b> Chickenpox Zoster :	Y	A+C	F <sup>c</sup>	
Normal host	N	S <sup>m</sup>	DI <sup>m</sup>	
Immunocompromised	Y	A+C	DI <sup>m</sup>	
<b><i>Venezuelan Equine Encephalitis</i> (VEE)</b> <b>**BW**</b>	Y	S		IC
<b>Whipworm</b>	N	S		
<b>Whooping Cough (Pertussis)</b>	Y	D	F <sup>s</sup>	CH
<b>Wound Infections</b> Major <sup>a</sup> Minor <sup>b</sup>	Y N	C S	DI	If SSI, IC
<b>Yellow Fever</b>	N	S		CH
<b><i>Yersinia (Plague)</i> **BW**</b> Pneumonic Bubonic	Y N	D S	U <sup>72Hrs</sup>	IC
<b>Zygomycosis</b>	N	S		

**APPENDIX D -Transmission Based ISOLATION AND PRECAUTIONS Guidelines**  
**REVISED CDC GUIDELINES OCTOBER 1997 (CONT.)**

- No dressing or dressing does not contain drainage adequately.
- Dressing covers and contains drainage adequately.
- Also see syndromes or conditions listed in Table 2.
- Install screens in windows and doors in endemic areas.
- Maintain precautions until all lesions are crusted. The average incubation period for varicella is 10 to 16 days, with a range of 10 to 21 days. After exposure, use varicella zoster immune globulin (VZIG) when appropriate, and discharge susceptible patients if possible. Place exposed susceptible patients on Airborne Precautions beginning 10 days after exposure and continuing until 21 days after last exposure (up to 28 days if VZIG has been given). Susceptible persons should not enter the room of patients on precautions if other immune caregivers are available.
- Place infant on precautions during any admission until 1 year of age, unless nasopharyngeal and urine cultures are negative for virus after age 3 months.

**APPENDIX D -Transmission Based ISOLATION AND PRECAUTIONS Guidelines  
REVISED CDC GUIDELINES OCTOBER 1997 (CONT.)**

- g. Additional special precautions are necessary for handling and decontamination of blood, body fluids and tissues, and contaminated items from patients with confirmed or suspected disease. See latest College of American Pathologists (Northfield, Illinois) guidelines or other references.
- h. Until two cultures taken at least 24 hours apart are negative.
- i. Call state health department and CDC for specific advice about management of a suspected case. During the 1995 Ebola outbreak in Zaire, interim recommendations were published. Pending a comprehensive review of the epidemiologic data from the outbreak and evaluation of the interim recommendations, the 1988 guidelines for management of patients with suspected viral hemorrhagic infections will be reviewed and updated if indicated. Include mask and eye protection with contact precautions.
- j. Use Contact Precautions for diapered or incontinent children <6 years of age for duration of illness.
- k. Maintain precautions in infants and children <3 years of age for duration of hospitalization; in children 3 to 14 years of age, until 2 weeks after onset of symptoms; and in others, until 1 week after onset of symptoms.
- l. For infants delivered vaginally or by C-section and if mother has active infection and membranes have been ruptured for more than 4 to 6 hours.
- m. Persons susceptible to varicella are also at risk for developing varicella when exposed to patients with herpes zoster lesions; therefore, susceptibles should not enter the room if other immune caregivers are available.
- n. The "Guideline for Prevention of Nosocomial Pneumonia" recommends surveillance, vaccination, antiviral agents, and use of private rooms with negative air pressure as much as feasible for patients for whom influenza is suspected or diagnosed. Many hospitals encounter logistic difficulties and physical plant limitations when admitting multiple patients with suspected influenza during community outbreaks. If sufficient private rooms are unavailable, consider cohorting patients or, at the very least, avoid room sharing with high-risk patients. See "Guideline for Prevention of Nosocomial Pneumonia" for additional prevention and control strategies.
- o. Patient should be examined for evidence of current (active) pulmonary tuberculosis. If evidence exists, additional precautions are necessary (see tuberculosis).
- p. Resistant bacteria judged by the infection control program, based on current state, regional, or national recommendations, to be of special clinical and epidemiologic significance.
- q. For 9 days after onset of swelling.
- r. Maintain precautions for duration of hospitalization when chronic disease occurs in an immunodeficient patient. For patients with transient aplastic crisis or red-cell crisis, maintain precautions for 7 days.
- s. Maintain precautions until 5 days after patient is placed on effective therapy.
- t. Avoid cohorting or placement in the same room with a CF patient who is not infected or colonized with B cepacia. Persons with CF who visit or provide care and are not infected or colonized with B cepacia may elect to wear a mask when within 3 ft of a colonized or infected patient.
- u. Avoid placement in the same room with an immunocompromised patient.
- v. Until 7 days after onset of rash.
- w. Discontinue precautions only when TB patient is on effective therapy, is improving clinically, and has three consecutive negative sputum smears collected on different days, or TB is ruled out. Also see CDC "Guidelines for Preventing the Transmission of Tuberculosis in Health-Care Facilities."
- x. Duration of illness in an immunocompromised patient.

The proponent for this memorandum is the Chief, Infection Control (IC). Users are invited to send comments and suggestions for improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, Brooke Army Medical Center, ATTN: MCHE-MDI, Fort Sam Houston, Texas 78234-6200.

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