

Infection Control Manual		
	Policy Name	Air and Ground Transport
	Policy Number	IC 0001
	Date this Version Effective	Oct 2016
	Responsible for Content	Hospital Epidemiology

I. Description

Addresses infection control measures related to personnel, transported patients, equipment, and the environment of our ground and air transport service.

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II. Rationale

Adult and pediatric patients with communicable infectious diseases are regularly transported. Personnel should be alert to taking appropriate measures to prevent transmission of disease to themselves and others. In many cases, the communicable disease is unknown. This requires that personnel observe patients for symptoms of infectious disease and use appropriate empiric isolation precautions based on these symptoms.

III. Policy

A. Personnel

- Healthcare Personnel (HCP) must adhere to guidelines found in the Infection Control Policy: [Infection Control and Screening Program: Occupational Health Services](#).
- Personnel exposed to communicable diseases, for example, hepatitis A, invasive meningococcal disease, pertussis, should report the exposure to their supervisor. Hospital Epidemiology (984-974-7500) or the Infection Preventionist on call (pager 123-7427) should be notified to initiate the exposure evaluation. The exposed employee will complete an incident report and be seen by OHS for appropriate exposure prophylaxis/treatment as needed.
- Personnel shall adhere to the Infection Control Policies: [Exposure Control Plan for Bloodborne Pathogens IC0021](#) and the [Tuberculosis Control Plan IC0060](#).
- Personnel shall adhere to all personnel guidelines in the Infection Control Policy: [Infection Control Guidelines for Adult and Pediatric Inpatient Care IC0030](#).
- Hand hygiene will be performed in accordance with the Infection Control Policy: [Hand Hygiene and Use of Antiseptics for Skin Preparation IC0024](#).

6. Healthcare personnel must adhere to the Infection Control Policy: [Isolation Precautions IC0031](#). If a communicable disease is in the differential diagnosis, the appropriate Isolation Precautions should be ordered and instituted.
7. Drinking, eating, application of lip balm and handling of contact lenses are prohibited in areas where there is potential for exposure to blood and other potentially infectious materials.
8. Personnel must adhere to the Infection Control Policy Exposure Control Plan for Bloodborne Pathogens IC0021 and the Tuberculosis Control Plan IC0060.
9. Standard Precautions should be consistently followed. Personnel must be familiar with and follow the Infection Control Policy: [“Exposure Control Plan for Bloodborne Pathogens IC0021.”](#)
 - a. Nitrile gloves should be worn for touching blood and other potentially infectious materials (OPIM), mucous membranes, or non-intact skin of all patients, for handling items or surfaces soiled with blood or OPIM, and for performing venipuncture and other vascular access procedures. Gloves should be changed and hands should be washed or cleaned with a waterless Alcohol Based Hand Rub (ABHR) after contact with each patient. Gowns, masks, and gloves will be available on the vehicle at all times. For situations where large amounts of blood are likely to be encountered, it is important that gloves fit tightly at the wrist to prevent blood contamination of hands around the cuff and that gowns are worn. For multiple trauma victims, gloves should be changed between patient contacts. Appropriate protective attire must also be worn when personnel handle deceased person(s) or amputated body parts. Appropriate safety gloves (structural fire-fighting gloves that meet the Federal OSHA requirements) should be worn in any situation where sharp or rough surfaces are likely to be encountered. If these gloves are not disposable, they should be appropriately cleaned and disinfected between each use following the manufacturer’s instructions. Employees with skin or systemic allergic reactions to soaps should be evaluated by UNC Health Care OHS.
 - b. Masks and protective eyewear or face shields should be worn during procedures that are likely to generate droplets of blood or OPIM to prevent exposure of mucous membranes of the mouth, nose, and eyes. If eyewear is reusable (i.e., reusable goggles), it should be appropriately cleaned and disinfected after contamination using an EPA-registered hospital disinfectant (e.g. MetriGuard or Sani-Cloths). Flame-retardant flight suits are worn by flight personnel. Cotton/polyester suits may be worn by other transport personnel in the field. If the suit becomes contaminated with blood/OPIMs, the manufacturer’s instructions for cleaning/disinfecting should be followed. Boots and leather goods may be brush scrubbed with soap and hot water when visibly soiled. Waist (fanny) packs should be made of a material that can be cleaned. Cleaning with a germicidal detergent should occur on a routine basis and when the pack is visibly soiled. Alternatively, packs may be machine laundered. No personal items or food should be stored in the packs. When working with a patient on Contact Precautions, the pack should not come in contact with the patient or the patient’s immediate environment (e.g., wear cover gown). A washer/dryer is located in the department for this purpose. Contaminated clothes/scrubs should never be worn home.
 - c. Personnel who get a needlestick/sharp, mucous membrane, or non-intact skin exposure to blood or OPIM should call the NEEDLESTICK HOTLINE at ~~966-4480~~ 984-974-4480 as soon as possible to receive instructions regarding follow-up. This service is provided 24 hours a day.
 - d. Blood spills should be cleaned up promptly with an EPA registered hospital disinfectant (e.g. MetriGuard or Sani-Cloth) or a 1:10 sodium hypochlorite (household bleach)

solution. Bleach solutions must be discarded 30 days after mixing. The container must be labeled as to its contents and expiration date. Large spills should be flooded with the disinfectant first and then wiped up with absorbent material. If broken glass is involved, use tongs or forceps to lift pieces into the sharps container.

- e. Contaminated gloves, gowns, or other disposable equipment should be placed and transported in a biohazard labeled bag that prevents leakage. It should be discarded in the regular hospital waste receptacle.
10. For management of a suspicious letter/package/container as a biothreat, call Hospital Police (4-3686) to initiate the UNC Healthcare policy on suspicious letters/packages/containers. In addition, in situations involving suspicious substances, including liquids or powders, the state-wide Suspicious Substance Response Guidelines must also be followed. Do not touch or move the suspicious letter/package/container – immediately evacuate the area but remain until Hospital Police arrive. If there is suspicion of an explosive device, follow the policy for potential explosives.

B. Procedure

1. Intravenous Therapy (IV) Site Preparation and Other Procedures that Enter the Patient's Skin: refer to the Infection Control Policies [“The Prevention of Intravascular Catheter-Related Infections IC0032”](#) and [“Hand Hygiene and Use of Skin Antiseptics for Skin Preparation IC0024”](#).
 - a. Catheter Site Dressing (refer to the Nursing Policy [Central Venous Access Device \(CVAD\) Care & Maintenance – Nurs 0074](#))
 - b. If the I.V. has been placed under suboptimal conditions, information will be given to the receiving facility so that a new site can be selected when the patient has stabilized.

C. Vehicle, Helicopter, Supplies and Equipment

1. The walls and floors of the vehicle/helicopter should be cleaned on a routine basis and when visibly soiled using an EPA- registered disinfectant detergent and water to remove surface debris. Blood and OPIM spills should be collected using an absorbent cloth while enroute and disinfected with an EPA-registered disinfectant before transporting the next patient. Areas that come in direct contact with patients and/or patients' secretions should be disinfected with an EPA registered hospital disinfectant (i.e., Sanicloth, MetriGuard) between patients. Work areas (defined as surfaces that may be touched while treating patients) should also be disinfected between patients.
2. Airing of the vehicle after transporting a patient with a communicable infectious disease is only necessary when transporting a patient with known or suspected Tuberculosis, Varicella (Chicken Pox) and Measles. After transporting a patient with one of these conditions (either known or suspected), the vehicle/helicopter should be allowed to “air out” by opening all doors and windows for 15 minutes. If the vehicle/helicopter has to be occupied or cleaned within that 5 minute period, employees should wear a respirator (e.g., N95 mask).
3. Disposal of Infectious Waste (refer to Infection Control Policy: [“Guidelines for Disposal of Regulated Medical Waste IC0054”](#) and [“Exposure Control Plan for Bloodborne Pathogens IC0021”](#))
4. Patient Equipment
 - a. Sterile supplies should be stored in a manner to prevent contamination.
 - b. Shared patient equipment (e.g., traction splints, Philadelphia collars, spine boards, Papoose Boards, stethoscopes, blood pressure cuffs, antishock trousers) will be cleaned and disinfected between patients using an EPA-registered hospital disinfectant solution

(e.g., MetriGuard or SaniWipes). Heavily soiled items are first washed with soap and water followed by wiping with the disinfectant solution. A 1:10 solution of bleach and water or bleach wipes may also be used to decontaminate items soiled with blood or body fluids. The manufacturer may need to be contacted to determine the appropriate cleaning solution. Infant isolettes will be cleaned using 1:10 bleach or SaniWipes.

- c. Laryngoscope handles and blades are managed after use by any of the following methods:
 - i. The laryngoscope handle and blade are disposable
 - ii. Reprocess the laryngoscope handle/blade and McGrath using High Level Disinfection (HLD) or Sterilization. This should be done according to the manufacturer's IFUs and UNCH [Cleaning, Disinfection and Sterilization policy IC0008](#).
- a. Disposable equipment will not be reused refer to Infection Control Policy "[Reuse of Single Use Items IC0058](#)".
- b. For medication management guidance, follow the Administrative Policy: "[Medication Management: Use of Multi-Dose Vials of Parenteral Medications and Vaccines in Acute Care and Ambulatory Care Environments ADMIN0104](#)."

D. Implementation

Implementation of this policy is the responsibility of the Medical Director, Associate Medical Director, and the Program Director/Chief Flight Nurse.

IV. Reviewed/Approved by

Hospital Infection Control Committee

V. Original Policy Date and Revisions

Revised on Dec 2005, Feb 2008, Dec 2010, Dec 2013, Oct 2016

Appendix 1: Highly Communicable Disease Considerations for Carolina Air Care (CAC) Transport

Inter-hospital transport of patients with a suspected severe and highly communicable respiratory infection such as a novel strain of Influenza, a viral hemorrhagic fever, and Severe Acute Respiratory Syndrome (SARS) will be performed only for the purpose of obtaining a higher level of medical care. CAC staff will follow the CDC and Hospital Epidemiology recommendations for prehospital emergency medical services.

Communications:

- Notify Hospital Epidemiology (pager # 123-7427) immediately of the need for patient transport.
- Notify receiving unit as soon as possible that a patient with a suspected highly communicable illness such as a novel strain of Influenza, viral hemorrhagic fever, or SARS will be admitted.
- Follow guidelines set out in the Ebola Transports policy (CAC 1053).

Vehicle/Helicopter:

- When possible, use vehicles that have separate driver/pilot and patient compartments.
- Keep door/window between compartments closed.
- Vehicle ventilation system set to non-recirculating mode.
- Vehicle rear exhaust fan should be on.
- HEPA filtration should be used if it is available.
- Vehicles without separate compartments should optimize ventilation by opening outside air vents in the driver area and turn on the rear compartment exhaust fans to the highest setting, to create a negative pressure in the patient area.
- Patients in helicopters should be positioned as far downwind with regard to cabin airflow as possible.
- Helicopter ventilation systems set on high and opened windows in the patient care compartment can be used to optimize air exhaust.
- Patients with suspected or confirmed viral hemorrhagic fevers will be transported by ground transport only. All healthcare personnel will follow a strict donning and doffing protocol located in the [Highly Communicable Diseases: Preparedness and Response Plan IC 0026](#).

Supplies:

- Sufficient infection control supplies should be available on the vehicle/helicopter to support the expected duration of the mission plus additional time should the vehicle/helicopter experience maintenance delays or weather diversions.

Personnel:

- Transport will be performed using the fewest number of CAC staff to minimize possible exposures.
- All CAC staff will follow the [“Highly Communicable Diseases: Preparedness and Response Plan. IC0026”](#) All CAC staff will have fit testing clearance for N95 respirator use.

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- All CAC staff should not wear leather or other “flight” gloves while providing patient care.
- All CAC staff will follow the Isolation Precautions Infection Control Policy following Special Airborne and Contact Precautions.
 - N95 respirator, gloves, gowns, and goggles required when in the same space as the patient.

Patients:

- Patients should be admitted only if medically indicated (i.e., require hospital care for respiratory distress).
- Patients will be admitted to an Airborne Infection Isolation (AII) room, (negative pressure, air exhausted directly to the outside, >12 air exchanges per hour).
- Non-intubated patients will wear a surgical mask until they are in the Airborne Infection Isolation (AII) room.
- Patients will be continuously on Special Airborne/Contact Precautions.

Visitors:

- Family members/other patient contacts are not allowed to ride in the vehicle/helicopter.
- Visitors will be excluded from the UNC patient’s isolation room.
 - A quarantine order may be sought from the State Health Department to enforce this policy.
 - Exceptions to the visitation exclusion policy can only be made by the N.C. State Epidemiologist and Medical Director of Hospital Epidemiology.

Infection Control Interventions during Care:

- Avoid touching one’s face with contaminated gloves.
- Oxygen delivery with simple and non-rebreather facemasks may be used for patient oxygen support during transport.
- Positive pressure ventilation should be performed using a resuscitation bag-valve mask. If available, units equipped for HEPA or equivalent filtration of expired air should be used.
- Limit the use of aerosol-generating procedures to those that are deemed medically necessary (e.g. aerosol medication administration, airway suctioning, intubation).
- Use clinically appropriate sedation during procedures to minimize resistance and coughing.
- Suction device exhaust should not be vented into the vehicle/helicopter without HEPA or equivalent filtration. Portable suction devices should be fitted with in-line HEPA or equivalent filters.
- Mechanical ventilators for highly communicable respiratory disease patients should provide HEPA or equivalent filtration for airflow exhaust.
- Intra-hospital patient transport will be reserved for essential diagnostic tests.
- Handle clinical specimens that must be collected during transport (e.g. blood gas) in accordance with standard precaution procedures.

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- Specimens should be stored only in designated coolers or refrigerators. The container should be labeled with a Biohazard label.
- Clinical specimens should be labeled with appropriate patient information and placed in a clean self-sealing bag with a Biohazard label for storage and transport.
- Arrange for the receiving facility staff to meet the patient at the ambulance door or helipad to limit the need for the transporting CAC staff to enter the facility in contaminated PPE.
- Transporting CAC staff will remove and discard used PPE and perform hand hygiene before entering the facility.
- Used PPE will be disposed of as medical waste.

Infection Control Interventions After Transport Has Been Completed:

- Any post-transport activities in this section involving a known or suspected hemorrhagic fever (Ebola, etc.) patient should occur only under the supervision and/or direction of Infection Prevention staff with adherence to the [Highly Communicable Diseases: Preparedness and Response Plan IC0026](#).
- Personnel performing vehicle/helicopter/equipment disinfection will wear N95 respirators, gloves, gowns and goggles.
- Environmental disinfection of the vehicle/helicopter/equipment will be completed following the Environmental Services Policy .
- Follow standard operating procedures for disposal of waste and the containing and reprocessing of used linen.
- Suctioned fluids and secretions should be stored in sealed containers for disposal as regulated medical waste in red bag trash.
- Disinfection of items having direct or close contact with the patient will be done using an EPA registered hospital disinfectant-detergent.
- CAC staff will provide to their medical director:
 - Mission number/date
 - Transport mission team member names, contact information and crew positions (including duration of direct patient care provided).
 - Duration of the patient transport
- Medical Director/Program Director will:
 - Perform post mission monitoring of mission personnel and report results to OHS.
 - Mission personnel should be monitored (directly or by telephone) at least once daily for 10 days for evidence of fever or respiratory illness that would require evaluation and follow-up.