



## **Air & Surface Transport Nurses Association Position Statement**

### **Transport of Patients with Serious Communicable Diseases**

*This Position Statement was developed as an educational tool based on the opinion of the authors. It is not a product of a systematic review. Readers are encouraged to consider the information presented and reach their own conclusions.*

#### *Background*

The Air & Surface Transport Nurses Association (ASTNA) recognizes the importance of ongoing attention to infection control and prevention measures in the transport of patients with serious communicable diseases. Maintaining safety during all aspects of transport requires adherence to standard infection prevention and control practices.

The transport team is likely to be at added risk of exposure due to factors such as environmental conditions and interventions performed, and thus must be aware of the most current information available from infectious disease specialists to make informed practice decisions.

The speed at which evolving microbial threats are appearing today and the impact these threats has on the environment in which health care transport professionals work has prompted ASTNA to focus on the following viral agents:

- Ebola virus disease (EVD), which is a serious communicable disease given its associated morbidity and mortality rates, the risk it poses by human-to-human transmission, and the absence of available vaccines for protection against the virus
- Enterovirus D68 (EV-D68), which was associated with a nationwide outbreak of severe respiratory illness in 2014. These cases predominantly affected infants and children, many with underlying respiratory conditions such as asthma.
- Seasonal influenza, which appears with new variations annually resulting in vaccines that provide significantly reduced protection against the flu, given the genetic drift of the circulating (H3N2) influenza strain. Children younger than age 2, adults 65 years and older, pregnant women, and many individuals of Native American descent and Alaskan Native descent are at highest risk.

Health care providers in the out-of-hospital setting must not contribute to secondary transmission of communicable illness; thus, fastidious application of infection control procedures is required.

The ASTNA website will list best practices from programs with experience in the transport of patients with serious communicable disease and those best informed by the work of researchers and epidemiologists involved in combating emerging microbial threats.

### *Standard Precautions*

Standard precautions should be used for the care of all patients, as all bodily fluids are assumed to be infectious. Gloves, surgical masks, and protective eye wear or face shields must be worn for all invasive procedures that commonly result in the generation of droplets, splashing of blood or other body fluids. Gowns or aprons made of materials that provide an effective barrier should be worn during invasive procedures that are likely to result in the splashing of blood or other bodily fluids.

Gloves should be changed after each patient contact, and after loading or unloading a stretcher; hand washing or use of antiseptic gel cleansers is required after glove removal.

Do not eat, drink, apply cosmetics or lip balm, insert or remove contact lenses in areas with reasonable likelihood of exposure to bloodborne microorganisms or other infectious materials.

All surfaces in patient care areas must be disinfected between patients.

### *Airborne Precautions*

Airborne precautions are to be used with patients with known or suspected infections subject to transmission by airborne droplet. Airborne precautions include use of N95 masks when making patient contact. A fitted mask must be worn by all personnel on the transport vehicle, and means of increasing ventilation or air exchange in the vehicle should be considered. If possible, a surgical mask should be placed on the patient.

Examples of diseases transmitted by airborne droplets include measles, pneumonic plague, varicella, and tuberculosis. Any patient with a persistent or productive cough also should be considered suspect.

### *Droplet Precautions*

Droplet precautions should be used with patients with known or suspected illnesses transmitted by large particle droplets. Droplet precautions include use of a surgical mask when making patient contact; use of a surgical mask is required of all personnel in the transport vehicle. Means of increasing ventilation or air exchange should be considered in the transport vehicle, and a surgical mask should be placed on the patient if possible.

Examples of illnesses transmitted by large droplets include *Haemophilus influenzae B*, *Neisseria meningitidis*, bacterial respiratory infections, pertussis, and viral respiratory infections.

### *Contact Precautions*

Contact precautions are used for patients with known or suspected illnesses transmitted by direct or indirect patient contact. Contact precautions require use of gloves and gown or coverall when in proximity to the patient. Gloves should be changed after direct patient contact or after procedures with direct patient contact. Hand washing and/or waterless antimicrobial gels should be used after each patient contact and after contact with items or equipment that have been in contact with the patient. Special attention must be paid to the cleaning of all patient area surfaces and equipment upon completion of transport, as described below.

Examples of illnesses requiring contact precautions include the following:

- gastrointestinal, respiratory, skin, or wound infections
- known colonization with drug-resistant bacteria
- enteric infections with organisms with known prolonged survival on environmental surfaces
- hepatitis A
- rotavirus
- respiratory syncytial virus
- parainfluenza virus or enterovirus infection
- contagious skin infections
- viral or hemorrhagic conjunctivitis

Transport of patients with viral hemorrhagic fevers, such as EVD or Marburg hemorrhagic fever, requires specialized equipment, policies, and procedures. Current Centers for Disease Control and Prevention (CDC) and state guidelines should be followed for transport and decontamination of these patients, and emergency contact numbers for the CDC and state health departments should be readily available for real-time guidance.

### *Education*

Medical teams transporting patients with suspected or confirmed infectious diseases should follow infection control standards outlined by the World Health Organization (WHO), the Occupational Safety and Health Administration (OHS), and the CDC.

The Commission on Accreditation of Emergency Transport Services (CAMTS) also recommends the following:

- Development and implementation of written policies and procedures regarding the transport of patients with suspected or confirmed contact or respiratory infections
- Annual review of policies and procedures for medical transport of patients with infectious diseases
- Precautions to ensure that transport team members are protected from contracting communicable diseases by maintaining current vaccinations, receiving appropriate training on donning and doffing PPE, and ensuring proper decontamination of transport vehicles
- Development of education programs consistent with current CDC recommendations and OSHA guidelines regarding infectious diseases. Initial and annual training should be required for all transport team members, and supplemental training should be initiated for specific pathogens that pose a threat to transport personnel.
- Development of policies and procedures for post-exposure management of transport personnel that are consistent with OSHA guidelines

### *Cleaning of Equipment and Transport Vehicles*

Aircraft and ground vehicles should be terminally cleaned and decontaminated after transporting patients with highly infectious diseases. The type of vehicle selected for transport may depend on its suitability for effective decontamination before return to service. Further guidelines include the following:

- Appropriate personal protective equipment should be donned prior to entering the decontamination area.
- Cleaners should be EPA-approved disinfectants with label claims specific to the suspected organism.
- Objects and surfaces soiled with blood or bodily fluids should be cleaned according to the instructions on the disinfectant's label.
- Emphasis must be placed on cleaning patient care areas and exposed surfaces. Stretchers and litters, including wheels, brackets, and other areas likely to become contaminated should receive special attention. Railing, medical equipment and control panels, flooring, walls, and work surfaces in the vehicle also should be cleaned and disinfected.
- Only mattresses and pillows with plastic or other impermeable covers should be used.
- All soiled linen and supplies and patient-generated wastes should be disposed of in accordance with CDC guidelines.

ASTNA promotes the advancement of transport nursing by encouraging its members in an on-going commitment to safety, education, and quality patient care (ASTNA, 2011). By remaining vigilant and using the most current evidence and practice guidelines, transport nurses can safely care for highly infectious patients. These guidelines are based on the most current information collected from OSHA, WHO and the CDC, and are meant as baseline knowledge.

## References

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Published May 2015 Air & Surface Transport Nurses Association.

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