



SARS Advisory

	 New York State Department of Health Bureau of Emergency Medical Services POLICY STATEMENT	No. 04-01 Date: 02/10/04 Re: SARS Advisory
<i>Supplements/Updates: 03-11</i>		

Introduction:

This policy was prepared in conjunction with the Department's Planning Work Group for Disease Prevention. The Bureau of Emergency Medical Services (BEMS) strongly recommends that all EMS services review this guidance document, along with other state and county public health recommendations to prepare your EMS agency's response to a patient with an infectious respiratory illness suspected of being SARS. BEMS is sharing this Policy Statement with County EMS Coordinators, Public Health Directors, REMACs, Regional EMS Councils, Program Agencies and Dispatch Centers.

EMS providers should be aware of the signs and symptoms of infectious respiratory diseases, SARS-CoV (SARS) and the procedures necessary for protecting themselves. Not all respiratory infections are transmitted in the same way. Transmission can occur from direct or indirect contact, large droplets, or small droplet nuclei. The mode of transmission will depend on the etiological agent. Certain procedures can also impact transmission of infectious agents by producing aerosols. These are deemed "high risk respiratory procedures" and include intubation, extubation, deep tracheal suctioning, nebulized respiratory treatments and bronchoscopy. More often in the field of emergency medicine, the etiologic agents of infections are unknown. Given this, it is paramount that good infection control practices be followed for contact with all patients.

SARS — Background:

A new emerging infection, Severe Acute Respiratory Syndrome (SARS), has heightened awareness of the importance of utilizing good infection control practices to prevent the transmission of respiratory diseases. Information from the SARS outbreaks worldwide during the spring of 2003 suggests that SARS is transmitted through close contact with infected persons. SARS is most likely spread by droplet transmission, however, the possibility of airborne transmission and spread through inanimate objects cannot be ruled out. Healthcare procedures that produce aerosols (e.g. nebulized respiratory treatments, intubation/extubation and deep tracheal suctioning) appear to have an impact on the transmissibility of SARS.

In discussion with Ontario EMS recently we learned about the dramatic effect a SARS outbreak can have on a community and specifically its prehospital health care community. However, we also learned from our Canadian EMS neighbors that three prehospital care providers acquired the disease with their first SARS contact at the beginning of the outbreak. The infected EMS providers were those who did not use PPE (i.e. N95 mask) or used it late. Once the infective nature of the disease was realized, all EMS personnel were required to don PPE including an N95 mask, eye protection, gowns, gloves and practice good hand hygiene. There were no additional infections of EMS personnel after this policy was implemented. NYS EMS should learn from this, follow appropriate protective procedures and prevent the spread of infection.

In the absence of identified SARS cases in the world, implementing the infection control strategies of Standard and Droplet Precautions for respiratory infections of unknown etiology with the additional incorporation of Respiratory Etiquette principles will control transmission without overburdening the healthcare system. Implementation of this strategy will likely impact the transmission of seasonal circulating infections that are transmitted by respiratory spread (e.g. influenza, adenovirus, respiratory syncytial virus, and *Mycoplasma pneumoniae*).

Purpose:

Guidance for infection control and prevention for SARS will be dependant on the emergence of SARS worldwide, nationwide, statewide, and/or locally. Approaching infection control measures according to the level of known SARS activity will enable healthcare programs to maintain an environment that is safe for the prevention of communicable disease outbreaks, while not overtaxing the healthcare system with intensive isolation procedures and public health notifications. The intention of this document is to assist EMS Agencies in the planning for SARS cases and to provide specific infection control guidance for the following scenarios: no SARS transmission has been identified in the world; SARS transmission identified in the world, but no transmission locally; and SARS transmission identified locally.

Infection Control Guidance

Preparedness Planning for the Re-emergence of SARS:

1. BEMS strongly recommends the following for EMS services and providers:
 - a. Fit testing for an N-95 or higher respirator mask
 - b. Education on performing a "fit check" (conforming the mask to the face and checking for air leaks) after donning N95 respirators
 - c. Frequent and on-going education including, but not limited to infection control measures, PPE as well as proper personal/hand hygiene.
 - d. Routine flu vaccinations and other preventative health measures
2. EMS services should monitor their crews for any type of infectious illness:
 - a. EMS management should monitor any provider that presents with signs and symptoms of a respiratory illness. Services should consider the following (in order of preference):
 - Release staff from duty until they have sought medical attention and have sufficiently recovered.
 - Assigning staff to non-patient care related duties for the duration of their illness.
 - Require EMS providers to don surgical masks to protect their patients while providing care.
 - The EMS medical director and the County Public Health Office should be advised of any EMS healthcare provider who is hospitalized with pneumonia.

No SARS Identified Worldwide:

1. **Practice Body Substance Isolation (BSI) or Standard Precautions.** Utilize personal protective equipment (PPE -e.g. use of gown, gloves and eye protection/face shield) based on the contact with bodily substances that is anticipated. More information on Standard Precautions can be found on the following Centers for disease Control and Prevention (CDC) Website: <http://www.cdc.gov/ncidod/hip/ISOLAT/Isolat.htm> .
2. Utilize the Standard Respiratory Precautions below **for all patients** presenting with respiratory symptoms. This includes wearing a surgical mask within 3 feet of the patient.
3. Prior to transporting a patient with respiratory symptoms, the door between the driver and the patient compartment should be closed. If the vehicle does not have a barrier between the cab and the patient compartment, the driver and front seat passenger should also wear surgical masks.
4. Hands must be properly washed or disinfected with a waterless hand sanitizer immediately after removal of gloves. Do not wait until you return to the ambulance station to practice hand hygiene.
5. Assure adequate cleaning of the equipment and vehicles between transports. This cleaning should minimally include:
 - a. Use of an Environmental Protection Agency (EPA) approved disinfectant;
 - b. Disinfection of any reusable equipment used on the patient as per the manufacturer's instructions;
 - c. Frequently touched surfaces of the vehicle;
 - d. Visibly soiled surfaces.
6. Medical procedures, such as nebulized respiratory treatments, that may re-aerosolize infectious material should only be done if medically necessary. It is recommended that mechanical ventilators, including BVM devices and suction equipment, should be fitted with a HEPA filter, if available, to prevent re-aerosolization. EMS services should contact equipment manufacturers for recommendations on a HEPA filter .
7. Humidified oxygen use should be suspended for the treatment of a suspected SARS patient unless otherwise directed by medical control.

Standard Respiratory Precautions

- Provide surgical masks to all patients with symptoms of a respiratory illness. Provide instructions on the proper use and disposal of masks.
- For patients who cannot wear a surgical mask, provide tissues and instructions on when to use them (i.e., when coughing, sneezing, or controlling nasal secretions), how and where to dispose of them, and the importance of hand hygiene after handling this material.
- Implement use of surgical or procedure masks by healthcare personnel during the evaluation of patients with respiratory symptoms.
- Continue to use droplet precautions to manage patients with respiratory symptoms until it is determined that the cause of symptoms is not an infectious agent that requires precautions beyond standard precautions.

SARS Re-emerges in the World without Local Transmission:

1. Follow the recommendations in Specific Infection Control Guidance — **No SARS Transmission Identified Worldwide.**
2. Assign a point person to regularly access CDC Website <http://www.cdc.gov/ncidod/sars/> to obtain updated information on the epidemiology of SARS, and to share the up to date case definition with EMS personnel.
3. Screen all patients for fever, respiratory symptoms, and SARS risk factors.
SARS risk factors include:
 - Travel within 10 days of illness onset to a foreign or domestic location with documented or suspected recent local transmission of SARS, or
 - Persons who had close contact within the last 10 days of illness onset with an ill traveler who had recently returned from an area with documented or suspected recent local transmission of SARS, or
 - Employment as a healthcare worker, or
 - Close contact within 10 days of illness onset, with a person with confirmed or probable SARS or SARS report under investigation.
4. For Patients meeting the established SARS case definition, **Temperature of >100.4° F (>38° C) and one or more clinical findings of respiratory illness (e.g., cough, shortness of breath, difficulty breathing, or hypoxia):**
 - a. Utilize Airborne, Contact, and Standard Precautions, including a fit-tested N95 respirator, gloves, gown and approved eye protection (e.g. face shield or goggles).
 - b. Prior to transporting the patient, the door between the driver and the patient compartment should be closed. If the vehicle does not have a barrier between the cab and the patient compartment, the driver and front seat passenger should also wear fit-tested N95 respirators. Do not use any air-recirculating mechanisms in the vehicle, and consider opening a window for fresh air exchanges.
 - c. Perform high-risk procedures that increase aerosolization (nebulized treatments, deep tracheal suctioning, intubation/extubation), only if medically necessary; do not use humidified oxygen.
 - d. After treating and transporting any patient with a infectious respiratory illness or a suspected SARS case, decontamination and waste disposal procedures should be followed:
 - The ambulance patient compartment, including stretchers, railings, medical equipment, control panels and adjacent flooring, counter tops should be cleaned using a recommended EPA approved disinfectant in accordance with manufacturer's specifications.
 - All PPE as well as disposable equipment and supplies used while treating patients should be disposed as regulated medical waste.
 - Spills of body fluids should be cleaned by placing absorbent material over the spill and collecting the material in a biohazard bag for disposal.
 - Personnel cleaning the vehicles should be appropriately protected.
 - e. If treating and transporting a patient suspected to have SARS, the EMS service must immediately notify:
 - The destination hospital prior to arrival of the suspected case of SARS and the possible need for an airborne infection isolation room and proper precautions. **Do not identify the patient as a suspected SARS patient over the radio.** Please utilize either a cellular or landline telephone.
 - The County Public Health Officer

SARS Re-emerges in the World with Local Transmission:

1. Follow the recommendations above for Specific Infection Control Guidance — No SARS Transmission Identified Worldwide and SARS Re-emerges in the World without Local Transmission.
2. Actively screen all patients for fever or respiratory symptoms.
3. Utilize Airborne, Contact, and Standard Precautions, including a fit-tested N95 respirator, gloves, gown and approved eye protection (e.g. face shield or goggles) for **all patients** presenting with respiratory symptoms.
4. Notify the receiving hospital of the need for an Airborne Isolation room or SARS designated unit.

Conclusion:

It is vitally important that the EMS community regularly utilize Standard Precautions and Personal Protective Equipment when treating all patients with a suspected infectious disease. Changing routine habits to include these measures will allow EMS providers to protect themselves against known infectious diseases as well as SARS - CoV or other new emerging diseases.

In addition to changing habits, providing initial and on going education on disease prevention, personal hygiene and hand washing techniques, equipment and vehicle cleaning will allow the EMS community to protect patients and itself against all types of infectious diseases.

For Additional Resources:

Please review the information provided at the following web sites;

1. www.health.state.ny.us
2. www.cdc.gov

References:

1. CDC Public Health Guidance for Community-Level Preparedness and Response to Severe Acute Respiratory Syndrome (SARS), IV - Infection Control for Prehospital Emergency Medical Services, January 8, 2004
2. Policy Statement 03-11, Respiratory Disease Precautions

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With the participation of the DOH Infectious Disease Clinical Workgroup

Revised: April 2004