Infection Prevention During the Coronavirus Disease (COVID-19) Pandemic

Purpose: To outline infection prevention and personal protective actions when providing assessment and treatment during the COVID-19 pandemic. To outline the appropriate decontamination for people, equipment, and vehicles utilized in treatment and transport of patients.

Objective: To protect vulnerable patients being cared for by EMS and to protect the EMS workforce by reducing the transmission rate of COVID-19.

I. Each life support agency shall continuously monitor CDC Community Transmission Rates for each county they serve. Respiratory Protection should be based on CDC Community Transmission Rates for the county in which the EMS incident occurs as outlined below.
   a. EMS crews must be aware of CDC Community Transmission Rates at the start of every shift.
      i. If CDC Community Transmission Rates are not accessible, community transmission rate level is to be treated as high.
   b. CDC COVID-19 Community Levels are different than CDC Community Transmission Rates. CDC Community Levels are NOT to be utilized for this protocol.

II. All patients should be evaluated for higher risk during the initial assessment. When in doubt, or if dispatch information matches higher risk patient criteria, treat patient as a higher risk patient.
   a. Higher Risk Patient
      i. Patient with known COVID-19 or close contact within ten days to a patient with known COVID-19
      ii. Patient is a resident or employee of a residential facility with a known current outbreak of COVID-19
      iii. Patient with any of the following signs or symptoms
         1. Dyspnea/shortness of breath (including asthma, COPD, CHF)
         2. Cough, sore throat, rhinorrhea (runny nose), fever/chills
         3. Myalgias (muscle aches)
         4. Patient in cardiac or respiratory arrest
         5. Any other circumstance in which EMS personnel believe patient may be at higher risk
   b. Lower Risk Patients are all other patients who do not meet higher risk criteria.

III. Universal Source Control
   a. Patients will have a surgical mask applied prior to being placed in an ambulance unless they are receiving oxygen by mask.

Protocol Source/References: https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-for-ems.html, https://www.cdc.gov/coronavirus/2019-ncov/php/risk-assessment.html, https://www.cdc.gov/infectioncontrol/guidelines/isolation/precautions.html

b. Anyone accompanying the patient in any part of the ambulance regardless of COVID-19 symptoms will minimally have a surgical mask applied prior to entering the ambulance.

IV. All patient contacts include:
   a. Protective equipment according to bodily fluid exposure, per MIOSHA standards.
   b. Respiratory protection as outlined below.

V. Guidance for respiratory protection utilization based on situation

Community Transmission Level	**Lower-Risk Patient Not Inside Ambulance[1]/Not Close[2]**	**Lower-Risk Patient Inside Ambulance[1]/ Close[2]**	**Higher-Risk Patient Not Inside Ambulance[1]/ Not Close[2]**	**Higher-Risk Patient Inside of Ambulance[1]/ Close[2]**
Low	≥Surgical Mask	≥Surgical Mask	≥Surgical Mask	**≥N95**
Moderate	≥Surgical Mask	≥Surgical Mask	**≥N95**	**≥N95**
Substantial	≥Surgical Mask	**≥N95**	**≥N95**	**≥N95**
High	≥Surgical Mask	**≥N95**	**≥N95**	**≥N95**
[1]Refers to patient care compartment of ambulance. [2]Close refers to within 3 feet of patient or in any area with decreased air flow				

VI. During Treatment
   a. The number of responders within six feet of the patient should be limited to the fewest number to provide essential patient care.
   b. A (surgical type) facemask should be placed on the patient for source control. Do not place N-95 or similar masks on patients as these increase the work of breathing.
   c. Any family or bystanders should not be within six feet of responders, and if they are, they need to wear at least a surgical face mask.
   d. Aerosol Generating Procedures
      i. Perform aerosol-generating procedures using PPE in accordance with MIOSHA requirements for healthcare providers.
      ii. Perform aerosol-generating procedures only when clinically indicated.
      iii. Keep patient and aerosolization away from others without PPE (e.g., bystanders, EMS personnel not in PPE, etc.).
      iv. Preferably, aerosolized procedures should NOT be done within the ambulance. When treating patient in the ambulance, activate patient compartment exhaust fan at maximum level.
      v. Use HEPA filtration for expired air from the patient (Ventilators, CPAP, biPAP, BVM).

VII. Patient Compartment –
   a. When practical, utilize a vehicle with an isolated driver and patient compartment.

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b. Only necessary personnel should be in the patient compartment with the patient.
c. All compartments should have ventilation maintained, with outside air vents open and set to non-recirculated mode.

VIII. Patient Transfer of Higher Risk Patient

a. Friends and family of the patient should avoid riding in the transport vehicle with the patient. If they must accompany the patient, they will minimally have a surgical mask applied.
b. Personnel driving the transport vehicle should doff PPE (except for respiratory protection) and perform hand hygiene before entering the driver's compartment. Respiratory protection should be maintained throughout.
c. Ventilation in the driver's compartment should be set to bring in outside air and on maximum speed.
d. Notification of infectious risk (if known) should be made to receiving facility as soon as feasible.
e. Upon arrival at receiving facility, open patient compartment doors BEFORE opening driver's compartment doors.
f. Maintain mask on patient and filtered exhaust while transporting patient to room.
g. Patients should never be transported into a hospital with a nebulizer treatment in progress, regardless of COVID-19 patient status.
h. If patient care requires CPAP, contact receiving hospital to coordinate hand-off in a manner that minimizes hospital environmental risk.
i. Avoid transporting the patient within 6 feet of others (e.g., unprotected hospital staff, patients, bystanders, etc.)
j. Minimize delays in moving symptomatic (or confirmed/suspected or patients with respiratory symptoms) directly to a room to limit exposure to others (e.g., hallway passerby).
k. Higher risk patients should not be taken to the waiting room/triage area.
l. Doff PPE after leaving patient room and perform hand hygiene before touching documentation tools.

IX. Cleaning of Transport Vehicle and Equipment After Each Transfer

a. All equipment that was involved in patient care and equipment that was inside of patient compartment of ambulance should be cleaned, regardless of COVID-19 patient status.
b. Ambulances should be thoroughly cleaned (including door/compartment handles and ambulance cab) at the beginning and end of each shift in which patient transport occurred, regardless of COVID-19 patient status.
c. Vehicle disinfection should include door handles, steering wheel, and other surfaces contacted by personnel. Electrostatic disinfecting systems (or comparable disinfecting system) should be used when available.
d. Perform hand hygiene after cleaning is complete and PPE doffed and disposed of.

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