



High Consequence Pathogens

(Respiratory Diseases, SARS, MERS-CoV, COVID-19)



EMD Dispatch Center Screening

1. All calls requiring response from EMS system:

Ask: Do you have FEVER AND/OR RESPIRATORY SYMPTOMS?
(cough, breathing difficulty, or other respiratory symptoms?)

EMD Systems:

PDS – Card 36 Pandemic Flu

APCO – COVID-19 Pandemic Vital Points Card

PowerPhone – Pandemic Influenza Card

Evolving Protocol:

Protocol subject to change at any time dependent on changing outbreak locations.

Monitor for protocol updates.

EMD Screen Positive

Notify

All Responding Agencies:

Positive screening (agency specific code)

First Responder Response:

Allergic reaction with dyspnea
Cardiac/respiratory arrest
Uncontrolled hemorrhage
Unconscious/unresponsive
MVC/Rescue Incident
EMS response time > 15 minutes
• Telecommunicator discretion

EMD Screen Negative

First Responders and EMS Screening

Do not rely solely on EMD personnel to identify a potential exposure patient:

- EMD may be constrained by time and caller information.
- **First arriving provider (FR or EMS):**
If call nature allows, send 1 provider only into scene to complete a quick screen. Stand at a distance of ≥ 6 feet and perform screening question. Patients with Fever and/or Cough (or other respiratory symptoms are at risk of Influenza and/or COVID-19).
Chills, muscle aches, sore throat, or sudden loss of taste or smell.
If patient screens positive:
Place facemask or covering over patient's mouth and nose and provider dons appropriate PPE based on clinical situation.

- First Responders should stage and limit number of providers entering scene only necessary for care to limit potential exposures and use of PPE.
- Request additional resources as needed. See Page 4.

Negative FR or EMS Screening

Exit to
Appropriate Protocol(s)

PPE Supply Chain Disruptions:

- Prioritize respirators (N95 or equivalent) to aerosol-generating procedures until supply chain restored.
- Prioritize gowns to aerosol-generating procedures.
- It is reasonable for providers to wear a facemask during their duty-shift and change only when soiled or damaged. Adjust use based on supply chain.

Positive FR or EMS Screening

EMS PPE

EMS
General Treatment
Considerations

Exit to
Appropriate Protocol(s)

Patient:

- Use non-rebreather mask if oxygen needed
- If unable to tolerate mask, have patient cover mouth and nose when coughing

Providers utilize:

- **Follow PPE precautions listed below:**
- Exam gloves and eye protection
- Facemask minimum
- **Aerosol generating procedure:**
- Respirator (N95, PAPR, or equivalent)
- Goggles, gown (disposable gown, coveralls, or equivalent)
- Create negative pressure in care compartment (See Pearls)

Personnel in ambulance cab utilize:

- Facemask for driver and passenger

Aerosol generating procedures:

NIPPV / Nebulizer therapy / Intubation / BIAID / Suctioning / CPR
Use all PPE devices and strategies listed above

- **Notify receiving facility of infection control requirements prior to arrival.**



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Pearls

- **First Responders:** Because community spread is now present, every patient contact should be considered to have potential for infection with COVID-19. Limit number of FR when caring for patients to limit exposures and PPE use.
- **Place facemask on any patient complaining of respiratory problems with or without a fever.**
- **Dispatch Screening:**
 - If caller interrogation results in positive screen first responders are assigned based on local agency direction.
 - This screening process will result in many False Positive screens in order to be very sensitive.
- **First Responder and EMS Screening:**
 - Limit distance initially to ≥ 6 feet and conduct a quick screening using the EMD specific question. If this results in a positive screen, immediately place a facemask on the source patient and all providers don appropriate PPE and limit provider number to that which necessary for patient care.
- **Close Contact and Duration Definition:**
 - Healthcare provider exposure is defined as being within 6 feet for ≥ 15 minutes in a patient with suspected illness.
 - Unprotected (no or incorrect PPE) with direct contact with body fluids, including respiratory generated body fluids.
- **Transport:**
 - Occupants in cab of vehicle all should wear facemasks. Riders should be discouraged in order to limit PPE use.
 - Limit number of providers in vehicle required to provide patient care in order to limit exposures.
 - Ensure use of correct PPE for crew and passengers when aerosol-producing procedures utilized.
- **Recommend facemask and gloves with every patient contact. It is reasonable to wear eye protection on every patient contact.**
- **Reasonable to wear simple/surgical mask during entire duty-shift when not able to maintain social distance of ≥ 6 feet among fellow providers when not engaged in patient care.**
- **Negative Pressure in care compartment:**
 - Door or window available to separate driver's and care compartment space:**
 - Close door/window between driver's and care compartment and operate rear exhaust fan on full.
 - No door or window available to separate driver's and care compartment space:**
 - Open outside air vent in driver's compartment and set rear exhaust fan to full.
 - Set vehicle ventilation system to non-recirculating to bring in maximum outside air.
 - Use recirculating HEPA ventilation system if equipped.
- **Airborne precautions:**
 - Standard PPE with fit-tested N95 mask (or PAPR respirator) and utilization of a gown or coveralls, change of gloves after every patient contact, and strict hand washing precautions. This level is utilized with Aspergillus, SARS/ MERS/COVID-19, Tuberculosis, Measles (rubeola), Chickenpox (varicella-zoster), Smallpox, Influenza, disseminated herpes zoster, or Adenovirus/Rhinovirus.
- **Contact precautions:**
 - Standard PPE with utilization of a gown or coveralls, change of gloves after every patient contact, and strict hand washing precautions.
 - This level is utilized with GI complaints, blood or body fluids, C diff, scabies, wound and skin infections, MRSA. Clostridium difficile (C diff) is not inactivated by alcohol-based cleaners and washing with soap and water is indicated.
- **Droplet precautions:**
 - Standard PPE plus a standard surgical mask for providers who accompany patients in the treatment compartment and a surgical mask or NRB O2 mask for the patient.
 - This level is utilized when Influenza, Meningitis, Mumps, Streptococcal pharyngitis, Pertussis, Adenovirus, Rhinovirus, and undiagnosed rashes.
- **All-hazards precautions:**
 - Standard PPE plus airborne precautions plus contact precautions.
 - This level is utilized during the initial phases of an outbreak when the etiology of the infection is unknown or when the causative agent is found to be highly contagious (e.g. SARS, MERS-CoV, COVID-19).
- **COVID-19 (Novel Coronavirus):** For most current criteria to guide evaluations of patients under investigation: <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>



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Decontamination Recommendations

EMS Personnel Requires Decontamination

Driver:

- Should wear full PPE as described when caring for patient.
- Remove all PPE, except respiratory (N95, PAPR, or equivalent) and perform hand hygiene prior to entering cab to prevent contamination of driver's compartment. **Cab occupants only need to wear facemasks if respirator not already used.**

Wash hands:

- Thoroughly after transferring patient care and/or cleaning ambulance

Maintain records:

- All prehospital providers exposed to patient at the scene and during ambulance transport (self-monitoring for symptoms for 14 days is recommended, even if wearing appropriate PPE).
This does not mean the providers can no longer work.
- List all prehospital provider names (students, observers, supervisors, first response etc.) in the Patient Care Report.

EMS Equipment / Transport Unit Requires Decontamination

Safely clean vehicles used for transport:

- Follow standard operating procedures for the containment and disposal of regulated medical waste.
- Follow standard operating procedures for containing and reprocessing used linen.

Wear appropriate PPE when:

- Removing soiled linen from the vehicle. Avoid shaking the linen.
- Clean and disinfect the vehicle in accordance with agency standard operating procedures.
- Personnel performing the cleaning should wear a disposable gown and gloves (a respirator should not be needed) during the clean-up process; the PPE should be discarded after use.
- All surfaces that may have come in contact with the patient or materials contaminated during patient care (e.g., stretcher, rails, control panels, floors, walls, work surfaces) should be thoroughly cleaned and disinfected using an **EPA-registered disinfectant** appropriate for SARS, MERS-CoV, or coronavirus in healthcare settings in accordance with manufacturer's recommendations. **Keep doors open to patient care compartment while cleaning to allow air exchanges.**

EMS Provider Exposure Risk and Monitoring Recommendations

Close Contact Less than 6 feet for ≥ 15 minutes Source patient NOT WEARING A MASK				Close Contact Less than 6 feet for ≥ 15 minutes Source patient WEARING A MASK			
PPE Utilized	Exposure Risk	Monitoring	Work Restrictions	PPE Utilized	Exposure Risk	Monitoring	Work Restrictions
NONE	HIGH	Self-monitor Supervision	If symptomatic: Fever and Respiratory symptoms (cough, difficulty breathing or other respiratory symptoms) THEN Exclude from work: • At least 72 hours after fever resolution with no use of fever reducing medications. AND • At least 10 days since symptom onset.	NONE	MEDIUM	Self-monitor Supervision	If symptomatic: Fever and Respiratory symptoms (cough, difficulty breathing or other respiratory symptoms) THEN Exclude from work: • At least 72 hours after fever resolution with no use of fever reducing medications. AND • At least 10 days since symptom onset.
No facemask N95 or PAPR	HIGH			No facemask N95 or PAPR	MEDIUM		
No Eye Protection	MEDIUM			No Eye Protection	LOW		
No Gown/ Coveralls or Gloves	LOW			No Gown/ Coveralls or Gloves	LOW		
All recommended PPE Except facemask instead of N95 or PAPR	LOW			recommended PPE Except facemask instead of N95 or PAPR	LOW		

Placing a simple/surgical mask on the patient within 15 minutes of contact decreases exposure risk.

Return to Work Practice and Work Restrictions (if excluded from work OR exposure to suspected or known COVID-19 patient):

- Prior to duty shift, measure temperature and assess for illness symptoms either by provider, infection control officer, or occupational or public health.
- Self-monitoring with oversight by agency's infection control officer, occupation or public health department per agency policy.
- Wear mask at all times and restrict care of immunocompromised patients (Cancer, Transplant, Steroid use) until all symptoms have resolved or 14 days after onset of illness, whichever is longest.
- Social distance: Employee should maintain 6 feet of separation as work duties permit in the workspace.
- Remove from work if employee becomes symptomatic.
- <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-for-ems.html>
- <https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/hcp-return-work.html>
- <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19>



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First Responder Guidance

COVID-19 Declared Pandemic with both State and Federal Emergencies Declared

- Many systems are heavily dependent on First Responder agencies to supplement critical prehospital medical care services.
- Community spread is now evident both in NC and in the US.
- Every patient, regardless of medical or injury complaint, is at risk of COVID-19 and all should undergo routine screening questions.
- While EMD is a first step, all providers must screen every patient contact and don appropriate PPE based on clinical situation and COVID-19 screening.
- The citizens we serve continue to have a variety of illness and injury unrelated to COVID-19.
- Limiting PPE use:
 - First Responders should consider staging with all incidents and sending 1 provider (or more dependent on situation) into the scene to assess for fever and respiratory complaints.
 - Request staged resources as needed only to provide necessary medical care.
 - Where patients do not require immediate intervention, first responders may stay in contact with patient, but remain beyond 6 feet until EMS providers arrive to begin assessment and further care.
 - Consider calling patient on mobile phones to maintain contact and provide reassurance and explain current situation.

PPE Crisis or Alternative Strategies

N95 Respirators

- Use only for aerosol generating procedures (Nebulizer, NIPPV, Suctioning, BVM, BIAD, Intubation).
- Use facemasks in all other scenarios.
- Use respirators (N95 or equivalent) beyond the manufacturing expiration date when not soiled, ripped, torn, or otherwise damaged. Securing straps should also be in good repair and operational:
 - Visually inspect straps, nose bridge/foam, and mask in general.
 - Perform seal check: <https://www.youtube.com/watch?v=pGXiUyAoEd8>
- Models tested by CDC and are believed to function properly beyond expiration date:

3M: 1860, 1860s, 1870, 8210, 9010, 8000	Medline/Alpha Protech NON27501
Gerson 1730	Moldex: 1512, 2201
- Minimize providers caring for patient to the extent possible to conserve.
- Use Self-Contained Breathing Apparatus (SCBA) if needed.
- Re-use respiratory (N95 or equivalent) masks and place in paper bag between use. Do not touch inside of mask. Wash hands thoroughly before removing mask.
- When to discard a respirator (N95 or equivalent):
 - After using during an aerosol producing procedure.
 - Contamination with blood, body fluids or secretions, following close contact with known COVID-19 patient.

Gowns:

- Use only for aerosol generating procedures (Nebulizer, NIPPV, Suctioning, BVM, BIAD, Intubation).
- Use only for close patient contact, lifting, moving, or transferring where provider contacts patients body.
- May use removable and washable coveralls.

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/respirators-strategy/index.html>