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**Attachments:** [COVID EMS PPE.pdf](#)

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Warden:

In preparation for rapid decompensation in the medical status of certain inmates who have tested positive for SARS-CoV-2 at OCCC, HCD has been in discussions with EMS on protocols. EMS requests:

- The facility ensure the area in which HEMS personnel will pass and work on the medical emergency is secured so that inmates are not walking or roaming freely.
- ACOs who accompany the inmate in the ambulance wear full PPE. HEMS personnel are required to wear respiratory protection (N95s), gowns, gloves, and full face shields for all patients. They are concerned that ACOs will be exposed when they perform aerosolizing type procedures in the ambulance if ACOs are not wearing appropriate PPE. Please remind the staff about required PPE.
- If at all possible as circumstances allow, can the inmate or staff that is in need of HEMS assistance be moved to the nearest most accessible area where the ambulance will be parking? This would assist HEMS in decreasing potential heat related illness (heat exhaustion) to their personnel due to having to wear full PPE throughout the day.

I hope this assists the facility in being able to move inmates quickly and safely during anticipated medical emergencies in the coming days.

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## Interim Recommendations for Emergency Medical Services (EMS) Systems and 911 Public Safety Answering Points/Emergency Communication Centers (PSAP/ECCs) in the United States During the Coronavirus Disease (COVID-19) Pandemic

### First Responder Guidance

Updated July 15, 2020

[Print](#)

This guidance applies to all medical first responders, including fire services, emergency medical services, and emergency management officials, who anticipate close contact with persons with suspected or confirmed Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) infection in the course of their work.

Updated July 15, 2020

## Summary of Key Changes for the EMS Guidance:

Below are changes to the guidance as of July 15, 2020:

- Reorganized recommendations into 2 sections:
  - Recommended infection prevention and control (IPC) practices for routine activities during the pandemic.
  - Recommended IPC practices when caring for a patient with suspected or confirmed SARS-CoV-2 infection.
- Added recommendations that were included in healthcare IPC FAQs addressing:
  - Universal use of PPE for healthcare personnel working in communities with moderate to sustained transmission of SARS-CoV-2, the virus that causes COVID-19
  - Creating a process for responding to SARS-CoV-2 exposures among healthcare personnel and others.

## Background

This interim guidance has been updated based on currently available information about COVID-19 and the current situation in the United States. EMS practices should be based on the most up-to-date clinical recommendations and information from appropriate public health authorities and EMS medical direction about SARS-CoV-2 infection. Most recommendations in this updated guidance are not new (except as noted in the summary of changes above); they have been reorganized into the following sections:

- Recommended infection prevention and control (IPC) practices for routine healthcare delivery during the pandemic.
- Recommended IPC practices when caring for a patient with suspected or confirmed SARS-CoV-2 infection.

EMS play a vital role in responding to requests for assistance, triaging patients, and providing emergency medical treatment and transport for ill or injured persons. However, unlike patient care in the controlled environment of a healthcare facility, care and transports by EMS present unique challenges because of the nature of the setting, enclosed space during transport, frequent need for rapid medical decision-making, interventions with limited information, and a varying range of patient acuity and jurisdictional healthcare resources.

When preparing for and responding to patients with suspected or confirmed SARS-CoV-2 infection, close coordination and effective communications are important among 911 Public Safety Answering Points/Emergency Communication Centers (PSAP/ECCs)— commonly known as 911 call centers, the EMS system, healthcare facilities, and the public health system. Each PSAP/ECC and EMS system should seek the involvement of an EMS medical director to provide appropriate medical oversight. When SARS-CoV-2 infection is suspected in a patient needing emergency transport, prehospital care providers and healthcare facilities should be notified in advance that they may be caring for, transporting, or receiving a patient who might have SARS-CoV-2 infection.

This interim guidance applies to all EMS personnel (i.e., prehospital EMS and medical first responders involved in 911 responses or interfacility transfers) across multiple EMS models including, but not limited to, free standing, third-service, fire-based, hospital-based, and related EMS providers. Note that fire services are also included as they respond to emergency medical calls and may do so with or without an ambulance.

#### Additional Key Resources:

- Strategies to Optimize the Supply of PPE and Equipment
- Criteria for Return to Work for Healthcare Personnel with Suspected or Confirmed COVID-19 (Interim Guidance)
- Strategies to Mitigate Healthcare Personnel Staffing Shortages
- Interim U.S. Guidance for Risk Assessment and Work Restrictions for Healthcare Personnel with Potential Exposure to Coronavirus Disease 2019 (COVID-19)
- Discontinuation of Transmission-Based Precautions and Disposition of Patients with COVID-19 in Healthcare Settings (Interim Guidance)

## 1. Recommended infection prevention and control (IPC) practices for routine healthcare delivery during the pandemic

CDC recommends using additional infection prevention and control practices during the COVID-19 pandemic, along with standard practices recommended as a part of routine healthcare delivery to all patients. These practices are intended to apply to all patients, not just those with suspected or confirmed SARS-CoV-2 infection (See Section 2 for additional practices that should be used when caring for patients with suspected or confirmed SARS-CoV-2 infection).

#### Recommendations for 911 PSAP/ECCs

Municipalities and local EMS authorities should coordinate with state and local public health, PSAP/ECCs, and other emergency call centers to address the need for modified caller queries about SARS-CoV-2 infection, outlined below.

These modified caller queries should be developed in collaboration with an EMS medical director and informed by local, state, territorial, tribal and federal public health authorities, including the city or county health department(s), state health department(s), and CDC.

#### Modified Caller Queries

911 Public Safety Answering Points/Emergency Communication Centers (PSAP/ECCs) should question callers and determine whether the call concerns a person who might have SARS-CoV-2 infection (e.g., ask about signs and symptoms of COVID-19 or recent close contact with someone with SARS-CoV-2 infection). The query process should never supersede the provision of pre-arrival instructions to the caller when immediate lifesaving interventions (e.g., CPR or the Heimlich maneuver) are indicated.

Information about a patient who might have SARS-CoV-2 infection should be communicated immediately to EMS personnel before arrival on scene in order to limit the number of EMS personnel exposed to the patient and to allow use of appropriate PPE. As part of pre-arrival instructions, PSAP/ECCs should encourage the universal use of cloth face coverings for all persons who are safely able to wear them at the scene prior to EMS arrival. PSAP/ECCs should utilize medical dispatch protocols that are approved by their EMS medical director in consultation with the local or state public health department. These protocols should be updated, as needed, to accommodate changes in EMS availability, and/or the redirection of low acuity calls to alternate disposition (e.g., nurse triage line, telemedicine triage line).

PSAP/ECCs and EMS units that respond to calls for ill travelers at US international airports or other ports of entry to the United States (maritime ports or border crossings) should be in contact with the CDC quarantine station of jurisdiction for the port of entry. CDC's Quarantine Station Guidelines for Ill Travelers provide information on how to identify the appropriate

the port of entry (see: CDC Quarantine Station Contact List) for planning guidance. They should notify the quarantine station when responding to that location if a communicable disease is suspected in a traveler. CDC has provided job aids for this purpose to EMS units operating routinely at US ports of entry. The PSAP/ECCs or EMS unit can also call CDC's Emergency Operations Center at (770) 488-7100 to be connected with the appropriate CDC quarantine station.

## Recommendations for EMS Personnel

### EMS Employer Responsibilities

The responsibilities described in this section are for the care and transport of all patients, and not only for the care and transport of patients with suspected or confirmed SARS-CoV-2 infection. The Ryan White HIV/AIDS Treatment Extension Act of 2009 addresses notification procedures and requirements for medical facilities and state public health officers and their designated officers regarding exposure of emergency response employees (EREs), which includes EMS and other first responders, to potentially life-threatening infectious diseases. In March 2020, CDC/NIOSH updated the list of potentially life-threatening infectious diseases to which EREs might be exposed that are covered by the Act to include the addition of COVID-19, the disease caused by the virus SARS-CoV-2. A medical facility must respond to appropriate requests by making determinations about whether EREs have been exposed to infectious diseases included on the list. See <https://www.cdc.gov/niosh/docs/2020-119/pdfs/2020-119.pdf?id=10.26616/NIOSH PUB2020119> for more information.

In addition, employers are required to:

- Develop IPC policies and procedures for EMS units that include a recommended sequence for safely donning and doffing PPE.
- Provide all EMS personnel with job- or task-specific education and training on preventing transmission of infectious agents, including refresher training.
- Ensure that EMS personnel are educated, trained, and have practiced the appropriate use of PPE prior to caring for a patient, including attention to correct use of PPE and preventing self-contamination and contamination of environmental surfaces during the process of removing such equipment.
- As part of the Occupational Safety and Health Administration (OSHA) respiratory protection program, ensure EMS personnel are medically cleared, trained, and fit tested for respiratory protection device use (e.g., N95 filtering facepiece respirator), or medically cleared and trained in the use of an alternative respiratory protection device (e.g., loose fitting powered air-purifying respirator, PAPR) whenever respirators are required. OSHA has a number of respiratory training videos [\[link\]](#).
- EMS units should be provided adequate supplies (e.g., hand sanitizer, cleaning supplies, EPA-registered hospital disinfectants, PPE) so EMS personnel can adhere to recommended IPC practices.
- Ensure that EMS personnel and professional cleaners contracted by the EMS employer tasked to clean and disinfect transport vehicles and equipment are educated, trained, and have practiced the process according to EPA-registered label instructions, equipment manufacturer's instructions, and the EMS agency's standard operating procedures.

### Screen all EMS Personnel for Signs or Symptoms of SARS-CoV-2 Infection at the Start of Each Shift

Although screening for symptoms will not identify asymptomatic or pre-symptomatic individuals with SARS-CoV-2 infection, symptom screening remains an important strategy to identify those who could have COVID-19 and require prompt assessment and response.

- Screen all EMS personnel and visitors (i.e., anyone entering the facility) for symptoms consistent with COVID-19 and exposure to others with SARS-CoV-2 infection. Screen EMS personnel at the start of each shift. Screen visitors prior to entry to the facility (e.g., firehouse or EMS station).
  - Actively take their temperature and confirm absence of symptoms consistent with COVID-19. Fever is either measured temperature  $\geq 100.0^{\circ}\text{F}$  or subjective fever.
  - Ask them if they have been advised to self-quarantine because of exposure to someone with SARS-CoV-2 infection.
- Promptly manage anyone with symptoms of COVID-19 or who has been advised to self-quarantine:
  - EMS personnel should don a facemask if not already wearing one, return home, and notify occupational health services to arrange for further evaluation.
  - Visitors should be restricted from entering the facility.

## Assess All Patients for SARS-CoV-2 Infection

- If PSAP/ECC telecommunicators advise that the patient is suspected of having SARS-CoV-2 infection, based on symptoms or close contact with an individual with SARS-CoV-2 infection, EMS personnel should put on appropriate PPE (as described in Section 2) before entering the scene. EMS personnel should be aware of the signs and symptoms of COVID-19.
- If information about potential for SARS-CoV-2 infection has not been provided by the PSAP/ECC, EMS personnel should exercise caution when responding to any patient. Initial assessment should begin from a distance of at least 6 feet from the patient, if possible. If the patient's condition allows, the patient may be directed to meet the EMS crew at an appropriate location outside or in a more ventilated area.
- All patients (if tolerated), regardless of COVID-19 symptoms, should be instructed to practice source control. Patient contact should be minimized to the extent possible until a cloth face covering or facemask is on the patient.
- If possible, EMS personnel should ask the patient about signs and symptoms of COVID-19 or if the patient has had recent close contact with someone with SARS-CoV-2 infection.
- If SARS-CoV-2 infection is suspected, PPE as described in Section 2 should be used. If SARS-CoV-2 infection is not suspected, EMS personnel should follow standard procedures and use appropriate PPE for evaluating and providing care to the patient. Consideration for universal PPE (as described below) should be given depending on the level of community transmission.

## Implement Universal Source Control Measures

Source control refers to use of cloth face coverings or facemasks to cover a person's mouth and nose to prevent the release of respiratory secretions when they are talking, sneezing, or coughing. Because of the potential for asymptomatic and pre-symptomatic transmission, source control measures are recommended for everyone, even if they do not have symptoms of COVID-19.

- Patients and family members should be wearing their own cloth face covering (if tolerated) prior to the arrival of EMS personnel and throughout the duration of the encounter, including during transport. If they do not have a face covering, they should be offered a facemask or cloth face covering, as supplies allow.
  - Facemasks and cloth face coverings should not be placed on young children under age 2, anyone who has trouble breathing, or anyone who is unconscious, incapacitated or otherwise unable to remove the mask without assistance.
  - If a nasal cannula is used, a facemask should (ideally) be worn over the cannula. Alternatively, an oxygen mask can be used if clinically indicated. If the patient requires intubation, see below for additional precautions for aerosol-generating procedures.
- EMS personnel should wear a facemask at all times while they are in service, including in breakrooms or other spaces where they might encounter co-workers.
  - When available, facemasks are preferred over cloth face coverings for EMS personnel as facemasks offer both source control and protection for the wearer against exposure to splashes and sprays of infectious material from others.
    - Cloth face coverings should NOT be worn instead of a respirator or facemask if more than source control is needed.
  - To reduce the number of times EMS personnel must touch their face and potential risk for self-contamination, EMS personnel should consider continuing to wear the same respirator or facemask (extended use) throughout their entire work shift, instead of intermittently switching back to their cloth face covering.
    - Respirators with an exhalation valve are not recommended for source control, as they allow unfiltered exhaled breath to escape.
  - EMS personnel should remove their respirator or facemask, perform hand hygiene, and put on their cloth face covering when leaving at the end of their shift.
- Educate EMS personnel about the importance of performing hand hygiene immediately before and after any contact with their respirator or facemask.

## Encourage Physical Distancing

Healthcare delivery requires close physical contact between patients and EMS personnel. However, when possible, physical distancing (maintaining at least 6 feet between people) is an important strategy to prevent SARS-CoV-2

transmission.

- During transport, limit the number of EMS personnel in the patient compartment to essential personnel.
- Limit others riding in the ambulance while the patient is transported to the healthcare facility to only those essential for the patient's physical or emotional well-being or care (e.g., care partner, parent, etc.)
  - They should wear a cloth face covering if possible, and, ideally, be screened for symptoms of COVID-19 or close contact with an individual with COVID-19 prior to transport including taking their temperature before entering the ambulance.
  - Those with symptoms or a history of close contact in the prior 14 days should not be permitted in the ambulance.

For EMS personnel, the potential for exposure to SARS-CoV-2 is not limited to direct patient care interactions. Transmission can also occur through unprotected exposures to asymptomatic or pre-symptomatic co-workers in breakrooms, co-workers or visitors in other common areas, or other exposures in the community. Examples of how physical distancing can be implemented for EMS personnel include:

- Reminding EMS personnel that the potential for exposure to SARS-CoV-2 is not limited to direct patient care interactions.
- Emphasizing the importance of source control and physical distancing when engaged in non-patient care activities.
- Designating areas for EMS personnel to take breaks, eat, and drink that allow them to remain at least 6 feet apart from each other, especially when they must be unmasked.

### Implement Universal Use of Personal Protective Equipment

- EMS personnel working in areas with moderate to substantial community transmission are more likely to encounter asymptomatic or pre-symptomatic patients with SARS-CoV-2 infection. If SARS-CoV-2 infection is not suspected in a patient (based on symptom and exposure history), EMS personnel should follow Standard Precautions (and Transmission-Based Precautions if required based on the suspected diagnosis). They should also:
  - Wear eye protection in addition to their facemask to ensure the eyes, nose, and mouth are all protected from splashes and sprays of infectious material from others.
  - Wear an N95 or equivalent or higher-level respirator, instead of a facemask, for:
    - Aerosol generating procedures (refer to Which procedures are considered aerosol generating procedures in healthcare settings FAQ)
  - Respirators with exhalation valves are not recommended for source control.
- For EMS personnel working in areas with minimal to no community transmission, the universal eye protection and respirator recommendations described for areas with moderate to substantial community transmission are optional. However, EMS personnel should continue to adhere to Standard and Transmission-Based Precautions, including use of eye protection and/or an N95 or equivalent or higher-level respirator based on anticipated exposures and suspected or confirmed diagnoses. Universal use of a facemask for source control is recommended for EMS personnel.

### Create a Process to Address to SARS-CoV-2 Exposures Among EMS Personnel and Others

EMS should have a process for notifying the health department about suspected or confirmed cases of SARS-CoV-2 infection, and should establish a plan, in consultation with local public health authorities, for how exposures in EMS personnel will be investigated and managed and how contact tracing will be performed. The plan should address the following:

- Who is responsible for identifying contacts (e.g., EMS personnel, patients, family members) and notifying potentially exposed individuals?
- How will such notifications occur?
- What actions and follow-up are recommended for those who were exposed?

Contact tracing should be carried out in a way that protects the confidentiality of affected individuals and is consistent with applicable laws and regulations. EMS personnel and patients who were transported to a healthcare facility should be prioritized for notification. These groups, if infected, have the potential to expose many individuals at higher risk for severe disease, or in the situation of admitted patients, are at higher risk for severe illness themselves.

Information about risk assessment and work restrictions for healthcare personnel (HCP) including EMS personnel exposed to SARS-CoV-2 is available in the Interim U.S. Guidance for Risk Assessment and Work Restrictions for Healthcare Personnel with Potential Exposure to Coronavirus Disease 2019 (COVID-19).

Information about when HCP including EMS personnel with suspected or confirmed SARS-CoV-2 infection may return to work is available in the Interim Guidance on Criteria for Return to Work for Healthcare Personnel with Confirmed or Suspected COVID-19.

The EMS system must be prepared for potential staffing shortages and have plans and processes in place to mitigate these, including providing resources to assist EMS personnel with anxiety and stress. Strategies to mitigate staffing shortages are available.

## 2. Recommended IPC practices when caring for a patient with suspected or confirmed SARS-CoV-2 infection

### Personal Protective Equipment (PPE)

EMS personnel who will directly care for a patient with suspected or confirmed SARS-CoV-2 infection or who will be in the compartment with the patient should adhere to Standard Precautions and use a NIOSH-approved N95 or equivalent or higher-level respirator (or facemask if a respirator is not available), gown, gloves, and eye protection.

When available, respirators (instead of facemasks) are preferred; they should be prioritized for situations where respiratory protection is most important, including the care of patients with pathogens requiring Airborne Precautions (e.g., tuberculosis, measles, varicella). Additional information about infection control practices and Transmission-Based Precautions is available in the Infection Control Guidance for Healthcare Professionals about Coronavirus (COVID-19).

- **Hand Hygiene**
  - EMS personnel should perform hand hygiene before and after all patient contact, contact with potentially infectious material, and before putting on and after removing PPE, including gloves. Hand hygiene after removing PPE is particularly important to remove any pathogens that might have been transferred to bare hands during the removal process.
  - EMS personnel should perform hand hygiene by using alcohol-based hand sanitizer (ABHS) with 60-95% alcohol or washing hands with soap and water for at least 20 seconds. If hands are visibly soiled, use soap and water before returning to ABHS.
  - EMS personnel should ensure that hand hygiene supplies are readily available to all personnel on the transport vehicle.
- **Personal Protective Equipment Training**

EMS should select appropriate PPE and provide it to EMS personnel in accordance with OSHA PPE standards (29 CFR 1910 Subpart I) [\[2\]](#). EMS personnel must receive training on and demonstrate an understanding of:

  - when to use PPE
  - what PPE is necessary
  - how to properly don, use, and doff PPE in a manner to prevent self-contamination
  - how to properly dispose of or disinfect and maintain PPE
  - the limitations of PPE.

Any reusable PPE must be properly cleaned, decontaminated, and maintained after and between uses. Facilities should have policies and procedures describing a recommended sequence for safely donning and doffing PPE.

The PPE recommended when caring for a patient with suspected or confirmed SARS-CoV-2 infection includes the following:

- **Respirator or Facemask** (*Cloth face coverings are NOT PPE and should not be worn for the care of patients with suspected or confirmed SARS-CoV-2 infection or other situations where use of a respirator or facemask is recommended.*)

- Put on an N95 respirator (or equivalent or higher-level respirator) or facemask (if a respirator is not available) before performing patient care, if not already wearing one as part of extended use strategies to optimize PPE supply. Other respirators include other disposable filtering facepiece respirators, powered air purifying respirators (PAPRs), or elastomeric respirators.
- N95 respirators or respirators that offer an equivalent or higher level of protection should be used instead of a facemask when performing or present for an aerosol generating procedure. See appendix for respirator definition and more information about respiratory protection.
- Disposable respirators and facemasks should be removed and discarded after exiting the patient's care area unless implementing extended use or reuse. Perform hand hygiene after removing the respirator or facemask.
  - If reusable respirators (e.g., PAPRs or elastomeric respirators) are used, they should also be removed after exiting the patient's care area. They must be cleaned and disinfected according to manufacturer's reprocessing instructions prior to re-use.
- When the supply chain is restored, EMS personnel using facemasks instead of respirators should return to use of respirators for patients with suspected or confirmed SARS-CoV-2 infection.
- **Eye Protection**
  - Put on eye protection (i.e., goggles or a face shield that covers the front and sides of the face) before performing patient care, if not already wearing as part of extended use strategies to optimize PPE supply.
    - Protective eyewear (e.g., safety glasses, trauma glasses) with gaps between glasses and the face likely do not protect eyes from all splashes and sprays.
    - Personal eyeglasses and contact lenses are NOT considered adequate eye protection.
  - Ensure that eye protection is compatible with the respirator so there is not interference with proper positioning of the eye protection or with the fit or seal of the respirator.
  - Remove eye protection after performing patient care, unless implementing extended use.
  - Reusable eye protection (e.g., goggles) must be cleaned and disinfected according to manufacturer's reprocessing instructions prior to re-use. Disposable eye protection should be discarded after use unless following protocols for extended use or reuse.
- **Gloves**
  - Put on clean, non-sterile gloves before performing patient care.
    - Change gloves if they become torn or heavily contaminated.
  - Remove and discard gloves after providing patient care, and immediately perform hand hygiene.
- **Gowns**
  - Put on a clean isolation gown before performing patient care. Change the gown if it becomes soiled. Remove and discard the gown in a dedicated container for waste or linen after providing patient care. Disposable gowns should be discarded after use. Cloth gowns should be laundered after each use.
  - If coveralls are used as an alternative to gowns, put on a clean coverall before performing patient care. A new coverall is required for each patient. Change the coverall if it becomes soiled. Remove and discard the coverall in a dedicated container for waste after providing patient care. Disposable coveralls should not be reused.

EMS systems should work with their health department, healthcare coalition [\[link\]](#), or emergency management agency to address shortages of PPE.

### Aerosol-Generating Procedures

- If possible, consult with medical control before performing aerosol-generating procedures for specific guidance. EMS personnel should exercise caution if an aerosol-generating procedure (AGP) is necessary
  - An N95 or equivalent or higher-level respirator such as disposable filtering facepiece respirators, PAPR, or elastomeric respirator instead of a facemask, should be used in addition to the other PPE described above, by EMS personnel present for or performing aerosol-generating procedures.
  - Bag valve masks (BVMs), and other ventilatory equipment, should be equipped with HEPA filtration to filter expired air.
  - EMS systems should consult their ventilator equipment manufacturer to confirm appropriate filtration capability and the effect of filtration on positive-pressure ventilation.
  - If possible, the rear doors of the transport vehicle should be opened and the HVAC system should be activated during AGPs. This should be done away from pedestrian traffic.



- If possible, discontinue AGPs prior to entering the destination facility or communicate with receiving personnel that AGPs are being implemented.

### EMS Transport of a Patient with Suspected or Confirmed SARS-CoV-2 Infection to a Healthcare Facility (including interfacility transport)

If a patient with suspected or confirmed SARS-CoV-2 infection requires transport to a healthcare facility for further evaluation and management (subject to EMS medical direction), the following actions should occur during transport:

- EMS personnel should notify the receiving healthcare facility that the patient has suspected or confirmed SARS-CoV-2 infection so that appropriate infection control precautions may be taken prior to patient arrival.
- Isolate the ambulance driver from the patient compartment and keep pass-through doors and windows tightly shut.
- When possible, use vehicles that have isolated driver and patient compartments that can provide separate ventilation to each area.
  - Before entering the isolated driver's compartment, the driver (if they were involved in direct patient care) should remove and dispose of PPE and perform hand hygiene to avoid soiling the compartment.
  - Close the door/window between these compartments before bringing the patient on board.
  - During transport, vehicle ventilation in both compartments should be on non-recirculated mode to maximize air changes that reduce potentially infectious particles in the vehicle.
  - If the vehicle has a rear exhaust fan, use it to draw air away from the cab, toward the patient-care area, and out the back end of the vehicle.
  - Some vehicles are equipped with a supplemental recirculating ventilation unit that passes air through HEPA filters before returning it to the vehicle. Such a unit can be used to increase the number of air changes per hour (ACH) (<https://www.cdc.gov/niosh/hhe/reports/pdfs/1995-0031-2601.pdf> ).
- If a vehicle without an isolated driver compartment and ventilation must be used, open the outside air vents in the driver area and turn on the rear exhaust ventilation fans to the highest setting to create a pressure gradient toward the patient area.
  - Before entering the driver's compartment, the driver (if they were involved in direct patient care) should remove their gown, gloves and eye protection and perform hand hygiene to avoid soiling the compartment. They should continue to wear their respirator (or facemask if a respirator was not available).
- Follow routine procedures for a transfer of the patient to the receiving healthcare facility (e.g., wheel the patient directly into an examination room, wheel to dedicated receiving area). At a minimum, EMS personnel should continue to wear their respirator (or facemask) and eye protection while transferring the patient from the ambulance into the facility. Depending on the level of direct patient contact and care being provided during transfer (e.g., CPR), it may be appropriate for EMS personnel to also continue wearing their gown and gloves when entering the facility. In such circumstances, transfer should be coordinated with receiving facility and care must be taken to avoid contaminating surfaces in the healthcare facility.

### Documentation of Patient Care

- EMS documentation should include a listing of EMS personnel and public safety providers involved in the response and level of contact with the patient (for example, no contact with patient, provided direct patient care and level of PPE worn). This documentation may need to be shared with local public health authorities if contact tracing becomes necessary.

### Cleaning EMS Transport Vehicles after Transporting a Patient with Suspected or Confirmed SARS-CoV-2 Infection

The following are general guidelines for cleaning or maintaining EMS transport vehicles and equipment after transport:

- After transporting the patient, leave the rear doors of the transport vehicle open to allow for sufficient air changes to remove potentially infectious particles.
  - The time to complete transfer of the patient to the receiving facility and complete all documentation should provide sufficient air changes.
- When cleaning the vehicle, EMS personnel should wear a disposable gown and gloves, as well as their respirator or facemask. A face shield or goggles should also be worn if splashes or sprays during cleaning are anticipated.

- Ensure that environmental cleaning and disinfection procedures are followed consistently and correctly, to include the provision of adequate ventilation when chemicals are in use. Doors should remain open when cleaning the vehicle.
- Routine cleaning and disinfection procedures (e.g., using cleaners and water to pre-clean surfaces prior to applying an EPA-registered, hospital-grade disinfectant to frequently touched surfaces or objects for appropriate contact times as indicated on the product's label) are appropriate for SARS-CoV-2 in healthcare settings, including those patient-care areas in which aerosol-generating procedures are performed.
  - Refer to List N [\[link\]](#) on the EPA website for EPA-registered disinfectants that have qualified under EPA's emerging viral pathogens program for use against SARS-CoV-2.
- Clean and disinfect the vehicle in accordance with standard operating procedures. 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 hospital grade disinfectant in accordance with the product label.
- Clean and disinfect reusable patient-care equipment before use on another patient, according to manufacturer's instructions.
- Follow standard operating procedures for the containment and disposal of used PPE and regulated medical waste.
- Follow standard operating procedures for containing and laundering used linen. Avoid shaking used linens.

## Additional Resources

The EMS Infectious Disease Playbook, published by the Office of the Assistant Secretary for Preparedness and Response's Technical Resources, Assistance Center, Information Exchange (TRACIE) is a resource available to planners at <https://www.ems.gov/pdf/ASPR-EMS-Infectious-Disease-Playbook-June-2017.pdf> [\[link\]](#)

## Appendix: Additional Information about Respirators and Facemasks

Information about Respirators:

- A respirator is a personal protective device that is worn on the face, covers at least the nose and mouth, and is used to reduce the wearer's risk of inhaling hazardous airborne particles (including dust particles and infectious agents), gases, or vapors. Respirators are certified by the CDC/NIOSH, including those intended for use in healthcare.
- Respirator use must be in the context of a complete respiratory protection program in accordance with OSHA Respiratory Protection standard (29 CFR 1910.134 [\[link\]](#)). EMS personnel should be medically cleared and fit tested if using respirators with tight-fitting facepieces (e.g., a NIOSH-approved N95 respirator) and trained in the proper use of respirators, safe removal and disposal, and medical contraindications to respirator use.
- NIOSH information about respirators
- OSHA Respiratory Protection eTool [\[link\]](#)
- Strategies for Optimizing the Supply of N95 Respirators

Filtering Facepiece Respirators (FFR) including N95 Respirators

- A commonly used respirator in healthcare settings is a filtering facepiece respirator (commonly referred to as an N95). FFRs are disposable half facepiece respirators that filter out particles.
- To work properly, FFRs must be worn throughout the period of exposure and be specially fitted for each person who wears one. This is called "fit testing" and is usually done in a workplace where respirators are used.
- Three key factors for an N95 respirator to be effective [\[link\]](#)
- FFR users should also perform a user seal check to ensure proper fit each time an FFR is used.
- Learn more about how to perform a user seal check [\[link\]](#)

NIOSH-approved N95 respirators list.

- PAPRs have a battery-powered blower that pulls air through attached filters, canisters, or cartridges. They provide protection against gases, vapors, or particles, when equipped with the appropriate cartridge, canister, or filter.
- Loose-fitting PAPRs do not require fit testing and can be used with facial hair.

- A list of NIOSH-approved PAPRs is located on the NIOSH Certified Equipment List.

#### Information about Facemasks:

- If worn properly, a facemask helps block respiratory secretions produced by the wearer from contaminating other persons and surfaces (often called source control).
- Surgical facemasks are cleared by the U.S. Food and Drug Administration (FDA) for use as medical devices. Facemasks should be used once and then thrown away in the trash.

#### Definitions:

**Source Control:** Use of cloth face coverings or facemasks to cover a person's mouth and nose to prevent spread of respiratory secretions when they are talking, sneezing, or coughing. Facemasks and cloth face coverings should not be placed on children under age 2, anyone who has trouble breathing, or anyone who is unconscious, incapacitated, or otherwise unable to remove the mask without assistance.

**Cloth face covering:** Textile (cloth) covers that are intended for source control. They are not personal protective equipment (PPE) and it is uncertain whether cloth face coverings protect the wearer. Guidance on design, use, and maintenance of cloth face coverings is available.

**Facemask:** Facemasks are PPE and are often referred to as surgical masks or procedure masks. Use facemasks according to product labeling and local, state, and federal requirements. FDA-cleared surgical masks are designed to protect against splashes and sprays and are prioritized for use when such exposures are anticipated, including surgical procedures. Facemasks that are not regulated by FDA, such as some procedure masks, which are typically used for isolation purposes, may not provide protection against splashes and sprays.

**Respirator:** A respirator is a personal protective device that is worn on the face, covers at least the nose and mouth, and is used to reduce the wearer's risk of inhaling hazardous airborne particles (including dust particles and infectious agents), gases, or vapors. Respirators are certified by the CDC/NIOSH, including those intended for use in healthcare. Refer to the Appendix for a summary of different types of respirators.

**Substantial community transmission:** Large scale community transmission, including communal settings (e.g., schools, workplaces)

**Minimal to moderate community transmission:** Sustained transmission with high likelihood or confirmed exposure within communal settings and potential for rapid increase in cases

**No to minimal community transmission:** Evidence of isolated cases or limited community transmission, case investigations underway; no evidence of exposure in large communal setting

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