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O P E R A T I O N S M A N U A L

STANDARD INSTRUCTION 10 INJURY AND ILLNESS PREVENTION PROGRAM

SECTION 26 PANDEMIC RESPONSE

I. PURPOSE

To provide personnel with the guidelines, policy and procedures for actions and behaviors during a pandemic.

II. SCOPE

This policy shall apply to all San Diego Fire-Rescue Department (SDFD) personnel.

III. AUTHORITY

The fire chief authorizes the information within this policy.

IV. DEFINITIONS

A. Isolation: Process used to separate symptomatic persons who have a communicable disease or have tested positive for a communicable disease from those who are healthy. Isolation restricts the movement of ill persons to help stop the spread of disease.

B. Quarantine: Process used to separate and restrict the movement of asymptomatic persons who may have been exposed to a communicable disease to see if they become ill. These people may have been exposed to a disease and do not know it, or they may have the disease but do not show symptoms. Quarantine can help limit the spread of communicable disease.

V. POLICY

A. A pandemic is an outbreak of a disease that occurs over a wide geographic area (such as multiple countries or continents) and typically affects a significant proportion of the population.

1. A pandemic may be the result of many different disease processes and may create a variety of different symptoms and concerns.
2. For this reason, different actions may be taken during a pandemic.
3. Consideration should be given to creating a recovery plan prior to returning to normal operations.

B. Personnel Care and Management (On and Off-Duty)

The Health and Safety Office will determine the actions taken in coordination with the Medical Director and national, regional and local health authorities.

1. Behaviors and actions that may be required while not on emergency incidents (in station/tower/facilities, shopping, apparatus maintenance, etc.)

a. In station/tower/facility actions

1) Health screenings
2) Face coverings over nose and mouth while on duty, except when alone in a closed room such as while sleeping or bathing
3) Social distancing
4) Regular hand washing

5) Stations/towers and facilities may restrict access to only essential personnel

   a) No public access
   b) No family members
   c) Only authorized vendors allowed inside for station maintenance and repairs

6) Sanitation stations with hand sanitizer will be set up between the apparatus floor and the living areas, and between hallways and living area rooms (gym, kitchen, bullpen, etc.)
7) Prop open door between rooms, when possible/acceptable
8) Eat in separate locations, or alternate times
9) Consider preparing own meals and discontinue organized station chow
10) Move chairs in group areas to facilitate social distancing
11) Add signs to remind personnel to wash hands
12) Maintain station/tower/facility security to avoid any walk-up medical aids from entering
13) Initiate station/tower/facility cleaning protocol

   a) Regularly clean all commonly used areas (computers, gym equipment, sinks)

14) Initiate apparatus/equipment cleaning protocol (see Appendix A: Apparatus and Equipment Cleaning Protocol)

   a) Initiate specialized equipment cleaning after use, for example SCBAs (see Appendix B: SCBA Regulator Disinfecting Procedures) and SCUBAs

15) Crews are to keep all uniforms at the station and do not wear uniforms home

   a) Arrive and depart shift in civilian clothes, including probationary firefighters
   b) Shower prior to dressing into civilian clothes at the end of the shift
   c) Wash all uniforms at the station

16) Crews are to dress down in the station, when appropriate, in class C uniform

   a) Class B uniform is to be kept clean and separate (out of dorm and living areas) for responses

b. Away from the station while on-duty

1) Personnel shall wear fanny packs while away from the apparatus (for example, while shopping) for easy access to PPE
2) Personnel will wear face coverings and practice social distancing

c. Outside activities may be cancelled
d. Meetings and training may be suspended
e. Crews are to politely refuse any food offered by the public

C. Incidents with Suspected Pandemic Illness

The Emergency Medical Services (EMS) Division will determine the actions and personal protective equipment (PPE) to be used on incidents involving patients with pandemic illnesses in coordination with the Medical Director and national, regional and local health authorities.

1. Emergency Command and Dispatch Center (ECDC)

   a. Initiate pre-arrival instructions
   b. Initiate bio surveillance questions (card 36)
   c. Premise notes may be added to addresses of those found to test positive for the pandemic infection
   d. Dispatchers will confirm responding units have acknowledged premise notes, when appropriate

2. Response Changes

   a. Company officers are to consider slowing down the speed of the call to ensure crew safety and that PPE is safely and correctly donned (Appendix C: CDC Donning and Doffing of PPE)

      1) Perform a seal check (Appendix D: CDC User Seal Check) every time N95/N100 mask is donned

   b. Don all PPE prior to leaving the station
   c. No turnouts on medical aids to limit contamination and decontamination
   d. Carry isolation kits on all calls, so they are readily available
   e. Realize that it may be difficult for ECDC to obtain relevant pandemic illness information

3. PPE Criteria for patients suspected of infection may include:

   a. Gloves
   b. Eye protection (glasses, goggles)
   c. Face Shields
   d. N95 or N100 mask
   e. Gown

4. Pandemic Infection Assessment Criteria

   a. The Center for Disease Control, Medical Director, and national, regional and local health authorities will develop assessment criteria to be used for each type of pandemic illness

5. Patient Assessment/Treatment Options (Appendix E: SDFD COVID19 Protocol)

a. First responders shall utilize 'one-in three-out' for initial patient contact on non-critical calls, with the single provider "scout" in full PPE while the remaining members of the crew provide support services
b. Upon arrival, determine if patient can meet crews outside
c. Ensure family/bystanders maintain social distancing
d. Conduct initial patient assessment from greater than six feet away when possible
e. Place surgical mask on patient and determine if patient meets pandemic infection assessment criteria
f. All non-essential personnel should stay a minimum of six feet from the patient to prevent exposure
g. Aerosolizing procedures (suctioning, CPR, intubation, use of BVM, CPAP or nebulizer, etc.) should alert crews to slow down and ensure all safety measures are in place

    1) BVMs and ventilatory equipment should be equipped with HEPA filtration

h. Advise incoming units of situation to improve awareness and limit exposures

6. Patient Transport

a. Family members/care providers/interpreters, etc. should not ride in the ambulance, if possible
b. Open outside air vents in the driver area and turn on exhaust ventilation fans to highest setting
c. Keep pass through compartment closed
d. Notify the receiving facility of the transport of an infected patient so hospital personnel can take actions prior to patient arrival
e. Transporting personnel will wear all required PPE during patient assessment, treatment and transport
f. Clean and disinfect the vehicle after transport

7. Decontamination (Appendix E: SDFD COVID19 Protocol) and Re-Stock

a. Clean and disinfect PPE
b. Uniform
c. Equipment

    1) Goggles (YouTube Video)
    2) N95/N100 (YouTube Video)

d. Ambulance
e. Hands
f. Re-stock medical supplies one for one off the ambulance

8. Exposure Reporting and Documentation

a. Documentation of patient care should be done after personnel have completed transport, removed their PPE, and performed hand hygiene.

b. Document positive pandemic infection screening.

1) Include the type of PPE used, when it was put on, and if there were any breaches.
2) EMS documentation should include all EMS clinicians 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, etc.)
3) Use the pandemic infection button on the electronic patient care report (ePCR) to flag patients.

c. A Communicable Disease Exposure Report should be submitted to the DICO when patient screened positive for pandemic illness and:

1) Any PPE missing or breached
2) Aerosolized procedures performed
3) Extensive body contact with patient
4) An exposure occurred on a patient not transported (an AMA, 11-44, etc.)

D. Dedicated Infection Control Officer (DICO)

1. Procedures will be implemented in cooperation with the Medical Director and national, regional and local health authorities
2. Implement a standard process for incident exposure reporting

a. Symptomatic Personnel

1) Isolate personnel
2) Notify chain of command
3) Page the DICO and follow instructions given

b. Asymptomatic Exposure

1) Notify chain of command
2) Page the DICO and follow the instructions given

E. Isolation and Quarantine

1. Isolation is for personnel who are symptomatic
2. Quarantine is for personnel who have been exposed and are not symptomatic
3. Implemented in cooperation with the Medical Director, national, regional, and local health authorities

F. Family Support

1. Implemented to provide support to the members and families in cooperation with the following

a. Peer Support Team
b. Chaplains
c. Psychological Services Provider
d. San Diego Fire Relief Association
e. San Diego Lifesaving Association

G. Behavioral Health and Wellness

1. Services will be provided in cooperation with the department's contracted psychological services provider.
2. Long-term behavioral wellness shall be considered early in the pandemic.

H. Additional Considerations

1. Meetings may be cancelled or moved to on-line systems (Skype, Teams, etc.)
2. Wellness appointments may be suspended
3. SDFD may activate an Incident Management Team and regular operational briefings
4. Outreach programs and ride-alongs may be suspended
5. Suspend FCIP and pre-fire planning
6. Public presentations may be suspended (community, schools, etc.)
7. Fire Academy, Paramedic School, Advanced Lifeguard Academy, and any other specialized training may be suspended
8. Department may implement increased staffing models and various first responder arrangements, and re-assign personnel

VI. APPENDIX A: APPARATUS AND EQUIPMENT CLEANING PROTOCOL

COVID-19 Best Practice
Apparatus Cleaning Checklist

Conduct twice a shift at 0800 and 1900 hours.

- Don appropriate PPE including eye protection and gloves.
- Keep apparatus doors open while cleaning.
- Remove gurney if applicable.
- Use disinfectant to clean all visible interior surfaces.

Cleaning Instructions	0800	1900
Clean and disinfect all reusable patient-care equipment including but not limited to: • BP cuff • Stethoscopes • O_2 bottles		
Clean and disinfect Scott air pack according to guidelines.		
Clean and disinfect the interior (firefighter & patient compartments) • Control Panel • Seatbelts • Grab rails • Drawer and Door handles • Walls, ceilings, and cabinets		
Sweep vehicle floors to remove debris and mop with disinfectant. Allow for the solution to dry before reentering to continue the decontamination process.		
Clean and disinfect surfaces on the interior of the driver's compartment: • Radios • Control panel surfaces • Steering wheel and vehicle controls • Seatbelts • Interior door handles • Keyboards • Cell phones and tablets • Headsets		
Wipe down the exterior door handles and compartment handles and other potentially contaminated areas (backboards, stair chair) with disinfectant wipes.		
Doff all PPE using Agency protocols. Wash hands thoroughly.		

VII. APPENDIX B: SCBA REGULATOR DISINFECTING PROCEDURES

SCBA Regulator Disinfecting Procedures

The following procedure will be used to disinfect the regulator after each use, including training exercises and emergency responses. All apparatus will receive one *Fresh Gear* spray bottle. Ensure Safety Data Sheet (SDS) is referenced and available by personnel.

Supplies needed:

- *Fresh Gear* in a spray bottle: (DO NOT DISCARD, spray bottles are refillable through Logistics at Storeroom 42). *Fresh Gear* is a SCOTT approved anti-viral solution.
- Drinking (potable) water: running or in a spray bottle
- PPE: gloves, goggles or face protection

1. Ensure proper PPE precautions are taken.
2. Remove the breathing regulator from the face piece by rotating the regulator 1/4 turn clockwise.
3. Remove any obvious dirt from the external surfaces of the regulator using *Fresh Gear* with a sponge or soft cloth.
4. Depress the manual shut-off, close the purge knob by turning fully clockwise and spray *Fresh Gear* into the regulator opening. Make sure to wet the immediate area around the opening. Swirl to completely cover internal components. Allow for 10 minutes of contact time to disinfect prior to rinsing. Turn regulator, opening face down and shake excess liquid out.
   - **Note:** *Fresh Gear* and water should not be directed into the spray bar ports.
5. Rinse regulator with drinking water using a spray bottle or softly running water. The inside of regulator must be thoroughly rinsed after applying *Fresh Gear*. Failure to thoroughly rinse may cause a number of adverse effects. Rinsing is a key component to the SCBA integrity after disinfecting.
6. Shake excess water out of regulator and completely air-dry the regulator before use. Perform a regulator check by opening the purge valve and observe the air flow from the regulator spray bar. Droplets of water indicate the regulator is **NOT** dry. If this occurs, repeat drying procedure and regulator check.

IMPORTANT: Under no circumstances should the face of the regulator be banged against a hard surface to expedite the removal of water. It may damage the spray bar ports or crack the exterior surface of the regulator. Shaking and opening the purge valve is the only acceptable way to remove water.

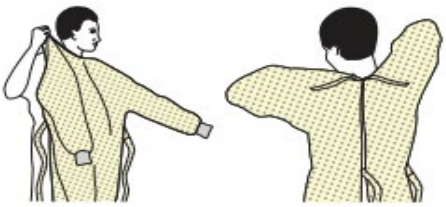
VIII. APPENDIX C: CDC GUIDELINES FOR DONNING AND DOFFING PPE

SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator

3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit

4. GLOVES

- Extend to cover wrist of isolation gown

USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene

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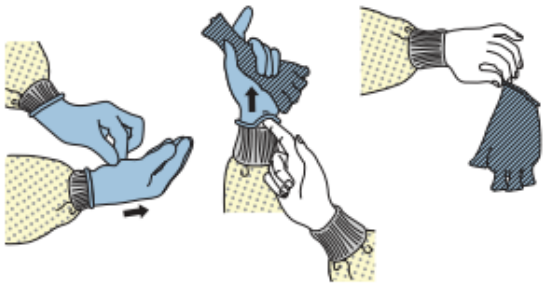
HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in a waste container



2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band or ear pieces
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container

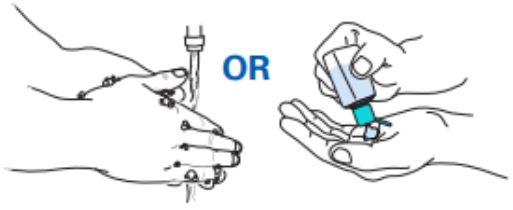
3. GOWN

- Gown front and sleeves are contaminated!
- If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- Pull gown away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard in a waste container

4. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container

5. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE

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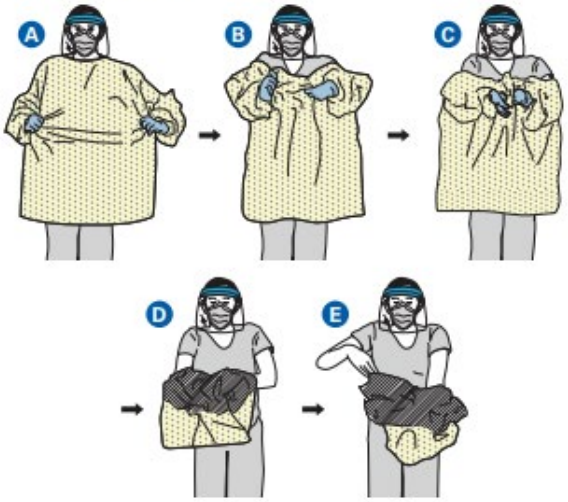
HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 2

Here is another way to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GOWN AND GLOVES

- Gown front and sleeves and the outside of gloves are contaminated!
- If your hands get contaminated during gown or glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp the gown in the front and pull away from your body so that the ties break, touching outside of gown only with gloved hands
- While removing the gown, fold or roll the gown inside-out into a bundle
- As you are removing the gown, peel off your gloves at the same time, only touching the inside of the gloves and gown with your bare hands. Place the gown and gloves into a waste container

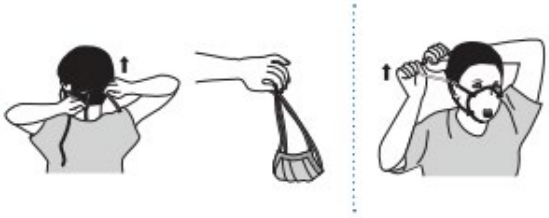


2. GOGGLES OR FACE SHIELD

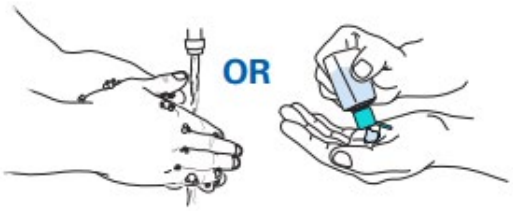
- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band and without touching the front of the goggles or face shield
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container

3. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



4. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE

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IX. APPENDIX D: CDC USER SEAL CHECK

Filtering out Confusion: Frequently Asked Questions about Respiratory Protection

User Seal Check

Over 3 million United States employees in approximately 1.3 million workplaces are required to wear respiratory protection. The Occupational Safety and Health Administration (OSHA) (29 CFR 1910.134) requires an annual fit test to confirm the fit of any respirator that forms a tight seal on the wearer's face before it is used in the workplace.[1] Once a fit test has been done to determine the best respirator model and size for a particular user, **a user seal check** should be done every time the respirator is to be worn to ensure an adequate seal is achieved.

What is a User Seal Check?

A user seal check is a procedure conducted by the respirator wearer to determine if the respirator is being properly worn. The user seal check can either be a positive pressure or negative pressure check.

During a **positive pressure user seal check**, the respirator user **exhales** gently while blocking the paths for air to exit the facepiece. A successful check is when the facepiece is slightly pressurized before increased pressure causes outward leakage.

During a **negative pressure user seal check**, the respirator user **inhales** sharply while blocking the paths for air to enter the facepiece. A successful check is when the facepiece collapses slightly under the negative pressure that is created with this procedure.

A user seal check is sometimes referred to as a fit check. A user seal check should be completed each time the respirator is donned (put on). It is only applicable when a respirator has already been successfully fit tested on the individual.

How do I do a User Seal Check while Wearing a Filtering Facepiece Respirator?

Not every respirator can be checked using both positive and negative pressure. Refer to the manufacturer's instructions for conducting user seal checks on any specific respirator. This information can be found on the box or individual respirator packaging.

The following positive and negative user seal check procedures for filtering facepiece respirators are provided as examples of how to perform these procedures.

CDC NIOSH Centers for Disease Control and Prevention National Institute for Occupational Safety and Health

How to do a positive pressure user seal check

Once the particulate respirator is properly donned, place your hands over the facepiece, covering as much surface area as possible. Exhale gently into the facepiece. The face fit is considered satisfactory if a slight positive pressure is being built up inside the facepiece without any evidence of outward leakage of air at the seal. Examples of such evidence would be the feeling of air movement on your face along the seal of the facepiece, fogging of your glasses, or a lack of pressure being built up inside the facepiece.

If the particulate respirator has an exhalation valve, then performing a positive pressure check may be impossible. In such cases, a negative pressure check should be performed.

How to do a negative pressure user seal check

Negative pressure seal checks are typically conducted on particulate respirators that have exhalation valves. To conduct a negative pressure user seal check, cover the filter surface with your hands as much as possible and then inhale. The facepiece should collapse on your face and you should not feel air passing between your face and the facepiece.

In the case of either type of seal check, if air leaks around the nose, use both hands to readjust the nosepiece by placing your fingertips at the top of the metal nose clip. Slide your fingertips down both sides of the metal strip to more efficiently mold the nose area to the shape of your nose. Readjust the straps along the sides of your head until a proper seal is achieved.[2]

If you cannot achieve a proper seal due to air leakage, you may need to be fit tested for a different respirator model or size.

Can a user seal check be considered a substitute for a fit testing?

No. The user seal check does not have the sensitivity and specificity to replace either fit test methods, qualitative or quantitative, that are accepted by OSHA (29 CFR 1910.134). A user should only wear respirator models with which they have achieved a successful fit test within the last year. NIOSH data suggests that the added care from performing a user seal check leads to higher quality donnings (e.g., reduces the chances of a donning with a poor fit).[3]

Where can I Find More Information?

This information and more is available on the NIOSH Respirator Trusted-Source webpage.

References
1. OSHA [1998]. Respiratory Protection. 29 CFR 1910.134. Final rule. Fed Regist 63:1152-1300.
2. NIOSH [2010]. How to properly put on and take off a disposable respirator. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Insitute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 2010-133 https://www.cdc.gov/niosh/docs/2010-133/pdfs/2010-133.pdf
3. Viscusi DJ, Bergman MS, Zhuang Z, and Shaffer RE [2012]. Evaluation of the benefits of the user seal check on N95 filtering facepiece respirator fit. J Occup and Evironl Hyg. 9(6):408-416.

Photos courtesy of NIOSH

DOI: https://doi.org/10.26616/NIOSHPUB2018130
DHHS (NIOSH) Publication No. 2018-130

X. APPENDIX E: SDFD COVID19 PROTOCOL

This protocol shall be followed unless directed differently by a Base Hospital

Steps 1-4 apply to all patient contacts. For patients that have a positive prehospital screen for potential COVID-19 infection, the remainder of this protocol shall be used in addition to the appropriate Treatment Protocol(s) based on Provider Impression(s).

1. Assume that all patients, regardless of dispatch complaint, may have COVID-19 and place a surgical mask on them at initial encounter, as tolerated. ❶
   Minimum PPE for all patient encounters is a N95/N100 mask (use a surgical mask over N100 exhalation valve [if present] to protect the patient), gloves, face shield, and/or goggles. ❷
2. Perform initial assessment of all patients, including COVID-19 screen, from at least 6 feet away if possible. ❸
3. If completing the screening within 6 feet of the patient, have a single provider don all PPE (N95/N100 mask, gloves, gown, face shield, and/or goggles) and approach the patient to perform an assessment to determine what level of PPE is required. ❹❺
4. For patients in cardiac/respiratory arrest, all providers shall don PPE (N95/N100 mask, gloves, gown, face shield, and/or goggles) prior to approaching the patient. ❺
5. For any patient who screens positive for potential COVID-19 infection all providers shall: ❸
   Utilize this protocol in addition to the appropriate protocols based on provider impression(s).
   - Don PPE prior to approaching the patient (N95/N100, gloves, gown, face shield, and/or goggles). ❺
6. Consider if the patient is appropriate for non-transport per protocol S-415A.
7. Limit interventions to essential procedures only.
   - Auscultations of lung sounds in patients without respiratory distress, administration of nebulized medications and use of CPAP is discouraged except as outlined below.
8. Assess airway and initiate basic and/or advanced airway maneuvers as needed. ❺
   - Use a HEPA filter for all aerosol-generating procedures (positive-pressure ventilation).
   - Use a shower cap over patients face with advanced airway devices.
   - Use of a King Airway is preferred to endotracheal intubation.
9. Administer **Oxygen** for O_2 sat <94% and/or respiratory distress at the lowest flow possible to achieve O_2 sat ≥94% and to improve respiratory distress. Place a surgical mask on the patient over the oxygen delivery device.
10. For **mild respiratory distress** (abnormal breathing that is neither severe nor moderate).
    - Do not administer nebulized medications or apply CPAP.
11. For **moderate respiratory distress** (not severe, but retractions, RR>24, or SpO2 <94%).
    - Do not administer nebulized medications or apply CPAP.
    - For bronchospasm, assist patient with use of their own metered-dose inhaler (MDI). ❻

12. For **severe respiratory distress** (altered level of consciousness, diaphoresis, inability to maintain work of breathing, difficulty speaking between breaths, bradycardia, increasing EtCO2).
    - Wear PPE (N95/N100 mask, gloves, gown, face shield, and/or goggles). ❺
    - Utilize CPAP with blue adapter and HEPA Filter.
    - For bronchospasm, administer Albuterol/Atrovent via nebulizer. ❻
    - For patients with known asthma or suspected allergic reaction presenting with severe bronchospasm, epinephrine IM is the preferred treatment in addition to MDI as the initial intervention.
13. During transport, restrict the number of providers in the patient compartment to only essential personnel to minimize possible exposures and, if possible, adjust the ventilation system air changes/hour to the highest rate and consider opening windows. ❼
14. Notify the receiving hospital for any patient who screens positive for possible COVID-19. Provide notification for all patients, including those who are transported BLS.
    - Prior to entry into the hospital, one provider should doff PPE and discuss plan for handoff with the triage RN.
    - You may be directed to an alternative triage area or handoff may occur outside the hospital.
    - Discuss the handoff plan with the receiving staff prior to bringing the patient into the facility. In some cases, the facility may require that aerosolizing procedures (e.g., nebulized medications, CPAP) be discontinued, or that the patient's head be covered with a sheet to minimize the potential for spread of aerosols during transport inside the receiving facility.

Special Considerations

❶ Do not rely on dispatch pre-arrival screening to catch all possible screened positive patients, repeat screening yourself. Patients with COVID-19 may present with complaints other than shortness of breath or fever. In addition, there is documented community spread, so travel or contact with a known case is not required for a positive screen.

❷ This PPE is recommended as the supply chain allows.

❸ A positive screen is any patient with these symptoms or combinations of symptoms:
- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

❹ If the patient is ambulatory in a home or residential building, consider asking them to come out to you to reduce exposure to surfaces in the home.

❺ Droplet and contact precautions should be taken for all potential COVID-19 patients. Airborne and contact precautions should be taken for all aerosolizing procedures including suctioning, CPAP, nebulized medications, bag-mask ventilation, CPR, advanced airway placement, as well as patients with significant coughing/sneezing; this includes a N95/N100 respirator and gown, in addition to the gloves, face shield, and/or goggles required for all patients screening positive for potential COVID-19.

❻ Administration of Albuterol via a metered-dose inhaler (MDI) with spacer is considered equivalent to nebulized Albuterol; a spacer is typically required for this route to be effective in novice users. MDIs are single use and should be left with the hospital staff upon handoff of the patient; be sure to leave it with the hospital since MDIs are in short supply.

❼ Family members and other contacts of patients with possible COVID-19 should NOT ride in the transport vehicle, if possible. Consider allowing one parent or caregiver of an infant or child to be transported. If riding in the transport vehicle, they should be screened and wear a surgical mask. All areas of the transport cabin are exposed (as well as the driver compartment if connected). The higher air changes/hour may reduce the concentration of infectious particles but does not eliminate risk.

*Fanny Packs (with masks, goggles, gowns, & gloves) shall be carried by all personnel, at all times, to ensure proper PPE is easily accessible.

***All captains, supervisors, and crews shall ensure the following takes place:*

Scene Supervision/Ambulance Support

A key fire captain role is EMS scene supervision to include ambulance support.

- Ensure all personnel (Fire & AMR) follow this protocol and wear the correct PPE.
- Provide support to ambulance crews.
- Communicate COVID-19 related needs to responding ambulances on the assigned radio tactical channel.

Ambulance Transport

During transport, limit the number of providers in the patient compartment to essential personnel to minimize possible exposures.

Isolate the ambulance driver from the patient compartment and keep pass-through doors and windows tightly shut, if equipped.

- Close the door/window between these compartments before bringing the patient on board.
- Consider isolating exposed personal belongings (move to the front of the ambulance cab, seal front/back, or place a sealed vinyl barrier over the open compartment in the back during transport).
- 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.

If a vehicle without an isolated driver compartment must be used, the driver must open the outside air vents in the driver area and turn on the rear exhaust ventilation fans to the highest setting. This will create a negative pressure gradient in the patient area.

- Driver not directly involved in patient care should wear a N95/N100 mask while driving.
- Driver directly involved in patient care must keep respirator on, but remove gown, gloves, face shield, and/or goggles before entering the driver compartment.

Decontamination of Personnel

Use alcohol-based hand sanitizers with greater than 60% ethanol or 70% isopropanol. Wash hands with soap and water for at least 20 seconds when available. Avoid touching your eyes, nose, and mouth.

Launder contaminated uniforms according to the manufacturer's recommendations.

Contaminated firefighting PPE shall follow the specialized PPE washing procedures.

Shower and change uniform (have extra uniforms immediately available at station/quarters).

Decontamination of Equipment and Ambulance

Decontaminate equipment and ambulances with EPA-registered hospital-grade disinfectants and follow instructions for SARS-associated Coronavirus.

After transporting the patient, leave the rear doors of the ambulance open to allow for sufficient air changes (at least 10 minutes) to remove potentially infectious particles.

When cleaning the vehicle and equipment used in patient care, personnel should wear a disposable gown, gloves, mask, face shield, and/or goggles.

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 open).

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 the products described above.

Clean and disinfect reusable patient-care equipment before use on another patient, according to agency and manufacturer's instructions.

Follow standard operating procedures for the disposal of used PPE and regulated medical waste. Empty trash after calls with confirmed or suspected COVID-19 patients.

Vehicles used to transport confirmed COVID-19 patients, or after transporting suspected COVID-19 patients with aerosol-generating procedures, should return to AMR Station 1 AFTER normal decontamination for use of the Decontamination Fogger. Consider alternate transportation of third crew member (Field Trainee or Intern).

For additional information on Ambulance Fogger decontamination and decontamination of ambulances, equipment, and uniforms, please see the most up-to-date guidelines at www.globalmedicalresponse.com/coronavirus and click the link for Decontamination and Disinfecting Procedures.

Encounter
Within 6' of a patient who screens positive for potential COVID-19 when wearing full PPE (N95/N100, gown, gloves, face shield, and/or goggles) without a PPE breach.

DICO contact is **not** required for encounters.

- Option to document on a Minor Injury form (Fire) or STARS report (AMR)

Exposure
Within 6' of a patient who screens positive for potential COVID-19, and any of the following:

- Missing any PPE (N95/N100, gown, gloves, face shield, and/or goggles) or a PPE breach.
- Any aerosolizing procedures including suctioning, CPAP, nebulized medications, bag-mask ventilation, advanced airway placement, chest compressions, as well as patients with significant coughing/sneezing.
- Prolonged body contact with patient (e.g., moving or lifting of patient).
- All treated cardiac arrest patients.

DICO contact is **required** for all exposures once the scene stabilizes. Both the Fire and AMR DICOs must be notified when Fire and AMR employees are exposed.

- Complete Communicable Disease Exposure Report.
    - Complete on scene (legible, include FS#), enter names of exposed crew members, take a photograph of form and email to DICO call taker who contacted you, send form to hospital with patient (if not possible, ensure form is delivered to hospital ASAP).

Documentation

- Document positive COVID-19 screening.
- Include the type of PPE used, when it was put on, and if there were any breaches.
- EMS documentation should include a listing of EMS clinicians 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).
- Use the COVID-19 button on the ePCR to flag COVID-19 patients.
- Fire crews shall complete AMAs and dead on scene documentation to help keep ambulances available.
- Captains shall begin routine iPad documentation and transfer the report to the transporting ambulance. The following information should be entered at a minimum:
    - Incident Number
    - At Patient Side Time
    - Patient First Name
    - Patient Last Name
    - Date of Birth
    - Sex
    - Vitals with time stamps
    - Any treatments given, to include time stamp and crew name (paramedic can enter dose later)