

Guideline: AirMed Transport Process-Confirmed COVID-19 Patients or respiratory illness Patients including fever (≥ 100.4 F) or shortness of breath, or any patient requested for transport deemed appropriate for this guideline by AirMed Admin on-call and Medical Direction.

Purpose: To provide guidance to flight crew members who may be asked to transport a confirmed COVID-19 patients.

Process: During the flight request process, the flight center will screen all requests for confirmed or potential COVID-19 transports by asking the following questions.

Flight Request Process to be followed by the Flight Center and Transfer Center:

If the answer is “yes” to any of the following screening questions, the dedicated COVID-19 aircraft and team will be dispatched with the medical team dedicated to that aircraft. Aircraft dedicated to COVID-19 transports are; N399AM (PC-12), N420UH (PC-12) (or back up PC-12) and N46UH (EC-145) (or back up EC145) will be the designated aircraft for these transports.

Transfer Center screening questions

1. Have they been diagnosed with COVID-19?
2. Have they been screened for COVID-19?

If the answer is yes to questions one OR two, the COVID-19 team will be dispatched.

If the answer is no to questions one AND two, AirMed Flight Center will screen with the following questions.

1. Have there been any reports of new respiratory complaints (shortness of breath, cough) or fever (≥ 100.4)? If yes, then the flight center will call admin on-call prior to dispatching the COVID dedicated team. If the patient has not had a fever (≥ 100.4) the COVID-19 dedicated team will be dispatched.

Flight crew members and admin on-call are required to consult with Medical Direction on each of these cases prior to transport. Medical Control for Medical Direction call reference for flight crew and admin on-call.

- Adult and Pediatric transports Eric Swanson, Scott McIntosh and Steve Bott. Also consult with online medical direction at Primary’s if Primary’s is the receiving facility.
- Obstetrical transports, Marcella Smid or MFM online Medical Direction.
- NICU transports Mariana Baserga or Brad Yoder.

Processes to be followed upon return of the aircraft with patient on board:

- Once the aircraft lands at the Salt Lake City airport the flight center will immediately contact environmental services for decontamination of the aircraft. #1 801-347-0562 #2 801-688-2243
- Flight Center will notify admin on-call, Lead Technician and ASM

Flight Crew Preparedness:

1. Donning of PPE in order:
 - a. Perform hand hygiene
 - b. Head cover
 - c. Gown
 - d. N95 mask
 - e. Eye protection with wrap-around
 - f. Gloves (double glove technique) and the outer gloves should be changed when soiled or sanitized after working with suction or respiratory equipment if there is no visible contamination. Use hand sanitizer before and after taking off the inner layer.
 - g. Note that personal eyewear is not sufficient protection.
 - h. Be mindful that meticulous attention to donning and doffing of PPE is required to optimize your protection.
 - i. Doffing process will be completed in the designated area outside of aircraft. All red bag items will be left in the designated area and removed by the environmental services team.
 - j. Be careful to assure you do not self-contaminate while removing PPE. Designate a flight team member to observe the doffing process.
 - k. If wearing a helmet use purple Sani cloths to wipe off gross contamination from the front of the face shield prior to doffing the gown.
2. Doffing of PPE in order:
 - a. Grasp the gown at both side hips and start to bunch, pull slowly and steadily away from the body-until the waist tie rips.
 - b. Continue to pull down and away to break the neck of the gown.
 - c. Continue to gather and roll the gown away from the body into a ball, removing gloves in the process.
 - d. Do not put your hands behind your back.
 - e. Perform hand hygiene.
 - f. Don clean gloves
 - g. Remove the mask with a face shield by grasping the elastic behind the ears. Remember the front of the mask is contaminated, do NOT touch.
 - h. Discard mask with face shield.
 - i. Perform hand hygiene.
3. Doffing the N95 mask:
 - a. If you are wearing a N95 mask under your helmet:
 - b. Don clean gloves.
 - c. Use two hands to grab the bottom and top strap on one side of the mask and pull to break the straps.
 - d. Discard the mask holding only the straps, do not touch the front of the respirator.
 - e. Sanitize hands.
4. The N-95 face mask is the standard respiratory protection for use during critical care transport, respiratory and airway care.

5. Facial hair which prevents direct contact of the sealing surface of the mask with the face will not enable a proper seal. No staff can have facial hair that interferes with the N-95 mask to skin seal. All staff must have documented fit-testing of N-95 masks on file with AirMed.
6. Place a simple facemask on the patient (not N95, which is reserved for clinical personnel) if they are not intubated.
7. Please see the **airway management section** for intubated patients.

Ground Ambulance transports: Ground transports will only be accepted with ground transports agencies that AirMed has trained with and a ground transport risk assessment will be completed.

1. The flight crew and ambulance crew should attempt to determine which EMS equipment will be necessary and minimize exposure to all unnecessary equipment using trash bags and placing it in closed or external compartments.
2. The cab of the ambulance should be closed to the patient care area if possible and the vehicle operator should continue to wear the N-95 mask.
3. The patient cabin ECS system should be run to cycle air through the filtration system. Driver will not contact the patient during loading or unloading.

Fixed wing and Rotor wing transports will require that pilots adhere to the use of personal protective equipment and procedures as applicable.

1. N95 masks will be donned prior to entering the cockpit and not removed until the patient has been off-loaded and the pilot has exited the aircraft into open air. The curtain dividing the pilots from the cab of the aircraft will be utilized at all times. Pilots will not assist in the loading or unloading of any confirmed positive COVID-19 patients. Pilots will ensure they have donned the appropriate PPE, as appropriate, while transiting the cabin area and when securing the cabin doors prior to flight. Pilots shall not handle medical bags, stretchers, or any patient care equipment unless the pilot is wearing the appropriate PPE.
2. The flight crew should attempt to determine which EMS equipment will be necessary and minimize exposure to all unnecessary equipment using trash bags and placing it in closed or external compartments.

Airway Management:

- General concepts:
 - Your personal safety is the highest priority. These guidelines are designed to ensure your safety, and to deliver safe patient care.
 - Aerosolizing procedures (all airway management procedures, including NIPPV, HFNC, BVM ventilation, intubation, cricothyrotomy) are the highest risk to providers. Full airborne and contact PPE on all providers is mandatory. Simple oxygen masks and nasal cannulas are not aerosolizing.
 - Avoid aerosolizing procedures in the confined space of a transport vehicle, if possible. Patients that are in distress, deteriorating rapidly, on NIPPV or HFNC, should have their

airway controlled prior to transport. Patients with supra-glottic airways (LMA, iGel, etc) should be intubated prior to transport.

- Try to avoid contaminating clean equipment and bags. Attempt to keep non-essential equipment outside of the patient care area, or wrapped in plastic to facilitate decontamination.
- When performing aerosolizing procedures, remove all non-essential personnel. In general, there should only be two providers in the immediate patient care area. One other clean provider, in airborne and contact PPE, should be positioned outside of the patient care area, ready to pass extra equipment or supplies to the primary team, or enter the patient care area to assist, if needed. If these procedures are performed in the aircraft, every effort should be made to ensure the curtain separating the pilot from the procedure. The dividing curtain must be completely closed and the pilot is notified that an aerosolizing procedure is being performed.
- There should always be a viral/bacterial (ideally, HEPA) filter in place between a mask or ETT, and the Ambu bag. There should always be a viral/bacterial (ideally, HEPA) filter on the expiratory limb of the ventilator. If a HEPA filter is not available, there should always be an HME filter in these locations.
- Procedure:
 - Review the airway management plan with all providers.
 - Set-up all equipment and supplies outside of the patient care area.
 - Don PPE
 - Only bring required equipment into the patient care area: drawn up medications, tools for primary airway management plan. Additional supplies and equipment can be passed into the patient care area, as needed.
 - Perform airway procedures as outlined in the appropriate AirMed guideline.
 - COVID-19 patients typically have hypoxic respiratory failure, with low FRC and diffusion defects. They may remain hypoxic despite optimal pre-oxygenation, even with NIPPV or HFNC. Although it is desirable to avoid BVM ventilation, it is often required to achieve adequate apneic oxygenation time to achieve first-pass success without hypoxia.
 - Recommended procedure for intubation:
 - Sit the patient upright if possible, or put them into reverse Trendelenburg position. Keep them in this position until the airway is secured.
 - Pre-oxygenate for ≥ 3 minutes, using the best possible technique, in order of preference:
 - BVM with PEEP at 10, plus HFNC or NC O2 at 10 lpm
 - NIPPV, with NC O2 at 10 lpm to be placed during laryngoscopy
 - NRB mask at flush rate, plus NC O2 at 10 lpm
 - Complete the Pre-Intubation Checklist
 - Administer RSI medications per the airway management guideline.
 - As soon as the patient loses consciousness, prior to laryngoscopy some patients will require mask ventilation this should be done with care. Take precautions to minimize mask leak. Gently mask ventilate for 30 seconds. Place OPA if any difficulty.
 - Intubate the patient. Recommend video laryngoscopy with hyper-angulated blade, to keep the provider's face further away from the airway. Confirm ETT placement and secure per airway guideline.
 - If failed airway, proceed as usual per airway guideline.

- Place all non-disposable soiled equipment in a plastic bag for decontamination later.

Aircraft Decontamination

1. After transporting a COVID-19 patient, exits and doors should be open for a minimum of 20 minutes. Air conditioning turned on at maximum capacity for several minutes in accordance with the airing time specified by aircraft manufacturers to provide at least one complete air exchange. Non-pressurized aircraft should be aired out, with exits and doors open long enough to ensure a COMPLETE air exchange.
2. Cleaning should be postponed until airing out is COMPLETE; a minimum of 20 minutes.
3. The appropriate sign will be placed on the aircraft by a designated flight crew member once the doffing process is complete. This sign will indicate that no one is to touch the aircraft until environmental services has completed the decontamination process. Environmental services will remove the sign once they complete their decontamination process.
4. All dirty equipment or items requiring disinfection will be placed in the designated “dirty area” located in the Conex box.
5. Transport of the patient through the hangar will remain within the designated lane identified by floor markings throughout the hangar. The patient and transport personnel should not leave the designated lane while transporting.
6. Non-patient-care areas of the aircraft should be cleaned and maintained according to manufacturers’ recommendations. Pilots will clean all cockpit surfaces handled or touched; including, but not limited to door handles, chart compartments, flight controls, avionic touch points, etc. Appropriate PPE will be used while cleaning the cockpit; gloves and eye protection at a minimum.
7. Patient-care areas (including stretchers, railings, medical equipment control panels, and adjacent flooring, walls and work surfaces likely to be directly contaminated during care) should be cleaned and disinfected using an EPA-registered disinfectant approved by the program manufacturer.
8. Personal protective equipment (PPE) to prevent contact with germicides should be worn according to existing organization procedures for environmental cleaning and disinfection while cleaning patient-care areas.
9. Cleaning personnel should, at a minimum, wear protective gear as directed on the label instructions of the disinfectant product. Spills of body fluids during transport should be cleaned by placing absorbent material over the spill and collecting the used cleaning material in a biohazard bag. The area of the spill should be cleaned using an EPA-registered disinfectant approved by the aircraft manufacturer. Environmental services personnel should be notified of the spill location and initial clean-up performed.
10. Contaminated fabric seats, curtains or seat cushions that are to be sanitized according to environmental services protocol.
11. Contaminated reusable patient care equipment should be placed in biohazard bags and labeled for cleaning and disinfection at the receiving facility prior to returning to the aircraft.
12. Reusable equipment should be cleaned and disinfected according to manufacturer’s instructions.

13. Following completion of cleaning tasks, including cleaning and disinfection of reusable equipment, cleaning personnel should carefully remove and dispose of personal protective gear and wash hands thoroughly with soap and water or an alcohol-based hand rub.

General Linen/Uniform Laundering Procedures

1. Avoid agitating or shaking linen/uniforms to prevent aerosolizing potentially contaminated lint particles.
2. Contaminated uniforms are to be doffed at the hangar when returning to the designated "dirty area."
3. It is recommended that all flight crew members wear scrubs or clothing underneath their flight suits.
4. If flight crew members do not want to launder their uniforms at home, environmental services will launder the uniforms and return within 24 hours according to the following procedure.
5. Use disposable or washable liners in laundry hampers.
6. Regularly clean and disinfect laundry hampers.
7. Launder items as appropriate in accordance with the manufacturer's instructions.
8. Use laundry detergent according to manufacturer recommendations. Note using too much laundry detergent can trap potentially infectious particles.
9. If possible, launder items using the warmest appropriate water setting.
10. Completely dry items on the highest recommended heat setting.
11. White shop towels/rags can be laundered using bleach according to manufacturer recommendations. Note: gel bleach is recommended to reduce risk of splashing.
12. Wash or sanitize hands after placing items in the washing machine and after transferring items to the dryer.
13. Washer & dryer surfaces in contact with hands and laundry should be cleaned and disinfected regularly. Contaminated Linens/Uniforms/Coats/Helmets Contaminated linens/uniforms known to be or visibly contaminated with blood or other potentially infectious material will be DOUBLE RED BAGGED and cleaned at a U of U facility (or base).
14. Use droplet and contact PPE when laundering linens or uniforms contaminated with blood or other potentially infectious materials.
15. Clean washer and dryer handles and surfaces according to proper cleaning and disinfection procedures after contact with items or contaminated hands/gloves.
16. Doff PPE according to doffing procedures.
17. Wash or sanitize hands.

Flight Helmets

1. Remove gross contaminants or heavy soil from shell and strap surfaces prior to the application of the Pro-tech ready to use disinfectant (RTU) (see effective products section for item#).
2. Hold the container six to eight inches from the surface to be treated.
3. Spray area until it is covered with the solution.
4. Allow product to remain on the helmet surface for 3 minutes (for Blood borne Pathogens: allow surface to remain wet for 5 minutes).
5. No scrubbing is necessary.

6. Wipe off with a clean cloth.
7. If a helmet liner has gross contamination it should be removed from the helmet and washed.
8. Clean visors with lint-free cloth dampened with a 70 % solution of isopropyl alcohol.
9. Insert-able Helmet liners are washed in the same fashion as linens and uniforms and allowed to air dry