





Guidelines for Safe Transportation of Remains of Persons Suspected or Confirmed to Have Died of COVID-19



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Background

This document provides guidance on how dead bodies/remains of patients suspected or confirmed to have died of COVID-19 can be safely transported between states or across international boundaries.

What are the circumstances under which remains of persons that have died of COVID-19 be transported across states and international boundaries?

When a person has died from COVID-19, considerations for final disposition may include interment at the location of death or repatriation of the remains to another state or country at the request of the next of kin.

Repatriating human remains is a complicated process, often involving the cooperation and coordination of various stakeholders on several levels to ensure the process is conducted efficiently and in compliance with relevant international and national regulations.

How should the remains of persons who have died of COVID-19 be prepared for transportation?

Considerations for transport of the remains by road (from one state to the other within Nigeria)

For guidelines on how dead bodies of patients suspected or confirmed to have died of COVID-19 should be handled and prepared for a dignified burial including conducting autopsies and environmental cleaning and decontamination, see 'Interim Guidelines for the Safe Management of a Dead Body in the Context of COVID-19' via *covid19.ncdc.gov.ng*.

Once the remains have been prepared as indicated in the NCDC guidelines and put in a sealed coffin, it can be transported locally within the country in either a standard hearse (or any other vehicle used in transporting human remains) or by air as cargo.

No special personal protective equipment (PPE) is required for handling the coffin except a pair of gloves that should be properly disposed of after use followed by hand washing with soap and water.

The coffin should not be opened while in transit.

Considerations for air transport during international repatriation

While embalming is not encouraged for remains of COVID 19, there are situations in which it becomes a pre-condition for repatriating the remains. For instance, it may be a requirement for the destination country and the aircraft operator transporting the human remains. Embalming should therefore only be reserved for those human remains that the destination country mandates it and should only be carried out by trained and experienced personnel.



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A highlight of recommendations on how to safely embalm the remains of a COVID-19 patient

- Embalming should be done in a well-ventilated area
- Properly put on all required PPE (Gloves (nitrile gloves preferred), apron, long sleeved gown, eye protection (Goggles or face shield) and FFP3 mask or N95 respirator)
- Minimize infected material being aerosolized
- Carefully disinfect nasal/oral cavities and pack them with a mortuary-grade disinfectant. Purging during embalming from the nasal/oral cavity could result in the aerosolization of infected material
- Carry out the embalming using a higher than normal arterial fluid index and a higher than normal arterial solution concentration
- Use a slow rate of flow. A high rate of flow can cause distention of internal organs that may lead to purge and the aerosolization of infected material
- Seal the body in a leak-proof body bag or similar hermetically sealed inner containment
- The exterior of the inner containment needs to be disinfected
- The sealed and disinfected containment is then placed into a second hermetically sealed inner containment
- The exterior of this inner containment is then disinfected and sealed in a coffin
- After sealing, the exterior of the coffin is disinfected
- Clean and disinfect all surfaces
- Properly remove all PPE (and dispose of the waste appropriately)
- Immediately wash hands with soap and running water
- A certificate detailing the date, time and manner of disinfection must be issued by the undertaker or funeral director and submitted to the freight forwarder/aircraft operator

Preparation of non-embalmed human remains for air transport (this should be done in a mortuary or a funeral home with trained personnel)

- Staff preparing the body should wear appropriate PPE (long sleeved gown, gloves, face mask, face shield of goggles) and prepare the body using standard precautions.
- Ensure that body fluids leaking from cadaver orifices are contained and/or rendered noninfectious using the following methods:
- Sprinkle the cadaver with special absorbent (highly absorbent compound with disinfecting, antiseptic and deodorizing properties that can absorb over 10 times the initial volume. It can also be used to spread evenly over the bottom of a coffin) for binding and disinfection of leaking body fluids of the corpse
- Seal the body in a leak-proof body bag or similar hermetically sealed inner containment
- The exterior of the inner containment is disinfected



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- The sealed and disinfected containment is then placed into a second hermetically sealed inner containment
- The exterior of this inner containment is then disinfected and sealed in a coffin
- After sealing, the exterior of the coffin is disinfected
- Clean and disinfect all surfaces
- Properly remove all PPE (and dispose of the waste appropriately)
- Immediately wash hands with soap and running water
- A certificate detailing the date, time and manner of disinfection must be issued by the undertaker or funeral director and submitted to the freight forwarder/aircraft operator

Once the remains have been prepared as described above, no PPE may be required by the flight crew, if the above precautions are followed.

Documentation requirements

Documentation requirements might be different for different countries. It is recommended that these requirements are confirmed with both the Nigerian embassy at the country of departure and embassy of country of destination prior to arrangement of transport with the aircraft operator and be submitted to the freight forwarder/aircraft operator for arrangement of transport.

The person requesting transfer of the remains, should obtain a certificate from the funeral home or mortuary regarding the procedures that have been followed and submit these certificates to the freight forwarder/aircraft operator who would be required to submit it to the Public Health Office at the destination country.

- This might include a death certificate stating cause of death, certificate of embalming (or Laissez-Passer), cremation certificate, import permit or any other certificate required by national legislation.
- In addition, a certificate confirming disinfection of the coffin must be issued by the mortuary/funeral home and submitted to the freight forwarder/aircraft operator.

References

- 1. ECDC technical report on considerations related to the safe handling of bodies of deceased persons with suspected or confirmed COVID-19
- 2. Guidance Information on the Transport of COVID-19 Human Remains by Air. A collaborative publication by WHO, CDC, IATA and ICAO
- 3. NCDC interim guideline on safe management of dead bodies in the context of COVID-19
- 4. The Royal College of Pathologists Briefing on COVID-19 Autopsy practice relating to possible cases of COVID-19 (2019-nCov, novel coronavirus from China 2019/2020).