



Guidance Information on the Transport of COVID-19 Human Remains by Air

Collaborative document by WHO, CDC, IATA and ICAO

Introduction

Repatriation of human remains is the process whereby human remains are transported from the State where death occurred to another State for burial at the request of the next-of-kin. Repatriating human remains is a complicated process involving the cooperation and coordination of various stakeholders on several levels to ensure that it is conducted efficiently and in compliance with relevant international and national regulations.

Presently there is no universal international standard for requisite processing and documentation for repatriation of human remains by air. The Strasbourg Agreement of the Council of Europe (<https://rm.coe.int/168007617d>) has been agreed to by more than 20 States in Europe. Furthermore, there is no existing single source document that could provide harmonised guidance to States and other interested parties.

Considering requests received by WHO, IATA and ICAO on the transport by air of human remains where the cause of death was COVID-19, there was a need to assess the risk of transporting human remains by air and to develop temporary COVID-19 specific guidance material.

The objective of this document is to provide guidance to aircraft operators, funeral directors and other involved parties concerning the factors that need to be considered when planning repatriation of COVID-19 human remains by air transport.

Guidance for handling COVID-19 cadavers

The COVID-19 pandemic has resulted in a considerable death toll and has raised questions regarding the repatriation of human remains where the person died of the disease overseas. Generally human remains are not infectious and do not transmit disease. However, cadavers of persons who have died from contagious diseases may pose risk of transmission, but at a lower level than from living individuals except for viral hemorrhagic fever and prion diseases:

International Society for Infectious Diseases (ISID): <https://isid.org/guide/infectionprevention/humancadavers/>

National Center for Biotechnology Information (NCBI): <https://www.ncbi.nlm.nih.gov/pubmed/29019307/>.



According to WHO and European Centre for Disease Prevention and Control (<https://www.ecdc.europa.eu/sites/default/files/documents/COVID-19-safe-handling-of-bodies-or-persons-dying-from-COVID19.pdf>), there is no evidence to date of persons having become infected from exposure to the bodies of persons who died from COVID-19 .

Transmission of COVID-19 related to the handling of infected remains could occur through direct contact with body surfaces, tissues, fluids or their aspirates where the virus is present, or by direct contact with contaminated surfaces, clothing or other personal effects. Best practices to avoid COVID-19 infection under these circumstances include appropriate use of personal protective equipment (PPE) and thorough decontamination of surfaces and materials that have been in contact with remains

Center for Disease Control & Prevention (CDC): <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-postmortem-specimens.html>

BMJ Journals: <https://jcp.bmj.com/content/early/2020/04/01/jclinpath-2020-206522>.

Key issues to be considered when managing COVID-19 human remains include:

- providing specific guidance as to appropriate PPE for funeral directors, religious leaders or others who may have direct contact with COVID-19 human remains, especially the importance of hand hygiene and personal protective equipment (PPE) when handling COVID-19 human remains;
- respecting the dignity of the dead and their families according to cultural and religious traditions;
- encouraging practices that balance the rights of the family, the need to investigate the cause of death, and the risks of exposure to infection on a cases-by-case basis.

WHO has provided general guidelines for preparation and packing of human remains for non-air transfer to an autopsy unit, mortuary, crematorium or burial site that includes, procedures for autopsy and funeral preparation and local burial in the document *Infection Prevention and Control for the safe management of a dead body in the context of COVID-19*. https://apps.who.int/iris/bitstream/handle/10665/331538/WHO-COVID-19-IPC_DBMgmt-2020.1-eng.pdf.

Options for air transport

When a person has died from COVID-19 overseas, considerations for final disposition may include on-site cremation or interment at the location of death or repatriation of human or cremated remains to the State requested by the next-of-kin.

Many aircraft operators provide services for the transport of cremated and non-cremated human remains. These services vary according to the policies of each aircraft operator. In general, there are three possible options for the transportation of human remains by air:

1. cremated remains contained in a funeral urn, which is often the least complicated option. However, this is dependent on the personal, cultural and religious beliefs of the bereaved as well as national laws in the State of death;
2. embalmed human remains enclosed in a sealed coffin. This option may be challenging since States may have opposing laws about embalming. For instance, legislation in the departure country may not allow embalming, while the destination country may require embalming for repatriation of the remains. In addition, some aircraft operators will only accept embalmed human remains. It should be noted that at the time of issue of this guidance, WHO does not recommend the practice of embalming for COVID-19 remains to avoid excessive manipulation of the body;



3. human remains that have not been embalmed in an enclosed, sealed coffin. Specific requirements for this type of transport may vary by country, and States of departure or repatriation may not allow the export or import, as applicable, of non-embalmed remains.

Different States might have different requirements. It is therefore important to consider several factors prior to deciding on the appropriate process for air transport. These factors include being aware of the applicable regulations and / or rules of the departure and destination States, including relevant documentation required as well as the requirements of the airline.

Requirements of departure, transit and arrival States

All parties, including aircraft operators are required to comply with State laws regarding human remains of departure, transit and arrival States. These national laws will ultimately determine the limitations, if any, associated with the handling, disposition, and repatriation of human remains. This information can be found on government or embassy websites or by contacting them directly. Appendix 1 sets out a list of States where there are specific requirements for the importation of human remains. This list is taken from The Air Cargo Tariff (TACT) Rules. For more information see: <https://www.iata.org/tact> or <https://www.tact-online.org>.

Formal identification of the deceased's remains is obligatory. The requirements for confirming the identity of a deceased person vary depending on the country or jurisdiction involved.

In addition, the completion of required documentation is compulsory, confirming that all the medical, health, administrative and legal requirements of the regulations in force in the country of departure relating to the transfer of human remains have been complied with. This might include a death certificate, certificate of embalming, cremation certificate or any other certificate required by national legislation. If the documents are not in English or in the language of the destination country, it may be necessary to have them translated and certified.

The destination country might also have specific requirements e.g. the United States require a specific document or *laissez-passer*, issued by the CDC Division of Global Migration and Quarantine for importation of human remains when the cause of death was due to a quarantinable communicable disease. Therefore, for transport of COVID-19 human remains to the United States, a *laissez-passer* issued by the United States would be required. Refer to Appendix 2 for an example of the United States requirements for importation of human remains.

Should a difference exist between the requirements of the departure and destination countries e.g. transporting non-embalmed human remains to a country where embalming is required, further bilateral discussions would be needed. This can be done by contacting the local authority of the destination country that mandates the human remains to be embalmed individually for confirmation of acceptance on a case-by-case basis.

Requirements for air transport

Aircraft operators typically allow transport of human remains as cargo on aircraft, either on cargo-aircraft or in the cargo section of a passenger aircraft. Cremated remains may be shipped as cargo or may be carried by passengers as part of their baggage. Requirements and recommendations are set out in the TACT Rules, TACT 2.3.3 and the Airport Handling Manual, AHM 333 on the transport of human remains.

The following are recommended to all stakeholders considering transport of COVID-19 human remains by air:

Requirements for cremated remains

- cremated human remains are usually accepted in any aircraft without advance arrangements;
- the ashes should be placed in a polyurethane bag and then enclosed in a funeral urn;



- the urn can be transported in either carry-on or checked baggage. Policies might vary and it is recommended to confirm with the countries and aircraft operators concerned;
- the urn will be subject to X-ray screening as part of the normal security procedures; and
- the urn must be efficiently protected against breakage by cushioning packaging.

Requirement for embalming

- WHO currently does not recommend embalming where the cause of death was COVID-19; however,
- it might be a requirement of the destination country and the aircraft operator carrying the human remains.

Preparation of the non-embalmed human remains for air transport

- staff preparing the body should wear appropriate PPE according to standard precautions;
- ensure that any body fluids leaking from orifices are contained;
- sprinkle the body corpse with special absorbent (e.g. Ardol) for binding and disinfection of leaking body fluids of the corpse;
- wrap the body in two cloths soaked in formalin (10% solution) or any other suitable disinfectant;
- place the body into a hermetically sealed inner containment. The exterior of the inner containment needs to be disinfected;
- the sealed and disinfected containment then needs to be placed into a second hermetically sealed inner containment; the exterior of this inner containment also needs to be disinfected;
- after being sealed, the exterior of the coffin needs to be disinfected;
- 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;
- the coffin may then be covered in tarpaulin so that the nature of its content is not apparent; and
- acceptance of coffins by aircraft operators is dependent upon the type of aircraft, requirements of entry and clearance and prior approval of the countries of origin, transit and destination.

Document requirements

- documentary requirements might be different for different countries. It is recommended that documentary requirements are confirmed with both the country of departure and of destination prior to arrangement of transport with the aircraft operator and be submitted to the freight forwarder / aircraft operator for arrangement of transport. This might include a death certificate including cause of death, certificate of embalming, cremation certificate, import permit or any other certificate required by national legislation.
- there might be a requirement that when embalming of the body has been performed, that the certificate of embalming must be sealed in the coffin with the body.
- the person requesting transfer of the remains, should obtain a certificate from the funeral parlour 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 would either be an embalming certificate or a certificate that the body has been enclosed in a double-body bag.
- in addition, a certificate confirming disinfection of the coffin must be issued by the mortuary and submitted to the freight forwarder / aircraft operator.
- the Council of Europe has developed a Laissez-Passer template under the Strasbourg Agreement on the Transfer of Corpses, <https://archive.fo/aUAAt5> that could be used for facilitation purposes. Appendix 3 provides the Laissez-Passer template.



Appendix 1 – Country (State) Restrictions on Importation of Human Remains

Below table* lists all countries and states that have restrictions on the import of human remains (HUM) particularly on HUM to be embalmed or where the cause of death was due to a contagious disease.

For the import of HUM where the cause of death was COVID-19, it is recommended to confirm with the air operators and local competent authority (e.g. Public Health Authority) for specific requirements.

Country/State	Description
Algeria	Certificate attesting nature of illness
Antigua & Barbuda	Embalming is required Certificate from the health authority certifying the death was not caused by an infectious disease
Australia	Embalming is required, except for exceptional circumstances
Bhutan	Embalming is required
Botswana	Embalming is required
Colombia	Embalming is required
Cook Islands	Embalming is required
Costa Rica	Embalming is required
Eritrea	Embalming is required
Eswatini	Doctor's report for cause of death to determine if it is contagious
Fiji Islands	Embalming is required
France	Specific requirements apply when the cause of death was an infectious disease listed in Sanitary Department Order
Gabon	Embalming is required Certificate attesting that the deceased was not suffering from an infectious disease
Germany	Where contagious disease is the cause of death, the remain must be enveloped in antiseptic linen
Grenada	Embalming is required
Guatemala	Embalming is required
Hong Kong (SAR China)	Embalming is required



Country/State	Description
India	Embalming is required
Indonesia	Doctor certificate to confirm the death was not caused by a contagious disease
Ireland	Embalming is required
Jamaica	Embalming is required
Japan	If the death was caused by an infectious, contagious, or communicable disease, such human remains may not be imported unless cremated.
Malawi	Embalming is required
Malaysia	Embalming is required
Malta	Certificate from Health Authorities at origin that remains can be transported without risk and danger to public health
Mexico	Special requirement for non-embalmed human remains.
Montserrat	Embalming is required Certificate from originating Health Authority certifying death was not caused by an infectious disease
Myanmar	Embalming is required
New Caledonia	Embalming is required Certificate proving that there are no infectious risks
New Zealand	Special requirement for non-embalmed human remains Doctor certificate stating that there were no communicable diseases present in the deceased and the area where they died
Nigeria	Embalming is required
Pakistan	If death was caused by infectious disease entry is prohibited.
Peru	Embalming is required
Philippines	For deaths caused by communicable disease, admittance is allowed only when the remains are cremated or properly embalmed and enclosed in hermetically sealed coffin
Portugal	Where contagious disease is the cause of death, the remain must be wrapped in a shroud soaked in an antiseptic substance
Puerto Rico	Embalming is required



Country/State	Description
	Human remains will not be admitted when the cause of death was a communicable disease.
Salvador, El	Embalming is required Certificate stating the cause and place of the death has not been an epidemic or contagious illness
Samoa	Embalming is required Special requirement for non-embalmed human remains
Seychelles	Embalming is required
Singapore	Preservation certificate is required
Sri Lanka	Embalming is required
St. Lucia	Embalming is required
St. Vincent and the Grenadines	Embalming is required
Tajikistan	If death was caused by infectious disease entry is prohibited.
Tonga	Special requirement for non-embalmed human remains
Trinidad and Tobago	Embalming is required
Turkey	Embalming is required
Uganda	Embalming is required
Venezuela	Embalming is required
Zambia	Embalming is required
Zimbabwe	Infectious disease certificate is required

* Important: Information is sourced by IATA and published in the The Air Cargo Tariff (TACT) Rules. Restrictions are subject to change at any time.



Appendix 2 – Requirements for Importing Human Remains through a U.S. Port that are Intended for Interment or Subsequent Cremation

Human remains intended for interment or cremation after entry into the United States must be accompanied by a death certificate stating the cause of death. If the death certificate is in a language other than English, then it should be accompanied by an English language translation. If a death certificate is not available in time for returning the remains, the U.S. embassy or consulate should provide a consular mortuary certificate stating whether the person died from a quarantinable communicable disease.

- If the cause of death was a quarantinable communicable disease, the remains must meet the standards for importation found in [42 CFR Part 71.55](#) and may be cleared, released, and authorized for entry into the United States only under the following conditions:
 - the remains are cremated; or
 - the remains are properly embalmed and placed in a hermetically sealed casket; or
 - the remains are accompanied by a permit issued by the CDC Director. The CDC permit (if applicable) must accompany the human remains at all times during shipment. permits for the importation of the remains of a person known or suspected to have died from a quarantinable communicable disease may be obtained through the CDC Division of Global Migration and Quarantine by calling the CDC Emergency Operations Center at 770-488-7100. If a CDC permit is obtained to allow importation of human remains, CDC may impose additional conditions for importation beyond those listed above.

If the cause of death was anything other than a quarantinable communicable disease, then the remains may be cleared, released, and authorized for entry into the United States under the following conditions:

- the remains meet the standards for importation found in 42 CFR Part 71.55, (i.e., the remains are cremated, or properly embalmed and placed in a hermetically sealed casket, or are accompanied by a permit issued by the CDC Director); or
- the remains are shipped in a leakproof container.

Under 42 CFR § 71.32(b), CDC may also require additional measures, including detention, disinfection, disinfestation, fumigation, or other related measures, if it has reason to believe that the human remains are or may be infected or contaminated with a communicable disease and that such measures are necessary to prevent the introduction, transmission, or spread of communicable diseases into the United States



Appendix 3 – Laissez-Passer for Human Remains

Certified International Document – Repatriation Human Remains

Deceased Details

Family Name:
Given name(s):.....
Address:
Country:..... Nationality:
Date of Birth:.....Date of Death:.....
Place of Death:
Cause of death (if available).....
Shipper:.....
Tel:email:
Consignee:.....
Tel:email:

Flight Details

Origin Airport:..... Dep. Time:..
Destination Airport: Arr. Time:
Company: Tel:
Company Contact:.....email:
Flight No.: Date:
Air waybill No.:.....

Accompanying Person:

Document Details

Death Certificate:
Embalming Certificate (if applicable):
Freedom from Infection Certificate:.....
Funeral Director Declaration:
Out of Country Declaration:
Transportation Permit:
Other:
Done at on

Signature of the competent authority

Official stamp of the competent authority
