



MANAGEMENT OF DEAD BODIES



PREPAREDNESS



RESPONSE



RECOVERY

This tool will help you to:

- Describe key considerations for planning the disposal of dead bodies during an influenza pandemic
- Provide best practices in handling dead bodies

The guide is not meant to be comprehensive. It is designed to give municipal leaders an overview of what is required in the event that an influenza pandemic results in the deaths of a large number of people in a short period of time. These guidelines may also be useful during other types of disaster.

For a more comprehensive manual refer to PAHO's *Management of Dead Bodies after Disasters: a Field Manual for First Responders* at www.paho.org/disasters. (In Spanish at www.paho.org/spanish/dd/ped/GestionCadaveres.pdf or in English at www.paho.org/english/dd/ped/deadbodiesfieldmanual.htm)

Who will implement this tool:

- National disaster agencies/offices
- The mayor
- Civil protection agencies
- Municipal police
- The army
- Non-governmental organizations (NGOs)

Where national plans for managing dead bodies in disasters exist, the role of municipal authorities will be defined by those plans. We strongly recommend that municipal authorities refer to the national plan and consult with the national disaster agency for local information and resources.

Where national plans are not in place or simply not available, a municipal agency or authority such as the governor, police chief, mayor, or the military, may serve as the local coordinator with responsibility for managing bodies. In this case, this tool can provide key considerations to keep in mind when managing a large number of fatalities.

Key Facts

- Except in cases of hemorrhagic fevers (Ebola, Marburg, etc.) and Cholera, *dead bodies are generally not infectious*. Only the lungs of pandemic influenza patients, if handled during an autopsy, can be infectious. Otherwise, cadavers do not transmit disease. It is a common myth that persons who have died of a communicable disease should be cremated, but this is not true. Cremation is a matter of cultural choice and available resources.
- Most people who die in an influenza pandemic will be at a health facility or at home, reducing the number of bodies that may be unidentified.

WHY THIS IS A SENSITIVE ISSUE

This tool outlines the key steps in managing cadavers. In a pandemic, we must anticipate catastrophic levels of death in the municipality, region, and country. When dealing with the dead, a municipal leader's main role will be to coordinate with other agencies that will carry out the actual retrieval, identification, storage, and disposal of dead bodies. Municipal leaders must also manage public information and messages, and should establish partnerships with key agencies—such as the police, army, or civil protection agency—in advance, before the situation becomes critical.

The dead and their bereaved should be respected at all times. Cultural and religious needs should be observed and normal procedures for mourning and burial allowed to the extent possible during a pandemic.

Consider the use of local crisis intervention teams or psychosocial support teams and whether they can be adapted to the needs and culture of the community. Consider also the context of the pandemic and its affect on local coping mechanisms. (For more information, see Tool 19, *Recovery and Resilience*.)

HOW TO COORDINATE THE DISPOSAL OF BODIES

If the pandemic is severe and there are many deaths, there will be a need to coordinate many tasks, which will include:

- **Managing information.** There will be a need to maintain information on available human resources and supplies, contact information for trained teams, and a database of the number of dead and their identities. Municipal leaders may be contacted with inquiries about specific persons; an individual or team should be assigned to manage such information. (See “Frequently Asked Questions” in the PAHO field manual, *Management of Dead Bodies after Disasters: a Field Manual for First Responders*.)
- **Assigning responsibility.** Leaders should appoint people to handle identification of the deceased; public information and communication; recovery, storage, and burial/cremation of bodies; support for families; and logistics (timely location and provision of needed supplies and resources).
- **Identifying resources.** Locate and arrange for the use of storage facilities and supplies before the pandemic arrives. Items you will need include body bags, protective clothing, tools, and communication equipment. Develop and maintain a roster of staff and volunteers.
- **Implementing an action plan.** Arrange for the management of dead bodies in collaboration with other agencies in your district or community. See the table at the end of this tool for ideas on how to develop a simple plan.
- **Disseminating information.** Leaders must provide accurate information to families and the community regarding the identification of bodies. Determine procedures for releasing names of the deceased, with controlled media access. (For more information, see Tools 12–14, in the *Crisis and Emergency Risk Communications* section of this toolkit.) Establish a location or facility, prior to any emergency if possible, where the public can inquire about missing/deceased persons. The location should be separated from the main hospitals or treatment centers and staffed by people with the resources to provide such information. Use radio and other news media and local churches to let the community know where to go.

LOGISTICS

Logistics is the process of getting the correct supplies, equipment, and people to the correct place at the correct time. A logistics leader or team should be appointed to ensure smooth implementation of any plan.

Key logistical responsibilities to plan for include:

- Transport of bodies from place of death to mortuary, storage facility, or burial site
- Transport of workers to work sites
- Secure communications equipment for field workers, site managers, and the headquarters or coordinating office
- Supplies and other resources, including coffins, body bags, labels, dry ice, portable sources of electricity, and water
- Assistance from local and regional technical specialists such as morticians and funeral home directors
- Equipment for the maintenance of records, such as log books, inventory lists, and cameras (to photograph unidentified bodies)

BODY RECOVERY

Many different people or groups will be involved in body recovery. This process must be done rapidly to correctly identify the dead and reduce the mental stress on the survivors.

Bodies should be placed in body bags if available; plastic sheets, shrouds, or bed sheets may also be used. Identification of the deceased, and the place and date of recovery (removal) should be recorded, if known.

CONTROL MEASURES¹

The World Health Organization (WHO) has developed some general cholera management measures to reduce the possibility of disease transmission, which can also be used for an influenza pandemic. These are:

- Disinfect the body (cadaver) with 0.5% bleach solution. (For dealing with influenza victims, disinfection with soap and water will be sufficient.)
- Reduce physical contact by family members.
- Wash hands with soap and water after touching a corpse.
- Disinfect the equipment and bedding.

STORAGE

While refrigerated storage between 2 and 4 degrees Celsius is an ideal, it is not always feasible to find existing facilities large enough to accommodate all those who have died. As an option, refrigerated sea-land cargo containers have been suggested and some communities have made arrangements to purchase or lease these. If such an option is not possible, any large, well-ventilated space, such as a warehouse or empty building, can serve as a temporary mortuary. If refrigeration is not available, temporary facilities should be set up away from residential areas but easily accessible to vehicles and the public.

Other considerations for storage of bodies:

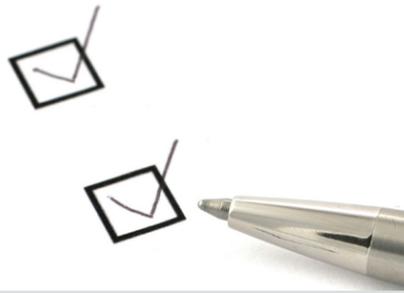
- Storage space should be refrigerated to 2 to 4 degrees Celsius, if possible.
- Dry ice (the solid form of carbon dioxide) may be used. Regular ice (frozen water) should be avoided due to problems with transportation, storage, disposal, and sanitation.
- Bodies should be placed in a body bag or wrapped in a sheet before storage.
- Waterproof labels with a unique identification numbers should be used.
- Temporary burial may be necessary for immediate storage if other means are not available.

IDENTIFICATION

Most of the people who die in a pandemic are likely to die at home or in a health care facility. It is unlikely that there will be large numbers of people whose identities cannot be easily confirmed (as in the case of a massive landslide or tsunami).

A lead agency or individual such as the local governor, police chief, military commander, or mayor should be assigned full authority over the management of dead bodies. A team will be required to assist in identifying the deceased, securing the remains, and notifying family or friends. The team may include members from law enforcement, forensic sciences, health authorities, and social services.

¹ World Health Organization. Cholera Outbreak. Assessing the Outbreak Response and Improving Preparedness (2004)



The legal rights of the dead, law enforcement acts, Interpol Resolution AGN/65/res/13 (1996), humanitarian laws, and other ethical and social norms should be taken into consideration.

For more detail on the identification of dead bodies, refer to PAHO's *Management of Dead Bodies after Disasters: a Field Manual for First Responders*, which has examples of forms for the description of bodies, sequential numbering, and inventory. (This manual is available online at www.paho.org/disasters or www.paho.org/english/dd/ped/deadbodies_epidemics.htm)

BURIAL

Although burial is clearly the expected method for disposal of bodies in the region, the location of burial sites needs to be considered carefully. When choosing a site, consider the soil conditions, water table level, and space. Burial sites should be at least 200 meters away from water sources such as streams, lakes, springs, waterfalls, beaches, and shorelines.

PLANNING

The National Influenza Pandemic Planning Committees should have planning figures that may be useful in predicting the number of dead based on the strength of the pandemic influenza virus. Tool 3, *Pandemic Health Impact Projection Tool*, can also generate estimates of the pandemic's likely toll on the municipality. These estimates can help agencies plan for the management of dead bodies in such an event.

The pandemic will cause many people to get sick and miss work or stay at home to care for family members. This will reduce the number of people available to assist in carrying out tasks. Alternative workers should be secured through volunteer groups and trained in what to do in case of pandemic.

Supply chains for all types of goods may be temporarily interrupted in a pandemic. The municipality should consider stockpiling equipment and other supplies necessary for managing a large number of bodies over a short period.

CONCLUSION

In an influenza pandemic, the care and burial of bodies is important, but leaders will need to manage resources carefully. They must be sure to prioritize interventions aimed at reducing transmission in order to save lives and to provide care for those in need.

Respect for the dead and the bereaved should be maintained and local customs honored. All communities have systems for interment and disposal of remains, and it is important to integrate these into pandemic planning.



PLAN OF ACTION TEMPLATE

This template can be used to help in developing any type of plan.

Mission:				
Goal # _____:				
Objectives:	Plan of Action			
	Strategies (How?)	Resources needed (What?)	Undertaken by (Who?)	Completion date (When?)
Evaluation criteria				

Additional information on how to make a plan of action can be found on www.publicachievement.org/pdf/Coaches/Creating%20the%20Project/ActionPlan.pdf or www.bonner.org/resources/modules/modules_pdf/BonCurActionPlanning.pdf

SOURCES

PAHO/WHO. *Management of Dead Bodies after Disasters: a Field Manual for First Responders*. www.paho.org/disasters. (In Spanish at www.paho.org/spanish/dd/ped/GestionCadaveres.pdf or in English at www.paho.org/english/dd/ped/deadbodiesfieldmanual.htm)