



## MAJOR EPIDEMIC AND PANDEMIC DISEASES

Please note that the foundation messages are included in the previous section: Key messages for all-hazards household and family disaster planning. Separate messages are also available for other specific hazards.

A number of communicable diseases can constitute significant threats at local, regional or global levels leading to epidemics or pandemics. An epidemic refers to an increase, often sudden, in the number of cases of an infectious disease above what is normally expected in a given population in a specific area. Examples of major epidemics include cholera and diarrhoeal diseases, measles, malaria, and dengue fever. A pandemic is an epidemic of infectious disease that spreads through human populations across a large region, multiple continents or globally. These are diseases that infect humans and can spread easily. Pandemics become disasters when they cause large numbers of deaths, as well as illness, and/or have severe social and economic impacts. Concerns exist about potential pandemic diseases including new strains of influenza, such as severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS) to which humans may not have immunity. In the past, pandemics have included cholera, smallpox, leprosy, measles, polio and yellow fever.

- Epidemics and pandemics can be:
  - Airborne: transmitted by air and droplets, for example, flu, measles, SARS, MERS;
  - blood and/or body fluids borne: transmitted through contact, including blood transfusion, mother to child in utero, and sexual activity, for example, Ebola virus, HIV;
  - waterborne: transmitted by water, for example, cholera;
  - zoonotic: transmitted between animals and people, by direct and indirect contact, for example, viruses, bacteria, parasites, and fungi;
  - vector-borne: transmitted by being bitten by mosquitos, fleas, ticks etc., for example, malaria, dengue, plague; and
  - food-borne: transmitted by preparing and eating food, for example, salmonella, listeria and hepatitis A.

Epidemics and pandemics can be prevented and mitigated through a range of household and community measures, such as:

- good hygiene and sanitation
- access to clean water
- handwashing
- vaccination
- use of antiviral medications
- social distancing
- good clinical practice
- proactive surveillance
- early warning systems
- vector control
- access to safe food.



## Assess and plan

Key messages	Context-specific details
Protect sources of clean water	<ul style="list-style-type: none"> <li>• Protect water sources from contamination by animals and wastewater.</li> <li>• Use water sources with care and maintain them.</li> </ul>
Use latrines	<ul style="list-style-type: none"> <li>• Clean and proper toilets prevent disease.</li> </ul>
Vaccinate children to keep them safe	<ul style="list-style-type: none"> <li>• Maintain vaccination cards for babies and children.</li> <li>• Keep vaccinations up-to-date.</li> <li>• Participate in vaccination campaigns.</li> <li>• Vaccinate against polio, diphtheria and measles.</li> </ul>
Stay informed by local health authorities about epidemics and pandemics that might occur in your location	<ul style="list-style-type: none"> <li>• Be aware that possible pandemic threats, and transmission occurs through air, water, food, vectors and/or exchange of body fluids.</li> <li>• Stay informed about airborne, waterborne, food borne, vector-borne diseases and those caused by exchange or body fluids.</li> </ul>
Keep your community informed about prevention of disease	<ul style="list-style-type: none"> <li>• Teach community members how to take care of themselves and to maintain healthy practices. This will prevent the spread of disease and epidemics.</li> </ul>
Keep communities clean to keep your family healthy	<ul style="list-style-type: none"> <li>• Keep your communities clean. This will help prevent germs from spreading and breeding of vectors.</li> </ul>
Keep the community safe – call the country specific number for poison alerts to report unusual sickness in animals	<ul style="list-style-type: none"> <li>• Notify authorities of any unusual incidences of sickness in people or animals immediately.</li> </ul>



## Mitigate risks: physical or environmental

Key messages	Context-specific details
A. General	
Use clean and safe water sources	<ul style="list-style-type: none"> <li>• Provision of safe drinking water is the most important prevention measure for many diseases.</li> <li>• Protect water sources from contamination by animals and wastewater.</li> <li>• Use water sources with care and ensure these are well maintained.</li> <li>• Risk factors include:                             <ul style="list-style-type: none"> <li>• sick animals</li> <li>• sick people</li> <li>• unprotected water sources</li> <li>• leaking septic tanks and latrines</li> <li>• contaminated surface water runoff entering wells and springs</li> <li>• animals using the same source as people</li> <li>• objects falling into a well.</li> </ul> </li> </ul>
Keep water clean with safe water storage practices	<ul style="list-style-type: none"> <li>• Always clean your hands and use clean utensils when collecting and storing water.</li> <li>• Use clean vessels and closed containers for transportation and storage of water.</li> <li>• Keep water clean during collection, transportation and storage.</li> <li>• Take drinking water from storage vessels using a clean dipper or ladle so that hands, cups and other objects do not contaminate water.</li> <li>• Remove standing water to prevent mosquitoes from using these as breeding sites and contaminating it.</li> </ul>
Purify water appropriately	<ul style="list-style-type: none"> <li>• Learn and practise reliable methods for purifying water for your household (e.g. aqua tabs, chlorine).</li> </ul>
Practice good personal hygiene	<ul style="list-style-type: none"> <li>• Learn how to wash hands properly, using clean water and soap.</li> <li>• Always wash hands after using the toilet, and before and after handling food and eating.</li> <li>• Bathe regularly.</li> </ul>
Practise good sanitation	<ul style="list-style-type: none"> <li>• Dispose of any domestic, human or animal waste, without contaminating soil and water.</li> <li>• Dispose of any waste that attracts flies and insects.</li> <li>• Keep your house and surrounding clean, eliminate any stagnant water that can become a breeding site for mosquitoes or any other vector.</li> </ul>

Keep food clean	<ul style="list-style-type: none"> <li>• Keep food clean and covered to keep flies, rodents and animals away.</li> <li>• Cook food thoroughly.</li> <li>• Always handle and prepare food with clean hands and use clean utensils.</li> <li>• Wash fruits and vegetable thoroughly with clean water before eating.</li> <li>• Thoroughly cook meat.</li> <li>• To prevent cross-contamination separate raw meat from fresh produce such as fruits or vegetables when shopping and storing in the refrigerator and where possible use different cutting boards for fresh produce and raw meat.</li> </ul>
Dispose of human and animal waste safely	<ul style="list-style-type: none"> <li>• Dispose of humans and animal waste safely to protect the environment.</li> <li>• Avoid contaminating water sources. To prevent diseases from spreading use latrines and do not defecate in the open.</li> <li>• If latrines are not available, defecate at a safe distance from houses, water sources and places where children play. Bury faeces immediately or cover with earth, sand or ash.</li> <li>• Locate trench and pit latrines away from water sources (raised, where there is a shallow water table) and keep them clean.</li> <li>• Make sure pit latrines are emptied or replaced regularly by trained people with mechanical and protective equipment, rather than manually.</li> </ul>
<b>B. Airborne diseases</b>	
Wash your hands	<ul style="list-style-type: none"> <li>• Wash your hands well using clean water and soap.</li> <li>• This is of critical importance before and after you have contact with people who are sick.</li> </ul>
Cover your mouth and nose when you cough or sneeze	<ul style="list-style-type: none"> <li>• Always cover your mouth and nose when you cough and sneeze. Cough or sneeze into your elbow or into a scarf, tissue or handkerchief. If you cough or sneeze into your hands, wash them immediately with soap and water.</li> <li>• Avoid touching your mouth, nose, or eyes with your hands unless you have just washed your hands.</li> </ul>
Keep your distance (avoid and limit close and unprotected contact with sick people).	<ul style="list-style-type: none"> <li>• When there are contagious diseases, keep a safe distance and avoid crowds if possible. Stay 1–2meters (3–6.5 feet) away when talking to people. Avoid physical contact when greeting people, for example, do not shake their hands or kiss them.</li> <li>• Limit unnecessary visits to sick people or hospitals.</li> <li>• Keep safe distance when talking to and/or interacting with people.</li> <li>• Avoid crowded places as much as you can, and stay home if you show signs of illness.</li> </ul>
Dispose of waste	<ul style="list-style-type: none"> <li>• Dispose of your waste and exposed materials. Throw out used masks and tissues properly by placing them in a bag and sealing it, before burning or burying them.</li> </ul>
Separate and care for your sick	<ul style="list-style-type: none"> <li>• Separate and care for sick members of the household in order to limit the spread of the illness: <ul style="list-style-type: none"> <li>• Separate family members who are sick by moving them into a room, corner of the house, or outside if the weather permits.</li> </ul> </li> <li>• The caregiver should use the following safety measures: <ul style="list-style-type: none"> <li>• Use a mask when less than 1 meter (3 feet) from the person who is sick.</li> <li>• Always put protective clothing on when you are in the room and remove it before leaving the room.</li> <li>• Wash hands after providing care.</li> </ul> </li> <li>• Family members should monitor themselves daily for fever and cough. Make sure that young children, pregnant women and people who are suffering from another disease receive medical care if they get sick.</li> </ul>

**C. Blood or body fluid borne diseases**

Keep your distance (avoid or limit close and unprotected contact with sick people)

- Where possible, do not care for the sick at home and take appropriate measures. If at home, separate sick household members from the others and care for them separately and appropriately.
- Use protective equipment as required including gloves, apron, eye protection, and mask.
  - Do not touch a sick person with suspected disease symptoms.
- Do not share household items with sick people.

Wash hands well

- Wash your hands well using clean water and soap if available.
- Washing hands is of critical importance before and after you have contact with people who are sick.

Practise safe sex

- Do not engage in unprotected sexual activity. Use a condom.
- Do not introduce other people's body fluids into your mouth.

Protect household members from contaminated blood and body fluids

- Use protective equipment (mask, glove, eye and mouth protection) if needed.
- Be sure to clean and disinfect blood and body fluids.

**D. Zoonotic diseases**

Avoid or limit contact with animals that might be infected. This includes domestic animals, wild animals and pets, since they can transmit serious illnesses

- Always wash hands after touching animals and their habitat.
- Never touch sick or found animals without using protective gear.
- Avoid contact with birds and poultry in locations with flu outbreak.
- Avoid contact with animals like bats and chimpanzees since they are common carriers of viral haemorrhagic fevers – Ebola virus.
- Avoid unprotected contact with camels during a MERS-COV epidemic.

Do not eat animals that may carry disease

- Never eat animals that are sick or found dead.
- Do not drink unpasteurized milk or eat raw meat. Cook meat thoroughly.

Practice dog bite prevention

- Avoid handling and approaching unknown dogs.

**E. Vector-borne diseases (from bites)**

Control mosquitoes indoors and outside

- Eliminate stagnant water since this can become a mosquito-breeding site.
- Empty any containers that hold water, and dispose of garbage and containers where mosquitoes can breed.
- Clean gutters, empty or treat swimming pools and ponds (or use guppies that will eat the larvae).
- Use screens on windows and doors.

Prevent insect bites	<ul style="list-style-type: none"> <li>• Carriers (infected person) should avoid being bitten by a mosquito since they can spread the pathogen (disease-producing agent, especially a virus or bacteria for instance).</li> <li>• Wear long-sleeved light coloured clothing.</li> <li>• Regularly use insecticides and repellents to protect from day-biting mosquitos (These can spread zika, yellow fever, chikungunya and dengue).</li> </ul>
Sleep under mosquito nets	<ul style="list-style-type: none"> <li>• Sleep under long lasting insecticide treated nets (LLIN) in malaria endemic areas to reduce exposure to malaria-carrying mosquitoes.</li> <li>• Make sure that older people or infants and children, who sleep during the day, sleep under a LLIN.</li> </ul>
Use insect repellent according to instructions	<ul style="list-style-type: none"> <li>• Follow instructions on product label.</li> <li>• Do not use on babies younger than two months.</li> <li>• Do not apply to child's hands, eyes, mouth, or cut or irritated skin (apply by hand to face).</li> <li>• Do not use produces containing lemon, eucalyptus or paramethane-diol on children under three years old.</li> <li>• Do not spray repellent on skin under clothing.</li> <li>• If using sunscreen, apply that first.</li> </ul>
<b>F. Food borne diseases</b>	
Keep yourself and the environment clean and safe	<ul style="list-style-type: none"> <li>• Wash hands, tools, and surfaces before, during, and after handling and preparing food using clean water.</li> <li>• Keep all kitchen surfaces, tools, and cloths clean.</li> <li>• Avoid mixing or keeping raw meat, fish and eggs together. Wash your hands and any surface and/or utensils that have been used to store or prepare raw meat, fish and eggs since bacteria from these can be transmitted to cooked food and/or be ingested.</li> </ul>
Cook and reheat cooked food thoroughly	<ul style="list-style-type: none"> <li>• Raw poultry, meat, eggs and unpasteurized milk can be contaminated. Cooking (and re-heating) these thoroughly at 158 degrees Fahrenheit, i.e. 70 degrees Celsius will kill any pathogens.</li> </ul>
Eat cooked foods immediately	<ul style="list-style-type: none"> <li>• When cooked food cools to room temperature, it can develop harmful bacteria. Prepared should be eaten immediately.</li> </ul>
Store cooked foods carefully	<ul style="list-style-type: none"> <li>• Cooked food can be safely stored hot (near or above 140 degrees Fahrenheit or 60 degrees Celsius) or cool (near or below 33.8 degrees Fahrenheit, i.e. 10 degrees Celsius).</li> <li>• Refrigerate cooked food within two hours of preparation.</li> </ul>
Protect foods from insects, rodents and other animals	<ul style="list-style-type: none"> <li>• Store food in closed containers to prevent contamination.</li> </ul>
Choose food processed for safety	<ul style="list-style-type: none"> <li>• Many foods (such as fruit and vegetables) are best in their natural state.</li> <li>• Milk and dairy products are safest when pasteurized, and poultry when treated for safety with ionizing radiation.</li> </ul>



## Prepare to respond: develop skills and store provisions

Key messages	Context-specific details
Listen to and follow official advise of health authorities, regarding preventive and protective measures	<ul style="list-style-type: none"> <li>• Authorities usually have reliable information, and a wider picture to analyse the situation and provide instructions for safety.</li> <li>• Wash hands with soap and water.</li> <li>• Do not touch your mouth, eyes or noose with unwashed hands to reduce the risk of infection by germs including spread of flu, viral haemorrhagic fever, cholera etc.</li> <li>• Limit physical contact with people during epidemic and pandemic – keep safe distance, do not kiss or touch.</li> <li>• Use protective equipment as recommended (e.g. masks, gloves etc.).</li> <li>• Participate in vaccination campaigns as recommended (e.g. cholera, measles, etc.).</li> </ul>
Know where and how to report or seek medical attention	<ul style="list-style-type: none"> <li>• Get to know nearest health centres. During an epidemic or pandemic, health officials will identify specific health centres to provide care.</li> <li>• Learn emergency telephone numbers and procedures for accessing health services.</li> </ul>
Take care of yourself and family members	<ul style="list-style-type: none"> <li>• Maintain good personal hygiene.</li> <li>• Build up your immunity with a good diet, regular exercise and adequate rest.</li> <li>• Reduce stress and avoid smoking.</li> <li>• Wear a facemask when in close proximity to someone who is ill or may be contagious.</li> <li>• If you show symptoms, stay at home.</li> </ul>
Promptly take appropriate action when you think that you or a family member might have been infected or exposed	<ul style="list-style-type: none"> <li>• Self-monitor and check for symptoms every day.</li> <li>• Call for medical assistance or report to the nearest or designated health facility promptly, if you experience symptoms.</li> <li>• Manage fever by cooling the body down, and drinking lots of fluids.</li> <li>• Respect the prescribed isolation or quarantine period and procedures.</li> </ul>
Take immediate action if you have been accidentally exposed to blood or body fluids from a person who might be infected	<ul style="list-style-type: none"> <li>• Beware that some viruses can be transmitted via blood and body fluids through cut skin, cutaneous mucus, or a needle prick. Take immediate action if exposed.</li> <li>• Apply disinfectant when appropriate.</li> <li>• Report the incident to a specialist or health facility for appropriate care.</li> <li>• Wash the exposed area thoroughly with water and soap (if exposed, irrigate the eyes with water).</li> </ul>

Seek medical attention for anyone who cannot be treated at home	<ul style="list-style-type: none"> <li>• If someone needs medical care and cannot be treated at home, go to the nearest health clinic or hospital to get help.</li> </ul>
Use personal protection equipment when caring for sick people	<ul style="list-style-type: none"> <li>• Personal protection equipment includes:             <ul style="list-style-type: none"> <li>• masks</li> <li>• protective glasses or goggles</li> <li>• gloves</li> <li>• apron</li> <li>• soap or alcohol-based disinfectant, for washing hands.</li> </ul> </li> </ul>
Clean and disinfect surfaces during home care or when in isolation	<ul style="list-style-type: none"> <li>• Do not share bedding, towels, and clothing with sick people. Use gloves when handling soiled laundry from the sick.</li> <li>• Surfaces touched or soiled by the patient, or his/her body fluids should be cleaned and disinfected with a household detergent. Wear utility gloves when cleaning.</li> </ul>
Ensure appropriate sanitation and shelter conditions	<ul style="list-style-type: none"> <li>• Avoid crowded areas to reduce the risk of contamination.</li> <li>• Separate sick household members from others at home to minimize the risk of spreading the disease.</li> <li>• Use proper and clean toilets to prevent illness and disease.</li> <li>• Bathe often, using clean water and soap or clean sand.</li> <li>• Ensure good ventilation (opening windows and doors to let fresh air in).</li> </ul>
Stay hydrated and treat dehydration and diarrhoea	<ul style="list-style-type: none"> <li>• Prepare oral rehydration solution to treat dehydration and diarrhoea. (Recipe: 1 litre water, 6 level teaspoons sugar, and half level teaspoon salt or drink coconut water).</li> </ul>
Get emergency supply kit and/or stock ready	<ul style="list-style-type: none"> <li>• In addition to regular first aid kit, keep stock of:             <ul style="list-style-type: none"> <li>• antipyretics</li> <li>• oral rehydration salts or coconut water</li> <li>• disinfection solution or household bleach</li> <li>• protective equipment like gloves and masks</li> <li>• chlorine or water treatment tablets</li> <li>• hand sanitizer.</li> </ul> </li> </ul>
Stockpile food and essential medicines	<ul style="list-style-type: none"> <li>• If there is a possibility that there will be limited or no access to food and water, prepare a two-week supply for your household.</li> <li>• Assess the food insecurity level, and make your needs known within and beyond your community:             <ul style="list-style-type: none"> <li>• Self-sufficient – maintaining a sustainable income and other means of living and sustainable access to sufficient food.</li> <li>• Food insecure – sustainable income and other means of living but without access to enough food, due to disruptions in the market.</li> <li>• Food and livelihood insecure – without a sustainable income, and unable to access and/or afford enough food. This is the most vulnerable level.</li> </ul> </li> </ul>
Seek veterinary attention for animals that require treatment	<ul style="list-style-type: none"> <li>• Make a list of the veterinarians in your area.</li> </ul>
Share your knowledge with others	<ul style="list-style-type: none"> <li>• To avoid the spread of diseases and epidemics teach others how to take care of themselves and maintain healthy practices.</li> </ul>