

## Types of Emergencies

OST programs can experience various types of emergencies. This toolkit categorizes the types as disaster-related, violence-related, public-health related, other, and individual emergencies. All emergencies can be or become a disaster, which is a natural or man-made occurrence that leads to damage of property and/or injury to people. Emergencies may be predicted events or surprise events.

Characteristics of a program can determine the likelihood of certain emergencies. Some of these characteristics are:

- Geographic location (e.g. coastal areas)
- Proximity to bodies of water (e.g. rivers)
- Proximity to institutional facilities (e.g. prisons)
- Proximity to large power sources (e.g. nuclear plants)

### Disaster-related

- Earthquakes are characterized by the shaking of the surface of the Earth, resulting from the sudden release of energy in the Earth's lithosphere that creates seismic waves. The intensity of earthquakes can range from those that are so weak their shaking is barely noticeable to those violent enough to toss people around and destroy whole cities.
- Fires include:
  - Individual – Single fire incident in which fire consumes part or all of a structure due to an accidental fire caused by gas, electric, or another source.
  - Explosion – A violent and destructive shattering or blowing apart of something, such as caused by a bomb or an unexpected chemical reaction.
  - Wildfires, also known as brush fires and forest fires, characterized by their size and speed of ignition. These commonly destroy several thousands of acres in just a few days. Wildfires are quite common in the western United States.
- Floods are surprisingly one of the most common natural disasters. Floods do not play favorites in terms of where they occur. They also rank among the highest in terms of property damage. The aftereffects of the 2010 100-year flood in middle Tennessee resulted in large-scale property devastation throughout the area.
- Heatwaves are incredibly hot weather combined with unbearable humidity. The eastern United States is typically hit with scorching humidity, which starts in the Gulf of Mexico, combined with hot air masses from Mexico's desert.

- An arctic freeze occurs when temperatures drop below zero Fahrenheit and remain in negative digits for over an extended long time. Skin exposure to the air is dangerous and can result in hypothermia, frostbite, and/or frost burn.
- A landslide or a mudslide is a downslope transport of soil and rock resulting from natural phenomena or man-made actions. Landslides and mudslides can be secondary effects of heavy storms, volcanic eruptions, and earthquakes.
- A volcano eruption is a sudden occurrence of a violent discharge of steam and volcanic material. A Plinian eruption is a volcanic eruption in which a stream of gas and ash is ejected explosively to a height of several miles.
- Storms:
  - Thunderstorm – A storm with loud rumbling or crashing noises heard after a lightning flash, due to the expansion of rapidly heated air, and typically heavy rain or hail
  - Hurricane (and cyclones) – Storms that form over the ocean with evaporating water from the ocean and characterized by high winds
  - Hail – A storm with large, consistent pellets of frozen rain that fall in showers from cumulonimbus clouds
  - Blizzard – A storm with a heavy snowfall or blowing snow accompanied by strong winds and low visibility
  - Ice storm – A storm of freezing rain that leaves a coating of ice
  - Tornado – A violently rotating column of air touching the ground, usually attached to the base of a thunderstorm
  - Tsunami – A long, high sea wave caused by an earthquake, submarine landslide, or other disturbance

### **Violence and Public-Health Related**

Large-scale emergencies characterized by non-weather related events are usually related to violence or public health. These emergencies require action by emergency management departments, such as the local or state police, to assist citizens in finding or maintaining safe, healthy environments.

### **Violence-Related**

- Highway safety – The safety of vehicles and their occupants are in jeopardy due to a shooting, excessive speeding, etc.
- Terrorism – The unlawful use of violence and intimidation, especially against civilians, in the pursuit of political aims and/or expressions of discontentment with present political agenda of a country, state, or locality

- Hostile intruder – An individual or a group of individuals who use force inappropriately, especially to gain entry into a room, building, etc., without invitation or permission and with the intent to do harm
- Active shooter – An individual or a group of individuals who actively engage in killing or attempting to kill people in a confined and populated area; in most cases, active shooters use firearms

### **Public Health-Related**

- Chemical-related is when a harmful or potentially harmful chemical substance (liquid or gas) that can lead to illness and/or death of members of a community or larger population is unleashed into the environment accidentally or as a terroristic act.
- Influenza outbreak – Influenza (or flu), an extremely contagious respiratory illness caused by influenza A or B viruses, affects a large percentage of an area's population. An influenza pandemic is a global outbreak of a new influenza A virus. Pandemics happen when new influenza A viruses emerge, which can infect people easily and spread from person to person in an efficient and sustained way.
- Food safety – The contamination of food products during some part of the food production or transporting process, and the contamination poses a threat to the health of those who eat it.
- Poisoning – A food product, food source, water supply, or the like is contaminated with a poisonous substance that can lead to illness or death of the members of a community or a larger population. The contamination is unleashed accidentally or as a terroristic act.

### **Other Emergencies**

- Power outage – Electricity is lost across a geographic area—towns, communities, or cities—and poses risk to lives.
- Transportation emergencies – In relation to OST environments, these can be school bus or vehicle accidents or highway detainment due to weather, etc.
- Water safety – An individual(s) is involved in a water emergency via a water vehicle (boat, jet ski, etc.), or the individual(s) is immersed in the water, and the result could be fatal due to injury or drowning. The body of water can be a waterway, such as an ocean or river, or a structure such as swimming pool or tub.

## Individual Emergencies

- Allergic reaction – Individuals may exhibit adverse reactions to certain allergens through ingestion, inhalation, or absorption (through the skin). Allergens can be classified in the following groups:
  - Respiratory (dust, vegetation, mold, animal hair, etc.)
  - Food (dairy, nuts, fish, shellfish, wheat, soy, etc.)
  - Skin (contact dermatitis, hives, insect bites, nickel allergy, sun, etc.)
  - Eye and drug allergies

**Note:** CCDF now requires health and safety standards as well as training for responses to emergencies due to food and allergic reactions.

- Asthma attack is a condition in which the airways (i.e., the tubes that carry air in and out of the lungs) swell and narrow causing reversible obstruction, causing the individual to have problems breathing and require treatment.
- Injury (including injury to teeth) is when an action results in harm or damage to the body. Examples of common injuries are cuts, bruises, head concussions, and broken limbs.
- Drug overdose is when an individual takes too much of a substance, whether prescription, over-the-counter, legal or illegal. Drug overdoses, accidental or intentional, happen when there is enough of the drug in the body to cause a harmful effect on the individual's bodily functions.
- Food poisoning is an illness caused by bacteria or other toxins in food, typically with vomiting and diarrhea. It can occur as an incident with both an individual and a group of individuals.
- Epilepsy is a neurological disorder in which brain activity becomes abnormal, causing seizures or periods of unusual behavior and sensations and sometimes a loss of awareness. Seizure symptoms can vary widely from small episodes (petit) to more intense occurrences (grand mal).
- Cardiac arrest is a sudden loss of blood flow resulting from the failure of the heart to pump effectively. Symptoms include loss of consciousness and abnormal or absent breathing. Some individuals may experience chest pain, shortness of breath, or nausea before a cardiac arrest. If not treated immediately, cardiac arrest can be fatal.

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