Epidemic Control for Volunteers

A training manual

International Federation
of Red Cross and Red Crescent Societies

The International Federation's Global Agenda (2006–2010)

Over the next two years, the collective focus of the Federation will be on achieving the following goals and priorities:

Our goals

Goal 1: Reduce the number of deaths, injuries and impact from disasters.

Goal 2: Reduce the number of deaths, illnesses and impact from diseases and public health emergencies.

Goal 3: Increase local community, civil society and Red Cross Red Crescent capacity to address the most urgent situations of vulnerability.

Goal 4: Promote respect for diversity and human dignity, and reduce intolerance, discrimination and social exclusion.

Our priorities

Improving our local, regional and international capacity to respond to disasters and public health emergencies.

Scaling up our actions with vulnerable communities in health promotion, disease prevention and disaster risk reduction.

Increasing significantly our HIV/AIDS programming and advocacy.

Renewing our advocacy on priority humanitarian issues, especially fighting intolerance, stigma and discrimination, and promoting disaster risk reduction.

International Federation of Red Cross and Red Crescent Societies, Geneva, 2008

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Contents

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Foreword

Communicable diseases kill more than 14 million people around the world every year. Those diseases include respiratory infections, HIV/AIDS, diarrhoeal diseases, tuberculosis, malaria and measles. An increase in the number and severity of natural disasters has exacerbated this problem.

Epidemics are a constant threat to the well-being of communities everywhere, especially in societies where resources are scarce. Managing epidemics, or preferably preventing them, is a priority for the International Red Cross and Red Crescent Movement.

Populations frequently experience epidemics when they are affected by emergencies. A large part of the Movement's response to health needs in emergencies and epidemics is carried out by Red Cross and Red Crescent volunteers in their communities. However, research has shown that volunteers frequently lack the initial background information necessary for a quick and efficient response to epidemics without the aid of health professionals.

Whilst training health professionals for emergencies, is a major activity of the International Federation of Red Cross and Red Crescent Societies, more needs to be done to address the training needs of volunteer. This training package, in harmonization with the community-based health and first aid (CBHFA) approach, aims to fill this gap by involving volunteers more effectively in the management of epidemics. The training is unique because it provides volunteers with a basic understanding of the diseases that can easily turn into epidemics should certain conditions in an environment change.

The **Epidemic Control for Volunteers training manual** *and accompanying toolkit are intended for at volunteers and their trainers in local branches of National Societies. Whilst not exhaustive, the training aims to familiarize volunteers with the most common epidemics and those that cause the most death and suffering. It encourages them to use evidence-based actions and approaches to prevent the spread of communicable diseases in their communities, provide appropriate care for the sick and reduce the number of deaths.*

When an epidemic strikes, there are many ways that volunteers can help. This manual and toolkit are designed to help volunteers define their role in the community before, during and after an epidemic and to take the actions that are best suited to that particular epidemic. The knowledge and skills acquired will enable them to act quickly and effectively in the event of an epidemic. The training will also be useful to them in dealing with other emergencies.

Dominique Praplan
Head, Health and Care Department

List of illustrations

Module 1

Epidemics

Session 1.1

Introduction and definitions

By the end of this session, you will:

- Know what an epidemic is.
- Understand how epidemics spread and their cycle.
- Understand vulnerability to epidemics.
- Know what conditions help to spread epidemics.

Part 1.1.1

What is an epidemic?

To understand what an **epidemic** is, we need to understand what an **infection** is and what causes the infection. This is because an epidemic is when an infection happens to many people at the same time.

So, let us define an infection:

An infection

causes a disease that can be transmitted from one person to another. It is caused by different kinds of germs. It can be transmitted between people in several different ways.

There are many kinds of infections, which cause many different diseases, including diarrhoea, respiratory infections, polio, measles and more. These diseases (caused by infections) can result in epidemics.

We will talk about each of these diseases later in the manual.

In the next part of the session, we will also learn more about **germs**, how they cause infections and how they travel from one person (or an animal or insect) to another person.

Participate

Choose a word that describes what comes to mind when you hear the word "epidemic", what it is, how it happens and what causes it.

Tell this word to your facilitator, who will write it on the flip chart, and write it down in this box. Then copy all the words suggested by your colleagues into this box as well.

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All of the words you have written down in the box above will give you a better idea of what an epidemic is, how it happens, why it happens and how it affects people and communities.

So, here is the definition of an epidemic:

An epidemic

occurs when many people in the community have the same infection at the same time.

More people become infected than in normal situations, exceeding the community's ability to cope.

Thus, a few things together will make an epidemic:

- An infection
- Affecting the community
- Making many people sick
- At the same time

Can you think of infections that cause epidemics? Have you ever witnessed an epidemic? Tell your facilitator and colleagues about it.

Part 1.1.2

Infection and epidemic cycles

Now that we know the definitions of an infection and an epidemic, we can talk a little bit more about how they happen and how they affect people and communities.

Infection cycle

As we said before, infections cause diseases that affect people and make them sick. People fall sick with a disease when the germs that cause the infection enter their bodies.

So, we have mentioned germs several times. What are they?

A germ

is a very small organism we cannot see with our eyes. Germs affect people and animals and can make them sick by infecting them with diseases. They travel from one person, animal or other vector to another person causing a disease to spread (which may result in an epidemic).

A few things to remember about germs:

- They are living organisms.
- They are very, very small, so small that we cannot see them.
- They can enter our bodies in different ways (by mouth, from hands and by vector bites).
- Some germs can make us sick when they enter our bodies.
- They can travel from one person to another in different ways.

Germs exist everywhere around us. They can be found in the ground, in water or in food, on our hands or on other things. But how do those germs get into our bodies and cause diseases? And how do they travel from one person to another?

To understand how germs spread, we need to look at the infection cycle. Take a good look at the diagram on next page to see how germs can infect a person and make that person sick.

The diagram shows us some important things:

- Infections are caused by germs.
- Germs spread from a sick person (and sometimes from an animal or another vector) to others.
- Different kinds of germs cause different kinds of infections.
- There are several ways for a germ to spread and infect new people:
  - Directly, through touching, coughing, sneezing or having sex.
  - Indirectly, through a vector.
  - Indirectly, through contact with our environment or surroundings, such as water, food, air, soil, etc.
  - By carriers, who are people who carry the germ without getting sick.
- When a germ enters a well person, this person can get sick. The sick person can either get better and sometimes get immunity from the disease or can die as a result of the infection.
- Some people get germs but do not get sick. We will discuss why this happens later in the session, but for now it is important to remember that even if they do not get sick, and although they look healthy, these people can still spread the germs they have. They are called carriers.
- Infectious diseases occur to some extent all the time in any community. But sometimes a disease affects too many people at the same time and the community is unable to cope. This is called an epidemic.

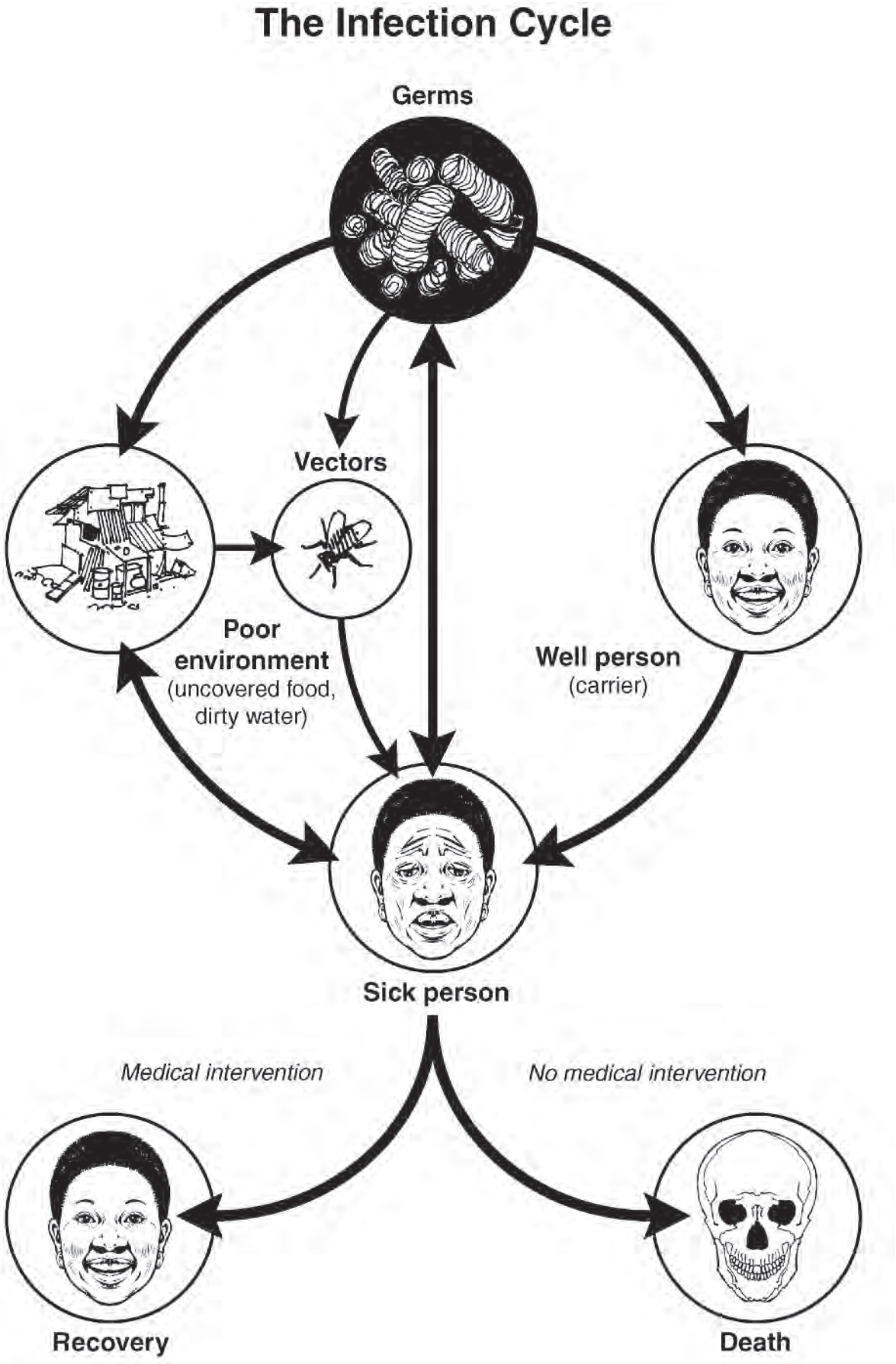
Discuss the above points with your facilitator and your colleagues. Make sure each one is clear to you.

We have mentioned that germs can be spread by vectors, but what are vectors?

A vector

is an insect or an animal that can carry germs and transmit them to people. A vector can be, for example, a mosquito, a fly, a rat, a bat, a chicken or a monkey.

Look at the drawing of different vectors (mosquito, fly, rat) and try to remember them. We will talk about diseases that are spread by vectors later.


The Infection Cycle
Germs
Vectors
Poor environment (uncovered food, dirty water)
Well person (carrier)
Sick person
Medical intervention
No medical intervention
Recovery
Death

The spread of an epidemic

Infectious diseases that can occur in the community at various times can sometimes spread more strongly and rapidly than usual. When this happens, they can affect many more people than would normally be the case and this can cause more sickness and sometimes more deaths than the community is able to cope with. This is what we call an epidemic.

Many different diseases can cause epidemics. We will talk about those different diseases in the next session. For now, we will try to understand how infections that are transmitted from one person to another spread and can become an epidemic.

Look closely at the following diagram to get an idea of how one person can pass on the infection to several other people and cause the infection to spread. It shows how an epidemic can start with one or a few people who get sick with an infection and who then spread the germs to others. Those who get the germs may also get sick and spread the infection even more.

It is important to note that not all people who get the germs get sick. Some people are able to resist an infection. These people have **immunity**. However, they can sometimes still pass on the germs to other people.

Immunity

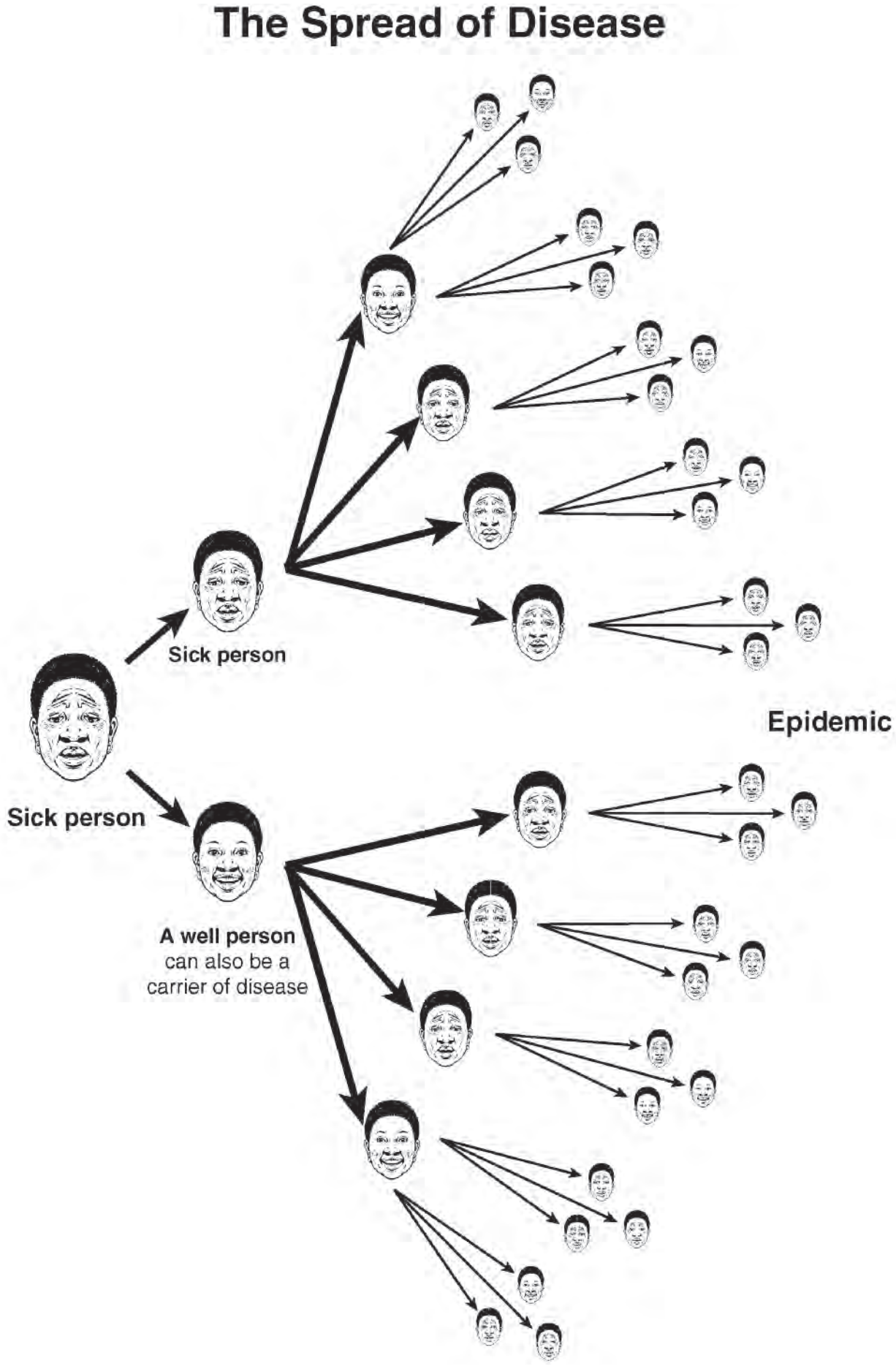
is the ability to fight off an infection. Not all people who get the germs that cause a particular disease get sick. When this happens, the person is said to be "immune" to the disease. Immunity can be acquired either if a person has already had the disease, has carried the germs before and become immune, or has been vaccinated against the disease.

An epidemic occurs when the number of people in a community sick with a particular disease increases. More people become infected than in normal situations, exceeding the community's ability to cope. In other words, more people in the community are getting sick (or dying) than those who are getting better or recovering from the disease.

An epidemic occurs for one of several reasons:

- The germs are stronger than usual (e.g. new kinds of germs).
- There are more vectors (e.g. an increase in mosquitoes during the rainy season).
- People are less able to resist the germs (e.g. owing to malnutrition) and very few people have immunity.
- The surrounding environment has deteriorated (e.g. lack of clean water, poor hygiene, etc.).

It is important to determine what factors are causing an epidemic to spread. This can be done by knowing something about the infection that


The Spread of Disease
Sick person
Epidemic
Sick person
A well person
can also be a
carrier of disease

is causing the epidemic and by understanding the environment in which it is spreading.

Role-play

Your facilitator will choose one of you to play the part of the first person who catches an infection. This disease can spread from one person to another by shaking hands.

The "infected person" will go around and shake hands with other people. The people whom he or she shakes hands with will also get "sick". Do this for a while, and see how many people get sick after a few minutes.

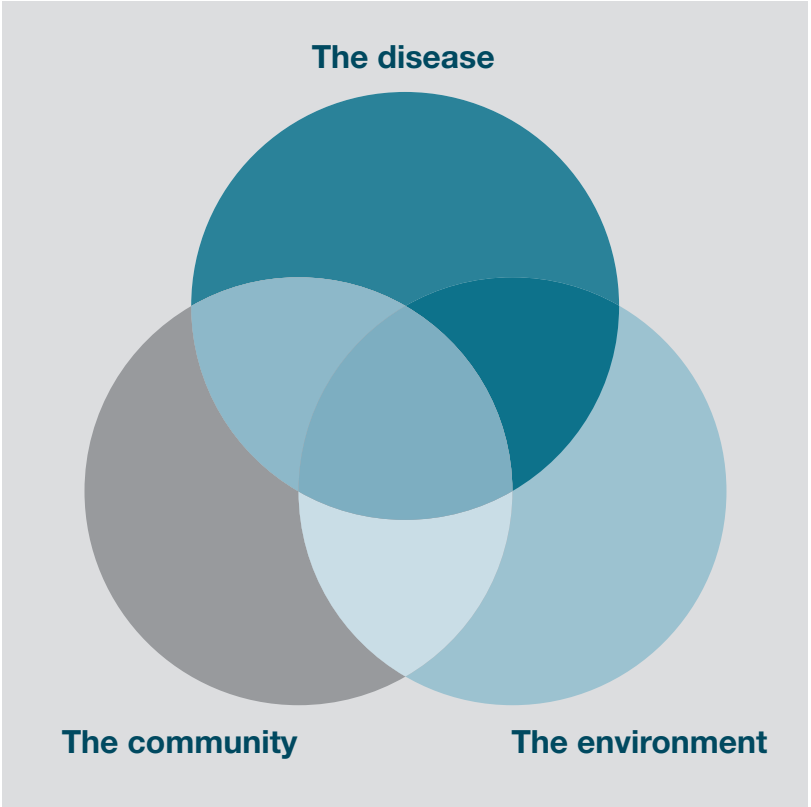
This exercise will give you an idea how epidemics spread.

Part 1.1.3

What helps epidemics to spread?

As we said before, the germs that cause diseases are transmitted directly from person to person, through the surrounding environment or by vectors.

Normally, there is a *balance* between several things, which prevents the disease from spreading and causing an epidemic. Those things are:



- The nature of the *disease* itself and its strength.
- The *community* in which the disease exists, people's living conditions, habits and practices.
- The *environment*, including the seasons, water and sanitation conditions, and the presence of vectors.

Look at the diagram on the previous page and imagine how any change in one of the three things mentioned (the disease, the community, the environment) can help a disease to spread and cause an epidemic.

Several things can increase the spread of an epidemic and make people weaker and more vulnerable to getting sick.

We can remember from the previous part that epidemics will start spreading for one or more reasons relating to germs, vectors, people or the environment.

Participate

Tell your facilitator what things you think will help spread diseases. Think of those diseases that spread directly by coughing or touching, those that spread through mosquitoes, and those that spread through dirty water or poor sanitation. Write all of your suggestions in this box.

For example:
- Dirty hands
- More mosquitoes near ponds

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_ _

Community clean-up

You can now see that many things help spread diseases and cause epidemics. You have to keep all of them in mind when you work in the prevention and control of epidemics because doing so will help you do your work better by showing people how to protect themselves and stop the spread of the disease.

These things will become much clearer in the next session when we talk about the different kinds of diseases that cause epidemics and how they spread.

Part 1.1.4

Who is vulnerable?

Germs and the infectious diseases they cause do not affect everyone the same way. Some people can get sick easily when they come in contact with germs, while others are better able to resist them. This is what we mean by vulnerability. The more vulnerable people are, the easier it is for them to get sick.

A mother bottle-feeding her baby

In general, we know why and how some people in the community are more vulnerable than others. For example, it is often because they are poor, sick or disabled. Now, we need to think about what other sorts of people in the community might be vulnerable to infections and why.

Participate

Below is a list of different categories of people. In small groups, look at each category and mark whether you think it is vulnerable to infectious diseases or not and why.

When deciding whether a particular category is vulnerable or not, keep in mind the things that help spread infections.

Category	Vulnerability	Why
Babies		
Children		
Pregnant women		
Strong working people		
Elderly		
Soldiers		
Farmers		
Factory workers		
HIV+ people		
Health workers		
Poor people		
Single parents or widows		
HIV+ health workers		

Now think of other sorts of people who might be vulnerable in your community and why.

Knowing which groups are vulnerable to infections is very important. It will give you an idea of who to help and how.

As you can imagine, some of the people mentioned above are vulnerable to all kinds of infections, while others are vulnerable to only some, depending on their circumstances, the way those infections spread and other factors.

Session 1.2

Diseases that cause epidemics

By the end of this session, you will:

- Know and be familiar with the different groups of diseases that cause epidemics.

Part 1.2.1

What are the disease groups?

There are many different kinds of diseases that cause epidemics. It is useful to put them in groups. This will help us to understand the nature of the diseases and to manage their epidemics better.

There are different ways of grouping diseases. We can group them according to what kind of germs cause them, how they are transmitted, or what kind of symptoms they cause.

In this training package, we will group diseases in such a way that it will be easier to understand how to *prevent* or *manage* the epidemics that they cause. Therefore, we have decided to use six different disease groups. These are:

1. Diarrhoeas
2. Diseases prevented by vaccines
3. Diseases transmitted by vectors
4. Respiratory infections
5. Highly contagious diseases
6. Avian and pandemic influenza

We will explain the reasoning behind these six disease groups in later sections.

Because it is usually easier to remember drawings than names, we will use "icons" (graphic symbols) for each group of diseases. Then we will talk a little bit about each group and the diseases in it: how they are transmitted, what symptoms they cause, and how to prevent and manage their epidemics.

You do not need to remember all of the information about these groups by heart. We will talk about them again later on, and you will be given a toolkit along with this training manual that will help you not only to remember them, but also to prevent and manage their epidemics.

Group 1: Diarrhoeas

Diarrhoea is when a child (or an adult) passes three or more loose stools in a day. It can cause the child to lose so much body water and minerals that he or she becomes dried out (dehydrated). This can cause death in some cases if not treated.

Many children get diarrhoea. For the most part, it can be cured simply. But sometimes it can spread and cause an epidemic. There are different kinds of diarrhoea, including those that take the form of watery stools, those in which blood comes out with the stools, and a very severe kind that is called cholera.

How are diarrhoeas transmitted?

All kinds of diarrhoeas are transmitted by germs that come out with the stools of sick people and usually spread to other people through contaminated water. Diarrhoea can be transmitted in other ways besides water. An easy way to remember these is through the 3Fs: Food, Fingers, Flies.

A dehydrated child

What symptoms do diarrhoeas cause?

It is mainly children who get diarrhoea. When children get diarrhoea, they start having frequent loose stools. This causes them to lose water and minerals from their bodies. Other symptoms of diarrhoeas include stomach pains, fever, cramps, nausea and vomiting. When a child loses a lot of water, he/she can become dehydrated.

Dehydration

happens when a person, mainly a child, loses a lot of water and minerals in his or her stools through diarrhoea. Dehydration is like "drying out". It is very dangerous and can cause death.

There are two particularly severe kinds of diarrhoea:

- **Dysentery** – in which blood comes out with the stools.
- **Cholera** – which causes more severe symptoms and very watery stools that look like "rice water".

The epidemic

Who?
Diarrhoeas mainly affect children, especially those under five years of age (children are most likely to suffer sickness and death caused by diarrhoeas). Severe diarrhoeas, and especially cholera, can affect anyone, including adults.

Where?
Diarrhoea epidemics happen more often in places and communities with a bad water supply or poor sanitation facilities.

When?
Diarrhoea epidemics are more likely to occur at times when water is less available and/or there is no clean drinking water or water for washing/bathing.

Why?
Exposure of water (or food or other things) to stools because of poor sanitation causes diarrhoeas. Germs go into the water from the stools and can cause diarrhoea in people who then drink the water. When the whole community's water sources are contaminated, this can cause an epidemic.

How do we prevent a diarrhoea epidemic?

Diarrhoea epidemics can be prevented by several simple things:

- *Hygiene* – This includes washing hands with soap at critical times, especially after going to the toilet, after cleaning children's bottoms and before preparing food.
- *Drinking only clean and safe water* – This means boiling, filtering or treating water with chlorine and storing it in clean containers.
- *Eating safe food* – This means washing vegetables and fruits, storing food in clean conditions and reheating food before eating it.
- *Appropriate sanitation facilities (latrines)* – This will help decrease the likelihood of stools contaminating water or food. Special care needs to be taken with children's stools, which should be properly disposed of or buried.

How do we deal with cases of diarrhoea?

The most important point to remember when dealing with diarrhoea cases is to replace the water and minerals that are being lost. In other words, it is vital to correct dehydration. This is done by detecting diarrhoea early and giving the affected person water and salts: these can be in the form of an oral rehydration solution (ORS), which is made from packets, or home-made fluids such as rice water or soup.

How do we detect a diarrhoea epidemic?

We suspect an epidemic of diarrhoea when many people, especially children, have diarrhoea and dehydration at one time and it is more severe than we see in normal situations.

We suspect cholera when *adults*, as well as children, have severe diarrhoea and dehydration and many die as a result.

A child being given an oral rehydration solution

How do we deal with a diarrhoea epidemic?

If an epidemic of diarrhoea occurs, there are a few things that should be done:

- Find out the source and cause (unsafe water, inappropriate latrines, unsafe hygiene practices).

- Ensure water is clean(by boiling, filtering or treating it with chlorine) and provide safe water storage.
- Identify cases of diarrhoea.
- Treat sick children at home with ORS or home-made fluids such as rice water or soup.
- Refer very sick and dehydrated children to health facilities.
- Promote proper hygiene in local communities and among families.
- Use the International Federation's cholera kit when available.

Learn

It is very important to be able to recognize dehydration in children when looking for cases of diarrhoea. This will help you to decide who should be treated with an ORS at home and who should be referred to a health facility or hospital.

The table below will help you recognize dehydration and its severity.

	No dehydration	**Some dehydration**	**Severe dehydration**
1. Look at General condition	Well, alert	Restless, irritable	Does not react or unconscious; floppy
Eyes	Normal	Sunken	Very sunken and dry
Tears	Present	Absent	Absent
Mouth and tongue	Moist	Dry	Very dry
Thirst	Drinks normally, not thirsty	Thirsty, drinks eagerly	Drinks poorly or not able to drink
2. Feel: Skin pinch	Goes back quickly	Goes back slowly	Goes back very slowly
3. Action to take	Give ORS	Give ORS	Refer immediately to health facility or hospital

What can volunteers do?

As volunteers, you can play a useful role in hygiene promotion at the community and household levels, where you can encourage people to change their behaviour and adopt safe hygiene practices on the personal and domestic sides. You can also be involved in teaching mothers about oral rehydration and in advising parents/families to take very sick children to health facility.

Volunteers can also play an important role during a diarrhoea epidemic. You can look out for new cases and inform staff at the health centre. You can also take part in investigating the source and cause of the epidemic.

Most importantly, you can:

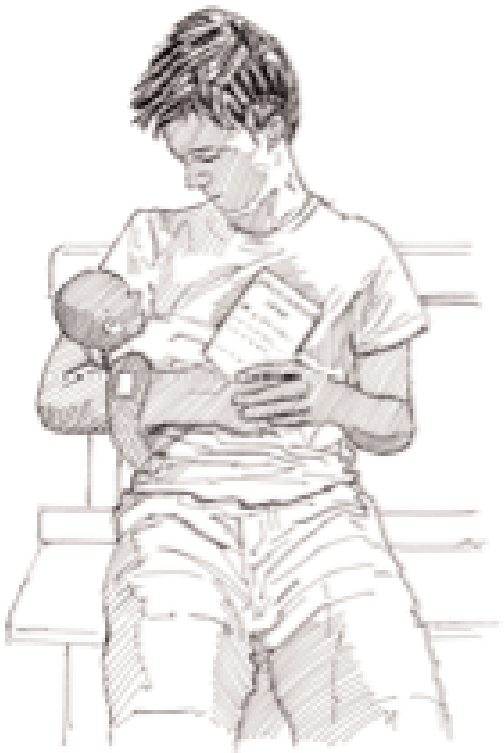
- Help detect diarrhoea cases in your local community.
- Refer children with severe dehydration to health facilities.
- In a major epidemic, put up posters and distribute leaflets with dos and don'ts.
- Conduct health promotion in the community.
- Show mothers and caregivers how to prepare ORS for dehydrated children.
- Alert the health authorities.

A volunteer doing hygiene promotion in a village.

Group 2: Diseases prevented by vaccines

A **vaccine** is a medication that helps people resist an infection before it happens. Some vaccines are in the form of injections and others can be given by mouth.

There are several diseases that can be prevented and controlled by vaccines. Each disease is different and spreads in a different way. But for you as volunteers, the important thing is to know how to prevent epidemics of such diseases from occurring and how to assist with vaccination campaigns.



Vaccination card

Diseases that are prevented by vaccines include **polio, hepatitis A (liver infection), measles, yellow fever** and **meningitis**.

How are vaccine-preventable diseases transmitted?

Diseases in this group are transmitted in different ways. Polio and hepatitis A are transmitted by water or food contaminated by infected stools in a similar way to diarrhoeas; measles and meningitis are transmitted by droplets emitted by coughing or sneezing; and yellow fever is transmitted by mosquito bites.

What symptoms do vaccine-preventable diseases cause?

It is not as important for you to know the causes and the technical details of each disease as how to prevent them by helping get children to health workers who will vaccinate them.

However, to describe the symptoms briefly: polio causes paralysis in children; hepatitis A causes the skin and whites of the eyes to go yellow and is accompanied by fever and diarrhoea; measles causes a rash and fever; yellow fever causes fever and pain; and meningitis causes fever, headache and a stiff neck.

All of these diseases can cause death in young children and even in adults.

The epidemic

Who?
Yellow fever is transmitted by infected mosquitoes and affects people who are bitten by such mosquitoes in areas where the disease exists. *Polio* affects children in places where water is contaminated with the germs through infected stools. *Meningitis* and *measles* affect people in crowded places where droplets from coughing and sneezing carry germs from one person to another. *Children are more affected by all of these diseases than other people.*

Where?
Diseases in this group are concentrated in certain places and countries. These places are usually in poorer countries, where a decline in living conditions can lead more easily to the spread of these diseases.

When?
Epidemics of *yellow fever* occur when the number of mosquitoes increases (mostly in the rainy season). *Polio*, *meningitis* and *measles* epidemics occur when there are situations of overcrowding, such as in refugee camps, or after a natural disaster.

How do we prevent epidemics of vaccine-preventable diseases?

Epidemics of these diseases can be prevented by several simple things:

- Specific vaccines will prevent many people being infected by the diseases in this group.
- Epidemics can be prevented if enough people in the community are vaccinated against these diseases.
- *Yellow fever* epidemics can be prevented by controlling mosquitoes and protecting people from being bitten.
- Improving living conditions, hygiene and sanitation and reducing overcrowding help in prevent *polio*, *measles* and *meningitis*. This is especially the case in refugee camps.

About vaccines

The vaccines for diseases in this group are very effective. They should be given to every child as part of a routine vaccination schedule. As volunteers, you should encourage people in your local community to always take their children to health centres for regular vaccinations.

These are the vaccines for the different diseases in this group:

- *Yellow fever* vaccine is given by injection at 9 months of age. This vaccine should only be given in certified centres. The vaccine is effective 10 days after it is administered and provides protection for 10 years.
- *Meningitis* vaccine is given by injection at 2 years of age in places where the disease is a threat. The protection of this vaccine lasts only 2 to 3 years.
- *Measles* vaccine is given by injection at 9 months of age. It should be accompanied by vitamin A drops in the mouth.
- *Polio* vaccine is given by drops in the mouth. It should be given to children 4 times in their first year (at birth and then at 6, 10 and 14 weeks).

How do we deal with cases of vaccine-preventable diseases?

When children are sick with one of the above-mentioned diseases, there is little that volunteers can do to cure them. These diseases are dangerous and require prompt medical treatment. The best way to help is to recog-

nize that the child is sick, as we will learn to do with the help of the toolkit, and then refer him or her to the nearest hospital or health facility.

How do we detect an epidemic of a vaccine-preventable disease ?

- ***Polio*** – An epidemic is suspected when many children are suffering from paralysis.
- ***Measles*** – An epidemic is suspected when many children get fever with a rash on the skin.
- ***Meningitis*** – An epidemic is suspected when many people get fever with a bad headache and stiff neck.
- ***Yellow fever*** – An epidemic is suspected when many people get fever in a place where yellow fever exists.
- ***Hepatitis A*** – An epidemic is suspected when many people get fever and their skin and the whites of their eyes turn yellow.

How do we deal with an epidemic of a vaccine-preventable disease ?

If an epidemic of a vaccine-preventable disease occurs, there are a few things that should be done:

- Mass vaccination to bring the epidemic under control.
- Destruction of mosquito breeding sites in the case of *yellow fever*.
- Improving water, sanitation and hygiene in the case of *polio*.
- Improving living conditions and reducing overcrowding in the case of *measles* or *meningitis*.
- Detecting new cases in the community (**surveillance**) and referring them to health facilities.

Surveillance

is a system created to detect new cases of diseases in the community and to refer them to health facilities. It includes: educating people about the diseases; actively finding sick individuals; and knowing what symptoms to look for.

What can volunteers do?

Volunteers do not usually give vaccines, either in routine vaccinations or in campaigns. However, there are many other things that you can do to support the health authorities giving the vaccinations. These include:

- **Monitoring:** Ensuring that vaccination campaigns cover all the people who need them.
- **Social mobilization:** Educating the community in the importance of vaccinations and helping them catch up with vaccination campaigns. *Social mobilization is one of the most valuable things volunteers can do because volunteers belong to the community and can make a big difference encouraging families to get their children vaccinated.*
- **Community-based surveillance:** Helping the community identify cases of infection and knowing how to deal with them.

A vaccination campaign

Group 3: Diseases transmitted by vectors

A **vector** is an insect or an animal that can carry germs and transmit them to people. A vector can be, for example, a mosquito, a fly, a rat, a bat, a chicken or a monkey.

A mosquito

There are many diseases that are transmitted by vectors. Vectors can be insects that transmit a disease by biting humans. They include mosquitoes, some kinds of flies, and ticks. They can also be animals, such as rats. Two of the main diseases transmitted by vectors are **malaria** and **dengue fever**. These diseases can exist in some regions and countries all the time, but because of changes in the surrounding environment, they can cause epidemics.

How are these diseases transmitted?

This group of diseases is transmitted by vectors. In the case of *malaria* and *dengue fever*, they are transmitted by different kinds of mosquitoes that carry the germs. When those mosquitoes bite someone, they can insert the germs in the blood of that person, causing him or her to get the disease.

What symptoms do vector-transmitted cause?

The diseases in this group are caused by different germs. However, they all cause high fever, acute body pains and tiredness. Malaria causes a fever that goes up and down, with spells of extreme heat and shivering. *Dengue fever* can sometimes cause bleeding of the gums and under the skin, in addition to the fever.

The epidemic

Who?
Anyone can suffer from diseases transmitted by vectors, especially young children. People who sleep without mosquito nets and beside water surfaces where mosquitoes lay their eggs are more at risk.

Where?
Several regions and countries have *malaria* and *dengue fever* all the time. These are mostly tropical countries and places close to water surfaces, such as ponds and lakes.

When?
Epidemics are more likely to occur in the rainy season when mosquitoes breed more.

Why?
When mosquitoes breed more in the rainy season, there is a higher chance of people being bitten and getting these diseases. When people are not protected and there are more mosquitoes than usual, many people can get bitten and suffer from these diseases. When this happens, it is considered an epidemic.

A mother and child under a mosquito net

How do we prevent the spread of vector-transmitted diseases?

Controlling mosquitoes and preventing them from breeding are the main methods of stopping the spread of diseases such as *malaria* and *dengue fever*. This is done in several simple ways:

- Destroying or filling in ponds and small swamps where mosquitoes live and breed.
- Spraying houses and tents with substances that kill mosquitoes (insecticides).
- Most importantly, preventing mosquitoes from biting people, especially children. This is done mainly by encouraging people to sleep under bed nets (useful in the case of *malaria* but not *dengue fever*) and to wear clothes that cover as much of the body as possible.

How do we deal with cases of vector-transmitted diseases?

When a person is sick with a vector-transmitted disease, it is not possible for volunteers to treat the patient. They need treatment by health professionals in a health centre. The most important things volunteers can do are: to identify cases of high fever; to suspect *malaria* or *dengue fever*; and to refer these suspected cases to health professionals.

How do we detect an epidemic?

When many people get high fever combined with any of the other symptoms mentioned above, in a place known to have *malaria* or *dengue fever*, an epidemic is suspected. Before volunteers act, there should be a confirmation from the health authorities that there is an epidemic of one of these diseases.

How do we deal with an epidemic of a vector-transmitted disease?

If an epidemic of vector-transmitted diseases occurs, there are a few things that should be done:

- **Surveillance:** Detection of suspected cases and their referral to health facilities.
- **Prevention:** Distribution of mosquito nets and education in their use.
- **Health promotion:** Teaching the community how to identify the disease and protect themselves from mosquitoes.
- **Mosquito control:** Spraying houses with insecticides.
- **Medical care:** Mass treatment of cases by health professionals.

What can volunteers do?

As the management of an epidemic is not only the treatment of cases but also preventing the disease from spreading to other people and slowing down the epidemic, volunteers can play a big role in helping to control epidemics of diseases transmitted by vectors.

You can do this through:

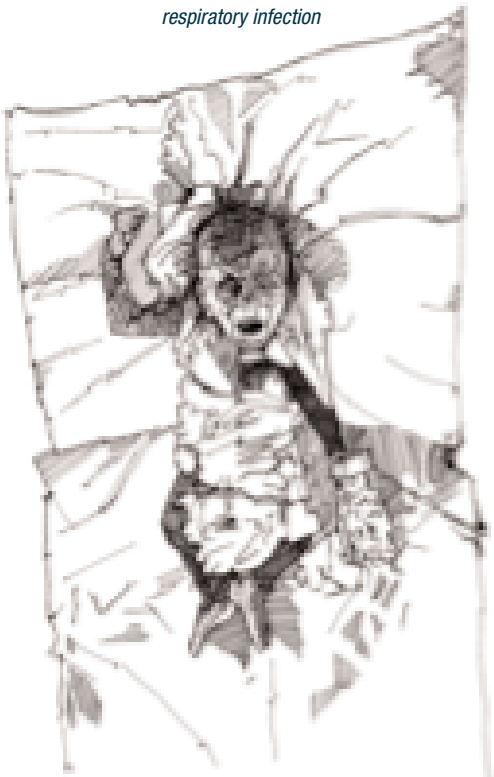
- Distribution of malaria mosquito nets and education of the community in their use.
- Health promotion on the prevention and identification of the diseases.
- Surveillance through house-to-house visits.
- Referral of cases to health facilities.
- Clean-up campaigns.
- Mosquito control (spraying) after proper training, with the appropriate protection and under the supervision of water and sanitation specialists.

Group 4: Respiratory infections

Respiratory infections occur when germs affect the lungs of a person and cause an infection. These infections can also cause epidemics and may result in death for children, especially if they are very sick and not treated.

Respiratory infections are diseases that affect the chest (lungs). They can be mild, causing only some pain or coughing, but can also be very severe, causing fever, difficulty in breathing, and coughing, and may even lead to death if not treated properly or quickly. These diseases cause epidemics, mainly when living conditions (overcrowded houses and tents) allow them to spread easily.

A child sick with an acute respiratory infection



How are respiratory infections transmitted?

Respiratory infections are transmitted by droplets released into the air by coughing or sneezing. These droplets carry germs and can be breathed in by other people, causing them to become sick too.

What symptoms do respiratory infections cause?

Respiratory infections can be mild or very severe and can result in death for children if they are not treated. Usually, they cause fever with a bad dry or wet cough (with sputum). This can make it very difficult for those infected (usually children) to breathe. Children with respiratory infections also appear exhausted and pale.

The epidemic

Who?
Respiratory infections can affect anyone, but children are more at risk and suffer worse symptoms. Children suffering from malnutrition are especially at risk of respiratory infections.

Where?
Respiratory infections happen mostly in crowded places, such as collective shelters and camps, schools, health centres or hospitals, where the droplets coughed or sneezed can easily carry the germs from one person to another.

When?
Respiratory infections can happen at any time of the year. They are more likely to occur when it is cold because people close windows and there is less fresh air inside buildings.

Why?
When there is a situation that leads to overcrowding, such as a lot of people moving away from their homes because of a natural disaster or war and having to live in temporary shelters, respiratory infections spread more easily and can result in epidemics.

How do we prevent the spread of respiratory infections?

The spread of respiratory infections can be prevented by several simple things:

- Having good habits, such as cough etiquette. This will reduce the spread of respiratory infections and can prevent epidemics and reduce their impact when they occur.
- Improving the shelter situation and reducing overcrowding in the community.
- Identifying those in the community who are sick with respiratory infections before they spread the infection to others.
- Quickly treating or referring children who have a cough or difficulty breathing.
- Improving the nutritional situation.
- Educating the community in the diseases and how to prevent and manage them.

How do we deal with cases of respiratory infections?

Respiratory infections are hard to treat, and sick individuals will need to be cared for by health professionals. The role of volunteers is mainly to identify cases and refer them to health facilities. However, some other things can be done. Children sick with respiratory infections benefit greatly from eating good, nutritious food and drinking plenty of fluids such as water, juices and soups.

How do we detect an epidemic of a respiratory infection?

An epidemic of a respiratory infections is suspected when many people (especially if they live in crowded conditions) have fever, a cough and difficulty breathing.

How do we deal with an epidemic of a respiratory infection?

If an epidemic of a respiratory infections occurs, there are a few things that should be done:

- Early detection of sick people and referral to health facilities through good surveillance.
- Improving shelter, if possible, and reducing overcrowding.
- Improving nutrition and providing children with good food.
- Proper and prompt treatment of sick people in clinics and other health facilities.

What can volunteers do?

With this group of diseases, volunteers can be useful by carrying out health promotion and by identifying cases and referring them to appropriate health facilities for proper care and treatment.

You can do this through:

- Surveillance, by carrying out house-to-house visits so that you can assess living conditions and detect people with fever, a cough and difficulty breathing.
- Referral of children with respiratory infections to health centres or hospitals.
- Ensuring access to healthy food and, if malnutrition is a problem, making sure that children receive good nutrition.
- Improving shelter, if possible, to increase fresh air and reduce overcrowding.
- Health promotion to tell people about:
  - good habits such as covering the mouth and nose when coughing or sneezing (cough etiquette)
  - the symptoms of respiratory infections
  - how to manage sick children
  - the need to take sick children to a health facility
  - good nutrition
  - giving fluids to sick children
  - improving shelter and reducing overcrowding

Group 5: Highly contagious diseases

Highly contagious diseases can be more dangerous than other kinds of diseases because some of them are new and we are less prepared to deal with them. Others are very severe and spread so rapidly and strongly that we need extra efforts to control their epidemics.

This group of diseases includes three infections that are very similar. They are in the same group because: they are caused by similar germs; they spread in the same way; and they all cause very severe symptoms. Although these diseases are not very common, they are very dangerous and can cause death to many people in a very short time. The names of these three diseases are: **Ebola haemorrhagic fever, Marburg haemorrhagic fever** and **Rift Valley fever.**

How are highly contagious diseases transmitted?

Ebola, *Marburg* and *Rift Valley fever* are transmitted by contact with the bodily fluids (blood, vomit, saliva, stools, etc.) of an infected person. They can also be transmitted through the bodies of people who have died from the disease or from anything that an infected person may have come in contact with, such as bed sheets, surfaces, tools, etc. In addition, *Rift Valley fever* comes originally from livestock and is transmitted to humans first by mosquito bites.

The main concern with these diseases is that they are passed from one person to another very easily and rapidly and can cause the death of a big proportion of the people who are infected by them.

What symptoms do highly contagious cause?

Ebola, Marburg and *Rift Valley fever* cause very severe symptoms, including bleeding, fever, headache and different kinds of pains. They can cause death in many people who are infected.

The epidemic

Who?

Ebola, Marburg and *Rift Valley fever* can affect anyone. Everybody in the epidemic area can be affected, but some people are more at risk than others. People at risk include health workers, such as doctors and nurses, and families of sick people, because both groups of people will come in close contact with people who have the disease and can catch it from them.

Where?
Most of the time, *Ebola* and *Marburg* occur in only a few countries in Africa. These countries include: the Democratic Republic of the Congo, Sudan, Gabon and Uganda for *Ebola*; Angola, the Democratic Republic of the Congo and Uganda for *Marburg*; and East Africa and the Arabian Peninsula for *Rift Valley fever*.

When?
Epidemics of *Ebola, Marburg and Rift Valley fever* can occur at any time of the year.

How do we prevent highly contagious diseases?

Ebola, Marburg and *Rift Valley fever* occur in only a few countries. It is hard to prevent them, but if people know about them and are able to detect them early on, once an epidemic starts it can be more easily brought under control.

How do we deal with cases of highly contagious diseases?

The best way to deal with cases of these diseases is to isolate sick individuals and keep them at a safe distance from others, who could become infected if they get too close. Most importantly, they need to be referred to specialized health facilities as soon as possible. It is very important to use **personal protection equipment** (PPE) at all times when dealing with *Ebola* or *Marburg*. We will learn in detail how to use PPE in the toolkit.

A volunteer wearing personal protection equipment

Personal protection equipment

is equipment we can wear to protect us from coming in direct contact with sick people, their bodily fluids or anything that can cause us to get the infection, such as items or surfaces that may have been touched by someone who has had the disease.

How do we deal with an epidemic?

If an epidemic of *Ebola*, *Marburg* or *Rift Valley* fever occurs, there are a few things that should be done:

- Self-protection to avoid getting the disease, mainly through the use of PPE.
- Early detection of sick people and their referral to health facilities.
- Cleaning items and surfaces touched by sick people or dead bodies with *very* strong cleaning products (disinfectants), such as bleach or anything that is able to kill germs effectively.
- Safe burial of people who have died of *Ebola* or *Marburg*.
- Health promotion to teach community members how to protect themselves from infection.

What can volunteers do?

When it comes to volunteer involvement in the control of *Ebola*, *Marburg* and *Rift Valley fever* epidemics, the most important concern is the protection of the volunteers themselves. You should not take risks and get sick, too, because if that happens, you will increase the effect of the epidemic and you will not be able to help sick people. The use of PPE is *essential* when entering an epidemic area. We will learn when and how to use PPE in the toolkit.

Volunteers do not normally care for patients in *Ebola*, *Marburg* or *Rift Valley fever* epidemics because people who are infected need highly specialized treatment from health professionals. However, you can be very effective in several other ways:

- Talking to community members and leaders to get their help in detecting new cases and asking for them to be referred to health facilities.
- Health promotion is the most important thing volunteers can do. You can help tell the community about the epidemic and teach people how to protect themselves, how to care for relatives who are sick and how to deal with dead bodies.
- Sometimes you can help the community to make strong cleaning products (disinfectants) and teach them how to use them and distribute them with the necessary cleaning implements.
- It is unusual for volunteers to help care for patients or deal with the burial of dead bodies, but if this happens because there is no one else to do it, it should be done under the strict supervision and instruction of specialists and with the use of full PPE at all times.

Group 6: Avian and pandemic influenza

Pandemic influenza is a very severe kind of influenza. This new disease starts by causing a severe sickness in chickens or other birds (avian influenza) and can be passed to people who come in direct contact with them. If the disease changes (mutates) so that it can pass easily between humans, it could cause a worldwide epidemic (pandemic) and kill many people. In this form, it can spread easily and there is as yet no treatment or vaccine.

For some time now, there has been a germ that affects mainly birds, causing **avian influenza**. In some cases, this germ has been passed from birds to people, causing them to become sick with a very severe type of influenza that can kill many of the people it affects. Until now, avian influenza has only affected a few people around the world, who have caught it from birds.

A sick chicken with avian influenza

Pandemic influenza is a disease that does not exist yet; it can happen only if the germ that causes avian influenza changes (mutates) from being able to infect mainly birds to being able to infect humans as well. If this happens, the disease will be transmitted easily from one person to another by droplets (coughing and sneezing) in the same way as normal influenza. It will become a very severe disease that will spread among people very rapidly and will affect huge numbers around the world; this is what we call a pandemic.

If a pandemic occurs and spreads all over the world, millions of people could get sick and many of them could die. In addition, a pandemic would affect many other things. For example, it would cause hospitals to be overwhelmed with patients, other diseases to be neglected, travel to stop, and schools and other institutions to be closed. If that happens, local resources (such as volunteers) will be very valuable in helping communities to overcome the effects of the disease, to care for patients, to learn how to manage the pandemic, and, when it is over, to return to normal life.

Influenza pandemics have occurred in the past. They include: the "Spanish flu" of 1918/1919; the "Asian flu" of 1957/1958; and the "Hong Kong flu" of 1968/1969.

How are avian and pandemic influenza transmitted?

Avian influenza is transmitted among birds through their fluids, feathers and faeces. It can spread in the same way to humans and cause them to get the disease. It can also potentially spread to humans from the meat or eggs of sick chickens or other infected birds, if they are not cooked properly.

Pandemic influenza, like the respiratory infections we talked about in Group 4, is transmitted by the droplets released into the air by coughing or sneezing. These droplets carry germs and can be breathed in by others, causing them also to become sick.

It is important to know that the droplets that are emitted by coughing or sneezing do not go very far: they only travel about 1.5 metres. This means that if we are further than that from a sick person, it is very unlikely that we will catch the disease from them. We should always remember this when dealing with pandemic influenza, because keeping a safe distance from sick people (or what we call "**social distancing**") is the most effective prevention measure.

What symptoms do avian and pandemic influenza cause?

Both *avian* and *pandemic influenza* are severe infections in humans. Their symptoms can be very similar to regular influenza, including: sudden illness, fever, cough, shortness of breath and, in some cases, chills, runny nose, sore throat, tiredness, and upset stomach or loss of appetite. These symptoms may be very severe if the germ that causes them is very strong.

The epidemic

Who?
Avian influenza is more likely to affect people who keep chickens or birds at home, work on bird farms, or deal with birds or their raw meat.

We cannot know yet who will be most vulnerable to the *pandemic influenza* germs. This will be better known after the pandemic starts.

Where?
The pandemic will start from one or several places that are not known yet, but after it starts, several waves of the pandemic influenza can affect the whole world. That is why it is called pandemic.

When?
No one knows yet. The pandemic might start soon or in many years.

How do we prevent the spread of avian and pandemic influenza?

We can prevent the spread of *avian influenza* from birds to humans by detecting the disease early in birds and eliminating sick birds, by separating birds and humans in places where the disease occurs (preventing chickens from going inside houses), for example, and by thoroughly cooking bird meat and eggs.

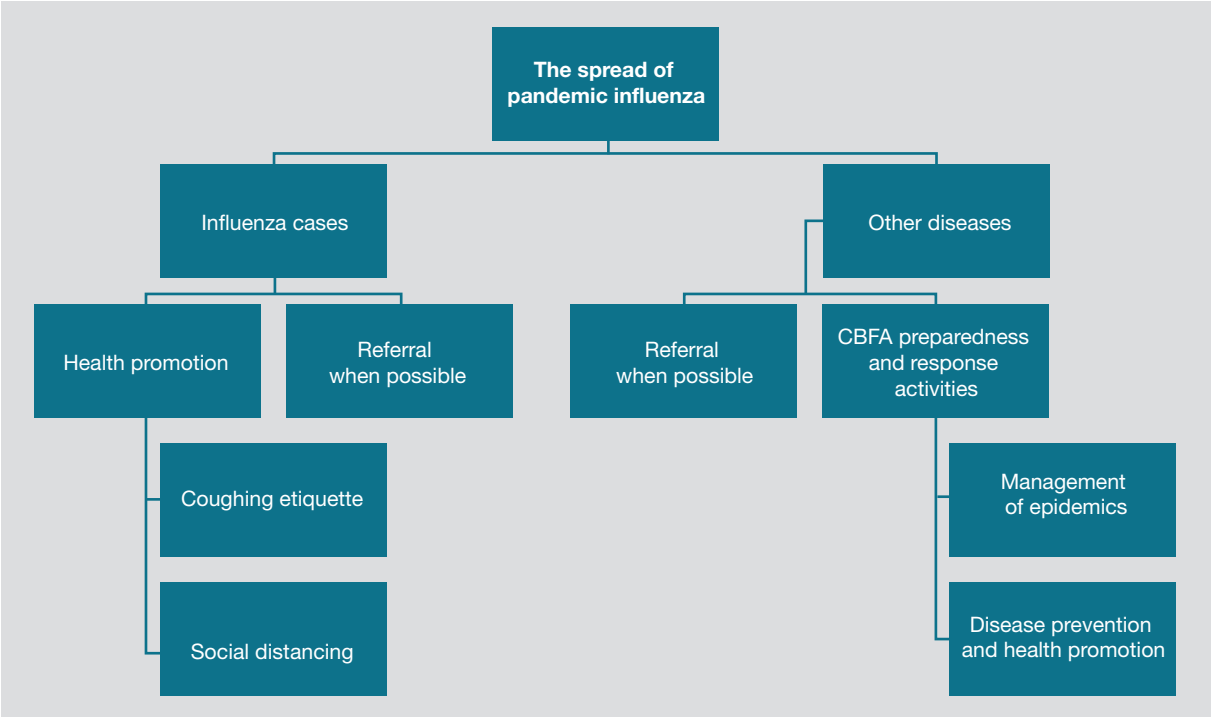
There is very little we can do to prevent an influenza pandemic. This is because the mutation of the avian influenza germ into a new one that can affect humans more easily and can be transmitted between humans

can happen anywhere and at any time. The best way to prevent the bad effects of an influenza pandemic is to prepare for it very well and to know what to do if it happens.

How do we deal with cases of pandemic influenza?

The best ways to deal with cases of **pandemic influenza** are to isolate sick people, to keep our distance from them (social distancing) and to refer them very rapidly to health facilities.

When a pandemic occurs, there will be many people sick with other diseases who cannot get medical attention because hospitals and clinics will be overwhelmed by influenza patients. This means that those other diseases will need to be dealt with by other means. The diagram below:



When the new germ that spreads among humans develops and the pandemic starts, many people may get sick with influenza all at once. This will mean that hospitals and health facilities may have more patients than they can handle and many other patients with influenza or other diseases may have to be treated at home.

In that event, treatment for influenza will be done at the community level through several simple methods. These will include the prevention of transmission from sick to healthy people through social distancing and better practices (as simple as coughing in the sleeve) and giving support to sick people through care, better nutrition, rest and so on.

How do we deal with an influenza pandemic?

As we said before, the best way to deal with an epidemic is to prepare. The International Federation is leading the worldwide effort to prepare for an influenza pandemic, for which it is working with many National Societies, governments and other partners.

But when the pandemic occurs, there are several things that volunteers can do to help, including:

- Managing sick people: hospitals and health facilities will have to be able to treat large numbers of people sick with influenza. If the numbers are too big, some sick people may need to be treated in the community.
- Reducing the spread of the disease through promotion of good health practices, such as social distancing and better hygiene habits.
- Supporting public infrastructure: When the pandemic occurs, many services such as water and sanitation, schools and others may be disrupted. Work will need to be done to keep such services in operation.
- Lastly, when health facilities are flooded with many people sick with influenza, they will have very little room for people suffering from other diseases. Instead, the care of those people will have to be managed either through other health services or in the community.

What can volunteers do?

Volunteers will be one of the cornerstones of their National Societies' efforts to deal with an influenza pandemic, by helping to carry out the tasks listed above.

Session 1.3

Special issues in epidemics

By the end of this session, you will:

- Know about epidemics that occur after natural disasters.
- Understand how to deal with dead bodies to prevent epidemics.
- Know about other infections that can affect the community.

Part 1.3.1

Disasters and epidemics

Natural disasters happen all the time in all parts of the world and can have a devastating effect on people and their property. They cause a lot of deaths, injuries and sickness in the community. They also cause people to move away from their destroyed homes and towns.

Different types of natural disasters affect communities differently. While some, such as earthquakes, will cause a lot of deaths and injuries and cause many people to move, others, such as floods or droughts, will generally cause fewer deaths and injuries but will affect other issues such as the availability of food and local crops.

In order to understand how infections and epidemics occur and develop after natural disasters, we need to understand the link between what such disasters do and what kinds of epidemics are more easily able to develop in such conditions. We will begin by looking at the effects of natural disasters on communities.

Participate

Name some of the kinds of natural disasters that you know about and say what effects they can have on people and communities.

Disaster	Effects
Earthquakes	
Floods	

As we said earlier, the effects of the disasters listed above will create the conditions for epidemics to spread. Many epidemics, such as diarrhoeas and respiratory infections, are more likely to occur after natural disasters, but others, such as malaria, can also occur.

To understand how this happens, we need to remember what helps spread epidemics.

Group work

In small groups, remember what helps spread epidemics. Discuss and come up with a sentence that describes the link between natural disasters, their effects and epidemics.

Follow the example below:

Earthquakes cause people to leave their homes and live in tents and temporary shelters in crowded conditions. This helps spread epidemics of respiratory infections.

Each group will work on one of the following kinds of disasters:

- Earthquakes
- Floods
- Landslides
- Storms
- Tsunamis
- Refugee crises
- Droughts and famine

Write all the sentences the groups come up with on the flip chart or board and discuss them.

It is much harder to deal with epidemics after a natural disaster than it is in other situations. This is because disasters affect the ability of clinics and hospitals to receive and treat patients and, most often, the situation changes for the worse after such an emergency.

Earlier, we talked about people who are vulnerable to epidemics. Now, from the table we have created above, we can see that even more people

Group work

In small groups, discuss why vulnerability is increased in the community and at the individual level after a natural disaster, and in what way.

Each group will work on one of the following kinds of emergencies:

- Earthquakes
- Floods
- Landslides
- Storms
- Tsunamis
- Refugee crises
- Droughts and famine

can become vulnerable after a natural disaster. This is because living conditions, shelter, water supply and sanitation, and the movement of people are all made worse by a natural disaster.

Part 1.3.2

Dead bodies and epidemics[1]

After most natural disasters, there is a strong fear that dead bodies will cause epidemics. This belief is wrongly promoted by the media, as well as by some medical and disaster professionals.

Dead bodies do not cause epidemics after natural disasters!

The pressure brought on by these fears causes the authorities to use unnecessary measures to dispose of the dead, such as rapid mass burials and the spraying of "disinfectants". These actions can lead to mental distress and legal problems for the relatives of those who may have died as a result of the disease.

It is very important to know that the surviving population is much more likely to spread disaster.

Infections and dead bodies

People who die as a result of natural disasters are normally killed by injury, drowning or fire, not by disease. At the time of their death, those people are not likely to have been sick with infections that cause epidemics. Most germs that cause infections will not survive in the dead bodies for more than 48 hours.

Risk to other people

The risk to the public is small because they usually do not touch dead bodies. There is a risk from drinking water from sources contaminated by the stools released by dead bodies, but this risk is also only small.

Risk to body handlers

Individuals handling human remains (bodies) have a small risk through contact with blood and stools infected with hepatitis (a liver infection), HIV, tuberculosis or diarrhoeas. Body recovery teams work in dangerous places, such as collapsed buildings, and may also be at risk of injury.

Safety precautions for body handlers

As volunteers who may be called upon to handle dead bodies after a natural disaster, it is important to know what safety precautions to take in order to avoid getting infections or helping to spread them. Observing basic hygiene will protect you from getting infections from blood and certain bodily fluids.

1. Adapted from O. Morgan, M. Tidball-Binz, D. van Alphen (eds), Management of Dead Bodies after Disasters: A Field Manual for First Responders, *Pan-American Health Organization, 2006.*

You should take the following precautions when handling dead bodies:

- Use gloves and boots, if available.
- Wash hands with soap and water after handling bodies and before eating.
- Avoid wiping your face or mouth with your hands.
- Wash and disinfect all equipment, clothes and vehicles used for transportation of bodies.
- Face masks are not necessary but should be provided if requested to avoid anxiety.

Part 1.3.3

Some other infections

It is important to know a little bit about some other infections that we have not yet mentioned. These infections do not cause the same kind of epidemics that happen so rapidly and in a certain period of time as, for example, diarrhoeas and respiratory infections. But these other infections do affect many millions of people around the world and cause a lot of sickness and death. This is why we need to know something about them.

HIV and AIDS[2]

Human immunodeficiency virus (HIV) is the germ that causes acquired immune deficiency syndrome (AIDS). It attacks the immune system (the body's defence against diseases). HIV is present in blood, breast milk, semen and vaginal fluids. When people are infected with HIV, they are known as being HIV positive (HIV+).

A person wearing an HIV+ T-shirt

AIDS is the name given to a group of serious illnesses that affect HIV-positive people. These illnesses arise when people with HIV are no longer able to resist infection because of lowered immunity.

Ways in which HIV is transmitted

- Unprotected sexual contact – Having unprotected sex is the most common way that people contract HIV.
- Blood contact – Blood transfusions or sharing needles or other sharp objects contaminated with infected blood can transmit HIV.
- Mother-to-child transmission – Mothers can pass HIV to their babies through pregnancy, childbirth or breastfeeding.
- People who have tuberculosis are much more susceptible to HIV infection.

Ways in which HIV is NOT transmitted

- Social contact, such as hugging, kissing, shaking hands, breathing the same air, coughing, sneezing, sweat, tears or contact through sport.

2. *Adapted from WHO/SAFAIDS/International Federation,* HIV prevention, treatment, care and support – A training package for community volunteers,

- Sharing such things as toilet seats, food utensils or drinking cups, clothes, public baths or swimming pools.
- Insect bites, such as from mosquitoes or bedbugs.

Methods of preventing HIV transmission

- Engaging in safer sex (using condoms every time, abstinence, being faithful to your partner, avoiding casual sex or having non-penetrative sex).
- Preventing mother-to-child transmission during pregnancy, childbirth or breastfeeding.
- Preventing or reducing the health consequences of certain behaviours (harm reduction). This includes helping people whose behaviours might put them at risk of HIV.
- Taking precautions against infection (often called "universal precautions"), which means taking steps to ensure that you have no contact with blood or bodily fluids during caring activities.

It is important to know about HIV and AIDS because people living with HIV are more likely to get sick and may die during an epidemic. These people are more vulnerable and may be in particular need of our help in epidemic situations.

Tuberculosis[3]

Tuberculosis (TB) is a disease that affects mainly the lungs, but can also affect other organs. It is, in a way, very similar to the respiratory infections we talked about before but it is transmitted and heals much more slowly.

TB is a serious disease, but curable. Small drops of saliva or spit carrying TB germs are coughed into the air by people who have TB and then breathed in by other people who may then contract TB themselves.

People who are in close contact with a person who has TB are more at risk. A person infected with TB should cover his/her mouth and nose with a handkerchief when coughing or sneezing to avoid spreading the germs. TB develops easily and becomes serious when the body is weak. For example, people who are malnourished, infected with HIV, smoke, or have an alcohol or drug abuse problem are more vulnerable to TB infection.

TB is suspected when someone has a cough for more than three weeks, a mild fever, night sweats, loss of appetite and weight, and tiredness. Anyone who has these symptoms should go to the local health facility or TB clinic for an examination.

3. *Taken from the* International Federation Household Toolkit.

TB germs die very slowly. Each person with TB has to take a combination of several drugs for no less than six months. Most TB cases can be cured with the right treatment, but it is very important to take the medication regularly and to complete the full course of treatment. However, some kinds of TB germs are resistant to the medications and are much harder or sometimes impossible to cure.

People with HIV are at greater risk of contracting TB. TB is particularly dangerous for HIV-positive people.

Malnutrition

Malnutrition is not an infection. It is a condition that occurs when people, especially children, do not have enough food for their needs. Children who suffer malnutrition become weak and are unable to resist infections. This makes them more likely to get sick and die in the event of an epidemic.

A child with kwashiorkor

A child with marasmus

Malnourished children are very obvious to spot. They are usually thin, tired, lacking in energy (marasmus) and sometimes have swollen bellies caused by fluids in their abdomens (kwashiorkor).

Malnourished children should be treated with care. It is important to refer them to health centres or therapeutic feeding centres, where available, because when malnutrition is severe it is important to give special food to children under medical supervision. —

Module 2

Principles of epidemic control

Session 2.1

Understanding an epidemic

By the end of this session, you will:

- **Know the major aspects of an epidemic and their importance.**
- **Know how to ask the right questions to investigate and assess an epidemic.**

Part 2.1.1

Asking questions about an epidemic – the assessment

To be able to manage an epidemic and help the affected people and communities, we must first understand what is going on in that particular epidemic. There are a number of simple things we need to know in order to respond appropriately to the epidemic.

In order to understand the epidemic, we will need to ask some big questions: What? Who? Where? When?

In the box below is a list of possible questions that could be asked during an epidemic assessment. It is not exhaustive. Can you think of other questions to add to it? Discuss these questions with your colleagues and facilitator.

What?

- What disease is causing the epidemic?
- What size is the epidemic?
- What way is the epidemic spreading?
- What preventive and management measures exist for this kind of epidemic?
- What are the ways to reduce the spread of the disease?

Who?

- Who is being affected by the epidemic and how many people are sick or dead?
- Who in the community is most vulnerable to the epidemic?
- Who is responding to the epidemic?
- Who can we work with?

Where?

- Where is the epidemic happening?
- Where are other places under threat?
- Where are our resources?
- Where are the best places to work from?

When?

- When did the epidemic start?
- When was the epidemic confirmed?
- When can we start working on the ground?

Answering questions like those in the box on previous page is one of the most important things we can and need to do when an epidemic occurs in our communities.

Asking these questions and reporting the answers is called an **epidemic assessment**. It is a very important step in the response to an epidemic. We will talk more about this when discussing the epidemic response cycle in the next session.

An epidemic assessment

is the gathering of information on the nature, extent and cause of an epidemic. This includes asking questions, collecting and analysing information, and using and reporting the information to others in order to respond to the epidemic properly. It answers the questions: What? Who? Where? When?

Part 2.1.2

How do we find the answers?

The questions in the above list are asked and answered at several levels. They will be asked and answered at the national level, in the Ministry of Health and in the headquarters of your National Society; they will also be asked and answered in your local Red Cross or Red Crescent branch. You will be asking and answering them in your community too. Together, the answers will help everyone to understand the epidemic best.

The answers to the questions are obtained from different sources, but mainly from members of the affected community. People in the community know about their environment, their lives and their situation probably better than anyone else. Community leaders, health workers and families are some of the best sources of the information you will need.

For an assessment to be most effective, you need to be in the affected community and ask questions and get the answers from the members of that community. Use the communication skills you have already learned in order to get accurate answers that will help you and others to respond to the epidemic properly.

Volunteers talking to elders in the community

A volunteer talking to a health professional

Participate

Your facilitator has prepared a scenario involving an epidemic. Think of yourself as part of an assessment team for the epidemic. Ask your facilitator the questions we mentioned earlier as if you are doing the assessment and tell him or her to whom you would be addressing that question.

When you have finished asking the questions, on the basis of the answers think of what the epidemic could be and what would be the next steps for dealing with it. Discuss these with your facilitator and colleagues.

That person can be anyone, such as: a health post worker, village leader, mother, or anyone you can talk to and think can provide answers to your questions. Discuss different options with your colleagues. You can ask the same questions to several people.

Session 2.2

Epidemic response cycle

By the end of this session, you will:

- **Understand the epidemic response cycle.**
- **Be able to use this cycle in real life.**

Part 2.2.1

Epidemic response cycle

We can use this method to understand an epidemic better in relation to time and to get an idea of how to limit the harm it might do in the community.

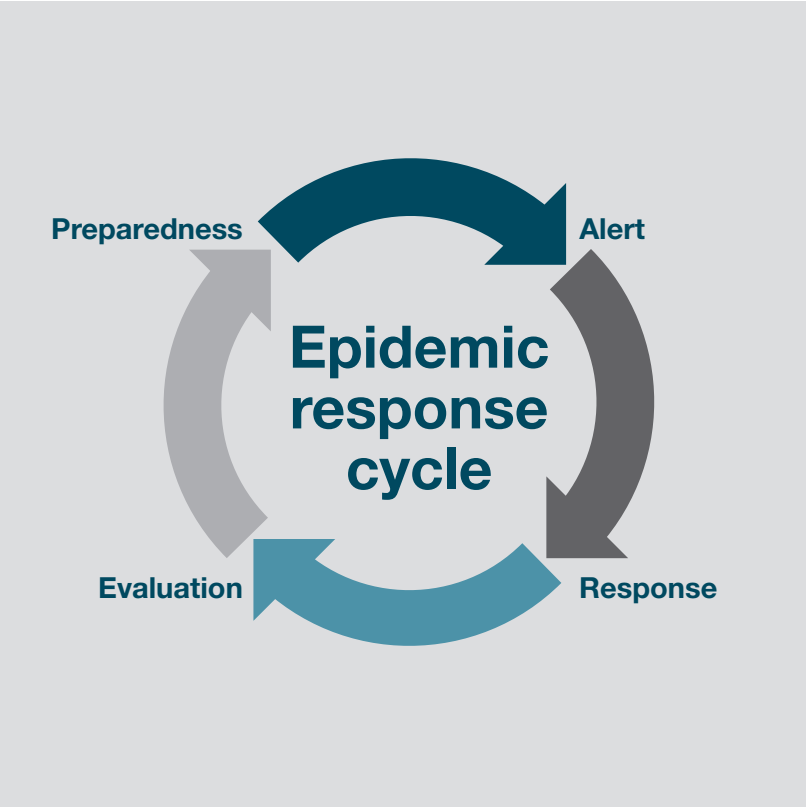
Epidemics tend to occur in cycles, not in a line (one after the other). When an epidemic occurs, the way it is handled and the actions that are taken to respond to it will affect how a future epidemic may go. In other words, if we respond well to an epidemic now, we are not only limiting the sickness and death during this one but may also be helping to limit the effects of future ones. This is not a complicated concept, but it helps us understand our role in relation to an epidemic and what we need to do at every stage.

There are four main phases of an epidemic response cycle, regardless of what the epidemic is.

These four phases are:

1. **Preparedness** – When we prepare for an epidemic in the period between epidemics.
2. **Alert** – When we detect an epidemic and start to mobilize the resources we will need to respond to it.
3. **Response** – When we respond to an epidemic.
4. **Evaluation** – When we evaluate our response to the epidemic after it is over.

This cycle is demonstrated in the following diagram:



At each phase of the cycle, there are certain things we can do to reduce the harmful effects of an epidemic on the people in our communities. We will talk in more detail about some of these actions throughout this training. For now, we will list only what needs to be done at each stage.

Preparedness
This takes place in the period between epidemics. During this period, we have time and are able to learn, train and prepare our equipment/volunteers for a possible epidemic. We also have to work on preventing epidemics. Prevention is done through work in the community to promote good habits and the building of the necessary infrastructure.

Alert
At this stage, we do not know if an epidemic has started, but some cases of the disease have appeared in the community (more than usual), making it a strong possibility that there may be an epidemic soon. We mobilize volunteers, refresh their knowledge and get ready to work if an epidemic is confirmed. One important step in the alert phase is to start the epidemic assessment.

Response
When an epidemic is confirmed by the Ministry of Health or the district health authorities, we start our response. We have already

discussed some ways that volunteers can help during an epidemic, including the importance of health promotion. We will continue to discuss these and more throughout the rest of this manual.

Evaluation
After the epidemic is over, it is very important to look at what was done during the epidemic (our actions) and think about what can be done better next time (in future epidemics). This is called an evaluation. Without a proper evaluation of our actions, it is more likely that we will repeat the same mistakes. After this, we can begin to prepare again for another possible epidemic.

Part 2.2.2

Where do volunteers come into the epidemic response cycle?

At each stage of the epidemic response cycle, there are several useful things volunteers can do. However, our actions are not always fixed for every epidemic. Some actions are general and apply to all epidemics, while others are more specific and only apply to certain epidemics. For now, we will try to think of the general things that volunteers can do at each phase of the epidemic response cycle.

After we make a list of our ideas in the next group activity, we will talk in more detail about each of the different stages and the required actions in Module 4. We will also talk about the more specific actions volunteers can take to help during an epidemic when we learn how to use the toolkit.

Group work

Complete some of the main actions you think should be taken in every one of the stages of the epidemic response cycle. Concentrate on those that are not specific to a certain kind of epidemic but can be done during any kind of epidemic. Some examples are given.

Preparedness	**Alert**
Train volunteers	Contact health centre ... ...
Response	**Evaluation**
Mobilize volunteers	Measure how many people were helped ... ...

Session 2.3

Understanding risk

By the end of this session, you will:

- **Understand the idea of risk.**
- **Know and be able to identify the different kinds of risks you have in your country and community that may lead to an epidemic.**

Part 2.3.1

What is risk?

By knowing what the risks are, we will be able to better prepare for an epidemic in our communities.

Epidemic risk

is the likelihood or possibility of a certain epidemic occuring in a community, depending on the vulnerability of the people, the diseases that exist in that community, and the surrounding environment.

If the risk INCREASES, there is a greater chance of having an epidemic (more likely).
If the risk DECREASES, there is a smaller chance of having an epidemic (less likely).

What affects risk?

There are several factors that affect and determine how high the risk of an epidemic is. For many diseases, the risk of an epidemic is very much related to the time of year and the season. This means that the risk increases at certain times of the year and decreases at other times. Can you think of examples of diseases that may be affected by a change in season? Tell your facilitator and colleagues.

Threats
The disease already exists in the community, there is a lack of clean drinking water, it is the rainy season and there are more mosquitoes in the air. This is an example of the kinds of threats that will increase the risk of a malaria epidemic. With your colleagues, try to think of more examples of threats that can increase the risk of other kinds of epidemic.

Vulnerability
There are many people living in crowded tents instead of proper shelters. This will increase their vulnerability to getting infections. For example, there is a greater chance in this case of a respiratory infection epidemic in this community. Again, try to think of more examples of vulnerabilities that can increase the risk of an epidemic.

Why is it important to know about risk?

It is important to know about risk because if we are able to identify things that can increase risk in our communities, we will be able to prepare better for and maybe prevent epidemics. Preventing epidemics is always better than having to respond to them.

We need to understand the risk for each group of diseases that we talked about earlier. We will think about that now when we talk about risk in our country and in our local community.

Part 2.3.2

Risk in your country and local community

Now that you are able to identify some of the threats and vulnerabilities that can increase the risk of an epidemic in your community, it is time to learn why it is important to know what diseases usually cause epidemics in your country.

Diseases exist and cause epidemics in certain geographical areas. Knowing whether your country is in one of those geographical areas will help you to know what epidemics are most likely to occur near you. This will help your local branch to prepare for epidemics of those diseases. For example, malaria exists mainly in tropical climates. If you are in a tropical country (in Africa, for example), you must be prepared for a malaria epidemic.

Look at the two maps provided. They tell us which countries are affected by yellow fever and are therefore more likely to have an epidemic of yellow fever. Looking at those maps will help you to determine if your country is at risk. Talk to your National Society or local branch about finding more maps that can be used to help assess the epidemic risk in your community.

Looking at the maps of yellow fever, can you tell if your country is at risk of a yellow fever epidemic?

Risk in your local community

It is not enough for you to know only if your country is at risk of an epidemic of a particular disease as this does not always mean that your local community is at risk. You have to know what the risk to your local community is, too.

Unfortunately, detailed maps of all areas in a country showing the risks of specific diseases are not always available or easy to get hold of. But there are other ways of finding out the risk of different diseases and epidemics in your local community.

Some of those ways are:

- Drawing on your own knowledge of the community.
- Gaining knowledge from other people in the community who know best about its threats, vulnerabilities and situation, such as mothers, farmers, fishermen, etc. They are always a good first source of information.
- Talking to community and religious leaders, who are easy to approach and can provide valuable information.
- Asking people who work in the local health centre, because doctors and nurses know a lot about what diseases are likely to occur in your area.

We will try to get to know a little more about the risk in our local communities in this coming exercise.

Group work

Each group will be assigned one of the disease groups (diarrhoeas, vaccine-preventable diseases, vector-transmitted diseases, respiratory infections or highly contagious diseases).

In your group, try to identify issues in your community that may increase the risk of an epidemic of each of the disease groups. Fill in the table with those that are threats and those that are vulnerabilities.

Risk factors of (choose an epidemic)	
Threats	**Vulnerabilities**

Now we know how to assess risk. Remember to use the knowledge you have gained from your community to be able to prepare well for epidemics.

Part 2.3.3

Seasons and epidemics[4]

Epidemics do not occur spontaneously at any time of year with no reason. In fact, they usually occur at specific times because of certain seasons,

4. *Taken from* Community-based First Aid in Action, *Module 3, Topic 4.*

conditions or activities. Many epidemics occur repeatedly in the same season or at the same time of year, as they have done in the past. An example is malaria, which occurs in the rainy season.

If we understand the risks and the diseases in our communities and their relation to the seasons, we can better prepare for and try to prevent and control epidemics. To do this, we need to understand the relation between seasons and different activities in the community and the relation between seasons and epidemics.

A **seasonal chart** can show the potentially dangerous times of year when epidemic risks are at their highest. We can use them to record information on the times of year and the epidemics that may occur during those times.

Below is an example of a seasonal chart:

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Floods												
Rainy season												
Diarrhoea												
Malaria												
Festival												
Harvest												

Can you think of other events to put in the left-hand column? Tell your facilitator or colleagues.

Participate

Your facilitator will draw the seasonal chart on the board. Suggest other events to include and fill in the times or months that are related to each event.

As you can see, we do not have all the answers or information we need to complete the chart. How do we get this information? Give suggestions on information sources to your facilitator.

Go back to Part 2.1.2 and remind yourself where to get answers from. Think of whom you need to ask for information about every subject in the chart and share your ideas with your facilitator and colleagues. Once the chart is completed, hang it on the wall.

Session 2.4

Volunteers and epidemic control

By the end of this session, you will:

- **Know why volunteers are essential in epidemic control.**
- **Understand where volunteers come from and where they can be most useful.**
- **Know the role of volunteers in epidemics.**

Part 2.4.1

Why do we need volunteers?

Why do we need volunteers in the effort to control epidemics and help the affected people and communities? Are health professionals, doctors and nurses not enough to do that? Very often, there are not enough health professionals, they are overworked and they do not have enough resources to deal with all the people who are sick in their communities. This is especially true during an epidemic, when the number of people in need of care increases rapidly. Also, health professionals work mostly in clinics and hospitals and are not always available in some communities.

Red Cross and Red Crescent volunteers are an essential part of the effort to control epidemics and limit their negative effects. In many situations and countries, volunteers assist health professionals and governments in implementing epidemic control measures. They are often the most effective helpers in epidemic responses because of their ability to reach local communities.

Being a volunteer is also good for the volunteers themselves because:

- They acquire good knowledge, training and skills that will be useful in their lives.
- They have a lot of fulfilment and satisfaction in helping others.
- They become important figures in their communities.

What you have learned above will help you understand and appreciate your role as a volunteer in the management of epidemics.

Group work

Divide up into four groups. Each group will talk for a few minutes about what volunteers can do and the benefits of their work in one of four different areas:

1. Being a volunteer from the community
2. Access to the community
3. Access to the health system
4. Knowledge, training and organization

Note the main points made by each group in the table on next page.

Being a volunteer	Access to the community
•	•
•	•
•	•
Access to the health system	**Knowledge, training and organization**
•	•
•	•
•	•

Part 2.4.2

Where do volunteers come from?

You are a Red Cross or Red Crescent volunteer. You live in a local community: this can be a village or a neighbourhood of a town or a city. When you work as a volunteer to provide health services or as part of the management of an epidemic, you work in your local community.

The advantages we talked about before apply to you because you come from that community and you work in it. This means that you know it, you have relationships with people in it and you are able to communicate easily with them.

Some of the advantages of volunteers coming from the community are:

- You understand the community.
- You know the people and understand how they think.
- You know the community leaders.
- You are able to talk to people in their own language.
- You know how to convince people to help themselves.
- You know the local habits.
- You know the local restrictions.
- You are available most of the time and you want to help others.
- You can meet everyone.

Can you think of some more advantages?

Where are volunteers situated when epidemics occur?

You are part of your local community, with all the advantages that we mentioned before. But you have different qualities that are important and that others in your community may not have. You are also part of a big organization which is your National Society, you are trained and prepared to deal with epidemics, and you know what you should do and how you should do it.

When volunteers have all those additional advantages, they are not only situated in their local communities, but can also be a vital link between their communities and the health system and facilities that are also managing the epidemic.

Volunteer position in the community

Part 2.4.3

The role of volunteers in epidemics

Now that we have learned about diseases and epidemics and how they spread, we need to think what volunteers can do that can help to prevent and control them.

In Module 4, we will learn about the toolkit that accompanies this manual. The toolkit will give us more details on the different diseases dealt with in this manual and the actions we should take to help with each one. When an epidemic occurs in your community, you will not need to read this entire manual again. Instead, you can use your toolkit to find the specific disease that you are facing and learn what actions to take to help. For now, we have to build on our general understanding of how volunteers can act during epidemics.

There are many different ways that volunteers can help before, during and after an epidemic. Throughout this manual, we have talked about a lot of these ways. Can you list some actions you could take to help your community during an epidemic? Talk to your colleagues and facilitator and write your ideas on the board.

It is very important, after we have talked about our position in the community and in relation to the health authorities, to think hard about how to use this position to help prevent and control epidemics. Let's move on to Module 3, where we will learn in more detail how volunteers can help their communities during all stages of an epidemic response cycle. —

Module 3

Actions in epidemic control

Session 3.1

Before an epidemic

By the end of this session, you will:

- Know what actions to take during the phase before an epidemic.
- Know about preparedness.
- Understand plans and some planning tools.
- Get an idea of volunteer training.

Part 3.1.1

Preparedness

If we are in a region or a community where epidemics occur regularly or in a place where we are afraid of them occurring, we will need to prepare for them. The preparation takes place before the epidemic so that when it occurs, we know what to do and how to do it. Knowing what to do and how to do it will help us to reduce the negative effects of the epidemic.

Epidemic preparedness and prevention have to take place at several levels and will start from your National Society's headquarters and go all the way down to your local branch and community. It is important to know that not only should the National Society be prepared, but it should help the community to be prepared.

Several issues need to be dealt with at this stage. We need to be ready for action when the epidemic comes. To have that kind of preparedness, we need to have three things in place:

1. A plan: what to do when an epidemic occurs.
2. People: volunteers available and trained in what to do in the event of an epidemic.
3. Resources: equipment and materials needed for the management of the epidemic.

We will talk about each one of these things in the following section.

Part 3.1.2

A plan

A plan for the management of epidemics is a very important tool that is created in advance to help guide our actions in the event of an epidemic. There are several levels of planning. The whole country has a plan, which is usually developed by the Ministry of Health and which your National Society is usually a part of. Your headquarters should also have a plan of its own for epidemic control, as should your local branch, which you and your fellow volunteers and staff should help to create.

To make a plan, you will need to do the following:

Collect information on:

Risks (remember Session 2.3 on risk analysis):

- What kinds of epidemics are a threat in your country or region?
- What risk factors (threats or vulnerabilities) exist?
- What is the social and economic situation of the people in your community?

Resources

Resources are divided into three types:

- Material (equipment, supplies, medicines, etc.)
- Human (trained and skilled volunteers, trainers, staff, etc.)
- Knowledge (training materials, information, etc.)

You should know what resources you will need for your actions and then check what resources you HAVE and what resources you need to GET before a possible epidemic.

Relationships

Think about your relationships with:

- The community
- The government
- Other National Societies, the International Federation and the International Committee of the Red Cross (ICRC) in the country
- Other actors, non-governmental organizations and other organizations that help during epidemics
- International organizations in the country, such as WHO, UNICEF, etc.

Determine what actions need to be taken

You need to think, as we will describe in this module, about what actions will need to be taken:

- Before the epidemic
- During the epidemic
- After the epidemic

and include them in your plan.

After you have done that, you should share your plan with other people in your National Society, with the health authorities and with other partners so they would know what to expect from you when an epidemic occurs.[5]

5. *For more information on planning, the International Federation has a training manual,* Project Planning Process (PPP)*, it has many useful tools to help you make effective plans.*

Part 3.1.3

Resources

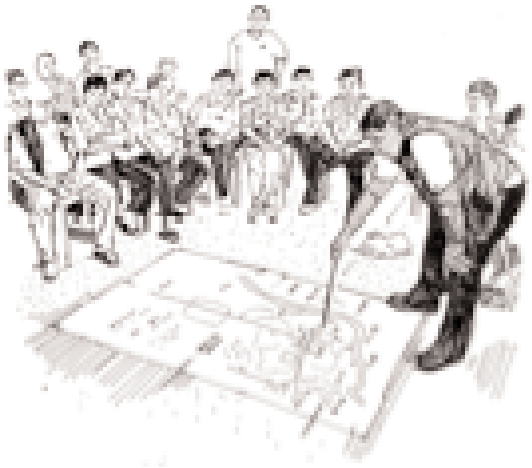
Even when you have a good plan and many trained volunteers who are available and willing to work, this will not be enough. To be able to manage an epidemic effectively, you will need equipment and materials for the training and for the actual management of the epidemic.

What you will need in the way of equipment and materials will depend on the situation, the local branch and the disease causing the epidemic. But at least some of what you need is standard. This includes:

- Training materials and manuals for the training of volunteers.
- The toolkit you will have and be trained in at the end of this training.
- Tools and information, education and communication materials to deliver messages to the community about the different diseases and behaviour to help prevent epidemics.
- Items people may need, such as shelter, tents, plastic sheeting, blankets, kitchen sets, water containers, etc.
- Some materials that will help manage the causes of epidemics, such as water treatment tablets, insect sprays, etc.
- Different materials that are specific to each kind of epidemic. These may include PPE in the case of highly contagious diseases, cholera kits in the case of cholera, etc.

Part 3.1.4

People and training



It is people – the volunteers and staff of the National Society – who will implement the plan, manage the epidemic and communicate with each other and the community.

For the Red Cross and Red Crescent, the most important people in the management of epidemics are the volunteers and staff at the local level: those who work directly with the community and who can make the biggest difference.

For you as volunteers to be able to make such a difference, you need to be ready. This happens when you:

- Are trained in how to conduct health programmes, including CBFA.
- Are trained in epidemic control, as we are doing in this training manual.
- Have facilitators at the local level.
- Understand risk and know what risks there are in the local community.
- Create a plan for the local branch.
- Communicate with each other, with others in the National Society, with the community and with the health authorities.
- Establish an alert and referral system before the epidemic.

This training is designed to prepare you as volunteers to prevent and control epidemics, but it is also to help you communicate with the community and prepare it for epidemics.

Group work

Divide up into groups. Think about the situation in your local branch and what resources you have available and what resources you will need to get in order to respond to epidemics and then fill in the table below.

	We have	We need
Human resources		
Material resources		
Knowledge		

Session 3.2

Epidemic alert

By the end of this session, you will:

- Know the actions to be taken in the alert phase.
- Understand epidemic assessment.
- Understand surveillance.

Part 3.2.1

Actions to be taken in the alert phase

The alert phase is when there is talk or a rumour of an epidemic that makes us want to know if there is one or not. This phase occurs during the time that cases of a disease start increasing and only ends when we have confirmation from the health authorities that an epidemic is actually occurring.

Participate

Before going any further, tell your facilitator what you think volunteers should do in the alert phase. Write in this box all the answers you and your colleagues give.

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_ _

The alert phase is when we notice that there are more cases of a certain disease than there are normally. More people are sick, but we still do not have confirmation from the health authorities that there is an epidemic. At this stage, we suspect that there might be an epidemic.

There are some actions that you need to take in this phase to prepare yourselves for a possible epidemic:

- Start doing an assessment in the community to the extent possible and in coordination with the health authorities.
- Keep in communication with the community and with each other, as well as with the health authorities.
- Conduct refresher courses for volunteers working in the community.
- Change from passive surveillance to active surveillance and start looking for new cases of the disease.
- Get the resources you will need for the management of the epidemic ready and in place.
- Start giving health messages to the community about the suspected epidemic.

Part 3.2.2

Epidemic assessment

In Module 2, we defined an epidemic assessment and explained how to do one and where to get the information from. To refresh your memory, look in your glossary for the definition or return to Module 2.

Part 3.2.3

Surveillance

We have defined surveillance before, but here is a reminder:

Surveillance

is a system created to detect new cases of diseases in the community and to refer them to health facilities. It includes: educating people about the diseases; actively finding sick individuals; and knowing what symptoms to look for.

We do surveillance when an epidemic is happening to detect new cases of the disease and refer and report them. But we also do it in the preparedness phase for the following reasons:

- To know the risk of diseases that can cause epidemics.
- To identify vulnerability in the community.
- To help plan.
- To identify the epidemic at an early stage – this is called early warning.
- To know how an epidemic is progressing.

To do surveillance, we need to collect information by observing our community and surroundings. Then we take this information and we use it to make decisions about how to act in order to prepare for the epidemic, according to the information we have found.

There are two kinds of surveillance that are used in two different situations:

1. In the *preparedness phase*, and while volunteers are carrying out our everyday activities (such as CBFA and water and sanitation) in the community, we will talk to people and health professionals and will be told if there are diseases occurring in an unusual way. This is called **passive surveillance** and is used to detect epidemics at an early stage and as a warning that an epidemic may be on the way.
2. *During an epidemic*, as part of our work in health promotion, referral and management of the epidemics, we will find new cases according to the case definitions they given in the toolkit and will report and refer sick people to be fully examined and treated in health facilities. This is called **active surveillance**.

Session 3.3

Actions in the epidemic phase

By the end of this session, you will:

- Know the actions to be taken in the epidemic phase.
- Understand health promotion.
- Be able to define the different roles of actors.

Part 3.3.1

Actions in the epidemic phase

The epidemic phase takes place between the time the health authorities declare an epidemic and tell us what disease is causing it and the time the epidemic is declared over.

Anything volunteers do in response to an epidemic will fall into one or more of three major areas of activity. Look at the diagram below and think what activities you and your fellow volunteers can do and into which area those activities fall.

Health promotion

is delivering health messages to the community in a simple, understandable and effective way to help prevent and control diseases and improve people's health. It is any activity that we do to inform people in the community about how to protect themselves better and how to prevent a disease from affecting them and spreading to others.

Prevention

is any activity we do to prevent a disease from spreading, such as giving out mosquito nets, providing clean water or helping with vaccination campaigns. These activities are usually done for the whole community or a specific group of people.

Case management

is what we do to help individuals who are sick. It includes, for example, providing ORS, if the person is suffering from diarrhoea or managing a fever in a child. In some cases, we will need to send (refer) the person who is sick to hospital or the nearest doctor.

Participate

Before going any further, tell your facilitator what you think volunteers should do in the epidemic phase. Write all the answers in this box.

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_ _

_ _

_ _

You only begin the actions in the epidemic phase when you have confirmation that an epidemic has started. This is usually given by the Ministry of Health and will be communicated to you by the National Society's health department. Once the confirmation is given and the disease causing the epidemic is identified, you will have to start working.

Many things can, and should, be done by volunteers during an epidemic. As we said before, volunteers are in a very good position to be helpful in the community.

However, we should always remember that we are not the only ones working to help people during an epidemic. The Ministry of Health and health facilities, with their doctors, nurses and health workers, do a huge job to treat people and make them better. Other organizations may also be working in your community and helping to manage the epidemic. It is very important that you coordinate with all of them so that everyone can work together in a way that benefits the most people.

So, now let's talk about the general actions that need to be taken in any kind of epidemics. After we understand the general actions that need to be taken for all kinds of epidemic, we can look at the specific actions to

take in response to a specific disease. These specific actions will be outlined when we learn how to use the toolkit.

General actions in response to any epidemic include:

- Once the epidemic control plan is activated, ensure you know the plan and follow it.
- Mobilize and organize volunteers.
- Conduct refresher training very rapidly, if it has not already been done in the alert phase.
- Start using the toolkit accompanying to this training manual. Assemble your toolkit for the epidemic in question and start using it.
- Get the resources that were prepared in the alert phase and start using them.
- Initiate active surveillance and start detecting cases in the community and referring them to health centres.
- Understand and follow the referral system and the process of how you send people to health facilities.
- Follow up cases by making house visits and filling in registration forms.
- Carry out health promotion activities widely in the affected and at-risk communities.
- Start widespread prevention activities according to the disease.
- Keep in communication with local health workers, community health workers and midwives.
- Participate in prevention activities and response interventions by the health authorities and other partners (mass vaccination campaigns, improving water and sanitation infrastructure, health promotion, etc.).
- Provide psycho-social support to volunteers and staff.
- In some epidemics and as instructed by health professionals, trace and find contacts of sick people who might be carrying the disease or get sick themselves.

Part 3.3.2

Health promotion

Health promotion is one of the essential things that you can do in your health interventions in CBFA and during epidemics.

We have defined health promotion before, but here is a reminder:

Health promotion

is delivering health messages to the community in a simple, understandable and effective way to help prevent and control diseases and improve people's health.

Characteristics of health messages

The health messages you deliver to the community should follow some basic guidelines in order to be effective. They need to be:

- Simple – so people can easily understand them.
- Specific and provide accurate information/descriptions – so that people know what actions they should take (they should guide the community in what to do, rather than giving lots of information with no actions to take).
- Short – so that they can be repeated frequently and easily.
- Possible – so that people can actually do what is in the message.
- Repeated frequently and in several different ways – so that people will remember them.
- Interesting – so that people will listen and not get bored.
- Suitable for people's habits and culture – so that they can be effective.
- Delivered by people the community trusts.

Face-to-face communication

Can you think of more things that will help to make health messages and promotion more effective? Tell your facilitator and colleagues.

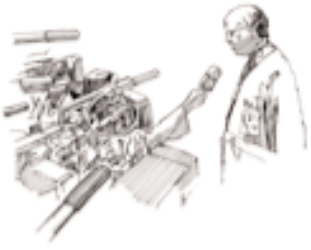
How do we deliver health messages?

There are many ways to deliver health messages to the community, some of those ways include:

- Face to face (talking directly to people)
- In meetings (village square, etc.)
- In religious places (mosque, church, temple)
- In schools for students
- Through mass media (radio, television, newspapers)
- Through known people (celebrities, etc.)
- Posters
- Flyers, handouts
- In universities
- Through songs, poems, etc.
- Street advertisements
- Concerts

A volunteer promoting health in a school

Can you think of any other ways to deliver health messages?



Talking to the media

Group work and role-play

Divide up into five groups. Each group will take one of the disease categories we talked about before and decide what messages to give to the community and how to deliver them. Each group will have to produce a suitable small project with health messages (poster, song, poem, etc.).

Volunteers and health promotion

All of the advantages we talked about earlier of volunteers working in their communities apply in particular when it comes to health promotion. You are close to the community and able to adapt health messages and deliver them in a way that will suit your community best.

In the toolkit that comes with this manual, you will find community message tools that are made to help you deliver the right messages to the community. But it is your duty to adapt them to suit the community and be accepted.

Part 3.3.3

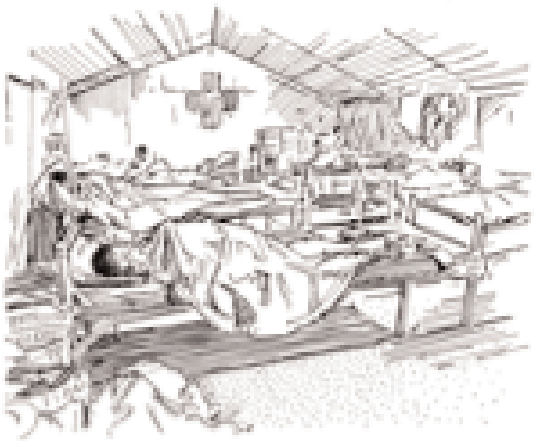
Referral

People sometimes get really sick in epidemics, and volunteers cannot provide all the care they need. Those people will need professional medical care by nurses and doctors. What you can do in such cases is to find people who are sick and help them to reach medical professionals and health facilities.

Finding sick people will happen while you are doing active surveillance. To refer them to health facilities, you need to be able to know how sick they are and whether they need referral. You can do this by using the toolkit and the descriptions you have for each disease.

You also need to know all the health facilities near you, such as hospitals, clinics, health centres, cholera treatment facilities, etc. and how to reach them. You might be needed to actually take the patient to the medical facility and you should be able to tell people where they are.

Part 3.3.4



Different roles and coordination

It is important for volunteers to organize themselves in such a manner that you can help the most people in their communities, while being effective when delivering your messages.

How do we coordinate?

- Talk to your local branch and health authorities – know what they are doing to organize themselves and how they plan to help the community.
- Make a plan – decide who will cover what and where.
- Communicate with other volunteers – meet at least once a week to update each other on what has been done to help the community and what needs to be done next.
- Talk to your facilitator and discuss more ways that you can work together.

Session 3.4

After an epidemic

By the end of this session, you will:

- Know the actions to be taken after an epidemic.
- Understand evaluation.

Part 3.4.1

Actions after an epidemic

Only your health authorities can tell you when an epidemic is over. It is very important to continue working and helping others (using the lessons you learned here, through your facilitator and from your toolkit) until you are told by the health authorities that it is safe and that the epidemic has ended.

Even when an epidemic is declared over by the health authorities, the work is not completed. There are many things you can do to help after an epidemic.

Some of these things include:

- Health promotion: continuing to deliver health messages in your community so that people will be able to protect themselves from future epidemics.
- Following up people in your community: making sure there are no new sick people and telling others how to continue to keep safe.
- Evaluating your actions during the epidemic.
- Reviewing what you did and the lessons learned: tell others what you learned or write it down so you remember. Then share your conclusions and recommendations.
- Planning for the next time: speak with the health authorities and ask them what could be done differently to make your response quicker and better if an epidemic of this kind were to occur again.

Part 3.4.2

Evaluation

After an epidemic is declared over, it is very useful to take the time to evaluate your actions during the epidemic. Very often, we do things very quickly during an epidemic because they need to be done urgently. We sometimes forget to take the time to think about what else we could be doing or how we could make our actions better. By doing this exercise, you can take the time to look at everything you did and use this information to learn what can be done better next time.

Start by making a list of all the things you did to help before, during and after the epidemic. Then, look at all the actions you have taken and evaluate them by asking yourself:

- What did I do well?
- What could I do better next time?
- Did I miss anything?

Practise

Imagine your community has just had an epidemic. Use the space below to practise your evaluation and answer the following questions:

What did I do to help before the epidemic?

What did I do to help during the epidemic?

What will I do now that the epidemic is over?

What could I have done better?

Review lessons learned and make recommendations

Because epidemics are unpredictable and we cannot prevent all of them all of the time, it is essential that after an epidemic ends, we begin preparing ourselves for another. To do this, you can review what you have learned from the epidemic that just ended and use this information to help you make a plan to deal with future epidemics.

Planning for the next time

Now that you have taken the time to write about, evaluate and review the actions you have taken before, during and after an epidemic, it is time to use this knowledge to prevent and prepare for another epidemic.

You can prepare for future epidemics in the following ways:

- Update your plan of action for epidemics.
- Mark this epidemic on your seasonal chart.
- Continue to promote health in your community and teach others how to protect themselves so that they do not get sick.
- Practise and review the information in the manual and toolkit.
- Adjust and change your training according to the lessons learned. —

Module 4

Using the epidemic control toolkit

Session 4.1

Introduction to the toolkit

By the end of this session, you will:

- Understand the different components of the epidemic control toolkit and how to use them.
- Know when to use the toolkit.

Part 4.1.1

What is the epidemic control toolkit?

In the past three modules, we have learned about epidemics, the diseases that cause them and the main principles of controlling epidemics. Our knowledge at this point is still related to general categories of diseases that cause epidemics.

However, when we work in the community in an epidemic situation, we will have to be more specific. This means that we will need to know more specific information about the disease that we are about to deal with, including: how it is transmitted; how to prevent and manage it; and what specific information we need to know about this disease.

We have also learned general prevention and control measures relating to the different categories of diseases. But again, when we are dealing with an epidemic of a specific disease, we will need to know what specific actions to take. We will also need to have specific messages about that disease ready to deliver to community members so that they can protect themselves and reduce the negative effects of the epidemic on their lives and health.

This is why you use the toolkit. This toolkit is made to guide your actions in response to epidemics. It is designed to be practical and action-oriented, easy to follow and simple. When an epidemic strikes, you will not have a lot of time to remember everything you learned in this training. You will have to use and rely on the toolkit to help you remember and to tell you what to do so that you can act quickly and help others in our community.

The toolkit consists of three major components:

1. **Disease tools:** describe the diseases that can cause epidemics.
2. **Action tools:** describe actions that need to be taken in epidemics.
3. **Community message tools:** provide important messages to tell your community. You will use them in your health promotion activities to deliver messages to the community about what they should and should not do to protect themselves.

Part 4.1.2

When do we use the toolkit?

We will use the toolkit now in the training in order to learn about it and how it is used. But in the event of an epidemic, when do we start using the toolkit?

Because the toolkit is made up of on disease tools, we will need to know what disease is causing the problem, and whether the problem is actually an epidemic.

To know that, we will need to rely on the health authorities. They are the ones that can confirm what disease is causing the epidemic by using health professionals and laboratories. It is also the health authorities who can say that the number of cases affected by the disease is actually large enough to consider it an epidemic.

So, we start using the kit when we are informed by the health authorities that there is an epidemic and we are told what disease is causing it. It is important not to rely on rumours, news, talk or anything else to initiate our action. The Ministry of Health and the health authorities are the only ones who can confirm an epidemic.

Once the epidemic is confirmed, we will work according to the plan that we have prepared. We can do some or all of the following:

- Call on volunteers trained in epidemic control.
- Start rapid training of volunteers already trained to refresh their knowledge or start training new volunteers, if needed.
- Gather needed supplies.
- Get the toolkit and start assembling it to fit the current disease causing the epidemic (we will learn how to do this next).
- Divide up volunteers into teams and assign them to villages or communities.
- Start working!

Session 4.2

Disease tools

By the end of this session, you will:

- Know the disease tools.
- Know how to use the disease tools and assessment questions.

Part 4.2.1

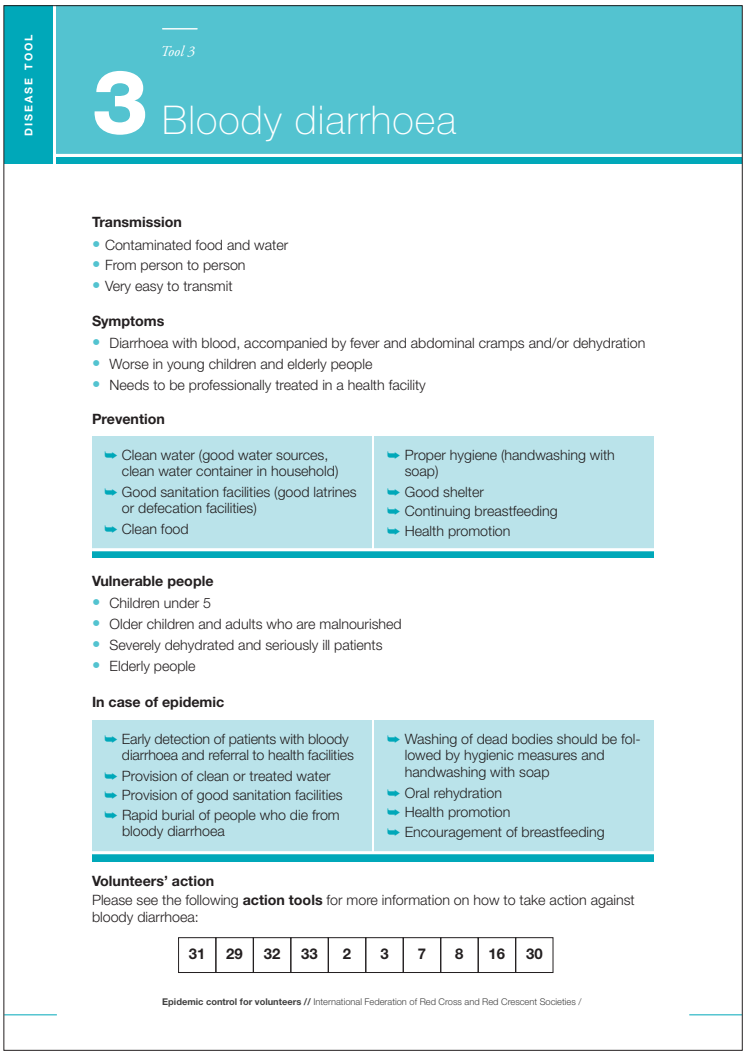
What are the disease tools?

The disease tools give basic information on diseases that cause epidemics.

Each disease tool tells us about a different disease that can cause an epidemic. Each sheet has the name of the disease, how it is transmitted and a few points about prevention and control of an epidemic. On the back of each sheet are some important questions we will need to ask when we are doing an assessment of an epidemic caused by this disease.

Each sheet also has a sequence of numbers on the front. This is to tell us what action tools to use when dealing with an epidemic of this disease. When we use this sequence, as described above, we will be able to pick the action tools that are suitable for a specific kind of epidemic. By putting all this information together, we will have a little working guide to follow for the specific epidemic we are dealing with.

An example of a disease tool



DISEASE TOOL

Tool 3

3 Bloody diarrhoea

Transmission

- Contaminated food and water
- From person to person
- Very easy to transmit

Symptoms

- Diarrhoea with blood, accompanied by fever and abdominal cramps and/or dehydration
- Worse in young children and elderly people
- Needs to be professionally treated in a health facility

Prevention

- ➥ Clean water (good water sources, clean water container in household)
- ➥ Good sanitation facilities (good latrines or defecation facilities)
- ➥ Clean food
- ➥ Proper hygiene (handwashing with soap)
- ➥ Good shelter
- ➥ Continuing breastfeeding
- ➥ Health promotion

Vulnerable people

- Children under 5
- Older children and adults who are malnourished
- Severely dehydrated and seriously ill patients
- Elderly people

In case of epidemic

- ➥ Early detection of patients with bloody diarrhoea and referral to health facilities
- ➥ Provision of clean or treated water
- ➥ Provision of good sanitation facilities
- ➥ Rapid burial of people who die from bloody diarrhoea
- ➥ Washing of dead bodies should be followed by hygienic measures and handwashing with soap
- ➥ Oral rehydration
- ➥ Health promotion
- ➥ Encouragement of breastfeeding

Volunteers' action

Please see the following **action tools** for more information on how to take action against bloody diarrhoea:

31	29	32	33	2	3	7	8	16	30

Epidemic control for volunteers // International Federation of Red Cross and Red Crescent Societies /

Part 4.2.2

List of disease tools

1. Acute watery diarrhoea
2. Cholera
3. Bloody diarrhoea
4. Polio
5. Yellow fever
6. Meningitis
7. Measles
8. Malaria
9. Dengue fever
10. Respiratory infections
11. Ebola
12. Marburg
13. Rift Valley fever
14. Avian influenza
15. Pandemic influenza
16. Hepatitis A
17. Hand, foot and mouth disease (HFMD)

Session 4.3

Action tools

By the end of this session, you will:

- Know the action tools.
- Know how to use the action tools.

Part 4.3.1

What are the action tools?

The action tools describe actions that need to be taken when dealing with epidemics.

Each action tool tells us about one specific action that needs to be taken to help control an epidemic of a certain disease. Some of these actions are specific to one kind of disease, while others will need to be done in several or all kinds of epidemics. This is one of the main reasons they have been produced on separate sheets, so that we can use the action tools for whatever disease we are dealing with. The action tools have numbers on them so we can find them easily.

In order to determine what actions need to be taken for a specific epidemic, look at the series of numbers on the front of the disease tools.

An example of an action tool

ACTION TOOL

Tool 2

2 Preparing oral rehydration solution

OVERVIEW

Oral rehydration solution (ORS) is the first way to treat people suffering from diarrhoea and dehydration.

ORS can be prepared either from packets of ORS or at home from water, sugar and salt.

What you need to KNOW

- ORS comes in little packets in the form of a powder, which needs to be diluted before use.
- ORS packets can be found at your local National Society branch, at a health centre or in the cholera kit (see Action Tool 6).
- Follow the instructions on the packet to find out how much water is needed to dilute the contents of each packet.
- Always use clean water to dilute ORS (see Action Tool 8).
- If the ORS is not completely used up by the end of the day, get rid of it and prepare a new batch in the morning. Do not keep for more than 24 hours.

Preparing and administering ORS

1. Wash hands with soap and clean water.
2. Pour all the powder from 1 packet of ORS into a clean container that will fit at least 1 litre of liquid.
3. Pour 1 litre (or amount indicated in the instructions) of the cleanest water available into the container and mix it with the powder.
4. Give frequent sips from a cup or a spoon (especially for young children) until the patient is no longer thirsty.
5. If the patient vomits, tell the caregiver and wait 10 minutes before giving more.
6. You can add ½ cup of orange juice or a mashed banana to the solution to make it taste better.

Use community message(s): 1

Part 4.3.2

List of action tools

1. Assessment of dehydration
2. Preparing oral rehydration solution (ORS)
3. Giving oral rehydration solution (ORS)
4. Managing fever
5. Preparing disinfectants
6. Cholera kit
7. Breastfeeding
8. Clean water
9. Sanitation
10. Building latrines
11. Hygiene promotion
12. Handwashing with soap
13. Handwashing in epidemics
14. Routine vaccinations
15. Mass vaccination campaigns and social mobilization
16. Clean food
17. Vitamin A supplementation
18. Vector control
19. Mosquito nets
20. Volunteer protection
21. Using personal protection equipment (PPE)
22. Handling dead bodies
23. Isolating sick people
24. Building an incinerator
25. Waste disposal and clean-up campaigns
26. Social distancing
27. Coughing etiquette
28. Shelter and ventilation
29. Health promotion
30. Surveillance and reporting
31. Community mapping
32. Communicating with the community
33. Referral to health facilities
34. Providing psychosocial support
35. Handling and slaughtering animals

List of diseases with the corresponding actions

	1	2	3	4	5	6
Acute watery diarrhoea	Assessment of dehydration	Preparing ORS	Giving ORS	Breastfeeding	Clean water	Sanitati
Bloody diarrhoea	Referral	Preparing ORS	Giving ORS	Breastfeeding	Clean water	Clean fo
Cholera	Assessment of dehydration	Preparing ORS	Giving ORS	Breastfeeding	Clean water	Sanitati
Polio	Clean water	Sanitation	Managing fever	Routine vaccination	Mass vaccination campaigns	Referral to health
Yellow fever	Preparing ORS	Giving ORS	Managing fever	Vector control	Mosquito nets	Routine vaccina
Meningitis	Referral	Routine vaccination	Mass vaccination campaigns	Surveillance and reporting		
Measles	Cough etiquette	Managing fever	Ventilation	Preparing ORS	Giving ORS	Breastfe
Malaria	Surveillance and reporting	Mosquito nets	Vector control	Referral	Health promotion	
Dengue fever	Surveillance and reporting	Mosquito nets	Vector control	Referral	Health promotion	
Respiratory infections	Ventilation	Surveillance and reporting	Referral	Fever control	Coughing etiquette	Preparin
Ebola	Isolating patients	Surveillance and reporting	Volunteer protection	Using PPE	Dead bodies	Preparin disinfec
Marburg	Isolating patients	Surveillance and reporting	Volunteers' protection	Using PPE	Dead bodies	Preparin disinfec
Rift Valley fever	Handling and slaughtering animals	Vector control	Mosquito nets	Health promotion	Volunteers' protection	Using P
Avian influenza	Handling and slaughtering animals	Referral	Volunteer protection	Using PPE	Health promotion	Coughin etiquett
Pandemic influenza	Surveillance and reporting	Preparing ORS	Giving ORS	Social distancing	Coughing etiquette	Social mobiliza
Hepatitis A	Community mapping	Health promotion	Communicating with the community	Referral to health facilities	Mass vaccination and campaigns social mobilisation	Managin
Hand, foot and mouth disease (HFMD)	Community mapping	Health promotion	Communicating with the community	Surveillance and reporting	Referral to health facilities	Waste c and clea campaig

	7	8	9	10	11	12	13
on	Hygiene promotion	Handwashing with soap	Clean food	Preparing disinfectant	Cholera kit	Surveillance and reporting	Referral to health facilities
ood	Surveillance and reporting						
on	Hygiene promotion	Handwashing with soap	Clean food	Preparing disinfectant	Cholera kit	Surveillance and reporting	Referral to health facilities
n facilities	Health promotion						
tion	Mass vaccination campaigns	Referral to health facilities	Surveillance and reporting				
	Isolating sick people						
eeding		Surveillance and reporting	Referral to health facilities	Routine vaccination	Mass vaccination campaigns	Vitamin A supplementation	
ng ORS	Giving ORS						
ng tant	Building an incinerator	Waste disposal					
ng tant	Building an incinerator	Waste disposal					
PE	Referral to health facilities	Building an incinerator	Waste disposal	Handling dead bodies			
ng e	Isolating patients						
tion	Health promotion	Isolating sick people	Referral to health facilities	Volunteer protection	Using PPE		
ng fever	Clean water	Sanitation	Building latrines	Hygiene promotion	Handwashing with soap	Surveillance and reporting	
disposal an-up gns	Clean water	Sanitation	Hygiene promotion				

Session 4.4

Community message tools

By the end of this session, you will:

- Know the community message tools.
- Know how to use the community message tools for health promotion in epidemics.

Part 4.4.1

What are the community message tools?

The community message tools have drawings and a message on each of them.

Each one contains a different message that relates to a specific disease. You will need to deliver these messages to people in your community so that they are more aware of the epidemic they are dealing with. These sheets will help you to remember what is the most important thing to tell people in your community about the epidemic. For example, use them in your health promotion activities to tell others what they should and should not do to protect themselves from the disease.

The community message tools have numbers on them so that you can find them easily. Look again at the action tools. You will find numbers on the front that will tell you which community message tools to use.

An example of a community message tool

It is important to remember that community messages are always changing and sometimes different communities need different messages to deal with epidemics. The printed sheets in the toolkit are only examples of the various types of messages that are important to share with your community. Look and use the many images on the *Drawing for Health DVD* to make more messages for your community. Be creative and teach others!

Part 4.4.2

List of community message tools

1. Preparing and giving oral rehydration solution (ORS)
2. Managing fever
3. Breastfeeding
4. Storing water properly
5. Protected well and pump for water
6. Using latrines
7. Proper sanitation
8. Handwashing with soap
9. When to wash hands
10. Handwashing in epidemics
11. Cleaning up the community
12. Keeping food safe for eating
13. Proper bathing
14. Vaccinations for children
15. Using vaccination cards
16. Attending vaccination campaigns
17. Using mosquito nets (bed nets)
18. Vitamin A supplementation
19. Putting on personal protection equipment (PPE)
20. Taking off PPE
21. Safe funerals
22. Waste disposal
23. Social distancing
24. Good ventilation
25. Health promotion
26. Finding sick people
27. Handling and slaughtering animals

Session 4.5

Assembling and using the toolkit

By the end of this session, you will:

- Know how to assemble and use the toolkit for any kind of epidemic.

Part 4.5.1

How to assemble and use the toolkit

After you have been informed by the health authorities that there is an epidemic and you are told what disease is causing it, you will need to begin using your toolkit.

Step 1

Look at the **disease tools**. Find the sheet that matches the disease that your health authorities have said is causing the epidemic in your community. Read the appropriate disease tool and refresh your memory about the specific disease. Remember the following:

- What causes the disease.
- How it is transmitted.
- What symptoms it causes.
- How it is prevented and controlled.
- What volunteers can do to help.

Look at the back of the sheet to find specific questions you should ask when doing an assessment of an epidemic caused by this disease.

Step 2

Find the numbers on the front of your **disease tool** and match them to the numbers on the **action tool**. This is how you will find out what actions need to be taken in order to help deal with the epidemic your community is facing.

Read the matching action tools and use them to make a plan and to take action against the epidemic. Remember to:

- Identify who is vulnerable in your community.
- Know the source and cause of the epidemic.
- Rely on these cards for specific actions to help people during the epidemic.

Step 3

Look at the numbers on the front of the **action tools** that you chose. This time, you are looking for numbers that will match the **community message tools**.

Use these tools to help you know what to tell people in your community. The tools contain important messages that everyone in your community

will need to know in order to avoid spreading the epidemic. The tools will also tell people how to take care of themselves or others if they become sick. Remember to:

- Read the tools carefully and many times so that you understand the messages you need to tell others.
- Share the tools and messages with others in your community so that everyone has the information they need and use them to teach people the DO'S and DON'TS for each epidemic.

Glossary

Action tools
Describe actions that need to be taken in epidemics.

Active surveillance
Takes place during an epidemic. Volunteers help to find new cases and sometimes trace contacts of sick people of the disease according to the case definitions they have (in the toolkit) and report and refer sick people to be fully examined and treated in health facilities.

AIDS
Acquired immune deficiency syndrome (AIDS) is the name given to a group of serious illnesses in HIV-positive people. These illnesses arise when people living with HIV (PLHIV) are no longer able to resist infection because of lowered immunity.

Avian influenza
is a very severe kind of influenza. It affects mainly birds but can sometimes spread from birds to people. When this happens, it causes them to become sick with a very severe influenza that can kill many of the people it affects. (See also *pandemic influenza*.)

Carriers
Some people get germs but do not get sick. Although they look healthy, these people can still spread the germs they have (they are called carriers because they still carry the germs in their bodies).

Case management
is what we do to help individuals who are sick. It includes, for example, providing ORS if the person is suffering from diarrhoea, or managing a child with a fever. In some cases, we will need to send (refer) the person who is sick to hospital or the nearest doctor. (See also *Referral*.)

Cholera
is diarrhoea that causes severe symptoms and very watery stools that look like “rice water”. Anyone can get this type of diarrhoea, including adults.

Community message tools
are the bigger cards in your toolkit with big drawings on them. You will use them in your health promotion activities to deliver messages to the community about what they should and should not do to protect themselves.

Dehydration
occurs when a person, mainly a child, loses a lot of water and minerals in his or her stools through diarrhoea. Dehydration is like “drying out”. It is very dangerous and can cause death.

Dengue fever
is a disease transmitted by a vector which causes fever and sometimes bleeding of the gums and under the skin. Anyone can suffer from this disease, especially young children. People who sleep without mosquito nets and beside water surfaces where mosquitoes lay their eggs are more at risk.

Diarrhoea
is when a child (or an adult) passes three or more loose stools in a day. It can cause the child to lose so much body water and salts that he or she becomes dried out (dehydrated). This can cause death in some cases if not treated.

Disease tools
are the red sheets in your toolkit. They describe the diseases that can cause epidemics.

Disinfectants
are very strong cleaning chemicals, for example bleach, which can get rid of or kill germs so that an infection will not spread.

Dysentery
is a type of diarrhoea that causes blood to come out with the stools.

Ebola haemorrhagic fever
is a highly contagious disease transmitted by contact with the bodily fluids (blood, vomit, saliva, stools, etc.) of an infected person, as well as through the bodies of people who have died from the disease or anything that an infected person may have come in contact with, such as bed sheets, surfaces, tools, etc. It causes a very severe disease that can kill many people who get it. The symptoms include bleeding, fever, headache and different pains.

Epidemic
occurs when many people in the community have the same infection at the same time. More people become infected than in normal situations, exceeding the community's ability to cope.

Epidemic assessment
is the gathering of information on the nature, extent and cause of an epidemic. This includes asking questions, collecting and analysing information, and using and reporting the information to others in order to respond to the epidemic properly. It answers the questions: What? Who? Where? When?

Epidemic risk
is the likelihood or possibility of a certain epidemic occurring in a community, depending on the vulnerability of the people, the diseases that exist in that community and the surrounding environment.

Germ
is a very small organism we cannot see with our eyes. Germs affect people and animals and can make them sick by infecting them with diseases. They travel from one person, animal or other vector to another causing a disease to spread (which may result in an epidemic).

Health promotion
is delivering health messages to the community in a simple, understandable and effective way to help prevent and control diseases and improve people's health. It is any activity that we do to inform people in the community about how to protect themselves better and how to prevent a disease from affecting them and spreading to others.

Hepatitis A
is a liver disease that is caused by an infection that is transmitted by water and food that has been contaminated by the stools of people who have the disease. It causes the skin and whites of the eyes to become yellow and is accompanied by fever, tiredness, abdominal pain and diarrhoea. This disease can be prevented by vaccine.

Highly contagious diseases
This group of diseases is more dangerous because some of them are new and we are less prepared to deal with them. Others are very severe and spread so rapidly and strongly that we need extra efforts to control their epidemics. They include Ebola haemorrhagic fever and Marburg haemorrhagic fever.

HIV
Human immunodeficiency virus (HIV) is the germ that causes AIDS. It attacks the immune system (the body's defence against diseases). HIV is present in blood, breast milk, semen and vaginal fluids and can be transmitted through unprotected sexual contact, blood contact and mother-to-child transmission. (See also *AIDS*.)

Hygiene
protects us from getting infections from blood and certain bodily fluids. You should always wash your hands with soap and water after handling anything that could carry germs, after going to the toilet, and before and after eating. Avoid wiping your face or mouth with your hands. Wash and disinfect all equipment, clothes and vehicles used during an epidemic. Wear face masks, gloves and/or boots, if necessary and available.

Immunity
is the ability to fight off an infection. Not all people who get the germs that cause a particular disease get sick. When this happens, the person is said to be "immune" to the disease. Immunity

can be acquired either if a person has already had the disease, has carried the germs before and become immune, or has been vaccinated against the disease.

Infection
causes a disease that can be transmitted from one person to another. It is caused by different kinds of germs. It can be transmitted between people in several different ways.

Infection cycle
explains how infections occur and shows how one sick person can spread germs to other people in different ways. There are several ways for a germ to spread and infect new people: a) directly, through touching, coughing, sneezing or having sex; b) indirectly, through a vector; or c) indirectly, through contact with our environment or surroundings, such as with contaminated water, food, air, soil, etc.

Isolation
is the process of keeping those who are sick away from those who are not sick. Sometimes when people are very sick, we have to keep them away from other people until they are better so that they do not make more people sick.

Malaria
is a disease transmitted by a vector that causes a fever that goes up and down with spells of extreme heat and shivering. Anyone can suffer from this disease, especially young children. People who sleep without mosquito nets and beside water surfaces where mosquitoes lay their eggs are more at risk.

Malnutrition
is not an infection. It is a condition that occurs when people, especially children, do not have enough food for their needs. Children who suffer malnutrition become weak and are unable to resist infections. This makes them more likely to be sick or die in the event of an epidemic.

Marburg haemorrhagic fever
is a highly contagious disease transmitted by contact with the bodily fluids (blood, vomit, saliva, stools, etc.) of an infected person, as well as through the bodies of people who have died from the disease or anything that an infected person may have come in contact with such as bed sheets, surfaces, tools, etc. It causes very severe symptoms, including bleeding, fever, headache and different pains and can kill many people who get it.

Measles
is a disease that can be prevented by vaccine (an injection given at 9 months of age with vitamin A drops in the mouth). It causes a rash and fever and affects people in crowded places where

droplets from coughing and sneezing carry germs from one person to another. Children are more often affected.

Meningitis
is a disease that can be prevented by vaccine (an injection given at 2 years of age in places where the infection is a threat). It causes fever, headache and stiff neck and affects people in crowded places where droplets from coughing or sneezing carry germs from one person to another. Children are more likely to be affected.

Oral rehydration solution (ORS)
is the main way to treat people who suffer from diarrhoea and dehydration. ORS can be prepared either from packets or at home from water, sugar and salt. Follow the instructions on the packet to find out how much water you need to dilute the contents of each packet. Do not keep for more than 24 hours.

Pandemic influenza
is a very severe kind of influenza. This new disease starts by causing a severe sickness in chickens or other birds (see *Avian influenza*) and can be passed to people who come in direct contact with them. If the disease changes (mutates) so that it can pass easily between humans, it could cause a worldwide epidemic (pandemic) and kill many people. In this form, it can spread easily and there is as yet no treatment or vaccine.

Passive surveillance
is used to detect epidemics at an early stage and as a warning. In the preparedness phase, and while volunteers are working in their everyday activities, they will talk to people and health professionals and will be told if there are diseases occurring in an unusual way. This is passive surveillance: keep your eyes and ears open to information. (See active surveillance for comparison.)

Personal protection equipment
is equipment we can wear to protect us from coming in direct contact with sick people, their bodily fluids or anything that can cause us to get the infection, such as items or surfaces that may have been touched by someone who has had the disease.

Polio
is a disease that can be prevented by vaccine (drops in the mouth given at birth and then at 6, 10 and 14 weeks). It causes paralysis in children and affects children where water is contaminated with the germs through infected stools and in situations of overcrowding, such as in refugee camps, or after natural disasters.

Prevention
is any activity to prevent a disease from spreading, such as giving out mosquito nets, providing clean water or helping with vaccina-

tion campaigns. These activities are usually done for the whole community or a specific group of people.

Referral
People sometimes get really sick during epidemics, and volunteers cannot provide all the care they need. Those people will need professional medical care by nurses and doctors. What we can do for such people is find them and give them the help they need to reach medical professionals and health facilities. Telling them where to go, who to see and how to get there is all part of referral.

Respiratory infections
occur when germs affect the lungs of a person and cause an infection. These infections can also cause epidemics and may result in death for children, especially if they are very sick and not treated.

Rift Valley fever
is a disease transmitted by a vector and can cause bleeding of the gums and under the skin, in addition to a fever. It can also cause the skin to become yellow (jaundice). Anyone can suffer from these diseases, especially young children. People who sleep without mosquito nets and beside water surfaces where mosquitoes lay their eggs are more at risk.

Seasonal chart
shows the potentially dangerous times of the year when epidemic risks are highest in a particular area.

Social distancing
is staying at a distance from sick people (at least 1.5 metres) in order to prevent the spread of a disease. For example, during an influenza pandemic, we should keep our distance from those who are sick so that we do not also become sick by breathing in the germs and spreading the disease to others.

Social mobilization
is when volunteers help to get the community motivated to do something, such as making sure everyone gets vaccinated for a disease that is known to occur in their area. It is one of the most valuable things volunteers can do because they are from the community and can make a big difference in helping to educate people.

Surveillance
is a system created to detect new cases of diseases in the community and to refer them to health facilities. It includes educating people about the diseases; actively finding sick individuals; and knowing what symptoms to look for.

Tuberculosis (TB)
is an infection that affects the lungs. It is, in a way, very similar to respiratory infections but it transmits and heals much more slowly. TB is a serious disease but curable. Small droplets of saliva or spit with TB germs are coughed into the air by people who have TB and then breathed in by people who do not have TB.

Vaccine
is a medication that helps people resist an infection before it happens. Some vaccines are in the form of injections and others can be given by mouth.

Vector
is an insect or an animal that can carry germs and transmit them to people. A vector can be, for example, a mosquito, a fly, a rat, a bat, a chicken or a monkey.

Vulnerability
Germs and infectious diseases do not affect everyone the same way. Some people get sick easily when they come in contact with germs, while others do not get sick so easily. (See also *immunity*.)

Yellow fever
is a disease that can be prevented by vaccine (by injection at 9 months of age; this vaccine should only be given in certified centres). It is transmitted by mosquitoes and affects people who are bitten by infected mosquitoes in areas where the disease exists. It causes fever and pain and usually affects children.

The Fundamental Principles of the International Red Cross and Red Crescent Movement

Humanity

The International Red Cross and Red Crescent Movement, born of a desire to bring assistance without discrimination to the wounded on the battlefield, endeavours, in its international and national capacity, to prevent and alleviate human suffering wherever it may be found. Its purpose is to protect life and health and to ensure respect for the human being. It promotes mutual understanding, friendship, cooperation and lasting peace amongst all peoples.

Impartiality

It makes no discrimination as to nationality, race, religious beliefs, class or political opinions. It endeavours to relieve the suffering of individuals, being guided solely by their needs, and to give priority to the most urgent cases of distress.

Neutrality

In order to enjoy the confidence of all, the Movement may not take sides in hostilities or engage at any time in controversies of a political, racial, religious or ideological nature.

Independence

The Movement is independent. The National Societies, while auxiliaries in the humanitarian services of their governments and subject to the laws of their respective countries, must always maintain their autonomy so that they may be able at all times to act in accordance with the principles of the Movement.

Voluntary service

It is a voluntary relief movement not prompted in any manner by desire for gain.

Unity

There can be only one Red Cross or Red Crescent Society in any one country. It must be open to all. It must carry on its humanitarian work throughout its territory.

Universality

The International Red Cross and Red Crescent Movement, in which all societies have equal status and share equal responsibilities and duties in helping each other, is worldwide.

Together for humanity

The International Federation of Red Cross and Red Crescent Societies promotes the humanitarian activities of National Societies among vulnerable people.

By coordinating international disaster relief and encouraging development support it seeks to prevent and alleviate human suffering.

The International Federation, the National Societies and the International Committee of the Red Cross together constitute the International Red Cross and Red Crescent Movement.

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