

What is Pandemic Influenza?

Trainees: Community Responders and Representatives, District and Community Leaders, Volunteers and others.

What does this training cover?

This session is a basic introduction to pandemic influenza terminology and key concepts.

LEARNING OBJECTIVES: At the end of this session, trainees should be able to:

1. Define pandemic influenza and how it is different from avian, swine, and seasonal influenza.
2. Describe how pandemic influenza spreads from person to person.
3. List the major symptoms of pandemic influenza.
4. Outline basic influenza home treatment guidance.
5. Explain what we've learned from past influenza pandemics.

TRAINING METHODS: Card sorting activity, presentation, discussion, pre- and post-test

Suggested time to conduct training session: 45 minutes to 1 hour, if full pre-and post-test are included.

What needs to be locally adapted?

See the *Introduction & User Guide* for guidance on local adaptation, including more on the points below:

- You need to know the **current state of pandemic influenza in the world.**
- **The educational handout** should be adapted for local use.
- **If your participants can't read and write well or at all, or don't understand English well,** see the *Introduction & User Guide* for guidance on translating and adapting materials.

Address pandemic severity: Trainers and participants should consider how the information in this session would differ based on pandemic severity in the community. They should be as clear as possible, in advance, about where they will get guidance on decisions such as closing schools and supporting the neediest families with home health care, food, and other necessities. For more information on assessing pandemic severity, see the section on pandemic severity in the *Introduction & User Guide* as well as WHO's *Considerations for Assessing the Severity of an Influenza Pandemic*, which can be found at www.who.int/wer/2009/wer8422/en/index.html.

Supplies and preparation needed:

- **Logistics:** Trainers need to make necessary logistical arrangements for the training, including any transport, venue, accommodation, and/or food requirements.
- **Pre-Test:** You will need one copy of the pre-test form for you to fill out. (Annex 1)
- **Card sorting:** Prepare pairs of cards: one card for each title or question, and one card for each answer. (Annex 2) You will need blank cards for participants to write questions on too. For an audience without strong reading/writing skills, you may also need to use illustrations, which should be prepared in advance. Tape and wall space are needed for hanging the cards. Hang the title cards around the room before opening the session.
- **Presentation:** Prepare your presentation. (Annex 3)
- **Slides:** The boxed information in this module and in Annex 3 should be prepared in advance for presentation by projector or written on a flipchart before the session.
- **Post-Tests:** A copy of the test and one pencil/pen for each participant. They will need a surface to write on. If these supplies are not available, see alternate instructions. (Annex 4)
- **Educational handout:** A summary of the important information of this session (which has been adapted so local people can understand it well.) (Adaptation of Annex 3)

OPENING

(10-15 minutes)

- **Welcome:** Greet participants in a friendly way. (People learn better when they feel comfortable.)
- **What to expect:** Tell participants the title, objectives, and length of the entire training course; and the title and length of this session.
- **Say who you are:** Include information about your work, and why you are here.
- **Learning well together:**
 - Ask participants to **say who they are**. Ask participants to briefly mention if they have experience with **disaster preparedness**, or with **community health care**. (Community health care is when workers or volunteers provide health education or care in people's homes or other community locations.)
 - If the group is large, divide the participants in small groups and give them 5-10 minutes to introduce themselves to each other. Another quick way is to have them say who they are and how they would like to be addressed.

- Ask participants to give ideas for a list of **rules of behavior** for everyone during the training. (For example: one person talks at a time, turn off telephones, cover coughs and sneezes, etc.)
 - Ask participants to be active learners, and to ask questions.
- **Basic needs:** Tell participants where the restroom is located, when breaks will be held, and other basic information.

PRE-TEST

(10 minutes)

Optional activity, if time permits

Tell participants:

- Some of you already may be familiar with pandemic influenza, and what to expect when it arrives and people start getting sick.
- However, many people have not yet learned about this dangerous hazard—which is why we are here!
- Let's take a moment and find out what you might already know. Please raise your hand if you are sure you know the answer to each question I ask. Keep your hand up until you have been counted. If you do not know the answer, do not raise your hand.

Ask participants each question on the pre-test form (Annex 1), and fill out the form as directed. (Later you will compare this to the post-test scores.)

CARD SORTING: LEARNING ABOUT PANDEMIC INFLUENZA

(10 minutes)

1. The following titles should be posted on walls around the room, with space to post the answer cards next to or below the title.

What is a “pandemic”?

What is “avian influenza”?

What is “pandemic influenza”?

What is “swine flu”?

When we talk about the flu, what do numbers like “H5N1” or “H1N1” mean?

What is “seasonal, or regular, influenza”?

What is “post trigger”?

What is “virus”?

Symptoms of influenza

Transmission (how pandemic influenza spreads)

Treatment (home care—since hospitals will be too full)

History tells us that...

Questions about birds and pigs

What are your questions?

2. Pass out the cards with the “answers” written on them to the participants. (See Annex 2 for guidance on what you should write on the answer cards.) Ask everyone to read the titles, and do their best to post their cards under the appropriate heading. Hand out tape.

Offer blank cards to write questions on, to post under the last category

- Another option, useful if the group is large: ask participants to discuss first in small groups what they think the answers are. Then hand out the cards with the “correct” answers and have them post the cards.

If the participants don’t read well, you can lead the activity by reading each card out loud and asking the group for guidance. If this is the case, you may want to include simple, clear drawings or symbols on the cards. You will need to adjust the timing of the session, as this will take more time.

Review the outcome with the group, card by card. Ask them if they think each card is in the right place. If there are cards in the wrong place, talk with the group about where they should go.

PRESENTATION AND DISCUSSION

(15-20 minutes)

1. **Opening:** Tell the group you are going to give them more details about pandemic influenza. If your schedule is tight, ask them to save questions for the end. Later, in the next training session, the group will learn the best techniques for slowing the spread of pandemic influenza.
2. **Presentation:** Depending on your supplies, you may want to create flipcharts, a computer presentation, or use a chalkboard to write the main points in a few words that people can read while they listen to you. If you use written words and pictures while talking, participants will better understand and remember the information. See Annex 3 for the pandemic influenza presentation, and for sample flipchart pages, chalkboard notes, or computer slides.
3. **Question and answer period:** Encourage participants to ask questions and discuss what they have learned in this session.

1. **Opening:** Tell the group it is time for a test. The purpose of the test is to be sure that this training is successful in helping participants understand pandemic influenza. Since this information has the power to help communities and people who get sick, we must be sure each participant understands what we have covered.

Tell them you will hand out the test (Annex 4), and ask everyone to work alone to fill it in. The participants will have 10 minutes to complete the test. Then you will collect the tests, and go over all the answers.

If you are working with people who are not comfortable with reading and writing, you can give the test from Annex 1 by asking for a show of hands, or getting participants to vote on each answer with stones or other small objects (beads, paperclips).

After the training, you will correct the test, and follow up if needed. Tell participants that if they feel they haven't done well on the test, and would like more information, to seek help with the trainer or from other participants.

2. **Give the test, collect it (for correcting later), and go over all the answers.** Ask participants to supply answers. If someone gives an incorrect answer, ask the group for help. Give as many people as possible a chance to talk. A good atmosphere where every participant feels "safe" is very important.
3. **Session closing.** Give a short summary of what has happened and what comes next. Thank participants for coming.

Annex 1: Pre-Test

To be filled out by trainer, who reads questions aloud			
Question	Number of participants who raised hand: "YES"	Number of participants who did not raise hand: "NO"	Percentage answering YES*
Do you know the meaning of this word: (If YES, raise hand)			
Pandemic?			
Avian influenza?			
Seasonal influenza?			
Swine influenza?			
Pandemic influenza?			
Post-trigger?			
Virus?			
If you can name three symptoms of pandemic influenza, raise your hand.			
If you can name one way that pandemic influenza spreads from person to person, raise your hand.			
If you can name three ways to care for someone who is ill with influenza, raise your hand.			
If you can tell us two things that we have learned from pandemic influenza outbreaks in the past, raise your hand.			

After the session, calculate the percentage of trainees who answered correctly:

- First, divide number of YES answers by total number of participants.
- Next, multiply your answer by 100.

For example, if 10 people answer YES out of 20 total participants: 10 divided by 20 is .5. .5 times 100 =50. So, the answer is 50 percent.

Annex 2: Answer Cards for Sorting Activity

The bold cards are the title cards. The other boxes are the answer cards that need to be filled out and supplied to participants, so they can post them on the wall. You may need to use graphics for low-literate trainees or read the cards out loud to them.

Title Cards	Correct answer card(s)
What is a “pandemic”?	<i>A sickness that spreads around much of the world making many people sick.</i>
What is “avian influenza”?	<i>Scientists refer to avian influenza as a sickness that spreads from bird to bird, making some birds sick, or killing them. It can spread from bird to human too—but not yet from human to human on a large scale.</i>
What is “pandemic influenza”?	<i>A respiratory or breathing illness develops that is new to humans. This happens about three times each century, and spreads around the world.</i>
What is “swine influenza”?	<i>Normally, scientists refer to swine flu as a sickness that spreads in pigs. Now, we have a new virus spreading person-to-person that some refer to as “swine flu”. Scientists prefer the name novel (new) H1N1 influenza or swine-origin H1N1 influenza to refer to the new flu virus that is circulating in humans and has pandemic potential (and to distinguish it from seasonal H1N1 influenza).</i>

<p>When we talk about the flu, what do numbers like “H5N1” or “H1N1” mean?</p>	<p><i>Scientists identify flu viruses by exact numbers and letters. For most people, the exact code of the virus is not as important as knowing what to do when leaders say a pandemic is coming.</i></p>
<p>What is “seasonal, or regular, influenza”?</p>	<p><i>This sickness spreads from human to human, making people sick with cough, fever, sneezing, “stuffy” head, and other signs. Because the sickness is common, most people have some protection from it and get better by themselves.</i></p>
<p>What is “post trigger”?</p>	<p><i>When international leaders announce that pandemic flu is spreading easily from person to person, and is likely to spread around the entire world. This starts—or triggers—the “response phase” in pandemic influenza programs.</i></p>
<p>What is a “virus”?</p>	<p><i>This germ is much too small for people to see with their eyes. It moves between living things and causes sickness.</i></p>
<p>Symptoms of influenza</p>	<p>One or more of these appear:</p> <ul style="list-style-type: none"> <i>Fever</i> <i>Muscle and head aches</i> <i>Extreme tiredness</i> <i>Cough</i> <i>Sneezing</i> <i>Sore throat</i> <i>Runny or stuffy nose</i> <i>Nausea or vomiting (mostly in children)</i> <i>Abdominal (gut) cramps (mostly in children)</i> <i>Diarrhea (mostly in children)</i>

<p>Transmission (how pandemic influenza spreads)</p>	<p>Most commonly spread through the air by coughing, sneezing, or talking.</p> <p>By touching something with the virus on it (like a table or door knob).</p> <p>Can be spread by people who have no symptoms but are infected.</p> <p>Spreads fastest in crowded places, especially indoors.</p> <p>Enters the body through nose, mouth, and eyes.</p>
<p>Treatment (home care since hospitals will be too full)</p>	<p>Rest in bed.</p> <p>Drink plenty of fluids.</p> <p>Eat plenty of healthy foods.</p> <p>Simple treatments or medicine (like paracetamol) for fever, sore throat, and discomfort (but never give aspirin to children or teens).</p> <p>Pneumonia (infected lungs filled with liquid) is common during an outbreak, and may need to be treated with antibiotics. Healthcare providers will follow guidelines for recognizing this dangerous problem, and how to treat it. They should inform the community of danger signs so people can seek care.</p> <p>Babies should continue to breastfeed.</p>

History tells us that...

Over the last 300 years, there have been about three outbreaks per century. In 1918, tens of millions of people died.

Local outbreaks last about 6-12 weeks.

Outbreaks may happen several times in each place (waves) over 1-2 years.

Outbreaks can hugely overload the health system, which means that flu and many other illnesses must be treated at home.

Services may be interrupted when many are sick, including police, water, electricity, food supply, telephone.

Outside help may not be available because many people are sick, everywhere.

Some families may need community help if all caretakers in a home become sick.

Schools, public transportation, and other services may need to close during the outbreak.

Pregnant women are at high risk of serious sickness.

<p>Questions about birds and pigs</p>	<p>Are avian influenza, swine influenza, and human influenza the same thing?</p> <p><i>NO. Even though we sometimes call human flu avian (bird) or swine (pig) influenza, human influenza is not a virus that spreads through animals. It spreads through people.</i></p> <p>Can we keep chicken, ducks, other birds, or pigs during a human influenza outbreak?</p> <p><i>Answer: Yes. All of the hygiene messages you know about animals are still important—for example, keep birds out of the house, wash hands after killing animals, cook meat well.</i></p> <p>Is it safe to eat poultry (chicken, duck, birds) or pork during a human influenza outbreak?</p> <p><i>Birds, poultry, and pork are still safe to eat, if you normally eat them, and important sources of nutrition.</i></p>
<p>What are your questions?</p>	<p>NOTE TO TRAINER: Answer the questions that you can, placing the answers in the appropriate category.</p> <p>If you can't answer a question, be honest! Tell the group you will find the answer if possible, and get back to them on it.</p>

Annex 3: Presentation Content

What is Pandemic Influenza?

What is pandemic influenza and where does it come from?

An influenza pandemic happens when a new virus moves from birds or pigs to people and spreads quickly around the world, from person to person. Because the virus is new, the human body does not know how to fight it. There is no available vaccine for pandemic influenza at this time.

PANDEMIC INFLUENZA— WHAT? FROM WHERE?

- A new virus grows in birds or pigs
- Moves to people
- Spreads around the world quickly
- Kills many people
- Attacks through respiratory (breathing) system

How do we assess pandemic severity?¹

The World Health Organization (WHO)'s pandemic phases consider the geographical spread of a pandemic virus and are intended as a global call to countries to increase their alertness and readiness. Within each WHO phase, countries can assess national or regional pandemic severity to best use limited resources and interventions aimed at lowering pandemic-associated health impacts.

A pandemic occurs when a new influenza virus emerges to which people have no prior exposure. They, therefore, do not have immunity to it. Instead of 5-10 percent of the population becoming ill as with seasonal influenza, approximately 35 percent of people will become ill during a pandemic. Because people have no immunity, the virus may cause more severe illness than is normal from seasonal influenza. The severity of a pandemic depends mostly on the virus that causes it, and severity may change over time during the course of the pandemic. While seasonal influenza causes death in less than 1 of 1,000 people who become ill, a pandemic virus may cause moderately higher to much higher rates of death. For the worst influenza pandemic we witnessed last century, the Spanish Flu of 1918, in the United States approximately 2 of every 100 who fell ill died. There were from 40-100 million deaths worldwide from the 1918 pandemic.

Assessment of pandemic severity is complex.

- Severity can vary from one pandemic to the next, from country to country, and among different population groups or geographical areas. Therefore, a single assessment of severity at the global level may not be relevant or helpful to countries.
- Second, severity will likely change as an event unfolds over time. As a result, monitoring is essential to detect changes in how the disease is developing.

- Third, the accuracy of a severity assessment will reflect the quality and availability of information about the virus and the people who are susceptible to infection. Such information is most limited at the beginning of a pandemic and takes some time to develop.

At the country level, three things will determine the impact of a pandemic on a community:

1. The pandemic virus and its characteristics, as well as the epidemiological and clinical manifestations,
2. The vulnerability of the community, and
3. The capacity of the community for response.

Participants should consider how their actions would differ based on pandemic severity in their community. They should be as clear as possible, in advance, about where they will get guidance on decisions such as closing schools and supporting the neediest families with home health care, food, and other necessities.

Is pandemic influenza coming to our region?

NOTE TO TRAINER: Your answer to this question will depend on whether the WHO has declared that pandemic influenza has broken out and is spreading around the world.

If pandemic influenza has been declared, tell the trainees that pandemic influenza is currently spreading around the world, from person to person, and will most likely come to their community. Everyone needs to prepare for this disaster. Preparing means planning:

- How to slow down the spread of influenza
- How to help those who get sick; for health care and medication supplies to treat other illnesses
- For possible problems with the systems that supply food and water, law and order, electricity; for what might happen to people’s ability to earn money.

Symptoms

Influenza attacks the respiratory (breathing) system and can have one or more of the following signs:

- Fever
- Cough
- Muscle aches and pains
- Fatigue (tiredness)
- Headache

WILL IT COME HERE? WHEN?

Trainer: please insert current, correct answer here as provided by health authorities.

Has pandemic influenza begin to spread around the world? Is it in your country?

SYMPTOMS

One or more may mean flu...

- Fever
- Cough
- Muscle aches and pains
- Fatigue
- Headache
- Sneezing
- Sore throat
- Runny or stuffy nose

- Sore throat
- Sneezing
- Runny or stuffy nose.

Also, some people, especially children, may have:

- Nausea or vomiting
- Abdominal cramps
- Diarrhea.

Transmission

- Most influenza is spread through the air by being close (within 1-2 meters or 3-6 feet) to sick people who are coughing, sneezing, singing, or talking, or who have contaminated the surfaces around them.
- It can be spread by people who have the virus, but don't feel or look sick yet.
- Influenza may spread by touching infected persons, or by touching contaminated things or surfaces. (The virus can live outside the body for up to two days.)
- Most influenza is spread in local outbreaks that are 6-12 weeks long. Each place may have one, two, or three "waves" of these local outbreaks, during a period of up to two years.

Who is in the greatest danger?

Pregnant women are likely to be in most danger from pandemic influenza. If at all possible, they should not care for, or be in contact with, anyone who may have influenza. Other groups who are likely to be at increased danger are babies and people with ongoing diseases, including HIV (human immunodeficiency virus) and tuberculosis. But we cannot know for sure until the pandemic begins, because this influenza virus will be new to the world.

MORE SYMPTOMS: especially for children

- Nausea or vomiting
- Abdominal cramps
- Diarrhea

SAME SYMPTOMS may come from other sicknesses, too

HOW IT SPREADS

- Breathed in
- OR
- Hands touch infected things, surfaces, and then touch eye, nose, or mouth

FOR HOW LONG

- In waves (comes and goes)
- One wave = 6-12 weeks
- 1, 2, or 3 waves over 1-2 years

IN MOST DANGER?

- Pregnant women
- Babies
- People with other sicknesses
- Maybe others

What should people do if an outbreak is severe?

Stay away from public places: Prevention behaviors slow down the spread of influenza, but nothing will completely stop it. Even when sick people stay home, influenza will be spread by infected people who don't yet know they are sick. The best way to be safe is to stay at home (or where you are currently staying), in contact with as few people as possible.

WHY MUST SICK PEOPLE STAY HOME?

- Rest is most important
- So they don't infect others
- No room at hospital

Where will sick people get care?

Health centers, dispensaries, clinics, pharmacies, and hospitals will probably be overloaded with sick people. Therefore, families will have to take care of most sick people at home. It will be important to save the hospital space for the very sickest people.

The good news is that many of the most important care methods can be provided as well at home as in the hospital. Ideally, Community Responders will be able to visit, and give care and information to people at their homes (or wherever they are staying). Only people who are dangerously ill (can't breathe, cough blood, or other serious symptoms) should go to the hospital.

What is the best care for a sick person?

- Separate the sick person from others as much as possible, with only one caretaker. (We'll learn more about this later in the session on Home-Based Care.)
- Keep the sick person resting quietly and comfortably.
- Prevent dehydration (not enough water in the body). This can be serious. Have the sick person drink liquids regularly at the first signs of influenza.
- Unless a fever is so high that the person becomes confused and can't recognize where he is or family or friends, etc., let it be. Remember that fever is a sign that the body is fighting the infection. It will go away as the patient is getting better.
- Basic drugs such as ibuprofen, paracetamol, acetaminophen, or other measures, as recommended by a health worker, can help with fever, sore throat, and aches. Never give aspirin to babies, children, or teenagers because it can react badly with the influenza virus and make them very sick.
- Pneumonia (infected lungs filled with liquid) often develops as a result of influenza. Look for symptoms (very rapid breathing) and refer or treat as recommended, which may include use of antibiotics.

FAMILIES OF SICK PEOPLE SHOULD keep the sick person:

- At home
- Away from everyone, except one caretaker
- Resting quietly
- Drinking lots of liquids
- Comfortable by use of basic drugs
- No aspirin for children or teens
- Get help if sick person can't breathe, wake up, or seems very, very sick

Can our actions make a difference? History says YES.

In the serious influenza pandemic of 1918, many people of all ages in the United States died. Health, telephone, and other systems sometimes stopped working altogether. Families that were hit hard were often too sick to go out for food or even care for the children. If a health worker or volunteer didn't come to their home to check on them and care for them, they sometimes died for lack of help.

Two cities in the United States, Philadelphia and Saint (St.) Louis, handled the outbreak very differently—with very different death rates as a result.²

A Story from 1918.
Let's be a St. Louis!

Philadelphia was slow to use social distancing methods like closing schools and banning public gatherings, and slow to direct the public in methods for separating the sick and other infection prevention behaviors.

St. Louis acted very quickly, and implemented bans and closures for much longer than Philadelphia, for a total of about 20 weeks. The rate of excess death was less than half as much as the rate in Philadelphia.

To give an example of the difference, if Philadelphia had been a town of 10,000 people, 75 people would have died as a result of the dangerous influenza. If St. Louis had also been a town of 10,000 people, only 36 people would have died. However, these communities were much larger than that—so imagine the huge number of deaths that might have been prevented in Philadelphia if that city had acted more quickly, and for longer.

Philadelphia's deaths were so overwhelming, city leaders were forced to bury people in mass graves, using construction equipment. St. Louis never reached that level of crisis. At the worst point, Philadelphia had eight people dying for every one person who died in St. Louis.

The point of this story is that district and individual-level **actions can make a big difference** and prevent the spread of pandemic influenza. Nearly 100 years later, St. Louis is still known and respected for this amazing achievement. Let's all aim to plan and prepare together, and follow the example of St. Louis.

Annex 4: Post-Test

Name: _____

1. Define (give the meaning of) “pandemic”.
2. Define “swine influenza”.
3. Define “avian influenza”.
4. Define “virus”.
5. Define “pandemic influenza”.
6. Define “seasonal, or regular, influenza”.
7. How will people know if pandemic influenza is spreading around the world?

8. List at least five symptoms of influenza. (We've learned seven today.)

9. List two symptoms of influenza that are more common in children.

10. Name the two main ways influenza spreads from person to person.

11. Do all people who have the virus and can spread it (be infectious) seem to be sick?

12. What are locations in your community where pandemic influenza might spread quickly?
Why?

13. If someone is sick with influenza, list the four main treatments that can help them get better.

14. Should babies with influenza continue to breastfeed?

15. When a pandemic influenza outbreak comes to a community, about how many weeks will it probably stay?
 - a. 1 week
 - b. 2-3 weeks
 - c. 6-12 weeks

16. How many times might the pandemic influenza break out in a community (waves) over several years, until it is gone?
 - a. 1-3 times
 - b. 5-7 times
 - c. More than 10 times

17. We know that if many people get sick, basic services might stop working. Give three examples of the services that might not work.

18. Who is most likely to get very sick or die of pandemic influenza?

REFERENCES

1. Adapted from: WHO (2009), Considerations for assessing the severity of an influenza pandemic. Weekly Epidemiological Record 84(22, 29 May):197–212. Available at: www.who.int/wer/2009/wer8422/en/index.html
2. This section based on Markel, H, and others (2007), Nonpharmaceutical interventions implemented by US cities during the 1918-1919 influenza pandemic. Journal of the American Medical Association 298(6):644-54.

