Community case management during an influenza outbreak

PARTICIPANT’S HANDOUT

A TRAINING PACKAGE FOR

COMMUNITY HEALTH WORKERS

World Health Organization
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Acknowledgements

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With the collaboration of Nuriye Nalan Sahin-Hodoglugil (training consultant), and Lynn Salt (illustrator); the English version was edited by Nina Mattock.

Contact: influenzatraining@who.int
<table>
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<th>Abbreviation</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ACT</td>
<td>Artemisinin-based combination therapy</td>
</tr>
<tr>
<td>CCM</td>
<td>Community case management</td>
</tr>
<tr>
<td>CHW</td>
<td>Community health worker</td>
</tr>
<tr>
<td>HA</td>
<td>Haemagglutinin</td>
</tr>
<tr>
<td>ILI</td>
<td>Influenza-like illness</td>
</tr>
<tr>
<td>IMAI</td>
<td>Integrated Management of Adolescent and Adult Illness</td>
</tr>
<tr>
<td>IMCI</td>
<td>Integrated Management of Childhood Illness</td>
</tr>
<tr>
<td>LLIN</td>
<td>Long-lasting insecticide-treated nets</td>
</tr>
<tr>
<td>MUAC</td>
<td>Middle upper arm circumference</td>
</tr>
<tr>
<td>NA</td>
<td>Neuraminidase</td>
</tr>
<tr>
<td>ORS</td>
<td>Oral rehydration salts</td>
</tr>
<tr>
<td>PPE</td>
<td>Personal protective equipment</td>
</tr>
<tr>
<td>RDT</td>
<td>Rapid diagnostic test (for malaria)</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
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</tbody>
</table>
Introduction

Training objectives

Upon completion of training, participants will be able to:

1. explain the dynamics of an influenza outbreak and its impact at the community level
2. discuss the role of the CHW during an influenza outbreak
3. define the signs and symptoms of influenza-like illness (ILI)
4. identify and assess patients with ILI signs and symptoms, and groups at increased risk for severe illness
5. recognize the danger signs of ILI, and describe when and how to refer severely ill patients
6. provide information and services for home-based care of ILI at the community level
7. provide further assessment, treatment and follow-up for patients with ILI, including treatment of common diseases which may co-occur with or be part of the differential diagnosis of influenza (fever, malaria, pneumonia, diarrhoeal diseases)
8. conduct community education activities and deliver appropriate messages specific to prevention and control of an influenza outbreak
9. demonstrate understanding of how CHWs can protect themselves while providing care to others
10. develop a draft reporting plan to guide the recording and monitoring of CHW activities related preparedness and response to an influenza outbreak in their communities.

Training programme

The training course is divided in six modules (see Table 1).
## TABLE 1. LEARNING OBJECTIVES

<table>
<thead>
<tr>
<th>Modules</th>
<th>Learning objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Upon completion of the module, participants will be able to:</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **1** Influenza outbreaks and impact on communities | 1. define seasonal, avian, swine and pandemic influenza  
2. describe the signs and symptoms of influenza  
3. describe how influenza spreads from person to person  
4. discuss the impact of an influenza outbreak on communities (health and well-being, social life, economic life, etc.)  
5. identify the challenges of responding to an influenza outbreak in the community and discuss how to address these challenges  
6. discuss the role and responsibilities of CHWs in responding to an influenza outbreak, in relation to their regular functions |
| **2** Key interventions and messages for the prevention and control of an influenza outbreak in the community and the home | 1. list the generic key messages for prevention and control of influenza outbreaks at community level and at home  
2. explain the rationale behind the key messages  
3. identify and list key sociocultural practices and health-seeking behaviours that can affect the spread of influenza  
4. discuss which generic key messages are more appropriate to the local setting and practices, and identify any other key messages  
5. identify the danger signs in patients and refer as necessary |
| **3** Assessment and treatment of diseases in the community and the home (optional module) | 1. use flow charts for assessing patients with ILI for symptoms including cough/difficulty breathing, fever and diarrhoea  
2. identify the danger signs in patients and refer as necessary  
3. treat patients with fever, cough/difficulty in breathing and diarrhoea at home, according to the national protocols  
4. follow up patients for treatment outcomes and make further referrals if necessary |
| **4** Community health education and social mobilization | 1. identify the most important key interventions and messages for controlling and preventing the spread of influenza, and for home-based care  
2. identify the most commonly used communication strategies and explain their advantages and disadvantages  
3. identify key challenges/obstacles that may prevent community members from acting on the health information provided  
4. discuss different ways to overcome these challenges and encourage community participation in responding to an outbreak  
5. develop a plan to reach all members of the community, including those at increased risk and those who are often forgotten  
6. develop sample materials for community education/information on influenza |
| **5** Protection of the community health worker | 1. describe the risks of CHWs acquiring influenza during their work  
2. list the most important infection control behaviours during the course of their work as CHWs  
3. describe the types of personal protective equipment that can be used by CHWs  
4. identify who should NOT serve as CHW during a local outbreak |
| **6** A framework for monitoring and reporting of influenza outbreak preparedness and response activities (optional module) | 1. identify the objectives for monitoring and reporting of community case management (CCM) activities  
2. develop a draft plan to guide the reporting and monitoring of activities  
3. identify which forms to use for reporting and monitoring  
4. complete a draft monitoring form, if available. |
References and additional information


H2P Humanitarian Pandemic Preparedness. Pandemic preparedness at the community level. Available at: www.pandemicpreparedness.org/


IMAI. Available at: www.who.int/hiv/pub/imai/en/

— Caring for the sick child in the community: Identifying signs of illness, and refer or treat the child. WHO/UNICEF, 2009.

Pandemic H1N1: www.who.int/csr/disease/swineflu/en/


MODULE 1
Influenza outbreaks and impact on communities

Objectives of Module 1
Upon completion of Module 1, participants will be able to:
1. define seasonal, avian, swine and pandemic influenza
2. describe the signs and symptoms of influenza
3. describe how influenza spreads from person to person
4. discuss the impact of an influenza outbreak on communities (health and well-being, social life, economic life, etc.)
5. identify the challenges of responding to an influenza outbreak in the community and discuss how to address these challenges
6. discuss the role and responsibilities of CHWs in responding to an influenza outbreak, in relation to their regular functions.

1.1 What is influenza?
General information on the virus
Influenza is a virus that:
- exists in many different types (strains)
- causes illness in humans and animals
- can quickly change itself through mutation to create a new strain.

Definitions
Seasonal influenza: is an acute viral infection caused by strains of seasonal influenza viruses. Influenza epidemics occur yearly during autumn and winter in temperate regions. In some tropical countries, influenza viruses circulate throughout the year with one or two peaks during rainy seasons.

Pandemic influenza: is a term used when a new influenza virus, to which most people in the world have little or no immunity, cause disease in humans and starts to spread from person to person around the world.

Avian influenza: refers to influenza viruses that primarily affect birds. On rare occasions, these bird viruses can infect other species, including pigs and humans.

Swine influenza: refers to influenza viruses that primarily affect pigs. These influenza viruses can occasionally infect humans.
Influenza-like illness (ILI): even though influenza can be caused by many different strains of influenza virus, the signs and symptoms are similar for all types. This is why all acute viral infections of the respiratory tract with similar signs and symptoms are grouped under “influenza-like illness” (most are caused by influenza viruses, but there are also other infections). ILI is a syndrome, and can, for the most part, be identified and managed at the community level.

**Note**

It is often not possible to distinguish between pandemic influenza, seasonal (or regular) influenza, a really bad cold and other common respiratory illnesses based on the symptoms. Therefore, during a pandemic influenza outbreak, any person with ILI symptoms should be managed according to these symptoms because tests for differential diagnosis may not be available or accessible.

**The symptoms of influenza**

The symptoms of influenza (see Box 1) usually start 1–2 days after a person gets infected with the influenza virus (incubation period from 1–7 days). People may be infectious from one day before developing symptoms to up to one day after the symptoms (particularly fever) go away. Children and those who are immunosuppressed may be infectious for a longer period.

**Box 1. Symptoms of influenza (or ILI)**

<table>
<thead>
<tr>
<th>Symptoms of influenza (or ILI):</th>
<th>Some people, especially children, may also have:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• fever 38 °C or above</td>
<td>• nausea or vomiting</td>
</tr>
<tr>
<td>• cough</td>
<td>• abdominal cramps</td>
</tr>
<tr>
<td>• sore throat</td>
<td>• muscle aches and pains</td>
</tr>
<tr>
<td></td>
<td>• tiredness</td>
</tr>
<tr>
<td></td>
<td>• headache</td>
</tr>
<tr>
<td></td>
<td>• sneezing</td>
</tr>
<tr>
<td></td>
<td>• runny or stuffy nose</td>
</tr>
<tr>
<td></td>
<td>• diarrhoea.</td>
</tr>
</tbody>
</table>
How influenza spreads from person to person

Box 2. Mode of transmission of influenza

Influenza can be spread:
• by direct transmission, when an infected person sneezes or coughs droplets into the nose, mouth or eyes of another person;
• by contact with droplets, e.g. touching the hands of ill people who have touched their own secretions, or when cleaning the secretions of others such as children and then accidentally spreading the contamination through touching the eyes, nose or mouth;
• through contamination of the hands, by touching items that are contaminated with secretions.

1.2 The impact of influenza outbreak on communities

Who is in the greatest danger?

Box 3. Groups at higher risk for severe illness and death from seasonal and pandemic influenza

• Women who are pregnant.
• Infants and young children, particularly less than two years of age.
• Elderly people more than 65 years of age.
• People with chronic diseases such as heart, lung, liver, renal, or metabolic conditions, or with immunosuppression (whether primary immunosuppressive conditions such as HIV infection or secondary conditions due to immunosuppressive medication or malignancy).
• Children receiving chronic aspirin therapy.
1.3 **Roles and responsibilities of the community health worker in the response to an outbreak of influenza**

- Community health education
- Provision of home-based treatment, primary and supportive care
- Identification of patients who require higher level medical attention
- Liaising between the community and higher levels of health care and decision-making in meeting needs during the response to an outbreak
- Working with the community and in collaboration with the health systems and other sectors to address the indirect effects of an outbreak
- Monitoring and reporting of activities to inform planning and future responses to manage and control the outbreak
- Identification and management of cases and groups at increased risk for disease and death.
MODULE 2

Key interventions and messages for the prevention and control of an influenza outbreak in the community and the home

Objectives of Module 2

Upon completion of Module 2, participants will be able to:

1. list the generic key messages for prevention and control of influenza at community level and in the home
2. explain the rationale behind the key messages
3. identify and list key sociocultural practices and health-seeking behaviours that can speed up the spread of influenza and those that can help slow down its spread
4. discuss which key generic messages are more appropriate to the local setting and practices, and identify any other key messages
5. identify the danger signs in patients and refer as necessary.

Key messages

<table>
<thead>
<tr>
<th>Domain</th>
<th>Key message</th>
<th>Behaviour examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease prevention</td>
<td>1. Know the disease</td>
<td>Consult with your CHW for the most up-to-date and correct information about the outbreak.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Follow the advice and recommendations of the CHW and other local health authorities.</td>
</tr>
<tr>
<td></td>
<td>2. Keep your distance from someone who is coughing and sneezing</td>
<td>Keep a distance of at least 1 metre (an arm’s length) from people who are coughing or sneezing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Avoid touching, shaking hands with, or kissing sick people.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduce the time spent in crowded places.</td>
</tr>
<tr>
<td></td>
<td>3. Cover your cough or sneeze</td>
<td>Cough or sneeze into your sleeve (or elbow), jacket or other clothing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use a single-use tissue if possible.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wash your hands immediately after coughing or sneezing.</td>
</tr>
<tr>
<td></td>
<td>4. Wash hands to prevent spread of germs</td>
<td>Wash hands frequently, especially if you are the caregiver for a sick person.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Keep hands away from face.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wash hands immediately after coughing or sneezing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clean surfaces regularly with soap and water (or other disinfection fluids such as bleach).</td>
</tr>
</tbody>
</table>
TABLE 2. KEY MESSAGES AND BEHAVIOUR EXAMPLES TO PREVENT THE SPREAD OF INFLUENZA AND TO CARE FOR THE SICK PERSON AT HOME (continued)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Key message</th>
<th>Behaviour examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease prevention</td>
<td>5. Separate the sick person from others</td>
<td>Stay at home or away from crowds if you feel ill.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If you are sick, avoid or reduce the time spent in crowded places (schools, markets, meetings, etc.).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ask others for help with daily chores.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Give sick people a separate space at home.</td>
</tr>
<tr>
<td></td>
<td>6. Ventilate closed spaces</td>
<td>Open the windows and doors to allow air to circulate.</td>
</tr>
<tr>
<td></td>
<td>7. Assign a single caregiver to a sick person</td>
<td>Assign one caregiver; assign the mother as caregiver if her breastfed infant is sick.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Caregivers should take special care to wash their hands before and after caring and to cover their mouth and nose during contact with a sick person.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do not assign a person at higher risk of severe illness as a caretaker, if possible.</td>
</tr>
<tr>
<td></td>
<td>8. Recognize the danger signs and seek prompt care</td>
<td>Learn the danger signs of influenza from the CHW.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Take the sick person with danger signs immediately to the nearest health facility.</td>
</tr>
<tr>
<td>Community case management</td>
<td>9. Provide hydration and nutrition for the sick</td>
<td>Continue breastfeeding sick babies and increase the duration of each feeding.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide additional fluids such as clean water, soups, teas and other liquids for hydration.</td>
</tr>
<tr>
<td></td>
<td>10. Learn how to care for a sick person who needs advanced treatment at home</td>
<td>If you are the caregiver, learn how to provide additional treatment at home.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Follow the directions provided by the CHW for giving medication and completing the treatment for sick people.</td>
</tr>
</tbody>
</table>

Managing fever

Box 4. Manage fever at home

Assess fever
Children and adults are considered to have a fever if their body temperature is above 37.5 °C axillary (armpit) (or above 38 °C rectal). In the absence of a thermometer, fever may be assessed by determining if the patient feels hot to touch. Fever may also be recognized based on recent history of fever (within 48 hours).

Treat fever
Fever is a sign that the body is fighting the infection. It will usually go away as the patient gets better. Lowering fever will make sick people feel better and make it possible to care for them at home. In malaria endemic areas, malaria should be assessed and treated according to national protocol.

Lower fever
- Keep the child/person in dry, clean and loose clothes
- If the person is chilled, cover with a blanket
- If the child/person becomes very hot, loosen clothing
- Give medicine to reduce fever such as paracetamol/acetaminophen. Do not use aspirin for people under the age of 18 years or for women who are pregnant
- Infants less than 2 months with fever should be referred
- Sponging with lukewarm (wrist-temperature) water may also lower the patient’s temperature
- Continue feeding and provide extra fluids or breastfeeding.
Managing diarrhoea and preventing dehydration

Box 5. Manage diarrhoea at home to prevent dehydration

Assess diarrhoea
Diarrhoea is defined as three or more loose stools in a 24-hour time period. For children, persistent diarrhoea for more than 14 days is a danger sign and the child needs to be referred.

A young infant less than 2 months of age has diarrhoea if the stools have changed from the usual pattern and are many and watery (more water than faecal matter). The normal frequent or semi-solid stools of a breastfed baby are not diarrhoea.

If the sick child or person has blood in stool, they need to be referred.

Look for danger signs.

Prevent dehydration in the sick child or person
- Increase intake of fluids
- Use ORS (oral rehydration salts) solution, if available (see Module 3 for more information on preparing and using ORS), or prepare, and teach how to prepare, home-made solutions (based on national protocols)
- Make sure that the water you are using is clean
- If the child is exclusively breastfed, advise the mother to breastfeed frequently and for a longer time during each feed; give ORS in addition to breast milk even if the baby is exclusively breastfed
- Provide zinc supplement to children older than 2 months with diarrhoea, if available;
- Continue to feed and provide extra fluid for the sick person; frequent breastfeeding for infants and young children
- If the child is too ill to breastfeed, or the sick person too ill to drink fluids, or she/he is vomiting frequently and cannot keep anything inside, take her/him immediately to a health facility.

Signs of dehydration
- Unusually sleepy or unconscious
- Sunken eyes
- Skin pinch goes back very slowly: lightly pinch some skin on the belly of a child or the upper chest of an adult, then let go. If the person has enough fluid in her/him, the skin will flatten out again right away. If the person is dehydrated, the skin will stay stretched up in the shape of the pinch for a few seconds
- Not able to drink or drinking poorly.

Danger signs

Danger signs for influenza in adults and children 5 years and older
- Shortness of breath or difficulty in breathing
- Lips or skin turning blue
- Chest pain
- Coughing up blood or coloured sputum
- Low blood pressure (if able to evaluate)
- Confusion, such as not recognizing family or friends; drowsy; severe weakness
- Convulsions
- Loss of consciousness
- Signs of severe dehydration
- Persistent high fever beyond 3 days.

\* If pandemic influenza is circulating in the community, and the patient has fast/difficult breathing and/or persistent high fever and other symptoms beyond 3 days, community case management of pneumonia should be provided. Ensure close observation of previously healthy patients, and refer high risk groups to a facility if there are signs of infection upon assessment. The CHW should immediately refer the sick child/adult to a health facility if she/he has any of the danger signs.
**Danger signs in infants and children less than 5 years**

**General danger signs in sick children (2 months–5 years old)**
- Cough for 21 days or more
- Diarrhoea (3 or more loose stools in last 24 hours) for 14 days or more
- Blood in stool
- Fever for 7 days or more<sup>a</sup>
- Convulsions
- Not able to drink or eat anything
- Vomits everything
- Chest indrawing (signals breathing difficulty in children)
- Unusually sleepy or unconscious
- Red on MUAC<sup>b</sup> strap (for children aged 6 months to 5 years; signals severe malnutrition)
- Swelling of both feet (sign of severe malnutrition).

**General danger signs for infants less than 2 months.** Danger signs which are beyond management of CHWs and requiring urgent referral to a health facility
- Not able to feed since birth, or stopped feeding well
- Convulsed or fitted since birth
- Fast breathing: Two counts of 60 breaths or more in one minute
- Chest indrawing
- High temperature: 37.5 °C or more
- Very low temperature: 35.4 °C or less
- Infant only moves when stimulated, or does not move even on stimulation
- Yellow palms and soles
- Signs of local infection: umbilicus red or draining pus, skin boils, or eyes draining pus.

<sup>a</sup> If pandemic influenza is circulating in the community, and the patient has fast/difficult breathing and/or persistent high fever and other symptoms beyond 3 days, community case management of pneumonia should be provided. Ensure close observation of previously healthy patients, and refer high risk groups to a facility if there are signs of infection upon assessment. The CHW should immediately refer the sick child/adult to a health facility if she/he has any of the above danger signs.

<sup>b</sup> MUAC: Middle upper arm circumference

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**DANGER SIGNS FOR INFLUENZA IN ADULTS AND CHILDREN 5 YEARS AND OLDER**

<table>
<thead>
<tr>
<th>Difficulty in breathing</th>
<th>Blue lips or skin</th>
<th>Coughing up blood</th>
<th>Chest pain</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Difficulty in breathing" /></td>
<td><img src="image2.png" alt="Blue lips or skin" /></td>
<td><img src="image3.png" alt="Coughing up blood" /></td>
<td><img src="image4.png" alt="Chest pain" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Confusion</th>
<th>Convulsions</th>
<th>Loss of consciousness</th>
<th>Persistent fever</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5.png" alt="Confusion" /></td>
<td><img src="image6.png" alt="Convulsions" /></td>
<td><img src="image7.png" alt="Loss of consciousness" /></td>
<td><img src="image8.png" alt="Persistent fever" /></td>
</tr>
</tbody>
</table>
GENERAL DANGER SIGNS IN CHILDREN (2 MONTHS–5 YEARS OLD)

- Cough for 21 days or more
- Diarrhoea for 14 days or more
- Blood in stool
- Fever for 7 days or more
- Convulsions
- Not able to drink or eat
- Vomiting
- Chest indrawing
- Unusually sleepy or unconscious
- Red on MUAC strap
- Swelling of both feet
If pandemic influenza is circulating in the community, and the patient has fast/difficult breathing and/or persistent high fever and other symptoms beyond three days, community case management of pneumonia should be provided. Ensure close observation of previously healthy patients, and – where capacity exists – refer high risk groups to a higher level of care. CHWs should immediately refer a sick child or adult to a health facility if she/he has any of the danger signs.

FLOW CHART 1. ASSESSMENT OF DANGER SIGNS TO DECIDE TO REFER TO A HEALTH FACILITY OR TREAT AT HOME DURING INFLUENZA OUTBREAK

<table>
<thead>
<tr>
<th>General danger signs for infants up to 2 months</th>
<th>General danger signs for sick children (2 months to 5 years old)</th>
<th>Danger signs for adults and children (5 years and older)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Not able to feed since birth, or stopped feeding well</td>
<td>1. Cough lasting for 21 days or more</td>
<td>1. Shortness of breath or difficulty in breathing(^a)</td>
</tr>
<tr>
<td>2. Convulsed or fitted since birth</td>
<td>2. Diarrhoea for 14 days or more</td>
<td>2. Lips or skin turning blue</td>
</tr>
<tr>
<td>3. Fast breathing: Two counts of 60 breaths or more in one minute</td>
<td>3. Blood in stool</td>
<td>3. Chest pain</td>
</tr>
<tr>
<td>4. Chest indrawing</td>
<td>4. Fever for 7 days or more(^a)</td>
<td>4. Coughing up blood or coloured sputum</td>
</tr>
<tr>
<td>5. High temperature: 37.5 °C or more</td>
<td>5. Convulsions</td>
<td>5. Low blood pressure</td>
</tr>
<tr>
<td>6. Very low temperature: 35.4 °C or less</td>
<td>6. Not able to drink or feed</td>
<td>6. Confusion/disorientation</td>
</tr>
<tr>
<td>9. Signs of local infection: umbilicus red or draining pus, skin boils, or eyes draining pus</td>
<td>9. Unusually sleepy or unconscious</td>
<td>9. Signs of severe dehydration</td>
</tr>
<tr>
<td></td>
<td>10. Red on MUAC strap</td>
<td>10. Persistent high fever beyond 3 days(^a)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IF ANY DANGER SIGN above PRESENT REFER THE PATIENT

WHEN REFERRING
Before referral, if able to eat and drink, give a first dose of antibiotics and antimalarial medication, continue to give ORS, breastfeed frequently and keep infant warm during referral

IF NO DANGER SIGN PRESENT
Does the patient have any of the following?

- COUGH OR DIFFICULT/ FAST BREATHING
- FEVER
- DIARRHOEA

TREAT AT HOME ACCORDINGLY
(See Module 3 on Assessment and treatment of diseases in the community)

\(^a\) If pandemic influenza is circulating in the community, and the patient has fast/difficult breathing and/or persistent high fever and other symptoms beyond three days, community case management of pneumonia should be provided. Ensure close observation of previously healthy patients, and – where capacity exists – refer high risk groups to a higher level of care. CHWs should immediately refer a sick child or adult to a health facility if she/he has any of the danger signs.
MODULE 3
Assessment and treatment of diseases in the community and the home

Objectives of Module 3

Upon completion of Module 3, participants will be able to:

1. use a flow chart for assessing patients with ILI for symptoms including cough/difficulty in breathing, fever, diarrhoea
2. identify the danger signs in patients and refer as necessary
3. treat patients with fever, cough/difficulty in breathing and diarrhoea according to the national protocol
4. follow up patients for treatment outcomes and further referrals if necessary.

Sample treatment protocols

Fever: treatment with paracetamol
Using syrup 120 mg/5 ml for children less than 12 months, give 4 times a day (10–15 mg/kg):

- Age 2 up to 4 months (4 up to 6 kg): 50 mg (2 ml)
- Age 4 up to 12 months (6 up to 10 kg): 60 mg (2.5 ml)

Using 500 mg tablets, give 4 times a day:

- Age 1 up to 3 years: ¼ tablet
- Age 3 up to 5 years: ½ tablet
- Age 5 to 14 years: 1 tablet
- Age 15 years or more: 1 to 2 tablets

Malaria: treatment with artemisinin-based combination therapy (ACT)

- To be completed according to national ACT protocol

Pneumonia: treatment with oral amoxicillin

The treatment regimen should be adapted to the local patterns of drug resistance and disease, and the national protocol.

Using oral amoxicillin 250 mg tablets, give 2 times a day, for 5 days:

- Age less than 2 months: ¼ tablet (total 2½ tablets)
- Age 2 up to 12 months: ¾ tablet (total 7½ tablets)
- Age 12 months to 14 years: 1½ tablet (total 15 tablets)
- Age 15 years and over: 2 tablets (total 20 tablets)

Diarrhoea: zinc supplement for children (from 2 months to 5 years)

Give 1 dose daily for 10 days:

- Age 2 up to 6 months: ½ tablet (total 5 tablets)
- Age 6 months to 5 years: 1 tablet (total 10 tablets)
FLOW CHART 2. ASSESSMENT AND TREATMENT IN THE COMMUNITY DURING AN INFLUENZA OUTBREAK

<table>
<thead>
<tr>
<th>General danger signs for infants less than 2 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Not able to feed since birth, or stopped feeding well</td>
</tr>
<tr>
<td>2. Convulsed or fitted since birth</td>
</tr>
<tr>
<td>3. Fast breathing: Two counts of 60 breaths or more in one minute</td>
</tr>
<tr>
<td>4. Chest indrawing</td>
</tr>
<tr>
<td>5. High temperature: 37.5 °C or more</td>
</tr>
<tr>
<td>6. Very low temperature: 35.4 °C or less</td>
</tr>
<tr>
<td>7. Infant only moves when stimulated</td>
</tr>
<tr>
<td>8. Yellow palms and soles</td>
</tr>
<tr>
<td>9. Signs of local infection: umbilicus red or draining pus, skin boils, or eyes draining pus</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General danger signs for sick children (2 months up to 5 years old)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cough for 21 days or more</td>
</tr>
<tr>
<td>2. Diarrhoea for 14 days or more</td>
</tr>
<tr>
<td>3. Blood in stool</td>
</tr>
<tr>
<td>4. Fever for 7 days or more</td>
</tr>
<tr>
<td>5. Convulsions</td>
</tr>
<tr>
<td>6. Not able to drink or feed</td>
</tr>
<tr>
<td>7. Vomits everything</td>
</tr>
<tr>
<td>8. Chest indrawing</td>
</tr>
<tr>
<td>9. Unusually sleepy or unconscious</td>
</tr>
<tr>
<td>10. Red on MUAC strap</td>
</tr>
<tr>
<td>11. Swelling of both feet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Danger signs for adults and children (5 years and older)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Shortness of breath/difficulty in breathing</td>
</tr>
<tr>
<td>2. Lips or skin turning blue</td>
</tr>
<tr>
<td>3. Chest pain</td>
</tr>
<tr>
<td>4. Coughing up blood or coloured sputum</td>
</tr>
<tr>
<td>5. Low blood pressure</td>
</tr>
<tr>
<td>6. Confusion/disorientation</td>
</tr>
<tr>
<td>7. Convulsions</td>
</tr>
<tr>
<td>8. Loss of consciousness</td>
</tr>
<tr>
<td>9. Signs of severe dehydration</td>
</tr>
<tr>
<td>10. Persistent high fever beyond 3 days</td>
</tr>
</tbody>
</table>

**IF ANY DANGER SIGNS, REFER**
Before referral, if able to eat and drink, give a first dose of antibiotics and antimalarial medication, continue to give ORS, breastfeed frequently and keep infant warm.

**Count the breaths in one minute**

<table>
<thead>
<tr>
<th>Age</th>
<th>Fast breathing</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 up to 2 months</td>
<td>60 breaths/min or more</td>
</tr>
<tr>
<td>2 up to 12 months</td>
<td>50 breaths/min or more</td>
</tr>
<tr>
<td>12 months up to 5 years</td>
<td>40 breaths/min or more</td>
</tr>
<tr>
<td>5 up to 12 years</td>
<td>30 breaths/min or more</td>
</tr>
<tr>
<td>13 years or more</td>
<td>20 breaths/min or more</td>
</tr>
</tbody>
</table>

**Malaria-endemic region**
Test and treat for malaria according to national protocol.

**Non malaria-endemic region**
Treat for fever.

**Give ORS and extra fluid** (zinc for children less than 5 years of age)

**Follow-up care**
- Explain to the patient and family that they must take the medication as prescribed
- Follow up the patient to evaluate any improvement, worsening symptoms, or danger signs
- Provide key messages 1 to 10 to the sick person and family

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If pandemic influenza is circulating in the community, and the patient has fast/difficult breathing and/or persistent high fever and other symptoms beyond three days, community case management of pneumonia should be provided. Ensure close observation of previously healthy patients, and – where capacity exists – refer high risk groups to a higher level of care. CHWs should immediately refer a sick child or adult to a health facility if she/he has any of the danger signs.
How to prepare and give ORS solution

HOW TO PREPARE ORS SOLUTION = THIS IS FOR 1 LITRE SOLUTION.
Please check ORS packet for the correct quantity of water with which to mix it.

Prepare ORS solution

1. Wash your hands with soap and water.
2. Pour the entire contents of 1 packet of ORS into a clean container (a mixing bowl or jar) for mixing the ORS. The container should be large enough to hold at least 1 litre.
3. Measure 1 litre of clean water (or correct amount for packet used). Use the cleanest drinking water available. In your community, what are common containers caregivers use to measure 1 litre of water?
4. Pour the water into the container. Mix well until the salts have completely dissolved.

1. Explain to the caregiver the importance of replacing fluids in a child with diarrhoea. Also explain that the ORS solution tastes salty. Let the caregiver taste it. It might not taste good to the caregiver, but a child who is dehydrated drinks it eagerly.
2. Ask the caregiver to start giving the child the ORS solution. Frequent small sips from a cup or spoon should be given. Use a spoon to give ORS solution to a young child.
3. If the child vomits, advise the caregiver to wait 10 minutes before giving more ORS solution. Then start giving the solution again, but more slowly. The caregiver should offer the child as much as the child will take, or at least ½ cup ORS solution after each loose stool.
4. Check the caregiver’s understanding. For example:
   — observe to see that she/he is giving small sips of the ORS solution – the child should not choke;
   — ask her/him: how often will you give the ORS solution? How much will you give?
5. The child should also drink the usual fluids that she/he drinks, such as breast milk. If the child is not exclusively breastfed, the caregiver should offer the child clean water. Advise the caregiver not to give very sweet drinks and juices to a child with diarrhoea who is taking ORS.
6. How do you know when the child can go home? A dehydrated child, who has enough strength to drink, drinks eagerly. If the child continues to want to drink the ORS solution, the mother should continue to give the solution. If the child becomes more alert and begins to refuse to drink the ORS, it is likely that she/he is not dehydrated any more. If you see that the child is no longer thirsty, then she/he is ready to go home.
7. Put the extra ORS solution in a container and give it to the caregiver for the trip home (or journey to the health facility if the child needs to be referred). Advise
caregivers to bring a closed container for extra ORS solution when they come to see you next time.

8. Give the caregiver two extra packets of ORS to take home, in case she/he needs to prepare more. Encourage the caregiver to continue to give ORS solution as often as the child will take it. At least ½ cup should be given after each loose stool.

How to store ORS solution

1. Keep ORS solution in a clean, covered container.

2. Ask the caregiver to make fresh ORS solution when needed. Do not keep the mixed ORS solution for more than 24 hours as it can lose its effectiveness.

MODULE 4
Community health education and social mobilization

Objectives of Module 4

Upon completion of Module 4, participants will be able to:

1. identify the most important key interventions and messages for controlling and preventing the spread of influenza, and for home-based care
2. identify the most commonly used communication strategies and explain their advantages and disadvantages
3. identify key challenges/obstacles that may prevent community members from acting on the health information provided
4. discuss different ways to overcome these challenges and encourage community participation in responding to the outbreak
5. develop a plan to reach all members of the community, including those at increased risk, and those who are often forgotten or ignored
6. develop sample materials for community education/information on influenza.

4.1 Messages for the community

Advice from communications experts
People want information about:
• what is known and unknown, with guidance on where to get up-to-date information
• how to protect themselves.

Messages should be:
• consistent (same messages from different sources)
• correct and clear
• straightforward and honest.

Source: H2P Humanitarian Pandemic Preparedness

4.2 Best ways to provide information to the community on key interventions and messages

The different members of a community get their information from different sources, and one role of the CHW is to ensure that health information is accessible to all members of the community in an appropriate and timely manner. This means organizing different communications activities under the umbrella of a social mobilization plan, so that the personal and societal influences that encourage individuals to act are mobilized.

There are many different kinds of communication strategies. The following table summarizes the advantages and disadvantages of commonly used strategies.
<table>
<thead>
<tr>
<th>Communications strategies</th>
<th>Examples</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed materials</td>
<td>Posters, leaflets, flyers</td>
<td>• Can be left with people to read</td>
<td>• Inappropriate for illiterate communities, or need adapting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Are passed from person to person so more people read them</td>
<td>• Difficult to tailor messages for specific groups</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Contain detailed information supporting and explaining the rationale of</td>
<td>• Low interactivity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the key messages</td>
<td></td>
</tr>
<tr>
<td>Interpersonal communication</td>
<td>Counselling Door-to-door visits</td>
<td>• Is highly interactive</td>
<td>• Low coverage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Has high community impact – use of trusted and credible sources of</td>
<td>• High cost per person targeted, especially if paying volunteers and staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>information can persuade people to take action</td>
<td>• Requires substantial labour force</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Supports the use of local terminology and language</td>
<td>• Training needed for counsellors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Benefits and advantages are tailored to the needs and concerns of the</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>person being counselled</td>
<td></td>
</tr>
<tr>
<td>Community mobilization and outreach</td>
<td>Street theatre</td>
<td>• Allows interactivity</td>
<td>• Takes time to develop</td>
</tr>
<tr>
<td></td>
<td>Puppet shows</td>
<td>• Specific messages can be tailored to specific groups</td>
<td>• Requires specialist skills</td>
</tr>
<tr>
<td></td>
<td>Meetings and presentations</td>
<td>• Brings an element of fun through the use of street theatre and puppet</td>
<td>• Potential high costs depending on the size of production</td>
</tr>
<tr>
<td></td>
<td>Peer support</td>
<td>shows</td>
<td>• Is risky during highly infectious disease outbreaks, when crowds may enhance disease</td>
</tr>
<tr>
<td></td>
<td>Workplace communications</td>
<td>• Sensitive issues can be tackled through role plays</td>
<td>exposure and transmission</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mass media</td>
<td>Radio, TV, newspapers</td>
<td>• Wide coverage</td>
<td>• Low coverage for the rural poor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Low cost per person targeted</td>
<td>• Expensive to make and broadcast</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Existing programmes are used to reach a captive audience</td>
<td>• Low interactivity</td>
</tr>
<tr>
<td>Use of devices</td>
<td>Text messages from phone</td>
<td>• Widely used</td>
<td>• If unplanned, may overwhelm the originator of message in responding to queries</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cheaper than phone calls</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• There are programs that allow for wide distribution of messages</td>
<td></td>
</tr>
</tbody>
</table>
Note

If severe outbreak of influenza or other communicable diseases transmissible through close personal contact has been announced in your area, DO NOT use any communication method that brings people close together because the virus spreads easily in crowds.

When there is no local outbreak (before influenza arrives, or in between outbreaks), these kinds of activities are possible.

However, whatever time and whenever possible, people should meet outside in a non-crowded location and everyone should be instructed to cover their coughs and sneezes.

Adapted from H2P Humanitarian Pandemic Preparedness
MODULE 5
Protection of the community health worker

Objectives of Module 5

Upon completion of Module 5, participants will be able to:

1. describe the risks of CHWs acquiring influenza during their work as CHWs
2. list the most important infection control behaviours during the course of a CHW’s work
3. describe the types of personal protective equipment that can be used by the CHW
4. identify who should NOT serve as CHW during a local outbreak.

5.1 The most important infection control behaviours for the CHW

- Protect yourself from other peoples’ coughs and sneezes
- Wash your hands
- Keep your distance
- Don’t touch, unless necessary

5.2 Personal protective equipment that CHWs can use to protect themselves

Using masks

CHWs can wear masks, if available, when taking care of patients. Patients and people with symptoms can also wear masks (if available) as a way to cover their coughs and sneezes. Whatever type of mask or protection is used, it must be removed immediately after caring for a patient. The following steps should be followed when a mask is used by the CHW:

- Tie the mask at the back of the neck and towards the top of the head. Please see the figure on how to put on mask.

- Wash your hands before removing your mask. Untie the bottom strings first and the top strings next. Holding the mask by the strings only, either dispose of it or store it for washing, as indicated below. Once a mask has been removed, do not put it back on.

- If the mask is disposable, throw it away carefully and properly in a place where no-one will handle it again. If it is reusable (such as a home-made mask), wash it in soap and water and let it dry completely, preferably in the sun.
Always wash hands after handling a used mask or face cloth.

Carry a bag in which to store used masks until they can be cleaned, and treat the bag as contaminated material.

**HOW TO PUT ON A MASK**

**Using gloves**

If the CHW has a supply of medical gloves they can be used when coming in contact with sick people's body fluids, blood, or respiratory fluid (mucus, or moisture produced by sneezing and coughing). The steps below describe how to remove gloves safely after they are used:

- Avoid touching the outside of either glove with your skin.
- Pinch the inside of one glove and remove it down to the knuckles. The glove will start to turn inside out. Use the partially gloved hand to carefully pull the other glove down to the knuckles on the other hand. Then pull each glove off using the gloved fingertips of the other hand. Try not to snap the gloves, as this can spread germs.
- Throw away the gloves properly, where no one will handle them again.
- Wash hands after taking off the gloves and disposing of them.
5.3 Disinfection

Household cleaning

When cleaning the house, it is better to use a damp mop or cloth rather than a dry broom. For general cleaning purposes, use water and plain soap or detergent with a damp cloth.

Dishes and laundry

All dishes used by the patient should be washed with water and soap or detergent. Wash clothes with water and soap, by hand or using a washing machine. Let clothes dry by the usual means (e.g. hang in the sun). Soiled handkerchiefs (if handkerchiefs are used) and bedding should be kept away from other people until they have been washed.

For laundry soiled with human waste or grossly contaminated with secretions

Remove as much human waste (e.g. faeces) and secretions as possible before washing the clothes. Dispose of the waste in the safest way possible so as to avoid contact with other people. Wash hands after this manipulation. If the soiled laundry is washed by hand, wear protection (e.g. rubber gloves or plastic bags on the hands). Wash clothes with soap or detergent and water, and dry by the usual means.

AND DON’T FORGET: WASH YOUR HANDS !!!!

This simple action will protect the CHW by removing the influenza virus from the hands, especially after examining a patient, or getting the virus on the hands through other means. Hands must be washed with soap for 40 to 60 seconds, and rinsed appropriately. Remember that if the towel you are using to dry your hands is not clean,
you may be contaminating your hands again. CHWs should wash their hands before and after every visit with a sick person, and should also wash their hands whenever they have a chance throughout the day.

5.4 Hand hygiene

How to Handwash?

**WASH HANDS WHEN VISIBLY SOILED! OTHERWISE, USE HANDRUB**

**Duration of the entire procedure:** 40-60 seconds

1. **Wet hands with water;**
2. **Apply enough soap to cover all hand surfaces;**
3. **Rub hands palm to palm;**
4. **Right palm over left dorsum with interlaced fingers and vice versa;**
5. **Palm to palm with fingers interlaced;**
6. **Backs of fingers to opposing palms with fingers interlocked;**
7. **Rotational rubbing of left thumb clasped in right palm and vice versa;**
8. **Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;**
9. **Rinse hands with water;**
10. **Dry hands thoroughly with a single use towel;**
11. **Use towel to turn off faucet;**
12. **Your hands are now safe.**

**World Health Organization**

**Patient Safety**

**SAVE LIVES**

Clean Your Hands

May 2009
MODULE 6

A framework for monitoring and reporting of influenza outbreak preparedness and response activities

Objectives of Module 6

Upon completion of Module 6, participants will be able to:

1. identify the objectives for monitoring and reporting of community case management activities
2. develop a draft plan to guide the reporting and monitoring of activities
3. identify the forms to be used for reporting and monitoring
4. complete a draft monitoring form, if available.

6.1 Objectives of monitoring and reporting of CCM activities

The objectives of monitoring can be to:

- assess if the sick people are getting appropriate and enough treatment
- identify the case load
- monitor the spread of disease geographically, or by special risk group, to help develop further prevention methods
- ensure that there will be enough supplies of medications and other equipment during an outbreak
- identify further needs of the region/district in terms of personnel, supplies, activities, etc., to prevent the spread of infection, and prevent disease-related mortality.

6.2 What information to monitor

Examples of information to collect for preparedness for influenza outbreak:

- number of trained CHWs in the region/district on influenza
- availability of different channels of health education (mass media, community, interpersonal) in the region/district
- number and extent of health education activities conducted by CHWs (or by other resources)
- coverage of the region with community education on key messages
- availability of resources (figures on stocks of medication, equipment, etc.).
Examples of information to collect during an outbreak of influenza:

- total number of ILI cases, acute respiratory infection (ARI) cases, and deaths
- new ILI cases, ARI cases, and deaths per time period
- number of new referrals (e.g. number of cases referred to a health facility)
- total number of referrals
- total number (or logs of) medication dispensed, by category (e.g. antibiotics, ORS packages, antimalarials).