Integrated diseases Guidebook

For community healthcare worker

Produced by

Malaria Free Mekong, A Platform of Communities and Civil Society Organization

This guidebook has collected data from in-depth consultations and collaboration with regional malaria civil society organizations in the Great Mekong Sub-region countries; Thailand, Myanmar, Laos, Cambodia, and Vietnam.

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DISCLAIMER

This guidebook is intended to be used in combination with the Integrated Disease Management Pocketbook

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INTEGRATED DISEASE MANAGEMENT GUIDEBOOK

PURPOSE OF THE GUIDEBOOK

In supporting the goal of the Regional Artemisinin-resistance Initiative to Elimination (RAI2E), and the goals of each national malaria control and elimination program, the Regional Malaria CSO Platform, GMS has a unique opportunity to strengthen community systems and generate guidance for delivering high quality community-based health services.

Using data and feedback collected during the 8-9 July 2019 regional consultation in Bangkok, the Platform gained valuable insight into the health concerns of various malaria affected populations. Country representatives shared a list of health conditions relevant to their country context, and relevant to the different population sub-groups including those engaging in varying occupations, from different ethnic groups, speaking different languages and living within varying levels of human and health security. The collected evidence demonstrated similarities in the needs of each country and became the foundation for this Integrated Disease Management Guidebook.

The purpose of this Integrated Disease Management Guidebook is to act as a minimum standard and reference tool for community-based disease management. It aims to support community health workers to understand and apply the basic knowledge of causation, signs and symptoms, prevention, testing, treatment and care within their work environment, recognizing the varying social, cultural, financial and geographical differences that exist between and within communities.

INTENDED AUDIENCE

This guidebook has been developed as an aid to support with the training of community health workers and volunteers across Cambodia, Lao PDR, Myanmar, Thailand and Viet Nam, as well as a detailed reference for any project managers, community health workers or volunteers who may wish to improve their understanding of the included diseases.

The roles, responsibilities and structures differ across and within each country, so it is important to understand context-specific health service delivery modalities before implementing any activities directed by this guidebook.

Overview of Modules

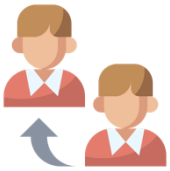
This Integrated Disease Management Guidebook contains background information on seven diseases. These seven diseases include malaria, HIV/AIDS, tuberculosis, dengue, malnutrition, diarrhoeal disease and respiratory tract infections. Each disease is separated into a separate module.

Each module includes the following components:

- General overview of the disease
- Causes or transmission
- High-risk groups and risk behaviors
- Signs, symptoms and danger signs
- Prevention
- Testing
- Treatment and Care
- Key Actions

You will also see some key symbols throughout the document. These include:

Referral
Refer to the nearest health center



Important
This is important to remember

National Guidelines
Consult your national guidelines

Danger Sign
This is severe. Refer immediately

Ethics and Confidentiality

As a community health worker, your community places their trust in you to provide support and listen to their concerns. As such, community members should be afforded a high level of respect, privacy and confidentiality. You should request consent from community members before providing a service. Any personal information that you collect during your work should be protected to prevent accidental loss or disclosure. You should consider the following statements before taking any action:

- Did the patient request or agree for you to provide your services?
- Do you actually need to collect or share personal information?
- Do you have a secure way to transport and store personal or confidential information?

KEY MESSAGES

- You should ask for consent from patients before providing care or collecting information.
- Never share any personal information from your work to other people.

INFECTION PREVENTION AND CONTROL

PERSONAL PROTECTION

As a community health worker, you may come in contact with infectious diseases. To protect yourself, you need to become familiar with how to prevent exposure. Personal protective equipment (PPE) should be worn when working with patients, and you should adopt good personal protection behaviors. Important points to remember include:

1. **Follow proper hand washing procedures before, after and between each patient.**

Hand washing is one of the best ways to minimize the risk of getting or spreading infection. By removing disease-causing material from your hands, you avoid infecting yourself when touching your eyes, nose, or mouth. You also avoid contaminating common objects (e.g., phones, books, and doors) and infecting others. Follow proper hand washing procedures for at least 20 seconds using soap and clean water. If water is not available, use an alcohol-based hand sanitizer that has at least 70% alcohol. Follow the step-by-step handwashing method below:

2. **Use personal protective equipment (including gloves and face masks)**

To protect yosurself and others, you need to become familiar with how to prevent exposure to infection. Personal Protective Equipment (PPE) should be worn when providing health services. Further, you must handle all body fluid materials as if they were infectious. No blood or body fluid should come in contact with you or other people.

KEY MESSAGES

- Personal protective equipment (PPE) should always be worn when supporting patients.
- Wash hands before, after and between all patients.

Face masks

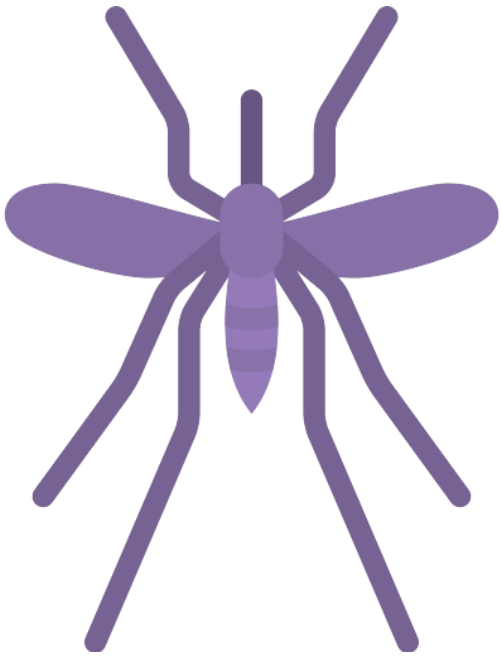
Face masks should be worn during healthcare procedures, particularly if patients have symptoms of coughing or sneezing. They can be worn by you and by the patient. Masks are designed to prevent infections by catching bacteria in liquid droplets from the wearer's mouth and nose. Masks also create an additional barrier which limits the contact between your hands and face. Instructions for putting on and removing face masks are included in the image below:

Gloves

It is important to remember that wearing gloves is not a substitute for washing your hands. You should always wash your hands before putting on gloves. You should also always change your gloves anytime that you would normally need to wash your hands. Instructions for putting on and removing gloves are included in the images below:

Module 1:

MALARIA



General

Malaria is a disease caused by a parasite and carried from person to person by the *Anopheles* mosquito. Malaria can make people very sick and can lead to death. Although malaria cases are decreasing each year, there is still a risk of infection in many communities across Cambodia, Lao PDR, Myanmar, Thailand and Viet Nam.

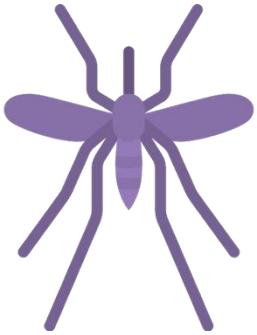
Transmission

Vector: Malaria parasites are transmitted from human to human through the bites of female *Anopheles* mosquitoes. Therefore, it is important to avoid mosquito bites.

Species: There are five main species of malaria parasites. The two most common are *Plasmodium falciparum* (Pf) and P*lasmodium vivax* (Pv). The most serious type of malaria is caused by the *Plasmodium falciparum* (Pf) parasite.

Biting: When a mosquito bites an infected person, it takes a small amount of blood containing the parasites. These parasites then multiply inside the mosquito. The next time that the mosquito bites someone else, it injects some of the malaria parasites into the new person.

Favorable Conditions for Transmission: The mosquito carrying malaria normally bites people at night between dusk (sunset) and dawn (sunrise). In the GMS, most biting occurs outdoors. Mosquitoes that transmit malaria are normally found in clean, unpolluted water and rivers, swamps and rice fields, as well as shaded forests and plantations. Transmission changes according to many factors including rainfall patterns, temperature and humidity. In many places across the GMS, the malaria transmission is higher during and just after the rainy season.



KEY MESSAGES

- Malaria is transmitted to humans through the bites of infected mosquitoes.
- The two main species of malaria are *falciparum* (Pf) and *vivax* (Pv).
- In the GMS, most biting occurs outdoors at night.

Risk Groups and Risk Behaviors

Some population groups are at a much higher risk of contracting malaria and developing severe disease. These populations include infants, children under 5 years of age, pregnant women, as well as migrants, mobile populations and travelers. Populations living or working in remote communities or near densely forested areas are also at increased risk of contracting malaria.

In the GMS, particular behaviors have also been identified to increase the risk of infection. This includes people who travel to forests for collecting fruits and mushrooms, cutting timber, hunting, or for the purpose of crossing international or provincial borders, as well as people who work outside during the night, including plantation workers who are avoiding the heat.

The key risk groups are:

KEY MESSAGES

- All people are at risk of malaria.
- People who live or travel near forests or plantations where mosquitos are likely to breed are at higher risk.

Signs and Symptoms

The symptoms of malaria normally develop within 10 days after being bitten by an infected mosquito. The first symptoms may be mild and may not match the typical symptoms of malaria. With some types of malaria, the symptoms occur in 48-hour cycles. During these cycles, people feel cold at first with some shivering. They then develop a high temperature, with severe sweating and fatigue. These symptoms usually last between 6 and 12 hours. Some people can also have malaria without showing any symptoms.

A malaria infection is generally characterized by the following signs and symptoms:

Fever

Chills

Headache

Nausea and vomiting

Muscle pain

Sweating

If you observe any of the following danger signs, immediately refer to the nearest health center.

Jaundice (yellow skin)

Convulsion

Bleeding

Difficulty breathing

Impaired consciousness

KEY MESSAGES

- Malaria frequently causes fever, chills and a headache.
- Symptoms can occur in 48 hour cycles.

PREVENTION

Long-lasting insecticidal nets (LLIN) are an effective method for preventing mosquito bites. Individuals should always sleep under a treated net and ensure that they are properly fitted and used inside their homes. It is also recommended that babies and infants stay under mosquito nets when indoors. The chemicals in LLINs normally last for 3 years, washable 20-30 times. After 3 years they should be replaced or treated with new chemicals. If any holes are found, it is important to repair them immediately.

Long-lasting insecticidal hammock nets (LLIHN) are a useful alternative to LLIN, particularly for risk groups who spend time sleeping outdoors in high transmission areas including forests or plantations. This includes forest goers, military, border patrol authorities and some agricultural workers. The chemicals in LLIHNs typically last for 3 years. After 3 years they should be replaced or treated with new chemicals. If any holes are found, it is important to repair them immediately.

Use a repellent that contains DEET, picaridin or oil of lemon eucalyptus (OLE). Products with DEET generally provide longer protection. Apply repellent to skin that is not covered by clothing, especially wrists and ankles. Always follow product directions and reapply as directed. Avoid ingestion or applying repellent to hands, eyes and mouth areas.

Wearing clothing that covers skin will not completely protect against mosquito bites, but it can help in preventing bites when used along with other careful prevention methods. Clothing that covers the body and worn after dark will lower the risk of being bitten.

Indoor residual spraying (IRS) may be an option in your area to control mosquitoes. This involves the spraying of insecticide on the interior walls of homes or other buildings to kill mosquitoes, which then interrupts malaria transmission. Contact your nearest health authority to organise IRS in your community.

KEY MESSAGES

- Sleeping under a long-lasting insecticidal net is the best way to prevent malaria.
- Behavior changes include wearing repellent and long clothing when outdoors.

TESTING

Fast and accurate diagnosis of malaria is part of effective disease management. There are normally three methods for finding malaria cases.

- **Passive case detection**: people will come to you with or without signs and symptoms
- **Reactive case detection:** you target testing around previous positive cases
- **Proactive case detection:** you go to transmission areas and test all at-risk people

Diagnosis based on signs and symptoms alone is not accurate. Diagnosis must be based on the detection of parasites in the blood. At the village level, the majority of patients will be diagnosed based on your observation of their symptoms, a simple history taking and blood examination by using a rapid diagnostic test (RDT).

Step 1: Observe signs and symptoms and take a travel history	Yes	No
Does the patient have a fever?		
Does the patient have chills and/or a headache?		
Does the patient live in a malaria transmission area?		
Has the patient travelled to a forest, plantation or other village?		
Has the patient been near or travelled with another malaria case?		

Step 2: Test using a rapid diagnostic test (RDT)

Signs and symptoms of malaria are not specific enough for a diagnosis of malaria, or to determine the type of malaria. If any of the above questions are answered 'yes', test the patient using a rapid diagnostic test (RDT).

Procedures for conducting an RDT are found on the next page. If cases are found to be positive, continue to provide treatment according to national guidelines.

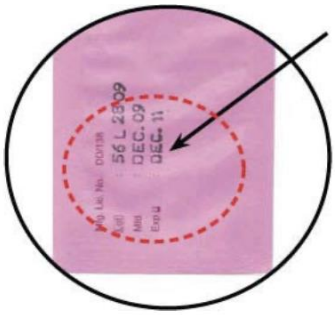
If you are unable to conduct a rapid diagnostic test (RDT), refer the patient to the nearest health center for testing.

KEY MESSAGES

- Malaria can be confirmed using a rapid diagnostic test (RDT) or by referring for testing.
- All suspected malaria cases should be diagnosed and treated within 24 hours.
- Severe malaria cases should be referred to the nearest health center.

RAPID DIAGNOSTIC TEST (RDT) INSTRUCTIONS

1. Check the expiry date of the RDT kit



2. Put on gloves before opening the RDT kit

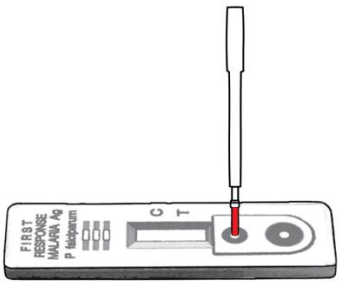
3. Write patient's name on the RDT

4. Clean the 4th finger on the patient's left hand and allow to dry

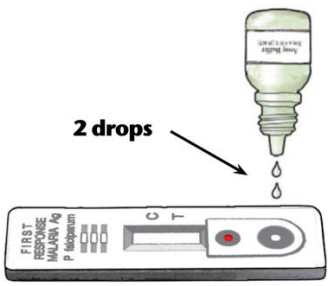
5. Prick patient's finger to get a drop of blood

6. Gently squeeze a drop of blood onto the pipette

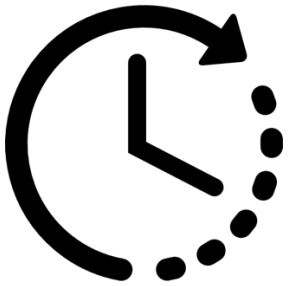
7. Touch the tip of the pipette to the small round hole on the RDT to transfer the blood



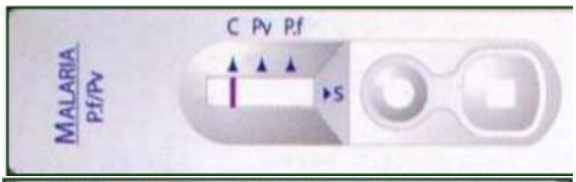
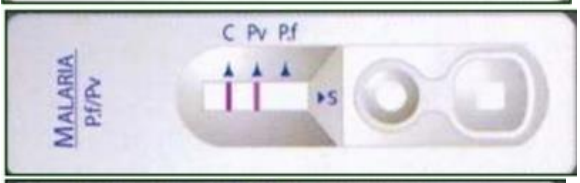
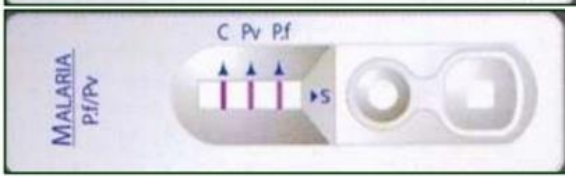
8. Put two drops of diluent into the large round hold

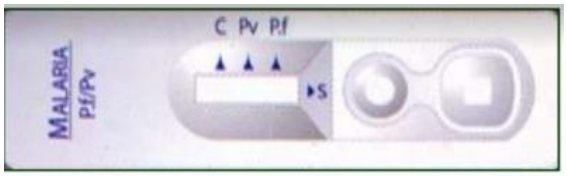
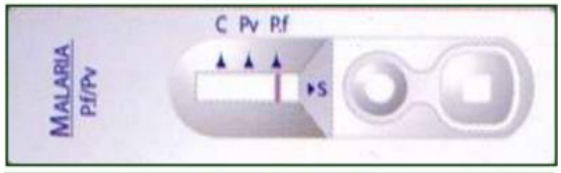
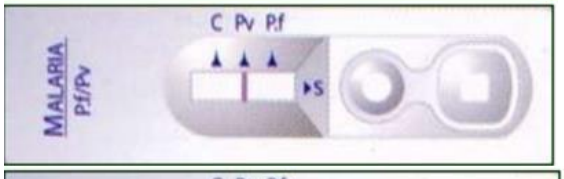
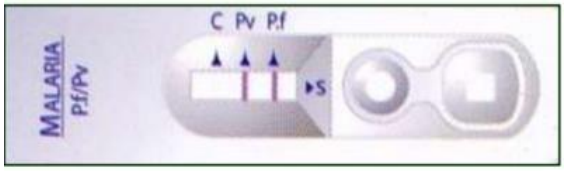


9. Wait 15-20 minutes before reading the results



RESULTS

Valid RDT Observation	Description	Result
	Band appears next to C only	Negative
	Band appears next to C and Pf	Positive for Pf
	Band appears next to C and Pv	Positive for Pv
	Band appears next to C, Pf and Pv	Positive for Pf and Pv

Invalid RDT Observation	Description	Result
	No bands	Invalid*
	Band appears next to Pf only	Invalid*
	Band appears next to Pv only	Invalid*
	Band appears next to Pf and Pv only	Invalid*

If the test result is invalid, you should test the patient again using a new RDT kit

Treatment and Care

Early diagnosis and treatment of malaria can reduce severity and prevent death. It also contributes to reducing malaria transmission. The best available treatment is artemisinin-based combination therapy (ACT). After confirming the diagnosis by RDT and/or microscopy, the patient should be immediately given treatment with effective and quality antimalarial drugs and supported to complete all medicine.

Refer to national guidelines for malaria treatment.

Treatment Adherence

You can support malaria patients during their treatment and for a period following treatment to ensure that the parasite is cleared from their blood. Make sure that the entire course of medication is taken by the correct person, in the correct dose, at the correct time, and for the complete period. This will prevent ongoing transmission in the community and prevent the development of drug resistance.

The basic tasks to complete treatment adherence in your community include:

- Arrange for a time and place that meets the needs of you and your patient. If you cannot find a convenient time, try to identify a family or community member to provide support.
- Assist the patient with taking all medicine.
- Observe the patient to ensure that pills are being taken on the correct day.
- Ask the patient about bad reactions from medicines and report any to the health center.
- Look for possible signs that patients did not take medicine (e.g. missing packet, not swallowing).
- Provide ongoing education about malaria.

Before starting treatment for Pv, G6PD testing may be required. Refer to national guidelines to understand when to conduct a G6PD test.

KEY MESSAGES

- Malaria is curable.
- Malaria treatment should be started immediately following a positive test result.
- Do NOT discontinue treatment (taking medicine) even if feeling better.
- Pregnant women should be referred to the nearest health center before treatment.

KEY ACTIONS

As a community health volunteer, you have an important role to support your community to eliminate malaria. Key actions that you can take include:

- Educate your community about how to recognise the signs and symptoms of malaria.
- Promote the use of long-lasting insecticidal nets (LLIN) and other prevention methods.
- Ensure anyone with a fever is tested for malaria by RDT or through referral to the nearest health center.
- Participate in LLIN distribution and replacement campaigns in your community and demonstrate how to use them correctly.
- Ensure that anyone on malaria treatment finishes all medicine according to your national treatment guidelines.
- Ensure that anyone who continues to have fever or other malaria symptoms while on treatment goes back to the health center.
- Support health staff with conducting reactive and active case detection.

Module 2:

HIV/AIDS

General

HIV and AIDS are different. Human immunodeficiency virus (HIV) is a virus that infects cells of the human immune system. There are approximately one million people across Cambodia, Lao PDR, Myanmar, Thailand and Viet Nam who are living with HIV. HIV attacks and kills the infection-fighting cells of the immune system. The immune system is considered deficient when these cells are reduced below a certain level and can no longer fight off other infections and diseases. People with damaged immune systems are much more vulnerable to a wide range of infections that are rare among people without immune system problems. Acquired immunodeficiency syndrome (AIDS) is the collection of symptoms and infections that result from HIV badly damaging the immune system.

Transmission

HIV can be found in body fluids, such as blood, semen, vaginal fluids and breast milk. HIV is transmitted through penetrative sex (vaginal or anal), sharing contaminated needles in health-care settings or drug injection, and between mothers and infants during pregnancy, childbirth and breastfeeding.

Sexual transmission

HIV can be transmitted through sex (vaginal or anal). Transmission through anal sex has been reported to be 10 times higher than by vaginal sex. A person with an untreated sexually transmitted infection (STI), is also much more at risk to transmit or contract HIV during sex.

HIV is not transmitted by:

- Touching
- Mosquitoes
- Sweat or tears
- Coughing
- Food and water
- Air
- Toilet seats
- Sharing clothes

Transmission through sharing of needles and syringes

Re-using or sharing needles or syringes is a high-risk way of transmitting HIV, as well as other infections. It is important to note that sharing needles and syringes is not the only risk. Sharing water to clean injecting equipment, reusing containers to dissolve drugs and reusing filters can also transmit HIV.

Mother-to-child transmission

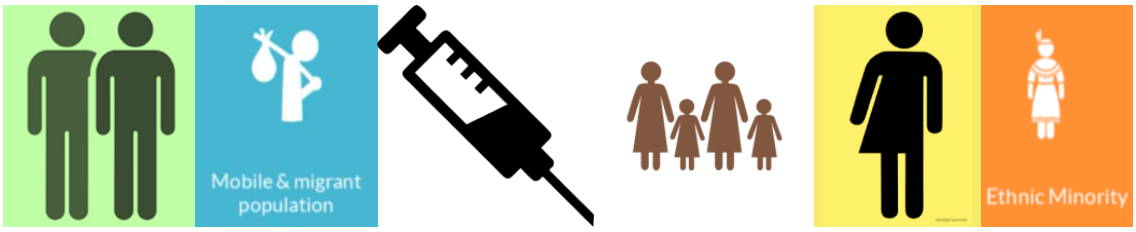
HIV can be transmitted to an infant during pregnancy, labour and delivery. Transmission from mother to child after birth can also occur through breastfeeding.

KEY MESSAGES

- HIV and AIDS are different. HIV is a virus and AIDS is a set of symptoms.
- HIV can be found in body fluids such as blood, semen, vaginal fluids and breast milk.
- HIV is transmitted through penetrative sex (vaginal or anal), sharing needles, and between mother and infant during pregnancy, childbirth and breastfeeding.

Risk Groups and Risk Behaviors

All people are at risk of HIV infection. However, there are some 'key populations' who are at a much higher risk of transmitting or contracting HIV. These groups include people who inject drugs, men who have sex with men, transgender persons, sex workers, migrants and prisoners. These populations account for most of the new HIV infections in the GMS. Other important populations to support due to health access barriers include ethnic minority groups, women and girls, and migrants.



You can conduct a simple risk assessment by asking high risk groups the following questions:

Step 1:	Yes	No
Have you ever had an HIV test?		⚠

If they answered 'no' to the above question, you should recommend that they are tested for HIV.

If they answered 'yes' to the above question, you should ask additional questions below to check their risk of infection.

Step 2:	Yes	No
Since your last HIV test have you had sex without a condom?	⚠	
In the last 12 months, have you had a sexually transmitted infection (STI)?	⚠	
Since your last HIV test have you exchanged sex for something you needed?	⚠	
Since your last HIV test have you had sex with a person who is HIV positive?	⚠	
Since your last HIV test have you injected drugs?	⚠	
If you injected drugs, did you share needles or other equipment?	⚠	
Since your last HIV test have you had sex with a person who injects drugs?	⚠	
Are you a man who has had sex with another man (MSM)?	⚠	

If they answered 'yes' to any of these questions, you should recommend that they are tested for HIV.

KEY MESSAGES

- HIV infection can occur during sex without a condom with an HIV-positive person.
- Key populations including people who inject drugs, men who have sex with men, sex workers, migrants and prisoners are at a higher risk of contracting HIV.
- Having an STI can increase the risk of transmitting HIV.

Signs and Symptoms

There are 3 stages of HIV infection: acute infection, no-symptom period, and symptom period.

Stage 1: Acute infection

About 2 to 6 weeks after infection, people may have a flu-like illness. Symptoms can last a few days or several weeks. Some people do not have any symptoms at all during this stage of HIV. Common symptoms, which are often flu-like, include:

Fever

Chills

Rash

Night sweats

Headache

Sore throat

Stage 2: Asymptomatic (without symptoms) period

In the second stage, most people will not have any signs or symptoms. This stage can last for many years. A person may look and feel well, but HIV is continuing to damage their immune system.

Stage 3: Symptomatic (with symptoms) period and AIDS

In the third stage, people are more likely to get serious infections or diseases that people without HIV would normally be able to fight off. Symptoms will worsen over time. They include:

Fatigue

Swollen glands

Rapid weight Loss

Night sweats

Fever

Unexplained bruises or spots

If you observe any of the following danger signs, immediately refer to the nearest health center.

Unexplained bruises or spots

Severe, long lasting diarrhoea

Memory Loss or Confusion

Rapid Weight Loss

Extreme tiredness all the time

PREVENTION

HIV infection can be prevented. This includes methods for preventing sexual transmission, transmission by needles and syringes, and transmission between mother and child. The most important thing to remember is that a person living with HIV who is taking effective antiretroviral therapy (treatment) and has reduced the virus amount in their blood, can no longer transmit HIV to another person, including unborn and newborn children.

Safe sex including consistent and correct use of condoms is the most affordable and accessible method of preventing sexual transmission of HIV. When used correctly, condoms are a proven and effective way of preventing HIV infection among both women and men. Incorrect use can lead to condom slip or breakage, which reduces their protective effect.

Pre-exposure prophylaxis (PrEP) is medicine that HIV-negative people can take to prevent contracting HIV infection. When taken as recommended, PrEP can almost eliminate the chance of getting HIV. PrEP is recommended for populations who are at higher risk of HIV infection. These groups may include men who have sex with men, sex workers and people who inject drugs.

Post-exposure prophylaxis (PEP) is medicine that can be started within hours of possible HIV exposure. If the medication is started quickly (ideally within 2 hours) after possible HIV exposure, then it can be beneficial in preventing HIV infection. It must be taken for approximately 4 weeks. The patient should also receive counselling.

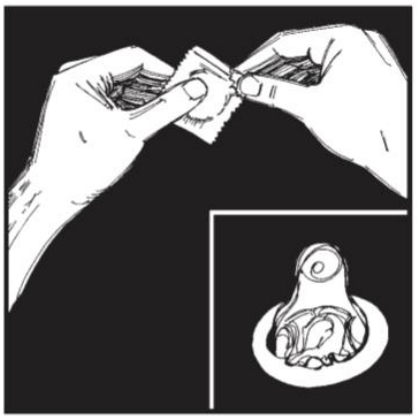
Harm reduction for injecting drug users is a proven way to limit HIV transmission. Injecting drug users should receive new, clean needles and syringes and never share with another person. Even if they know another drug user well, they must not share.

Reducing discrimination about HIV and HIV-affected populations will contribute to a reduction in HIV transmission, as well as increasing early testing and treatment. You can lead discrimination reduction activities by advocating for inclusion of all people in health systems, making your community aware of the facts about HIV, avoiding language that may offend or exclude people, and ensuring that your community respects the rights of all people.

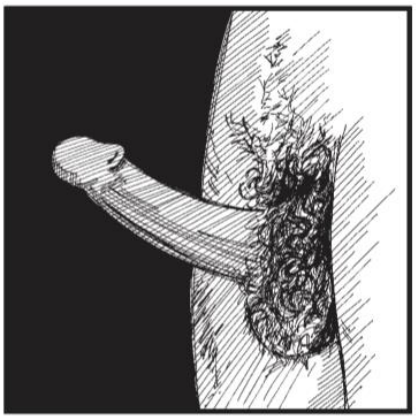
KEY MESSAGES

- HIV infection can be prevented.
- It is important that people know their HIV status to prevent onward transmission.
- Condom use is the most affordable and accessible method of preventing HIV transmission.

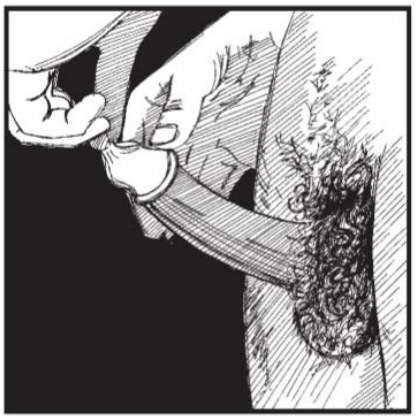
MALE CONDOMS



1 Check the expiry date, then open the sachet. Take care not to rip the condom inside. Make sure the tip of the condom is pushed through the outside of the coiled ring.



2 Ensure the penis is erect. If necessary, pull back the foreskin.

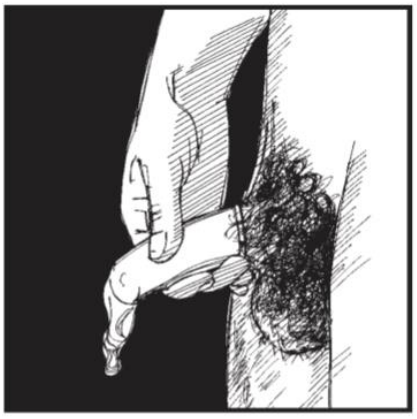


3 Pinch the tip of the condom and place the ring over the head of the penis.

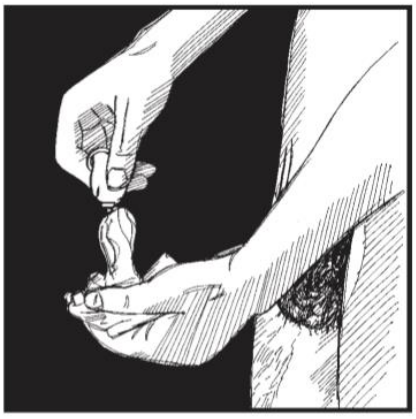
4 Unroll the condom to the base of the penis. The tip of the condom is left exposed to collect semen.

5 Smooth out air bubbles before inserting the penis into the vagina or anus.

6 Always use a condom for anal as well as vaginal intercourse.



7 After intercourse, carefully remove the condom from the penis, ensuring no semen is spilt.

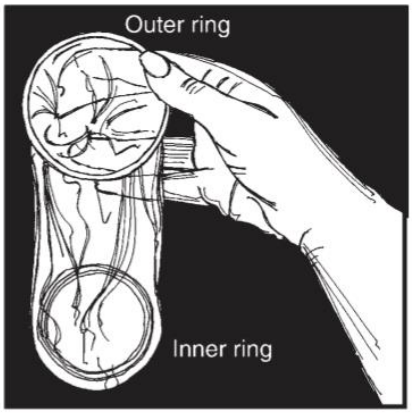


8 Tie a knot in the condom and collect in a tissue or another disposable material.

9 Place the wrapped condom into a sealed bin, or bury if no bin is available. Wash your hands.

FEMALE CONDOMS

1 After checking the expiry date, open the sachet, taking care not to rip the condom inside. Do not use scissors or a knife.



2 The outer ring covers the area around the opening of the vagina. The inner ring is used for insertion and to help hold the sheath in place during intercourse.

3 Hold the condom at the closed end and grasp the inner ring.

4 Squeeze the ring with the thumb and the second or middle finger so that it becomes long and narrow.

5 Insert the inner ring into the vagina. Feel the inner ring expand and move into place. Place the index finger inside the condom and push it as far as it will go.

6 The outer ring remains outside the vagina.

7 Guide your partner's penis into the condom, taking care that it does not enter your vagina between the condom and the vaginal wall.

8 To remove the condom, twist the outer ring to seal the semen inside and gently pull the condom out of the vagina.

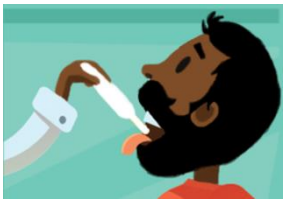
9 Place the condom into a tissue or another disposal material and thow away into a sealed bin. Do not dispose of the condom down a flush toilet. Wash your hands.

TESTING

The only way to know if you have HIV is to get tested. In some communities, it may be possible to provide community-based counselling and testing to increase the number of people who know their HIV status. It is important to note that it can sometimes take up to 3 months after infection for HIV in the patients' blood to be detectable in a HIV test. During this time, they can still transmit HIV to another person. Therefore, regular testing is required.

Consult your national guidelines for rules and regulations about community-based HIV screening and counselling.

COMMUNITY SCREENING – RAPID ORAL TEST



1. An oral swab is swiped between the teeth and upper and lower gum. The swab should be swiped no more than once.
2. The swab is placed in a buffer solution for 20 minutes
3. If the results window has one line, the test is suspected negative. If the window has two lines, the test is suspected positive.

COMMUNITY SCREENING – RAPID BLOOD TEST

1. Clean the finger with an antiseptic wipe
2. Prick the end of the finger and draw a drop of blood into the tube
3. Place the tube into a buffer solution
4. Pour the buffer and chemicals into the membrane. Wait 20 minutes.
5. If the membrane has one dot, the test is suspected negative. If the membrane has two dots, the test is suspected positive

Regardless of the HIV community screening result, you should refer the patient to the nearest health center for confirmatory testing.

COUNSELLING

Any HIV test must also include counselling. Counselling sessions are to help the patient understand their risk, and for you to tailor your services according to their specific needs.

- Pre-test counselling is performed in a private space. Anything discussed must remain confidential. You should discuss their exposure, any risky sexual or recreational drug practices, explain the difference between HIV and AIDS, and provide information on how the test is performed, and what the potential results mean.
- Post-test counselling is always performed, no matter of the test result. This should be performed in a private space and anything discussed must remain confidential. Post-test counselling is to help the patient understand what their results mean. If positive, you should discuss how to get treatment and prevent further transmission. If negative, you should discuss risk and prevention behaviors.

TREATMENT AND CARE

There is no cure for HIV. However, there is effective treatment. If treatment is started quickly and taken regularly, it can result in a quality life for someone living with HIV that is similar to that expected in someone who does not have HIV. The medicines used to treat HIV infection are called antiretroviral medicines. When a person living with HIV is on effective treatment, after some time they are no longer infectious.

Consult your national guidelines for rules and regulations about HIV treatment. HIV treatment should only be taken as prescribed by a medical professional.

People living with HIV should start antiretroviral treatment immediately. Treatment works by keeping the level of HIV virus in the body (viral load) low and undetectable by standard blood tests. This allows the immune system to recover and stay strong. Keeping the viral load low also helps to prevent HIV being passed on.

Medical professionals will discuss the best treatment plan with the community member. Your role is to support them throughout their treatment.

TREATMENT ADHERENCE FOR REDUCING HIV VIRAL LOAD

It is important to take treatment correctly – the right dose, at the right time, with or without food. In most cases, this means taking a pill every day.

During the first few months of starting treatment, you should support them to take their medicine correctly, and provide continuing health education. Important actions include:

- Arrange for a time and place that meets the needs of you and your patient. If you cannot find a convenient time, you can ask a family or community member to help.
- Ask the patient about bad reactions from medicines and report any to the health center
- Look for signs of not taking medicine (e.g. missing packet, not swallowing) or for signs that symptoms are returning.
- Assist with referral for regular HIV virus level testing and monitoring for other complications.

KEY MESSAGES

- Treatment adherence allows people with HIV to live just as long as people without HIV.
- It is not possible to know if the virus level is low based on how someone feels. The only way to know if the virus level is low is by regular testing at a health center.
- People with a low viral load can not transmit HIV to other people through sex.

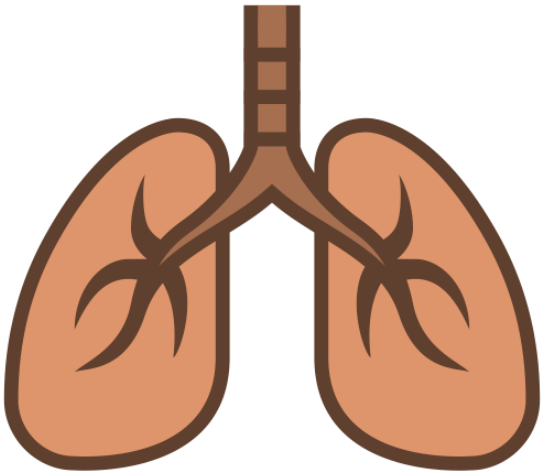
KEY ACTIONS

As a community health worker, you have an important role to support your community to end HIV. Key actions that you can take include:

- Teach community members how to prevent the spread of HIV.
- Identify locations where condoms are sold or available and inform your community where to find them.
- Build a relationship with high risk communities including men who have sex with men, sex workers, people who inject drugs and migrant populations.
- Identify HIV testing centers and encourage community members to know their HIV status.
- Refer people to go to a health center if they think they have HIV.
- Support HIV patients during the first few months of their treatment.
- Encourage pregnant mothers to be tested for HIV.
- Encourage mothers with HIV to discuss breastfeeding and replacement feeding with a doctor.
- Encourage people with tuberculosis (TB) to get tested for HIV, and people with HIV to get tested for TB.

Module 3:

TUBERCULOSIS

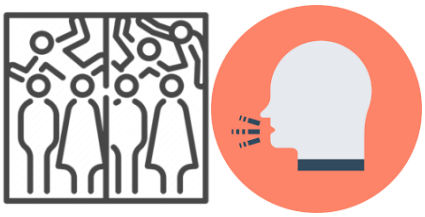


General

Tuberculosis, or TB, is a preventable and curable bacterial disease that can settle anywhere in the body, but most often in the lungs. TB occurs in every part of the world. TB is categorized as latent TB (non-infectious) or active TB (infectious). About one-quarter of the world's population has latent TB, which means people have been infected by TB bacteria but are not (yet) sick with the disease and cannot transmit the disease. In 2018, the largest number of new active TB (symptomatic and transmissible) cases occurred in the South-East Asia region (inc. Myanmar and Thailand), with 44% of new global cases, followed by the Western Pacific Region (inc. Cambodia, Lao PDR and Viet Nam) with 18% of new global cases.

Transmission

Most people with a TB infection who have a healthy immune system will never become sick and can not spread TB bacteria to other people. Some people with a TB infection can be become sick, this is called active TB disease. Active TB disease develops when the immune system can no longer fight the TB germs.



TB bacteria are spread through the air from one person to another. The TB bacteria are put into the air when a person with active TB disease coughs, sneezes, spits or speaks. People nearby may breathe in these bacteria and become infected. When a person breathes in TB bacteria, the bacteria can settle in the lungs and begin to grow. From there, it can move through the blood to other parts of the body, such as the kidneys, spine, and brain.

Active TB disease in the lungs or throat can be infectious. This means that the bacteria can be spread to other people. TB in other parts of the body, such as the kidney or spine, is usually not infectious.

Latent TB infection…	**Active TB Disease..**
- Has tuberculois bacteria but the bacteria are not active. - Does not cause sickness. - Is not contagious. - May develop into active TB disease if the bacteria becomes active and multiplies. - Is treatable.	- Has active tuberculosis bacteria. - Causes sickness and symptoms. - Can be spready to other people. - Is curable if diagnosed correctly and early, with fast and complete treatment.

KEY MESSAGES

- Tuberculosis (TB) is a bacterial infection.
- Tuberculosis spreads from person to person through the air.
- Most people who have a healthy immune system will never become sick with TB.
- People with damaged immune systems are more likely to get active TB disease.

Risk Groups and Risk Behaviors

There are specific and vulnerable populations including people living with HIV or people with other immune system diseases who are much more likely to develop active TB disease.

A summary of the risk groups and behaviors is included below:

People who had close contact with a person who has TB disease	People who were not treated correctly for TB in the past	People living in communities with high rates of TB disease (past and present)
People living in overcrowded and poor living conditions	People living with HIV or other diseases which weaken the immune system	People living with diabetes
Babies and young children	Elderly people	Smokers

KEY MESSAGES

- Anyone in close contact with a TB patient is at high risk of contracting TB bacteria.
- People with weak immune systems, including very young and elderly people are at high risk.
- People with HIV are significantly more likely to develop active TB disease.

Signs and Symptoms

Active TB disease can occur in the first few weeks after infection with TB bacteria, or it might occur many years later. Signs and symptoms of active TB disease include:

Coughing (for three or more weeks)

Coughing blood

Difficulty breathing

Weight loss

Fatigue

Fever

Night sweats

Chills

Loss of appetite

Tuberculosis can also affect other parts of the body, including the kidneys, spine or brain. When TB occurs outside of the lungs, symptoms may be different and will relate to the organ involved.

If you observe any of the following danger signs, immediately refer to the nearest health center.

Coughing blood

Coughing (for three or more weeks)

Difficulty breathing

Blood in urine

KEY MESSAGES

- People with a cough for more than three weeks should go to a health center.
- It is possible to have TB infection without symptoms or health problems.
- People with latent TB do not show any signs and symptoms.

PREVENTION

There are several methods for preventing TB transmission from person to person, as well as preventing people with latent TB from developing active TB disease. Anyone, including TB patients, can follow the advice below to lower the risk.

Covering coughs and sneezes and keeping hands clean can help to prevent the spread of serious respiratory illnesses including tuberculosis. It is important that people cover their mouth and nose with a tissue and put used tissues in a bin. If tissues are not available, then it is recommended to cough or sneeze into the upper sleeve or elbow. It is not good cough or sneeze to into the hands as it may lead to further transmission. It is always important to wash hands properly after coughing or sneezing.

Face masks can prevent patients from spreading infectious droplets when talking, coughing or sneezing. They should be worn by contagious patients (suspected or confirmed) when they are in any public spaces or any other closed area. Community health workers should also wear masks and other personal protective equipment (PPE) when working with tuberculosis patients (suspected or confirmed).

The BCG vaccine is one of the most widely used vaccines, however it is not 100% effective. The BCG vaccine has been shown to provide children with excellent protection against some forms of TB, however protection against TB in adults is limited. The BCG vaccine is generally used to protect children, rather than to stop transmission between adults.

TB treatment for prevention of active TB disease can reduce the risk of a first episode of active TB occurring in people with latent TB. *Isoniazid* is one of the drugs used to prevent latent TB from changing into active TB. It is mainly used to protect individuals, not to stop transmission between adults. There is significant benefit of isoniazid preventative therapy (IPT) for people living with HIV who have latent TB.

Reducing discrimination about TB and TB-affected populations will contribute to a reduction in TB transmission, as well as increase early testing and treatment. You can lead discrimination reduction activities by advocating for inclusion of all people in health systems, making your community aware of the facts about TB, avoiding language that may offend or exclude people, and ensuring that your community respects the rights of all people.

KEY MESSAGES

- Cover the mouth using the inner elbow when coughing and sneezing.
- Wear a face mask if in contact with any suspected or confirmed TB patients.
- People with latent TB can receive treatment to prevent progression to active TB.

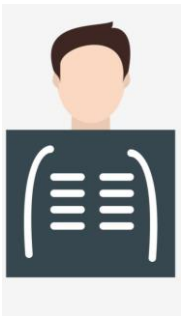
TESTING

There are two stages to diagnosing tuberculosis. This includes community-based screening and testing at a health center.

Step 1: Verbal Screening **You should observe and ask the patient the following questions.**	**Yes**	**No**
Have you experienced any of the following symptoms in the past year? a. A cough for more than 3 weeks b. Coughing up blood c. Unexplained weight loss d. Fever, chills or night sweats e. Shortness of breath or difficulty breathing f. Fatigue		
Have you had contact with anyone with active tuberculosis disease in the past year?		
Do you have a medical condition which suppresses your immune system?		

Refer to a health center if the patient answered "yes" to any of the above questions

STEP 2: DIAGNOSTIC TESTING



Diagnostic testing will be completed by medical staff at the health center.

A chest x-ray looks at the lungs of a person with suspected TB. Chest x-rays are used to confirm a suspicion and will always be followed by full diagnostic tests that aim to find the specific TB bacteria.

Full diagnostic testing may include sputum (phlegm) microscopy or molecular testing. Molecular testing using Xpert machines are demonstrated to have high accuracy. You should remain with your patient while they wait for results so that you can support with treatment if required.

Refer any TB positive patients for HIV testing.

KEY MESSAGES

- Refer symptomatic people to the nearest health center.
- People living with HIV should be aware of TB signs and symptoms.
- People with TB should have access to testing for HIV.

Treatment and Care

Tuberculosis can be cured. The aim of treatment is to cure the patient and prevent relapse of tuberculosis. You should refer to the national treatment guidelines for the correct drugs and dosage. In most cases, TB treatment will be prescribed by a doctor.

Community health workers play an important role in managing the long-term treatment of TB patients through a method called Directly Observed Therapy (DOT).

Drug resistant tuberculosis is a type of TB that cannot be killed by common TB antibiotics. Drug resistant TB develops when medicines are not taken correctly

DOT for Treatment Adherence

DOT is the observation of a person taking their medicine for the treatment of TB. DOT helps to ensure that all medicine is taken by the correct person, in the correct dose, at the correct time, and for the complete period.

The purpose of Directly Observed Therapy (DOT) is to:

- Prevent further transmission of tuberculosis bacteria within the community.
- Ensure that treatment is completed.
- Prevent development of drug resistance.

The basic responsibilities and tasks to complete DOT in your community include:

- Arrange for a time and place that meets the needs of you and your patient. If not convenient for you, find a family member or nearby community member that can support the patient with their daily treatment.
- Assisting the patient with completing their treatment. This includes:
    - Deliver medicine to the patient according to medical advice.
    - Observe the patient to ensure that correct pills are being taken on the correct day.
    - Ask patients about bad reactions from medicines and report any to the health center.
    - Look for possible signs of not taking medicine (e.g. missing packet, not swallowing).
- Provide regular education and support about tuberculosis during each visit.
- Assist the patient to complete follow-up visits at the nearest health center.
- Keep a record of each visit according to national treatment guidelines.

Multidrug-resistant TB

Multidrug-resistant tuberculosis (MDR TB) is increasing in some areas of the world, including in the GMS. MDR TB is caused by TB bacteria that is resistant to the two main TB medicines. This means that it is much more difficult to cure. MDR TB normally occurs when people do not take their medicine regularly or do not take all their medicine correctly.

KEY MESSAGES

- Tuberculosis is curable if the correct medicine is taken according to national guidelines.
- DOT is a method to ensure patients complete their full treatment.
- People being treated for tuberculosis should complete ALL of the treatment. They should not stop treatment even if they feel better.

KEY ACTIONS

As a community health worker, you have an important role to support your community to prevent TB. Key actions that you can take include:

- Teach community members about TB and how it spreads.
- Educate community members about the signs of TB and where community members can go for testing and treatment.
- Increase awareness about how to prevent the spread of TB, including how people should cover their nose and mouth when coughing or sneezing.
- Promote good hygiene and household ventilation.
- Refer people with more than three weeks of cough or other signs of TB to the health center.
- Support confirmed TB patients to take their medicines on time and complete the full course using the DOT approach.
- Host community education sessions about TB.
- Encourage people with HIV to get tested for TB.
- Encourage people with TB to get tested for HIV.

Module 4:

DENGUE

General

Dengue is a mosquito-borne virus disease that is in all regions of the world. The number of dengue cases reported continues to increase each year, and 70% of new cases are in Asia including the Greater Mekong Subregion (GMS).

Transmission

Vector: The virus is transmitted to humans through the bites of infected female mosquitoes, particularly the *Aedes aegypti* mosquito.

Types: There are four types of dengue virus (DENV-1, DENV-2, DENV-3 and DENV-4), all of which are present in the Greater Mekong Subregion (GMS).

Biting: The mosquitoes carrying dengue virus prefer to bite people during the day (different to malaria which is normally through a night-biting mosquito), and live both indoors and outdoors near people. After biting an infected person, the virus multiplies in the mosquito before biting and infecting new people. The time it takes from the mosquito getting the virus to transmission to another person is about 8-12 days. Once infectious, a mosquito can transmit dengue for the rest of its life.

Favorable Conditions for Transmission: *Aedes aegypti* mosquitoes normally lay eggs in containers that hold water, like buckets, bowls, animal dishes, flowerpots, and vases. This is normally in city or community settings where water sources may not be emptied regularly - increasing the mosquito population. Dengue transmission changes depending on rainfall, temperature, humidity and population growth. In general, as any of these factors increase, there is an increase in dengue transmission. High population density is closely related to dengue transmission.

KEY MESSAGES

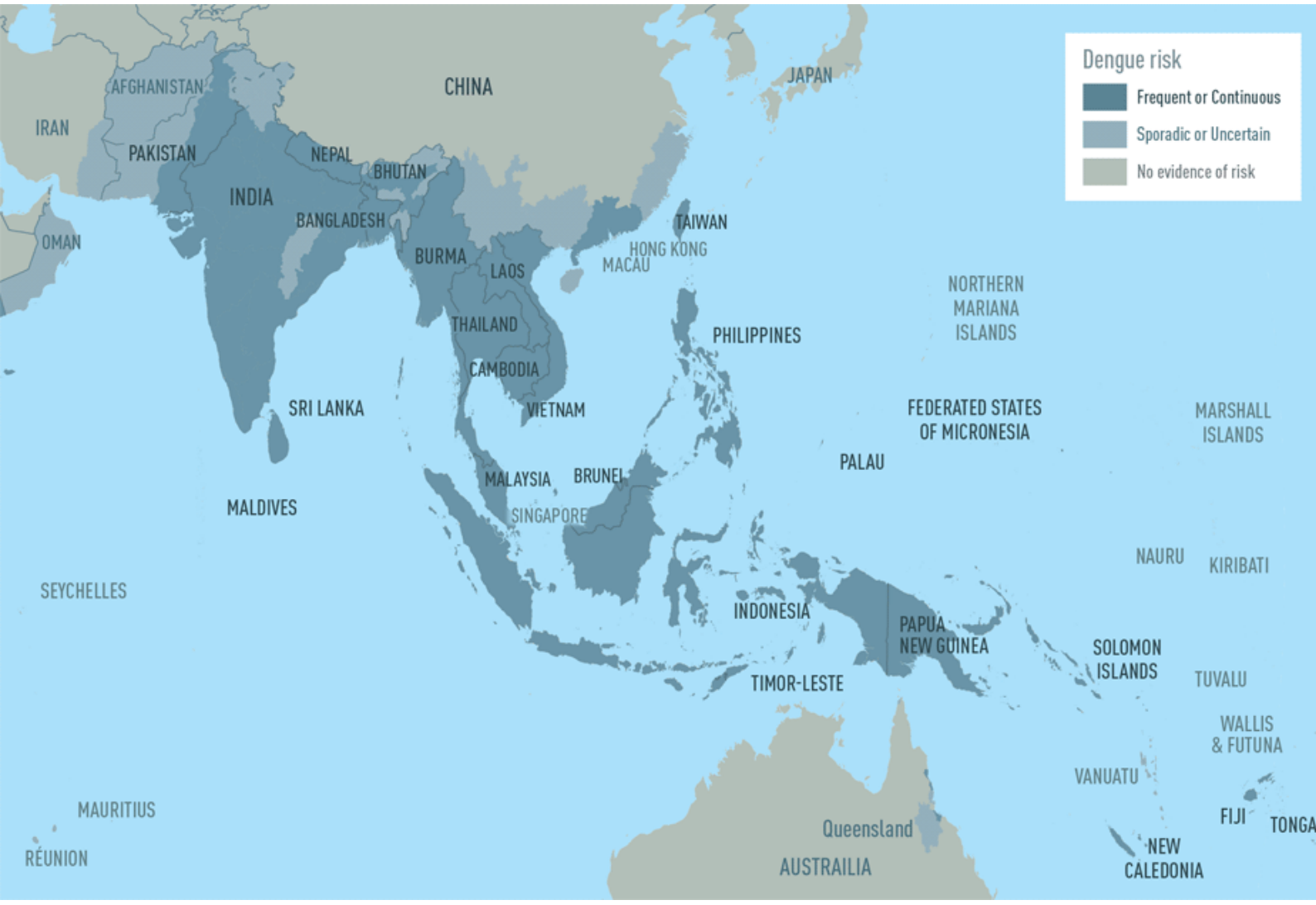
- The virus is transmitted to humans through the bites of infected mosquitoes.
- These mosquitoes prefer to bite people during the day and live both indoors and outdoors.
- Dengue mosquitoes live in and around houses and breed in clean water.

Risk Groups and Risk Behaviors

Altogether it is estimated that 3.9 billion people are at risk of infection with dengue viruses, which is about half of the world's population. All individuals are at risk of dengue, however there are specific behaviors which increase risk, as well as individuals who are more at risk of suffering life-threatening symptoms.

- Babies and young children have been shown to have severe disease, as well as people with chronic conditions such as diabetes and asthma.
- People who have previously had dengue infection will have some level of immunity to that specific type. However, it may increase their risk of developing severe dengue if infected with one of the other three types.
- People living in city or semi-urban areas with high population density.

The five countries in the GMS face frequent or continuous dengue virus transmission.



KEY MESSAGES

- All people in the GMS are at risk of dengue.
- Transmission often occurs in city or semi-rural communities.

SIGNS AND SYMPTOMS

Many people may not experience any signs or symptoms during a mild case of dengue. When symptoms do occur, they usually begin 5-7 days after being bitten. Most people recover within about a week without any long-term complications. It may not be possible to identify dengue from other diseases including malaria and respiratory tract infections, however in some cases, symptoms can become life-threatening. This can cause a severe form of dengue fever, called dengue haemorrhagic fever or severe dengue and requires hospitalization.

Dengue fever causes a high fever and at least two of the following symptoms:

High fever

Headache

Rash

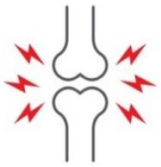
Nausea and vomiting

Pain Behind the eyes

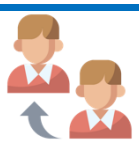
Swollen glands

fatigue

Muscle, bone and joint pain



If you observe any of the following danger signs, immediately refer to the nearest health center.



Severe stomach pain

Regular vomiting (3+ times in 24 hours)

Bleeding from the nose

Vomiting blood

Extreme tiredness all the time

KEY MESSAGES

- Dengue normally causes a high fever as well as headaches and a rash.
- If symptoms worsen dengue can become life-threatening.

PREVENTION

The closeness of mosquito breeding sites to humans is a large risk factor for dengue as well as for other diseases that mosquitos transmit. At present, the main method to control or prevent the transmission of dengue is to control the mosquitoes. Important prevention methods include:

Prevention of mosquito breeding. This focuses on managing the environment around us to stop mosquitos from laying eggs nearby. It may be possible for you to host community campaigns or school campaigns to remove mosquito breeding sites. These campaigns should include disposing of solid waste properly, removing man-made objects that can hold water, regularly cleaning and covering water storage containers, or adding larvae-eating guppy fish to pots, vases, ponds or other water that is not used for drinking.

Long-lasting insecticidal nets (LLIN). Dengue mosquitos bite during the day, so long-lasting insecticidal nets are not as effective compared to the prevention of malaria during the night. However, individuals, particularly children, should rest under an LLIN if it is available and ensure that they are properly fitted and used inside homes.

Using personal household protection measures, such as a fan, window screens, repellents, insecticide treated materials and coils. These prevention methods should be used during the day both inside and outside of the home, workplace or school.

Use a repellent that contains DEET, picaridin or oil of lemon eucalyptus (OLE). Products with DEET generally provide longer protection. Apply repellent to skin that is not covered by clothing, especially wrists and ankles. Always follow product directions and reapply as directed. Avoid ingestion or applying repellent to hands, eyes and mouth areas.

Wearing clothing that covers their skin will not completely protect against mosquito bites, but it can help to prevent bites when used along with other careful prevention methods. Clothing that covers the skin will lower the risk of being bitten.

KEY MESSAGES

- Regularly cover, empty or clean water sources to reduce mosquito breeding.
- Sleep or rest under mosquito nets at all times.
- Wear clothing that cover skin and use repellent on exposed skin.

TESTING

Dengue cannot be easily diagnosed within the community. Testing must be completed at a health center using several methods including virological tests (looking for the virus) and serological tests (looking at the immune system). A doctor, nurse or lab technician will select the best method depending on the time that a patient presents themselves to you or to the health center.

If you identify a patient with a high fever and any other symptoms, and you have already confirmed that they do not have malaria, you could suspect dengue fever.

Refer immediately to a health center if you suspect dengue.

KEY MESSAGES

- Dengue cannot be diagnosed based on symptoms alone.
- Suspected cases must be referred immediately to a health center for testing.

Treatment and Care

There is no specific treatment for dengue.

Patients with mild symptoms can be supported at home. It is important to maintain very good fluid intake especially in children, as well as fever-reducing methods such as a warm, damp sponge and fans if they are available.

Some medicines can be taken to control the symptoms of muscle aches, pains and fever. The best and cheapest options to treat these symptoms are acetaminophen or paracetamol. Aspirin and ibuprofen should not be used as they may increase the risk of bleeding.

Patients with dengue should immediately seek medical advice if any of the danger signs are noticed.

Instructions for Giving Paracetamol

1. Check the expiry on the packaging or bottle.
2. Calculate dosage according to national guidelines .
    - General dosage is as follows:
        - Two 500mg tablets every 4 hours for adults.
        - 10mg/kg body weight for children.
3. Provide paracetamol to the patient. It is better to take this medicine after a meal to avoid an upset stomach.

Tablets should be swallowed with a glass of water, milk or juice. Tablets should not be chewed.

Liquid medicine or syrup: Measure out the right amount using an oral syringe or medicine spoon.

4. Wait at least 4 hours between doses of paracetamol.
5. Do not give more than four doses in 24 hours.

KEY MESSAGES

- Refer suspected dengue cases to a health center immediately.
- Give paracetamol to reduce fever and manage pain.
- Do not give aspirin or ibuprofen if you suspect dengue fever.

KEY ACTIONS

As a community health worker, you have an important role to support your community to prevent and identify dengue infections. Key actions that you can take include:

- Teach community members how to recognize signs of dengue and to get immediate care from a health worker if they suspect dengue.
- Refer suspected dengue cases to the nearest health center.
- Teach community members how to prevent dengue through individual prevention behaviors.
- Participate in community, worksite and school-based clean up campaigns to identify and remove mosquito breeding sites.
- Encourage community members to rest under an LLIN and use other personal protection methods including long clothing and repellent during the day.

Module 5:

MALNUTRITION

General

Malnutrition refers to deficiencies, excesses, or imbalances in a person's intake of food and/or nutrients. In the Greater Mekong Subregion, approximately 10-45% of children under 5 are stunted, and 5-10% are wasted. Less than half of all infants under 6 months are exclusively breastfed. Women in the GMS also face high rates of anaemia, ranging from approximately 25-45% of women. These problems can lead to significant health problems, and it has been shown that around 45% of deaths among children under 5 years of age are linked to undernutrition. Malnutrition affects the immune or protection system of the body which increases the risk of getting diarrhea and respiratory infections including tuberculosis.

Types of Malnutrition

Malnutrition is caused by not having enough food, having too much food, or not having enough of the right food. It is also possible that someone may have an infection with a specific type of intestinal worm which contributes to undernutrition. There are three main categories of malnutrition that you may see in your community, which include:

- **Undernutrition:** is the result of not having enough food to eat and usually associated with poor living conditions, poor maternal health and nutrition, or frequent illness. Undernutrition can cause severe weight loss which damages the immune system, increases the risk and seriousness of other diseases, and prevents children from reaching their physical and brain potential.
- **Overnutrition:** is the result of eating too much food or eating too much of the wrong foods. It is usually associated with poor living conditions and limited availability of fresh foods. Someone who is over nourished will normally gain weight and is at risk of health problems including heart disease, diabetes and other infections.
- **Micronutrient-related malnutrition:** is from low intake of vitamins and minerals, often referred to as micronutrients. Micronutrients are essential for proper growth and development. Iodine, vitamin A, vitamin B, iron and zinc are the most important in public health. Low levels of these micronutrients are a major threat to the health and development of populations in the GMS, particularly for children and pregnant women.

KEY MESSAGES

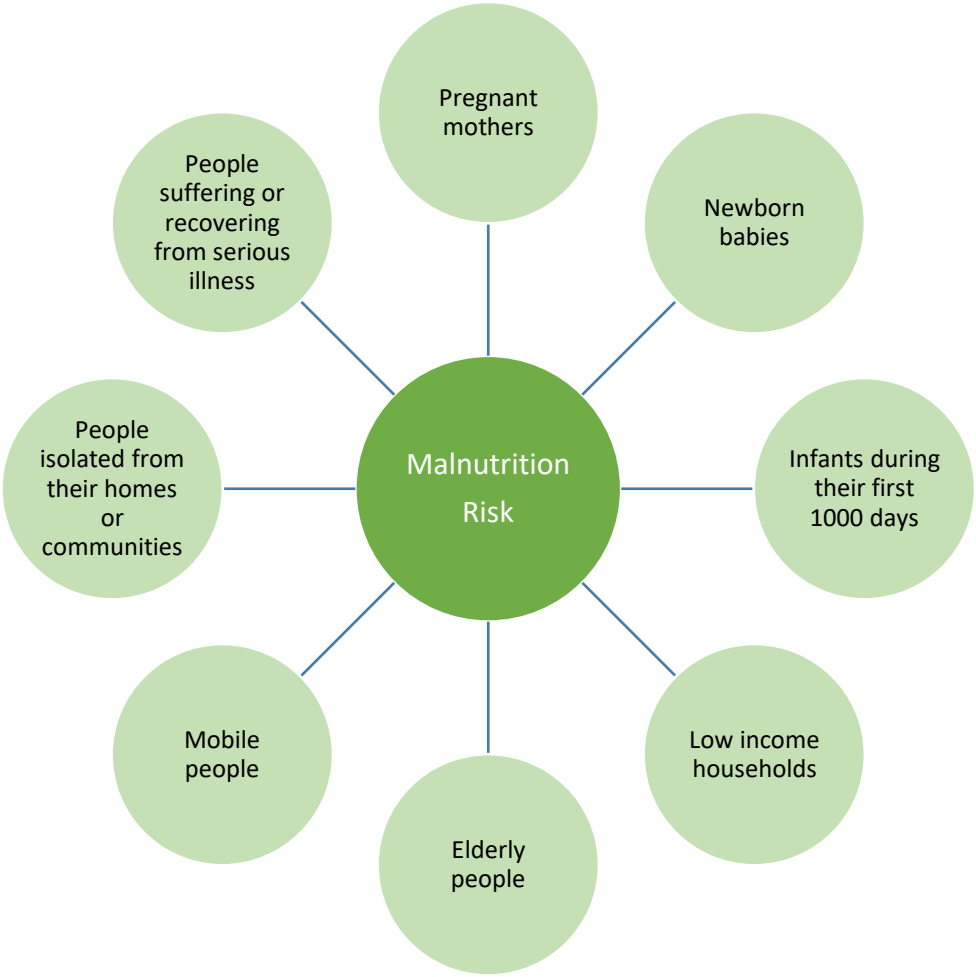
- Malnutrition increases the risk of contracting other diseases.
- Malnutrition harms growth and development of children.
- Most undernutrition is from a poor diet during pregnancy, infancy and childhood.

Risk Groups and Risk Behaviors

Every country in the world is affected by one or more forms of malnutrition. Anyone can become malnourished if, over a long period of time, they do not consume enough food to meet their nutritional needs, or if they have an unhealthy diet.

Women, infants and children are at higher risk of malnutrition. This is because good nutrition early in life—particularly the first 1000 days from conception to a child's second birthday, is very important for good growth, development and health. Poverty increases the risk of malnutrition as well as the diseases that come from having malnutrition. People who are poor are more likely to be affected by different forms of malnutrition.

The groups who are most at risk of malnutrition are:



KEY MESSAGES

- Anyone can become malnourished if they do not consume enough of the right foods.
- Infants and children are at high risk as they are still developing.

Signs and Symptoms

Most people who are malnourished will lose weight, but it is possible to have normal weight or even be overweight and still be malnourished. For example, this can happen if you're not getting enough micronutrients, such as some types of vitamins and minerals, through your diet.

Common symptoms for malnutrition include:

Unintended weight Loss

Reduced appetite

Fatigue

Weakness

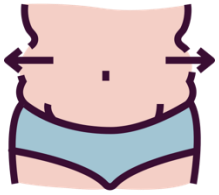
Poor concentration

Depression

Irritability

Poor growth

Unhealthy weight gain

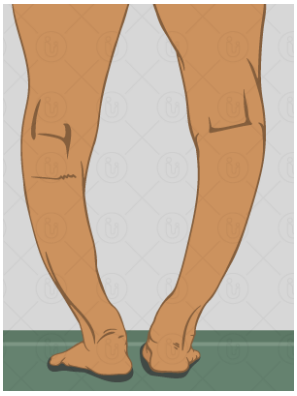


KEY MESSAGES

- Unintended weight loss, reduced appetite and weakness as clear signs of malnutrition.
- People can be malnourished even with normal weight.

Some micronutrient deficiencies can also be observed in your patients, as demonstrated in the examples below:

Vitamin D deficiency
Outward curved legs

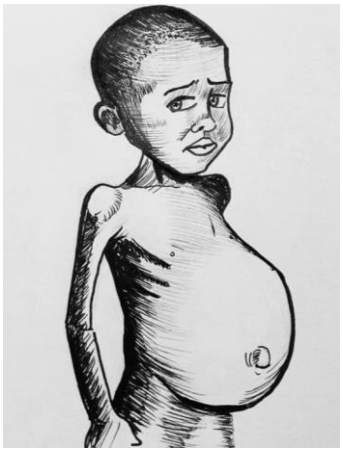


Vitamin B deficiency
Swollen legs and feet

Iodine deficiency
Swollen neck, weight gain

Iron deficiency
Pale skin, brittle nails

Protein deficiency
Swollen abdomen



Vitamin A deficiency
Night blindness

PREVENTION

The best way to prevent malnutrition is to eat a healthy, balanced diet. Everyone should be eating a variety of foods from the main food groups, including:

FRUITS AND VEGETABLES

Fruits and vegetables are a good source of vitamins, minerals and fibre that are important for preventing digestion problems. People should aim to eat at least 5 varieties of fruits and vegetables every day.

POTATOES, BREAD, RICE AND OTHER STARCHY CARBOHYDRATES

These foods are a good source of nutrients, energy and fibre and should make up about a third of the diet. Meals should be based around these carbohydrates When making these foods, limit the amount of added fat by using sunflower oils.

BEANS, FISH, EGGS, MEAT AND OTHER PROTEINS

These foods are sources of protein, vitamins and minerals. Therefore, it is important to include some foods from this group. Protein is used by the body for growth and repair.

MEAT: Choose leaner meats where possible and avoid adding extra fat or oil when cooking. Use the grill instead of frying, cut the fat off meat and remove the skin from chicken. Limit processed meats.

BEANS: Beans are naturally low in fat; they are filling and can often provide a healthy and cheaper alternative to meat. This includes beans, chickpeas, lentils and peas.

FISH: Fish can be eaten fresh or from a can. Aim for 2 portions of fish per week.

EGGS: Eggs are high in nutrients including vitamin B, zinc and iron. Boiled or scrambled eggs are better than fried eggs. Avoid adding salt.

DAIRY AND ALTERNATIVES

Milk, as well as non-dairy alternatives such as soy and nut milks, are a good source of protein, vitamins and calcium. They are good for strong teeth and bones. Choose lower fat, lower salt and lower sugar options if possible.

WATER

Drinking enough liquid is essential to keep bodies hydrated and working properly. People should aim to drink at least 6 to 8 glasses of water every day. Drinks high in sugar, including soft drinks, and alcohol should be avoided.

Exclusive breastfeeding of infants for the first six months is important to achieve the best growth, development and health. After 6 months, mothers can start to introduce other healthy foods but also continue breastfeeding up to the age of two years or longer.

DIET PYRAMID

IMPORTANT MICRONUTRIENTS

Micronutrients are essential for the body to work properly. Most people should be able to get all the nutrients they need by eating a healthy and balanced diet. Supplements should only be taken if there are still low levels even after making adjustments to diet. Some of the important micronutrients are included below and are very important for everyone's health and wellbeing.

IRON

Iron is important for movement and brain development. Children and pregnant women are especially vulnerable to the consequences of iron deficiency. Iron deficiency can also be a result of malaria infection. Foods high in iron include:

- Liver, beef , egg (chicken), duck, legumes (such as lentils, beans and chickpeas), tofu, nuts, wholegrain cereals, wholemeal bread, brown rice, and vegetables such as kale, broccoli, spinach and green peas.

IODINE

Iodine is required during pregnancy and infancy for the infant's healthy growth and brain development. Foods with iodine include:

- Egg (chicken), soybeans , oats, almonds, spinach, dairy and shrimp.

Although present in these foods, iodine concentrations are low. Therefore, using salt mixed with iodine is an alternative option.

VITAMIN A

Vitamin A supports healthy eyesight and the immune system. Children with low vitamin A levels face an increased risk of blindness and death from infections such as diarrhoea. Foods high in vitamin A include:

- Liver, egg (chicken) , carrots, spinach, bell pepper, sweet potato, broccoli and mango.

VITAMIN B

Vitamin B plays an important role in maintaining good health and well-being. It helps with energy levels, brain function and helps to prevent infection. It is also important for pregnant or new mothers who are breastfeeding. Foods high in vitamin B include:

- Citrus fruits, bananas, beans, seeds, red meat, chicken, fish and brown rice.

ZINC

Zinc is an important mineral that people need to stay healthy. It is needed for the body's immune system to work properly, and for the senses of smell and taste. It has been shown to reduce the duration and severity of diarrhoea and prevent ongoing episodes. During pregnancy, infancy, and childhood the body needs zinc to grow and develop properly. Foods high in zinc include:

- Tofu, mushrooms, pork, chicken, corn, beans.

TESTING

CHILDREN

There are different tools to screen **children** for malnutrition. The Mid-Upper Arm Circumference (MUAC) is the most common. The diagnostic methods used with children cannot be applied to adults.

Step 1: Rapid Screening for Malnutrition in Children

Asking four simple questions can be used as a quick, simple and effective screening tool

Question 1: Has the child unintentionally lost weight lately?

Question 2: Has the child had poor weight gain over the last few months?

Question 3: Has the child been eating/feeding less in the last few weeks?

Question 4: Is the child obviously underweight?

If 'yes' to two or more of the above questions, conduct an advanced assessment using the MUAC test and support mothers to improve their child's diet.

Step 2: Advanced Assessment of Malnutrition in Children using MUAC

MUAC is a quick and simple way to determine whether a child is malnourished using a simple colored strip. MUAC is suitable to use on children from the age of 12 months up to 59 months

Step 1: **Find the mid-upper left arm**

Determine the mid-point between the elbow and the shoulder.

Step 2: **Use a measuring tape or MUAC tape**

Place a measuring tape or MUAC tape around the mid-upper left arm.

The arm should be relaxed and hang down the side of the body.

The tape should not pinch the arm or be loose.

Step 3: **Measure arm circumference**

If using a measuring tape, note the number of centimetres (cm) to the nearest 0.1 cm or 1mm. If using a MUAC tape, note the color in the window.

Step 4: **Determine the level of malnutrition**

Measuring tape (cm)	MUAC tape (color)	Assessment
12.5cm to 26.5cm	Green	Child is properly nourished
11.5cm to 12.5cm	Yellow	Child is at risk of malnutrition
0.0cm to 11.5cm	Red	Child is severely malnourished

Refer any child who is at risk of malnutrition or is severely malnourished to the nearest health center for examination and support mothers to improve their diet.

ADULTS

To screen **adults,** use the BMI formula. This method used cannot be applied to children.

Step 1: Rapid Screening for Malnutrition in Adults

Ask three simple questions as a quick, simple and effective screening tool.

Question 1: Has the adult unintentionally lost or gained weight lately?

Question 2: Are the adult's clothes not fitting anymore?

Question 3: Is the adult obviously underweight or overweight?

If 'yes' to any one of these questions, conduct a BMI test and support them to improve their diet.

Step 2: Assessment of Malnutrition in Adults

The Body Mass Index (BMI) can provide an indication of the level of malnutrition.

Step 1: **Calculate the patients BMI using weight (kg) and height (in metres).**

$$\text{BMI} = \left(\frac{Weight\ (kg)}{Height(m) \times Height\ (m)}\right)$$

Step 2: **Calculate the Severity of Malnutrition**

BMI between 17 and 18.5 = Mild malnutrition

BMI between 16 and 17 = Moderate malnutrition

BMI less than 16 = Severe malnutrition

BMI more than 25 = Overnutrition

If you are unable to calculate BMI, you can refer to the chart on the next page to help.

BMI Reference Chart

The following chart has been included to support you with calculating the Body Mass Index (BMI) of the patient.

	40kg	45kg	50kg	55kg	60kg	65kg	70kg	75kg	80kg	85kg	90kg	95kg	100kg	105kg	110kg	115kg	120kg	125kg	130kg	135kg	140kg
1.3m	23.7	26.6	29.6	32.5	35.5	38.5	41.4	44.4	47.3	50.3	53.3	56.2	59.2	62.1	65.1	68.0	71.0	74.0	76.9	79.9	82.8
1.35m	21.9	24.7	27.4	30.2	32.9	35.7	38.4	41.2	43.9	46.6	49.4	52.1	54.9	57.6	60.4	63.1	65.8	68.6	71.3	74.1	76.8
1.4m	20.4	23.0	25.5	28.1	30.6	33.2	35.7	38.3	40.8	43.4	45.9	48.5	51.0	53.6	56.1	58.7	61.2	63.8	66.3	68.9	71.4
1.45m	19.0	21.4	23.8	26.2	28.5	30.9	33.3	35.7	38.0	40.4	42.8	45.2	47.6	49.9	52.3	54.7	57.1	59.5	61.8	64.2	66.6
1.5m	17.8	20.0	22.2	24.4	26.7	28.9	31.1	33.3	35.6	37.8	40.0	42.2	44.4	46.7	48.9	51.1	53.3	55.6	57.8	60.0	62.2
1.55m	16.6	18.7	20.8	22.9	25.0	27.1	29.1	31.2	33.3	35.4	37.5	39.5	41.6	43.7	45.8	47.9	49.9	52.0	54.1	56.2	58.3
1.6m	15.6	17.6	19.5	21.5	23.4	25.4	27.3	29.3	31.3	33.2	35.2	37.1	39.1	41.0	43.0	44.9	46.9	48.8	50.8	52.7	54.7
1.65m	14.7	16.5	18.4	20.2	22.0	23.9	25.7	27.5	29.4	31.2	33.1	34.9	36.7	38.6	40.4	42.2	44.1	45.9	47.8	49.6	51.4
1.7m	13.8	15.6	17.3	19.0	20.8	22.5	24.2	26.0	27.7	29.4	31.1	32.9	34.6	36.3	38.1	39.8	41.5	43.3	45.0	46.7	48.4
1.75m	13.1	14.7	16.3	18.0	19.6	21.2	22.9	24.5	26.1	27.8	29.4	31.0	32.7	34.3	35.9	37.6	39.2	40.8	42.4	44.1	45.7
1.8m	12.3	13.9	15.4	17.0	18.5	20.1	21.6	23.1	24.7	26.2	27.8	29.3	30.9	32.4	34.0	35.5	37.0	38.6	40.1	41.7	43.2
1.85m	11.7	13.1	14.6	16.1	17.5	19.0	20.5	21.9	23.4	24.8	26.3	27.8	29.2	30.7	32.1	33.6	35.1	36.5	38.0	39.4	40.9
1.9m	11.1	12.5	13.9	15.2	16.6	18.0	19.4	20.8	22.2	23.5	24.9	26.3	27.7	29.1	30.5	31.9	33.2	34.6	36.0	37.4	38.8
1.95m	10.5	11.8	13.1	14.5	15.8	17.1	18.4	19.7	21.0	22.4	23.7	25.0	26.3	27.6	28.9	30.2	31.6	32.9	34.2	35.5	36.8
2m	10.0	11.3	12.5	13.8	15.0	16.3	17.5	18.8	20.0	21.3	22.5	23.8	25.0	26.3	27.5	28.8	30.0	31.3	32.5	33.8	35.0
2.05m	9.5	10.7	11.9	13.1	14.3	15.5	16.7	17.8	19.0	20.2	21.4	22.6	23.8	25.0	26.2	27.4	28.6	29.7	30.9	32.1	33.3
2.1m	9.1	10.2	11.3	12.5	13.6	14.7	15.9	17.0	18.1	19.3	20.4	21.5	22.7	23.8	24.9	26.1	27.2	28.3	29.5	30.6	31.7
	Severe Malnutrition				Moderate Malnutrition				Mild Malnutrition				Healthy				Overweight				

Patients identified to be malnourished should be referred to the nearest health center for testing and supported to improve their diet.

Treatment and Care

Treatment for malnutrition will depend on its severity, and whether there are any underlying illnesses that are causing the patient to be malnourished. Any underlying causes will need to be addressed. Good nutrition takes time, so a patient's needs and preferences are important to consider. A good partnership between you, the patient and their health professionals is important.

Severe Malnutrition

Children Under 6 Months

Newborn babies and infants under 6 months should continue to be exclusively breastfed. If children under 6 months are malnourished, it is possible that breastmilk is not providing enough nutrients. It is safer, easier, and less expensive to give mothers more food than to expose the infant to the risks of breastmilk substitutes.

Children Older Than 6 months and Adults

If a child or adult has been identified as severely malnourished, they must receive urgent treatment to survive. Ready-to-use therapeutic food (RUTF) is a high-energy paste that can be provided. The advantage of RUTF is that it is a ready-to-use paste that does not need to be mixed with water, thereby avoiding the risk of contamination. This is a good option when cooking facilities are limited or water quality is poor. A severely malnourished child or adult can be given a standard dose of RUTF adjusted to their weight. It can be consumed with very little supervision.

For standard dosage in your country, refer to your national guidelines.

Mild to Moderate Malnutrition

Children Under 6 Months

Newborn babies and infants under 6 months should continue to be exclusively breastfed. If children under 6 months are malnourished, it is possible that breastmilk is not providing enough nutrients. It is safer, easier, and less expensive to give mothers more food than to expose the infant to the risks of breastmilk substitutes.

Children Over 6 Months and Adults

Treatment will involve a specially designed diet plan. In general, this will involve increasing daily food intake and incorporating micronutrient supplements. A diverse diet plan will include the following:

- plenty of fruit and vegetables.
- plenty of starchy foods such as rice, noodles, bread and potatoes.
- some milk and dairy foods or non-dairy alternatives.
- some sources of protein, such as meat, fish, eggs or beans.
- micronutrient supplements if micronutrient requirements cannot be met or during pregnancy.

Children between 6-24 months should continue to be breastfed.

Deworming

Treatment with deworming tablets can kill any intestinal worms which may be causing malnutrition. Treatment involves providing the patient with a single dose tablet of mebendazole every 6-12 months. It is recommended for children over the age of 12 months who live in areas with poor water quality, poor sanitation or limited access to good hygiene supplies.

For more information on drug types and dosage, refer to your national guidelines.

KEY ACTIONS

As a community health worker, you have an important role to support your community to prevent, identify and treat malnutrition. Key actions that you can take include:

- Promote good nutrition in the community, particularly for pregnant and new mothers.
- Regularly screen community members for malnutrition or risk of malnutrition.
- Encourage community members to include a variety of foods in their diet, such as fruits, vegetables, grains and cereals, meats or fish, eggs and dairy products.
- Promote exclusive breastfeeding for the first six months of life.
- Educate the community about foods high in vitamin A, vitamin B, iron, iodine and zinc.
- Refer children with signs of malnutrition to a health center immediately.

Module 6:

DIARRHOEAL DISEASE

General

Diarrhoeal disease is a leading cause of child death and illness in the world, and mostly results from contaminated food and water. Globally, there are nearly 1.7 billion cases of childhood diarrhoeal disease every year. Worldwide, 780 million individuals lack access to clean drinking water and 2.5 billion lack good sanitation. Diarrhoea due to infection is widespread throughout the Greater Mekong Subregion. In some countries, children under five years old experience an average of three episodes of diarrhoea every year. Each episode blocks the child from the nutrition necessary for growth. As a result, diarrhoea is a major cause of malnutrition, and malnourished children are more likely to fall ill from diarrhoea.

Transmission

Diarrhoea is usually a symptom of an infection in the intestinal tract, which can be caused by many different bacteria, viruses and parasites. Infection is spread through contaminated food or drinking-water, or from person-to-person as a result of poor hygiene.

Infection: Diarrhoea is a symptom of infections caused by many different bacteria, viruses and parasites, most of which are spread by faeces-contaminated water. Infection is more common when there is a poor sanitation and hygiene, and limited supply of safe water for drinking, cooking and cleaning.

Malnutrition: Children who die from diarrhoea often suffer from underlying malnutrition, which also makes them more vulnerable to diarrhoea. Each diarrhoeal episode makes their malnutrition even worse. Diarrhoea is also leading cause of malnutrition in children under five years old.

Water Contamination: Water contaminated with human and animal faeces is of particular concern as they carry many bacteria that can be ingested. Unsafe domestic water storage and handling is also an important transmission factor.

Food Hygiene: Diarrhoeal disease can also spread from person-to-person through poor personal hygiene. Food is another major cause of diarrhoea when it is prepared or stored in unhygienic conditions.

KEY MESSAGES

- Diarrhoeal disease is a leading cause of child mortality and morbidity in the world.
- Infection is spread through contaminated food or drinking-water, or from person-to-person as a result of poor hygiene.

Risk Groups and Risk Behaviors

Children are at the greatest risk of diarrhoeal disease. Children with poor nutritional status and overall health, as well as children exposed to poor environmental conditions, are more vulnerable to severe diarrhoea and dehydration compared to healthy children. Children are also at a greater risk than adults of life-threatening dehydration from diarrhoea since water makes up a larger amount of children's body weight and they use more water throughout the day to their higher energy and metabolism.

Key factors that increase the risk of diarrhoea include:

Lack of access to clean water

Poor sanitation

Bad personal or food hygiene

Lack of access to safe, clean drinking water and basic sanitation, as well as poor hygiene cause nearly 90% of all deaths from diarrhoea.

KEY MESSAGES

- Children are at the greatest risk of diarrhoeal disease.
- Areas with poor sanitation or limited access to clear water have increased risk.

Signs and Symptoms

Diarrhoea, which is loose, watery and possibly more frequent bowel movements, is a common problem. Luckily, diarrhoea does not normally last long – normally not more than a few days. However, when diarrhoea lasts for weeks, it means that's there is likely another problem. If symptoms last for more than 24 hours, the patient is at high risk of dehydration.

Common signs and symptoms of diarrhoea include:

Loose, watery stools

Blood or mucus in the stool

Abdominal pain or cramps

Nausea and vomiting

Bloating

Urgent bowel movements

If you observe any of the following danger signs, immediately refer to the nearest health center.

Extreme thirst

Less frequent urination and dark colored urine

Fever

Dry mouth and tongue,

Fatigue

Dizziness and confusion

KEY MESSAGES

- Diarrhoea can kill children.
- Symptoms of diarrhoea are loose, watery and possibly more-frequent bowel movements.
- If symptoms continue, dehydration can occur.

PREVENTION

You should organize community sessions to educate your people about the important ways to prevent transmission viruses and bacteria which cause diarrhoea. The key messages are:

Wash hands with soap for 20 seconds. If soap and water is not available, then an alcohol-based gel can be used. Washing hands correctly will remove dirt, viruses and bacteria and will stop them spreading to other people and objects. People should wash their hands after using the toilet, before and after touching raw foods, before and after eating, after touching animals and after sneezing or coughing.

Eat a balanced diet made-up of diverse and healthy foods. This will vary depending on individual characteristics (e.g. age, gender, lifestyle and degree of physical activity), cultural context, locally available foods and dietary customs. However, the basic principles of what makes up a healthy diet remain the same. This includes a balance of fruits, vegetables, proteins and nutrients.

Wash all fruits and vegetables to ensure they are clean and safe to eat. Washing will help remove bacteria from the surface of fruits and vegetables. Washing raw chicken, beef, pork or lamb before cooking it is not recommended.

Cook meats well before eating them. Many meats have bacteria from the way they are cut, transported or stored. If it is not cooked well, with high heat, the bacteria may not die and can enter the body when eaten. It is important that raw meats are stored and prepared separately from fruits and vegetables to prevent spreading of bacteria.

Exclusive breastfeeding is critical for an infant's first six months of life. In addition to providing ideal nutrients, breastfeeding provides infants with protection from many infections, including diarrhoeal diseases. Infants should be breastfed exclusively for 6 months, and then receive a small but gradually increasing amount of high-quality, complementary food in addition to breast milk in order to grow well.

The Rotavirus vaccine is used to protect against rotavirus infections, which are a leading cause of severe diarrhoea among young children. A child must get the first dose of rotavirus vaccine before 15 weeks of age, and the last 8 months of age. Almost all babies who get vaccinated will be protected from severe rotavirus diarrhoea. Coordinate with local health authorities to organize vaccinations.

KEY MESSAGES

- Diarrhoea is best prevented by maintaining good personal and food hygiene.
- Use safe water for drinking and food preparation. If safe water is not available, treat at home by boiling.
- Wash hands before preparing food, before eating or feeding a child, after using the toilet and before taking care of someone who is sick.

TESTING

The type of stool or faeces depends on the time it spends in the colon. After passing faeces, what is seen in the toilet is basically the result of diet, fluids, medications and lifestyle. You can use the chart below to check what the stool is telling you.

The chart shows seven categories of stool. Every person will have different bowel habits, but the important thing is that stools should be soft and easy to pass – like types 3 and 4 below.

Type 6 and 7 are signs of diarrhoea.

Refer immediately to a health center if blood is present in diarrhoea or if the person has a fever.

STOOL CHART

Type	Observation	Description
Type 1		Separate hard lumps, like nuts (hard to pass)
Type 2		Sausage-shaped but lumpy
Type 3		Sausage-like with cracks on the surface
Type 4		Like a sausage or snake, smooth and soft
Type 5		Soft blobs with clear-cut edges
Type 6		Fluffy pieces with ragged, mushy edges
Type 7		Watery, no solid pieces (entirely liquid)

KEY MESSAGES

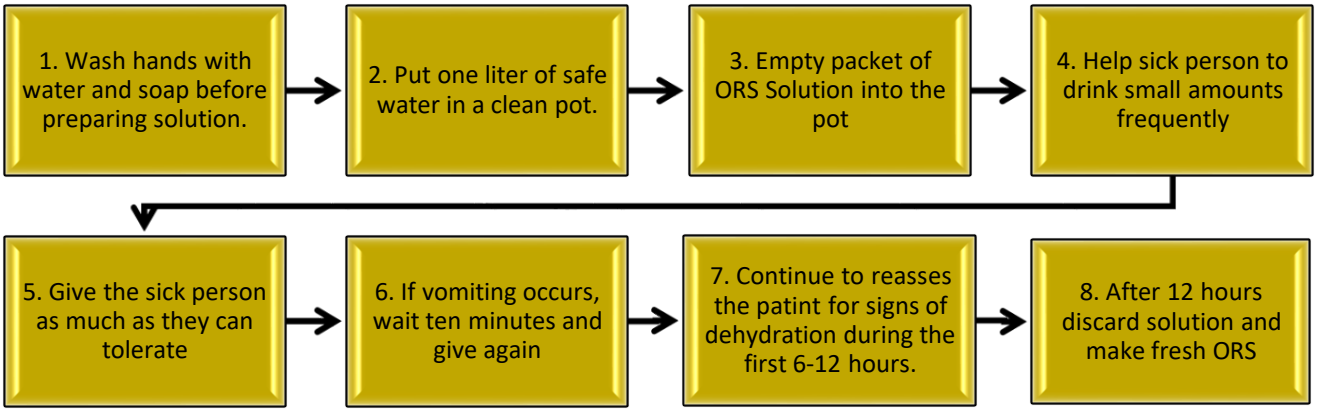
- Diarrhoea is classified according to Type 6 and Type 7 on the chart above.
- If blood is present in diarrhoea, refer the patient to a health center immediately.

TREATMENT AND CARE

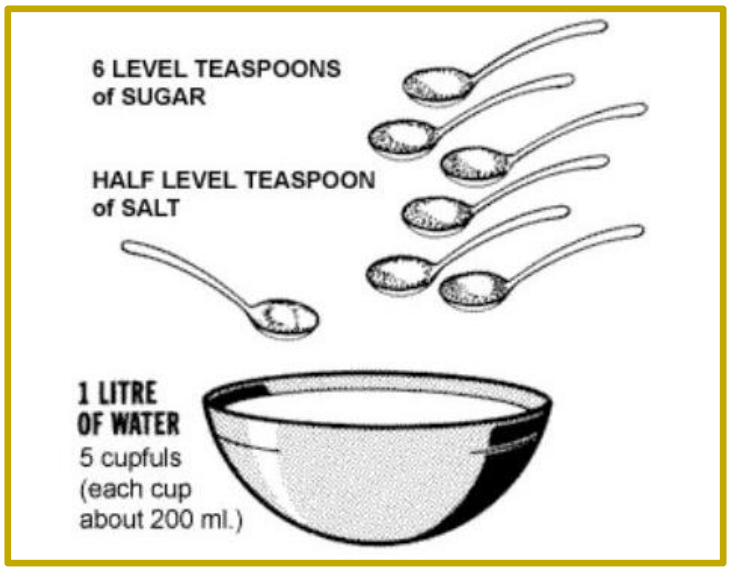
Breastfeed more frequently when a baby has diarrhea.

Oral Rehydration Therapy (ORT)

Oral Rehydration Therapy (ORT) can prevent the body from getting dehydrated and can reduce the risk of death from diarrhoea and dehydration. ORT does not stop diarrhoea. To provide Oral Rehydration Therapy, use a pre-made Oral Rehydration Solution (ORS) and follow the instructions below.



If a pre-made solution is not available, you can make your own using clean water, sugar and salt.



Zinc Supplements

Providing zinc has been shown to reduce the duration and severity of diarrhoea and can prevent ongoing episodes. You can support people by providing 20 milligrams (mg) of zinc per day to children over six months for approximately two weeks. If the child is under six months of age, reduce the dosage to 10 milligrams (mg) per day by breaking the tablet in half. Tablets can be dissolved into breastmilk, clean water, or added to ORT.

Refer to nearest health center for additional treatment and observation.

KEY MESSAGES

- Breastfeed more frequently when a baby has diarrhoea.
- Oral rehydration therapy (ORT) can reduce the risk of death from diarrhoea.

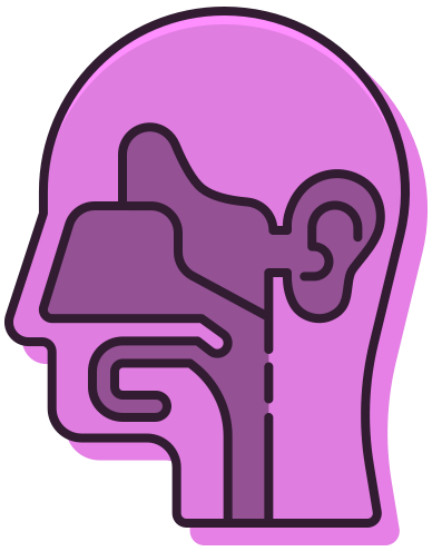
KEY ACTIONS

As a community health worker, you have an important role to support your community to prevent, identify and treat diarrhoea. Key actions that you can take include:

- Educate community members about how to prevent diarrhoea.
- Teach community members how to recognize signs of diarrhoea and dehydration and when to go to a health center.
- Demonstrate to community members how to prepare ORS and give ORT.
- Encourage community members to use clean water for drinking and food preparation.
- Encourage mothers to breastfeed exclusively for the first six months of a child's life.
- Encourage community members to have their children vaccinated according to the national immunization schedule.
- Encourage community members to practise good hygiene.

Module 7:

Respiratory Tract Infections



GENERAL

Respiratory tract infections (RTI) are any disease that affects the **upper** respiratory tract (nose and throat) or the **lower** respiratory tract (airways and lungs). Respiratory tract infections are a leading cause of death in the Greater Mekong Subregion, particularly for children under 5 years and people over the age of 70.

- **Upper** respiratory tract infections are more common. They can happen at any time but are most common during winter or colder times of the year.
- **Lower** respiratory tract infections are less common, but they normally last longer and can be more serious.

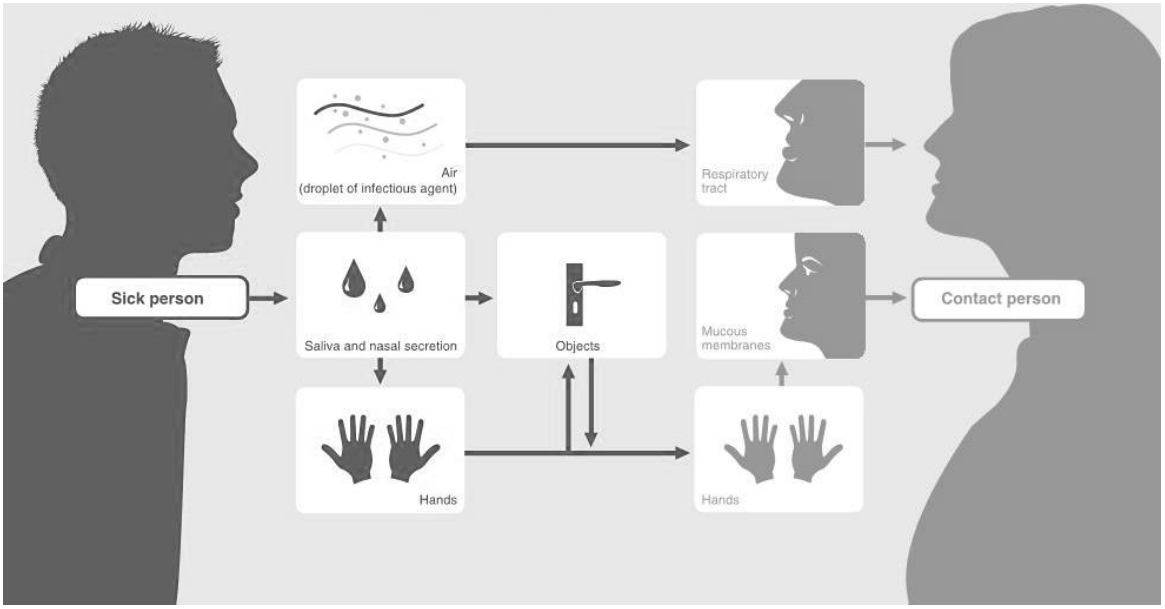
The most common types of respiratory tract infections are included in the table below:

Upper RTIs (nose and throat)	Lower RTIs (airways and lungs)
Common cold Sinus infection Tonsillitis Laryngitis	Bronchitis Bronchiolitis Chest infection **Pneumonia**
Both Upper and Lower RTIs	
Influenza **COVID-19**	

TRANSMISSION

Respiratory tract infections (RTI) can be easily spread from person to person. In most cases, they are spread through droplets when sick people cough, sneeze or talk. These small droplets can then land in the mouth or nose of nearby people.

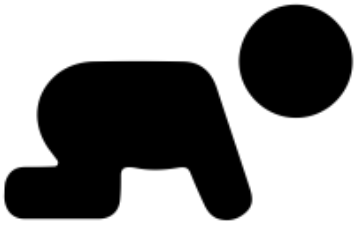
Transmission of respiratory tract infections can also occur when someone touches their nose, mouth or eyes after touching another infected person or an object that has been exposed.



Risk Groups and Risk Behaviors

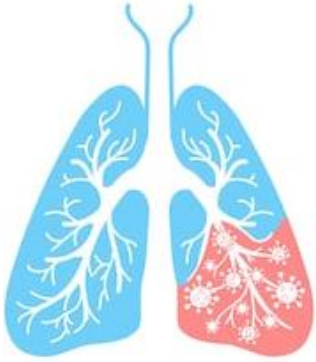
Everyone is at risk of getting respiratory tract infections. However, there are some risk groups and factors that increase the chances of getting respiratory tract infections.

Infants



Elderly

People with lung problems



People who smoke

Infants and young children are at the highest risk because they usually have a lot of contact with other children and the environment without washing their hands. They are also more likely to rub their eyes and put their fingers in their mouths.

Elderly people, people with chronic disease (lung disease, heart disease, diabetes) are also at higher risk because their immune system may not be fully functioning.

Smokers also are at high risk and have more trouble recovering.

KEY MESSAGES

- Young children and elderly people are at the highest risk of getting a respiratory tract infection and having severe symptoms.

Signs and Symptoms

The symptoms of upper respiratory infections can be different from lower respiratory infections.

Upper Respiratory Tract Infections

Upper respiratory tract infections affect the nose and throat. The main symptoms of an upper RTI are a runny nose, nasal congestion, sneezing and a cough. Symptoms can take a week or more to start after infection.

Stuffy or runny nose

Sore throat

Sneezing

Lower Respiratory Tract Infections

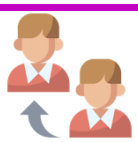
Lower respiratory tract infections affect the airways and lungs. The main symptoms of a lower RTI are a cough and fever. Symptoms can take a week or more to start after infection.

Coughing

Fever

Headache

If you observe any of the following danger signs, immediately refer to the nearest health center.



Chest pain

Difficulty breathing

Fever more than one time

Symptoms last more than 10 days

PREVENTION

There are several methods for preventing the spread of respiratory tract infections from person to person. The methods below are important because most RTIs are not treatable.

Covering coughs and sneezes and keeping hands clean can help to prevent the spread of germs. It is important that people cover their mouth and nose with a tissue and put used tissues in a bin. If tissues are not available, then it is recommended to cough or sneeze into the upper sleeve or elbow. It is not good to cough or sneeze into hands as it may lead to further transmission. It is important to wash hands properly after coughing or sneezing.

Wearing masks can prevent people from spreading infectious droplets when talking, coughing or sneezing. They should be worn by suspected or confirmed patients when they are in any public spaces or any other closed area. Community health workers should also wear masks and other PPE when working with a patients who are suspected or confirmed to have a respiratory tract infection.

Washing hands with soap for 20 seconds. If soap and water is not available, then an alcohol-based gel can be used. Washing hands correctly will remove viruses and bacteria and will stop them spreading to other people and objects. People should wash their hands before and after sneezing or coughing, and after being in contact with someone who has symptoms of respiratory tract infections.

Physical distancing, meaning keeping a safe distance of 1.5-2 metres away from other people, is a way to limit exposure to respiratory tract infections, and also to stop spreading bacteria or viruses to other people. Social distancing should be practiced indoors and outdoors with people who are not from the same household.

Good ventilation reduces the risk of contracting respiratory tract infections, as well as contributes to reducing the severity of any infection. To improve ventilation in households, open windows, keep children away from fires and smoke, and avoid smoking.

Vaccinations can protect people against some respiratory tract infections. People can receive an influenza vaccine every year to limit their risk of getting influenza and reducing the seriousness. Babies can also get vaccinated for a common type of pneumonia that is caused by bacteria. Review national guidelines or the national immunization schedule to understand when and where to get vaccinated.

KEY MESSAGES

- Handwashing, and covering sneezes and coughs, is the best way to prevent the spread of respiratory tract infections.

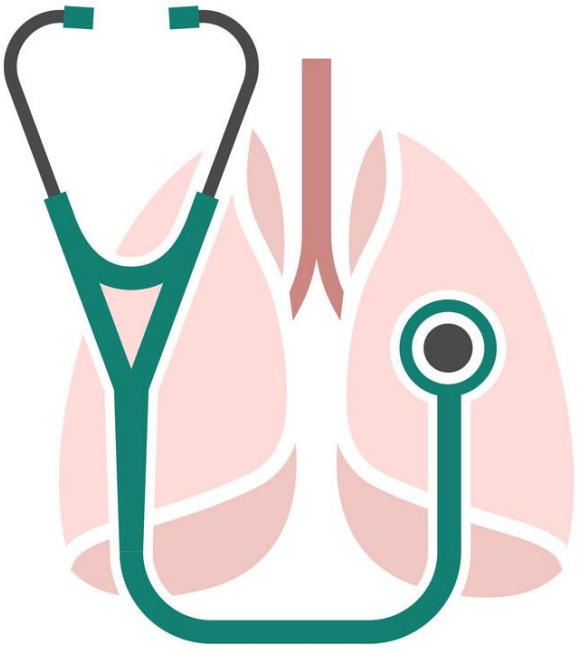
TESTING

Respiratory tract infections are most commonly diagnosed based on signs and symptoms.

In most cases, respiratory tract infections will be caused by a virus. Only a small percentage will be caused by bacteria. In general, bacterial infections will cause more serious symptoms.

At a community level, it may not be possible for you to know if the RTI is caused by a virus, bacteria or fungus. In some cases, they could happen at the same time.

Refer to a health center if you observe any of the signs, symptoms or danger signs.



KEY MESSAGES

- Respiratory tract infections are most often diagnosed based on signs and symptoms.
- Most respiratory tract infections are caused by viruses.

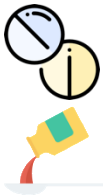
Treatment and Care

Most healthy people will make a full recovery from respiratory tract infections within 1-2 weeks. During this time, the best way to support patients is to help them manage their symptoms at home. This includes encouraging patients to drink plenty of water and have plenty of rest.

To help the patient reduce any fever, aches and pains, you can provide some basic medicines. You can also help them to take medicine that is prescribed by a doctor.

Instructions for Giving Paracetamol

1. Check the expiry on the packaging or bottle.
2. Calculate dosage according to national guidelines .
    - General dosage for paracetamol is as follows:
        - Two 500mg tablets every 4 hours for adults
        - 10mg/kg body weight every 4 hours for children
3. Provide medicine to patients. It is better to take this medicine after a meal to avoid an upset stomach.



Tablets should be swallowed with a glass of water, milk or juice. Tablets should not be chewed.

Liquid medicine or syrup: Measure out the right amount using an oral syringe or medicine spoon.

4. Wait at least 4 hours between doses of paracetamol.
5. Do not give more than four doses in 24 hours.

Supporting a Patient to Take Antibiotics Prescribed by a Doctor

If the RTI is confirmed to be caused by bacteria, a doctor may prescribe antibiotics. You can support patients during their treatment to ensure that the entire course of medication is taken by the correct person, in the correct dose, at the correct time, and for the complete period.

Self-medication can be dangerous. Consult community health workers or the nearest health center to know which medicine is correct.

KEY MESSAGES

- Most people will recover within 1-2 weeks.
- Treatment includes managing symptoms, drinking water and getting a lot of rest.

KEY ACTIONS

As a community health worker, you have an important role to support your community to prevent, identify and support patients with respiratory tract infections. Key actions that you can take include:

- Teach community members about Respiratory Tract Infections and how they spread.
- Educate community members about the signs of RTIs and when they should go to a health center.
- Increase awareness about how to prevent the spread of RTIs, including how to cover their mouths when coughing and sneezing.
- Demonstrate good physical distancing behaviors by organizing community sessions with at least 1.5-2 meters between people.
- Promote good hygiene and household ventilation.
- Encourage community members to have their children vaccinated according to the national immunization schedule.
- Educate your community about the dangers of buying medicine themselves. Community health workers, nurses and doctors should always be consulted.

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