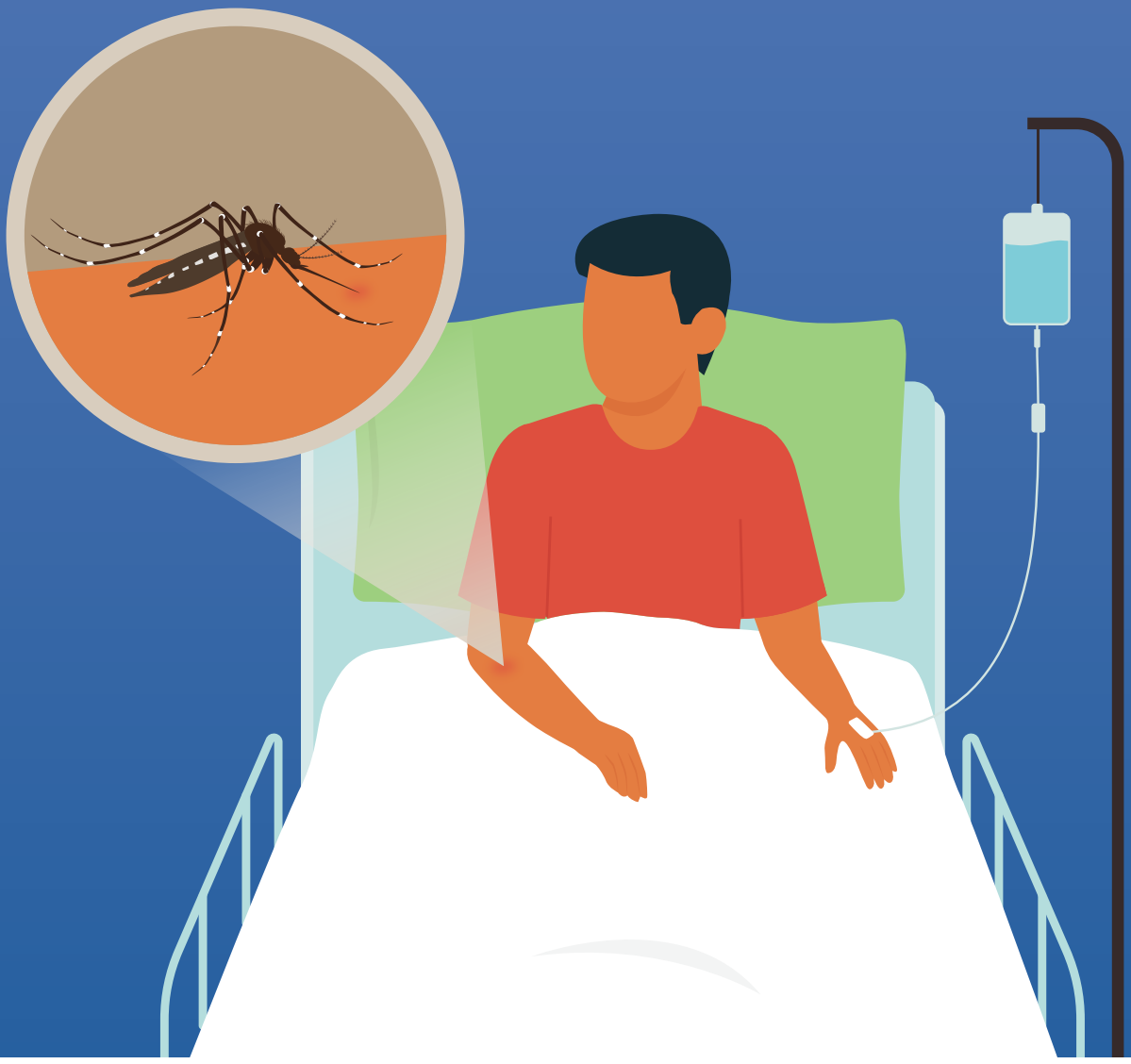
Dengue case management

For primary health care and home-based care



Booklet for health professionals
and health-care workers

World Health Organization
South-East Asia Region

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Dengue case management for primary health care and home-based care: Booklet for health professionals and health-care workers

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Contents

Foreword

Dengue is one of the most pressing public health threats across the WHO South-East Asia Region. With more than 1.16 million cases and over 4,300 deaths reported in 2023 alone, the region now bears a disproportionately high share – approximately 70% – of the global dengue burden. This troubling trend emphasises an urgent need to strengthen clinical recognition, case management, and health system readiness, particularly at the primary health care level where most patients first seek care.

Despite being a preventable and manageable disease, dengue continues to cause avoidable suffering and deaths. Early diagnosis, timely recognition of warning signs, and appropriate fluid management can significantly reduce complications and mortality. However, frontline health-care workers often face challenges such as limited diagnostic capacity, inadequate training, and constrained resources, especially during outbreaks.

This booklet has been developed to equip health professionals and primary health-care workers with clear, practical guidance on early diagnosis, effective management, and appropriate referral of dengue cases —including for home-based care. It offers straightforward evidence-based protocols, tailored to low-resource settings, enabling health-care providers to manage patients confidently and safely at the community level.

The booklet is a reflection of our commitment to building resilient and responsive primary care systems. It empowers the region's health workforce to play a transformative role in reducing dengue-related morbidity and mortality.

I commend the efforts of all experts and contributors involved in producing this vital resource. Let us work together to ensure that no life is lost to a disease that we have the knowledge and tools to manage effectively.

Dr Catharina Boehme
Officer-in-Charge
WHO South-East Asia

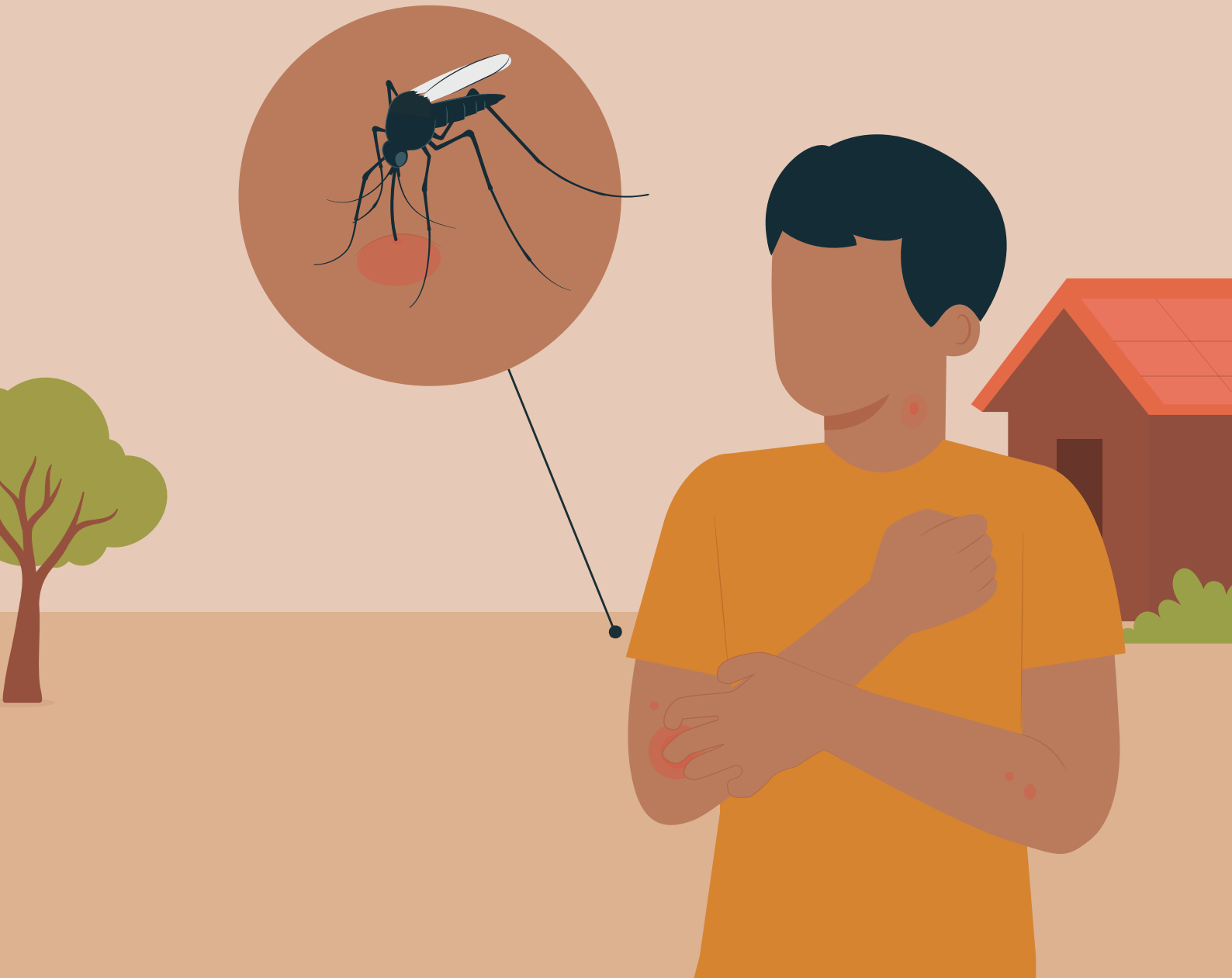
Acknowledgement

Dr Ananda Wijewickrama, Consultant Physician, National Institute of Infectious Diseases, Sri Lanka, and Professor Siripen Kalayanarooj, Queen Sirikit National Institute of Child Health (QSNICH), Department of Medical Services, Ministry of Public Health, Bangkok, Thailand, coordinated the production of this document. The WHO Regional Office for South-East Asia gratefully acknowledges the contributions and participation of all collaborators and WHO staff members in shaping this booklet. The list of contributors can be found in Annexure 1.

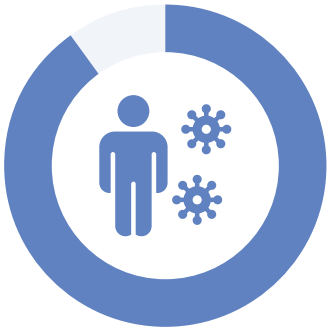
Abbreviations

CBC	complete blood count
DF	dengue fever
DHF	dengue haemorrhagic fever
DSS	dengue shock syndrome
EDS	expanded dengue syndrome
HCT	hematocrit
IV	intravenous
NSAIDs	nonsteroidal anti-inflammatory drugs
ORS	oral rehydration solution
PHC	primary health care
WBC	white blood count

1.
Introduction



Dengue is a rapidly spreading mosquito-borne viral infection that poses a significant public health challenge worldwide. Approximately half of the global population is at risk, with an estimated 100–400 million cases occurring annually. Dengue is prevalent in tropical and subtropical regions, particularly in urban and semi-urban areas, with South-East Asia accounting for more than half of all cases globally.



Approximately 80%–90% of individuals infected with the dengue virus remain asymptomatic, although they may carry the virus in their blood and contribute to its transmission. Others, after an incubation period of 3–14 days, develop a febrile illness in a varying spectrum, ranging from mild to severe:

1. Undifferentiated febrile illness:

- It is a mild, flu-like illness lasting a few days, lacking the classical features of dengue.

2. Dengue fever (DF):

- A self-limiting illness lasting 3–7 days, characterized by classical symptoms such as fever, headache, muscle and joint pain, pain behind the eyes, bleeding manifestations and rash; although DF may be benign, it can be an incapacitating disease with severe headache, and muscle, joint and bone pain (breakbone fever), particularly in adults.
- Most cases recover without complications, though some may experience significant bleeding.

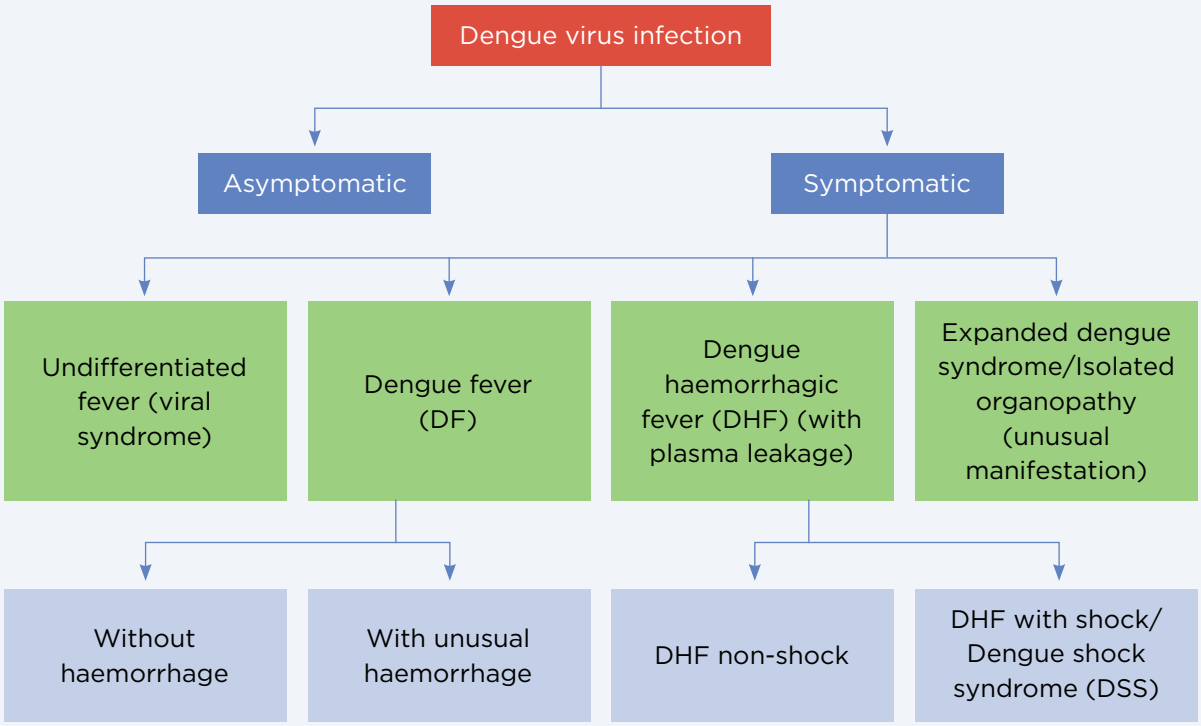
3. Dengue haemorrhagic fever (DHF):

- Initial symptoms similar to those of DF, but patients progress to plasma leakage and an increased tendency for bleeding during the subsidence of fever.
- Hospitalization and close monitoring are often required.

4. Expanded dengue syndrome (EDS)

- It is usually a severe manifestation of DHF/DSS (dengue shock syndrome) which affecting organs such as the liver, kidneys or brain, often associated with prolonged shock, co-infections or underlying conditions (e.g. diabetes, hypertension or chronic organ diseases). EDS can also follow DF, even in the absence of shock or hemorrhagic manifestations.
- EDS is difficult to diagnose early and is associated with a poor prognosis, especially when diagnosis and treatment are delayed.

Fig. 1. Classification of dengue illness (WHO-SEARO, 2011)



Distinguishing between DF and DHF in the early stages is challenging as both share similar initial presentations. Some cases may escalate to severe disease or result in death. Therefore, all suspected dengue patients require regular follow-up for timely intervention.

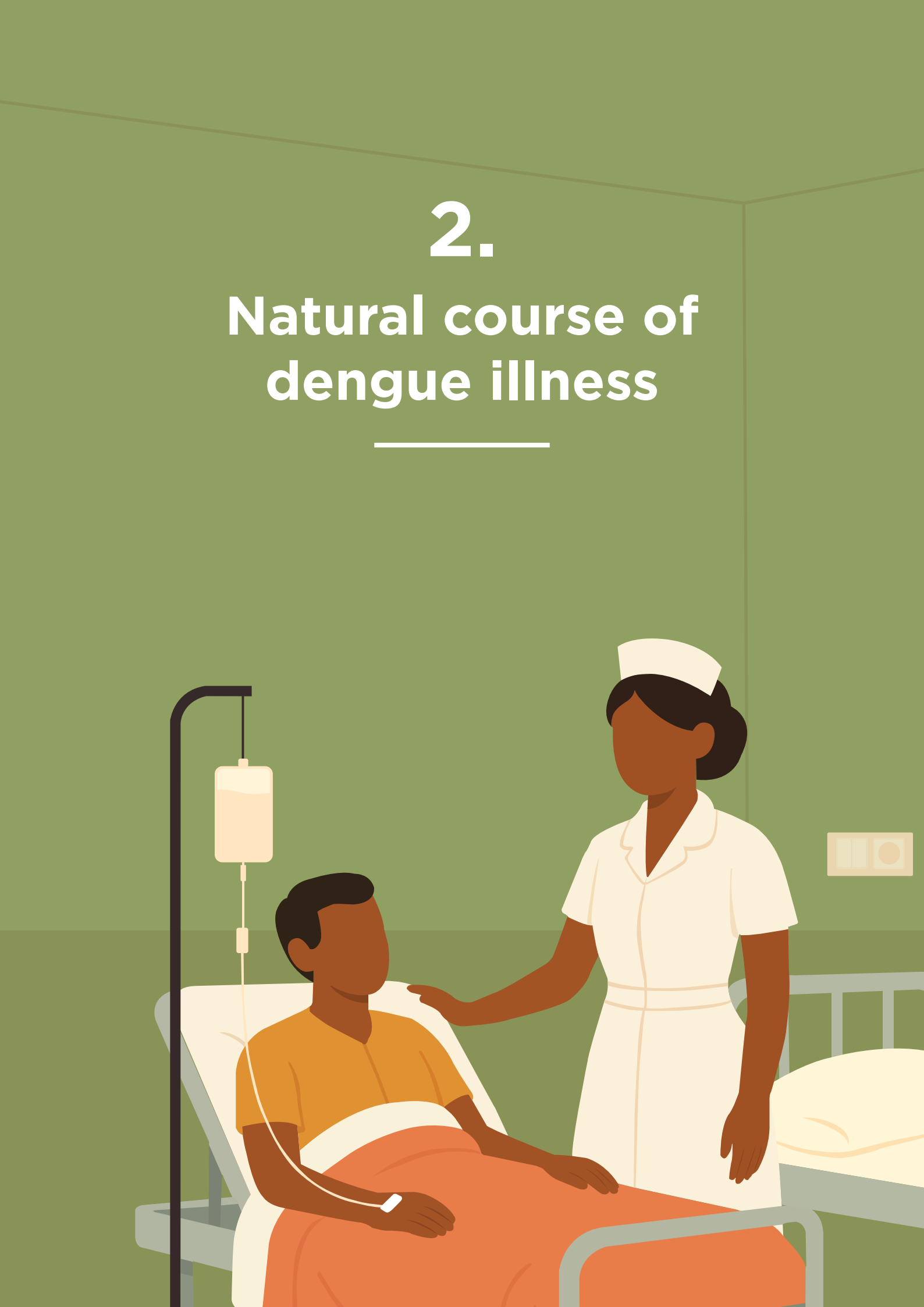
Currently, there is no specific antiviral treatment for dengue. Early medical care, symptomatic management, especially appropriate fluid management, and prompt recognition and management of complications significantly reduce the risk of severe outcomes, including death. Prevention and control primarily rely on effective vector control measures. Public health workers, especially those at the primary health care (PHC) level, play a vital role in:

- reducing complications and mortality in dengue patients through early diagnosis and management; and
- preventing disease transmission by implementing and promoting vector control strategies.

Therefore, health-care professionals and health-care workers at the PHC level have a great responsibility towards reducing the complications and death of patients, and containing the transmission.

2.

Natural course of dengue illness



Dengue infection may be asymptomatic or present with a wide-ranging clinical spectrum that includes both severe and non-severe clinical manifestations.

Dengue fever (DF) is typically a mild illness with two distinct phases: **the febrile phase (fever) and the convalescent phase (recovery).**

Dengue haemorrhagic fever (DHF), on the other hand, is a more severe form of dengue characterized by plasma leakage and a tendency to bleed, making it potentially life-threatening.

- **Plasma leakage** occurs when the liquid component of blood (plasma) escapes from blood vessels into the abdominal and chest cavities.
- **Bleeding manifestations** range from minor (e.g. petechiae, nosebleeds, gum bleeding) to severe (e.g. bloody vomiting or stools, haematuria, dark-coloured urine, hypermenorrhea), with severe cases often requiring blood transfusions.

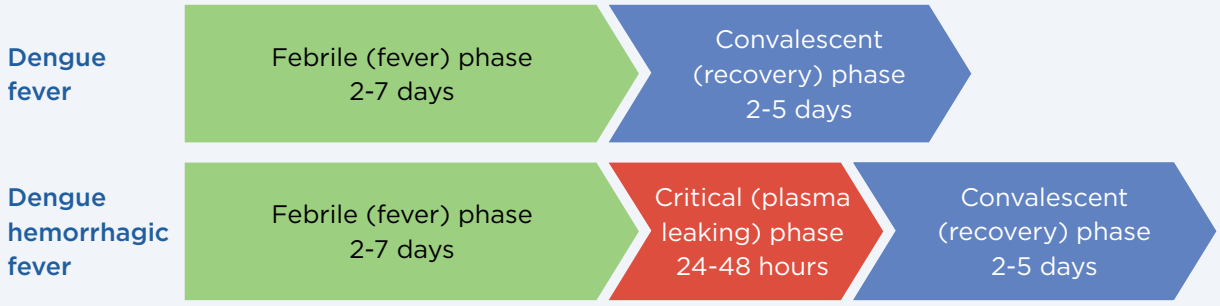
Both plasma leakage and significant bleeding occur at the end of a febrile phase, and last for about 24–48 hours (two days). This period is called the **critical phase** or the **leakage phase.**

- If properly managed, most patients, especially children, recover fully.
- However, severe or poorly managed plasma leakage and bleeding can lead to dengue shock syndrome and other serious complications.

Following the critical phase, patients enter the **recovery phase (convalescent phase),** during which symptoms gradually resolve.

Early detection and a thorough understanding of the clinical problems that may arise during the different phases of dengue are critical to ensure rational and effective management, leading to favourable clinical outcomes.

Fig. 2. Phases of dengue illness



Febrile phase (common in both DF and DHF)

Patients with dengue typically present with sudden onset of high-grade fever, particularly in children. In adults, however, fever may be low-grade or even absent. The initial acute febrile phase usually lasts 2–7 days and is often accompanied by the following symptoms:

- headache;
- generalized body pain, including muscle, joint and bone pain;
- pain behind the eyes; and
- bleeding manifestations – petechiae, nose and gum bleeding, bloody vomiting, bloody stool and urine (haematuria) or dark-coloured stool/urine, excessive menstrual bleeding; and
- maculopapular rash (flat and raised red spots).

Some patients may have non-specific symptoms, including nausea, vomiting, abdominal pain, upper respiratory infection symptoms (cough, sore throat, rhinorrhea) and diarrhoea.

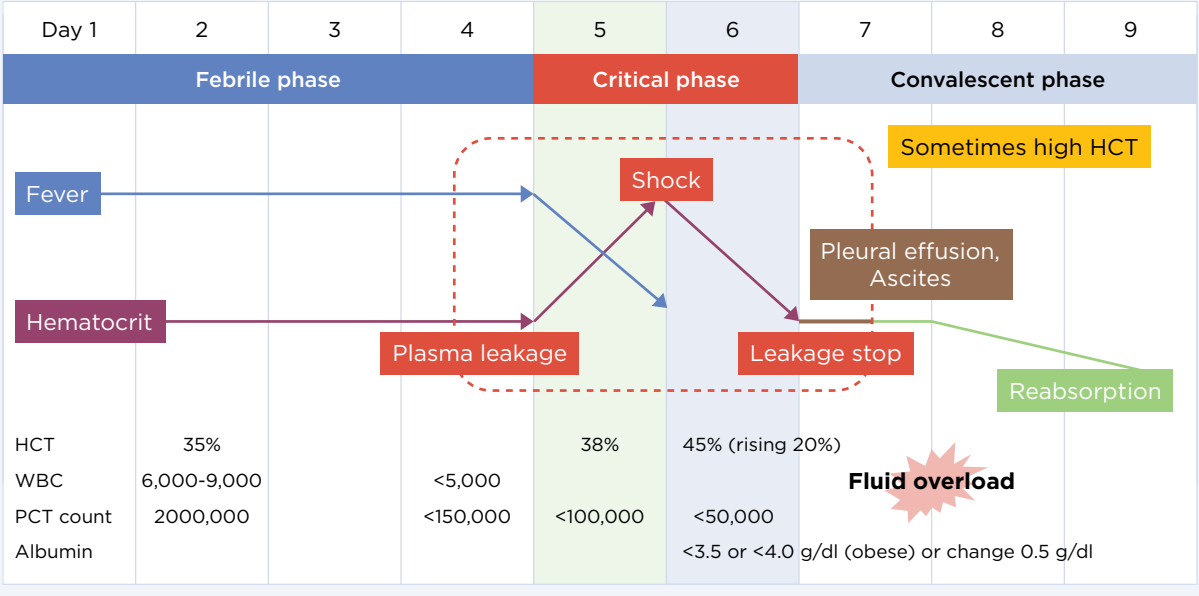
If there is any dengue case in the area, any febrile patient should be suspected of dengue.

These varied symptoms highlight the importance of early clinical suspicion and monitoring for progression to severe dengue.

It is often difficult to differentiate DF from DHF in the febrile phase. Therefore, during the febrile phase, suspected dengue patients should be closely followed up on in order to identify DHF patients going into the critical/leakage phase.

Fig. 3. Natural course of DHF/DSS

Courtesy of Professor Siripen Kalayanarooj



Critical/leakage phase (in DHF)

Plasma leakage in dengue typically lasts between 24 and 48 hours. Plasma leakage and bleeding vary from patient to patient:

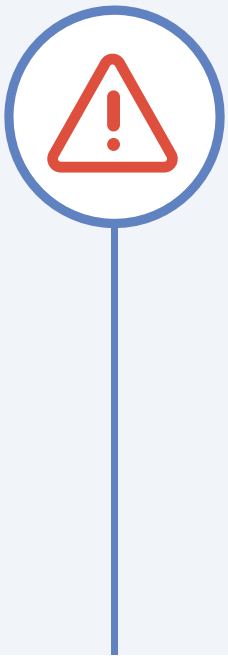
- Patients with mild leaking/bleeding will recover without any complications.
- Patients with significant leaking/bleeding may develop shock, if not properly managed.

Shock in dengue, particularly dengue shock syndrome (DSS), usually develops after 24 hours of entering the critical (leakage) phase. The clinical presentation of DSS can be subtle, as patients often remain conscious, are able to walk and talk, and communicate despite experiencing physical weakness.

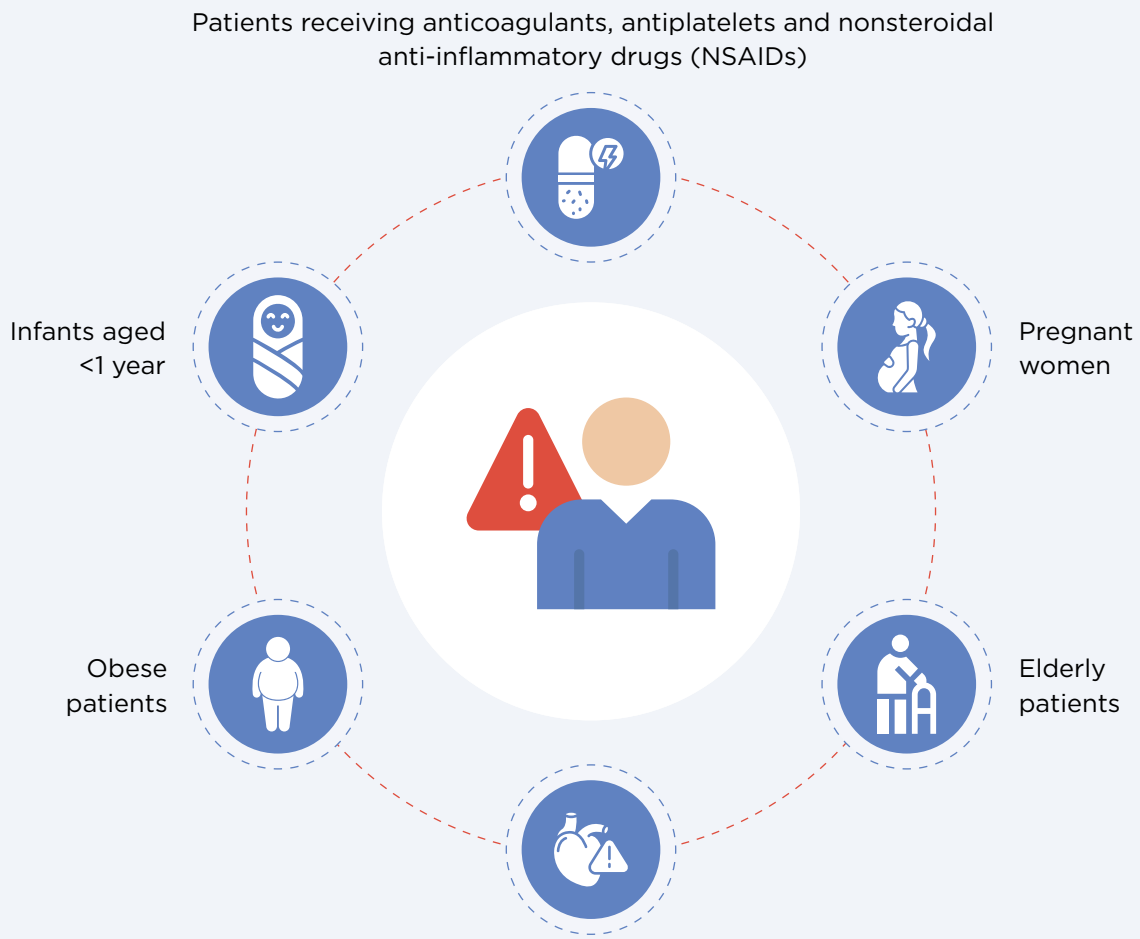
Dengue patients who are in the critical phase may present with the following warning signs.

Warning signs

- Lack of clinical improvement or worsening symptoms during the period when fever subsides
- Severe abdominal pain
- Persistent vomiting (more than three times per day)
- Lethargy, restlessness, irritability or confusion
- Reduced or absent urine output for 4–6 hours
- Bleeding tendencies, such as bleeding while brushing teeth or any significant bleeding
- Dark-coloured or tar-like stool, blood in vomitus, excessive menstrual bleeding or dark-coloured urine
- Pale, cold extremities



Dengue patients who are at high risk of developing severe diseases include:



Recovery/convalescent phase

In dengue fever, patients moving from the febrile phase to the recovery phase show clinical improvement. The following are the features of recovery:

- improving general conditions and appetite;
- bradycardia;
- convalescent rash – characterized as confluent petechial rash with scattering white halo on extremities, itching, especially on palms and soles;
- diuresis; and
- increasing platelet count.

In DHF, the recovery phase begins after the leakage phase resolves (after 24–48 hours of critical phase), marked by re-absorption of leaked plasma from the pleural and peritoneal cavities back into circulation, lasting 48–72 hours.

The re-absorption period may last longer than 72 hours, depending on the amount of pleural effusion and ascites. Rapid and complete recovery are commonly observed in children, whereas prolonged fatigue lasting for a month can occur in adults.

Advice to DHF patients in the recovery phase after they are discharged from hospitals includes:

There is no longer a risk of transmitting dengue virus to other people in the communities.

Avoid traumatic activities and vigorous exercise for two weeks.

Postpone invasive procedure, e.g. vaccination, injection and elective surgery for two weeks, but if any procedure needs to be carried out, check the platelet count and if it is ≥100 000/mm^3, the procedure can be proceeded with.

3.

Diagnosis (initial assessment)

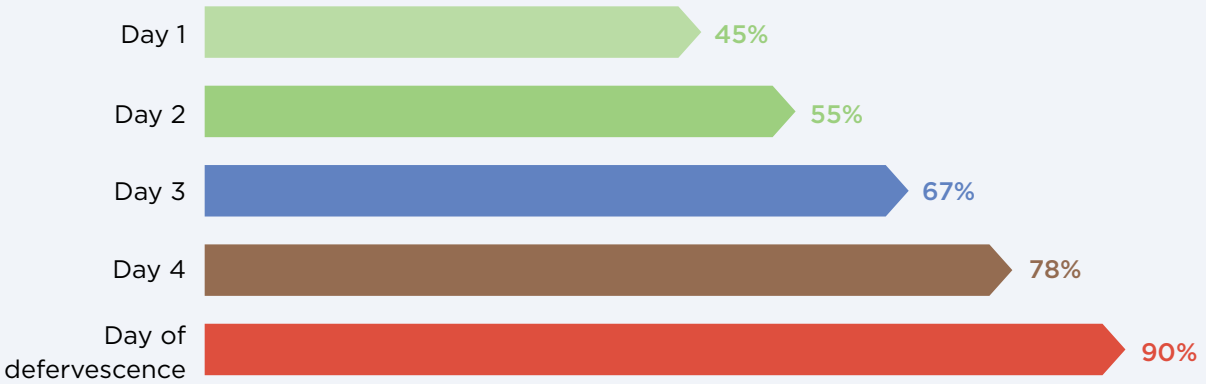
In endemic countries, dengue should be suspected in **any patient having a fever for two or more days.**

Clinical suspicion of dengue is based on symptoms and signs, supported by **tourniquet test,** if available. Basic investigations (based on **complete blood count (CBC) ± NS1 Ag test** result) will also support the diagnosis.

i. **Tourniquet test (TT)** is an inexpensive and non-invasive diagnostic tool commonly used to evaluate a patient's bleeding tendency, particularly in settings with limited resources. This method is practical as it requires only the basic equipment available, sphygmomanometer at nearly all levels of health-care facilities. Do not use a digital blood pressure machine to do the test.

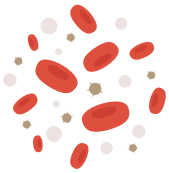
- **Procedures are:**
  - Calculate the midpoint pressure by adding the systolic and diastolic blood pressures and dividing the sum by two.
  - Inflate the blood pressure cuff to this midpoint and maintain the pressure for five minutes.
  - Deflate the cuff and allow the skin to return to its normal colour within 1–2 minutes.
  - The test is considered positive if 10 or more petechiae appear per square inch on the forearm.
- **Sensitivity:**
  - Ranges from 58% to 89.9%, depending on the stage of illness and individual variation.
- **Progressive positivity:**
  - The likelihood of a positive TT result increases with the course of the disease:

Fig. 4. The likelihood of a positive TT result



This progressive increase underscores the importance of performing the test daily for cases with suspected dengue to improve diagnostic yield.

ii. Fever with the signs and symptoms and the following examination results will suggest dengue infection:



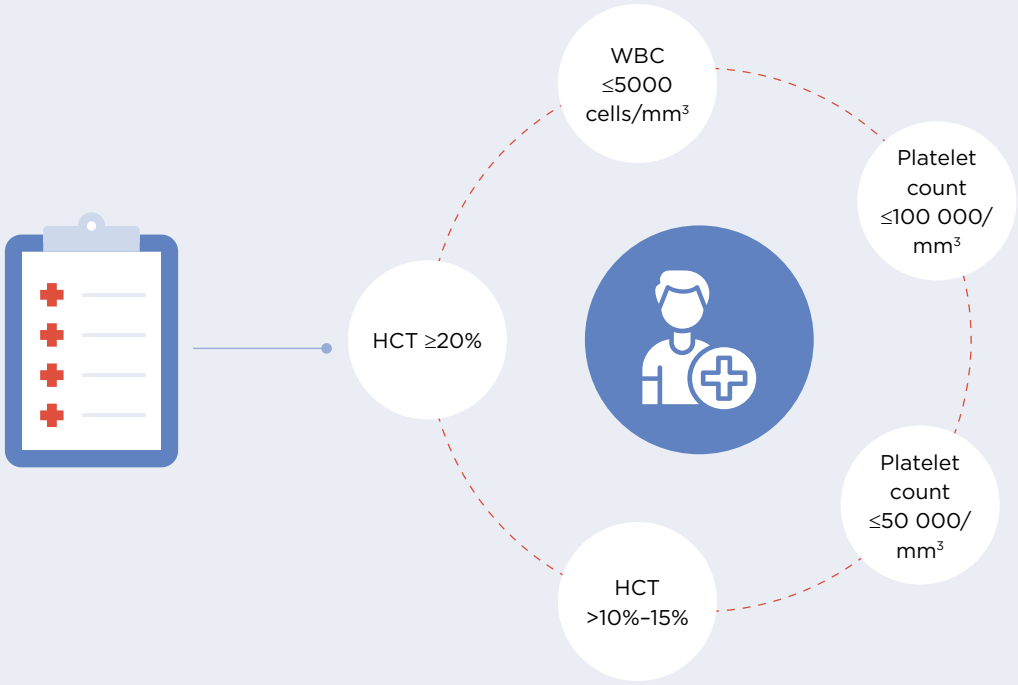
- reduced WBC count (≤5000/mm³)
- platelet count ≤150 000/mm³

Note: Some patients may present with respiratory or gastrointestinal symptoms.

iii. CBC findings will guide clinical implications as follows:

- Leucopenia (WBC ≤5000 cells/mm³) suggests dengue infection. The fever will subside within the next 24 hours but implies that the critical period is approaching in patients with DHF.
- Thrombocytopenia (platelet count ≤100 000/mm³) indicates that the patient is entering the critical period and requires close monitoring at the hospital. He/she may need IV fluid if oral intake is not adequate.
- Thrombocytopenia (platelet count ≤50 000/mm³) suggests ongoing plasma leakage for more than 24 hours.
- Rising HCT >10%–15% indicates the onset of plasma leakage.
- Rising HCT ≥20% suggests significant plasma leakage.

CBC findings that guide clinical implications



iv. **Dengue NS1 antigen test** is a valuable tool for early diagnosis of dengue infection, though its availability at primary health clinics (PHCs) is often limited to outbreak situations.

Optimal timing:

The test shows the highest positivity in the first 3–4 days of fever, making it most useful in the early febrile phase.

Sensitivity:

Ranges from 40% to 80%, depending on factors such as the stage of illness and individual immune response and the manufacturers of the tests.

Limitations:

A negative NS1 antigen test does not rule out dengue infection and should not be solely relied upon for diagnosis.

Cross-reactivity:

The NS1 antigen test may cross-react with other flaviviruses (e.g. chikungunya, Zika) as well as typhoid and rickettsial infections, which can lead to diagnostic challenges in endemic areas.

4.

Management of dengue patients in primary health care

Management of patients at the PHC level involves:

1. initial assessment for early identification of dengue illness;

2. appropriate care as outpatients at a PHC or home:

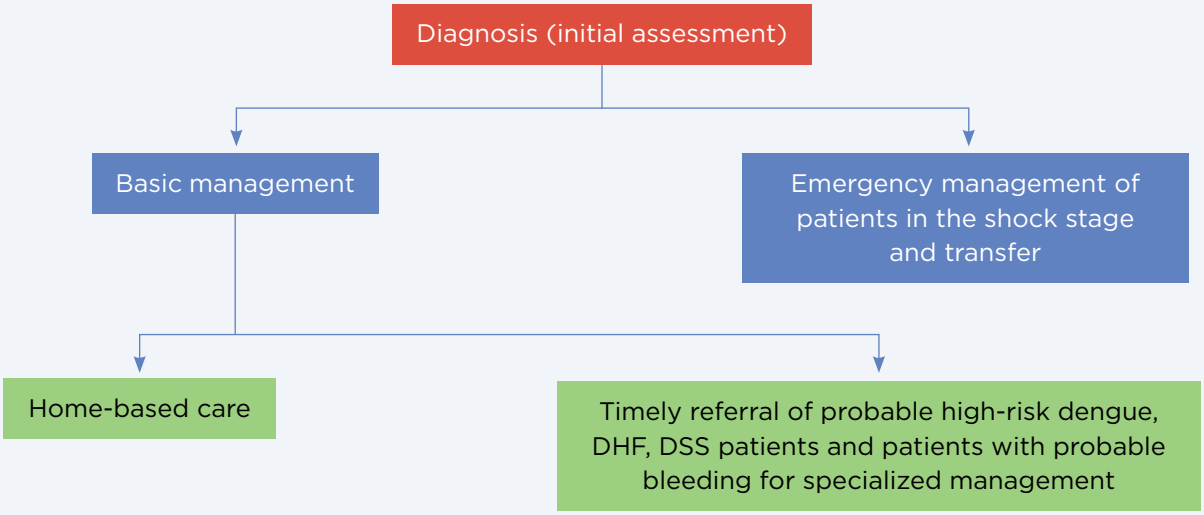
   a. Monitor hydration status and vital signs.

   b. Arrange for **CBC testing on Day 3 of fever and daily until defervescence.**

3. timely referral of probable high-risk dengue, DHF and DSS patients with probable bleeding for admission and specialized management; and

4. identification and stabilization of patients presenting shock before referral/transfer.

Fig. 5. Management options at the primary care level



Fever patients with a platelet count of more than 100 000/mm^3 (done within the last four hours) and clinically stable (normal vital signs without any warning signs) ones can be managed as outpatients and in home-based care.

Dengue patients who can be managed by home-based care under medical guidance

- Febrile patients with a platelet count of more than 100 000/mm^3 (done within the last four hours) and
- Clinically stable (normal blood pressure, pulse rate and urine output without any warning signs)

However, the patients should be **monitored daily as outpatients**, starting **from Day 3 of the fever.** Health-care workers should document relevant symptoms and signs while performing serial blood counts (CBC).

Platelet counts should guide the frequency of monitoring:

- If the count is above 120 000/mm^3, CBC testing should be carried out daily.
- If it falls between 100 000/mm^3 and 120 000/mm^3, CBC testing should be conducted twice a day.

A rapid drop in platelets warrants consideration for hospital admission.

Ensuring **proper hydration and adequate rest** is essential for recovery. Patients should strictly follow their care plan, attend scheduled follow-ups and **undergo recommended blood tests.** Health-care workers should emphasize the importance of seeking urgent medical attention if warning signs develop.

During each outpatient visit, the health-care provider should review the patient's symptoms, assess serial blood counts, document findings and offer appropriate medical guidance. Effective outpatient and home-based care play a critical role in managing dengue and preventing complications.

High-risk patients may be referred to higher-level centres for closer observation, particularly if they exhibit leukopenia (WBC ≤5000 cells/mm^3).

The following points are the key aspects of management of patients during home-based care.

i. Treatment of fever and medication

- Advise the patient to take **only paracetamol** (acetaminophen) for fever management. The recommended dose is 10 mg/kg every six hours or 15 mg/kg every eight hours, with a maximum daily dose of 60 mg/kg. For adults, the maximum dose is 4 g/day; 1–2 500 mg tablets every six hours.

Note:

Paracetamol may not reduce the fever to baseline levels in some patients. If the fever exceeds 38.5°C, recommend tepid sponging with lukewarm water for 15 minutes at a time for children. The procedure should be stopped if shivering occurs. For older children and adults, a warm shower or bath is an alternative.

- **Do not use other pain relievers or fever-reducing medications** such as NSAIDs (e.g. diclofenac, ibuprofen, mefenamic acid) or steroids (e.g. dexamethasone, prednisolone) in dengue patients due to the risk of complications [such as gastritis with severe gastrointestinal tract (GI) bleeding and liver injury].

Diclofenac | Ibuprofen | Mefenamic acid | Dexamethasone | Prednisolone

- Other medications can be considered according to the symptoms of patients:
  - domperidone 0.2–0.4 mg/kg/dose for children <35 kg or one tablet (10 mg) in adults, 3–4 times/day, maximum dose 40 mg/day for vomiting;
  - antacid, histamine-2 blockers (cimetidine, ranitidine) or proton pump inhibitors (omeprazole) for abdominal pain/peptic ulcer; and
  - anticonvulsants for febrile convulsion or epilepsy.
- If the patient is on medications that are contraindicated in dengue (e.g. warfarin, aspirin, clopidogrel, NSAIDs or steroids), advise them to seek specialist medical advice immediately.
- Patients should inform their doctor of all medications they are currently taking when seeking treatment for dengue to ensure safe and effective care.

ii. Food intake and adequate rest

- Patients should rest in comfortable clothing, ideally in a mosquito-free environment, such as under a bednet.
- Physical rest is highly recommended during the illness.
- Patients should avoid exertion and refrain from unnecessary physical activity.
- If the appetite is good, they can consume light and nutritious food. While there are no specific dietary restrictions, it is advisable to avoid dark-coloured foods and beverages (e.g. red, brown or black) to prevent confusion with blood-stained vomitus or stools.
- Patients should be encouraged to drink adequate fluids, especially if their food intake is reduced to less than half of normal. The preferred fluids are oral rehydration solution (ORS), fruit juices, coconut water, milk or soup to maintain hydration and ensure normal urine output.
- If the patient has a poor appetite, forced feeding should be avoided. Instead, focus on ensuring adequate fluid (not plain water) intake to maintain hydration.

iii. Fluid intake

- Fluids containing electrolytes, such as fruit juice, ORS, coconut water, *kanji* and soup, are preferred. Plain water should be avoided as it may lead to electrolyte imbalance.
- Patients should drink sufficient fluids to maintain hydration and ensure normal urine output:

For children, the recommended intake is 3–5 mL/kg/hour.

For adults, the recommended intake is 200 mL/hour, except during the night.

Note:

- The recommended fluid volume can be administered in small amounts more frequently throughout the day.
- Extra fluids should be provided to replace losses in cases of vomiting and/or diarrhoea.
- If patients show signs of moderate to severe dehydration (e.g. excessive vomiting or frequent diarrhoea), intravenous (IV) fluids may be required and referral to a higher-level health-care facility is recommended. Signs of moderate to severe dehydration include the following, and these signs require immediate medical attention and possible IV fluid therapy.

Moderate dehydration	Severe dehydration
• restlessness • decreased urine output (less than 0.5 mL/kg/hour) • dry and cracked lips • dry oral mucosa and tongue • crying without tears • poor skin turgor • flat jugular venous pulse • urine specific gravity ≥1.020.	All symptoms of moderate dehydration, plus: • sunken eyes • altered sensorium • decreased blood pressure • cold extremities.

iv. Measurement of urine output

- Maintaining a good urine output (0.5 mL/kg/hour) is essential for proper hydration and organ function. For infants as well as obese or pregnant patients, adequate urine output may be defined as less than 0.5 mL/kg/hour.

- Urine output should be measured whenever possible and documented with the time of measurement, as any reduction in urine output can be promptly identified and addressed.

Table 1. Fluid input-output chart

Date and time	Consumed fluid (mL)	Date and time	Urine amount (mL)

Note: *Special attention should be paid to diabetics with poor blood sugar control and pregnant women, as they may experience increased urine output.*

v. Monitoring of recovery signs vs warning signs

During recovery, patients will exhibit characteristic recovery signs as previously described (page 9). All suspected dengue patients should be monitored every day (from Day 3 onwards) for at least seven days from the onset of fever, and until they have been fever-free for 24 hours (without taking antipyretic drugs) and are in good clinical conditions.

Settling of fever may not be a sign of recovery in dengue. Complications may arise as the fever settles. In such cases, **the patient will exhibit warning signs. The earliest warning sign is no clinical improvement (before deterioration) when fever settles.** This means there is no fever, but the patient still looks weak, with persistent abdominal pain, vomiting and poor appetite. The patient needs to be aware of the possibility of getting complications as the fever settles and needs to be educated on how to look for any warning sign.

If a dengue patient experiences any warning sign when there is no fever, his/her family/caretaker should inform his/her medical practitioners immediately, as hospital admission may be required as soon as possible.

vi. Timely referral for specialized management

Probable high-risk DHF, DSS and dengue patients with probable bleeding need to be detected early and referred to **secondary/tertiary health facilities where blood bank is available** in a timely manner for specialized case management and/or blood transfusion.

Early signs of plasma leakage (critical phase) in DHF

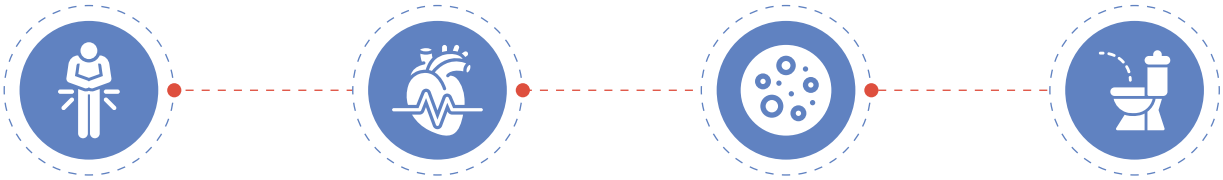
Clinically significant plasma leakage occurs around defervescence and the following signs are indications:

- no clinical improvement or deterioration of patient's general condition in defervescence (late signs);
- warning signs;
- suspected leaking in patients with platelet count below 100 000/mm^3 and in patients with rapid drop of platelet count;
- progressive rising of HCT towards 20% above the baseline;
- gradual reduction of urine output (UOP) or no urine output for 4–6 hours; and
- ultrasound evidence of leaking.

Early signs of bleeding in DF and DHF

Bleeding is a common complication in dengue illness and is multifactorial. It can occur in both DF and DHF patients. In paediatric age groups, bleeding usually occurs after prolonged shock. However, in adults, bleeding can occur in patients who have not gone into shock as well. Some patients can have visible bleeding, such as haematemesis, melaena, haematuria, haemoglobinuria and excessive menstruation. However, bleeding is often concealed, especially gastrointestinal bleeding.

Bleeding should be suspected in patients with the following features:



Severe abdominal pain

Unexplained tachycardia

Rapid drop in platelet count to below 50 000/ mm^3, without rising HCT or minimal rising of HCT <20% from baseline or dropping of HCT instead of rising

Normal or low HCT with unstable vital signs and/or reduction of urine output

vii. Emergency management of patients in shock stage and transfer/referral for specialized management

Dengue shock syndrome (DSS) can occur due to significant plasma leakage and/or bleeding. Inadequate fluid resuscitation and/or delayed blood transfusion can lead to prolonged shock and organ failure. Therefore, early identification and immediate/timely proper resuscitation of shock and/or blood transfusion are crucial.

Early signs of dengue shock syndrome

Patients with dengue shock typically remain conscious and are often able to walk and talk, though they may appear fatigued. Key clinical features of dengue shock include:

General symptoms

- Sweating
- Dizziness, fainting or syncope
- Restlessness, irritability or altered level of consciousness

Respiratory symptoms

- Shortness of breath

Gastrointestinal symptoms

- Abdominal pain
- Vomiting

Circulatory symptoms

- Cold extremities
- Tachycardia with a low-volume pulse
- Prolonged capillary refill time (≥3 seconds)
- Orthostatic/postural hypotension
- Narrow pulse pressure and/or hypotension

Renal symptoms

- Decreased or absent urine output for 4–6 hours (<0.5 mL/kg/hour)

Prompt recognition of these features is critical for initiating timely management and preventing progression to severe complications.

Management and transfer/referral of patients with dengue shock syndrome

- If the patient has signs of shock, stabilize the patient and monitor vital signs closely. If an IV line cannot be established, administer ORS in small amounts at a time: 10 mL/kg/hour for children and 1 litre/hour for adults.
- Administer normal saline (with or without 5% dextrose) at 10 mL/kg/hour for children or 500 mL/hour for adults. If blood pressure is restored after one hour, reduce the infusion rate to 60 mL/hour for children under six years and 120 mL/hour for patients over six years (in case there is no ambulance or accompanying medical personnel).
- If facilities are available, take blood for CBC and HCT before starting the fluid resuscitation.
- Check for hypoglycaemia, especially if the IV fluids do not contain 5% dextrose and correct, if necessary.
- Provide oxygen via a mask.
- Patients with profound shock often have associated complications such as acidosis, bleeding, hypocalcemia and hypoglycaemia. Consider the following management measures before transfer, if available:

- Correct hypoglycaemia, as needed.
- Administer vitamin K1 (5–10 mg IV) and calcium gluconate (1 mL/kg/dose, maximum 10 mL) diluted in D5W, slowly pushing the solution over 5–10 minutes.
- Administer NaHCO3 if the patient does not respond to the IV fluid bolus in 15–30 minutes.

- The reasons for transfer must be clearly documented.
- All clinical findings, investigation results and treatments provided should be thoroughly documented and sent with the patient.
- Before transfer, ensure the patient's condition is stable, and ensure that responsible health-care personnel communicate clearly with the patient's family and the receiving facility.

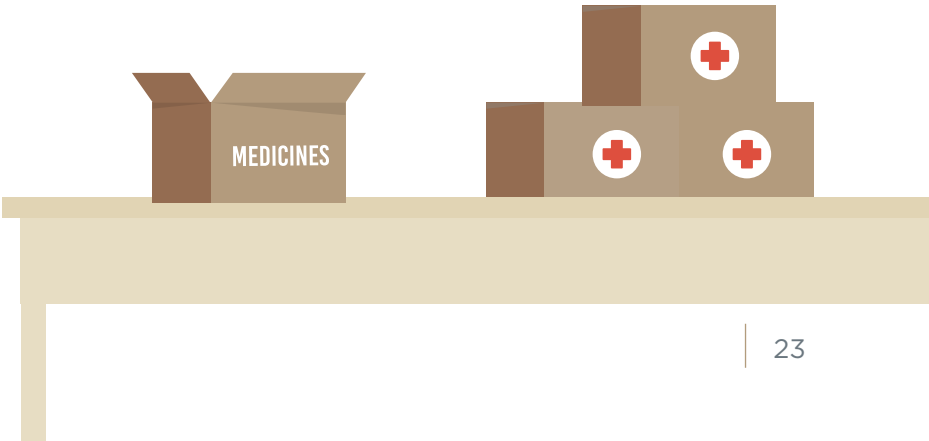
Note:

If it is not possible to establish an IV line and patients are conscious, encourage ORS solution – 10 mL/kg/hour in children or 1 L/hour in adults – small amount at a time during transfer.

Outbreak response plan at the primary health care level

In endemic areas, patients may report in clusters, especially during monsoon season. Therefore, the PHC should have an outbreak response plan to cater for such a need. The following activities are recommended:

- Triage fever patients, especially high-risk, shock, bleeding patients, at fever corner.
- Set emergency team for rapid resuscitation of DSS/severe dengue patients.
- Ensure strong referral system with higher health institutions for patients' transfer.
- Establish a communication mechanism with specialists at higher health institutions for advice and guidance before referral.
- Ensure adequate stocks of essential IV fluid, medicines are available at the PHC.
- Take part in risk communication and other public health activities with the preventive health staff.




PRIMARY HEALTH CARE CENTRE

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Annexure 2. Monitoring chart for dengue fever corner at outpatient department (OPD)

Name: _____ Age: _____

OPD number: _____ Weight: _____

Risk factors/ comorbidities: _____

Use of NSAIDs/Steroids/ Anticoagulants/Antiplatelets

Date and time	Fever day	Pulse rate	Blood pressure	UOP	WBC count	Platelet count	PCV	Giddiness	Vomiting	Diarrhoea	Abdominal pain	Bleeding	Severe headache	Menstrual bleeding	Remarks

UOP: urine output; PCV: packed cell volume


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