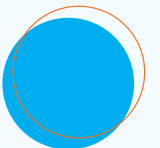
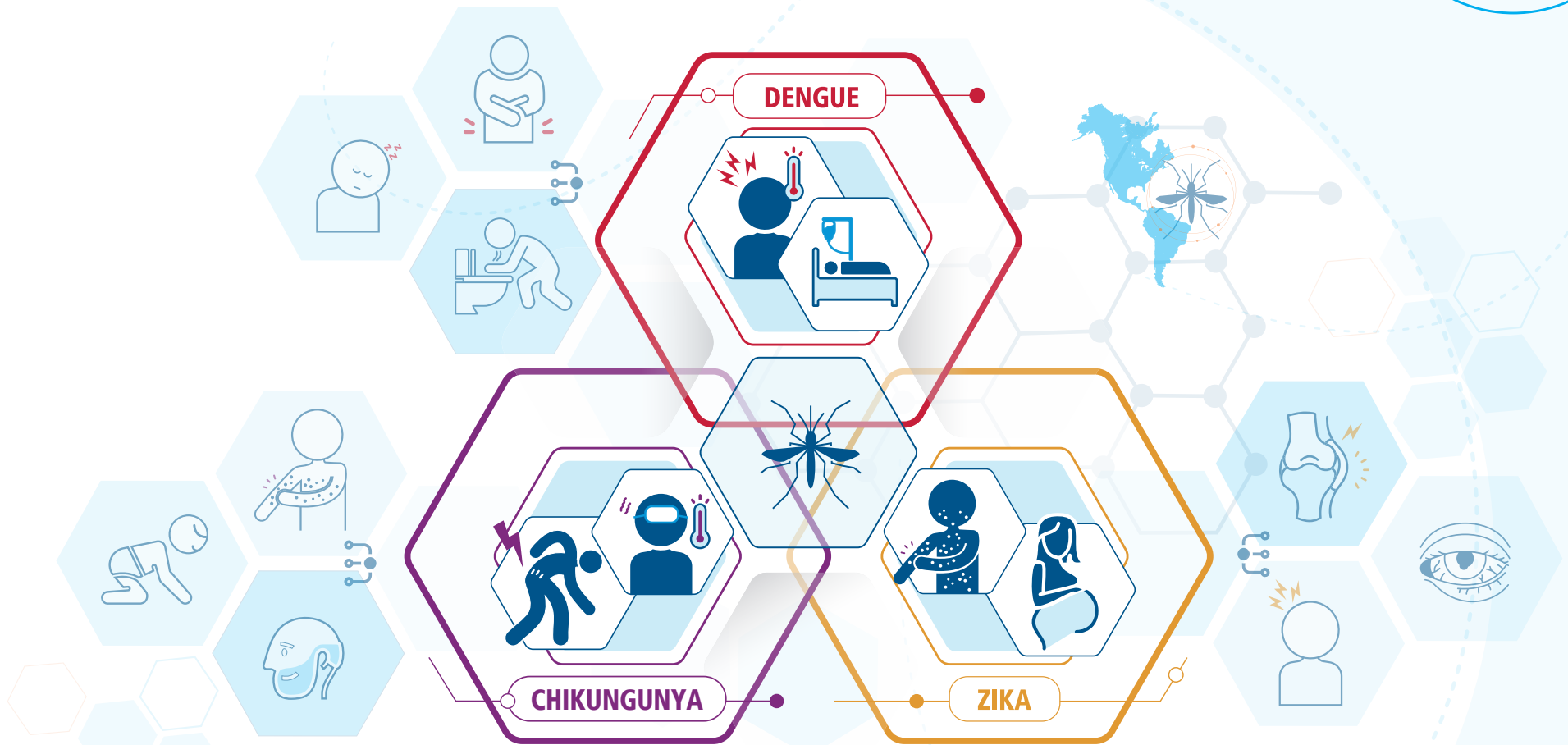


● Case definitions, clinical classification,
● and disease phases
● Dengue, Chikungunya, and Zika



Case definitions, clinical classification, and disease phases

Dengue, Chikungunya, and Zika

Washington, D.C., 2023

PAHO



Pan American
Health
Organization



World Health
Organization
REGIONAL OFFICE FOR THE
Americas

Contents

1. Dengue	1
1.1. Case definition	1
1.2. Clinical severity classification.....	2
1.3. Disease phases.....	3
2. Chikungunya	4
2.1. Case definition	4
2.2. Clinical severity classification.....	5
2.3. Disease phases.....	5
3. Zika	6
3.1. Case definition	6

1. Dengue

1.1. Case definition

Case	Definition
Suspected case	<p>A person who lives in or has traveled in the previous 14 days to areas with dengue transmission, and presents with acute fever that has typically lasted 2 to 7 days, and two or more of the following clinical manifestations: nausea or vomiting, exanthema, headache or retro-orbital pain, myalgia or arthralgia, petechiae or positive tourniquet test (+), leukopenia, with or without any warning sign or sign of severity.</p> <p>A suspected case is also considered to be any child who resides in or has traveled in the previous 14 days to an area with dengue transmission that presents acute febrile symptoms, usually for 2 to 7 days, without an apparent focus.</p>
Probable case	<p>Suspected case of dengue that also has:</p> <ul style="list-style-type: none">• Detection of IgM in a single serum sample (collected during the acute or convalescent phase). <p><i>or</i></p> <ul style="list-style-type: none">• Epidemiological link to a confirmed case.
Confirmed case	<p>Suspected case of dengue that also has:</p> <ul style="list-style-type: none">• Detection of viral RNA by RT-PCR or the viral protein NS1 by ELISA, or demonstrated presence of the virus by viral isolation. <p><i>or</i></p> <ul style="list-style-type: none">• 4-fold increase in DENV-specific antibody titer value (samples collected at least 14 days apart).• In deceased patients, molecular detection of the viral genome from autopsy tissue or by histopathological and immunohistochemical study.

*Fever is usually of sudden onset lasting no more than 7 days.

1.2. Clinical severity classification

Severity classification	Definition
Dengue without warning signs	<p>A person who lives in or has traveled in the previous 14 days to areas with dengue transmission and has fever usually for 2 to 7 days, and 2 or more of the following clinical manifestations:</p> <ol style="list-style-type: none">1. Nausea or vomiting2. Exanthema3. Headache or retro-orbital pain4. Myalgia or arthralgia5. Petechiae or positive tourniquet test6. Leukopenia
Dengue with warning signs	<p>Any case of dengue that presents one or more of the following signs as, or preferably after, fever drops:</p> <ol style="list-style-type: none">1. Intense and sustained abdominal pain, or tenderness of the abdomen2. Persistent vomiting3. Fluid accumulation4. Mucosal bleed5. Lethargy or restlessness6. Postural hypotension (lipothymia)7. Liver enlargement >2 cm below the costal margin8. Progressive increase in hematocrit
Severe dengue	<p>Any case of dengue that has one or more of the following clinical manifestations:</p> <ol style="list-style-type: none">1. Shock or respiratory distress due to severe plasma leakage.2. Severe bleeding: as assessed by the attending physician.3. Severe organ involvement (liver damage, myocarditis, etc.)

1.3. Disease phases

Phase	Description
-------	-------------

Febrile phase •

Fever in dengue can last from 2 to 7 days and is usually accompanied by facial redness, erythema, generalized body pain, myalgia, arthralgia, headache, and retro-orbital pain. Relative bradycardia is common in this phase, as fever does not substantially elevate the heart rate.

Critical phase •

In some patients during the first 3 to 7 days of the disease, their temperature drops and stays at 37.5 °C or below. At this time there may likely be an increase in capillary permeability. Patients without a large increase in capillary permeability improve, while those with higher capillary permeability may worsen as a result of loss of plasma volume and develop warning signs. If volemia is not promptly and properly restored, “a few hours later” these patients tend to present signs of tissular hypoperfusion and hypovolemic shock. This phase usually lasts 24 to 48 hours.

Recovery phase •

In this phase, a gradual reabsorption of the extravasated fluid takes place, returning from the extravascular compartment to the intravascular compartment. This stage of fluid reabsorption can last from 48 to 72 hours. In these cases, the general condition improves and appetite recovers.

2. Chikungunya

2.1. Case definition

Case	Definition
Suspected case	A person who lives in or has traveled in the previous 2 weeks to areas with chikungunya transmission, and has fever* associated with arthralgia or arthritis that is not explained by other medical conditions, with or without other extra-articular manifestations that can range from mild to severe.
Probable case	Suspected case of chikungunya that also has: <ul style="list-style-type: none">• Detection of IgM in a single serum sample (collected during the acute or convalescent phase) <i>or</i> <ul style="list-style-type: none">• Epidemiological link to a confirmed case
Confirmed case	Suspected case of chikungunya that also has: <ul style="list-style-type: none">• Detection of viral RNA by RT-PCR or viral isolation <i>or</i> <ul style="list-style-type: none">• 4-fold increase in CHIKV-specific antibody titer value (samples collected at least 14 days apart)• In deceased patients, molecular detection of the viral genome from autopsy tissue or by histopathological and immunohistochemical study.

*Fever is usually of sudden onset lasting no more than 7 days.

2.2. Clinical severity classification

Case	Definition
Chikungunya	A person who lives in or has traveled in the previous 2 weeks to areas with chikungunya transmission, and has fever* associated with arthralgia or arthritis that is not explained by other medical conditions.
Chikungunya with extra articular manifestations	A probable or confirmed case of chikungunya accompanied by other extra-articular manifestations: neurological, cardiovascular, dermatological, ophthalmological, hepatic, renal, respiratory, hematological, among others.
Severe chikungunya	A probable or confirmed case of chikungunya that has failure of at least one organ or system that threatens the patient's life and requires hospitalization.

*Fever is usually of sudden onset lasting no more than 7 days.

2.3. Disease phases

Phase	Description
Acute	Joint symptoms and/or signs last up to 2 weeks.
Post-acute	Joint symptoms and/or signs last for more than 2 weeks until the end of the third month. There may be continuous illness from the onset of symptoms or intermittent symptom-free periods.
Chronic	Patients who had chikungunya disease and present joint manifestations, such as pain, edema or joint stiffness for more than three months after the acute phase. They may also present with chronic arthritis due to chikungunya, which must be studied and confirmed. Arthritis of another inflammatory etiology should be ruled out.

3. Zika

3.1. Case definition

Case	Definition
Suspected case+	<p>A person who has a sudden-onset exanthema* that is not explained by other medical conditions and who (or his or her sexual partner) resides in or has visited epidemic or endemic areas during the two weeks prior to the onset of symptoms and has two or more of the following:</p> <ol style="list-style-type: none">1. Itching2. Conjunctivitis (non-purulent/hyperemic)3. Joint pain4. Myalgia5. Periarticular edema6. Fever
Probable case	<p>Suspected case of Zika that also has:</p> <ul style="list-style-type: none">• Detection of anti-ZIKV IgM in a single serum sample (collected during the acute or convalescent phase), with negative results for other endemic flaviviruses <p><i>or</i></p> <ul style="list-style-type: none">• Epidemiological link to a confirmed case
Confirmed case	<p>Patient who meets the criteria of a suspected case and has laboratory confirmation of recent ZIKV infection, i.e., presence of:</p> <ul style="list-style-type: none">• ZIKV RNA or isolation in serum or other samples (e.g., urine, saliva, tissues or whole blood, CSF), or• positive anti-ZIKV IgM antibodies and plaque reduction neutralization test (PRNT) for ZIKV titers ≥ 10 and without titers for other flaviviruses, or• In deceased patients, molecular detection of the viral genome from autopsy tissue, fresh or paraffin with in situ hybridization tests.

+ A suspected case is also considered to be any pregnant woman who has an acute onset exanthema* that is not explained by other medical conditions and who (or her sexual partner) resides in or has traveled in the previous 14 days to an area with Zika transmission. Do confirmatory testing for Zika and other exanthematous diseases (e.g., measles, rubella).

* The exanthema is usually maculopapular, cephalocaudal distribution and accompanied by pruritus.