### Key reference documents


### Case definitions

#### WHO suggested outbreak case definition

**Suspected case:** not applicable

**Probable case (with or without warning signs\(^1\)):**

- fever **and** two or more of the following: (nausea/vomiting, rash, aches and pains, tourniquet test positive, leukopenia);
- fever **and** two or more of the following: (nausea/vomiting, rash, aches and pains, tourniquet test positive, leukopenia) **and** any warning sign.

**Confirmed case:**

- A probable case with laboratory confirmation:
  1. Highly suggestive
     - Immunoglobulin M (IgM) positive in a single serum sample;
     - Immunoglobulin G (IgG) positive + in a single serum sample with a house index (HI) titre of 1280 or greater;
     - detection of viral antigen NS1+ in a single serum sample (by enzyme-linked immunosorbent assay (ELISA) or rapid tests).

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\(^1\) Requiring strict observation and medical intervention. Warning signs may include abdominal pain or tenderness, persistent vomiting, clinical fluid accumulation, mucosal bleeding, lethargy, restlessness, liver enlargement >2 cm, or increase in haematocrit with rapid decrease in platelet count.
2. Confirmed
   - polymerase chain reaction (PCR) positive;
   - virus culture positive;
   - IgM seroconversion in paired sera;
   - IgG seroconversion in paired sera or fourfold IgG titre increased in paired sera.

Severe dengue:
- suspected dengue with one or more of the following: severe plasma leakage, leading to dengue shock syndrome, fluid accumulation with respiratory distress; severe bleeding, as evaluated by clinician; severe organ involvement, such as liver (aspartate aminotransferase (ASAT) or alanine aminotransferase (ALT) elevation > 1000), central nervous system (impaired consciousness) or heart and other organs.

WHO surveillance case definition
- Any person who lived in, or travelled to, a dengue endemic area with onset of fever and two or more of the following: nausea/vomiting, rash, aches and pains, tourniquet test positive, leukopenia, or any warning sign. In: Dengue guidelines for diagnosis, treatment, prevention and control: new edition (WHO, 2009).

Data collection tools
- Case investigation forms: Not available.
- Line lists: Not available.
- Electronic tools: Not available.

Laboratory confirmation
- Technical handbook for dengue surveillance, dengue outbreak prediction/detection and outbreak response (Geneva: World Health Organization; 2016 (Chapter 2, page 15)).

Response tools and resources
- Western Pacific regional action plan for dengue prevention and control (Manila: WHO Regional Office for Western Pacific; 2016).
Other resources