

FACT SHEET: DENGUE AND MOSQUITO-BORNE DISEASES

Last Update: 8 June 2018

DISEASE SITUATION

Dengue and mosquito-borne diseases including chikungunya, Zika virus, and malaria are notifiable diseases under the National Disease Surveillance System in Thailand.

During 1 January to 4 June 2018, the National Disease Surveillance System revealed 14,973 dengue cases (19 deaths) from all provinces (77). There were 33 chikungunya cases in 2 provinces: Narathiwat and Phuket. Zika virus was found to cause mild illness. However, a special surveillance system centered on pregnant women in at-risk areas has been strengthened.

There were 681 malaria patients (1 death) in 43 provinces. Most cases occurred in remote areas of the border provinces. Provinces with the top five incidence rates (cases per 100,000 population) were Yala (18.45), Tak (15.03), Maehongson (10.73), Srisaket (8.66), and Ubolratchathani (5.67). The pathogens were *Plasmodium vivax* (53.0%), *P. falciparum* (14.2%), *P. malariae* (0.6%), mixed type (4.4%), and unknown (27.8%).

The overall morbidity rate of dengue was 22.89 cases per 100,000 population. The incidence was highest in the Southern, followed by the Central, the Northern, and the Northeastern regions respectively. Provinces with the top five highest incidence rates were Phuket (93.34), Krabi (77.05), Nakornpathom (67.02), Pangnga (66.23), and Ranong (65.82). The dengue peak period occurred during the rainy season around June to September. Most of the cases were children aged 10 - 14 years and young adults aged 15 - 24 years. Besides children, high risk groups for severe illnesses included older persons and people with underlying diseases.

PREVENTIVE MEASURES

Dengue is an endemic mosquito-borne viral disease in more than 100 countries in Southeast Asia, Africa, the Americas, the Western Pacific and the Eastern Mediterranean. The disease is transmitted by *Aedes* mosquitoes. There are four distinct dengue viruses without cross immunity. Dengue fever (DF) is a moderately severe disease with symptomatic presentations of high fever that rarely leads to death. However, a small portion of cases known as Dengue haemorrhagic fever (DHF) and Dengue shock syndrome (DSS) can be more severe and even fatal.

Thailand's Ministry of Public Health (MOPH) has implemented prevention and control measures for dengue and mosquito-borne diseases in all provinces including tourist sites. A summary of the measures is as follows:

- Formulate policies and evidence-based strategies;
- The Provincial Communicable Disease Control Committees closely monitor dengue prevention and control according to the Communicable Disease Act B.E. 2558 (2015);
- Implement dengue prevention and control through an effective integrated vector management program aiming to sustainably reduce mosquito vector density through intersectoral collaboration and community participation, given that currently, the dengue vaccine is not recommended for use in Thailand.;
- Train disease control teams on integrated vector management;
- Train clinicians on efficient clinical diagnosis and management;

- Provide risk communication to the public to protect themselves from mosquito bites and routinely eliminate mosquito breeding sites using the measure “3 Do’s to prevent 3 diseases (dengue, chikungunya and Zika virus)”, i.e. 1) cover water-storage containers, change water in small containers every 7 days and eliminate all mosquito breeding sites; 2) dispose garbage properly; and 3) keep houses tidy without any corners suitable for mosquitoes to rest;
- Conduct research for knowledge management and new tool development.

SURVEILLANCE AND RESPONSE

- Operate surveillance of dengue and mosquito-borne diseases according to the reporting system protocol to capture the true burden of the disease;
- Implement vector surveillance to monitor disease risk;
- Eliminate adult mosquitoes through aerial spraying with insecticides in affected outbreak areas as per guidelines;
- Provide health education and risk communication to the public with a focus on the affected communities.

ADVICE FOR TRAVELLERS

The Department of Disease Control (DDC) advises travelers to protect themselves from dengue and mosquito-borne diseases as follows:

- Avoid mosquito bites by sleeping in rooms with mosquito screens or sleeping in mosquito nets and by wearing long sleeve shirts, long pants and applying mosquito repellents with adequate amounts of DEET to exposed skin or clothing when staying outdoors, especially after sunrise and before sunset;
- Remove mosquito breeding sites in nearby outdoor and indoor premises;
- Travelers, especially children, pregnant women, and people with immune disorders or severe chronic illnesses, can seek advice from a travel medicine clinic;
- In areas of high risk for malaria, use long-lasting insecticidal-treated mosquito bed nets.

SELF-CARE AND MEDICAL TREATMENT

- Dengue patients usually present with abrupt high-grade fever (more than 38.5 degree Celsius), headache, anorexia, nausea and vomiting but not running nose and coughing. Paracetamol, but not Aspirin, is safe to use as an antipyretic. Sponging the patient’s skin is also helpful.
- Watch for warning signs of shock especially when body temperature declines 3 - 7 days after symptoms begin, i.e. bleeding from nose or gums, drowsiness or irritability, pale, cold, or clammy skin or difficulty breathing. Bring the patient to the hospital immediately for life-saving treatment.
- If the illness has not improved within 2 days of treatment, special medical care at the hospital is urgently needed. There is no specific treatment for dengue fever and severe dengue, but early detection and access to proper medical care lower fatality rates to below 1%.

FURTHER INFORMATION

More information on dengue and other communicable diseases is available at travel medicine clinics and the DDC's websites and call center as follows:

- ❖ **Information on disease surveillance:** Please visit the Bureau of Epidemiology website at <http://www.boe.moph.go.th/>
- ❖ **Information on the DDC Weekly Disease Forecast:** Please visit the DDC website at <http://www.ddc.moph.go.th/eng/>
- ❖ **For queries or additional information:** Please call DDC hotline 1422