

## MALARIA

Last revised July 29, 2011

### I. IDENTIFICATION

- A. **CLINICAL DESCRIPTION:** A parasitic infection caused by *Plasmodium vivax*, *P. ovale*, *P. malariae*, or *P. falciparum*. The disease is characterized by fever, chills, sweats, headaches, muscle pains, nausea and vomiting. Depending upon the species, acute illness may develop into a variety of syndromes with severe complications including confusion, coma, neurologic focal signs, severe anemia, respiratory difficulties, and death. The infection is transmitted by a bite of an infected *Anopheles* mosquito and symptoms may appear 7 to 30 days after the infective bite. Malaria may also be transmitted through transplacental, blood transfusion, organ transplant, or use of shared needles and syringes contaminated with blood. Relapses may occur even after the patient has fully recovered after months or years without symptoms because certain species have dormant liver stage that may reactivate. Malaria can be treated with anti-malaria drugs.
- B. **REPORTING CRITERIA:** Laboratory confirmation.
- C. **LABORATORY CRITERIA FOR CONFIRMATION:**
- Microscopy detection of malaria parasites in thick or thin peripheral blood films by microscopy, **OR**
  - Detection of species specific DNA in samples of peripheral blood by PCR, **OR**
  - Detection of circulating malaria-specific antigens using rapid diagnostic test (RDT)
- D. **WISCONSIN CASE DEFINITION:**
- Confirmed:** Any person (symptomatic or asymptomatic) who is laboratory confirmed by microscopy detection of malaria parasites on blood films (i.e. positive malaria smear) or by PCR **and** diagnosed in the United States, regardless of whether the person has experienced previous episodes of malaria while outside the country.
- Suspected:** Any symptomatic or asymptomatic person who is tested for malaria parasites by RDT test only and diagnosed in the US, regardless of whether the person has experienced previous episodes of malaria while outside the country.

### II. ACTIONS REQUIRED / PREVENTION MEASURES

- A. **WISCONSIN DISEASE SURVEILLANCE CATEGORY II:**  
Report to the patient's local health department either electronically through the Wisconsin Electronic Disease Surveillance System (WEDSS), by mail or fax using an Acute and Communicable Disease Case Report ([F-44151](#)), or by other means within 72 hours upon recognition of a confirmed case or suspected case.
- B. **EPIDEMIOLOGY REPORTS REQUIRED:**
- *Electronically* – Report through WEDSS, including appropriate disease-specific tabs  
**OR**
  - *Paper Copy* – Acute and Communicable Diseases Case Report ([F-44151](#)) **AND** Malaria Case Report Form
- C. **PUBLIC HEALTH INTERVENTIONS:**

## Wisconsin Division of Public Health Communicable Disease Surveillance Guideline

In accordance with Wisconsin Administrative rule DHS 145.05, local public health should follow the methods of control recommended in the current edition of *Control of Communicable Diseases Manual*, edited by David L. Heymann, published by the American Public Health Association.

- Blood donors should be questioned about history of malaria or malaria exposure. In general, most travelers to an area with malaria are deferred from donating blood for 1 year after their return. People who have lived in malaria risk-areas will be deferred for 3 years.
- People diagnosed with malaria cannot donate blood for 3 years after successful treatment and should remain free of symptoms during that time.

D. PREVENTION MEASURES: The parasite is transmitted by the bite of an infected female *Anopheles* mosquito. Non-immune travelers who will be exposed to mosquitoes in malaria risk-areas should regularly use malaria suppressive drugs. Insect repellents regularly applied to the skin, as well as night spraying and bed nets are recommended. It is very important to continue taking all prescribed anti-malarial medication, even after returning to the U.S.

### III. CONTACTS FOR CONSULTATION

A. LOCAL HEALTH DEPARTMENT – REGIONAL OFFICES – TRIBAL AGENCIES:

<http://www.dhs.wisconsin.gov/localhealth/index.htm>

B. BCDER / COMMUNICABLE DISEASE EPIDEMIOLOGY SECTION: Diep (Zip) Hoang Johnson, Vectorborne Epidemiologist, at 608-267-0249

C. WISCONSIN STATE LABORATORY OF HYGIENE / PARASITOLOGY: (608) 263-3421

### IV. RELATED REFERENCES

- Heymann DL, ed. Malaria. In: *Control of Communicable Diseases Manual*. 19th ed. Washington, DC: American Public Health Association, 2008: 373-393
- Pickering LK, ed. Malaria. In: *Red Book: 2009 Report of the Committee on Infectious Diseases*. 28th ed. Elk Grove Village, IL: American Academy of Pediatrics, 2009: 438-444
- Centers for Disease Control and Prevention. Nationally notifiable infectious conditions, United States 2010. [http://www.cdc.gov/osels/ph\\_surveillance/nndss/phs/infdis.htm](http://www.cdc.gov/osels/ph_surveillance/nndss/phs/infdis.htm)
- Centers for Disease Control and Prevention. Malaria surveillance-United States, 2009. MMWR 2010; 60:1-15