Algorithm for Diagnosis and Treatment of Malaria*

Fever and history of travel to malaria-endemic area, or clinical suspicion of malaria

Perform thick and thin blood smears and read within few hours**

Blood film positive?

No

Repeat blood films every 12–24 hours (total of 3 times)

Yes

From smear: calculate parasitemia and determine species

Evaluate clinical status and disease severity

Uncomplicated malaria

Severe malaria and/or patient unable to tolerate oral medication, regardless of species†

Admit to intensive care unit. Call CDC

Intravenous artesunate (Call CDC)

Interim treatment: Artemether-lumefantrine or Atovaquone-proguanil or Quinine plus tetracycline or doxycycline or clindamycin or Mefloquine

Monitor parasitemia every 12–24 hours

Chloroquine or Hydroxychloroquine‡

Yes

Consider alternate diagnosis

P. falciparum, P. knowlesi, or species not yet identified†

Admit to hospital and monitor for disease progression

P. falciparum or species not yet identified†

P. falciparum acquired in area with no chloroquine resistance

Chloroquine or Hydroxychloroquine‡

P. falciparum acquired in area with chloroquine resistance

Artemether-lumefantrine (preferred) or Atovaquone-proguanil or Quinine plus tetracycline or doxycycline or clindamycin or Mefloquine

P. malariae

Chloroquine or Hydroxychloroquine‡

Chloroquine or Hydroxychloroquine‡

P. ovale or P. vivax acquired in area without chloroquine resistance

Artemether-lumefantrine or Atovaquone-proguanil or Quinine plus tetracycline or doxycycline or clindamycin or Mefloquine

P. vivax acquired in area with chloroquine resistance

ARTENPEPE

If not G6PD deficient by quantitative testing: primaquine or tafenoquine (not for children <16 years old)

Administer follow on treatment after artesunate complete.†

Artemether-lumefantrine or Atovaquone-proguanil or Quinine and doxycycline (or clindamycin) or if no other options Mefloquine

Monitor parasitemia every 12–24 hours

Chloroquine or Hydroxychloroquine‡

P. falciparum acquired in area with chloroquine resistance

P. malariae

P. knowlesi

P. ovale or P. vivax acquired in area without chloroquine resistance

P. vivax acquired in area with chloroquine resistance

† Drum options for chloroquine-resistant P. falciparum may be used

Footnotes
* Treatment for special populations (children and pregnant women) can be found in the CDC Treatment Guidelines and Treatment Table.
** If rapid diagnostic test performed, smear should also be performed with results available as soon as possible
† If species later identified as P. vivax or P. ovale, add primaquine or tafenoquine if not G6PD deficient by quantitative testing
‡ Drug options for chloroquine-resistant P. falciparum may be used

Algorithm for Diagnosis and Treatment of Malaria*

CDC Malaria Hotline: (770) 488-7788 or (855) 856-4713 (toll free), Monday–Friday, 9 am–5 pm EST; (770) 488-7100 after hours, weekends, and holidays