Malaria

2006 Case Total 11 **2006 Rate 0.32 per 100,000**
2005 Case Total 12 **2005 Rate 0.35 per 100,000**

Malaria is a severe illness caused by the mosquito-borne parasite *Plasmodium.* Four species of *Plasmodium* cause illness in humans: *P. falciparum, P. vivax, P. ovale and P. malariae.* Of these, *P. falciparum* is the most life threatening. In the United States, malaria occurs in persons with a history of recent travel to endemic areas. Antimalarial chemoprophylaxis is recommended for travelers to those areas, and is effective in preventing the disease.

Each of the eleven cases of malaria reported in Oklahomans in 2006 were considered imported, meaning that the cases had lived or traveled to endemic countries during their exposure periods. The cases were evenly distributed between males (n=6, 55% of cases, 0.35 per 100,000) and females (n=5, 45%, 0.28 per 100,000). Cases occurred in residents of 6 counties: Tulsa (5), Oklahoma (2), Blaine (1), Comanche (1), Jackson (1) and Muskogee (1). The ages of cases ranged from 3 to 55 years with a median age of 35 years. Cases reporting their race as black (n = 9, 81%) represented the higher incidence with a rate of 3.2 per 100,000, compared to those of white race (n = 2, 19%) with a rate of 0.07 per 100,000.

All 11 cases reported travel to areas where malaria is endemic during the exposure period. Ten (91%) traveled to West Africa (five to Nigeria, one each to Angola, Cameroon, Ghana and Liberia). One (9%) traveled to Saudi Arabia. Most cases traveled for personal reasons, but two cases indicated occupational travel purposes: one was an airline pilot and one was deployed for military duty.

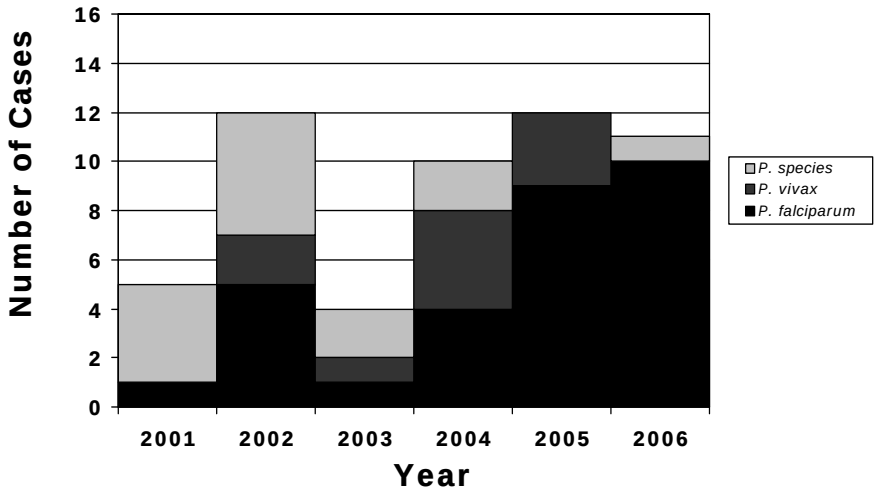
Five (45%) cases were hospitalized with lengths of stay ranging from 3 to 10 days (median length of stay = 6 days). No deaths were reported among malaria cases. Of the ten whose prophylaxis status was known, eight did not take any antimalarial prophylaxis, one admitted not taking the medication as ordered, and another indicated having purchased the medication while abroad, and was later told that it was counterfeit, which is a known risk.

Malaria is a reportable disease in Oklahoma. Confirmation of malaria is accomplished through microscopic identification of the parasites in the patient's blood. Thick and thin slides prestained with Giemsa or Giemsa-Wright stain are required for examination. Slides from suspected malaria cases must be sent to the OSDH PHL for confirmation (*310 O.A.C. § 315 Subchapter 1 et. seq*.). Ten cases' specimens were forwarded to the OSDH PHL for confirmation in 2006. Of these, nine were confirmed as *P. falciparum*. The PHL was not able to speciate one specimen due to low parasitemia. One specimen was read as *P. falciparum* by a regional lab, but was not forwarded to the OSDH PHL for confirmation.

Antimalarial prophylaxis is region-specific and must be prescribed by a healthcare provider. It must be started 1-2 days before travel to the area of risk, taken daily

while at risk, and daily for 7 days after leaving the risk area. It must be taken at the same time each day with food or milk. In addition to appropriate prophylaxis, it is recommended to avoid mosquito exposure through use of insect repellent containing DEET (N, N-diethyl-m-toluamide), and mosquito nets treated with permethrin, which may also be used on clothing and other items. Use of flying mosquito repellent is also advised. Travelers who develop fever or flu-like illness (chills, headache, fatigue, muscle aches) while traveling or up to 1 year later should seek professional medical care. See the CDC Travelers' Health website at http://www.cdc.gov/travel/index.htm for further recommendations.

Reported Number of Malaria Cases by Species and Year, Oklahoma, 2001-2006



Malaria Incidence Rate by Year, Oklahoma and U.S., 1997-2006