

Zika Virus Infection in Children



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KEYWORDS

- Arthropod-borne disease • Congenital infection • *Flavivirus* • Microcephaly
- Vertical transmission • Zika virus

KEY POINTS

- Zika virus is a mosquito-borne *Flavivirus* associated with symptomatic and asymptomatic infection in infants and children.
- Vertical transmission of Zika virus can occur, resulting in congenital infection with mild-to-severe neurologic manifestations.
- All infants born to mothers with possible Zika virus infection should be evaluated and tested for Zika virus and other causes of congenital infections.
- Supportive care is the mainstay management of disease in older infants and children, but infants with congenital infection require close follow-up.

INTRODUCTION

Zika virus is an arthropod-borne *Flavivirus* that was first described in 1947 in rhesus monkeys and in 1952 in humans in a forested region of Uganda.¹ Since then, Zika virus has been reported as a cause of sporadic febrile illnesses throughout Africa and Asia.²⁻⁷ In 2007, the first recognized large outbreak of Zika virus was documented on the Yap islands of Micronesia. Infected patients had rash, fever, and conjunctivitis.⁴ It was estimated that up to 73% of residents older than 3 years of age had been infected with the virus during the outbreak.⁴ Zika virus was not detected in the Western hemisphere until 2014 when it was identified during an outbreak on Easter Island.⁸ Beginning in March 2015, reports of Zika virus transmission in Brazil emerged.^{9,10} Zika virus transmission has now been reported throughout South America, Central America, the Caribbean, and parts of the United States (**Fig. 1**).¹⁰ **Fig. 2** depicts countries with known Zika transmission. Zika virus is an emerging pathogen, causing both asymptomatic and symptomatic infection, and research is ongoing to better understand transmission, pathogenesis, and optimal management of this virus.

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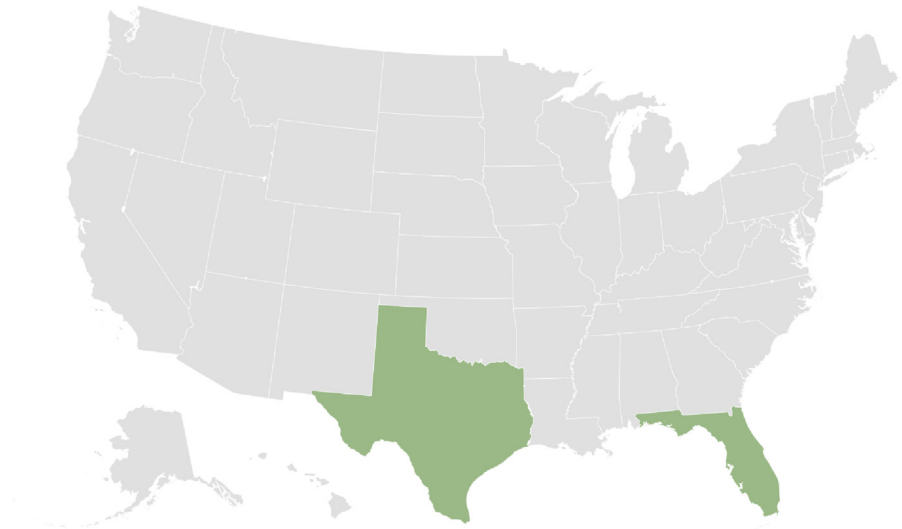


Fig. 1. States with reported Zika transmission.

TRANSMISSION

Arthropod Vectors

The primary vector for Zika virus transmission is the mosquito. *Aedes africanus* was first implicated in transmission when Zika virus was initially described.¹ The Asian tiger mosquito, *Aedes albopictus*, was confirmed as a vector for transmission in 2007 during an epidemic in Gabon. *Aedes hensilli* was the presumed vector during the Yap Islands outbreak in 2007; however, only laboratory infection has been documented.^{4,11} Zika virus has been isolated from *Aedes aegypti*, implicating it in the

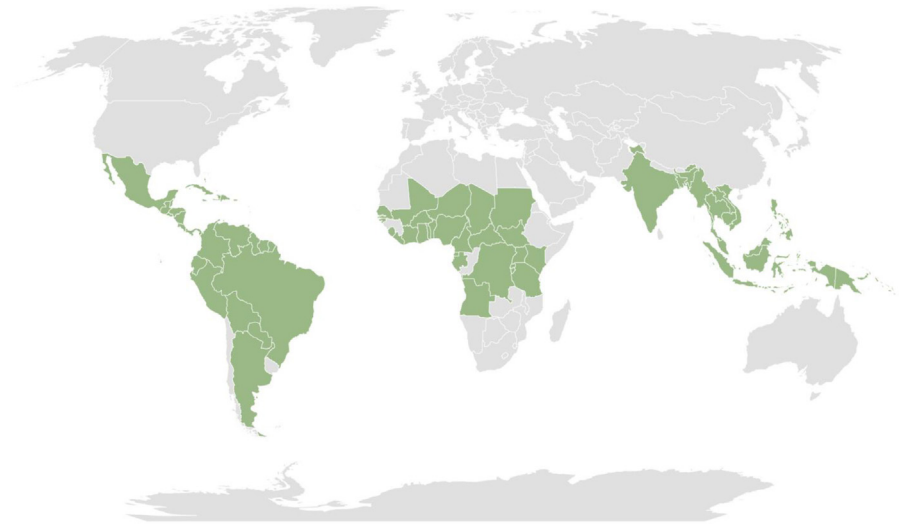


Fig. 2. Countries and territories with Zika transmission risk.

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