SMFM Provider FAQs
Chikungunya and Pregnancy: What Maternal-Fetal Medicine Subspecialists Need to Know

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This guidance was developed by the Society for Maternal-Fetal Medicine (SMFM) Committee on Infectious Diseases and Emerging Threats with the assistance of Kimberly Fortner, MD; Melissa Chu Lam, MD; Brenna L. Hughes, MD, MSc and Naima T. Joseph, MD, MPH.

Background

Chikungunya virus (CHIKV) is a mosquito-borne pathogen that has emerged as a significant global public health concern, capable of causing large, unpredictable outbreaks with attack rates as high as 75% in naïve populations.[1] As of September 16, 2025, 76 travel-associated cases have been reported in US states.[1,2] Since the start of 2025, approximately 317,000 cases of CHIKV disease and 135 CHIKV disease-related deaths have been reported.[3,4] Occurring in various tropical and subtropical areas, the virus has now been identified in over 110 countries and transmission reported in more than 50 within the last five years.[5]

Clinically, chikungunya typically presents with fever, rash, and debilitating polyarthritis, and up to 40% of cases may lead to chronic joint symptoms. Travel to endemic areas during pregnancy is associated with increased vulnerability to arboviral infections, including chikungunya, which may pose risks to maternal and fetal/neonatal health. In April 2025, the Centers for Disease Control and Prevention's (CDC) Advisory Committee on Immunization Practices (ACIP) reviewed proposed guidance for the use of VIMKUNYA, a recombinant virus-like particle (VLP) vaccine, during pregnancy and lactation, following its FDA approval earlier this year. The Food and Drug Administration (FDA) had approved IXCHIQ – the first chikungunya vaccine and a live-attenuated (LA) virus formulation – in November 2023. However, due to a safety signal, FDA licensure for the IXCHIQ vaccine was suspended in August 2025.

This document provides interim guidance and clinical considerations for vaccination against chikungunya in pregnancy.

Frequently Asked Questions

What is Chikungunya virus, and what geographic areas are at risk?

CHIKV belongs to a group of viruses called alphaviruses, which can be found in many parts of the world, including Africa, the Americas, Asia, and islands in the Indian and Pacific Oceans. CHIKV is not endemic to Europe or North America and most documented cases are travel-

related.[6] Surveillance of chikungunya cases provides critical information for identifying areas at increased risk of transmission. This data enables U.S. travelers to stay informed about regions experiencing outbreaks or heightened risk, allowing them to make informed decisions regarding travel plans and vaccination.[5]

How is Chikungunya virus transmitted?
During epidemic periods, humans are the primary hosts of CHIKV. The virus is predominantly transmitted by the bite of an infected mosquito, specifically *Aedes aegypti* and *Aedes albopictus*.

People infected with CHIKV have high enough levels of virus in their blood (viremia) during the first few days of illness to transmit the virus to others. Bloodborne transmission may occur through[7,8]:

- Blood transfusion
- Solid organ transplant
- Handling infected blood in the laboratory
- Drawing blood from an infected patient/needlestick injury

There is also a risk that the virus can spread to nonendemic areas by infected travelers. Rarely, the infection can be spread from a pregnant patient to the fetus, mainly during the second trimester.[8-10] If the pregnant patient is infected around the time of delivery, the baby can be infected at birth (ie, intrapartum transmission), often resulting in severe neonatal disease.[11,12] Additionally, chikungunya viral RNA has been identified in semen, but no evidence of sexual transmission has been noted to date.

How does chikungunya impact pregnancy and lactation?
Approximately 3% to 28% of people infected with CHIKV will remain asymptomatic. For people who develop symptomatic illness, the incubation period is typically 3 to 7 days (range 1 to 12 days).

The most common symptoms of chikungunya are fever and joint pain. Other symptoms include headache, muscle pain, joint swelling, and rash. Abnormal laboratory findings may include elevated creatinine and liver function tests, lymphopenia, and thrombocytopenia. Rare but serious complications of the disease include hepatitis, myocarditis, neurologic disorders (eg, cranial nerve palsies, Guillain-Barré syndrome, meningoencephalitis, myelitis), ocular diseases (eg, uveitis and retinitis), acute renal disease, and severe bullous skin lesions.

Pregnant patients have symptoms and outcomes similar to nonpregnant patients, and most infections occurring during pregnancy will not result in the virus being transmitted to the fetus. Adverse outcomes such as spontaneous abortions after first-trimester maternal infection, stillbirth, and preterm birth are rare. In a 2025 registry-based cohort study of 7 million Brazilian live births between 2015-2020, symptomatic maternal chikungunya infection was associated with increased risk of preterm birth [Hazard ratio: 1.10 (95% Confidence Interval (CI) 1.01–1.22)].[13] In addition, a 2018 systematic review reported the pooled risk of stillbirth is 1.7% (95% CI: 1.02–2.56) occurring with maternal chikungunya infection in all trimesters.[14]

If the pregnant patient is infected around the time of delivery, infection is more likely to result in perinatal transmission, with transmission rates of ~30% to 50%.[15,16] Of note, delivery by cesarean section has no protective effect against vertical transmission of CHIKV.[17] The intrapartum period is considered the most critical time for neonatal transmission, which can result in serious neonatal complications including hemorrhagic symptoms, sepsis-like illness, and myocardial and neurologic diseases.[18,19]

Although chikungunya viral RNA was identified in the breast milk of one infected person, the breastfed infant had no symptoms or evidence of infection based on laboratory testing.[20] As the benefits of breastfeeding likely outweigh the risk of transmitting CHIKV infection to breastfeeding infants, mothers should be encouraged to breastfeed even if they have an active CHIKV infection or live in an area with ongoing virus transmission.

What is the evaluation of a patient with suspected chikungunya?
Laboratory diagnosis is generally accomplished by testing serum to detect viral nucleic acid or virus-specific IgM and neutralizing antibodies. Because individuals with chikungunya infection develop high levels of viremia during the first week after symptom onset, chikungunya can often be diagnosed by performing viral nucleic acid amplification testing on serum. Virus-specific IgM antibodies typically develop toward the end of the first week of illness but can remain detectable for months to years after infection. Sometimes, serum IgM antibody testing can yield false-positive results due to cross-reacting antibodies against related alphaviruses (eg, Mayaro virus, O'nyong-nyong virus) or because of non-specific reactivity. Plaque reduction neutralization tests (PRNT) can be used to confirm the infection and, if warranted, discriminate between cross-reacting antibodies.

What treatment can be offered?
There are currently no medications to treat chikungunya. The best way to prevent chikungunya is protection from mosquito bites. There are two vaccines available to protect against chikungunya; however, recommendations for use in pregnancy are nuanced. Read below to learn more.

Chikungunya Vaccines

Are the chikungunya vaccines recommended in pregnancy and lactation?
There is one vaccine available in the U.S. to protect against chikungunya: a virus-like particle (VLP) vaccine (called VIMKUNYA). When administered before or during pregnancy, the chikungunya vaccine protects the pregnant patient from maternal infection, the fetus from intrapartum virus transmission, and the neonate from infection during delivery, which can lead to severe disease. Furthermore, based on data from other vaccines, the transplacental transfer of antibodies may also protect young infants from mosquito-borne transmission and severe disease.

VIMKUNYA
The FDA approved Bavarian Nordic's VIMKUNYA, the first VLP chikungunya vaccine for persons aged ≥12 years, in February 2025. It uses virus-like particles designed to mimic the Chikungunya virus without the ability to infect cells, replicate, or cause disease.

As of April 2025, the ACIP recommends the CHIK-VLP vaccine for[21]:

- Persons aged ≥12 years traveling to a country or territory where a chikungunya outbreak is present.
- In addition, the CHIK-VLP vaccine may be considered for persons traveling to or taking up residence in a country or territory without an outbreak but with an elevated risk for US travelers if planning travel for an extended period (eg, 6 months or more).
- Laboratory workers with a potential exposure risk to the Chikungunya virus.

On April 15-16, 2025, the ACIP reviewed guidance for the use of the CHIK-VLP vaccine in pregnancy and lactation. Safety and effectiveness of the vaccine were taken into consideration during the discussion.

There are no data available on the immunologic response to CHIK-VLP administered to pregnant women, and the data are insufficient to determine whether any safety risks exist from vaccination during pregnancy. However, in a developmental and reproductive toxicity study in rabbits, the postnatal survival rate within 28 days was lower for kits born to vaccinated mothers (42%; 95% confidence interval [CI] 31.5%– 52.8%) compared with kits in the control group (69%; 95% CI 57.8%–80.1%).[22] In a DART study in rats, reduced pup survival rates were not observed.[22] Although data are limited, there are no known benefits or risks for breastfeeding after vaccination with CHICK-VLP. Toxicology studies in mammals do not show an adverse impact of vaccination on lactation. An additional benefit of vaccination during pregnancy is the reduction in infection risk in young infants through the transfer of protective antibodies via breast milk. Based on this information, pregnancy would be a precaution and not a contraindication to vaccination with CHIK-VLP. Breastfeeding is neither a contraindication nor precaution for use of CHIK-VLP.

Proposed clinical guidance for the use of the CHIK-VLP vaccine during pregnancy is as follows[23]:

- Pregnant women should avoid the risk for Chikungunya virus infection, if possible (eg, by avoiding travel to an area with virus transmission particularly during an outbreak).
- Pregnancy is a precaution for vaccination with the CHIK-VLP vaccine based on the lack of safety and immunogenicity data in pregnant women and potential safety concerns from the toxicology study in rabbits.
    - In general, vaccination should be deferred until after delivery. However, in specific circumstances, vaccination during pregnancy might be warranted. If the risk of infection is high and exposure cannot be avoided, a health care provider should discuss the potential risks of Chikungunya virus infection and the potential benefits and risks of vaccination in pregnancy so that vaccination can be considered.
    - The CHIK-VLP vaccine should ideally be administered a minimum of 2 weeks prior to the expected date of delivery, and preferably earlier, to allow protection around the time of delivery.
- If pregnant women choose to be vaccinated, deferring vaccination until after the first trimester (after 14 weeks of gestation) might be preferred until there are further data to clarify potential concerns from ongoing studies. In addition, safety reporting is

challenging when vaccination is given in the first trimester due to spontaneous risk of loss (20%–25%) and contemporaneous timing of vaccine receipt.
- If both CHIK-VLP and CHIK-LA are available, vaccination with CHIK-VLP is preferred. Although there are no specific guiding data, this is based on general principles that vaccination with non-live vaccines is preferred over vaccination with live vaccines for pregnant women.

These vaccine recommendations and proposed clinical guidance for CHIK-VLP were reviewed and approved by the ACIP during the April 2025 meeting and are expected to be published in a forthcoming Morbidity and Mortality Weekly Report.

IXCHIQ (LA chikungunya vaccine manufactured by Valneva)
The live-attenuated (LA) vaccine, IXCHIQ, was approved by the FDA in November 2023 under the accelerated approval pathway and was administered intramuscularly as a single dose. The ACIP initially issued recommendations for its use in travelers and laboratory workers in February 2024, later revising guidance in 2025 to include broader risk-based use. Clinical guidance also emphasized caution in pregnancy**,** as the vaccine was live-attenuated; vaccination was generally deferred until after delivery, with particular avoidance of the first trimester due to risks of pregnancy loss and fever-associated congenital anomalies, and avoidance after 36 weeks to reduce theoretical risks of perinatal transmission.[24] However, in August 2025, the FDA suspended IXCHIQ's biologics license after reports of severe adverse events—including chikungunya-like illness, hospitalizations, and one death from encephalitis directly attributable to the vaccine.[25] **Because the vaccine's clinical benefit had not been confirmed in ongoing studies and safety concerns were substantial, IXCHIQ is no longer recommended for use in the United States**, **including in travelers, laboratory workers, and pregnant or breastfeeding patients.**

Additional Resources

- ACIP meeting information
- CDC Page on Chikungunya virus
- CDC Page on Chikungunya Vaccine Information for Healthcare Providers
- CDC Areas at Risk for Chikungunya
- CDC Vaccine Adverse Events Reporting System (VAERS)

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