



Army Public Health Center (Provisional)  
**Army Vector-borne  
 Disease Report**

13 May 2016

Data are preliminary and subject to change

- **Zika virus:** 503 travel-associated cases have been reported to the CDC in the United States; 5 confirmed cases have been reported among Army beneficiaries. CDC testing guidance updated to include urine testing.
- **PHCR-Pacific:** All mosquitoes tested for Zika, chikungunya, dengue, malaria, and Japanese encephalitis were negative.

**Yellow Fever**

- Yellow fever (YF) is a viral hemorrhagic disease which is transmitted by infected *Aedes* and *Haemogogus* species mosquitoes. It is endemic to tropical regions in Africa and Latin America and approximately 84,000-170,000 cases and 60,000 deaths due to YF are reported annually.
- Over the past ten years, the number of YF cases has decreased due to the [Yellow Fever Initiative](#) that was launched in 2006. However, YF is currently a concern because of the ongoing outbreak in Angola first detected in December 2015 which has strained already short vaccine supplies. As of 4 May, 2,149 suspected cases and 277 deaths have been reported in Angola and three countries (Democratic Republic of Congo, Kenya, and People's Republic of China) have reported a total of 50 exported cases from Angola.
- YF occurs in up to two phases. The first phase includes fever, muscle pain, headache, nausea and vomiting. After 3-4 days, most patients improve and their symptoms disappear. Symptoms in the second, more toxic, stage includes high fever, organ failure, jaundice, and possible bleeding from the mouth, nose, eyes, or stomach. 50% of patients in this stage die within 10-14 days. Supportive care is the mainstay of treatment; avoid aspirin or NSAIDs to reduce bleeding risk.
- YF vaccine is highly effective in preventing the disease and it is recommended for persons 9 months or older who are traveling to or living in areas at risk for YF transmission. The Centers for Disease Control and Prevention (CDC) [recommend](#) that unvaccinated travelers should not travel to Angola.
- Due to the shortage, YF vaccine should be limited to beneficiaries within 30 days of travel to an area where YF vaccine is required or recommended. If using the 5-dose vial, ensure 5 people are available to receive it to minimize waste.



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**Zika Virus (ZIKV) Update**

- From January 1, 2015 through May 11, 2016, 503 ZIKV cases have been reported in the U.S., all travel-associated. 698 locally acquired and 3 travel-associated cases were reported in Puerto Rico, U.S. Virgin Islands, and American Samoa.
- To date, five confirmed cases of ZIKV have been reported in Army beneficiaries: 3 AD and 2 non-AD cases.
- Updated CDC testing guidance: Triplex rRT-PCR should be performed on urine collected <14 days after onset of symptoms and should be performed in conjunction with serum testing if using specimens collected <7 days after symptom onset.



**DoD Army Laboratory Mosquito Surveillance**

- Public Health Command (PHC)-Pacific tested 253 *Aedes spp.* mosquitoes from 17 pools in Hawaii, 220 *Aedes spp.* mosquitoes from 20 pools in Guam, 4 *Aedes spp.* mosquitoes from 4 pools and 1 *Amigeres subalbatus* mosquito in the Philippines for Zika, dengue, and chikungunya. An additional 101 mosquitoes from 25 pools in Hawaii were tested for dengue alone. In addition, 206 *Culex spp.* from 59 pools in the Philippines were tested for Japanese encephalitis (JEV). None of the pools were positive for any of these viruses. Twenty-one *Anopheles spp.* mosquitoes from 10 pools in the Philippines were tested for malaria (*Plasmodium vivax*, *P. malariae*, *P. ovale*, *P. falciparum*); all were negative.
- PHC--Atlantic tested 26 *Culex spp.* mosquitoes from 11 pools for West Nile Virus (WNV) and 48 *Aedes spp.* mosquitoes from 9 pools for dengue, chikungunya, and Zika. Pools were collected from Cuba and Puerto Rico; none were positive for any of these pathogens.
- PHC-Europe tested 76 *Anopheles spp.* mosquitoes in 15 pools for malaria and 1 *Aedes aegypti* mosquito for dengue and chikungunya. Pools were collected from Djibouti, Africa and all tested negative for all pathogens.
- PHC-Central tested 404 *Culex spp.* mosquitoes from 22 pools and 1 *Aedes spp.* mosquito from Texas for WNV. All pools were negative.

**Army Tick Testing**

- PHC-Atlantic tested 20 *Rhipicephalus turanicus* ticks for *Rickettsia spp.* Four ticks (20%) tested positive for *Rickettsia spp.* The positive ticks were collected from canines at Kabul and Bagram Air Field, Afghanistan.
- Of 73 *Ixodes* ticks tested by the Human Tick Test Program, 33% (n=24) were positive for *B. burgdorferi*.

Human Tick Test Program	<i>A. phagocytophilum</i>	<i>B. microti</i>	<i>B. burgdorferi</i>	<i>E. chaffeensis</i>	<i>E. ewingii</i>	<i>E. muris-like</i>	<i>R. parkeri</i>	<i>R. rickettsii</i>
YTD No. Positive (YTD No. Tested)	2 (73)	0 (73)	24 (73)	1 (101)	2 (101)	0 (73)	0 (0)	0 (25)

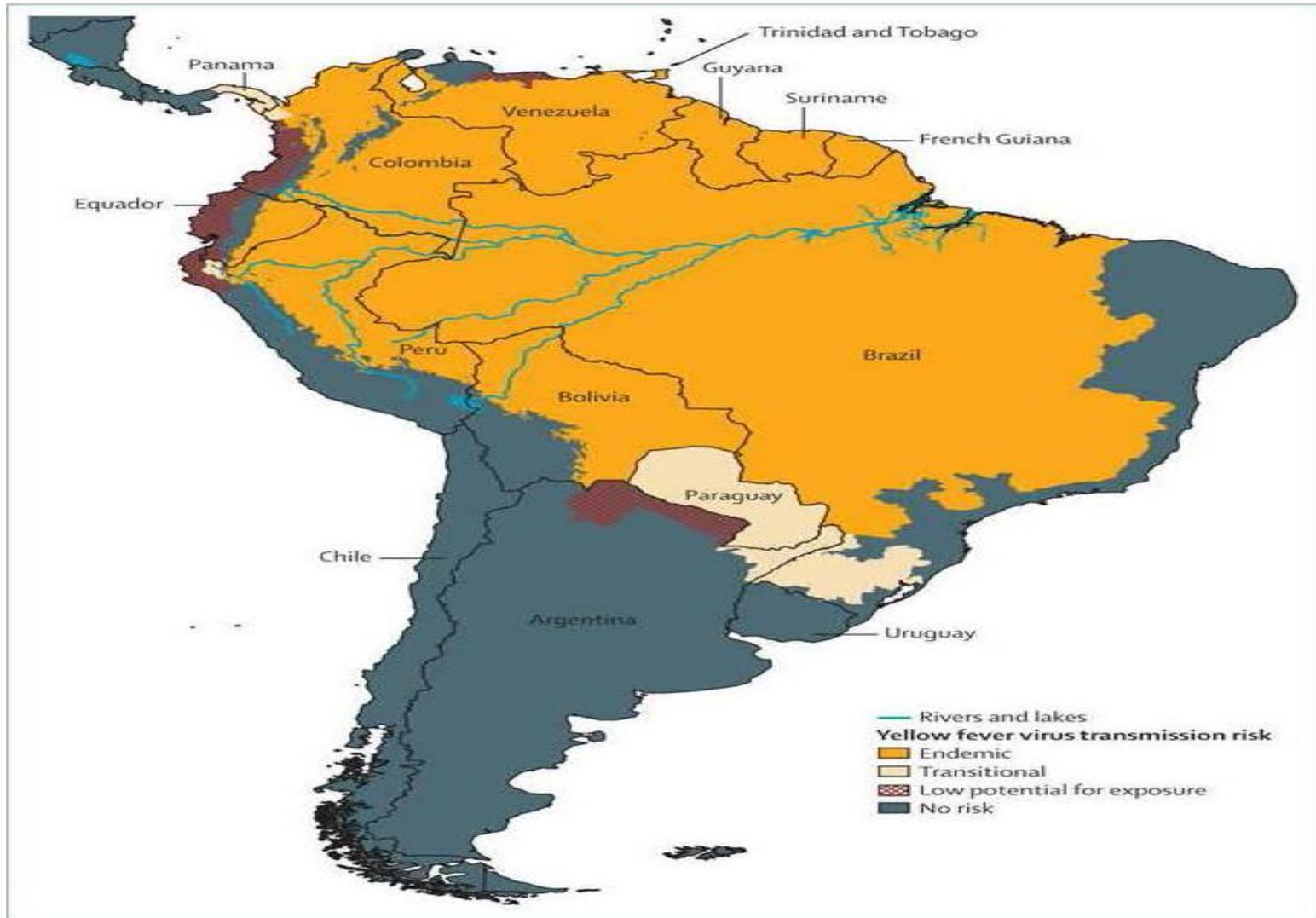
Note: CONUS data only.

**Resources:** WHO Yellow Fever • CDC Yellow Fever • CDC Zika Virus • APHC Zika Virus • Permethrin Treated Uniforms • Army Vector-borne Disease Reports • APHC  
**Key:** CDC Centers for Disease Control and Prevention; DRISi Disease Reporting System Internet; AD Active Duty

Contact us: [APHC Disease Epidemiology](#) or 410-417-2377



# Areas with Risk of Yellow Fever Virus Transmission in South America



Source: Centers for Disease Control and Prevention (CDC). *Areas with Risk of Yellow Fever Virus Transmission in South America*. Available at: <http://www.cdc.gov/yellowfever/maps/index.html>



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