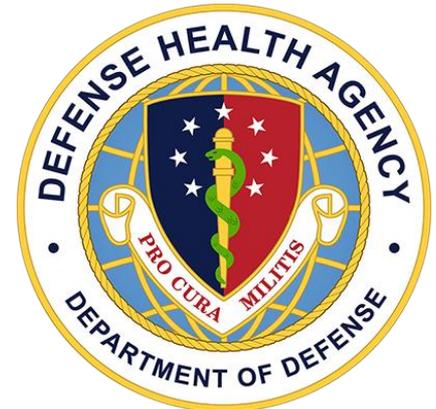


Department of Defense
Armed Forces Health Surveillance Branch
Global Zika Virus Surveillance Summary
(10 AUG 2016)



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DEPARTMENT OF DEFENSE (AFHSB)

Global Zika Virus Surveillance Summary #30

10 AUG 2016 (next report 17 AUG 2016)



DoD SURVEILLANCE: As of **10 AUG**, there are 69 confirmed Zika virus (ZIKV) cases in Military Health System (MHS) beneficiaries, including 52 Service members, nine dependents, and eight retirees. There is one confirmed case in a pregnant service member.

The CDC Zika IgM MAC-ELISA and CDC Zika Triplex rRT-PCR are available under an [Emergency Use Authorization \(EUA\)](#) at DoD laboratories ([see map on Slide 3](#)).

Strategy for Control of Zika Virus Transmitting Mosquitoes on Military Installations is available from the Armed Forces Pest Management Board.

CASE REPORT: From 1 MAY 2015 to **10 AUG 2016**, confirmed autochthonous vector-borne transmission of ZIKV has been reported in **46 (+1, Cayman Islands)** countries and territories in the Western Hemisphere, eight in PACOM, and two in AFRICOM. CDC has issued Alert Level 2, Practice Enhanced Precautions travel notices for 53 of these [areas](#) and for travelers to the [2016 Summer Olympics and Paralympics](#) in Rio de Janeiro. According to CDC, locations above 6,500 feet elevation in these countries and territories present minimal transmission risk. Past vector-borne outbreaks have been reported from other areas of Africa, Southeast Asia, and the Pacific Islands, where sporadic transmission may continue to occur. Eleven countries have reported person-to-person transmission, most likely through sexual contact.

On 26 JUL, following a significant decrease in the number of newly detected cases, the Colombia MOH declared an end to the ZIKV epidemic in that country and lifted its recommendation that women delay pregnancy because of the virus. Elsewhere in the Americas, in the last four weeks of reported data up to 29 JUL, an upward trend in new cases has been observed in Costa Rica, Ecuador, Guatemala, Jamaica, Mexico, Nicaragua, Puerto Rico, Saint Barthelemy, Saint Martin, U.S. Virgin Islands, and Venezuela.

As of **3 AUG**, CDC (ArboNet) reported **1,802 (+160)** travel-related cases, **16 (+1)** sexually transmitted cases, **six locally acquired mosquito cases**, and one laboratory acquired case in 46 states and the District of Columbia since MAY 2015.

Since 29 JUL, Florida health officials have reported **21 (+7)** ZIKV cases, **including at least four** probable cases and **one pregnant woman**, that were likely acquired through local mosquito transmission in a one-square mile area of Miami-Dade County, just north of downtown Miami. **Six cases currently meet CDC's case definition. Investigations into one non-travel related case outside of the one-square mile area in Miami-Dade County and one non-travel related case in Palm Beach County are ongoing; the Palm Beach County case did report CONUS travel to Miami-Dade County. The FL DOH believes active transmission remains limited to the one-square mile area in Miami-Dade County.** Six of the **21** cases were asymptomatic and were identified through a door-to-door sampling survey. On 1 AUG, CDC issued a [health advisory](#) for pregnant women and women of reproductive age traveling to or living in the affected area. **As of 3 AUG, all county health departments in Florida are offering free Zika risk assessments and testing to any pregnant woman. CDC has completed its investigation of a ZIKV infection in a caretaker of a fatal travel-related Zika case in Utah. Sexual and vector transmission were ruled out; it is suspected that transmission occurred via another bodily fluid while caring for the index case.**

As of **21 JUL**, Puerto Rico DOH reported **8,766 (+1,470)** confirmed cases (**2 (+1)** deaths), with **901 (+113)** cases in pregnant women. The U.S. Virgin Islands (USVI) DOH reported **79 (+23)** confirmed cases as of **5 AUG**. According to CDC on 31 JUL, American Samoa has reported 44 confirmed cases, including six cases in pregnant women and one case of fetal demise. As of **28 JUL**, the CDC's U.S. [pregnancy registry](#) has recorded **479 (+46)** pregnant women with laboratory evidence of a ZIKV infection in the 50 states and the District of Columbia; among these pregnancies, there have been **15 (+2)** infants born with birth defects and six fetal deaths due to birth defects. CDC is tracking **493 (+71)** additional pregnant women in the U.S. territories, with one fetal death due to birth defects.

Text updated from the previous report will be printed in red; items in (+xx) represent the change in number from the previous AFHSB summary (**3 AUG 2016**).

All information has been verified unless noted otherwise. Additional sources include: Pacific Public Health Surveillance Network.

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CASE REPORT (cont): As of 8 AUG, Gulf Coast Regional Blood Banks in Texas have tested 34,383 (+2,457) units for ZIKV, and none were positive. The American Red Cross has tested 32,700 (+7,469) units in CONUS; none were positive. In Puerto Rico as of 17 JUL, 1.0 percent of donors have screened positive for ZIKV. **OneBlood continues to screen all donations in Miami-Dade and Broward Counties; no positives have been reported.**

ZIKA AND MICROCEPHALY: As of 6 AUG, Brazil (1,749 cases), Cape Verde (11 cases), Colombia (22 (+1) cases), French Polynesia (8 cases), the Marshall Islands (1 case), Martinique (8 cases), El Salvador (3 cases), French Guiana (2 cases), Panama (5 cases), Puerto Rico (1 case), and Paraguay (2 cases) have reported microcephaly and other fetal malformations potentially associated with ZIKV infection or suggestive of a congenital infection. The U.S. (19), Spain (2), and Slovenia (1) have reported travel associated microcephaly cases. [CDC has said](#), “a causal relationship exists between prenatal Zika virus infection and microcephaly and other serious brain anomalies.”

ZIKA AND GUILLAIN-BARRÉ SYNDROME: According to [WHO on 4 AUG](#), 15 countries (14 in the Western Hemisphere and French Polynesia) have reported Guillain-Barré syndrome (GBS) cases that may be associated with ZIKV. There have been five GBS cases linked to ZIKV reported in the continental U.S. and 27 (+4) cases in Puerto Rico.

USG RESPONSE: On 9 AUG, CDC hosted a COCA call discussing the [updated interim guidance for pregnant women and data on contraceptive use to decrease Zika-affected pregnancies](#). On 5 AUG, FDA issued its final [environmental assessment for genetically engineered \(GE\) mosquitoes, concluding that the use of GE Aedes aegypti mosquitoes will have no significant impact on the environment](#). On 1 AUG, CDC released [advice for people living in or traveling to Wynwood](#), the neighborhood in Miami, FL, with local transmission. On 31 JUL, CDC updated its [interim plan for response activities](#) that would occur after local ZIKV transmission has been identified in the continental United States and Hawaii. CDC released two guidance updates on 25 JUL, one for [health care providers caring for pregnant women with possible ZIKV exposure](#) and one on the [prevention of sexual transmission of ZIKV](#). Additional data, guidance, and information from CDC is available on its [ZIKV](#) web pages.

GLOBAL RESPONSE: WHO issued a revised [Strategic Response Plan](#) on 17 JUN that places a greater focus on preventing and managing medical complications caused by ZIKV infection. Following the third meeting of the [WHO Emergency Committee](#) concerning ZIKV and observed increases in neurological disorders and neonatal malformations on 14 JUN, WHO said that the clusters of microcephaly cases and other neurological disorders continue to constitute a Public Health Emergency of International Concern (PHEIC). The Committee said the risk of further international spread of ZIKV from the Olympic and Paralympic games is very low and reaffirmed its previous advice that there should be no general restrictions on travel and trade with countries, areas, and/or territories with ZIKV transmission. PAHO has created a [searchable database](#) of published primary research and protocols. For additional information, visit the [WHO](#) and [PAHO](#) Zika web pages.

MEDICAL COUNTERMEASURES: On 4 AUG, researchers from the Walter Reed Army Institute of Research (WRAIR) and Harvard University published a preclinical study in Science demonstrating the efficacy of a ZIKV purified inactivated virus (ZPIV) vaccine in rhesus monkeys. Results indicated complete protection from ZIKV with no detectable virus in blood, urine, or secretions; phase 1 clinical testing is expected to begin later this year. On 26 JUL, Inovio Pharmaceuticals announced that it had started a phase I trial of its Zika DNA vaccine (GLS-5700). The trial will test safety, tolerability, and immunogenicity in 40 human volunteers. On 28 JUN, Nature reported on two other vaccine candidates, including one developed at the WRAIR; 100% of tested mice from ZIKV infection four and eight weeks after a single injection. WRAIR will co-develop its vaccine with Sanofi Pasteur.

Text updated from the previous report will be printed in red; items in (+xx) represent the change in number from the previous AFHSB summary (3 AUG 2016).

All information has been verified unless noted otherwise. Additional sources include: Sanofi Pasteur, Radio New Zealand, Brazil MOH, and Colombia MOH

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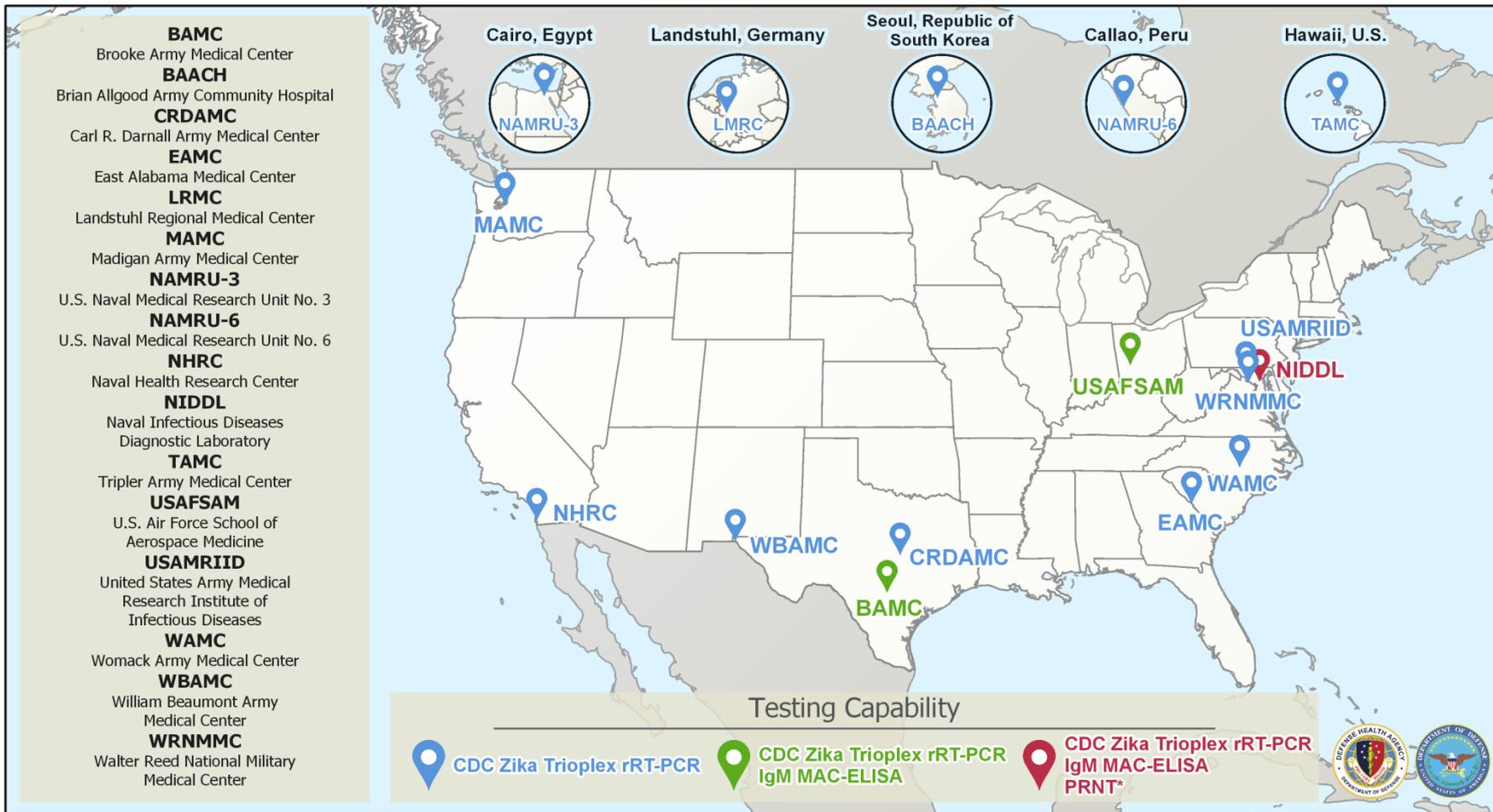
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Emergency Use Authorization Testing at DoD Laboratories



*Plaque-reduction neutralization test (PRNT)

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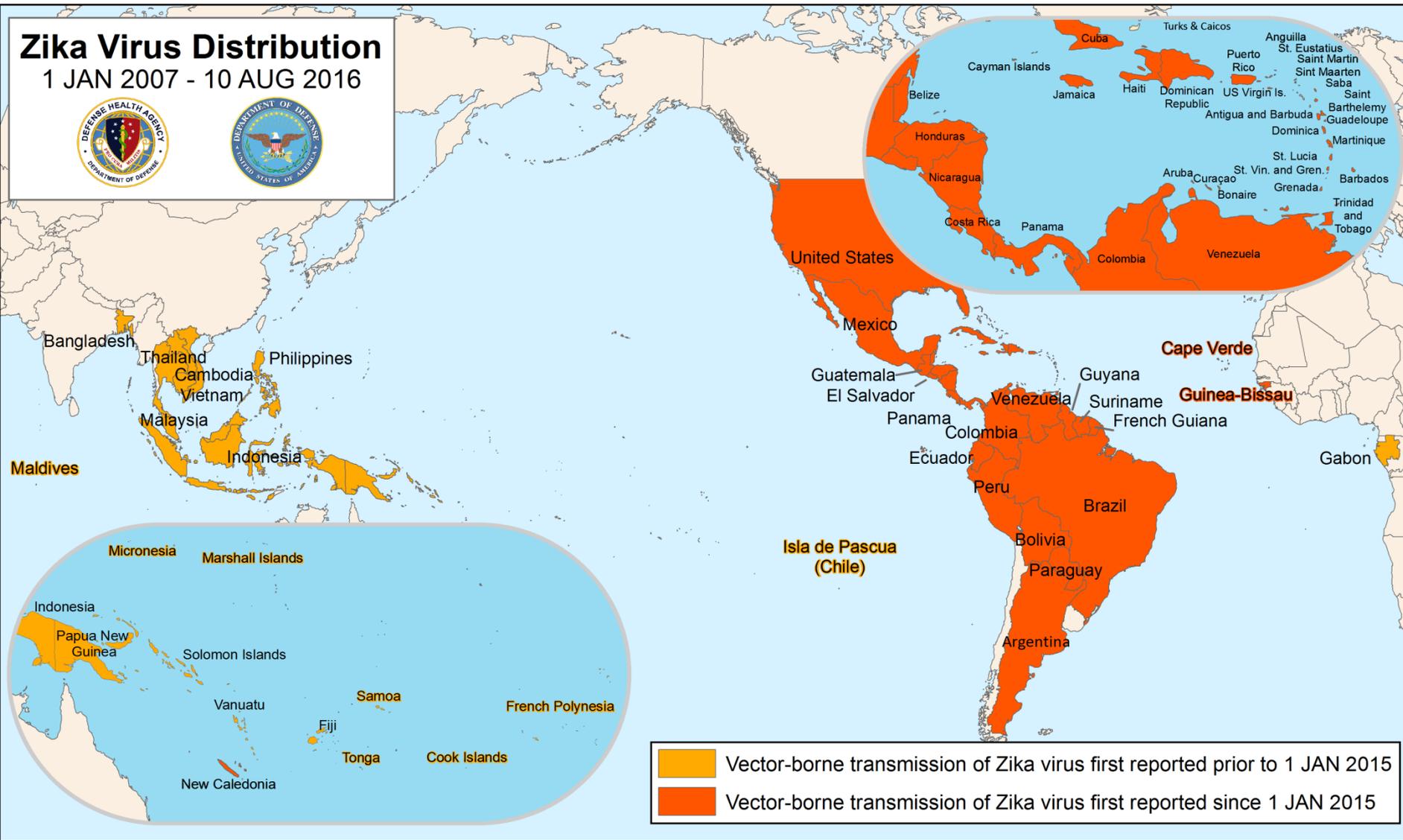
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Zika Virus Distribution

1 JAN 2007 - 10 AUG 2016



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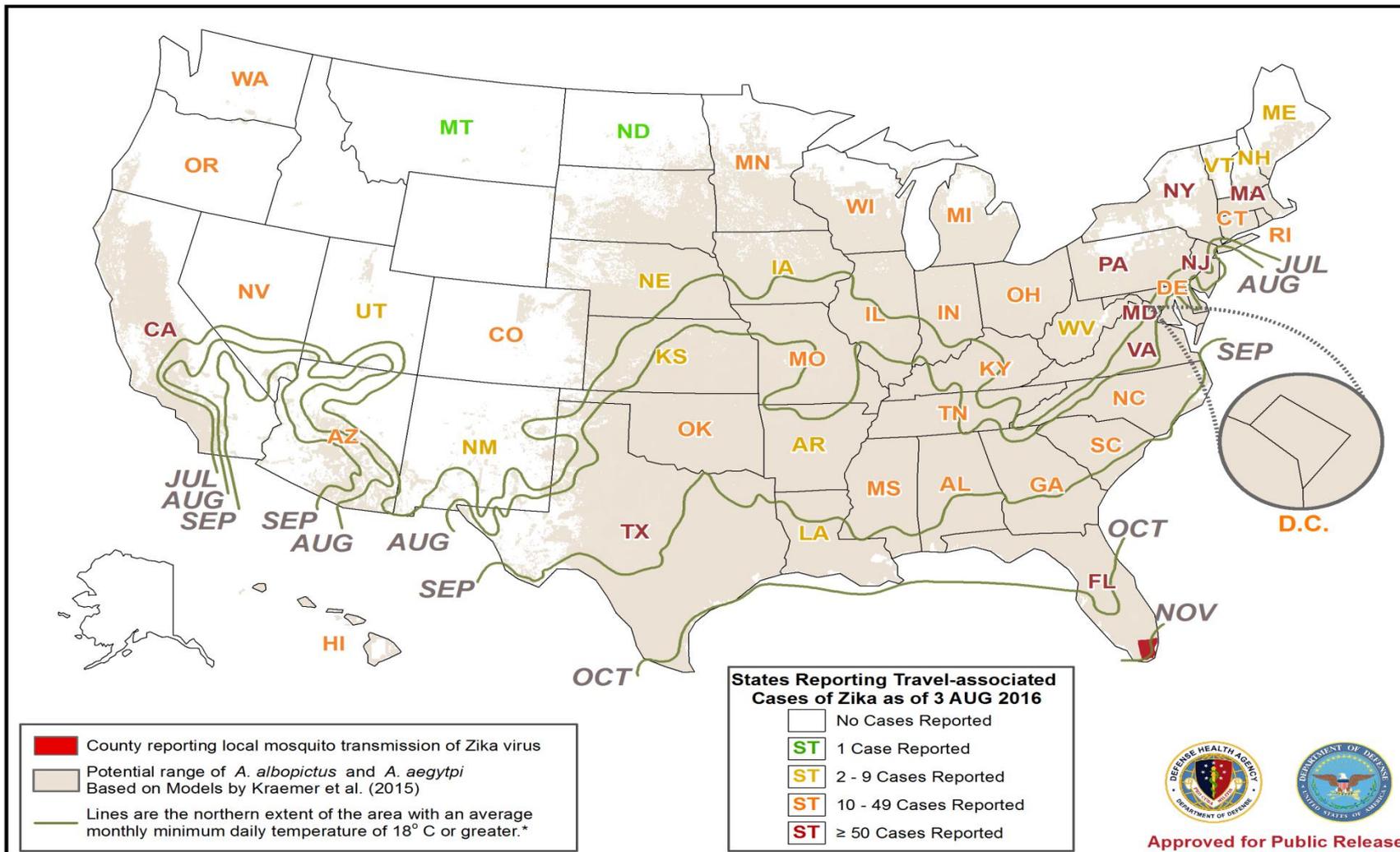
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DEPARTMENT OF DEFENSE (AFHSB)

Overlap of States Reporting Imported Zika Cases and the Estimated Range of Mosquito Vectors and Transmission Suitability

10 AUG 2016



This version of the map shows that after JUL the northern extent begins to move southward.

Based on Sang et al, Predicting Unprecedented Dengue Outbreak Using Imported Cases and Climatic Factors in Guangzhou, 2014. PLoS Negl Trop Dis 9(5);e0003808.

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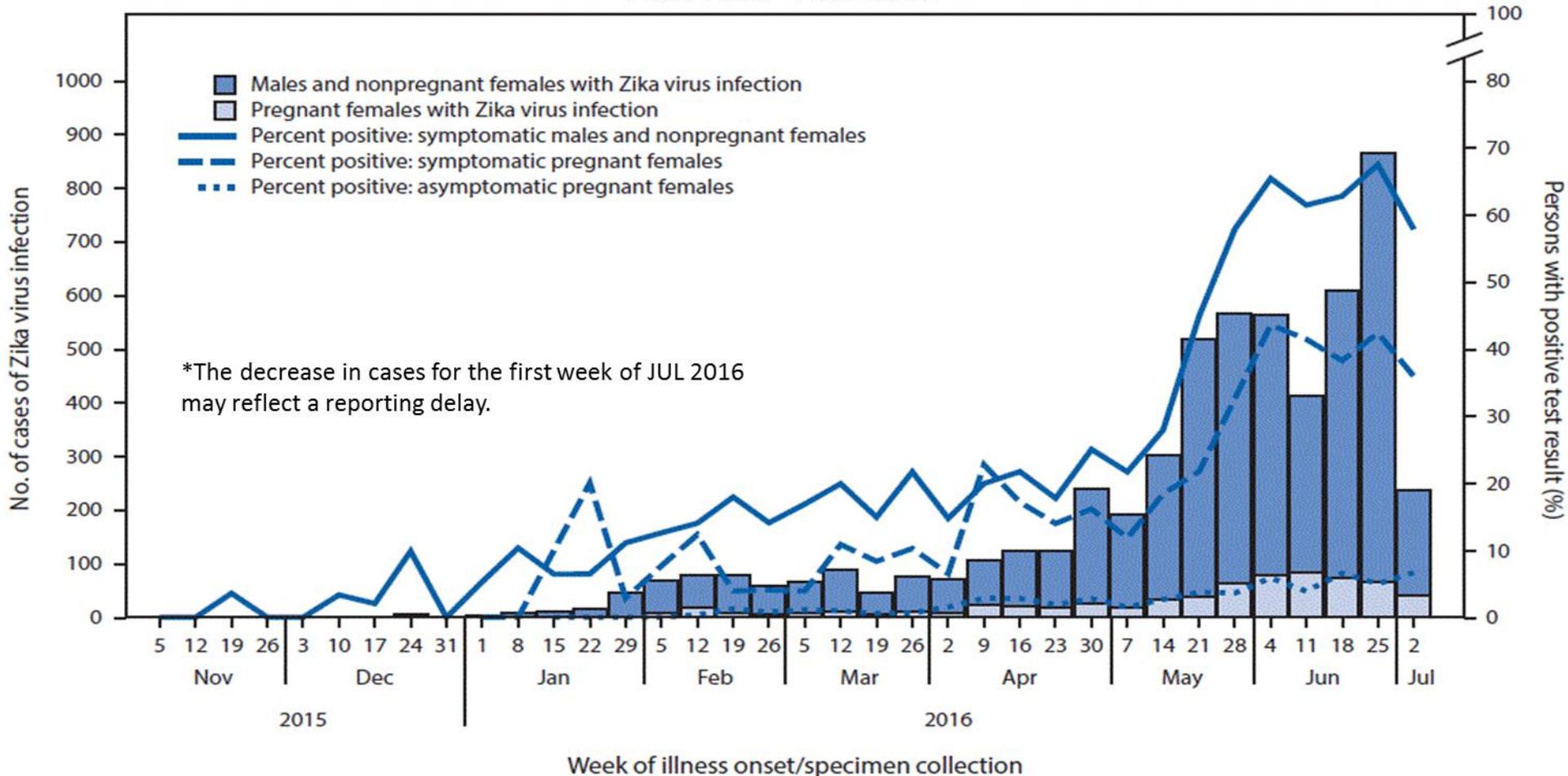
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Global Zika Virus Surveillance Summary #30

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Cases of confirmed and presumptive Zika virus infection (N = 5,582), by pregnancy status and week of illness onset or specimen collection, and percentage of persons with test results positive for Zika virus — Puerto Rico
1 NOV 2015 – 7 JUL 2016*



Source: Update: Ongoing Zika Virus Transmission — Puerto Rico, November 1, 2015–July 7, 2016. MMWR, 29 JUL 2016

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Western Hemisphere Countries[‡] and Territories with Autochthonous Transmission of Zika Virus: 01 JAN 2015 – 06 AUG 2016

	Confirmed	Suspected	Microcephaly Cases*	Reporting GBS†
Total	91,687	444,891	1,790	14 Countries

Country/Territory	Confirmed	Suspected	Microcephaly Cases*	Reporting GBS†
Anguilla	2	15		
Antigua & Barbuda	1	14		
Argentina	23	1,726		
Aruba	21	0		
Barbados	18	770		
Belize	5	0		
Bolivia	126	0		
Bonaire, St. Eustatius, Saba	9	0		
Brazil	66,180	165,932	1,749**	Yes
Cayman Islands	1	0		
Colombia	8,682	91,640	22**	Yes
Costa Rica	295	861		
Cuba	3	0		
Curaçao	208	0		
Dominica	67	811		
Dominican Republic	252	4,878		Yes
Ecuador	1,636	979		
El Salvador	54	10,899	3	Yes
French Guiana	483	9,225	2	Yes
Grenada	2	0		
Guadeloupe	379	25,450		Yes
Guatemala	416	2,133		

Country/Territory	Confirmed	Suspected	Microcephaly Cases*	Reporting GBS†
Guyana	6	0		
Haiti	5	2,125		Yes
Honduras	131	28,573		Yes
Jamaica	58	3,805		Yes
Martinique	12	33,900	6	Yes
Mexico	1,285	0		
Nicaragua	736	0		
Panama	295	1,558	5††	Yes
Paraguay	8	275	2	
Peru	89	0		
Puerto Rico	7,296	0	1	Yes
Saint Barthelemy	61	330		
Saint Lucia	26	702		
Saint Martin	200	1,730		
Saint Vincent & the Grenadines	8	0		
Sint Maarten	49	0		
Suriname	697	2,691		Yes
Trinidad and Tobago	149	0		
Turks & Caicos	2	0		
U.S. Virgin Islands	79	472		
Venezuela	1,632	53,397		Yes

* Number of microcephaly and/or CNS malformation cases suggestive of congenital infections or potentially associated with ZIKV infection
 ** Brazil is currently investigating 3,062 suspected microcephaly cases as of 23 JUL; Colombia is currently investigating 225 suspected microcephaly cases as of 6 AUG.
 † Reported increase in GBS cases associated with the introduction of ZIKV and/or GBS case(s) linked to ZIKV infection
 †† [WHO reports](#) that it "is not possible to establish a link between" ZIKV infection and microcephaly in one of the cases due to a lack of information, specifically trimester of infection.
 ‡ Excludes the U.S.; this data can be found elsewhere in this report.

All data was obtained from PAHO, Ministries of Health, and Departments of Health unless otherwise noted.
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