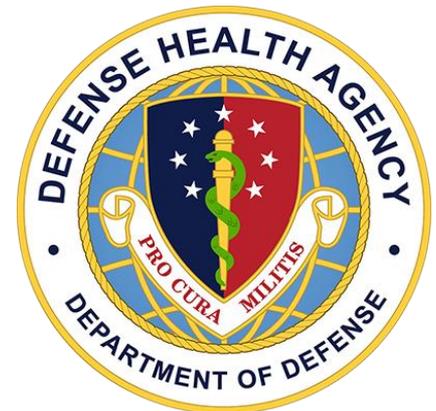


Department of Defense
Armed Forces Health Surveillance Branch
Global Zika Virus Surveillance Summary
(21 SEP 2016)



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DEPARTMENT OF DEFENSE (AFHSB)

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21 SEP 2016 (next report 28 SEP 2016)



As of 1300 on **21 SEP**, there are **122 (+7)** confirmed Zika virus (ZIKV) disease cases in Military Health System (MHS) beneficiaries (see table for details), since the first case was reported during the third week of 2016. There are two cases in pregnant Service members and one case in a pregnant dependent.

On **21 SEP**, AFHSB issued [updated guidance](#) for detecting and reporting DoD cases of confirmed and probable cases of ZIKV disease and ZIKV congenital disease. Cases should be reported in DRSi as “Any Other Unusual Condition Not Listed,” with “Zika” entered in the comment field along with additional pertinent information such as travel history and pregnancy status.

IgM ELISA and rRT-PCR assays are available under an [Emergency Use Authorization \(EUA\)](#) at DoD laboratories (see map on [Slide 4](#)). Confirmatory PRNT testing is available at the NIDDL.

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

CASE REPORT: As of **20 SEP**, FL health officials have reported **89 (+19)** ZIKV infections that were likely acquired through local mosquito transmission (as of **14 SEP**, 43 met the CDC definition of a Zika case). **The area of active transmission in Miami Beach has been expanded to encompass a 4.5 square mile area between 8th and 63rd streets.** As of **19 SEP**, the small area of the Wynwood neighborhood, where active transmission had previously been reported, is no longer a zone of transmission after 45 days (three mosquito incubation periods) with no evidence of active ZIKV transmission. The FL DOH is investigating additional areas in Miami-Dade, Palm Beach, and Pinellas counties. On **19 SEP**, CDC issued an [updated health advisory](#) for people who travel to or live in the Wynwood neighborhood. CDC’s [19 AUG guidance](#) for travelers to the affected Miami Beach area remains in effect.

Demographic		N	%
Service	Army	59 (+6)	48.4%
	Air Force	15	12.3%
	Navy	12	9.8%
	Marine Corps	9	7.4%
	Coast Guard	27 (+1)	22.1%
Status <small>*includes Reserve Component</small>	Service Member*	88 (+3)	72.1%
	Dependent	23 (+2)	18.9%
	Retiree	9	7.4%
	Not Reported	2	1.6%
Age	0-20	8 (+1)	6.6%
	21-35	57 (+3)	46.7%
	36-50	38 (+3)	31.1%
	51+	13	10.7%
	Not Reported	6	4.9%
Gender	Female	44 (+3)	36.1%
	Male	78 (+4)	63.9%

As of **20 SEP**, [CDC](#), [WHO](#), and ministries of health report **60 (+1, St. Kitts and Nevis)** countries and territories with a first reported Zika outbreak since JAN 2015: **49 (+1)** in the Western Hemisphere, nine in PACOM and two in AFRICOM. CDC has issued Alert Level 2, Practice Enhanced Precautions, travel notices for 57 of these [countries and territories](#).

Prior to JAN 2015, evidence of local transmission had been reported from other areas of Africa, Southeast Asia, and the Pacific Islands, and sporadic transmission may continue to occur in these areas. In Asia, Malaysia, Thailand, Vietnam, and the Philippines have reported locally transmitted cases in 2016. Singapore, which reported its first local ZIKV transmission on 27 AUG, reports **384 (+42)** cases as of **21 SEP**; most are linked to nine identified case clusters.

Zika Cases in the U.S. States and Territories	U.S. States*	U.S. Territories		
		Puerto Rico**	U.S. Virgin Islands*	American Samoa*
Total Zika Cases	3,176 (+212)	19,967 (+2,096)	299 (+56)	47
Travel-Associated	3,106 (+210)	-	-	-
Local Vector Transmission	43	-	-	-
Laboratory Exposure	1	-	-	-
Sexual Transmission	26 (+2)	-	-	-
Guillian Barré Syndrome (GBS)	8 (+1)	48 (+3)†	-	-

U.S. Zika Pregnancy Registry Data, as of 1 SEP		
Pregnant Zika Cases	731 (+60)	1,156 (+76)
Infants Born with Birth Defects	18 (+1)	1
Pregnancy Losses with Birth Defects	5	1

*Zika cases reported to ArboNET as of **14 SEP** (U.S. States and Am. Samoa); USVI cases reported from PAHO as of **15 SEP**.
 From the Puerto Rico DOH as of **1 SEP; PR DOH is tracking **1,706 (+189)** ZIKV cases in pregnant women.
 †Of the **48 (+3)** GBS cases, 11 are classified as evidence of flavivirus infection, but specific virus undetermined.

Text updated from the previous report will be printed in red; items in (+xx) represent the change in number from the previous AFHSB summary (**14 SEP 2016**).

All information has been verified unless noted otherwise. Additional sources include: Singapore MOH.

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CASE REPORT (con't): According to PAHO on 8 SEP, all Caribbean and North, Central, and South American OCONUS countries and territories were reporting a decreasing trend in Zika cases, except for Costa Rica and Guatemala.

MICROCEPHALY: As of 15 SEP, Brazil (1,888 (+31)), Cape Verde (11), Costa Rica (1), Colombia (40), Dominican Republic (3), El Salvador (4), French Guiana (3), French Polynesia (8), Haiti (1), Honduras (1), the Marshall Islands (1), Martinique (10), Panama (5), Paraguay (2), Puerto Rico (1), and Suriname (1) have reported cases of microcephaly and other fetal malformations potentially associated with ZIKV infection or suggestive of a congenital infection. The U.S. (22), Canada (1), Spain (2), and Slovenia (1) have reported travel-associated microcephaly cases. A case-control study of Brazilian newborns, published in the OCT issue of *Lancet Infectious Diseases*, describes a strong relationship between ZIKV and congenital neurologic abnormalities. An [Emerging Infectious Diseases \(EID\) article](#) described early growth and neurologic findings of 48 infants in Brazil diagnosed with probable congenital ZIKV syndrome and followed for one to eight months. An [EID article posted on 7 SEP](#) reported that hospitalizations for neuropathies could be an indicator of increasing ZIKV transmission.

GUILLAIN-BARRÉ SYNDROME: As of 15 SEP, 17 countries in the Western Hemisphere as well as French Polynesia have reported Guillain-Barré syndrome (GBS) cases that may be associated with the introduction of ZIKV. There have been eight (+1) GBS cases linked to ZIKV reported in the continental U.S. and 48 (+3) cases (1 death) in Puerto Rico, 11 of which are classified as evidence of flavivirus infection, but specific virus undetermined. A letter posted by the *New England Journal of Medicine* on 31 AUG described the strong association between the incidence of ZIKV disease and GBS in seven countries, but the authors said more research is needed to establish a causal relationship between ZIKV infection and GBS.

USG RESPONSE: On 13 SEP, CDC published a summary of [Zika cases in the U.S.](#) between JAN and JUL 2016 and preliminary findings from an [investigation of ZIKV infection in a Utah patient](#) with no known risk factors. CDC says it remains unclear how the Utah patient, who had close contact (i.e. kissing and touching) with an index patient with a very high viral load, became infected, but family contacts should be aware that blood and body fluids of severely ill patients may be infectious. [CDC said on 30 AUG](#) that children with evidence of congenital Zika virus infection who have normal initial hearing screening tests should receive regular follow-up based on research in Brazil. On 26 AUG, [Maryland health officials reported](#) in the MMWR a likely case of sexual transmission of ZIKV via vaginal intercourse from an asymptomatic man to his female partner. On 26 AUG, [FDA issued revised guidance](#) recommending universal testing of donated whole blood and blood components for ZIKV in all U.S. states and territories, not just those with ongoing ZIKV transmission as previously recommended.

On 23 and 24 AUG, CDC published guidance for healthcare facilities on [preparing to receive Zika patients, when to test for ZIKV](#), and [ZIKV testing of pregnant women not living in an area with ZIKV](#). CDC released [Update: Interim Guidance for the Evaluation and Management of Infants with Possible Congenital Zika Virus Infection](#) on 19 AUG. Additional data, guidance, and information from CDC are available on its [ZIKV](#) web pages.

GLOBAL RESPONSE: On 6 and 7 SEP, WHO published [a statement on causality of birth defects and GBS](#), [information for travelers](#), [travel health advice](#), and updated its [guidance for preventing sexual transmission](#). WHO now recommends that both women and men who are returning from Zika-affected areas abstain or practice safe sex for six months, an increase from the previously recommended eight weeks. The U.S. CDC is reviewing this change. Following the fourth meeting of the [WHO Emergency Committee](#) concerning ZIKV and observed increases in neurological disorders and neonatal malformations on 1 SEP, WHO said that the clusters of microcephaly cases and other neurological disorders continue to constitute a Public Health Emergency of International Concern (PHEIC). WHO reaffirmed its previous advice, including 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: HHS's Biomedical Advanced Research and Development Authority issued grants to [Moderna Therapeutics](#) and [Takeda Vaccines](#) for research and development of ZIKV vaccines. 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 Zika 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 of the vaccine, co-developed with Sanofi-Pasteur, is expected to begin later this year. On 26 JUL, Inovio Pharmaceuticals began a Phase 1 trial of its Zika DNA vaccine (GLS-5700) and launched a double-blind clinical trial of the vaccine in Puerto Rico on 29 AUG.

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All information has been verified unless noted otherwise. Additional sources include: Brazil MOH and Colombia MOH

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Emergency Use Authorization Zika Testing at DoD Laboratories



- BAMC**
Brooke Army Medical Center
- BAACH**
Brian Allgood Army Community Hospital
- CRDAMC**
Carl R. Darnall Army Medical Center
- EAMC**
Eisenhower Army Medical Center
- LRMC**
Landstuhl Regional Medical Center
- MAMC**
Madigan Army Medical Center
- NAMRU-3**
U.S. Naval Medical Research Unit No. 3
- NAMRU-6**
U.S. Naval Medical Research Unit No. 6
- NHRC**
Naval Health Research Center
- NIDDL**
Naval Infectious Diseases Diagnostic Laboratory
- TAMC**
Tripler Army Medical Center
- USAFSAM**
U.S. Air Force School of Aerospace Medicine
- USAMRIID**
United States Army Medical Research Institute of Infectious Diseases
- WAMC**
Womack Army Medical Center
- WBAMC**
William Beaumont Army Medical Center
- WRNMMC**
Walter Reed National Military Medical Center

*Plaque-reduction neutralization test (PRNT)



As of 21 SEP

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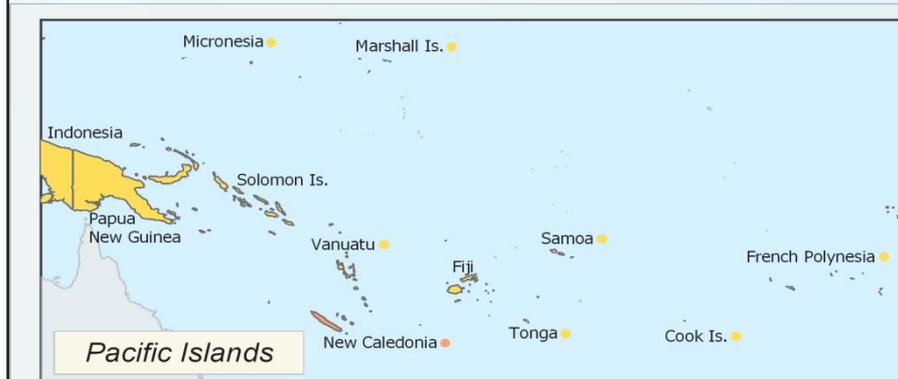
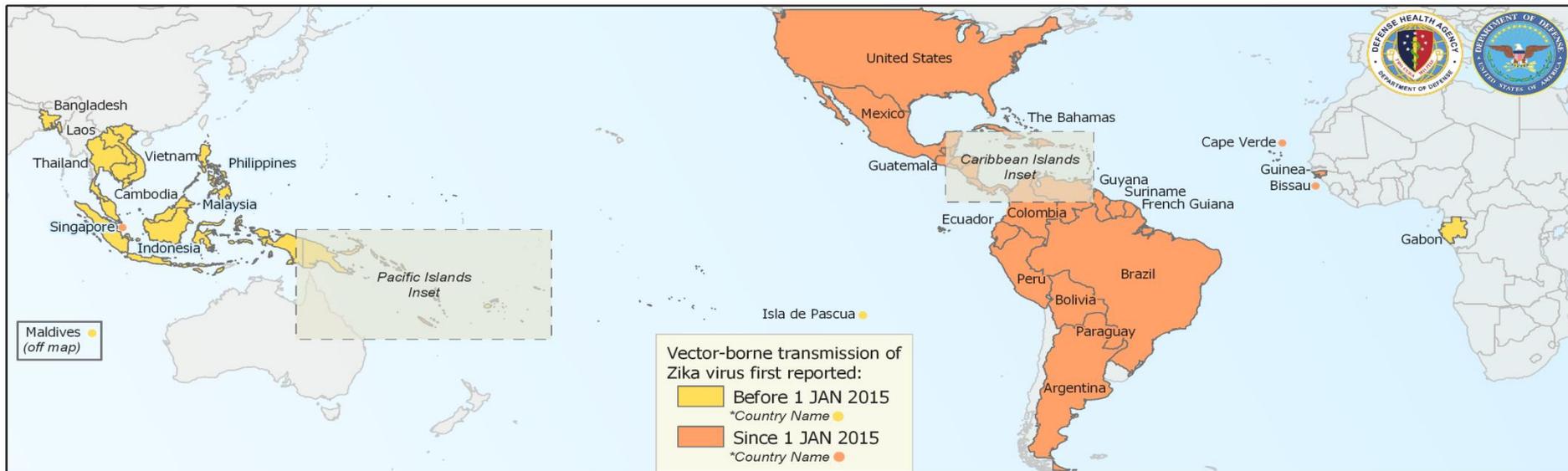
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Zika Virus Distribution

1 JAN 2007 - 21 SEP 2016



*Countries with a small footprint are given a marker by their label to denote current or previous Zika presence.

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Western Hemisphere Countries[‡] and Territories with Autochthonous Transmission of Zika Virus: 01 JAN 2015 – 15 SEP 2016

	Confirmed	Suspected	Microcephaly Cases*	Reporting GBS [†]
Total	120,329	497,706	1,960	17 Countries/Territories

Country/Territory	Confirmed	Suspected	Microcephaly Cases*	Reporting GBS [†]
Anguilla	5	22		
Antigua & Barbuda	9	14		
Argentina	25	1,778		
Aruba	26	0		
Bahamas	10	0		
Barbados	20	553		
Belize	5	0		
Bolivia	126	0		
Bonaire, St. Eustatius, Saba	45	0		
Brazil	78,421	196,976	1,888	Yes
British Virgin Islands	5	0		
Cayman Islands	9	0		
Colombia	8,826	94,112	40	Yes
Costa Rica	946	1,712	1	Yes
Cuba	3	0		
Curaçao	322	0		
Dominica	68	1,085		
Dominican Republic	318	5,135	3	Yes
Ecuador	761	2,150		
El Salvador	51	11,133	4	Yes
French Guiana	483	9,630	3	Yes
Grenada	74	317		Yes
Guadeloupe	379	29,460		Yes
Guatemala	442	2,535		Yes

Country/Territory	Confirmed	Suspected	Microcephaly Cases*	Reporting GBS [†]
Guyana	6	0		
Haiti	5	2,955	1	Yes
Honduras	269	30,864	1	Yes
Jamaica	83	4,946		Yes
Martinique	12	35,795	10	Yes
Mexico	2,782	0		
Nicaragua	1,845	0		
Panama	323	1,547	5	Yes
Paraguay	12	525	2	
Peru	97	0		
Puerto Rico	19,967	0	1	Yes
Saint Barthelemy	61	630		
Saint Kitts & Nevis	3	0		No
Saint Lucia	38	790		
Saint Martin	200	2,165		
Saint Vincent & the Grenadines	38	156		
Sint Maarten	47	0		
Suriname	721	2,723	1	Yes
Trinidad and Tobago	375	0		
Turks & Caicos	2	0		
U.S. Virgin Islands	299	581		
Venezuela	1,768	57,417		Yes

* Number of microcephaly and/or CNS malformation cases suggestive of congenital infections or potentially associated with ZIKV infection
[†] Reported increase in GBS cases associated with the introduction of ZIKV and/or GBS case(s) linked to ZIKV 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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