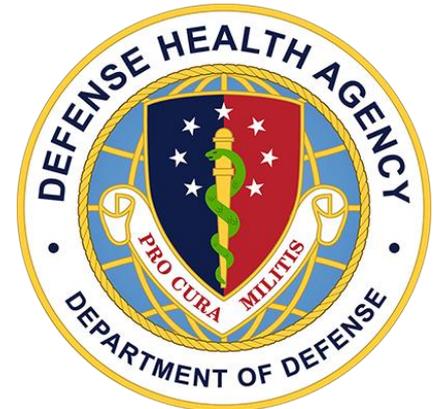


Department of Defense
Armed Forces Health Surveillance Branch
Global Zika Virus Surveillance Summary
(28 SEP 2016)



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DEPARTMENT OF DEFENSE (AFHSB)

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28 SEP 2016 (next report 5 OCT 2016)



As of 1300 on **28 SEP**, there have been **128 (+6)** 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 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 **27 SEP**, FL health officials have reported **109 (+24)** ZIKV infections that were likely acquired through local mosquito transmission (as of **21 SEP**, 43 met the CDC definition of a Zika case). The FL DOH believes ongoing transmission is only taking place within a 4.5 square mile area of Miami Beach in Miami-Dade County between 8th and 63rd streets. As of 19 SEP, the small area of the Wynwood neighborhood is no longer a zone of transmission after 45 days (three mosquito incubation periods) with no evidence of active ZIKV transmission. **In an [early release MMWR article](#) published on 23 SEP, FL DOH and CDC said aggressive mosquito control, including aerial spraying that targeted both adult and larval mosquitoes, most likely contributed to stopping ZIKV transmission in the Wynwood neighborhood.** The FL DOH continues to investigate additional areas in Miami-Dade, Palm Beach,

Demographics for all confirmed Zika cases in Military Health System Beneficiaries as of 1300, 28 SEP 2016 (N = 128 confirmed cases)			
Demographic		N	%
Service	Army	60 (+1)	47.2%
	Air Force	15	11.8%
	Navy	16 (+4)	12.6%
	Marine Corps	9	7.1%
	Coast Guard	27	21.3%
	Not Reported	1	0.8%
Status <small>*includes Reserve Component</small>	Service Member*	89 (+1)	69.5%
	Dependent	28 (+5)	21.9%
	Retiree	9	7.0%
	Not Reported	2	1.6%
Age	0-20	8	6.3%
	21-35	58 (+1)	45.3%
	36-50	38	29.7%
	51+	14 (+1)	10.9%
	Not Reported	10 (+4)	7.8%
Gender	Female	48 (+4)	37.5%
	Male	80 (+2)	62.5%

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	3,358 (+182)	22,358 (+2,391)	365 (+66)	47
Travel-Associated	3,286 (+180)	-	-	-
Local Vector Transmission	43	-	-	-
Laboratory Exposure	1	-	-	-
Sexual Transmission	28 (+2)	-	-	-
Guillian Barré Syndrome (GBS)	8	50 (+2)†	-	-

U.S. Zika Pregnancy Registry Data, as of 15 SEP		
Pregnant Zika Cases	749 (+18)	1,348 (+192)
Infants Born with Birth Defects	20 (+2)	1
Pregnancy Losses with Birth Defects	5	1

*Zika cases reported to ArboNET as of **21 SEP** (U.S. States and Am. Samoa); USVI cases reported from PAHO as of **22 SEP**.
 From the Puerto Rico DOH as of **8 SEP; PR DOH is tracking **1,817 (+165)** ZIKV cases in pregnant women.
 †Of the **50 (+2)** GBS cases, 11 are classified as evidence of flavivirus infection, but specific virus undetermined.

and Pinellas counties. On 19 AUG, CDC updated its [health advisory](#) for pregnant women, women of reproductive age, and others traveling to or living in affected areas. On 19 SEP, CDC updated its [guidance](#) for people who travel to or live in the Wynwood, FL, neighborhood.

As of **28 SEP**, [CDC](#) and [WHO](#) report 60 countries and territories with a first reported Zika outbreak since JAN 2015: 49 in the Western Hemisphere, nine in PACOM and two in AFRICOM. CDC has issued Alert Level 2, Practice Enhanced Precautions, travel notices for **58 (+1, St. Kitts and Nevis)** 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

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CASE REPORT (con't): 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. As of **28 SEP**, Singapore reports **396 (+12)** cases since 27 AUG; most are linked to **eight (-1) active** case clusters. **According to a 22 SEP Eurosurveillance article, the ZIKV circulating in Singapore is similar to a strain previously identified in southeast Asia and is not the strain circulating in the Americas.**

According to PAHO on **22 SEP**, over the previous four weeks, all Caribbean and North, Central, and South American OCONUS countries and territories were reporting a decreasing trend in Zika cases, except for **Saint Martin, Nicaragua, Costa Rica, and Guatemala.**

MICROCEPHALY: As of **22 SEP**, Brazil (**1,911 (+23)**), Cape Verde (11), Costa Rica (1), Colombia (**41 (+1)**), Dominican Republic (3), El Salvador (4), French Guiana (3), French Polynesia (8), **Guatemala (17)**, Haiti (1), Honduras (1), the Marshall Islands (1), Martinique (**12 (+2)**), 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. (**25 (+2)**), 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.

GUILLAIN-BARRÉ SYNDROME: As of **22 SEP**, **18 (+1, Ecuador)** 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 GBS cases linked to ZIKV reported in the continental U.S. and **50 (+2)** cases (**2 (+1)** deaths) 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.

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 (BARDA) 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, **which received a \$43 million development grant from BARDA on 26 SEP**, 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: Singapore, Brazil, and Colombia MOH

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Emergency Use Authorization Zika Testing at DoD Laboratories



*Plaque-reduction neutralization test (PRNT)

As of 28 SEP

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Western Hemisphere Countries[‡] and Territories with Autochthonous Transmission of Zika Virus: 01 JAN 2015 – 22 SEP 2016

	Confirmed	Suspected	Microcephaly Cases*	Reporting GBS [†]
Total	120,742	500,557	2,003	18 Countries/Territories

Country/Territory	Confirmed	Suspected	Microcephaly Cases*	Reporting GBS [†]
Anguilla	5	25		
Antigua & Barbuda	9	14		
Argentina	26	1,804		
Aruba	26	0		
Bahamas	11	0		
Barbados	20	553		
Belize	5	0		
Bolivia	126	0		
Bonaire, St. Eustatius, Saba	45	0		
Brazil	78,421	196,976	1,911	Yes
British Virgin Islands	5	0		
Cayman Islands	9	0		
Colombia	8,826	94,724	41	Yes
Costa Rica	1,076	1,884	1	Yes
Cuba	3	0		
Curaçao	322	0		
Dominica	68	1,085		
Dominican Republic	318	5,135	3	Yes
Ecuador	778	2,181		Yes
El Salvador	51	11,178	4	Yes
French Guiana	483	9,710	3	Yes
Grenada	74	319		Yes
Guadeloupe	379	29,850		Yes
Guatemala	442	2,535	17	Yes

Country/Territory	Confirmed	Suspected	Microcephaly Cases*	Reporting GBS [†]
Guyana	6	0		
Haiti	5	2,955	1	Yes
Honduras	269	31,488	1	Yes
Jamaica	83	4,946		Yes
Martinique	12	36,100	12	Yes
Mexico	3,015	0		
Nicaragua	1,900	0		
Panama	323	1,547	5	Yes
Paraguay	12	525	2	
Peru	102	0		
Puerto Rico	19,967	0	1	Yes
Saint Barthelemy	61	675		
Saint Kitts & Nevis	3	0		No
Saint Lucia	38	790		
Saint Martin	200	2,265		
Saint Vincent & the Grenadines	38	156		
Sint Maarten	47	0		
Suriname	723	2,725	1	Yes
Trinidad and Tobago	412	0		
Turks & Caicos	2	0		
U.S. Virgin Islands	365	695		
Venezuela	1,631	57,717		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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