

DoD Global, Laboratory-Based, Influenza Surveillance Program

2016-2017

USAF School of



Cumulative Results

Locations	49
Collected	201
Tested	188

Influenza A 5

A(H1N1)pdm09	1
A(H3N2)	4
A/not subtyped	0

Influenza B* 0

B	0
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Other Respiratory Pathogens 97

Adenovirus	4
<i>Bordetella pertussis</i>	0
<i>Chlamydomphila pneumoniae</i>	0
Coronavirus	3
Human Metapneumovirus	2
<i>Mycoplasma pneumoniae</i>	5
Parainfluenza	13
RSV	4
Rhino/Enterovirus	56
Non-influenza Viral Coinfections	8
Non-influenza Bacterial Coinfections	2
-M. pneumo coinfections (2)	

Lab data are current as of 31 October 2016.
Results are preliminary and may change as
more results are received.
*Influenza B lineages will be reported in the
periodic molecular sequencing reports.

Respiratory Highlights

16 - 29 October 2016 (Surveillance Weeks 42 & 43)

- During 16 - 29 October 2016, a total of 122 specimens were collected from 40 locations. Results were finalized for 110 specimens from 35 locations. During Week 42, one influenza A(H1N1)pdm09 was identified. No influenza was identified during Week 43. Approximately 2% of specimens tested positive for influenza during Week 42. The influenza percent positive for the season is approximately 3%.
- This report contains the monthly supplemental EUCOM report for surveillance through 29 October 2016. See pages 6 & 7 for more details.
- The overall influenza immunization rates for all services are over 40%.

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DoD Global, Laboratory-Based, Influenza Surveillance Program

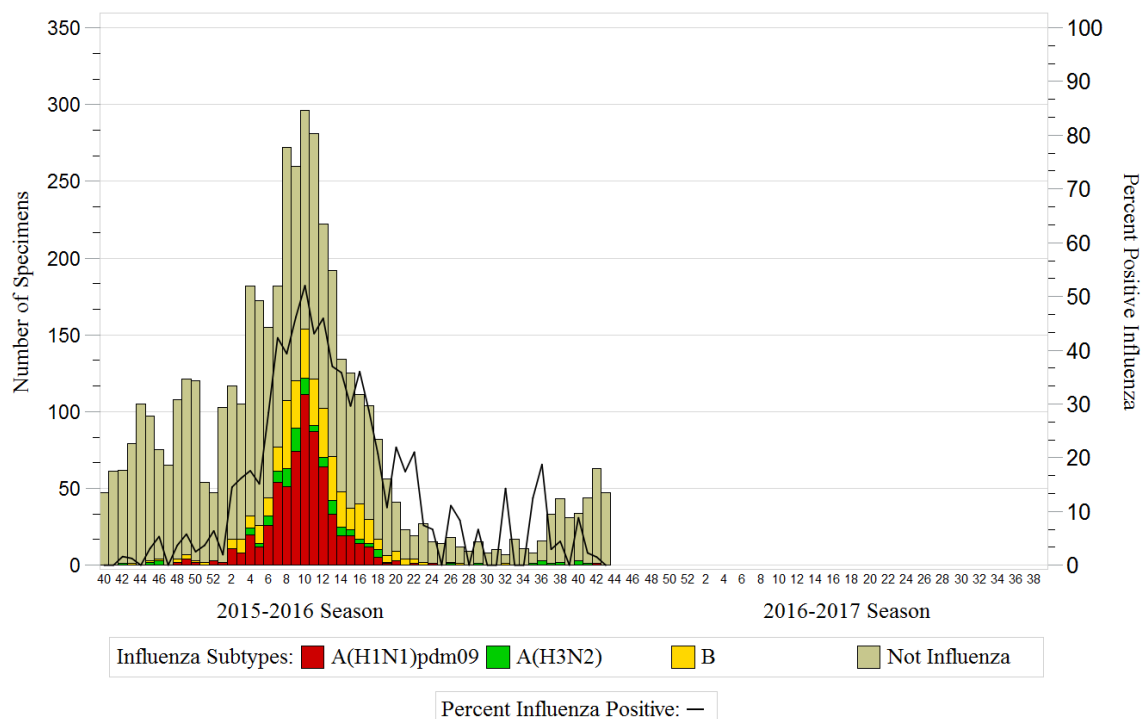
Table 1. Results by region and location for specimens collected during Weeks 42 & 43

Region*		A(H1N1)pdm09	Adenovirus	Coronavirus	hMPV	M. pneumoniae	Parainfluenza	RSV	Rhinovirus/Enterovirus	Adeno & Rhino/Entero	Para & Rhino/Entero	RSV & Rhino/Entero	No Pathogen	Total
PACOM	Eielson AFB, AK	-	-	-	-	-	-	-	-	-	-	-	1	1
	Kadena AB, Japan	-	-	-	-	-	-	-	-	-	-	-	1	1
	Yokota AB, Japan	-	-	-	-	-	-	-	-	-	-	1	4	5
Region 1	Hanscom AFB, MA	-	-	-	-	-	1	-	-	-	-	-	1	2
	USCG Academy, CT	-	-	-	-	-	-	-	1	-	-	-	-	1
Region 2	Ft Drum, NY	-	-	-	-	-	-	-	1	-	-	-	-	1
	JB McGuire-Dix-Lakehurst, NJ	-	-	1	-	-	1	-	2	-	-	-	4	8
	USMA - West Point, NY	-	-	-	-	-	-	-	1	-	-	-	5	6
Region 3	Dover AFB, DE	-	-	-	-	-	-	-	1	-	-	-	-	1
	JB Langley-Eustis, VA	-	-	-	-	-	-	3	8	-	-	1	4	16
	NMC Portsmouth, VA	-	-	-	-	-	-	-	1	-	-	-	1	2
Region 4	Eglin AFB, FL	-	-	-	-	-	-	-	1	-	-	-	-	1
	Ft Bragg, NC	-	-	-	-	-	-	1	1	-	-	-	2	4
	Keesler AFB, MS	-	-	-	-	-	1	-	-	-	-	-	-	1
	MacDill AFB, FL	-	-	-	-	-	-	-	1	-	-	-	-	1
	Moody AFB, GA	-	-	-	-	-	-	-	1	-	-	-	1	2
	NH Camp Lejeune, NC	-	-	-	-	-	-	-	-	-	-	-	1	1
Region 5	Scott AFB, IL	-	-	-	-	-	1	-	-	-	-	-	1	2
	Wright-Patterson AFB, OH	-	-	-	-	-	-	-	-	1	-	-	2	3
Region 6	Altus AFB, OK	-	-	-	-	-	-	-	-	-	-	-	1	1
	Cannon AFB, NM	-	-	-	-	-	-	-	1	-	-	-	-	1
	Laughlin AFB, TX	-	-	-	2	-	-	-	-	-	-	-	1	3
	Sheppard AFB, TX	-	-	-	-	-	-	-	2	-	-	-	-	2
	Tinker AFB, OK	-	-	-	-	-	-	-	1	-	-	-	3	4
Region 7	McConnell AFB, KS	-	-	-	-	-	-	-	1	-	-	-	2	3
	Offutt AFB, NE	-	-	-	-	-	-	-	2	-	-	-	2	4
Region 8	Ellsworth AFB, SD	-	-	-	-	-	-	-	1	-	-	-	-	1
	FE Warren AFB, WY	-	-	-	-	-	1	-	1	-	-	-	3	5
	Hill AFB, UT	-	-	-	-	-	-	-	1	-	-	-	1	2
	Malmstrom AFB, MT	-	-	-	-	1	-	-	-	-	-	-	1	2
	Peterson AFB, CO	-	-	-	-	-	-	-	-	-	-	-	2	2
Region 9	Nellis AFB, NV	1	1	-	-	-	2	-	1	-	1	-	-	6
	Travis AFB, CA	-	-	-	-	-	-	-	2	-	-	-	1	3
Region 10	Fairchild AFB, WA	-	-	1	-	-	-	-	1	-	-	-	2	4
	Mt Home AFB, ID	-	-	-	-	1	1	-	1	-	-	-	5	8
Total		1	1	2	2	2	8	4	34	1	1	2	52	110

*CONUS locations are based on Health & Human Services regions. Other locations are defined by COCOM.

Laboratory Results - Cumulative for Season

Graph 1. Percent influenza positive by week: 2015-2016 surveillance year and through Week 43 of the 2016-2017 surveillance year

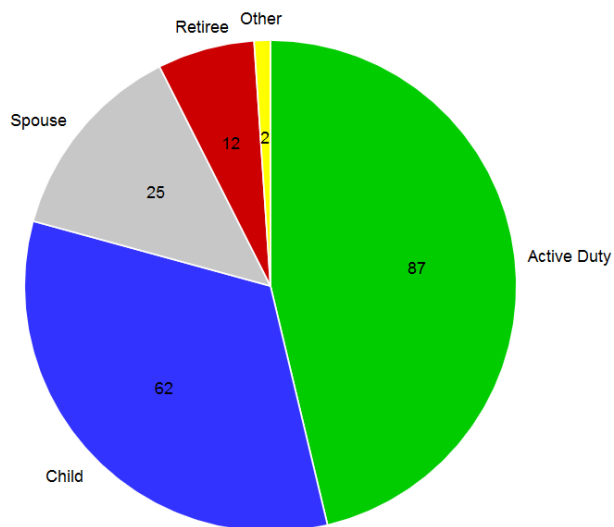


Note: Dual influenza coinfections are excluded from this graph. Specimens with pending results are used in the denominator to calculate percent positive, but are not displayed in the graph.

Table 2. ILI by age group for the 2016-2017 surveillance year through Week 43

Age Group	Frequency	Percent
0-5	41	21.81
6-9	5	2.66
10-17	16	8.51
18-24	38	20.21
25-44	68	36.17
45-64	10	5.32
65+	10	5.32

Graph 2. ILI by beneficiary status for the 2016-2017 surveillance year through Week 43

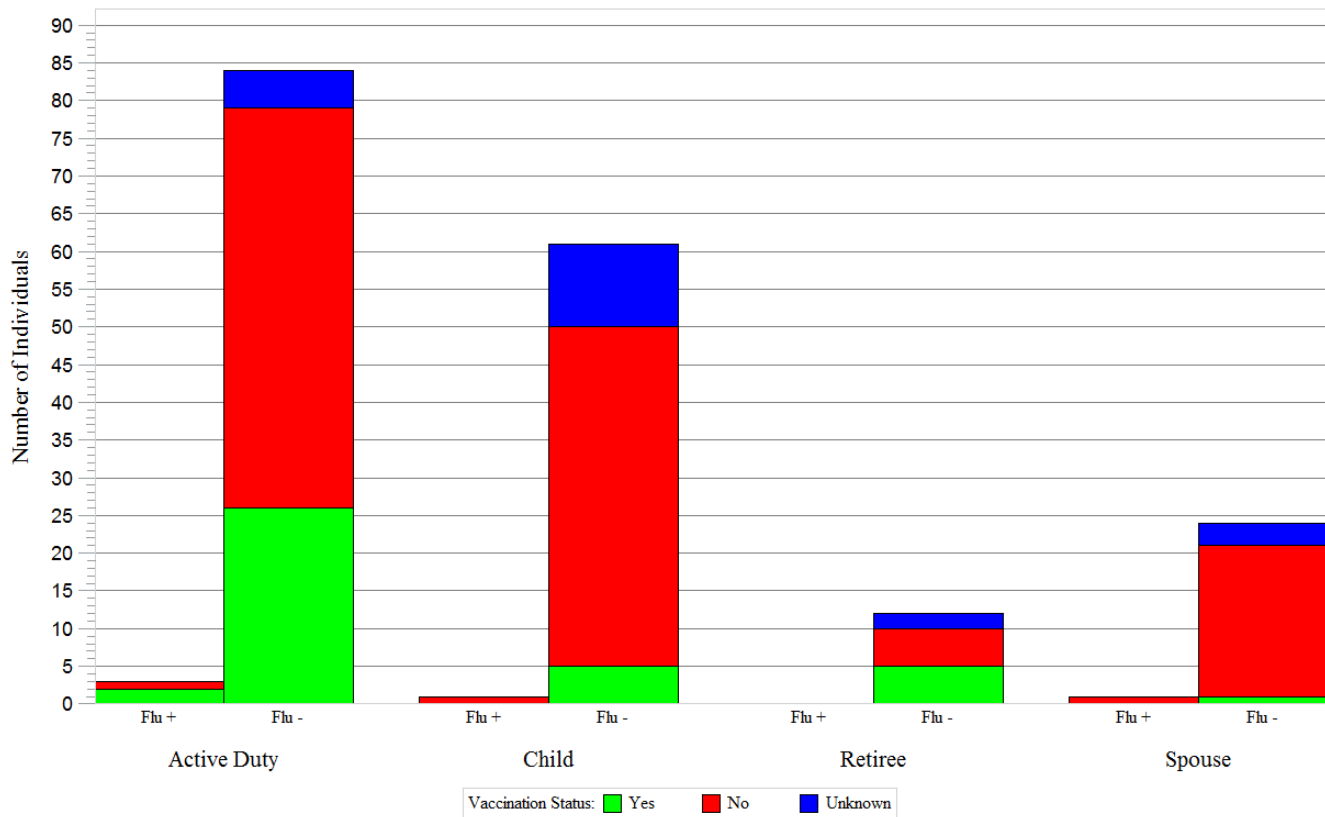


Demographic Summary

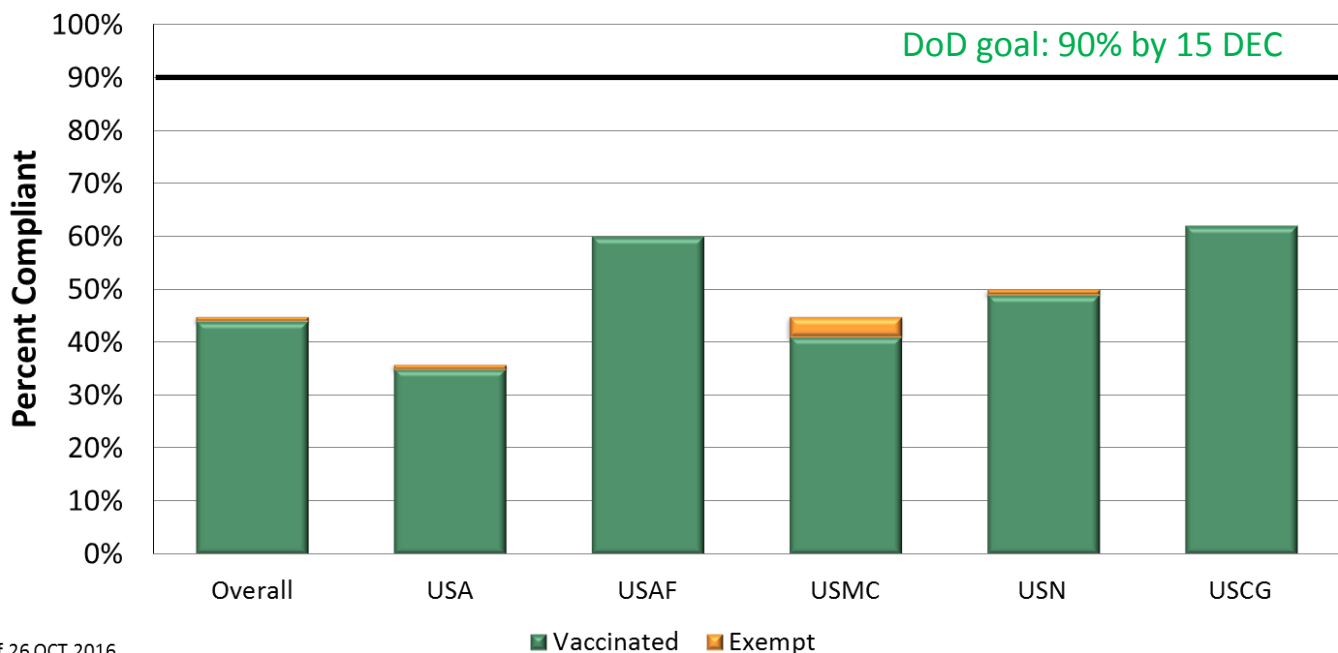
Of 188 ILI cases, 87 (46.3%) are service members, 62 (33.0%) are children, 25 (13.3%) are spouses, and 14 (7.4%) are retirees and other beneficiaries. The median age of ILI cases with known age (n=188) is 23 (range 0, 87).

DoD Global, Laboratory-Based, Influenza Surveillance Program

Graph 3. Vaccination status by beneficiary type for the 2016-2017 surveillance year through Week 43



Graph 4. Influenza vaccination status by service



As of 26 OCT 2016

No exemptions reflect less than 1% exempted

Data Sources: Army – MEDPROS; Air Force – ASIMS; Navy, Marine Corps & Coast Guard – MRRS

Laboratory Results—Through Current Surveillance Week 43

Table 3. Cumulative results by region and location for specimens collected during the 2016-2017 surveillance year

Region*		A(H1N1)pdm09	A(H3N2)	Adenovirus	Coronavirus	hMPV	M. pneumoniae	Parainfluenza	RSV	Rhinovirus/Enterovirus	Non-Influenza Viral Coinfection	Non-Influenza Bacterial Coinfection	No Pathogen	Total
PACOM	Eielson AFB, AK	-	-	-	-	-	-	-	-	-	-	-	1	1
	JR Marianas - Andersen AFB, Guam	-	-	-	-	-	1	-	-	-	-	-	-	1
	Kadena AB, Japan	-	-	-	-	-	-	-	-	-	-	-	2	2
	Osan AB, South Korea	-	1	-	-	-	-	-	-	-	-	-	-	1
	Yokota AB, Japan	-	-	-	-	-	1	-	-	1	3	-	5	10
Region 1	Hanscom AFB, MA	-	-	-	-	-	-	1	-	-	-	-	1	2
	USCG Academy, CT	-	-	-	-	-	-	-	-	2	-	2	-	4
Region 2	Ft Drum, NY	-	-	-	-	-	-	-	-	1	-	-	-	1
	JB McGuire-Dix-Lakehurst, NJ	-	-	-	1	-	-	1	-	2	-	-	5	9
	USMA - West Point, NY	-	-	1	-	-	-	-	-	2	-	-	9	12
Region 3	Dover AFB, DE	-	-	1	-	-	-	-	-	1	-	-	-	2
	JB Langley-Eustis, VA	-	-	-	-	-	-	1	3	10	2	-	6	22
	NMC Portsmouth, VA	-	-	-	-	-	-	-	-	1	-	-	2	3
Region 4	Columbus AFB, MS	-	-	-	-	-	-	-	-	1	-	-	-	1
	Eglin AFB, FL	-	-	-	-	-	-	-	-	2	-	-	2	4
	Ft Bragg, NC	-	-	-	-	-	-	-	1	1	-	-	2	4
	Hurlburt Field, FL	-	-	-	-	-	-	1	-	-	-	-	1	2
	JB Charleston (AF), SC	-	-	-	-	-	-	-	-	-	-	-	1	1
	Keesler AFB, MS	-	-	-	-	-	-	1	-	-	-	-	1	2
	MacDill AFB, FL	-	-	-	-	-	-	-	-	1	-	-	-	1
	Maxwell AFB, AL	-	-	-	-	-	-	-	-	1	-	-	-	1
	Moody AFB, GA	-	-	-	-	-	-	1	-	2	1	-	2	6
	NH Camp Lejeune, NC	-	-	-	-	-	-	-	-	-	-	-	1	1
	NH Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	1	1
	Shaw AFB, SC	-	-	-	-	-	1	-	-	1	-	-	1	3
Region 5	Scott AFB, IL	-	-	-	-	-	-	1	-	-	-	-	1	2
	Wright-Patterson AFB, OH	-	-	-	-	-	-	-	-	-	1	-	3	4
Region 6	Altus AFB, OK	-	-	1	-	-	-	-	-	-	-	-	2	3
	Cannon AFB, NM	-	-	-	-	-	-	-	-	1	-	-	-	1
	Laughlin AFB, TX	-	-	-	-	2	-	-	-	-	-	-	1	3
	Sheppard AFB, TX	-	-	-	-	-	-	-	-	2	-	-	-	2
	Tinker AFB, OK	-	-	-	-	-	-	-	-	1	-	-	4	5
	Vance AFB, OK	-	-	-	-	-	-	-	-	-	-	-	1	1
Region 7	McConnell AFB, KS	-	-	-	-	-	-	-	-	1	-	-	2	3
	Offutt AFB, NE	-	-	-	-	-	-	-	-	3	-	-	3	6
Region 8	Ellsworth AFB, SD	-	-	-	-	-	-	-	-	1	-	-	1	2
	FE Warren AFB, WY	-	-	-	-	-	-	1	-	1	-	-	5	7
	Hill AFB, UT	-	-	-	-	-	-	-	-	2	-	-	2	4
	Malmstrom AFB, MT	-	-	-	-	-	1	-	-	1	-	-	1	3
	Peterson AFB, CO	-	-	-	-	-	-	1	-	1	-	-	2	4
	USAF Academy, CO	-	-	-	-	-	-	-	-	1	-	-	-	1
Region 9	Davis-Monthan AFB, AZ	-	-	-	-	-	-	-	-	1	-	-	-	1
	Nellis AFB, NV	1	-	1	-	-	-	2	-	1	1	-	-	6
	Travis AFB, CA	-	2	-	-	-	-	-	-	4	-	-	3	9
Region 10	Fairchild AFB, WA	-	-	-	2	-	-	-	-	2	-	-	7	11
	Mt Home AFB, ID	-	-	-	-	-	1	2	-	1	-	-	5	9
	NH Bremerton, WA	-	1	-	-	-	-	-	-	3	-	-	-	4
Total		1	4	4	3	2	5	13	4	56	8	2	86	188

*CONUS locations are based on Health & Human Services regions. Other locations are defined by COCOM.

Monthly EUCOM Respiratory Surveillance Supplemental Report Through 29 October 2016

In cooperation and agreement with U.S. Army Public Health Command Region-Europe (PHCR-E), the DoD Global, Laboratory-based, Influenza Surveillance Program has analyzed data from surveillance sites that submit specimens to Landstuhl Regional Medical Center (LRMC), Germany. LRMC's laboratory is the forward laboratory for military sites in Europe. Lab results are preliminary and may change as more results are received.

Table 4. Results by region and location for specimens collected and finalized during Weeks 42 & 43

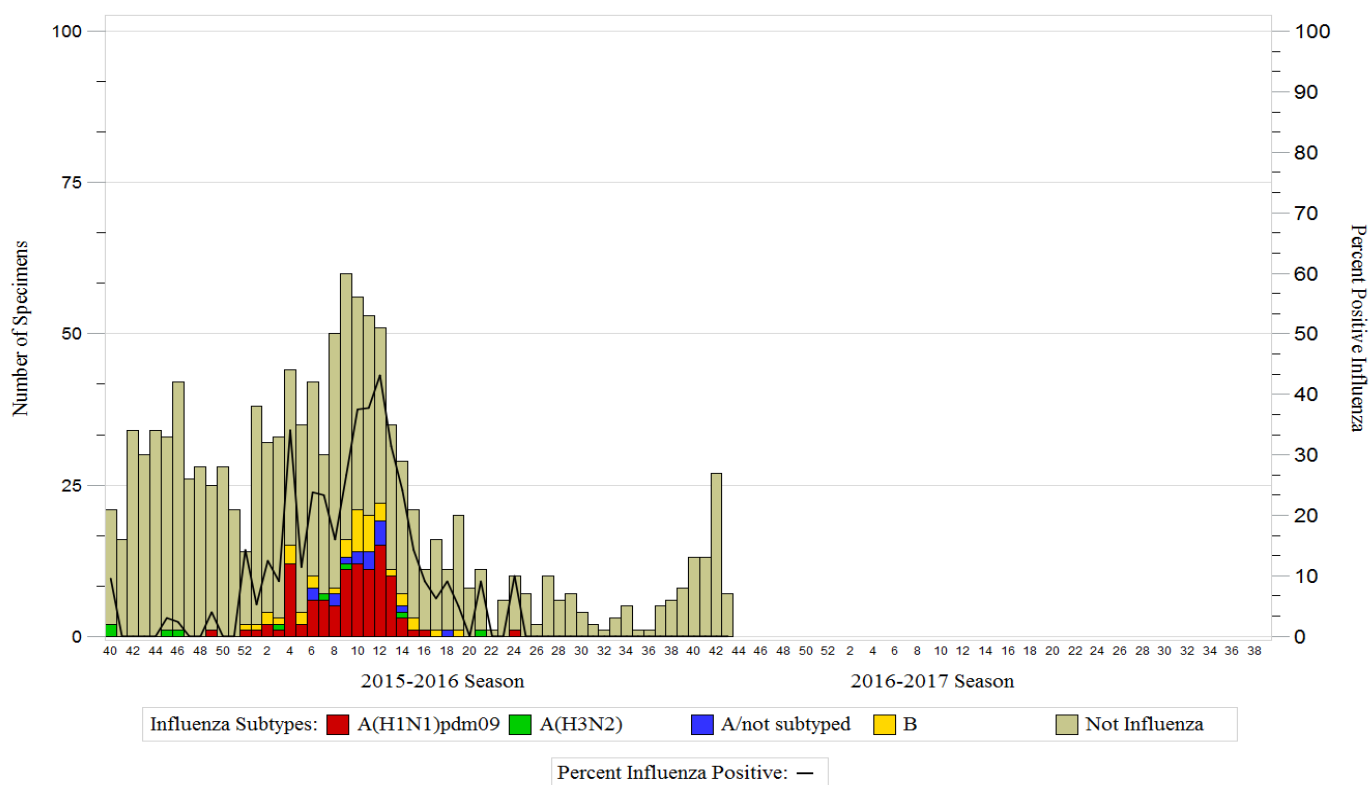
Region		RSV	Rhinovirus/ Enterovirus	Para & Rhino/Entero	No Pathogen	Total
Deployed	Country 2, Location A	-	-	-	1	1
EUCOM	Landstuhl RMC, Germany	-	5	-	6	11
	NSA Naples, Italy	-	-	-	1	1
	RAF Lakenheath, England	-	5	-	3	8
	Ramstein AB, Germany	1	1	-	1	3
	Spangdahlem AB, Germany	-	-	-	1	1
	USAG Stuttgart, Germany	-	1	-	1	2
	USAG Vicenza, Italy	-	-	-	1	1
	Vilseck AHC, Germany	-	3	1	2	6
Total		1	15	1	17	34

DoD Global, Laboratory-Based, Influenza Surveillance Program

Table 5. Cumulative results by region and location for specimens collected during the 2016-2017 surveillance year

Region		hM NV	RSV	Rhinovirus/ Enterovirus	Para & Rhino/Entero	No Pathogen	Total
Deployed	Country 2, Location A	-	-	-	-	1	1
EUCOM	Landstuhl RMC, Germany	2	-	7	-	9	18
	NAVSTA Rota, Spain	-	-	-	-	1	1
	NSA Naples, Italy	-	-	-	-	4	4
	RAF Lakenheath, England	-	-	9	-	4	13
	Ramstein AB, Germany	1	1	3	-	1	6
	Spangdahlem AB, Germany	-	-	1	-	1	2
	USAG Stuttgart, Germany	-	-	1	-	1	2
	USAG Vicenza, Italy	-	-	1	-	2	3
	Vilseck AHC, Germany	-	-	6	1	3	10
Total		3	1	28	1	27	60

Graph 5. Percent influenza positive by week: 2015-2016 surveillance year and through Week 43 of the 2016-2017 surveillance year



Note: Dual influenza co-infections have been excluded from the graph.

Background

The DoD-wide program was established by the Global Emerging Infections Surveillance and Response System (GEIS) in 1997. The surveillance network includes the Defense Health Agency/Armed Forces Health Surveillance Branch—Air Force Satellite Cell (DHA/AFHSB-AF) and U.S. Air Force School of Aerospace Medicine (USAFSAM) (sentinel site respiratory surveillance), the Naval Health Research Center (recruit and shipboard population-based respiratory surveillance), the Naval Medical Research Unit (NAMRU-3) in Cairo, Egypt, the Naval Medical Research Unit (NAMRU-2) in Phnom Penh, Cambodia, the Armed Forces Research Institute of Medical Sciences (AFRIMS) in Bangkok, Thailand, the Naval Medical Research Unit (NAMRU-6) in Lima, Peru, and the United States Army Medical Research Unit-Kenya (USAMRU-K) located in Nairobi, Kenya. This work is supported by the Air Force and GEIS Operations, a Division of the Armed Forces Health Surveillance Branch (AFHSB).

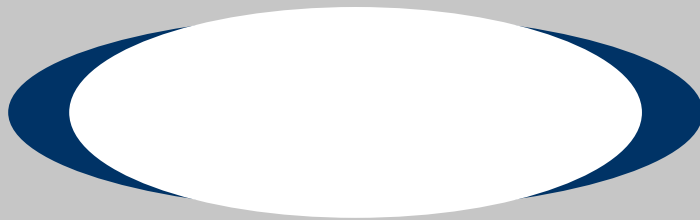
Sentinel Site Surveillance

In 1976, the U.S. Air Force Medical Service began conducting routine, global, laboratory-based influenza surveillance. Air Force efforts expanded to DoD-wide in 1997. DHA/AFHSB-AF and USAFSAM manages the surveillance program that includes global surveillance among DoD beneficiaries at over 95 sentinel sites (including deployed locations) and many non-sentinel sites (please see map below). Collaborating partner laboratories include five DoD overseas medical research laboratories (AFRIMS, NAMRU-2, NAMRU-3, NAMRU-6, USAMRU-K) who collect specimens from local residents in surrounding countries that may not otherwise be covered in existing surveillance efforts. Additionally, the Naval Health Research Center (NHRC) in San Diego, CA collects specimens from DoD recruit training centers and conducts surveillance along the Mexico border.

Landstuhl Regional Medical Center (LRMC) and Tripler Army Medical Center (TAMC) assist the program by processing DoD specimens for the EUCOM region and the State of Hawaii, respectively. This process seeks to provide more timely results and efficient transport of specimens.

Available on our website (listed below) is a list of previous weekly surveillance reports, program information (including an educational briefing and instruction pamphlets for clinic staff), and a dashboard containing respiratory data for our sentinel sites.

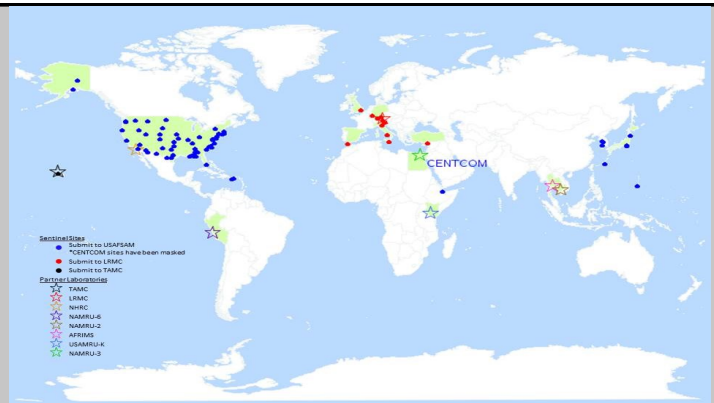
Errata:



For Public Health Services
937-938-3196; DSN 798-3196

For Laboratory Services
937-938-4140; DSN 798-4140

USAFSAM.PHRFlu@us.af.mil



Collaborating Partners

In addition to all participating DoD military sentinel sites, collaborating laboratories and medical centers (described above) may be further understood by reviewing the sites' website. Click on the sites' icon to be directed to their webpage.

