



Cumulative Results

Locations	59
Collected	525
Tested	486

Influenza A 11

A(H1N1)pdm09	1
A(H3N2)	10
A/not subtyped	0

Influenza B* 2

B	2
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Other Respiratory Pathogens 235

Adenovirus	11
<i>Bordetella pertussis</i>	0
<i>Chlamydomphila pneumoniae</i>	1
Coronavirus	7
Human Metapneumovirus	4
<i>Mycoplasma pneumoniae</i>	16
Parainfluenza	45
RSV	13
Rhino/Enterovirus	107
Non-influenza Viral Coinfections	26
Non-influenza Bacterial Coinfections	5
-M. pneumo coinfections (5)	

Lab data are current as of 28 November 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

13 - 26 November 2016 (Surveillance Weeks 46 & 47)

- During 13 - 26 November 2016, a total of 131 specimens were collected from 37 locations. Results were finalized for 98 specimens from 34 locations. During Week 46, two influenza A(H3N2) and one influenza B virus were identified. No influenza was identified during Week 47. Approximately 3% of specimens tested positive for influenza during Week 46. The influenza percent positive for the season is approximately 3%.
- A human case of novel influenza (influenza A(H1N2v)) has been identified and reported by the state of Iowa. The patient was not hospitalized and has fully recovered from their illness. The Centers for Disease Control and Prevention (CDC) did note that no human-to-human transmission has been identified and the case had close contact with swine on a week prior to the onset of illness. Since 2005 there has been nine total reported influenza A(H1N2v) cases. ([CDC FluView](#), cited 29 November 2016).

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Table 1. Results by region and location for specimens collected during Weeks 46 & 47

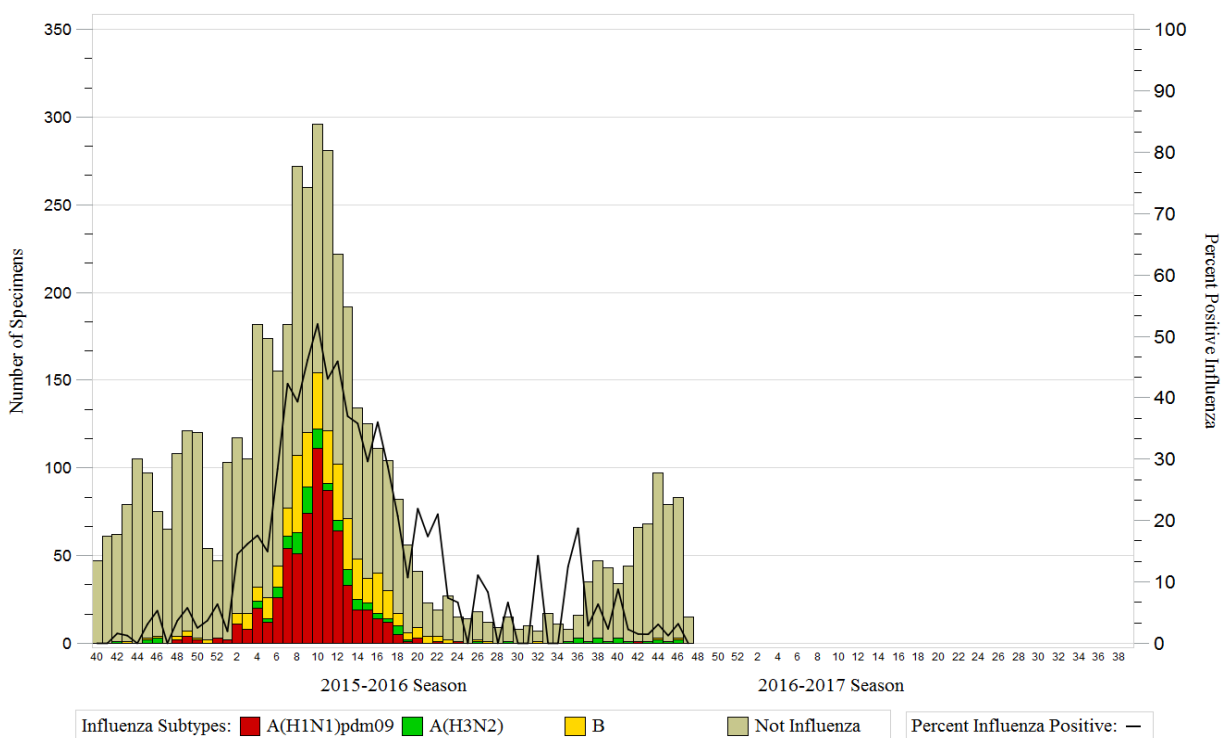
Region*		A(H3N2)	B	Adenovirus	Coronavirus	<i>M. pneumoniae</i>	Parainfluenza	RSV	Rhinovirus/Enterovirus	Adeno & RSV	Adeno & Rhino/Enterovirus	Corona & Para	Corona & Rhino/Enterovirus	hMPV & Rhino/Enterovirus	<i>M. pneumo</i> & Rhino/Enterovirus	RSV & Rhino/Enterovirus	No Pathogen	Total
PACOM	Eielson AFB, AK	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
	Kadena AB, Japan	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
	Tripler AMC, HI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Yokota AB, Japan	1	-	-	-	1	-	-	1	-	-	-	-	-	-	-	6	9
Region 1	USCG Academy, CT	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	2
Region 2	JB McGuire-Dix-Lakehurst, NJ	-	-	1	1	-	-	-	1	-	-	-	-	-	-	-	4	7
	USMA - West Point, NY	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	3	5
Region 3	Dover AFB, DE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	JB Langley-Eustis, VA	-	-	-	-	-	1	5	2	1	-	-	-	-	-	2	8	19
Region 4	Eglin AFB, FL	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
	Ft Bragg, NC	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	1	3
	Keesler AFB, MS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Maxwell AFB, AL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Moody AFB, GA	-	-	-	-	-	-	2	-	-	-	-	1	1	1	-	-	5
	Seymour Johnson AFB, NC	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Shaw AFB, SC	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2	3
Region 5	Wright-Patterson AFB, OH	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	2
Region 6	Altus AFB, OK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
	Barksdale AFB, LA	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
	Cannon AFB, NM	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
	Sheppard AFB, TX	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2
	Tinker AFB, OK	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	2
	Vance AFB, OK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Region 7	McConnell AFB, KS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Offutt AFB, NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Region 8	Ellsworth AFB, SD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
	FE Warren AFB, WY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Hill AFB, UT	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	2
	Minot AFB, ND	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
	Peterson AFB, CO	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	2
Region 9	Beale AFB, CA	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Travis AFB, CA	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	2
Region 10	Fairchild AFB, WA	-	1	-	-	-	2	-	2	-	-	-	-	-	-	-	1	6
	Mt Home AFB, ID	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	4	7
Total		2	1	3	2	4	11	8	16	1	1	1	1	1	1	2	43	98

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

DoD Global, Laboratory-Based, Influenza Surveillance Program

Laboratory Results - Cumulative for Season

Graph 1. Percent influenza positive by week: 2015-2016 surveillance year and through Week 47 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.

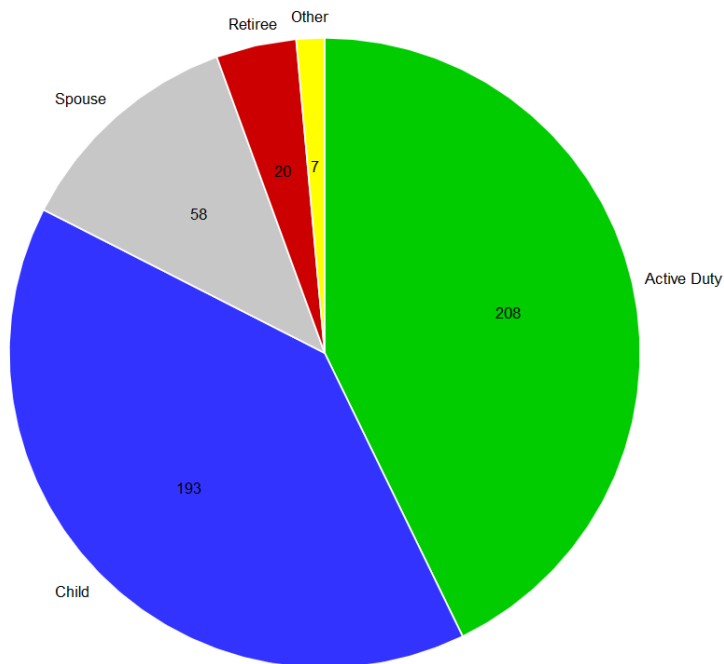
Table 2. ILI by age group for the 2016-2017 surveillance year through Week 47

Age Group	Frequency	Percent
0-5	119	24.49
6-9	25	5.14
10-17	49	10.08
18-24	84	17.28
25-44	170	34.98
45-64	24	4.94
65+	15	3.09

Demographic Summary

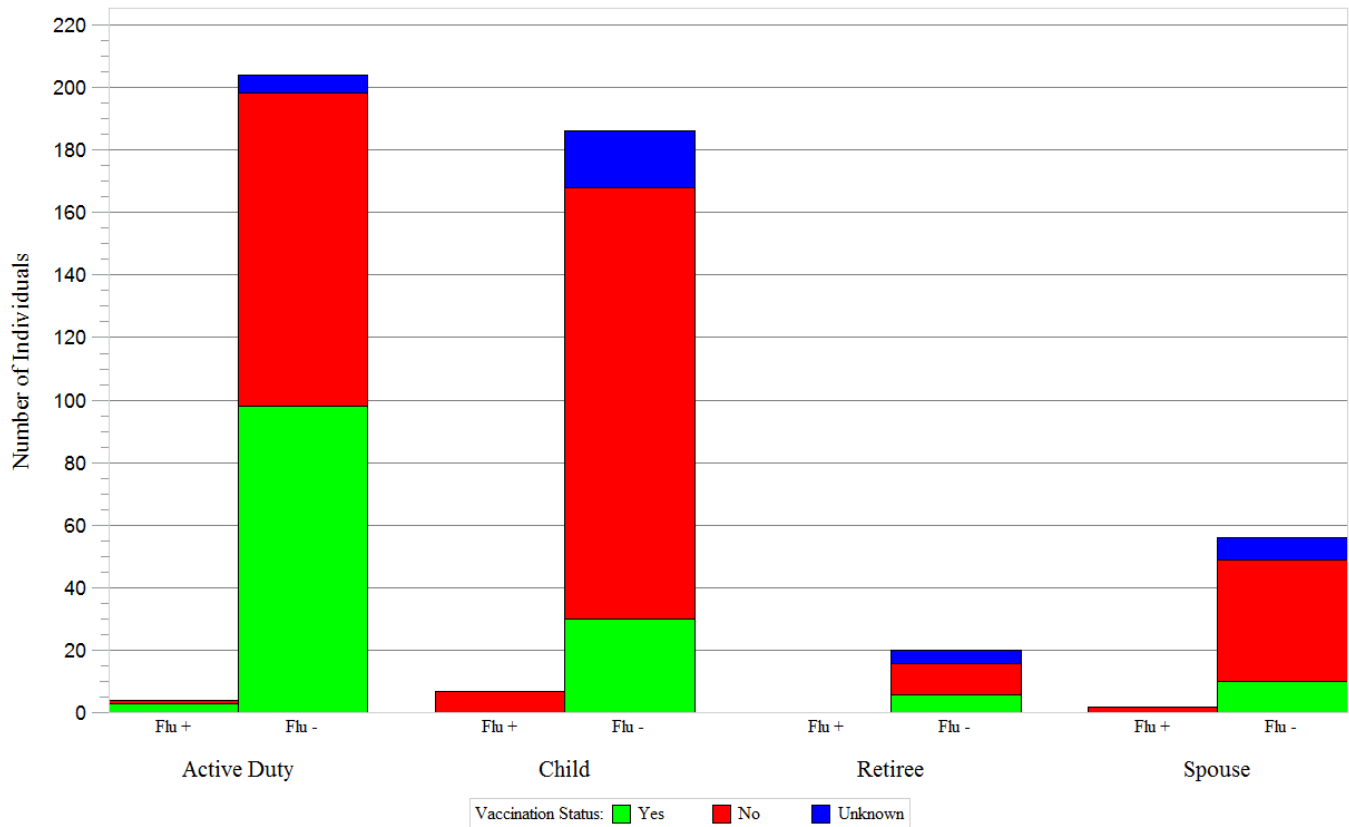
Of 486 ILI cases, 208 (42.8%) are service members, 193 (39.7%) are children, 58 (11.9%) are spouses, and 27 (5.6%) are retirees and other beneficiaries. The median age of ILI cases with known age (n=486) is 22 (range 0, 87).

Graph 2. ILI by beneficiary status for the 2016-2017 surveillance year through Week 47

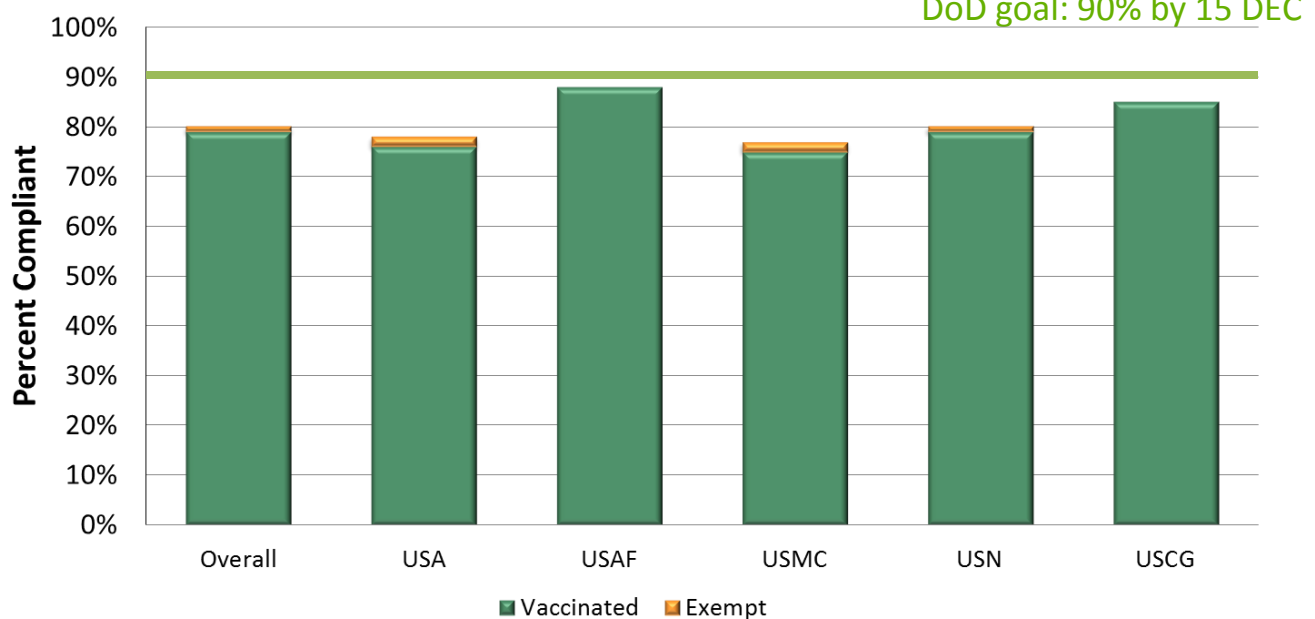


DoD Global, Laboratory-Based, Influenza Surveillance Program

Graph 3. Vaccination status by beneficiary type for the 2016-2017 surveillance year through Week 47



Graph 4. Influenza vaccination status by service



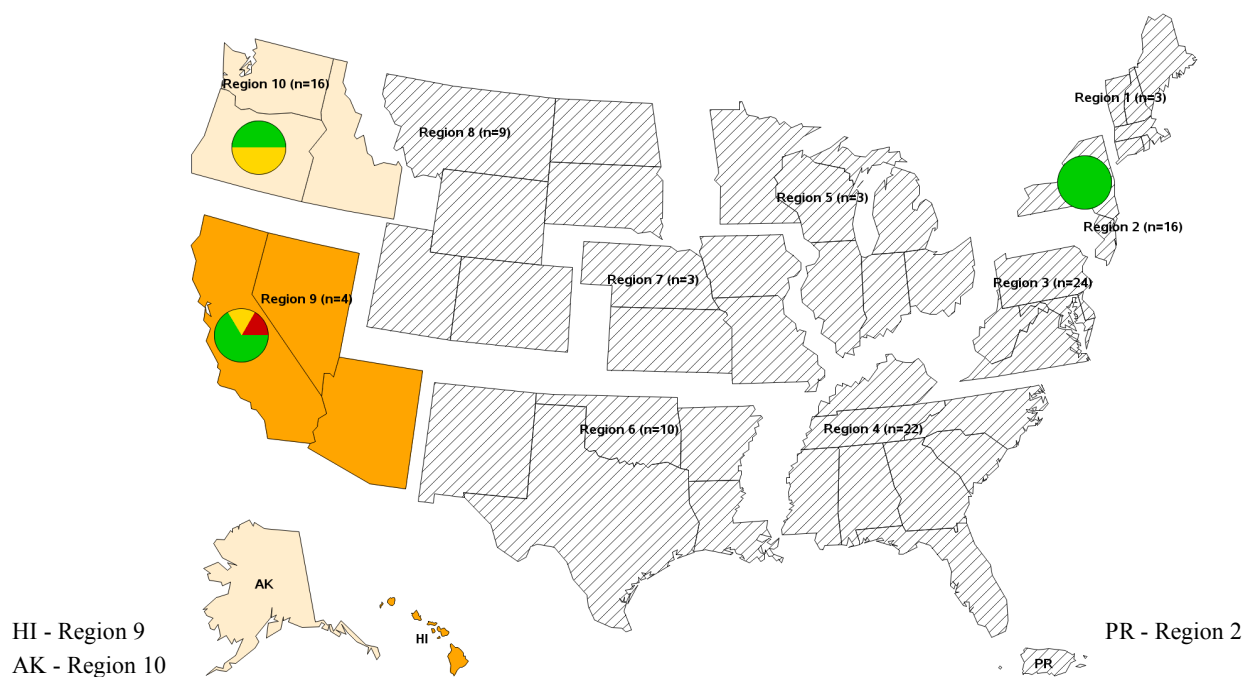
As of 23 NOV 2016

No exemptions reflect less than 1% exempted

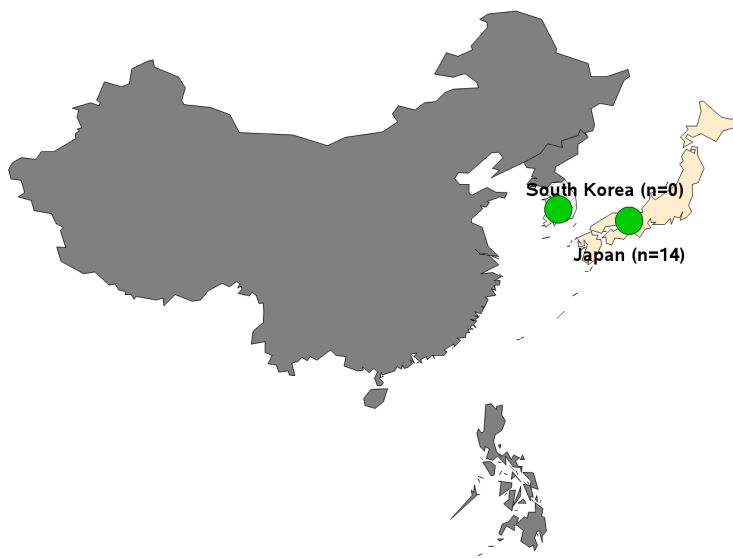
Data Sources: Army – MEDPROS; Air Force – ASIMS; Navy, Marine Corps & Coast Guard – MRRS

DoD Global, Laboratory-Based, Influenza Surveillance Program

Map 1. Influenza subtypes and activity level by U.S. region for the 2016-2017 surveillance year through Week 47



Map 2. Influenza subtypes and activity level by country for the 2016-2017 surveillance year through Week 47 (Pacific)



Legend

Influenza Activity - Past 2 weeks (n = # of submissions)

- No activity (0%+) or no submissions
- Low (<25%+)
- Moderate (25-49%+)
- High (>50%+)

Influenza Results - Cumulative

- Influenza A(H3N2)
- Influenza A(H1N1)pdm09
- Influenza B
- Influenza A/not subtyped

Laboratory Results—Through Current Surveillance Week 47

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

Region*		A(H1N1)pdm09	A(H3N2)	B	Adenovirus	C. pneumoniae	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	2
	JB Elmendorf-Richardson, AK	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	JR Marianas - Andersen AFB, Guam	-	-	-	-	-	-	-	1	-	-	-	-	-	1	2
	Kadena AB, Japan	-	2	-	-	-	-	-	-	2	-	2	-	-	5	11
	Kunsan AB, South Korea	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
	Misawa AB, Japan	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Osan AB, South Korea	-	1	-	-	-	-	-	-	-	-	-	-	-	4	5
	Tripler AMC, HI	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Yokota AB, Japan	-	1	-	-	-	-	-	2	-	1	2	3	-	18	27
Region 1	Hanscom AFB, MA	-	-	-	-	-	-	-	-	1	-	-	1	-	1	3
	USCG Academy, CT	-	-	-	-	-	-	-	1	-	-	3	-	2	1	7
Region 2	Ft Drum, NY	-	-	-	1	-	-	-	-	1	-	1	-	-	1	4
	JB McGuire-Dix-Lakehurst, NJ	-	-	-	1	-	2	-	2	4	-	5	1	-	15	30
	USMA - West Point, NY	-	1	-	3	-	1	-	-	4	-	3	1	-	21	34
Region 3	Dover AFB, DE	-	-	-	1	-	-	-	-	-	-	1	-	-	4	6
	JB Langley-Eustis, VA	-	-	-	-	-	-	1	1	2	8	20	8	-	23	63
	NM C Portsmouth, VA	-	-	-	-	-	-	-	-	-	-	1	-	-	2	3
Region 4	Columbus AFB, MS	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
	Eglin AFB, FL	-	-	-	1	-	-	-	-	-	-	4	-	-	5	10
	Ft Bragg, NC	-	-	-	-	-	-	-	1	1	-	3	2	2	3	12
	Ft Campbell, KY	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
	Hurlburt Field, FL	-	-	-	-	-	-	-	-	1	-	-	-	-	1	2
	JB Charleston (AF), SC	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
	Keesler AFB, MS	-	-	-	-	-	-	-	-	1	-	-	1	-	4	6
	MacDill AFB, FL	-	-	-	-	-	-	-	-	-	-	1	-	-	1	2
	Maxwell AFB, AL	-	-	-	-	-	-	-	-	1	-	1	-	-	3	5
	Moody AFB, GA	-	-	-	-	-	-	-	-	1	3	2	3	1	3	13
	NH Beaufort, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
	NH Camp Lejeune, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	NH Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Robins AFB, GA	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3
	Seymour Johnson AFB, NC	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
	Shaw AFB, SC	-	-	-	-	-	-	-	1	-	-	2	-	-	9	12

(Cont'd on page 7)

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

DoD Global, Laboratory-Based, Influenza Surveillance Program

Laboratory Results—Through Current Surveillance Week 47

Table 3. Cumulative results by region and location for specimens collected during the 2016-2017 surveillance year
(Cont'd from page 6)

Region*		A(H1N1)pdm09	A(H3N2)	B	Adenovirus	C. pneumoniae	Coronavirus	hMPV	M. pneumoniae	Parainfluenza	RSV	Rhinovirus/Enterovirus	Non-Influenza Viral Coinfection	Non-Influenza Bacterial Coinfection	No Pathogen	Total
Region 5	Scott AFB, IL	-	-	-	-	-	-	-	-	2	-	-	-	-	4	6
	Wright-Patterson AFB, OH	-	-	-	-	-	-	-	1	1	-	1	1	-	4	8
Region 6	Altus AFB, OK	-	-	-	1	-	-	-	-	-	-	1	-	-	5	7
	Barksdale AFB, LA	-	-	-	-	-	-	-	-	1	-	1	-	-	-	2
	Cannon AFB, NM	-	-	-	-	-	-	-	1	-	-	1	-	-	1	3
	Ft Polk, LA	-	-	-	-	-	-	-	1	-	-	-	-	-	1	2
	Laughlin AFB, TX	-	-	-	-	-	-	2	-	-	-	-	-	-	1	3
	Sheppard AFB, TX	-	-	-	-	-	-	-	-	2	-	3	-	-	2	7
	Tinker AFB, OK	-	-	-	-	-	-	-	-	-	1	3	-	-	4	8
	Vance AFB, OK	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3
Region 7	M cConnell AFB, KS	-	-	-	-	-	-	-	-	-	-	4	-	-	6	10
	Offutt AFB, NE	-	-	-	-	-	1	-	-	-	-	4	-	-	4	9
Region 8	Ellsworth AFB, SD	-	-	-	-	-	-	-	-	-	-	3	-	-	5	8
	FE Warren AFB, WY	-	-	-	1	-	-	-	1	1	-	2	-	-	7	12
	Hill AFB, UT	-	-	-	-	-	-	-	-	1	-	2	-	-	6	9
	Malmstrom AFB, MT	-	-	-	-	-	-	-	1	-	-	1	-	-	1	3
	Minot AFB, ND	-	-	-	-	-	-	-	-	-	-	1	-	-	1	2
	Peterson AFB, CO	-	-	-	-	-	-	-	-	1	-	2	1	-	3	7
	USAF Academy, CO	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
Region 9	Beale AFB, CA	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
	Davis-Monthan AFB, AZ	-	-	-	-	-	-	-	-	3	-	2	-	-	-	5
	Nellis AFB, NV	1	1	1	1	-	-	-	-	3	-	3	2	-	4	16
	Travis AFB, CA	-	2	-	-	-	1	-	-	2	-	4	-	-	7	16
Region 10	Fairchild AFB, WA	-	-	1	-	-	2	-	-	2	-	4	-	-	15	24
	McChesney AFB, ID	-	-	-	-	1	-	-	1	7	-	8	2	-	16	35
	NH Bremerton, WA	-	1	-	-	-	-	-	-	-	-	3	-	-	-	4
Total		1	10	2	11	1	7	4	16	45	13	107	26	5	238	486

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

Monthly EUCOM Respiratory Surveillance Supplemental Report Through 26 November 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.

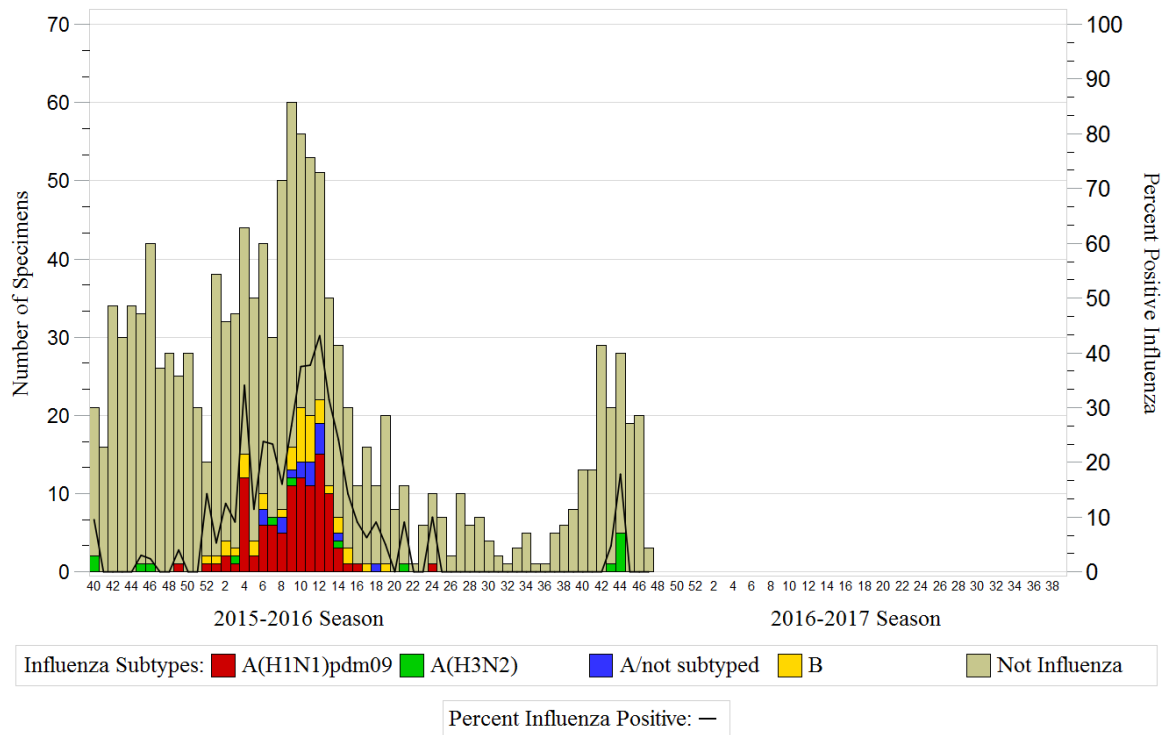
Table 4. Results by region and location for specimens collected and finalized during Weeks 44 - 47

Region		A(H3N2)	A(H3N2) & Rhino/Entero	hMV	Parainfluenza	RSV	Rhinovirus/Enterovirus	RSV & Rhino/Entero	No Pathogen	Total
EUCOM	Aviano AB, Italy	-	-	-	-	-	-	-	3	3
	Landstuhl RMC, Germany	1	1	-	1	-	3	-	11	17
	NAVSTA Rota, Spain	-	-	-	-	1	-	-	3	4
	NSA Naples, Italy	-	-	-	-	-	1	-	1	2
	RAF Lakenheath, England	-	-	2	1	2	4	2	5	16
	Ramstein AB, Germany	-	-	1	-	2	8	-	4	15
	USAG Stuttgart, Germany	3	-	-	-	-	2	-	2	7
	Vilseck AHC, Germany	-	-	-	1	-	2	-	3	6
Total		4	1	3	3	5	20	2	32	70

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

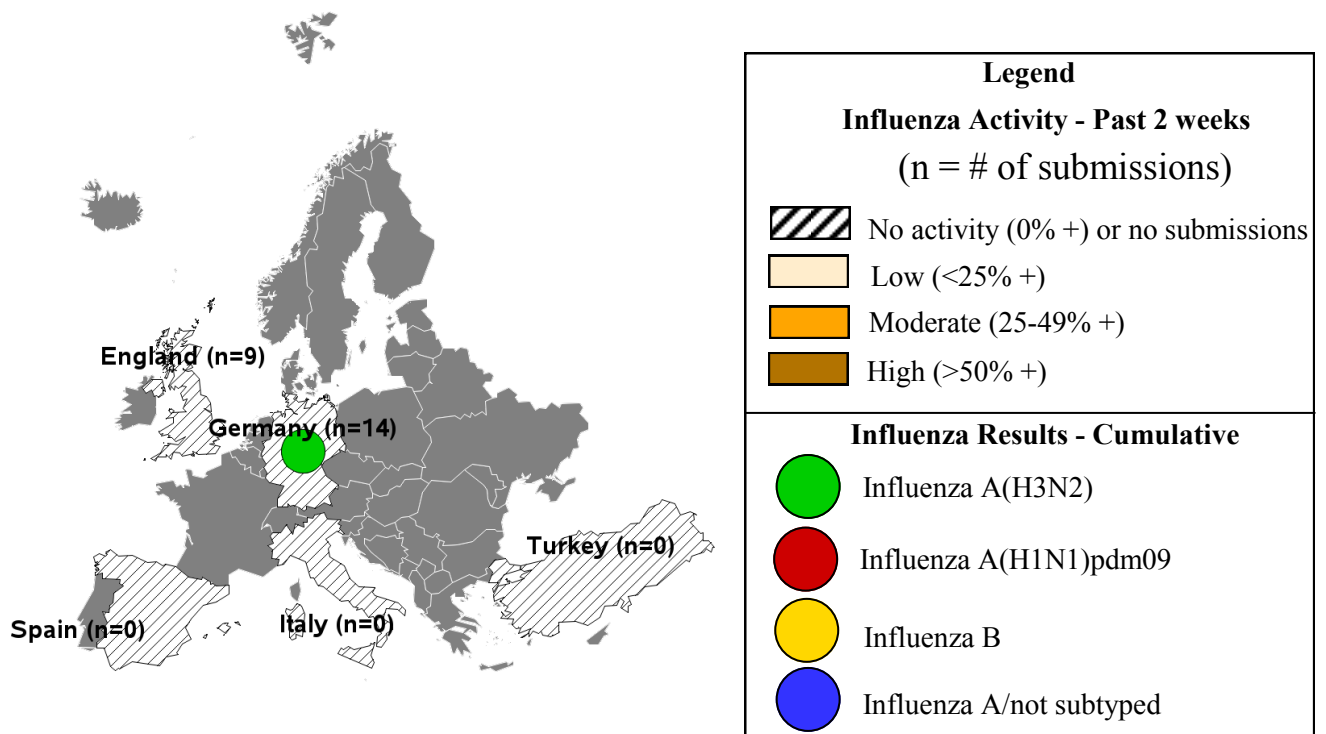
Region		A(H3N2)	A(H3N2) & Rhino/Entero	hMV	Parainfluenza	RSV	Rhinovirus/Enterovirus	Para & Rhino/Entero	RSV & Rhino/Entero	No Pathogen	Total
Deployed	Country 2, Location A	-	-	-	-	-	-	-	-	1	1
	Country 6, Location A	-	-	-	-	-	-	-	-	1	1
EUCOM	Aviano AB, Italy	-	-	-	-	-	-	-	-	3	3
	Landstuhl RMC, Germany	1	1	2	1	-	10	-	-	20	35
	NAVSTA Rota, Spain	-	-	-	-	2	2	-	-	5	9
	NSA Naples, Italy	-	-	-	-	-	1	-	-	6	7
	RAF Lakenheath, England	-	-	2	1	3	15	-	2	11	34
	Ramstein AB, Germany	-	-	2	-	3	11	-	-	5	21
	Spangdahlem AB, Germany	-	-	-	-	-	1	-	-	1	2
	USAG Stuttgart, Germany	3	-	-	-	-	3	-	-	4	10
	USAG Vicenza, Italy	-	-	-	-	-	1	-	-	2	3
	Vilseck AHC, Germany	1	-	-	1	-	11	1	-	6	20
Total		5	1	6	3	8	55	1	2	65	146

Graph 5. Percent influenza positive by week: 2015-2016 surveillance year and through Week 47 of the 2016-2017 surveillance year



Note: Dual influenza coinfections have been excluded from the graph.

Map 3. Influenza subtypes and activity level by country for the 2016-2017 surveillance year through Week (Europe)



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).

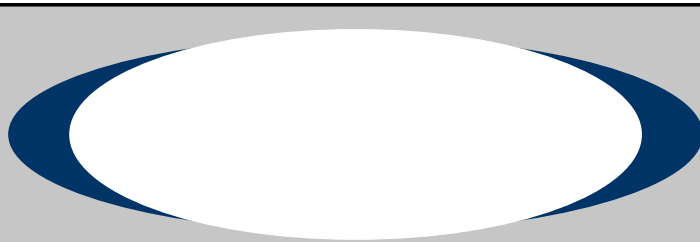
Sentinel Site Surveillance

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.

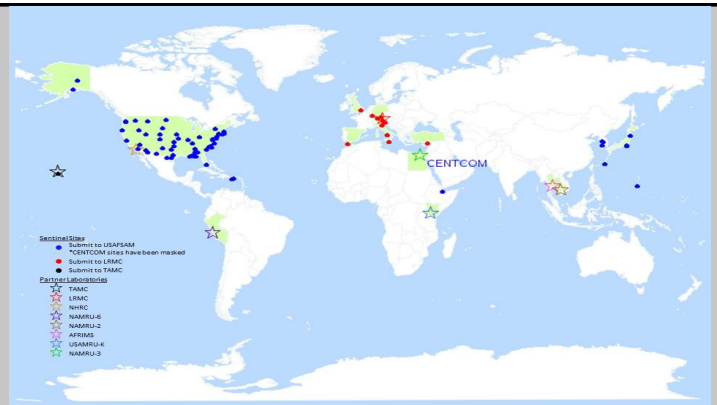
Errata:



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.

