



Cumulative Results

Locations	68
Collected	1,027
Tested	986

Influenza A 14

A(H1N1)pdm09	8
A(H3N2)	6
A/not subtyped	0

Influenza B* 11

B	11
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Other Respiratory Pathogens 308

Adenovirus	48
<i>Bordetella pertussis</i>	1
<i>Chlamydomphila pneumoniae</i>	0
Coronavirus	17
Human Metapneumovirus	2
<i>Mycoplasma pneumoniae</i>	24
Parainfluenza	63
RSV	28
Rhino/Enterovirus	86
Non-influenza Co-infections	39

Lab data are current as of 5 January 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

20 December 2015 - 2 January 2016 (Surveillance Weeks 51 & 52)

- During 20 December 2015 - 2 January 2016, a total of 73 specimens were collected and received from 28 locations. Results were finalized for 51 specimens from 24 locations. During Week 51, two influenza B viruses were identified. No influenza viruses were identified during Week 52.
- In a recent article, investigators found that, following long term evolution in pigs, the Eurasian avian-like H1N1 swine influenza viruses (antigenically different from current human H1N1 viruses) have the potential to cause a human influenza pandemic. This conclusion was reached after sampling over 36,000 pigs from slaughterhouses and farms in 24 Chinese provinces from August 2010 to March 2013. China is the largest pork producing country in the world, and pigs in China are not vaccinated against influenza. Influenza viruses can spread freely among unvaccinated herds, and pigs are intermediate hosts for influenza transfer to humans. Additionally, these swine influenza viruses preferentially bind to human-type receptors, and viruses were transmitted by respiratory droplets in ferrets (Yang, H., et al. (2015) Prevalence, genetics, and transmissibility in ferrets of Eurasian avian-like H1N1 swine influenza viruses. *PNAS Early Edition*).

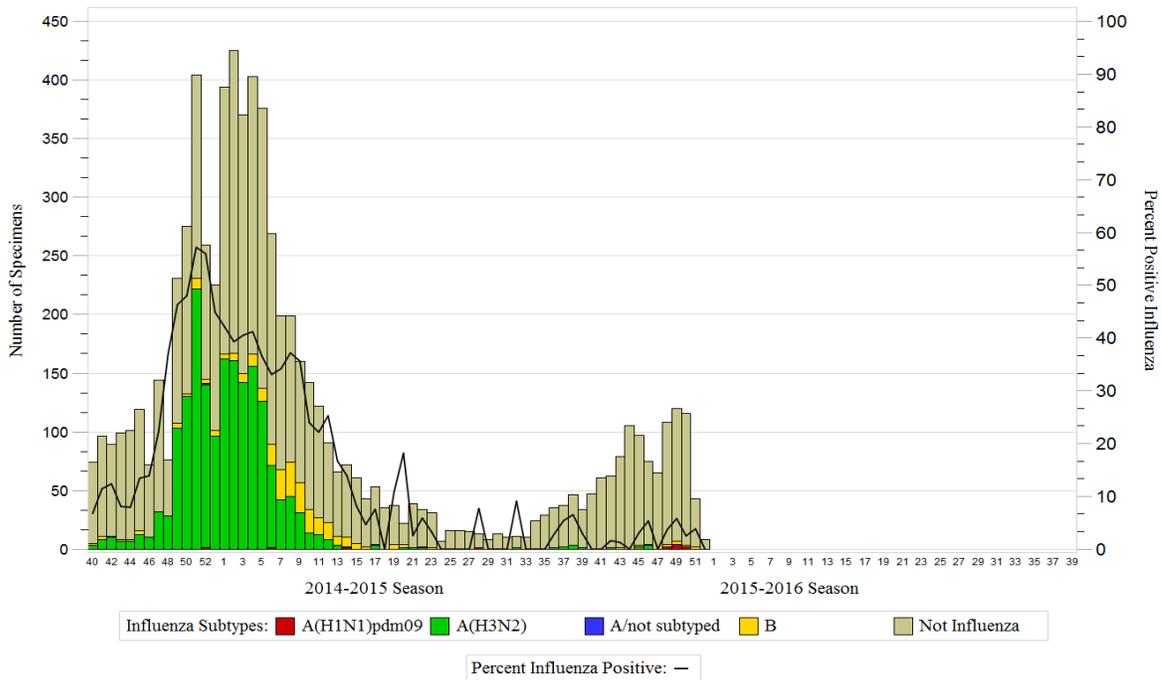
Table 1. Results by region and location for specimens collected during Weeks 51 & 52

Region*	Location	B	Adenovirus	Coronavirus	hMNV	M. pneumoniae	RSV	Rhino/Enterovirus	Adeno & RSV	Adeno & Rhino/Enterovirus	C. pneumoniae & M. pneumoniae	Corona & Rhino/Enterovirus	No Pathogen	Total
Region 2	JB McGuire-Dix-Lakehurst, NJ	-	-	-	-	-	-	-	-	-	-	-	1	1
	USMA - West Point, NY	1	1	1	-	-	-	-	-	-	-	-	-	2
Region 3	JB Langley-Eustis, VA	-	-	1	-	-	-	-	-	-	-	1	1	3
	NMC Portsmouth, VA	-	-	1	-	-	-	-	-	-	-	-	-	1
Region 4	Eglin AFB, FL	-	-	-	-	-	1	-	-	-	-	-	-	2
	Ft Bragg, NC	-	-	-	-	-	1	-	-	-	-	-	-	1
	Hurlburt Field, FL	-	-	-	-	-	-	-	-	-	-	1	-	1
	Keesler AFB, MS	-	-	-	-	-	-	-	-	-	-	-	2	2
	NH Jacksonville, FL	-	-	-	-	-	-	-	-	-	-	-	2	2
Region 6	Seymour Johnson AFB, NC	-	-	-	-	-	-	-	-	1	-	-	-	1
	Little Rock AFB, AR	-	-	-	-	-	-	-	-	-	-	3	-	3
	Sheppard AFB, TX	-	-	-	-	-	-	-	-	1	-	-	-	1
	Vance AFB, OK	-	1	-	-	-	-	-	-	-	-	-	-	1
Region 7	McConnell AFB, KS	-	-	-	-	-	1	-	-	-	-	-	-	1
Region 8	Ellsworth AFB, SD	-	-	-	-	-	-	-	1	-	-	-	-	1
	Hill AFB, UT	-	-	-	1	-	-	-	-	-	-	-	2	3
	Minot AFB, ND	-	-	-	-	-	-	-	-	-	-	-	1	1
Region 9	Peterson AFB, CO	-	-	1	-	-	-	-	-	-	-	-	-	1
	Luke AFB, AZ	-	-	-	-	-	-	-	-	-	-	-	-	1
	Nellis AFB, NV	-	-	3	-	-	1	-	-	-	-	-	-	2
	Travis AFB, CA	-	-	-	-	-	2	-	-	1	-	-	-	3
Region 10	USCG Island Alameda, CA	-	-	-	-	-	-	-	-	-	-	-	1	1
	Mt Home AFB, ID	-	-	-	-	-	-	-	-	-	-	-	-	1
	NH Bremerton, WA	1	-	-	-	1	-	-	-	-	-	-	-	1
Total		2	2	7	1	1	5	1	1	2	1	2	26	51

*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: 2014-2015 surveillance year and through Week 52 of the 2015-2016 surveillance year



Note: Dual influenza co-infections 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.

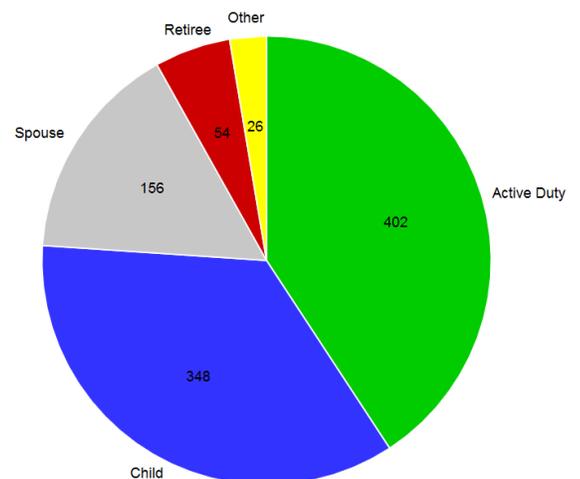
Table 2. ILI by age group for the 2015-2016 surveillance year through Week 52

Age Group	Frequency	Percent
0-5	224	22.72
6-9	54	5.48
10-17	72	7.30
18-24	174	17.65
25-44	348	35.29
45-64	91	9.23
65+	23	2.33

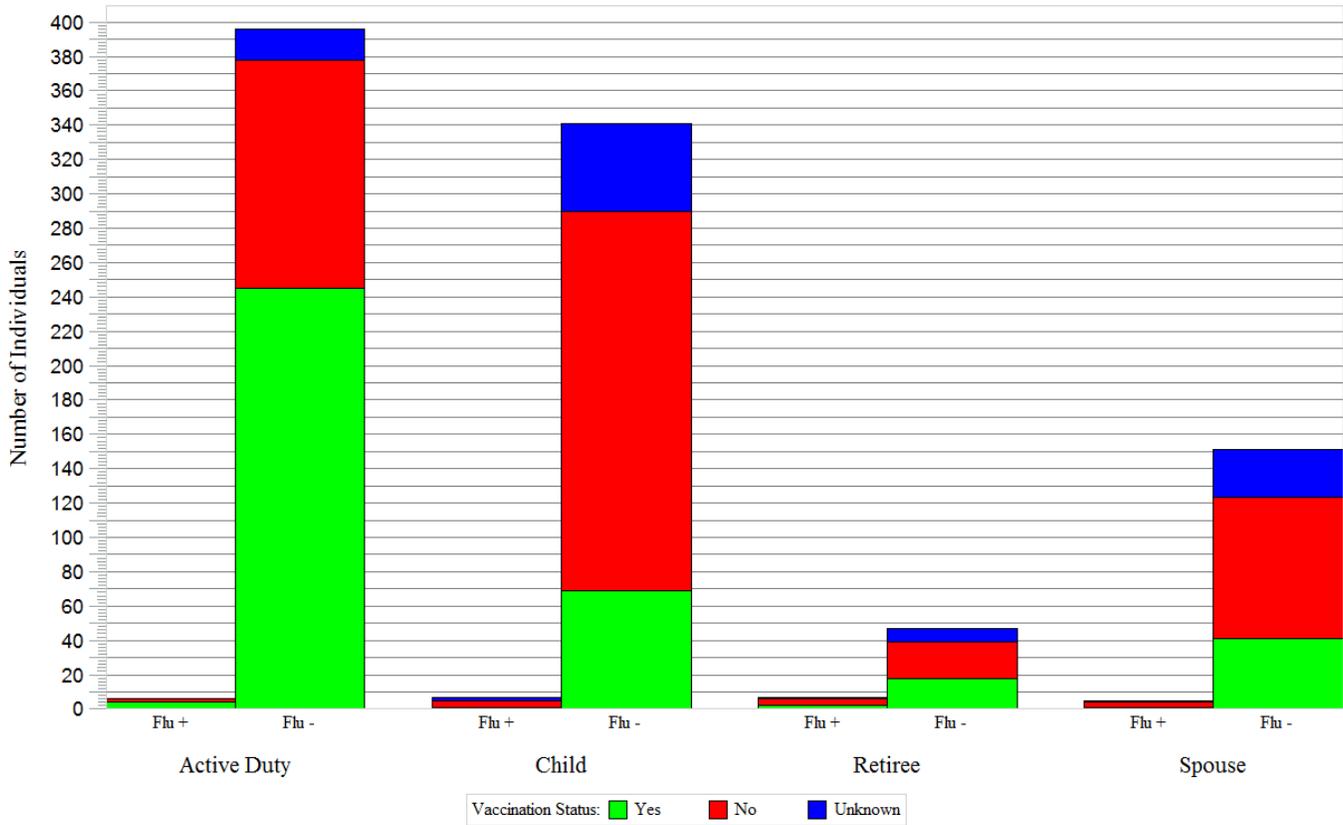
Demographic Summary

Of 986 ILI cases, 402 are service members (40.8%), 348 are children (35.3%), 156 are spouses (15.8%), and 80 (8.1%) are retirees and other beneficiaries. The median age of ILI cases with known age (n=986) is 23 (range 0, 91).

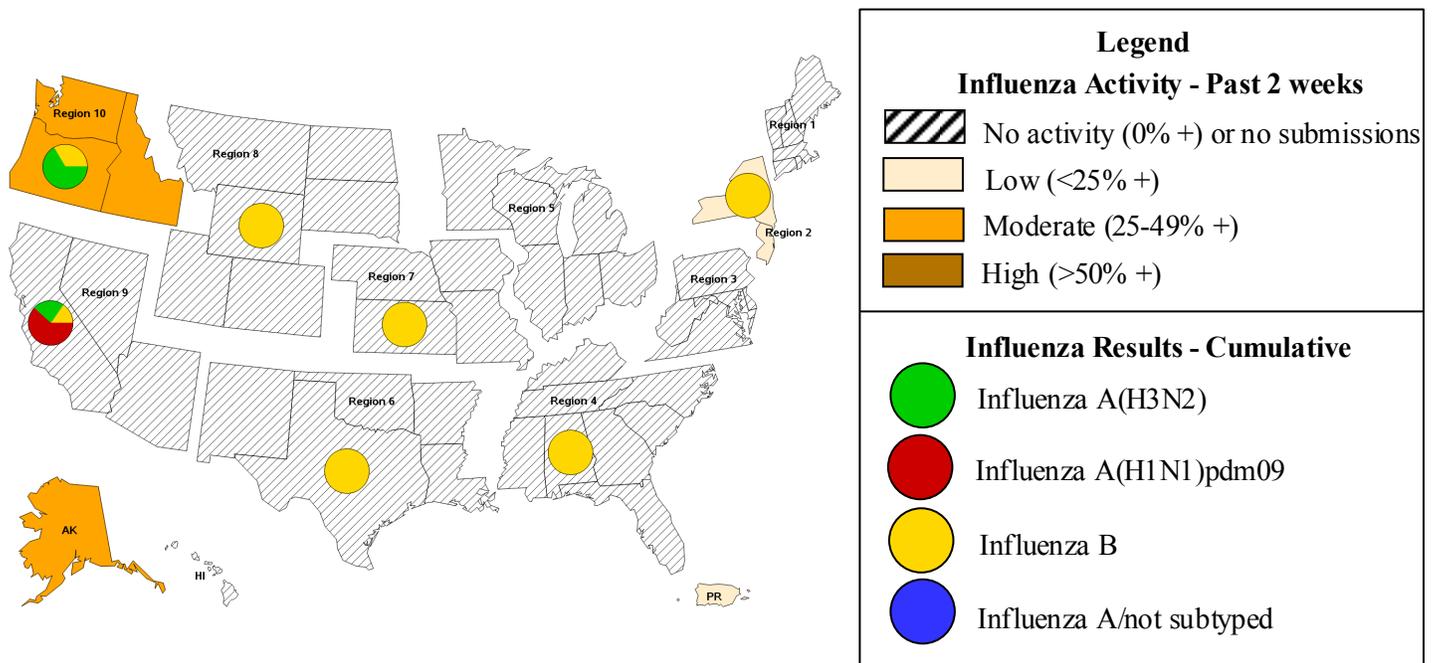
Graph 2. ILI by beneficiary status for the 2015-2016 surveillance year through Week 52



Graph 3. Vaccination status by beneficiary type for the 2015-2016 surveillance year through Week 52

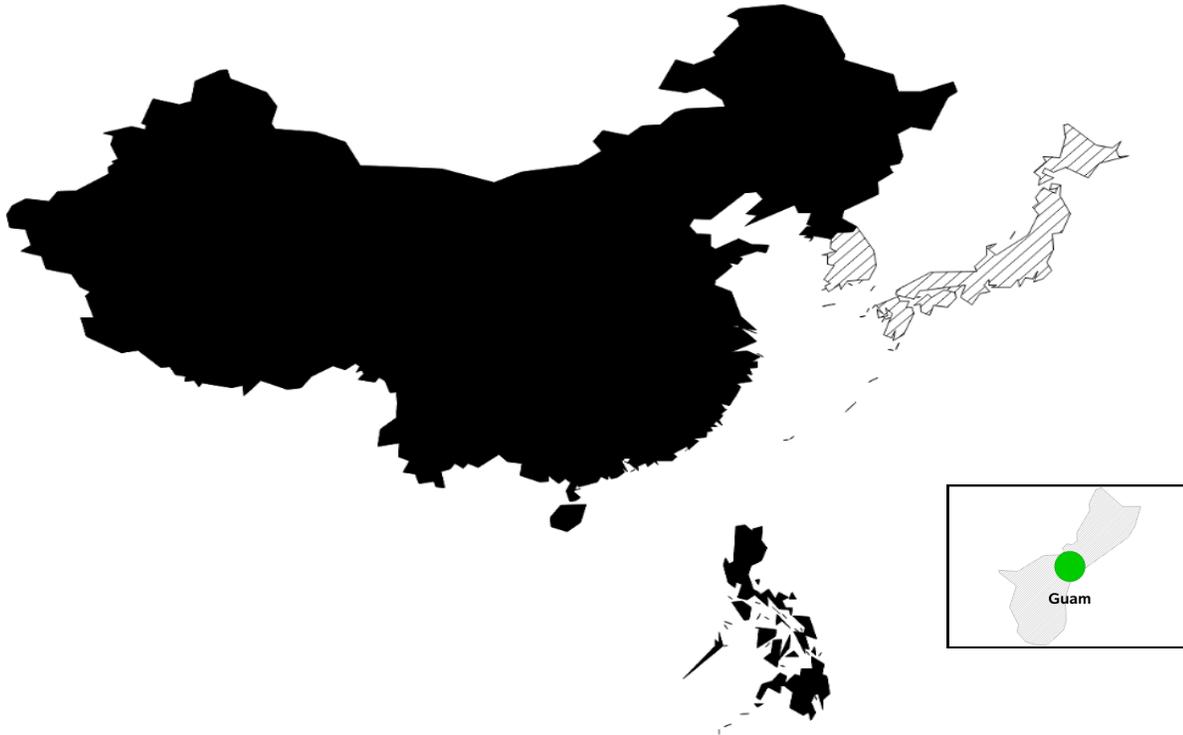


Map 1. Influenza subtypes and activity level by region for the 2015-2016 surveillance year through Week 52

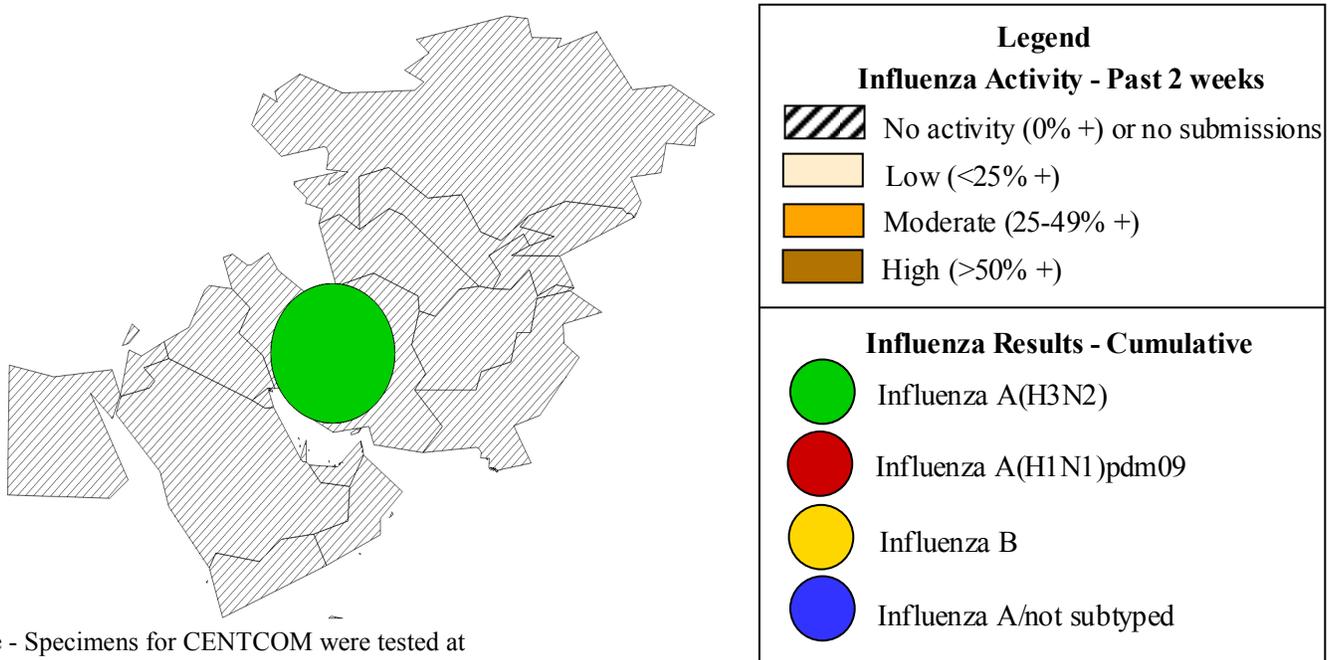


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Map 2. Influenza subtypes and activity level by country for the 2015-2016 surveillance year through Week 52 (Pacific)



Map 3. Influenza subtypes and activity level for CENTCOM for the 2015-2016 surveillance year through Week 52



Note - Specimens for CENTCOM were tested at USAFSAM or Landstuhl Regional Medical Center (LRMC).

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Laboratory Results—Through Current Surveillance Week 52

Table 3. Cumulative results by region and location for specimens collected during the 2015-2016 surveillance year

Region*		A(H1N1)pdm09	A(H3N2)	B	Adenovirus	E. perussis	Coronavirus	hMPV	M. pneumoniae	Parainfluenza	RSV	Rhinovirus/Enterovirus	Non-Influenza Co-Infection	No Pathogen	Total
PACOM	CFA Okinawa, Japan	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Eielson AFB, AK	-	1	-	-	-	-	-	-	-	-	-	-	4	5
	JB Elmendorf-Richardson, AK	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	JR Marianas - Andersen AFB, Guam	-	1	-	-	-	-	-	-	-	-	-	1	-	2
	Kadena AB, Japan	-	-	-	-	-	-	-	-	-	-	-	2	-	10
	Misawa AB, Japan	-	-	-	-	-	-	-	-	-	-	1	2	-	4
	Osan AB, South Korea	-	-	-	-	-	-	-	-	-	-	-	-	-	3
	Yokota AB, Japan	-	-	-	-	-	-	-	1	1	1	1	-	1	13
Region 1	Hanscom AFB, MA	-	-	-	1	-	-	-	-	2	-	-	-	9	12
	NHCNE Newport, RI	-	-	-	-	-	-	-	-	-	-	1	-	3	4
	USCG Academy, CT	-	-	-	-	-	-	-	-	-	-	-	-	3	3
Region 2	Ft Drum, NY	-	-	-	-	-	-	-	-	-	-	2	-	3	5
	JB McGuire-Dix-Lakehurst, NJ	-	-	-	-	-	-	1	-	-	-	4	-	6	11
	USMA - West Point, NY	-	2	3	3	-	2	-	2	1	1	1	3	49	64
Region 3	Dover AFB, DE	-	-	-	-	-	-	-	-	-	-	-	-	3	3
	JB Anacostia-Bolling, DC	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	JB Andrews, MD	-	-	-	-	-	-	-	1	-	-	-	-	-	1
	JB Langley-Eustis, VA	-	-	-	3	-	1	-	-	3	4	2	1	7	21
	NCRM - Walter Reed NMMC, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Region 4	NMC Portsmouth, VA	-	-	1	-	1	-	5	1	1	2	1	1	13	25
	CGS Mobile, AL	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Columbus AFB, MS	-	-	-	-	-	-	-	-	-	-	2	-	10	12
	Eglin AFB, FL	-	-	-	3	-	-	-	-	4	2	2	-	11	22
	Ft Bragg, NC	-	-	-	1	-	-	-	-	-	2	-	1	13	17
	Ft Campbell, KY	-	-	-	-	-	1	-	-	2	-	3	-	12	18
	Hurlburt Field, FL	-	-	-	-	-	-	-	-	-	-	2	-	6	8
	Keesler AFB, MS	-	-	-	-	-	-	-	1	-	-	2	-	17	20
	MacDill AFB, FL	-	-	-	-	-	-	-	1	1	-	-	-	1	3
	Maxwell AFB, AL	-	-	-	1	-	-	-	-	1	2	1	-	15	20
	Moody AFB, GA	-	-	2	4	-	1	-	1	2	2	7	1	12	32
	NH Camp Lejeune, NC	-	-	-	-	-	-	-	-	1	-	-	-	2	3
	NH Jacksonville, FL	-	-	-	2	-	-	-	-	-	1	-	-	5	8
	Robins AFB, GA	-	-	-	-	-	-	-	1	1	1	-	-	4	7
	Seymour Johnson AFB, NC	-	-	-	1	-	-	-	-	-	-	1	2	5	9
Shaw AFB, SC	-	-	-	-	-	1	-	2	-	-	4	2	6	15	
Tyndall AFB, FL	-	-	-	-	-	1	-	-	-	-	-	1	1	3	
Region 5	Scott AFB, IL	-	-	-	2	-	-	-	1	-	1	-	-	15	19
	Wright-Patterson AFB, OH	-	-	-	1	-	-	-	-	-	2	-	-	1	4
Region 6	Altus AFB, OK	-	-	-	2	-	-	-	-	2	-	-	2	23	29
	Barksdale AFB, LA	-	-	-	-	-	-	-	-	-	-	-	-	2	2
	Cannon AFB, NM	-	-	-	1	-	-	-	-	-	-	1	-	13	15
	Laughlin AFB, TX	-	-	-	-	-	1	-	-	-	-	-	-	2	3
	Little Rock AFB, AR	-	-	-	-	-	1	-	-	-	-	-	-	8	9
	Sheppard AFB, TX	-	-	2	3	-	-	1	3	1	-	5	2	37	54
	Tinker AFB, OK	-	-	-	1	-	-	-	1	4	1	3	5	17	32
	Vance AFB, OK	-	-	-	1	-	-	-	-	1	-	1	-	25	28
Region 7	Ft Leavenworth, KS	-	-	1	-	-	-	-	-	-	-	-	-	8	10
	McConnell AFB, KS	-	-	-	1	-	-	-	2	2	-	4	1	21	31
	Offutt AFB, NE	-	-	-	2	-	-	-	-	3	-	1	-	24	30
Region 8	Ellsworth AFB, SD	-	-	-	1	-	-	-	1	3	-	-	2	16	23
	FE Warren AFB, WY	-	-	-	-	1	-	-	-	2	-	2	-	14	19
	Hill AFB, UT	-	-	1	1	-	-	1	1	-	-	6	-	28	38
	Malmstrom AFB, MT	-	-	-	-	-	-	-	-	-	-	-	-	1	2
	Minot AFB, ND	-	-	-	-	-	-	-	-	1	-	1	-	2	4
	Peterson AFB, CO	-	-	-	1	-	1	-	-	-	-	1	-	10	13
	USAF Academy, CO	-	-	-	-	-	-	-	-	4	-	1	-	9	14
Region 9	Davis-Monthan AFB, AZ	-	-	-	-	-	1	-	-	-	-	-	-	7	8
	Edwards AFB, CA	-	-	-	-	-	-	-	-	-	-	-	-	4	4
	Luke AFB, AZ	-	-	-	-	-	-	-	-	-	-	-	-	7	7
	Nellis AFB, NV	8	2	2	6	-	3	-	-	7	3	5	3	34	73
	Travis AFB, CA	-	1	-	2	-	1	-	-	3	2	6	3	22	40
	USCG Island Alameda, CA	-	-	-	-	-	-	-	-	-	-	-	-	3	3
	Vandenberg AFB, CA	-	-	-	-	-	-	-	-	-	-	-	-	6	6
Region 10	Fairchild AFB, WA	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	JB Lewis-McChord, WA	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Mt Home AFB, ID	-	-	-	-	-	-	-	-	-	-	-	-	5	5
	NH Bremerton, WA	-	1	1	3	-	1	-	1	10	2	6	5	31	61
Total	8	6	11	48	1	17	2	24	63	28	86	39	653	986	

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

**Monthly EUCOM Respiratory Surveillance Supplemental Report Through
2 January 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 49-52

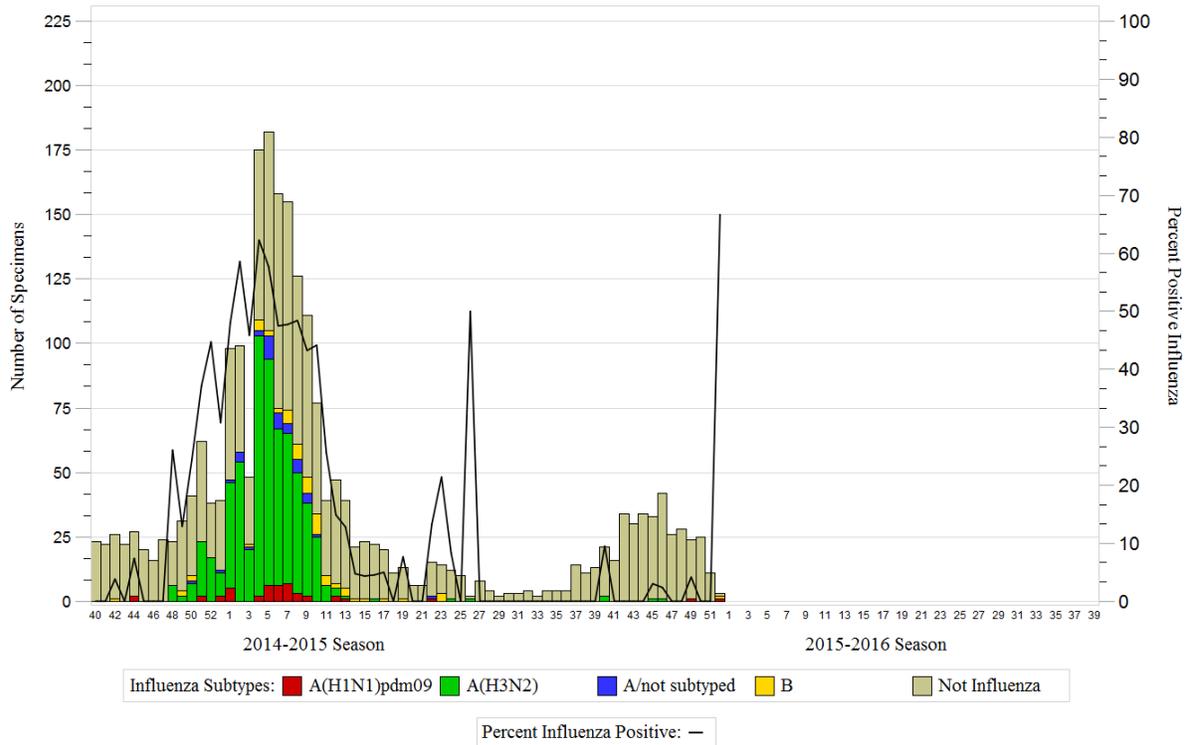
Region		A(H1N1)pdm09	B	Adenovirus	hMN	Parainfluenza	RSV	Rhinovirus/Enterovirus	Para & Rhino/Entero	RSV & Rhino/Entero	No Pathogen	Total
Deployed	Country 6, Location A	-	-	-	-	-	-	-	-	-	4	4
EUCOM	Landstuhl RMC, Germany	-	1	-	-	1	-	5	1	-	9	17
	NAVSTA Rota, Spain	-	-	-	-	1	-	1	-	-	1	3
	NSA Naples, Italy	1	-	-	-	-	-	-	-	-	-	1
	RAF Lakenheath, England	-	-	-	-	-	4	5	1	1	9	20
	Ramstein AB, Germany	-	-	1	1	-	-	1	-	-	5	8
	USAG Stuttgart, Germany	1	-	-	-	-	-	-	-	-	4	5
	Vilseck AHC, Germany	-	-	-	-	1	1	-	2	-	1	5
Total		2	1	1	1	3	5	12	4	1	33	63

Table 5. Cumulative results by region and location for specimens collected during the 2015-2016 surveillance year

Region		A(H1N1)pdm09	A(H3N2)	A(H3N2) & Rhino/Entero	B	Adenovirus	hMN	Parainfluenza	RSV	Rhinovirus/Enterovirus	Adeno & Rhino/Entero	hMN & Rhino/Entero	Para & Rhino/Entero	RSV & Rhino/Entero	No Pathogen	Total
Deployed	Country 6, Location A	-	1	-	-	-	-	-	-	6	-	-	-	-	10	17
EUCOM	Aviano AB, Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Incirlik AB, Turkey	-	-	1	-	-	-	1	-	2	-	-	-	-	3	7
	Landstuhl RMC, Germany	-	-	-	1	-	-	7	-	15	-	-	2	-	45	70
	NAVSTA Rota, Spain	-	-	-	-	-	-	3	1	4	-	-	-	-	3	11
	NSA Naples, Italy	1	-	-	-	-	-	1	-	2	-	-	-	-	10	14
	RAF Lakenheath, England	-	2	-	-	1	2	7	22	34	-	1	3	18	41	131
	Ramstein AB, Germany	-	-	-	-	1	1	2	-	6	-	-	-	-	5	15
	USAG Stuttgart, Germany	1	-	-	-	-	-	3	1	9	-	1	-	-	15	30
	USAG Vicenza, Italy	-	-	-	-	-	-	-	-	3	-	-	-	-	4	7
	Vilseck AHC, Germany	-	-	-	-	-	-	5	2	4	1	-	3	-	9	24
	Total		2	3	1	1	2	3	29	26	85	1	2	8	18	146

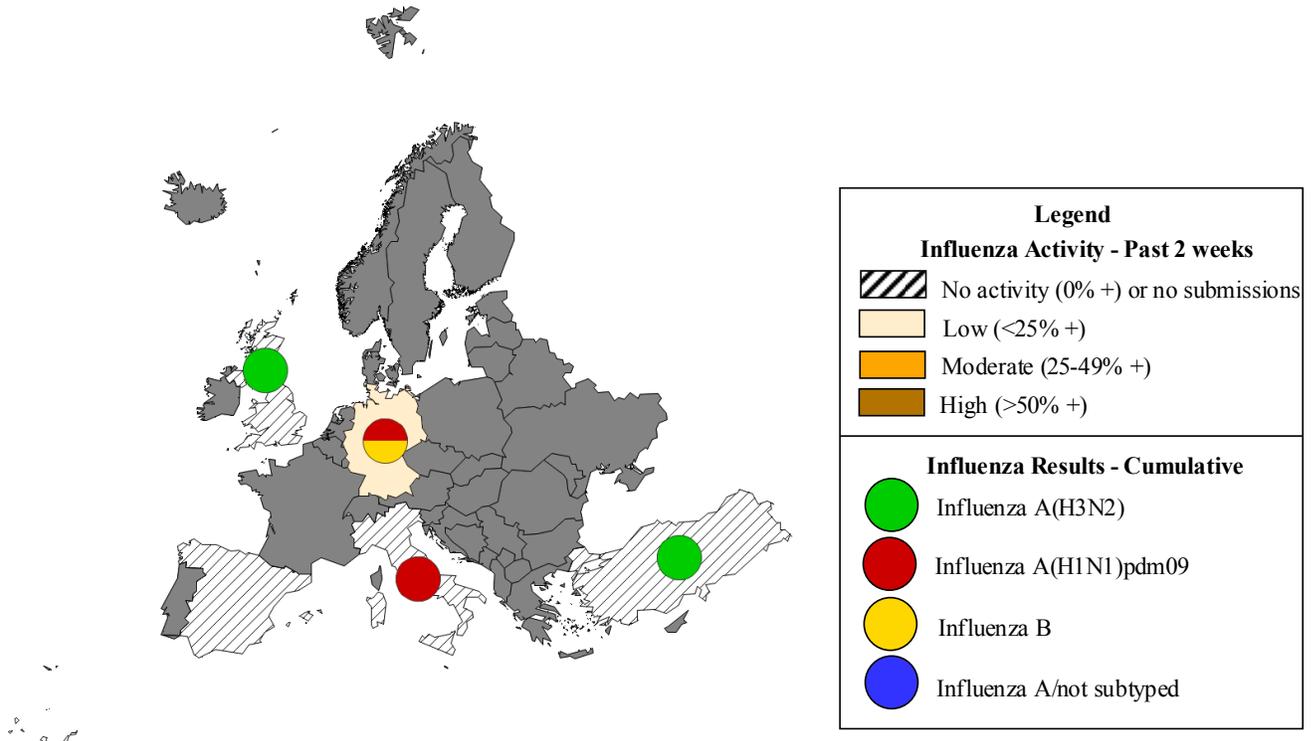
DoD Global, Laboratory-Based, Influenza Surveillance Program

Graph 4. Percent influenza positive by week: 2014-2015 surveillance year and through Week 52 of the 2015-2016 surveillance year



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

Map 4. Influenza subtypes and activity level by country for the 2015-2016 surveillance year through Week 52 (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 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-6 (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 the Division of Global Emerging Infections Surveillance and Response System (GEIS) Operations, a Division of the Armed Forces Health Surveillance Center (AFHSC).

Sentinel Site Surveillance at USAFSAM

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. USAFSAM manages the surveillance program that includes global surveillance among DoD beneficiaries at over 80 sentinel sites (including deployed locations) and many non-sentinel sites (please see map on the left). Unique sentinel sites include three DoD overseas medical research laboratories (AFRIMS, NAMRU-6, USAMRU-K) and the US Army Public Health Command Region South (PHCR-S). These sites collect specimens from local residents in surrounding countries that may not otherwise be covered in existing surveillance efforts.

Since the 2006-2007 season, Landstuhl Regional Medical Center (LRMC) has served EUCOM as a USAFSAM contributing laboratory. The initiative seeks to provide more timely results and efficient transport of specimens.

For an expanded view of this report, visit our website. Also available on the website is a list of previous weekly surveillance reports, program information (including an educational briefing and instruction pamphlets for clinic staff), and an overview of historical data. Please visit the AFHSC/GEIS website for an overview of influenza surveillance at all collaborating organizations.

Errata:

[DoD Global, Laboratory-Based,
Influenza Surveillance Program
https://gumbo2.wpafb.af.mil/
epi-consult/influenza/index.cfm](https://gumbo2.wpafb.af.mil/epi-consult/influenza/index.cfm)

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

For Laboratory Services
937-938-3163; DSN 798-3163



Collaborating Partners

In addition to all participating DoD military sentinel sites, several collaborating partners (described above) may be further understood by reviewing the partner's website.

