



Cumulative Results

Locations	72
Collected	2,234
Tested	2,125

Influenza A 200

A(H1N1)pdm09	167
A(H1N1)pdm09 & Parainfluenza	1
A(H3N2)	31
A & B	1
A/not subtyped	0

Influenza B* 95

Other Respiratory Pathogens 643

Adenovirus	98
<i>Bordetella pertussis</i>	1
<i>Chlamydomydia pneumoniae</i>	1
Coronavirus	68
Human Metapneumovirus	44
<i>Mycoplasma pneumoniae</i>	43
Parainfluenza	77
RSV	94
Rhino/Enterovirus	132
Non-influenza Viral Coinfections	73
Non-influenza Bacterial Coinfections	12
-C. pneumo coinfections (2)	
-C. pneumo & M. pneumo (1)	
-M. pneumo coinfections (6)	
-B. pertussis coinfections (3)	

Lab data are current as of 29 February 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

14 - 27 February 2016 (Surveillance Weeks 7 & 8)

- During 14 - 27 February 2016, a total of 363 specimens were collected and received from 50 locations. Results were finalized for 250 specimens from 46 locations. During Week 7, 51 influenza A(H1N1)pdm09, seven A(H3N2), and 14 influenza B viruses were identified. Twenty-seven influenza A(H1N1)pdm09, six A(H3N2), and 23 influenza B viruses were identified during Week 8.
- Recommended composition of influenza virus vaccines for use in the 2016-2017 northern hemisphere influenza season** - It is recommended that trivalent vaccines for use in the 2016-2017 northern hemisphere influenza season contain:
 - A/California/7/2009 (H1N1)pdm09-like virus;
 - A/Hong Kong/4801/2014 (H3N2)-like virus;
 - B/Brisbane/60/2008-like virus.
- It is recommended that quadrivalent vaccines containing two influenza B viruses contain the above three viruses and a B/Phuket/3073/2013-like virus (WHO Recommendation on Vaccine Composition, cited 25 February 2016).

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DoD Global, Laboratory-Based, Influenza Surveillance Program

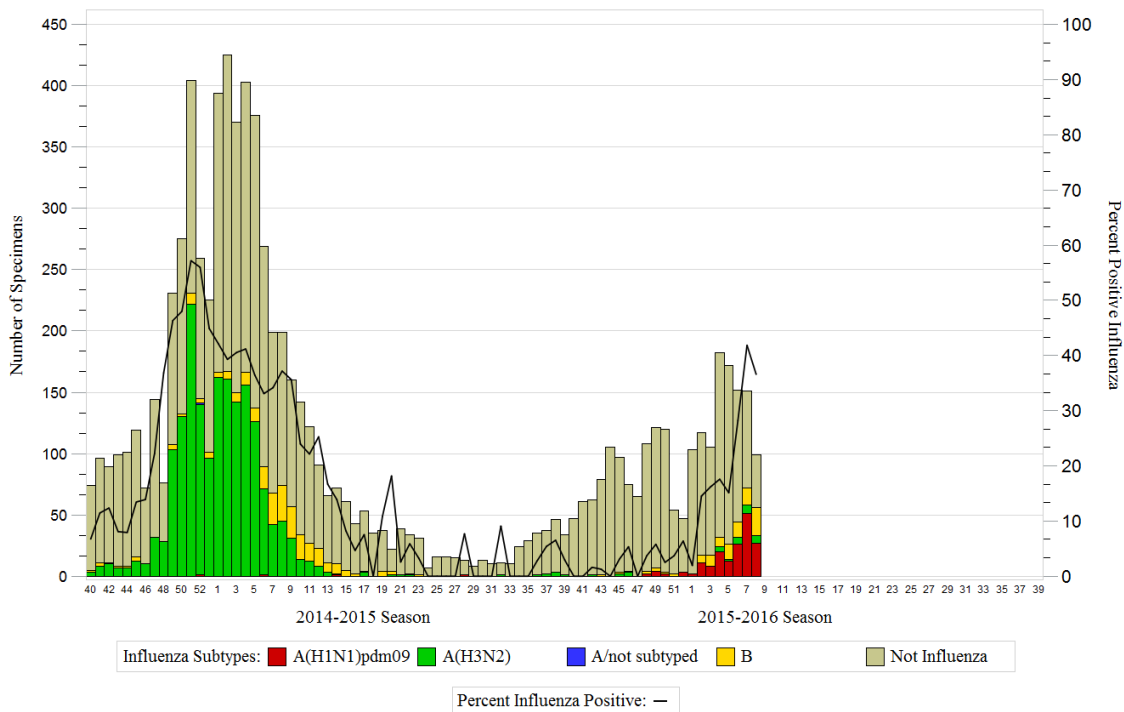
Table 1. Results by region and location for specimens collected during Weeks 7 & 8

Region*		A(H1N1)pdm09	A(H3N2)	B	Adenovirus	Coronavirus	hMPV	M. pneumoniae	Parainfluenza	RSV	Rhinovirus/Enterovirus	Adeno & Corona & RSV	Adeno & RSV	Adeno & RSV & Rhino/Entero	Corona & hMPV	Corona & RSV	hMPV & RSV	RSV & Rhino/Entero	No Pathogen	Total
PACOM	JR Marianas - Andersen AFB, Guam	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
	Yokota AB, Japan	5	-	2	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	9
Region 1	Hanscom AFB, MA	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	2
	NHCNE Newport, RI	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
Region 2	JB McGuire-Dix-Lakehurst, NJ	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2	4
	USMA - West Point, NY	8	1	-	-	2	1	-	-	1	1	-	-	-	-	-	-	-	3	17
Region 3	Dover AFB, DE	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	5	7
	JB Andrews, MD	3	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
	JB Langley-Eustis, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
	NMC Portsmouth, VA	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4
Region 4	Columbus AFB, MS	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Eglin AFB, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Ft Bragg, NC	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
	Ft Campbell, KY	4	-	4	-	1	-	-	-	1	-	-	-	-	-	-	-	-	7	17
	Hurlburt Field, FL	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	4
	JB Charleston (AF), SC	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
	Keesler AFB, MS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Maxwell AFB, AL	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
	Moody AFB, GA	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5
	Robins AFB, GA	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3
	Seymour Johnson AFB, NC	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
	Shaw AFB, SC	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	2	5
	Tyndall AFB, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Region 5	Scott AFB, IL	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Wright-Patterson AFB, OH	3	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	2	8
Region 6	Altus AFB, OK	1	-	-	1	-	2	-	1	3	1	-	-	-	-	1	-	-	4	14
	Cannon AFB, NM	1	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	7
	Laughlin AFB, TX	-	2	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	2	7
	Little Rock AFB, AR	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
	Sheppard AFB, TX	1	-	2	1	1	-	-	-	2	1	-	-	-	-	-	-	-	7	15
	Tinker AFB, OK	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	2	4
	Vance AFB, OK	1	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	1	5
Region 7	McConnell AFB, KS	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
	Offutt AFB, NE	2	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	5
Region 8	Ellsworth AFB, SD	3	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	6
	FE Warren AFB, WY	3	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	4
	Hill AFB, UT	5	-	10	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	16
	Minot AFB, ND	2	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	3
	Peterson AFB, CO	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	1	4
Region 9	Davis-Monthan AFB, AZ	2	2	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	6
	Edwards AFB, CA	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Luke AFB, AZ	5	6	1	-	-	2	-	-	3	-	-	-	-	-	-	1	1	-	19
	Nellis AFB, NV	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	3	5
	Travis AFB, CA	5	-	4	-	-	1	-	-	-	-	-	-	-	-	-	-	1	1	12
Region 10	Fairchild AFB, WA	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	NH Bremerton, WA	-	-	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	3
Total		78	13	37	6	10	14	3	4	15	9	1	1	1	1	1	1	2	53	250

*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 8 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.

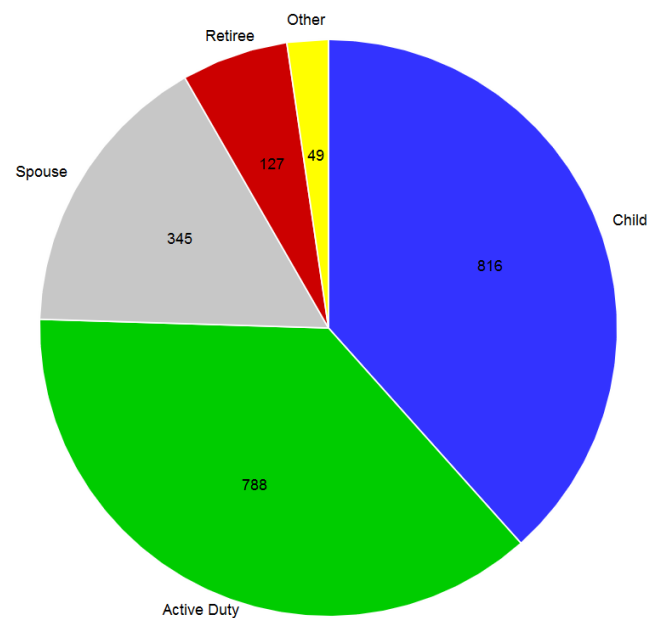
Table 2. ILI by age group for the 2015-2016 surveillance year through Week 8

Age Group	Frequency	Percent
0-5	507	23.86
6-9	132	6.21
10-17	180	8.47
18-24	321	15.11
25-44	707	33.27
45-64	223	10.49
65+	55	2.59

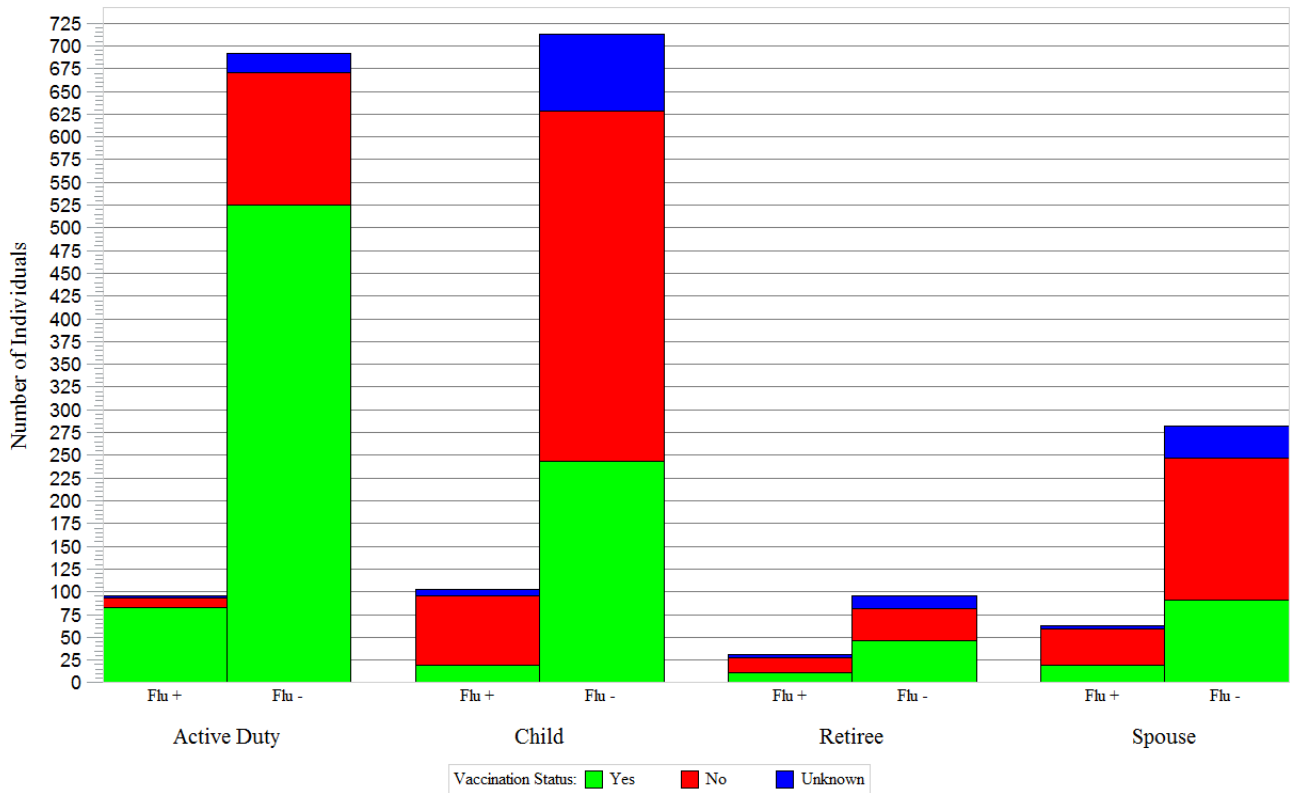
Demographic Summary

Of 2,125 ILI cases, 788 are service members (37.1%), 816 are children (38.4%), 345 are spouses (16.2%), and 176 (8.3%) are retirees and other beneficiaries. The median age of ILI cases with known age (n=2,125) is 23 (range 0, 95).

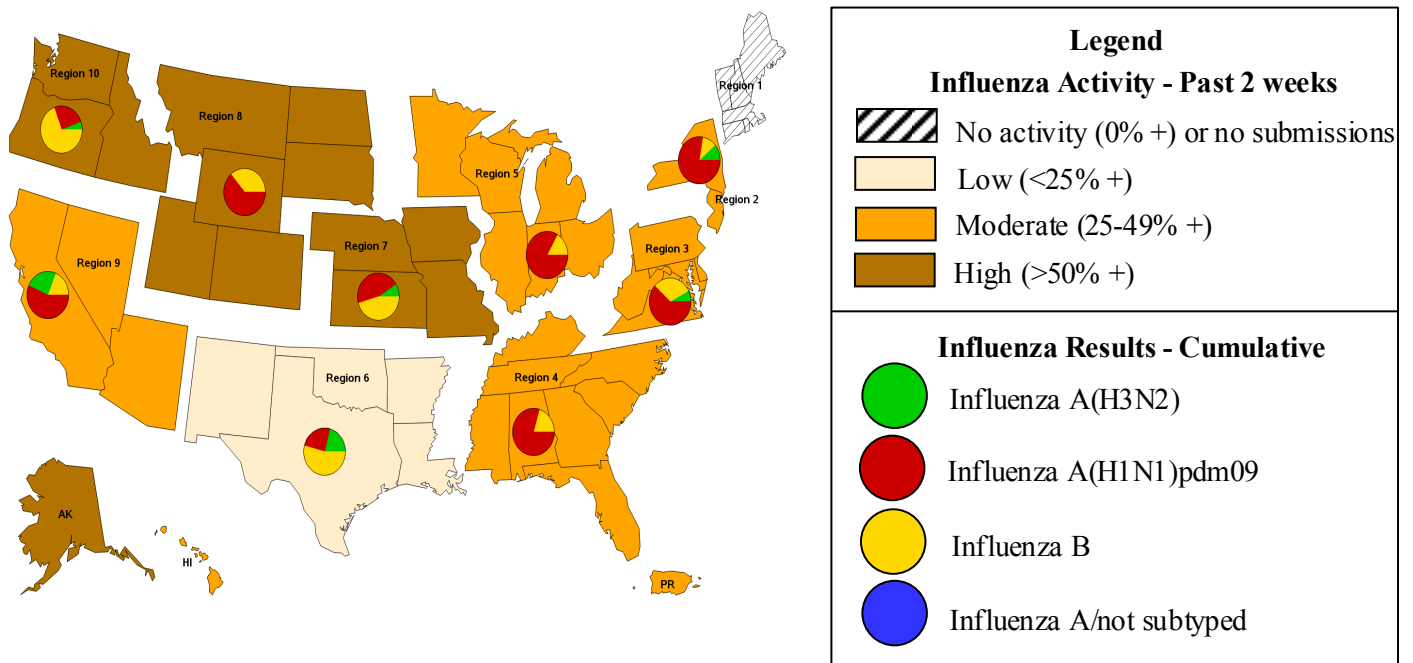
Graph 2. ILI by beneficiary status for the 2015-2016 surveillance year through Week 8



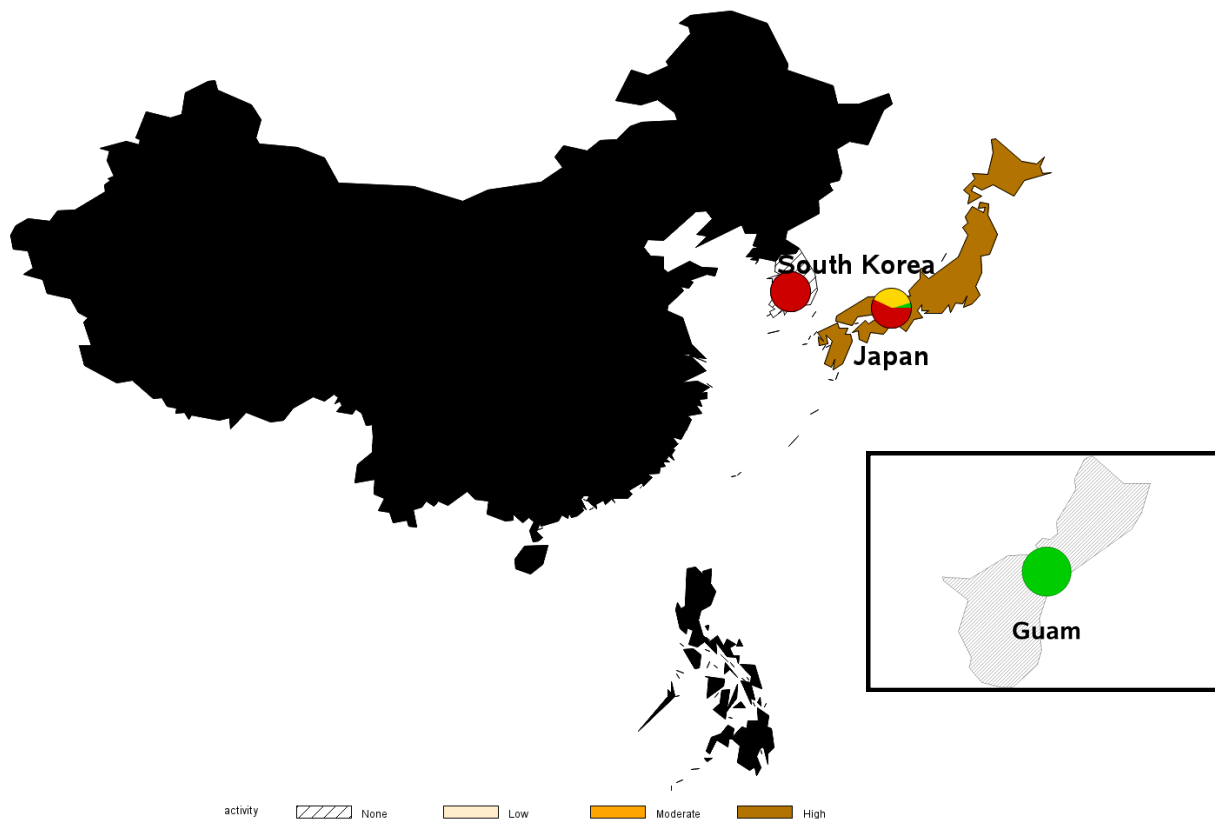
Graph 3. Vaccination status by beneficiary type for the 2015-2016 surveillance year through Week 8



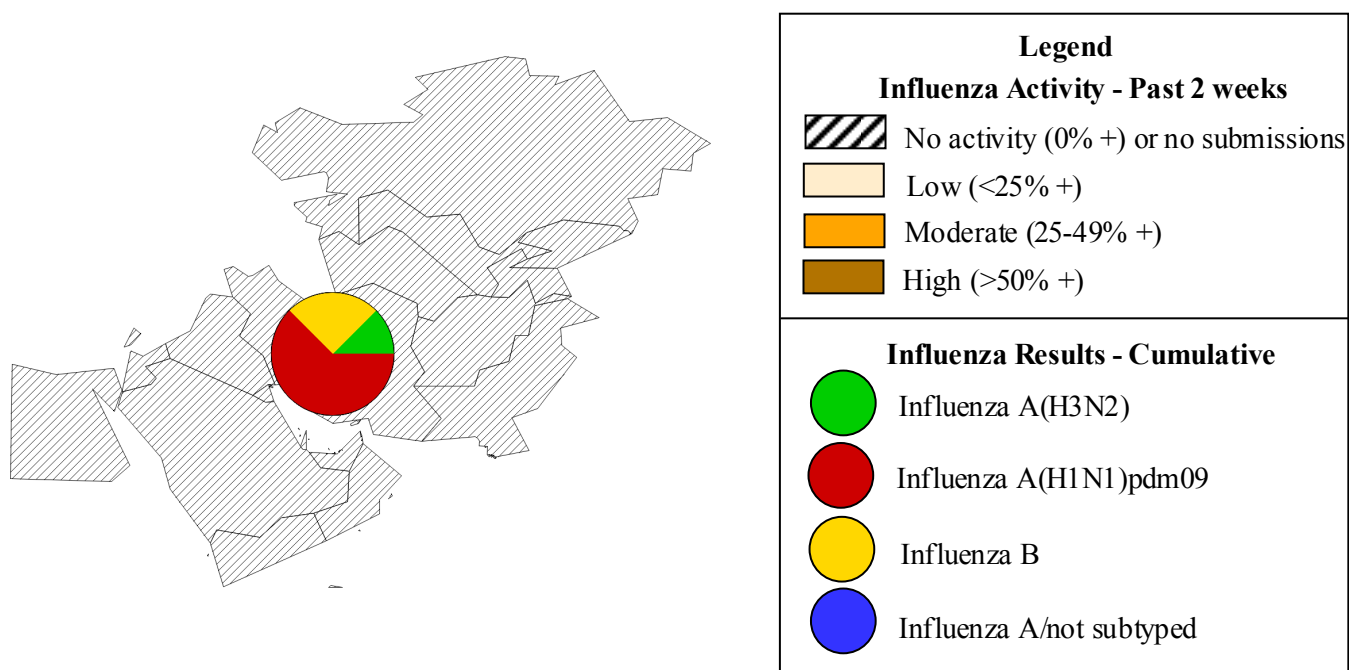
Map 1. Influenza subtypes and activity level by region for the 2015-2016 surveillance year through Week 8



Map 2. Influenza subtypes and activity level by country for the 2015-2016 surveillance year through Week 8 (Pacific)*



Map 3. Influenza subtypes and activity level for CENTCOM for the 2015-2016 surveillance year through Week 8



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

*Due to the receipt of a small number of specimens from these areas that subsequently tested positive for influenza, flu activity level appears inflated.

DoD Global, Laboratory-Based, Influenza Surveillance Program

Laboratory Results—Through Current Surveillance Week 8

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

Region*	Country 2, Location A	A(H1N1)pdm09	A(H3N2)	A(H1N1)pdm09 & Para	Influenza A & B	B	Adenovirus	B. pertussis	C. pneumoniae	Coronavirus	hMPV	M. pneumoniae	Parainfluenza	RSV	Rhinovirus/Enterovirus	Non-Influenza Viral Co-infection	Non-Influenza Bacterial Co-infection	No Pathogen	Total
Deployed		8	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	12
PACOM	CFA Okinawa, Japan	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	6
	Eielson AFB, AK	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5
	JB Elmendorf-Richardson, AK	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	4	5
	JR Marianas - Andersen AFB, Guam	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	4
	Kadena AB, Japan	-	-	-	-	-	-	-	-	2	-	3	-	-	2	-	-	16	23
	Misawa AB, Japan	2	-	-	-	-	-	-	-	-	-	-	-	1	3	-	-	4	10
	Osan AB, South Korea	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	6
	Yokota AB, Japan	10	-	-	-	8	4	-	-	2	-	2	2	-	1	-	-	19	50
Region 1	Hanscom AFB, MA	-	-	-	-	4	-	-	-	-	-	2	1	-	2	-	-	17	26
	NHCNE Newport, RI	-	-	-	-	-	-	-	1	-	-	-	1	1	-	-	-	8	11
	USCG Academy, CT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3
Region 2	Ft Drum, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	3	5
	JB McGuire-Dix-Lakehurst, NJ	2	-	-	-	1	-	-	-	1	3	-	-	5	3	-	-	16	31
	USMA - West Point, NY	11	2	1	-	2	12	-	-	8	6	3	3	7	4	3	2	82	146
Region 3	Dover AFB, DE	2	-	-	-	1	-	1	-	1	-	1	1	-	1	-	-	39	47
	JB Anacostia-Bolling, DC	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	2
	JB Andrews, MD	3	-	-	-	2	2	-	-	-	1	1	-	1	-	-	-	4	14
	JB Langley-Eustis, VA	1	-	-	-	5	-	-	4	2	-	3	8	4	2	-	-	13	42
	NCRM - Walter Reed NMMC, MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
	NMC Portsmouth, VA	2	1	-	-	2	4	-	-	1	-	5	1	2	2	-	1	21	42
Region 4	CGS Mobile, AL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Columbus AFB, MS	1	-	-	-	1	-	-	-	1	-	-	-	1	2	-	-	15	21
	Eglin AFB, FL	2	-	-	-	6	-	-	-	1	-	4	6	5	1	-	-	47	72
	Ft Bragg, NC	1	-	-	-	3	-	-	3	1	1	-	3	1	-	1	-	24	38
	Ft Campbell, KY	4	-	-	-	4	1	-	-	2	2	-	2	1	3	-	-	28	47
	Hurlburt Field, FL	2	-	-	-	-	-	-	-	1	2	-	-	-	2	-	-	18	25
	JB Charleston (AF), SC	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
	Keesler AFB, MS	-	-	-	-	-	-	-	-	-	1	-	-	2	1	-	-	24	28
	MacDill AFB, FL	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	1	4
	Maxwell AFB, AL	8	-	-	-	3	-	-	-	-	1	2	3	1	-	-	-	34	52
	Moody AFB, GA	4	-	-	-	4	7	-	-	1	1	2	2	5	9	5	-	19	59
	NH Beaufort, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	NH Camp Lejeune, NC	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	-	4	7
	NH Jacksonville, FL	-	-	-	-	3	-	-	-	-	-	-	1	-	-	-	-	7	11
	Patrick AFB, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
	Robins AFB, GA	4	-	-	-	-	-	-	-	-	2	1	1	-	-	-	-	11	19
	Seymour Johnson AFB, NC	3	-	-	-	2	-	-	1	-	-	-	-	2	1	1	-	9	19
	Shaw AFB, SC	-	-	-	-	-	-	-	4	-	4	-	-	4	1	1	1	11	25
	Tyndall AFB, FL	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	2
Region 5	Scott AFB, IL	2	-	-	-	1	2	-	-	-	-	1	-	1	-	-	-	16	23
	Wright-Patterson AFB, OH	3	-	-	-	2	-	-	-	-	1	1	1	3	-	-	-	15	26
Region 6	Altus AFB, OK	2	-	-	-	4	-	-	3	3	-	3	7	5	4	-	-	45	76
	Barksdale AFB, LA	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	3	4
	Cannon AFB, NM	1	-	-	-	6	1	-	-	2	-	-	-	2	-	-	-	17	29
	Laughlin AFB, TX	-	5	-	-	2	1	-	-	1	-	-	2	-	-	-	-	6	17
	Little Rock AFB, AR	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	11	13
	Sheppard AFB, TX	2	-	-	-	4	4	-	3	2	3	1	3	7	3	-	-	62	94
	Tinker AFB, OK	-	-	-	-	1	6	-	-	1	-	1	5	7	5	6	1	35	68
	Vance AFB, OK	1	-	-	-	2	-	-	-	2	-	1	-	1	-	-	-	39	46
Region 7	Ft Leavenworth, KS	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	9	11
	McConnell AFB, KS	-	-	-	-	3	1	-	-	1	-	2	2	-	7	-	1	30	47
	Offutt AFB, NE	5	1	-	-	1	2	-	-	1	1	-	3	-	1	-	-	35	50
Region 8	Ellsworth AFB, SD	6	-	-	-	1	-	-	1	3	1	6	-	-	4	-	-	24	46
	EE Warren AFB, WY	3	-	-	-	-	1	-	3	2	1	3	6	2	2	-	-	21	44
	Hill AFB, UT	10	-	-	-	16	1	-	-	2	3	1	-	1	9	-	1	64	108
	Malmstrom AFB, MT	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	2
	Minot AFB, ND	7	-	-	-	-	-	-	1	-	-	1	-	1	-	-	-	8	19
	Peterson AFB, CO	2	-	-	1	-	1	-	-	4	-	-	-	1	4	3	-	25	41
	USAF Academy, CO	-	-	-	-	-	-	-	-	-	-	4	-	1	-	-	-	10	15
Region 9	Davis-Monthan AFB, AZ	3	5	-	-	1	-	-	-	4	-	-	-	-	1	-	-	9	23
	Edwards AFB, CA	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	7	11
	Luke AFB, AZ	9	7	-	-	4	-	-	-	-	2	-	4	-	6	-	-	13	45
	NH Twentynine Palms, CA	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Nellis AFB, NV	15	2	-	-	2	6	-	-	3	-	-	7	4	8	8	-	55	110
	Travis AFB, CA	10	3	-	-	5	2	-	-	2	9	1	5	5	8	5	-	36	91
	USCG Island Alameda, CA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3
	Vandenberg AFB, CA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9
Region 10	Fairchild AFB, WA	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5
	JB Lewis-McChord, WA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
	Mt Home AFB, ID	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	7	8
Total	NH Bremerton, WA	8	1	-	-	24	3	-	-	2	-	2	10	4	7	7	1	40	109
		167	31	1	1	95	98	1	1	68	44	43	77	94	132	73	12	1187	2125

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

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.

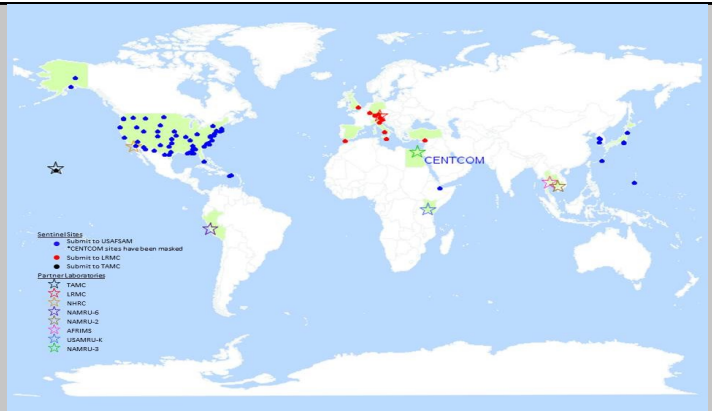
For an expanded view of this report, visit our website. Also available on the website is a list of previous weekly surveillance reports, program information (including an educational briefing and instruction pamphlets for clinic staff), and an overview of historical data. Please visit the AFHSC/GEIS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

Errata:

DoD Global, Laboratory-Based, Influenza Surveillance Program

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.

