

DoD Global, Laboratory-Based, Influenza Surveillance Program



USAF School of Aerospace Medicine

2014 - 2015

Cumulative Results

Locations	87
Collected	5,563
Tested	5,446



Respiratory Highlights

29 March - 11 April 2015 (Surveillance Weeks 13 & 14)

- During 29 March - 11 April 2015, a total of 105 specimens were collected and received from 34 locations. Results were finalized for 49 specimens from 27 locations. During Week 13, the laboratory identified three influenza A(H3N2) and seven influenza B. During Week 14, five influenza B were identified.
- Nationwide, levels of influenza-like illness (ILI) are now below the national baseline for the first time since mid-November 2014. However, five out of 10 U.S. regions continue to experience ILI above their regional baseline. An additional two pediatric deaths were reported this week. Influenza B viruses now account for 86% of all influenza viruses reported. While flu activity persists in parts of the country, the 2014-2015 flu season is winding down ([CDC FluView](#) 10 April 2015 report, cited 14 April 2015).

Influenza A 1,782

A(H1N1)pdm09	2
A(H3N2)	1,775
A & B	1
A & Parainfluenza	1
A(H3N2) & B/Victoria & Adenovirus & Rhino/Enterovirus	1
A(H3N2) & Coronavirus	1
A(H3N2) & Rhino/Enterovirus	1

Influenza B 236

B/Unknown or pending lineage	197
B & Rhino/Enterovirus	1
B/Victoria	12
B/Yamagata	26

Other Respiratory Pathogens 941

Adenovirus	98
<i>Bordetella pertussis</i>	0
<i>Chlamydomydia pneumoniae</i>	2
Coronavirus	84
Human Metapneumovirus	51
<i>Mycoplasma pneumoniae</i>	30
Parainfluenza	137
RSV	205
Rhino/Enterovirus	234
Non-influenza Co-infections	100

Lab data are current as of 13 April 2015. Results are preliminary and may change as more results are received.

Table 1. Results by region and location for specimens collected and finalized during Weeks 13 & 14

Region*		A(H3N2)	B	Adenovirus	Parainfluenza	No Pathogen	Total
Region 1	NHCNE Newport, RI	1	2	-	-	-	3
	USCG Academy, CT	-	1	-	-	-	1
Region 2	Ft Drum, NY	1	1	-	-	3	5
	JB McGuire-Dix-Lakehurst, NJ	-	1	-	-	-	1
	USMA - West Point, NY	-	1	-	1	-	2
Region 4	Eglin AFB, FL	-	-	-	-	1	1
	Keesler AFB, MS	-	-	-	-	1	1
	Maxwell AFB, AL	-	-	-	-	2	2
	Moody AFB, GA	-	-	1	-	-	1
	Robins AFB, GA	-	1	-	-	-	1
	Shaw AFB, SC	-	-	-	-	1	1
Region 5	Scott AFB, IL	-	-	-	-	3	3
	Wright-Patterson AFB, OH	-	-	-	-	1	1
Region 6	Altus AFB, OK	-	-	-	2	1	3
	Laughlin AFB, TX	-	-	-	-	1	1
	Sheppard AFB, TX	-	-	-	-	1	1
	Tinker AFB, OK	-	-	-	-	1	1
Region 7	Offutt AFB, NE	-	1	-	-	1	2
Region 8	Ellsworth AFB, SD	-	-	-	-	2	2
	FE Warren AFB, WY	-	1	-	1	1	3
	Minot AFB, ND	-	-	-	1	-	1
	Peterson AFB, CO	-	2	-	-	1	3
	USAF Academy, CO	1	-	-	-	-	1
Region 9	Nellis AFB, NV	-	1	-	-	-	1
	Travis AFB, CA	-	-	-	-	2	2
	Vandenberg AFB, CA	-	-	-	-	1	1
Region 10	NH Bremerton, WA	-	-	1	1	2	4
Total		3	12	2	6	26	49

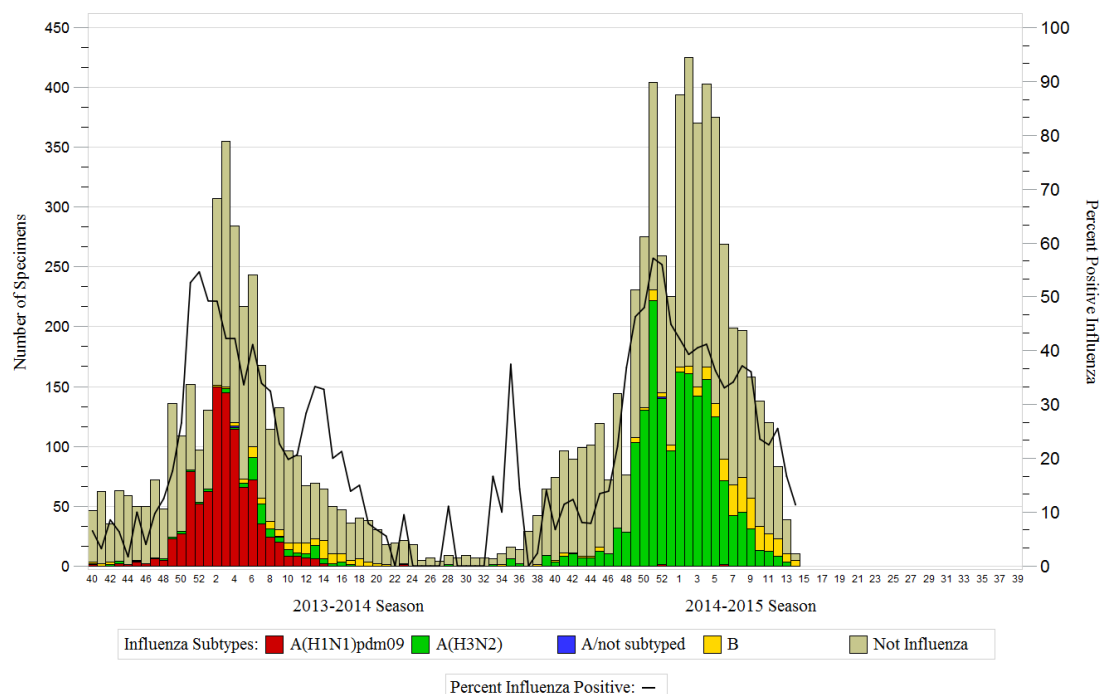
*US Regions are based on Health & Human Services regions. Other locations are defined by COCOM.

Distribution Statement A: Distribution is unlimited. 88ABW-2015-2044, 21 April 2015.

Email: USAFSAM.PHRFlu@us.af.mil, <https://gumbo2.area52.afnoapps.usaf.mil/epi-consult/influenza>

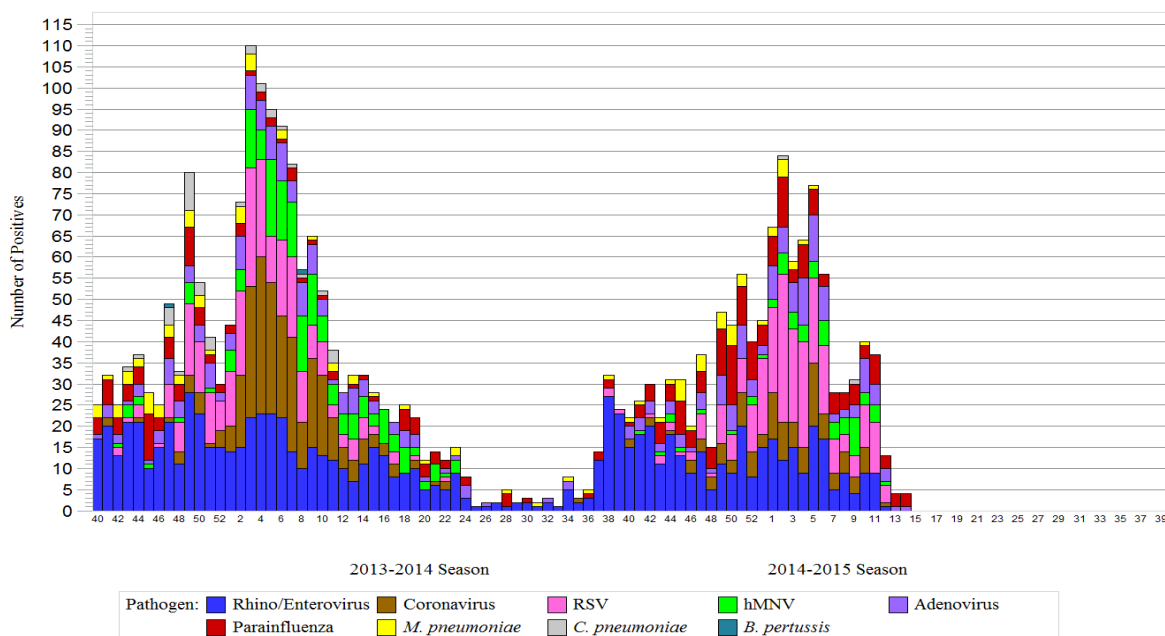
Laboratory Results - Cumulative for Season

Graph 1. Percent influenza positive by week: 2013-2014 surveillance year and through Week 14 of the 2014-2015 surveillance year



Note: One specimen positive for influenza A(H3N2)v has been excluded from the graph during the 2013-2014 season. Additionally, 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.

Graph 2. Other respiratory pathogen results by week: 2013-2014 surveillance year and through Week 14 of the 2014-2015 surveillance year

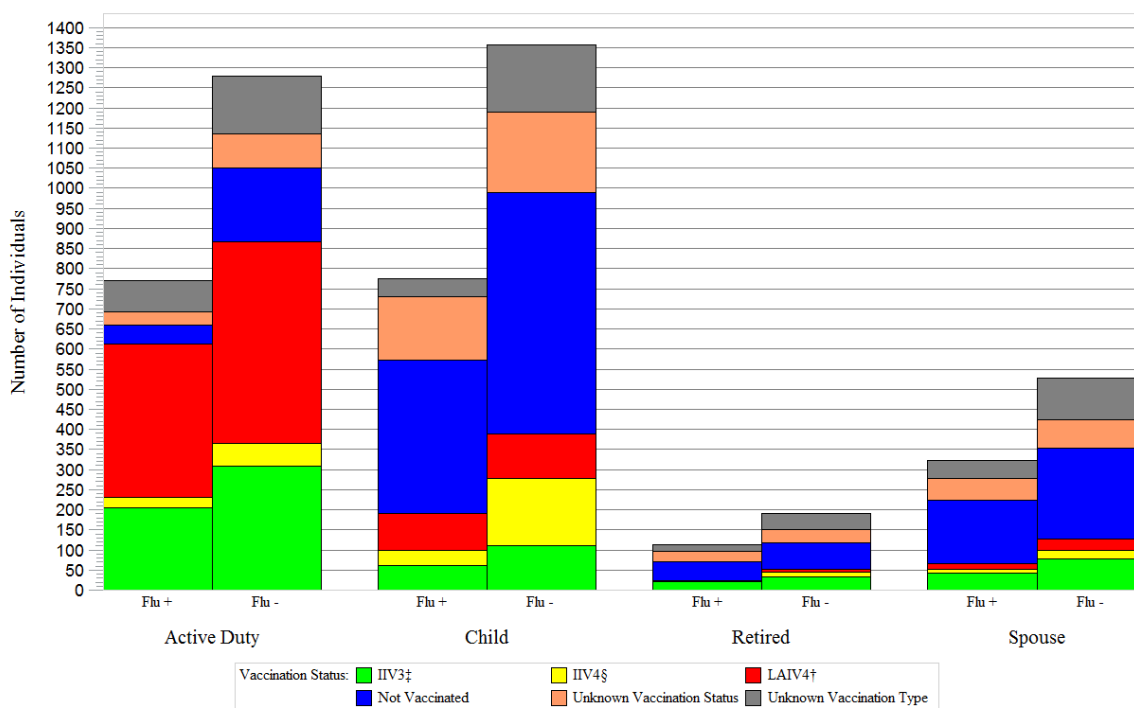


Note: Due to change in protocol between the surveillance years 2013-2014 and 2014-2015, a direct comparison between the years cannot be made.

Distribution Statement A: Distribution is unlimited. 88ABW-2015-2044, 21 April 2015.

Email: USAFSAM.PHRFlu@us.af.mil, <https://gumbo2.area52.afnoapps.usaf.mil/epi-consult/influenza>

Graph 3. Vaccination status by beneficiary type for the 2014-2015 surveillance year through Week 14



‡ Influenza, inactivated vaccine (trivalent)

§ Influenza, inactivated vaccine (quadrivalent)

† Live, attenuated influenza vaccine (quadrivalent)

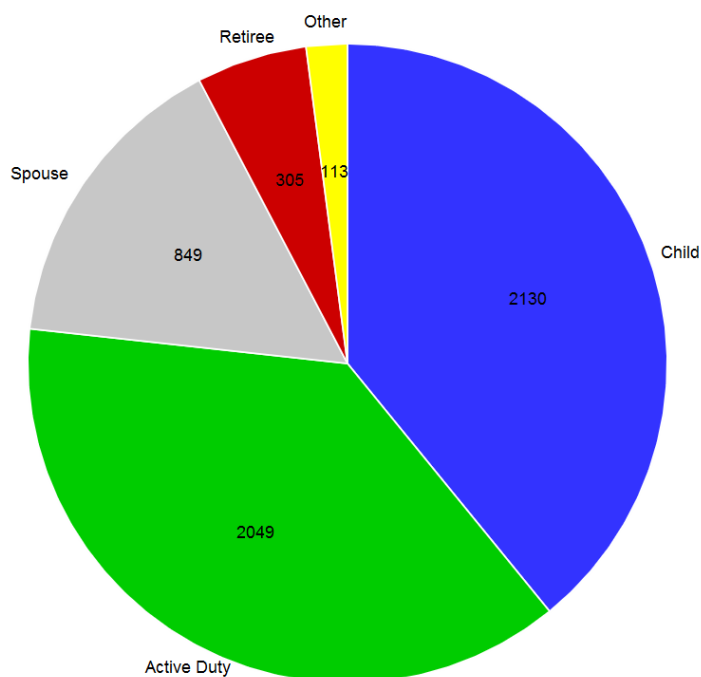
Table 2. ILI by age group for the 2014-2015 surveillance year through Week 14

Age Group	Frequency	Percent
0-5	1175	21.58
6-9	421	7.73
10-17	536	9.84
18-24	769	14.12
25-44	1822	33.46
45-64	555	10.19
65+	157	2.88
Unknown	11	0.2

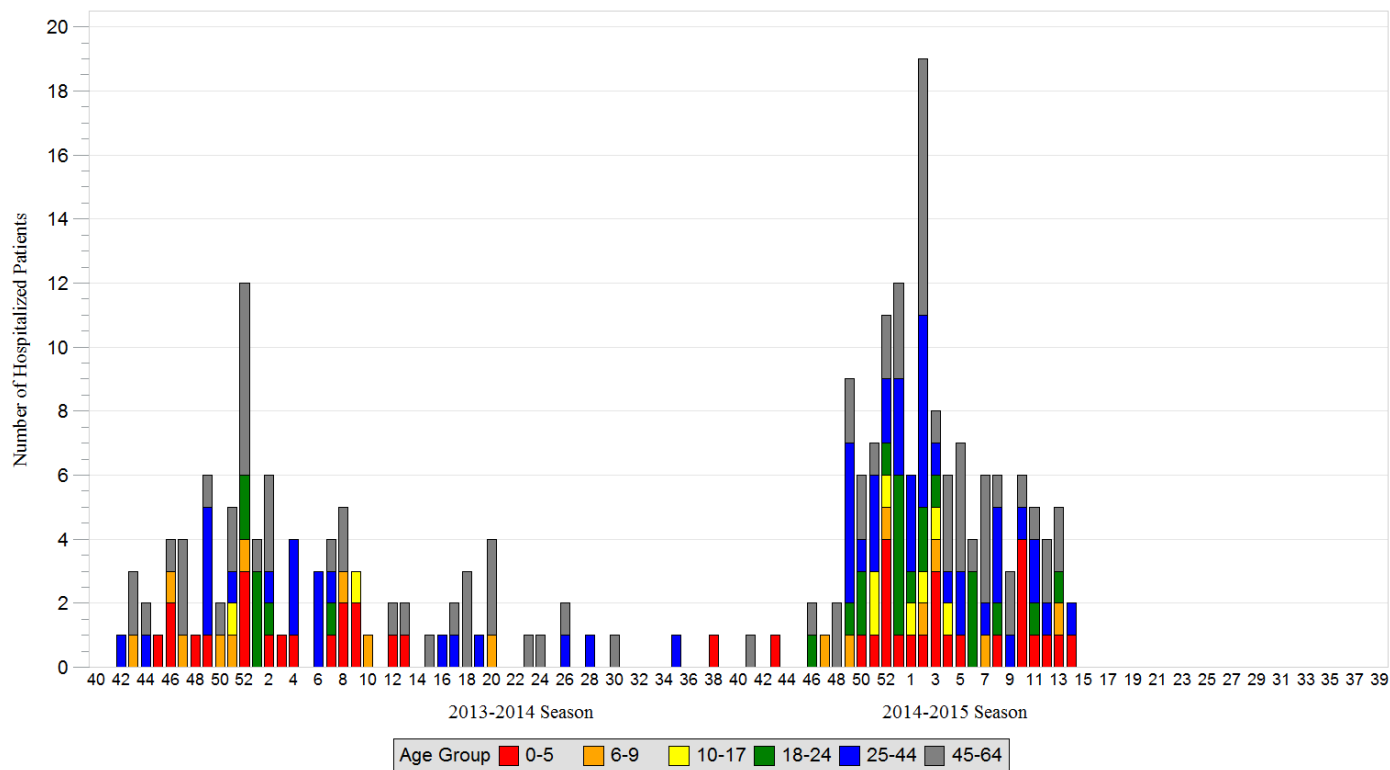
Demographic Summary

Of 5,446 ILI cases, 2,049 are service members (37.6%), 2,130 are children (39.1%), 849 (15.6%) are spouses, and 418 (7.7%) are retirees & other beneficiaries. The median age of ILI cases with known age (n=5,435) is 23 (range 0, 94) and 2,132 (39.2%) of these specimens are from ILI cases less than 18 years of age.

Graph 4. ILI by beneficiary status for the 2014-2015 surveillance year through Week 14



Graph 5. DoD Inpatient Influenza* Cases by Age Group: 2013-2014 and 2014-2015 Season



Laboratory Data: Courtesy of Navy & Marine Corps Public Health Center/EpiData Center Department

*Patient admitted to a Military Treatment Facility with a positive influenza laboratory test (including rapid tests).

Laboratory Results—Through Current Surveillance Week 14

Table 3. Cumulative results by region and location for specimens collected during the 2014-2015 surveillance year

Region*		A(H1N1)pdm09	A(H3N2)	A not subtyped & Para	A(H3N2) & B/Victoria & Adeno & Rhino/Entero	A(H3N2) & Corona	A(H3N2) & Rhino/Entero	Influenza A & B	B	B/Victoria	B/Yamagata	B & Rhino/Entero	Adenovirus	C. pneumoniae	Coronavirus	hMPV	M. pneumoniae	Parainfluenza	RSV	Rhinovirus/Enterovirus	Non-Influenza Co-Infection	No Pathogen	Total	
Deployed	Country 1, Location B	-	26	-	-	-	-	-	1	-	-	-	-	-	4	2	-	-	-	12	3	46	94	
	Country 2, Location A	1	48	-	-	-	1	-	5	-	3	-	-	-	-	-	-	-	-	6	1	27	92	
PACOM	CFA Okinawa, Japan	-	4	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2	-	20	28	
	Camp Zama, Japan	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	
	Eielson AFB, AK	-	6	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-	1	-	8	18	
	JB Elmendorf-Richardson, AK	-	7	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	5	14	
	JR Marianas - Andersen AFB, Guam	-	11	-	-	-	-	-	1	-	4	-	4	-	-	3	-	1	3	5	1	25	58	
	JR Marianas - NH Guam, Guam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	
	Kadena AB, Japan	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	6	12	
	Kunsan AB, South Korea	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	12	
	Misawa AB, Japan	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	8	20	
	Osan AB, South Korea	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	22	
	Tripler AMC, HI	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	
	Yokota AB, Japan	-	80	-	-	-	-	-	-	1	-	1	-	2	-	2	4	-	1	-	4	1	22	118
Region 1	Hanscom AFB, MA	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	-	26	54
	NHCNE Newport, RI	-	16	-	-	-	-	-	3	-	-	-	1	-	-	-	-	-	2	1	2	19	44	
	USCG Academy, CT	-	9	-	-	-	-	-	1	-	-	-	1	-	-	-	1	1	-	2	1	11	27	
Region 2	Ft Drum, NY	-	64	-	-	-	-	-	18	-	2	-	4	-	4	3	1	4	10	17	8	57	192	
	JB McGuire-Dix-Lakehurst, NJ	-	32	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	2	4	1	27	68	
	USMA - West Point, NY	-	93	-	-	-	-	-	9	-	-	-	5	-	9	2	4	7	12	6	5	141	293	
Region 3	CG Base Portsmouth, VA	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	
	Dover AFB, DE	-	21	-	-	-	-	-	1	-	-	-	-	-	1	1	1	1	-	-	-	14	40	
	JB Anacostia-Bolling, DC	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5	
	JB Andrews, MD	-	4	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	2	-	4	12	
	JB Langley-Eustis, VA	-	7	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	1	11	21	
	NCRM - Ft Belvoir CH, VA	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	4	1	4	11	
	NCRM - Walter Reed NMMC, MD	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	3		
	NMC Portsmouth, VA	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2	3	
Region 4	CGS Mobile, AL	-	11	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	2	-	4	18	
	Columbus AFB, MS	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	26	
	Eglin AFB, FL	-	14	-	-	-	-	-	4	-	1	-	2	-	-	-	1	2	6	1	3	45	79	
	Ft Bragg, NC	-	30	-	-	-	-	-	-	-	-	-	2	-	3	2	-	2	7	3	2	36	87	
	Ft Campbell, KY	-	30	-	-	-	-	-	1	1	-	-	5	-	1	1	-	4	2	6	3	37	91	
	Hurlburt Field, FL	-	22	-	-	-	-	-	1	-	-	-	2	-	-	-	1	-	4	7	2	36	75	
	JB Charleston (AF), SC	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	14		
	JB Charleston (Navy), SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	2	5	
	Keesler AFB, MS	-	6	-	-	-	-	-	1	1	-	-	3	-	-	-	-	1	2	1	2	22	39	
	MacDill AFB, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	
	Maxwell AFB, AL	-	31	-	-	-	-	-	12	-	3	-	2	-	2	1	-	1	1	5	-	78	136	
	Moody AFB, GA	-	92	-	-	-	-	-	6	2	2	-	14	-	7	4	1	8	5	17	8	83	249	
	NH Beaufort, SC	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	2	1	14	20	
	NH Camp Lejeune, NC	-	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	9	74		
	NH Jacksonville, FL	-	1	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	4	1	-	8		
	Patrick AFB, FL	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	
	Robins AFB, GA	-	35	-	-	-	-	-	4	-	1	-	1	-	3	1	-	-	-	-	-	40	85	
	Seymour Johnson AFB, NC	-	15	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	3	4	-	13	37	
	Shaw AFB, SC	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	12	21	
	Tyndall AFB, FL	-	14	-	-	-	-	-	-	-	3	-	3	-	1	1	-	-	2	1	1	15	41	
	USCG Base Elizabeth City, NC	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	

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

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Laboratory Results—Through Current Surveillance Week 14

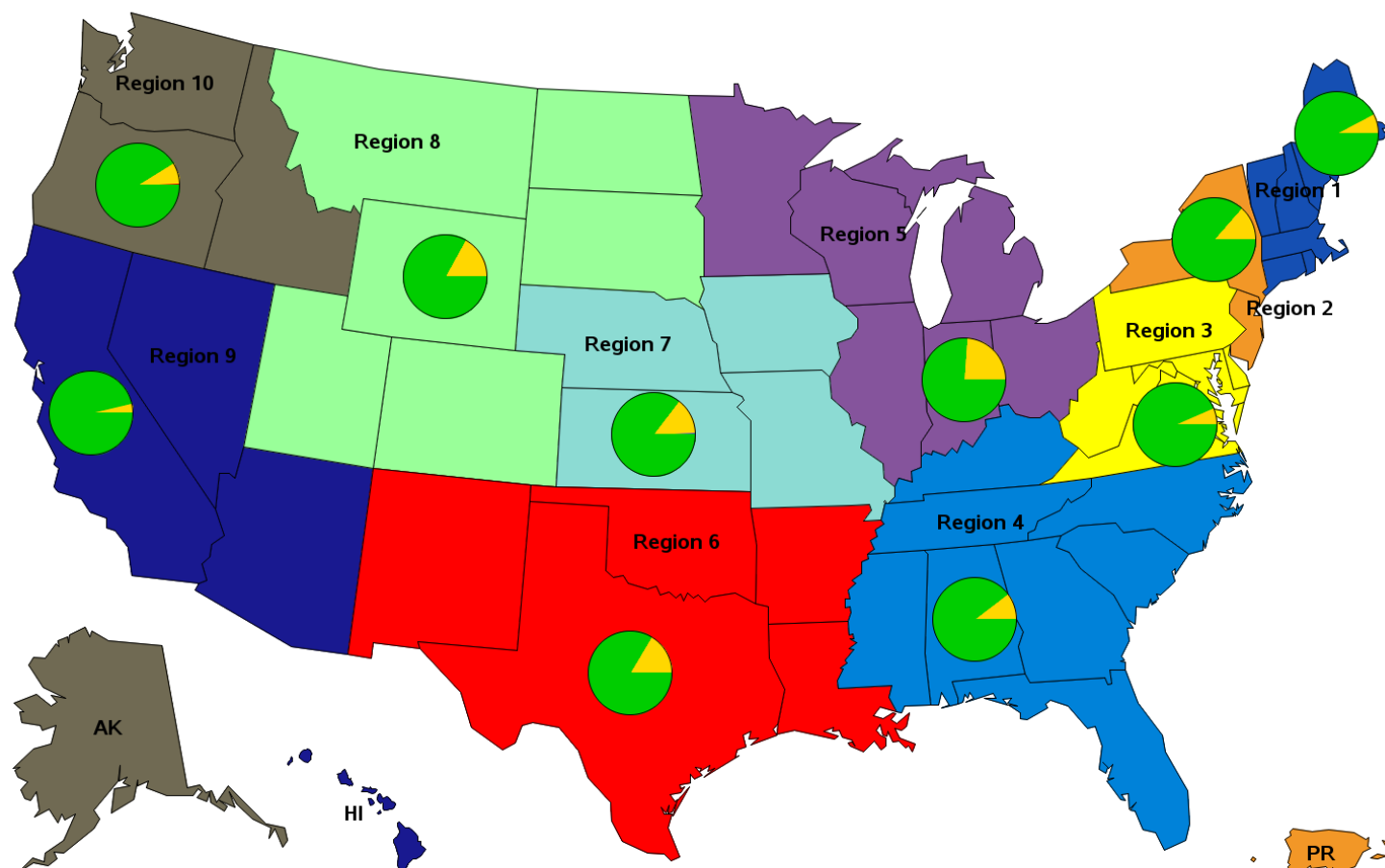
Table 3. Cumulative results by region and location for specimens collected during the 2014-2015 surveillance year (Continued from Page 5)

Region*		A(H1N1)pdm09	A(H3N2)	A/not subtyped & Para	A(H3N2) & B/Victoria & Adeno & Rhino/Entero	A(H3N2) & Corona	A(H3N2) & Rhino/Entero	Influenza A & B	B	B/Victoria	B/Yamagata	B & Rhino/Entero	Adenovirus	C. pneumoniae	Coronavirus	hMPV	M. pneumoniae	Parainfluenza	RSV	Rhinovirus/Enterovirus	Non-Influenza Co-Infection	No Pathogen	Total
Region 5	Scott AFB, IL	-	23	-	-	-	-	-	11	-	-	-	2	-	1	1	-	2	2	2	-	32	76
	Wright-Patterson AFB, OH	-	12	-	-	-	-	-	-	-	-	-	-	-	4	1	-	-	4	7	-	33	61
Region 6	Altus AFB, OK	-	16	-	-	-	-	-	6	-	-	1	2	-	1	-	-	4	7	3	2	112	154
	Barksdale AFB, LA	-	10	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	1	10	23
	Cannon AFB, NM	-	4	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	1	-	-	7	14
	Ft Hood, TX	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
	Holloman AFB, NM	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Laughlin AFB, TX	-	9	-	-	-	-	-	-	-	-	-	1	-	1	-	2	-	2	3	2	15	35
	Little Rock AFB, AR	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	33	52
	SAMMC, TX	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
	Sheppard AFB, TX	-	69	-	-	-	-	-	7	1	-	-	3	-	6	1	1	3	5	4	7	92	199
	Tinker AFB, OK	-	123	-	1	-	-	-	28	4	1	-	2	1	5	7	1	8	22	10	6	183	402
	USCG New Orleans, LA	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Vance AFB, OK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	3
Region 7	Ft Leavenworth, KS	-	5	-	-	-	-	-	-	-	-	-	2	-	1	1	-	-	1	1	-	13	24
	McConnell AFB, KS	-	38	1	-	-	-	1	4	-	-	-	-	-	3	-	-	-	-	4	-	26	77
	Offutt AFB, NE	-	67	-	-	-	-	-	13	-	1	-	3	-	5	-	2	8	1	11	1	130	242
Region 8	Buckley AFB, CO	-	2	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-	1	1	-	9	17
	Ellsworth AFB, SD	-	30	-	-	-	-	-	14	1	2	-	2	-	5	-	3	7	1	3	2	35	105
	FE Warren AFB, WY	-	35	-	-	-	-	-	10	1	-	-	2	-	-	-	-	14	3	3	2	36	106
	Hill AFB, UT	-	34	-	-	-	-	-	-	-	1	-	-	-	-	-	2	3	4	6	2	30	82
	Malmstrom AFB, MT	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-	2	10
	Minot AFB, ND	-	19	-	-	-	-	-	1	-	-	-	2	-	3	1	3	5	11	3	3	30	81
	Peterson AFB, CO	-	50	-	-	-	-	-	5	-	-	-	-	-	-	-	1	3	3	4	1	37	104
	USAF Academy, CO	-	26	-	-	-	-	-	3	-	-	-	-	-	-	-	1	1	-	1	-	26	58
Region 9	Beale AFB, CA	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
	Davis-Monthan AFB, AZ	-	25	-	-	-	-	-	1	-	-	-	-	-	1	2	-	1	1	1	1	43	76
	Edwards AFB, CA	-	8	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2	-	-	-	11	22
	Los Angeles AFB, CA	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Luke AFB, AZ	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	14	28
	Nellis AFB, NV	-	19	-	-	-	-	-	2	-	1	-	1	-	-	-	-	-	2	2	-	22	49
	Travis AFB, CA	-	56	-	-	-	-	-	1	-	-	-	1	-	2	1	2	11	18	12	3	189	296
	USCG Island Alameda, CA	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	8
Region 10	Vandenberg AFB, CA	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	19
	CGS North Bend, OR	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3
	Fairchild AFB, WA	-	22	-	-	-	-	-	1	-	-	-	1	-	2	2	-	1	7	1	1	10	48
	Mt Home AFB, ID	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	-	-	7	21
Total		1	87	-	-	-	-	-	9	-	-	-	14	1	4	6	2	21	38	23	14	315	535

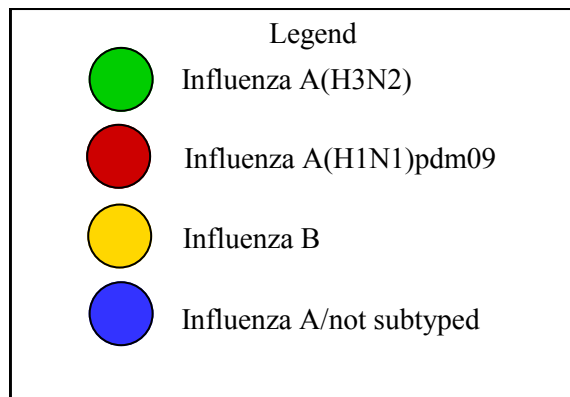
*US Regions are based on Health & Human Services regions. Other locations are defined by COCOM.

DoD Global, Laboratory-Based, Influenza Surveillance Program

Map 1. Percentage of influenza positives by region for the 2014-2015 surveillance year through Week 14

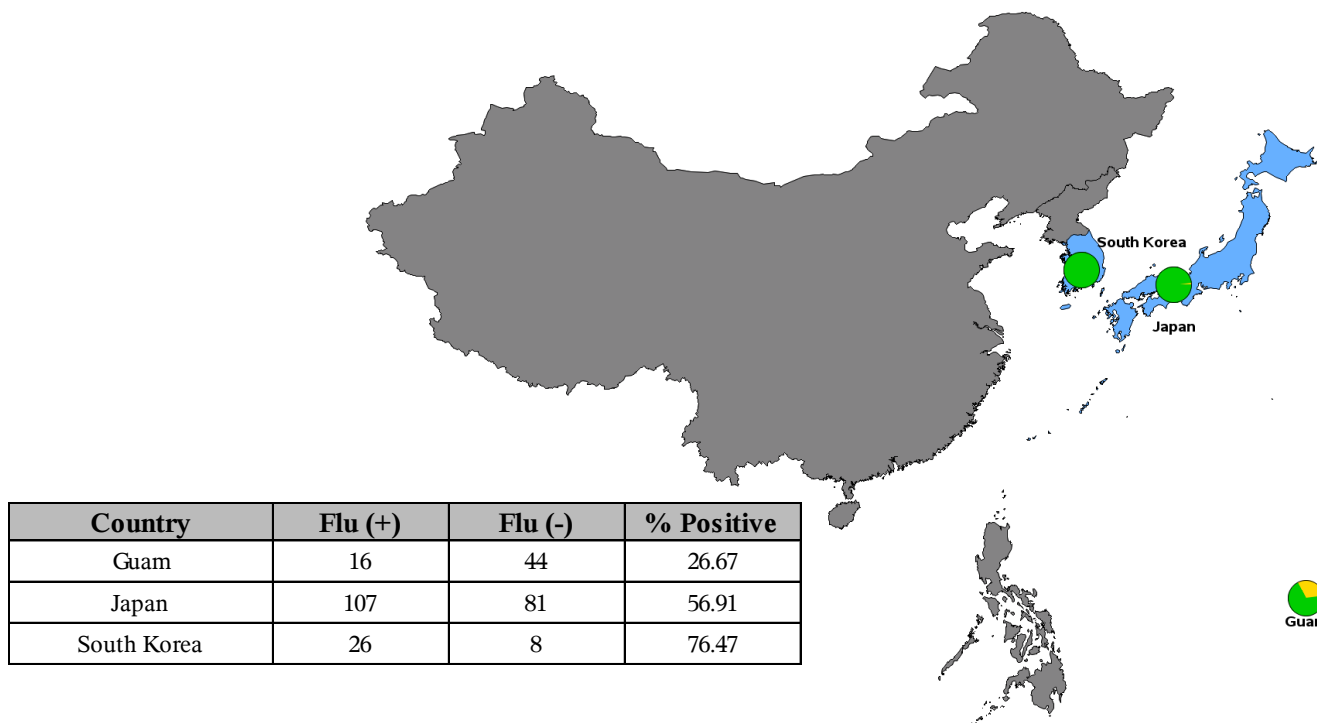


Region	Flu (+)	Flu (-)	% Positive
Region 1	53	74	41.73
Region 2	220	340	39.29
Region 3	45	57	44.12
Region 4	439	691	38.85
Region 5	46	96	32.39
Region 6	306	592	34.08
Region 7	129	215	37.50
Region 8	241	326	42.50
Region 9	156	370	29.66
Region 10	147	499	22.76

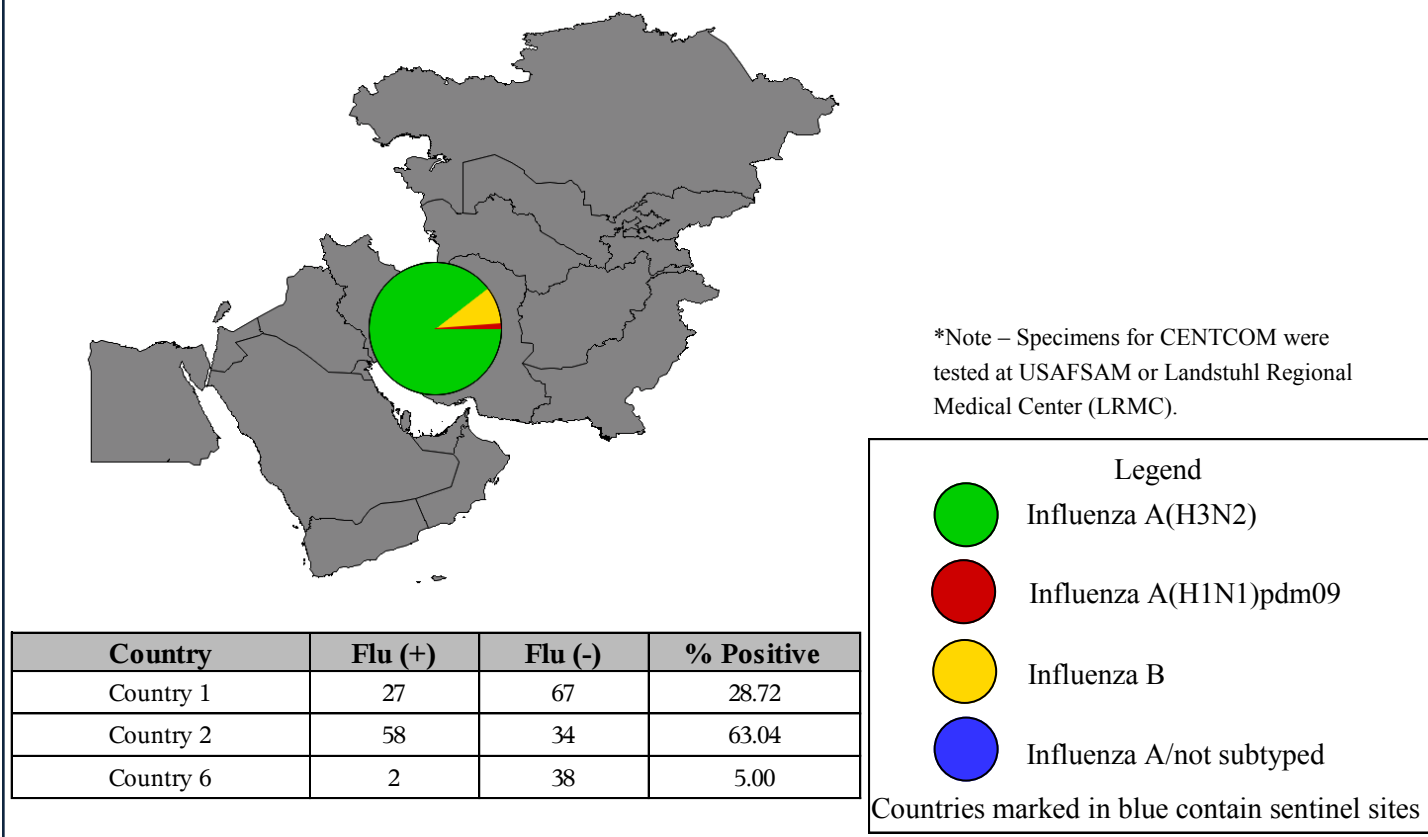


DoD Global, Laboratory-Based, Influenza Surveillance Program

Map 2. Percentage of influenza positives by country for the 2014-2015 surveillance year through Week 14 (Pacific)



Map 3. Percentage of influenza positives by country for the 2014-2015 surveillance year through Week 14 (CENTCOM)



DoD Global Laboratory-Based Influenza Surveillance Program



USAF School of Aerospace Medicine

2014 - 2015

Respiratory Surveillance
2014-2015 Year
(beginning 28 September 2014)



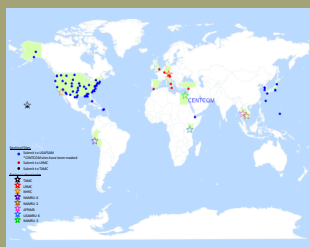
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Contributions to the CDC for National Influenza Surveillance

All sequence data are sent to the CDC and selected original specimens or isolates are sent for further characterization and possible use as influenza vaccine seed viruses. Specimens may also undergo antiviral testing.

[DoD Global Influenza Surveillance Program](https://gumbo2.area52.afnoapps.usaf.mil/epi-consult/influenza)

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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: Previously one specimen was incorrectly classified as Influenza A & Coronavirus. The corrected final result is Coronavirus. We regret the error.

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.



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Email: USAFSAM.PHRFlu@us.af.mil, <https://gumbo2.area52.afnoapps.usaf.mil/epi-consult/influenza>