

DoD Global, Laboratory-Based, Influenza Surveillance Program



USAF School of Aerospace Medicine

2014 - 2015

Cumulative Results

Locations	87
Collected	5,310
Tested	5,178



Respiratory Highlights

8-21 March 2015 (Surveillance Weeks 10 & 11)

- During 8-21 March 2015, a total of 212 specimens were collected and received from 49 locations. Results were finalized for 131 specimens from 38 locations. During Week 10, the laboratory identified 13 influenza A(H3N2) and 18 influenza B. During Week 11, five influenza A(H3N2) and 10 influenza B were identified.
- Influenza A activity is declining with a low to moderate increase in influenza B. Influenza activity peaked during Week 51 with approximately 60% of specimens testing influenza positive. We are currently seeing a downward trend with approximately 20% of our specimens testing positive for influenza (influenza B 13%, influenza A 7%).

Table 1. Results by region and location for specimens collected and finalized during Weeks 10 & 11

Region*		A(H3N2)	B	Adeno	Para	RSV	No Pathogen	Total
PACOM	Eielson AFB, AK	-	-	-	-	-	1	1
	Yokota AB, Japan	1	-	-	-	-	1	2
Region 1	Hanscom AFB, MA	-	-	-	-	-	1	1
	USCG Academy, CT	1	-	-	-	-	1	2
Region 2	Ft Drum, NY	5	6	1	-	-	3	15
	USMA - West Point, NY	1	1	-	-	1	6	9
Region 3	JB Langley-Eustis, VA	-	-	-	-	-	1	1
	NMC Portsmouth, VA	-	1	-	-	-	-	1
Region 4	CGS Mobile, AL	-	1	-	-	-	-	1
	Eglin AFB, FL	-	-	1	1	-	-	2
	Hurlburt Field, FL	-	-	-	-	-	1	1
	Keesler AFB, MS	-	1	-	-	-	1	2
	Maxwell AFB, AL	-	1	-	-	-	3	4
	Moody AFB, GA	1	2	3	1	1	5	13
	Robins AFB, GA	-	-	-	-	-	1	1
	Tyndall AFB, FL	-	-	-	-	-	1	1
Region 5	Scott AFB, IL	-	3	-	-	-	-	3
Region 6	Altus AFB, OK	-	1	-	-	-	4	5
	Cannon AFB, NM	-	1	-	-	-	-	1
	Sheppard AFB, TX	-	-	-	-	-	6	6
	Tinker AFB, OK	1	4	-	-	3	3	11
	Vance AFB, OK	-	-	-	-	-	1	1
Region 7	McConnell AFB, KS	-	-	-	-	-	1	1
	Offutt AFB, NE	-	2	-	-	-	-	2
Region 8	Buckley AFB, CO	-	1	-	-	-	-	1
	Ellsworth AFB, SD	1	1	-	-	1	3	6
	FE Warren AFB, WY	-	1	-	1	-	3	5
	Malmstrom AFB, MT	-	-	-	1	-	-	1
	Minot AFB, ND	2	-	-	1	4	5	12
	Peterson AFB, CO	-	-	-	-	1	2	3
	USAF Academy, CO	-	-	-	-	-	2	2
Region 9	Beale AFB, CA	1	-	-	-	-	-	1
	Davis-Monthan AFB, AZ	2	-	-	-	-	-	2
	Edwards AFB, CA	-	-	-	-	-	1	1
	Travis AFB, CA	1	-	-	-	1	4	6
Region 10	CGS North Bend, OR	1	-	-	-	-	-	1
	Fairchild AFB, WA	-	-	-	-	-	1	1
	NH Bremerton, WA	-	1	-	-	-	1	2
Total		18	28	5	5	12	63	131

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

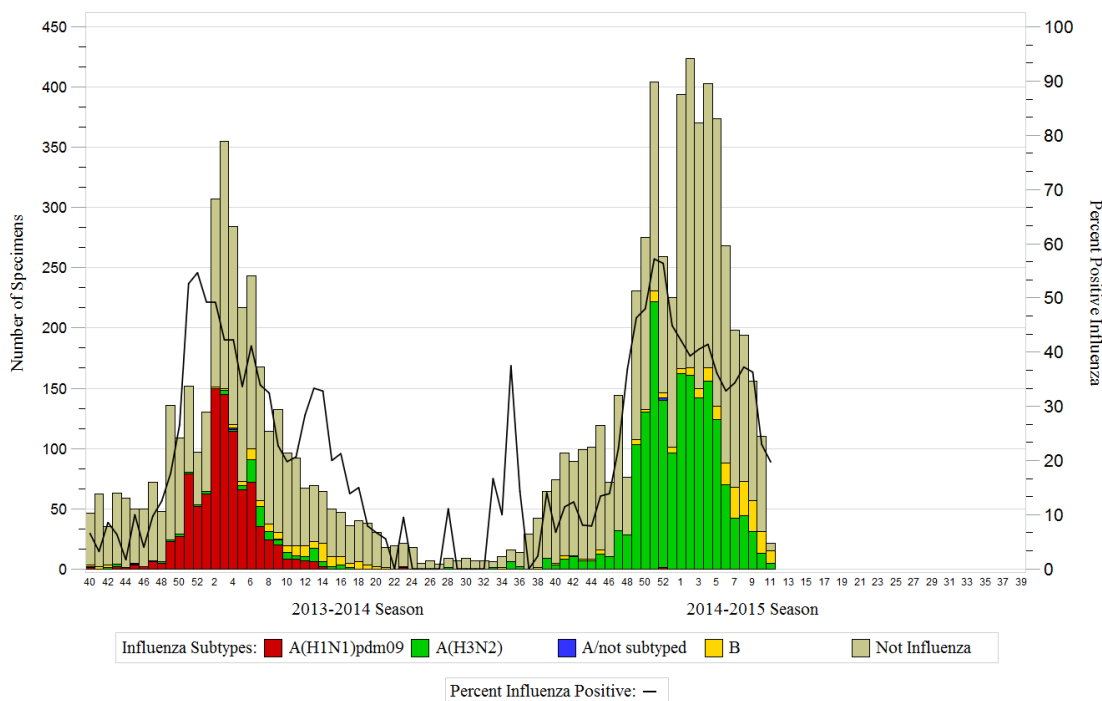
Lab data are current as of 23 March 2015. Results are preliminary and may change as more results are received.

Distribution Statement A: Distribution is unlimited. 88ABW-2015-1620, 31 Mar 2015.

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

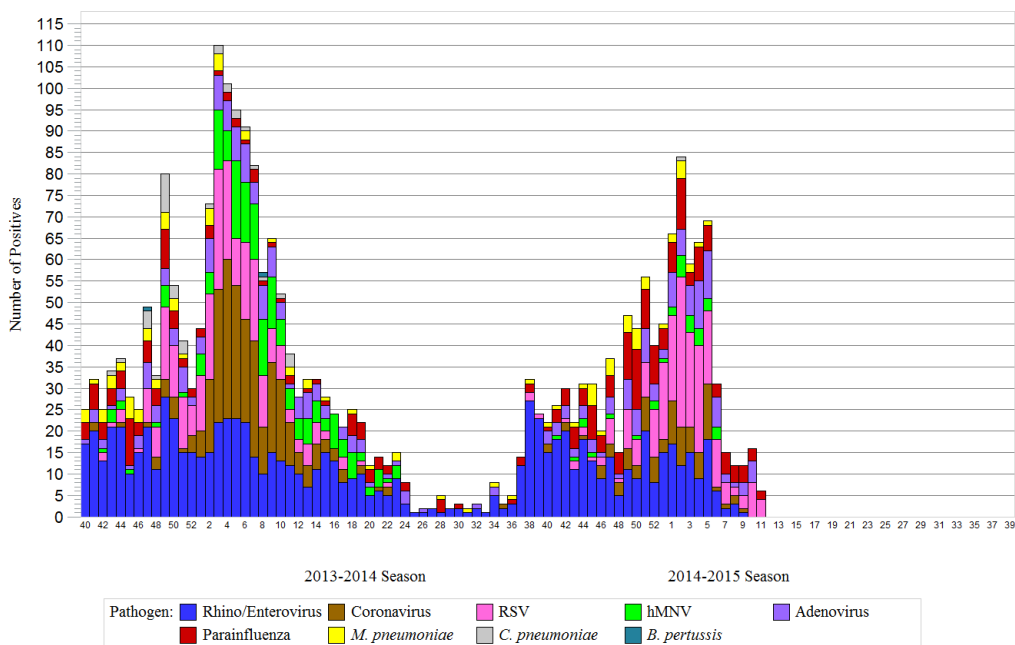
Laboratory Results - Cumulative for Season

Graph 1. Percent influenza positive by week: 2013-2014 surveillance year and through Week 11 of the 2014-2015 surveillance year



Note: One specimen positive for influenza A(H3N2)v during the 2013-2014 season has been excluded from the graph. 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 11 of the 2014-2015 surveillance year

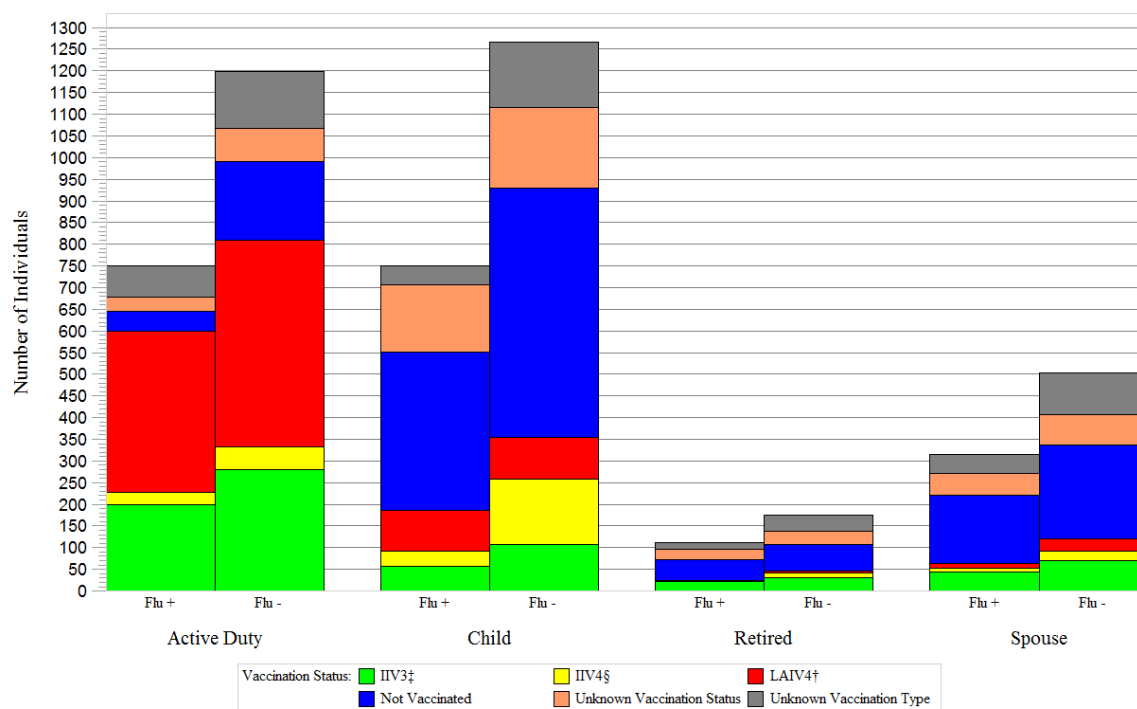


Note: Due to change in protocol between the surveillance years 2013-2014 and 2014-2015, a direct comparison between the years cannot be made.

Distribution Statement A: Distribution is unlimited. 88ABW-2015-1620, 31 Mar 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 11



‡ Influenza, inactivated vaccine (trivalent)

§ Influenza, inactivated vaccine (quadrivalent)

† Live, attenuated influenza vaccine (quadrivalent)

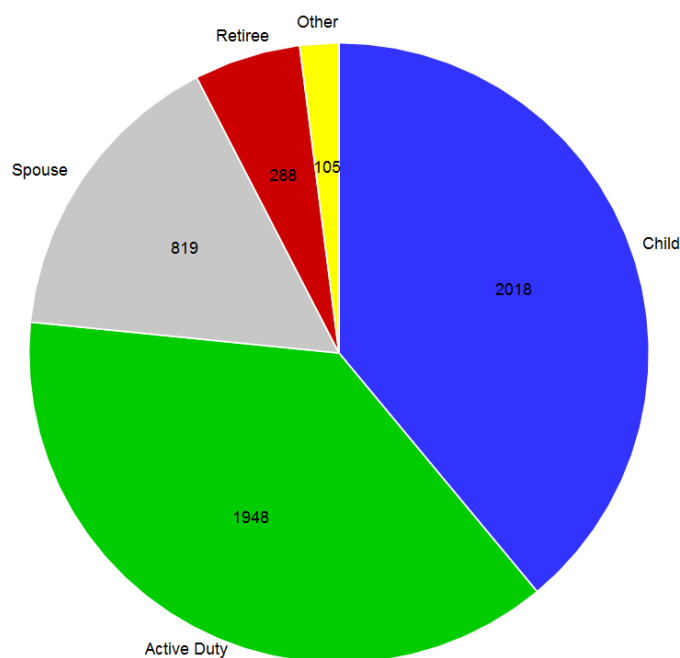
Table 2. ILI by age group for the 2014-2015 surveillance year through Week 11

Age Group	Frequency	Percent
0-5	1105	21.34
6-9	398	7.69
10-17	516	9.97
18-24	733	14.16
25-44	1744	33.68
45-64	527	10.18
65+	144	2.78
Unknown	11	0.21

Demographic Summary

Of 5,178 ILI cases, 1,948 are service members (37.6%), 2,018 are children (39.0%), 819 (15.8%) are spouses, and 393 (7.6%) are retirees & other beneficiaries. The median age of ILI cases with known age (n=5,167) is 23 (range 0, 94) and 2,019 (39.0%) 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 11



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Laboratory Results—Through Current Surveillance Week 11

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 & Corona	A/not subtyped & Para	A(H3N2) & B & 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	-	-	-	-	-	3	2	-	-	-	12	3	47	94	
	Country 2, Location A	-	46	-	-	-	-	1	-	3	-	3	-	-	-	-	-	-	-	-	5	-	22	80	
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	-	5	11	
	Kunsan AB, South Korea	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	12	
	Misawa AB, Japan	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	6	18
	Osan AB, South Korea	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	21	
	Tripler AMC, HI	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
	Yokota AB, Japan	-	79	-	-	-	-	-	-	-	1	-	1	-	2	-	2	-	-	1	-	3	1	26	116
Region 1	Hanscom AFB, MA	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	25	52	
	NHCNE Newport, RI	-	15	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2	1	2	17	38	
	USCG Academy, CT	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	2	1	11	25	
Region 2	Ft Drum, NY	-	55	-	-	-	-	-	-	13	-	2	-	4	-	3	-	1	3	10	11	6	52	160	
	JB McGuire-Dix-Lakehurst, NJ	-	32	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2	3	-	23	61		
	USMA - West Point, NY	-	92	-	-	-	-	-	-	7	-	-	-	4	-	5	1	4	5	8	6	3	145	280	
Region 3	CG Base Portsmouth, VA	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	
	Dover AFB, DE	-	21	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	14	39	
	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	-	3	17	
	Columbus AFB, MS	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	26	
	Eglin AFB, FL	-	14	-	-	-	-	-	-	3	-	1	-	2	-	-	-	1	2	6	1	2	42	74	
	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	20	37	
	MacDill AFB, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	
	Maxwell AFB, AL	-	31	-	-	-	-	-	-	14	-	1	-	2	-	1	-	-	1	1	5	-	74	130	
	Moody AFB, GA	-	92	-	-	-	-	-	-	6	2	2	-	10	-	7	1	1	9	5	13	4	84	236	
	NH Beaufort, SC	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	1	12	17	
	NH Camp Lejeune, NC	-	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	9	74	
	NH Jacksonville, FL	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	4	1	-	8	
	Patrick AFB, FL	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	
	Robins AFB, GA	-	35	-	-	-	-	-	-	3	-	1	-	1	-	2	-	-	-	-	-	-	42	84	
	Seymour Johnson AFB, NC	-	15	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	3	4	-	11	35	
	Shaw AFB, SC	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	9	17	
	Tyndall AFB, FL	-	14	-	-	-	-	-	-	-	-	-	3	-	2	-	-	1	-	2	-	1	15	38	
	USCG Base Elizabeth City, NC	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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Laboratory Results—Through Current Surveillance Week 11

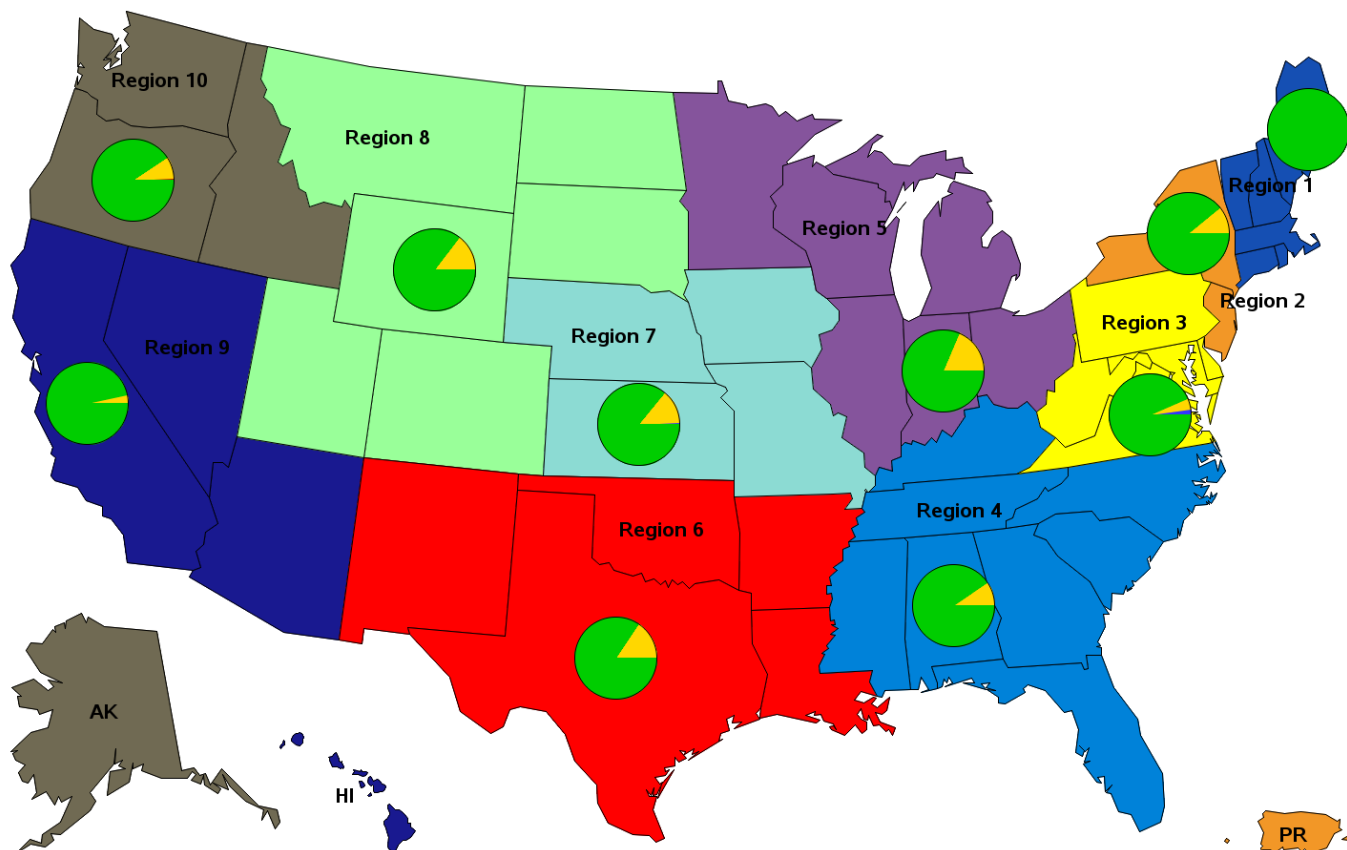
Table 3. Cumulative results by region and location for specimens collected during the 2014-2015 surveillance year
(Continued from Page 4)

Region*		A(H1N1)pdm09	A(H3N2)	A/not subtyped & Corona	A/not subtyped & Para	A(H3N2) & B & 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	-	-	-	-	-	-	8	-	-	-	1	-	1	1	-	2	2	2	-	28	68
	Wright-Patterson AFB, OH	-	12	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	4	7	-	32	59	
Region 6	Altus AFB, OK	-	16	-	-	-	-	-	-	5	-	-	1	2	-	1	-	-	2	6	3	2	103	141
	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	-	-	-	2	-	2	2	2	15	33
	Little Rock AFB, AR	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	32	51	
	SAMMC, TX	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
	Sheppard AFB, TX	-	69	-	-	-	-	-	-	6	-	-	-	3	-	5	1	1	3	5	3	6	92	194
	Tinker AFB, OK	-	123	-	-	1	-	-	-	32	1	-	-	2	-	5	1	1	7	15	9	5	186	388
	USCG New Orleans, LA	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Vance AFB, OK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3
	Region 7	Ft Leavenworth, KS	-	5	-	-	-	-	-	-	-	-	-	-	2	-	1	1	-	-	-	-	-	15
McConnell AFB, KS		-	38	-	1	-	-	-	1	4	-	-	-	-	-	3	-	-	-	-	3	-	27	77
Offutt AFB, NE		-	67	-	-	-	-	-	12	-	-	-	3	-	3	-	2	8	1	10	1	129	236	
Region 8	Buckley AFB, CO	-	2	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-	1	1	-	9	17	
	Ellsworth AFB, SD	-	29	-	-	-	-	-	14	-	1	-	2	-	2	-	2	8	1	3	1	33	96	
	FE Warren AFB, WY	-	35	-	-	-	-	-	9	-	-	-	2	-	-	-	-	11	1	3	1	36	98	
	Hill AFB, UT	-	34	-	-	-	-	-	-	-	1	-	-	-	-	-	2	3	4	6	1	30	81	
	Malmstrom AFB, MT	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-	2	10	
	Minot AFB, ND	-	19	-	-	-	-	-	1	-	-	-	2	-	2	-	3	4	10	2	3	30	76	
	Peterson AFB, CO	-	50	-	-	-	-	-	2	-	-	-	-	-	-	-	1	2	2	3	1	35	96	
	USAF Academy, CO	-	25	-	-	-	-	-	3	-	-	-	-	-	-	-	1	1	-	1	-	25	56	
Region 9	Beale AFB, CA	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
	Davis-Monthan AFB, AZ	-	25	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	1	1	1	43	74	
	Edwards AFB, CA	-	7	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2	-	-	-	10	20	
	Los Angeles AFB, CA	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
	Luke AFB, AZ	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	14	27	
	Nellis AFB, NV	-	19	-	-	-	-	-	2	-	-	-	1	-	-	-	-	-	2	2	-	20	46	
	Travis AFB, CA	-	54	-	-	-	-	-	1	-	-	-	1	-	1	-	2	11	16	12	3	176	277	
	USCG Island Alameda, CA	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	8	
	Vandenberg AFB, CA	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	17	
Region 10	CGS North Bend, OR	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	
	Fairchild AFB, WA	-	22	-	-	-	-	-	1	-	-	-	1	-	1	-	-	1	7	-	1	14	48	
	Mt Home AFB, ID	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	7	20	
	NH Bremerton, WA	1	87	-	-	-	-	-	10	-	-	-	12	1	3	5	2	19	36	19	14	294	503	
Total		1	1755	1	1	1	1	1	176	6	20	1	88	1	63	24	29	125	183	205	83	2412	5178	

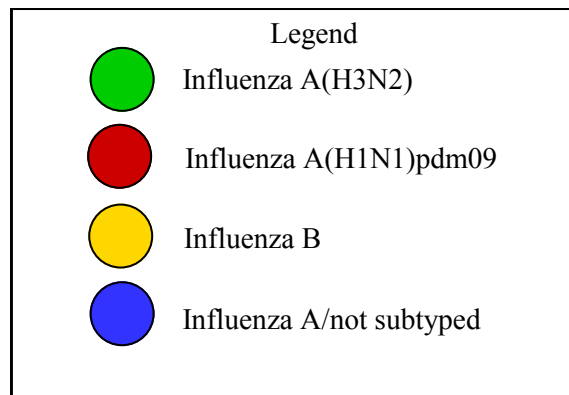
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Map 1. Percentage of influenza positives by region for the 2014-2015 surveillance year through Week 11

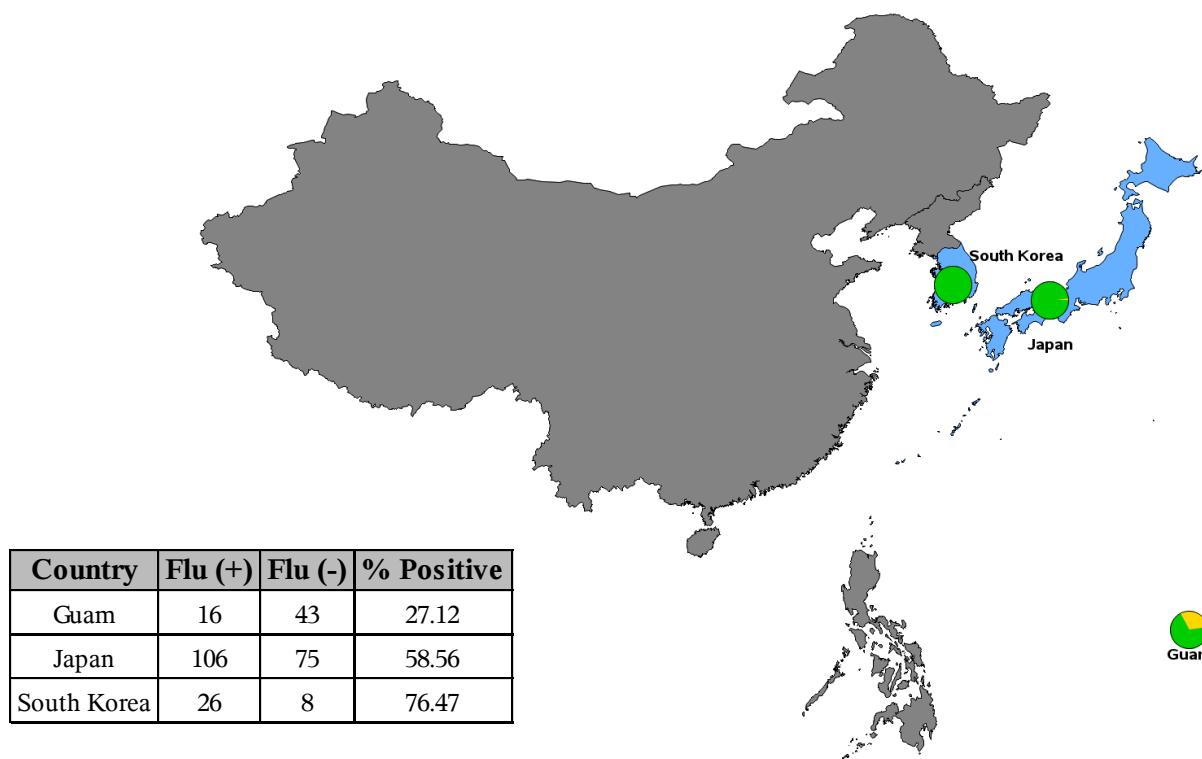


Region	Flu (+)	Flu (-)	% Positive
Region 1	48	69	41.03
Region 2	202	316	39
Region 3	45	54	45.45
Region 4	436	658	39.85
Region 5	43	88	32.82
Region 6	303	562	35.03
Region 7	127	211	37.57
Region 8	232	304	43.28
Region 9	151	347	30.32
Region 10	148	468	24.03

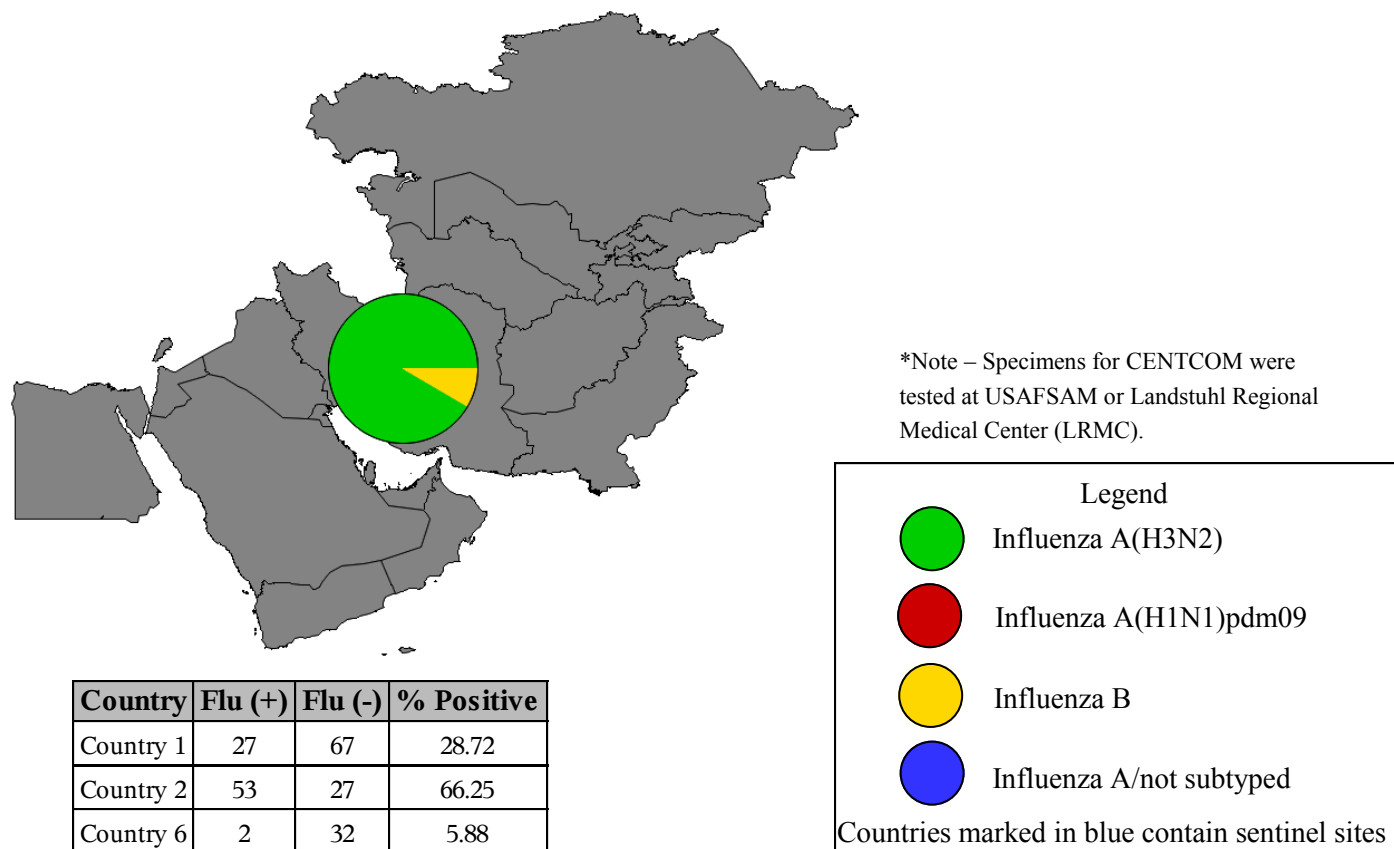


DoD Global, Laboratory-Based, Influenza Surveillance Program

Map 2. Percentage of influenza positives by country for the 2014-2015 surveillance year through Week 11 (Pacific)



Map 3. Percentage of influenza positives by country for the 2014-2015 surveillance year through Week 11 (CENTCOM)



DoD Global Laboratory-Based Influenza Surveillance Program



USAF School of Aerospace Medicine

2014 - 2015

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



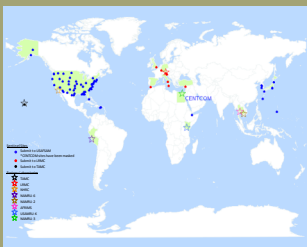
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Contributions to the CDC for National Influenza Surveillance

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:

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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