

DoD Global, Laboratory-Based, Influenza Surveillance Program



USAF School of Aerospace Medicine

2014 - 2015

Cumulative Results

Locations	77
Collected	3,284
Tested	2,865



Respiratory Highlights

11 - 24 January 2015 (Surveillance Weeks 2 & 3)

- During 11 - 24 January 2015, a total of 611 specimens were collected and received from 60 locations. Results were finalized for 248 specimens from 50 locations. During Week 2, the laboratory identified 141 influenza A(H3N2), one influenza A/not subtyped and four influenza B. During Week 3, 28 influenza A(H3N2), one influenza A/not subtyped and two influenza B were identified. See Table 1 below for results of other respiratory viruses identified during Weeks 2 & 3.
- The Public Health Agency of Canada (PHAC) notified the USG on 26 January 2015, of its first human case of Avian Influenza A(H7N9). This is the first documented case of H7N9 infection in a human in North America. More information on this case can be found on the PHAC website: <http://www.phac-aspc.gc.ca/phn-asp/2013/h7n9-0403-eng.php>

Table 1. Results by region and location for specimens collected and finalized during Weeks 2 & 3

Region*	A(H3N2)	A/not subtyped	B	Adenovirus	Parainfluenza	RSV	No Pathogen	Total
PACOM	Kadena AB, Japan	3	-	-	-	-	-	3
	Kunsan AB, South Korea	1	-	-	-	-	-	1
	Misawa AB, Japan	4	-	-	-	-	-	4
	Osan AB, South Korea	1	-	-	-	-	-	1
	Yokota AB, Japan	6	1	-	-	-	-	7
Region 1	Hanscom AFB, MA	3	-	-	-	-	2	5
	NHCNE Newport, RI	7	-	-	-	-	1	8
	USCG Academy, CT	-	-	-	-	-	2	2
Region 2	Ft Drum, NY	7	-	-	-	1	-	8
	JB McGuire-Dix-Lakehurst, NJ	15	-	-	-	-	4	19
	USMA - West Point, NY	14	1	-	1	3	2	21
Region 3	JB Anacostia-Bolling, DC	2	-	-	-	-	-	2
Region 4	Columbus AFB, MS	2	-	-	-	-	-	2
	Eglin AFB, FL	4	-	-	-	-	-	4
	Ft Bragg, NC	7	-	-	-	-	6	13
	Ft Campbell, KY	1	-	1	-	-	1	3
	Hurlburt Field, FL	-	-	1	-	1	-	2
	JB Charleston (AF), SC	1	-	-	-	-	-	1
	Keesler AFB, MS	-	-	-	-	-	2	2
	Maxwell AFB, AL	2	-	-	-	-	-	2
	Moody AFB, GA	1	-	-	-	-	-	1
	NH Beaufort, SC	-	-	-	-	-	1	1
	NH Camp Lejeune, NC	3	-	-	-	-	-	3
	Robins AFB, GA	4	-	-	-	-	5	9
	Seymour Johnson AFB, NC	1	-	-	-	1	1	3
Region 5	Scott AFB, IL	-	-	-	1	-	-	1
Region 6	Altus AFB, OK	-	-	-	-	1	-	1
	Cannon AFB, NM	1	-	-	-	-	-	1
	Little Rock AFB, AR	5	-	-	-	-	-	5
	Sheppard AFB, TX	2	-	-	1	-	2	5
	Tinker AFB, OK	12	-	-	-	1	2	15
Region 7	McConnell AFB, KS	3	-	-	-	-	2	5
	Offutt AFB, NE	6	-	-	-	-	-	6
Region 8	Ellsworth AFB, SD	1	-	2	-	1	-	5
	EE Warren AFB, WY	6	-	-	1	1	1	9
	Hill AFB, UT	2	-	-	-	-	1	3
	Malmstrom AFB, MT	-	-	-	1	-	-	1
	Minot AFB, ND	1	-	-	1	1	-	3
	Peterson AFB, CO	2	-	-	-	-	-	2
	USAF Academy, CO	2	-	-	-	-	2	4
	Davis-Monthan AFB, AZ	7	-	-	-	-	-	7
Region 9	Edwards AFB, CA	1	-	-	1	-	1	3
	Luke AFB, AZ	1	-	-	-	-	-	1
	Nellis AFB, NV	3	-	1	-	-	-	4
	Travis AFB, CA	9	-	-	-	1	2	12
	USCG Island Alameda, CA	2	-	-	-	-	-	2
	Fairchild AFB, WA	2	-	-	1	-	1	4
	Mt Home AFB, ID	1	-	-	-	-	-	1
Region 10	NH Bremerton, WA	11	-	1	-	-	5	20
		169	2	6	3	12	8	248

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

Other Respiratory Pathogens

Adenovirus	42
<i>Bordetella Pertussis</i>	0
<i>Chlamydomphila pneumoniae</i>	0
Coronavirus	26
Human Metapneumovirus	9
<i>Mycoplasma pneumoniae</i>	23
Parainfluenza	93
RSV	64
Rhino/Enterovirus	132
Non-influenza Co-infections	43

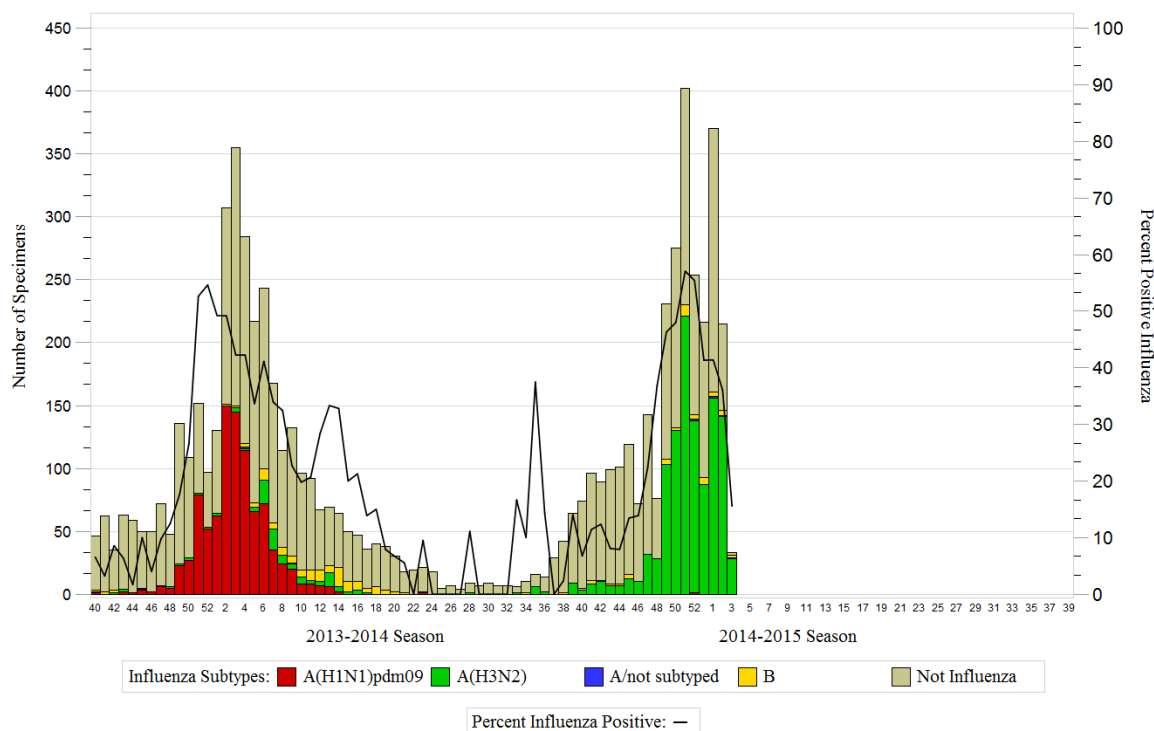
Lab data are current as of 26 January 2015. Results are preliminary and may change as more results are received.

Distribution Statement A: Distribution is unlimited. 88ABW-2015-0355, 29 January 2015.

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

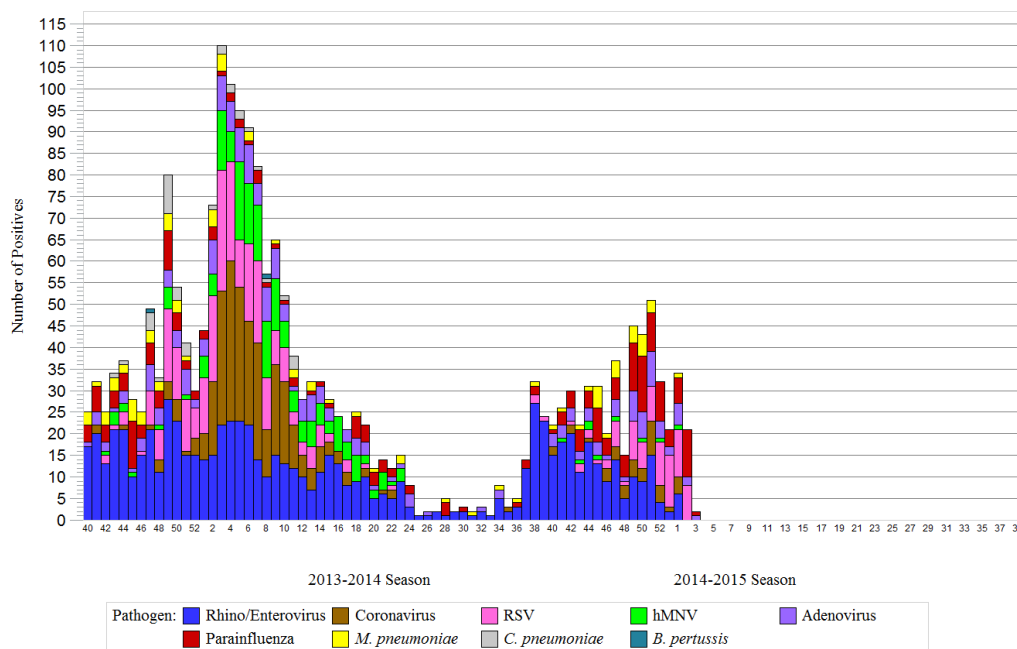
Laboratory Results - Cumulative for Season

Graph 1. Percent influenza positive by week: 2013-2014 surveillance year and through Week 3 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. Specimens 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 3 of the 2014-2015 surveillance year

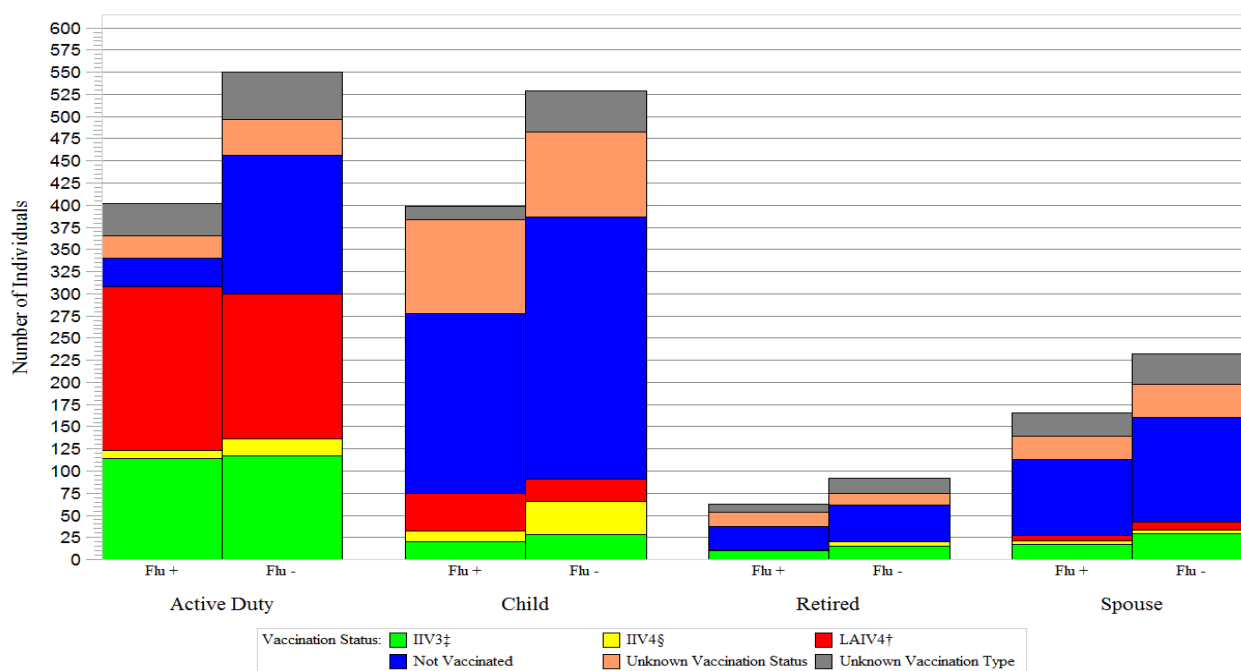


Note: Due to change in protocol between the surveillance years 2013-2014 and 2014-2015, a direct comparison between the years cannot be made.

Distribution Statement A: Distribution is unlimited. 88ABW-2015-0355, 29 January 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 2*



‡ Influenza, inactivated vaccine (trivalent)

§ Influenza, inactivated vaccine (quadrivalent)

† Live, attenuated influenza vaccine (quadrivalent)

*Graph 3 has not been updated due to delay in data feed

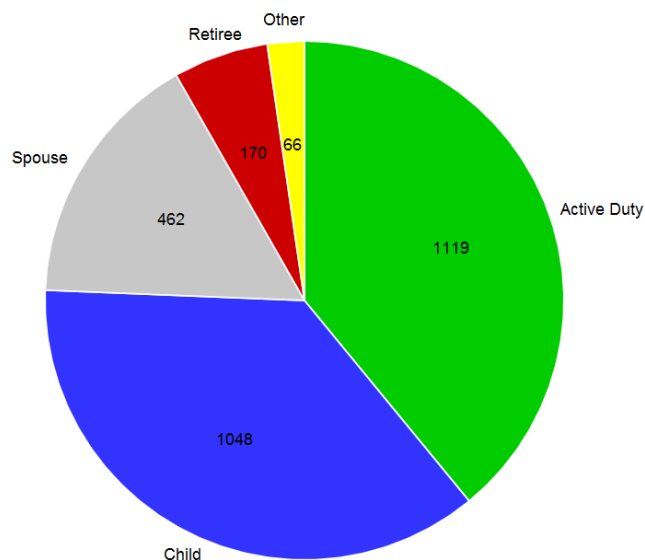
Table 2. ILI by age group for the 2014-2015 surveillance year through Week 3

Age Group	Frequency	Percent
0-5	551	19.23
6-9	214	7.47
10-17	284	9.91
18-24	414	14.45
25-44	1014	35.39
45-64	298	10.4
65+	86	3
Unknown	4	0.14

Demographic Summary

Of 2,865 ILI cases, 1,119 are service members (39.1%), 1,048 are children (36.6%), 462 (16.1%) are spouses, and 236 (8.2%) are retirees & other beneficiaries. There are no unknown beneficiary types. The median age of ILI cases with known age (n=2,861) is 24 (range 0, 94) and 1,049 (36.6%) 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 3



Laboratory Results—Through Current Surveillance Week 3

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	A/not subtyped & Para	A(H3N2) & Corona	B	B/Victoria	B/Yamagata	B & Rhino/Entero	Adenovirus	Coronavirus	hMPV	M. pneumoniae	Parainfluenza	RSV	Rhinovirus/Enterovirus	Non-Influenza Co-Infection	No Pathogen	Total
Deployed	Country 1, Location B	-	19	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	37	61
	Country 2, Location A	-	35	-	-	-	3	-	-	-	-	-	-	-	-	-	1	-	25	64
PACOM	CFA Okinawa, Japan	-	1	-	-	-	-	-	-	-	2	-	-	-	-	-	2	-	17	22
	Eielson AFB, AK	-	3	-	-	-	1	-	-	-	2	-	-	-	-	-	1	-	5	12
	JB Elmendorf-Richardson, AK	-	7	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	5	13
	JR Marianas - Andersen AFB, Guam	-	10	-	-	-	1	-	4	-	1	-	3	-	1	2	4	1	17	44
	JR Marianas - NH Guam, Guam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	Kadena AB, Japan	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	7
	Kunsan AB, South Korea	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3
	Misawa AB, Japan	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	4	14
	Osan AB, South Korea	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	7
	Tripler AMC, HI	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
	Yokota AB, Japan	-	23	1	-	-	1	-	-	-	2	-	-	-	1	-	-	1	11	40
Region 1	Hanscom AFB, MA	-	8	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	12	22
	NHCNE Newport, RI	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	10	20
	USCG Academy, CT	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	7	9
Region 2	Ft Drum, NY	-	24	-	-	-	4	-	-	-	1	1	-	1	2	2	9	5	29	78
	JB McGuire-Dix-Lakehurst, NJ	-	27	-	-	1	-	-	-	-	-	-	-	-	-	-	3	-	9	40
	USMA - West Point, NY	-	29	1	-	-	-	-	-	-	1	4	-	3	4	3	6	2	54	107
Region 3	CG Base Portsmouth, VA	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
	Dover AFB, DE	-	9	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	3	13
	JB Anacostia-Bolling, DC	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
	JB Andrews, MD	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	3	7
	JB Langley-Eustis, VA	-	6	-	-	-	-	-	-	-	1	-	-	-	1	-	-	1	9	18
	NCRM - Ft Belvoir CH, VA	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	4	1	4	11
	NCRM - Walter Reed NMMC, MD	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2
	NMC Portsmouth, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Region 4	CGS Mobile, AL	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	12
	Columbus AFB, MS	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	19
	Eglin AFB, FL	-	11	-	-	-	3	-	-	-	-	-	-	1	-	2	1	1	25	44
	Ft Bragg, NC	-	30	-	-	-	-	-	-	-	1	2	1	-	4	7	1	-	31	77
	Ft Campbell, KY	-	18	-	-	-	2	-	-	-	1	-	-	-	4	1	3	-	17	46
	Hurlburt Field, FL	-	15	-	-	-	1	-	-	-	1	-	-	1	-	2	3	1	18	42
	JB Charleston (AF), SC	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	8
	JB Charleston (Navy), SC	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	1	4
	Keesler AFB, MS	-	6	-	-	-	1	-	-	-	2	-	-	-	-	1	1	2	16	29
	MacDill AFB, FL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7
	Maxwell AFB, AL	-	29	-	-	-	4	-	-	-	-	-	-	-	1	1	4	-	41	80
	Moody AFB, GA	-	74	-	-	-	3	1	1	-	3	7	1	1	6	2	10	4	39	152
	NH Beaufort, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	1	4	8
	NH Camp Lejeune, NC	-	61	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	8	72
	NH Jacksonville, FL	-	1	-	-	-	-	-	-	-	1	-	1	-	-	-	4	1	-	8
	Robins AFB, GA	-	33	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	26	60
	Seymour Johnson AFB, NC	-	14	-	-	-	-	-	-	-	1	-	-	-	1	2	4	-	9	31
	Shaw AFB, SC	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	7	12
	Tyndall AFB, FL	-	13	-	-	-	-	-	3	-	1	-	-	-	-	1	-	1	9	28
	USCG Base Elizabeth City, NC	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2

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

Continued on Page 5

Laboratory Results—Through Current Surveillance Week 3

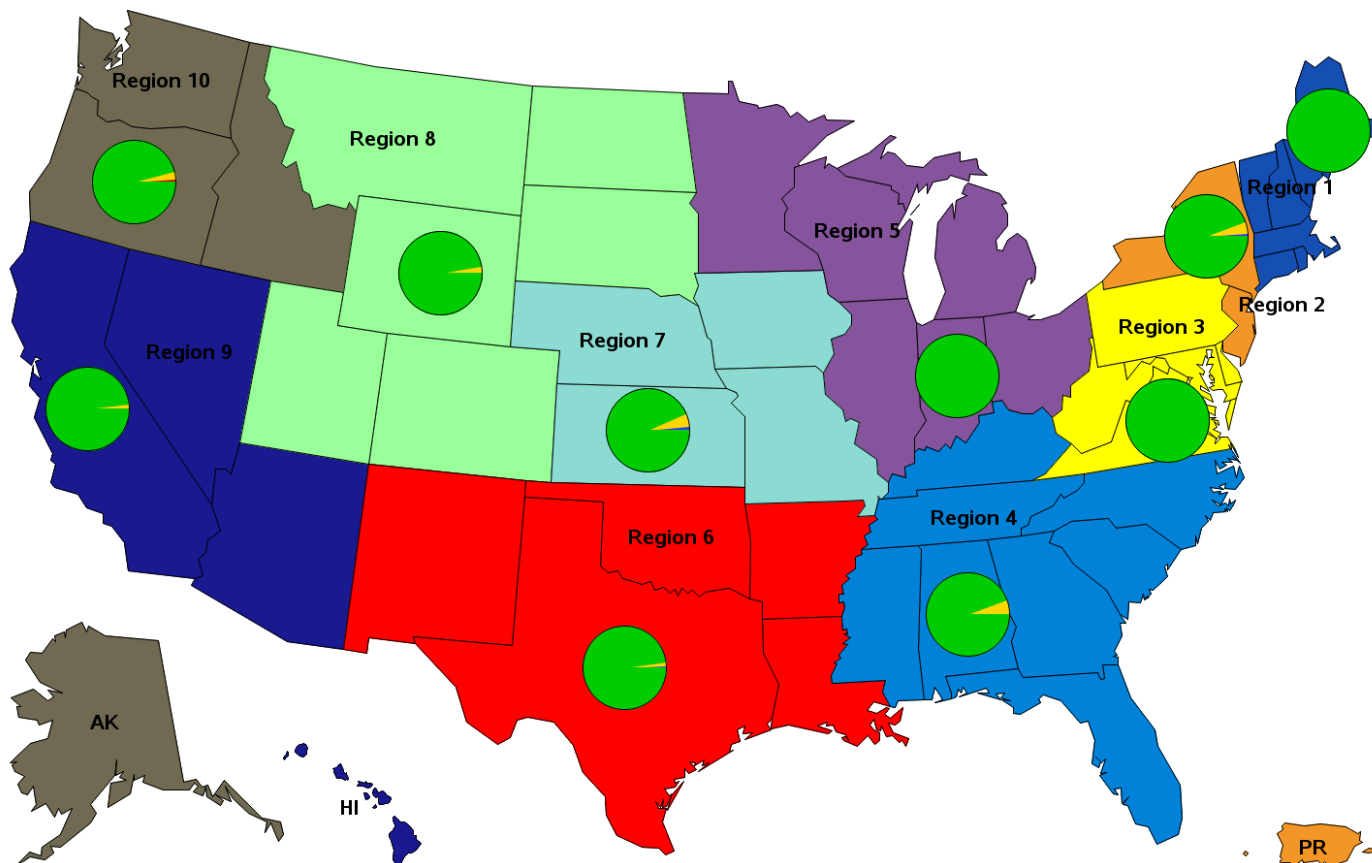
Table 3. Cumulative results by region and location for specimens collected during the 2014-2015 surveillance year (Continued from Page 4)

Region*		A(H1N1)pdm09	A(H3N2)	A/not subtyped	A/not subtyped & Para	A(H3N2) & Corona	B	B/Victoria	B/Yamagata	B & Rhino/Entero	Adenovirus	Coronavirus	hMPV	M. pneumoniae	Parainfluenza	RSV	Rhinovirus/Enterovirus	Non-Influenza Co-Infection	No Pathogen	Total
Region 5	Scott AFB, IL	-	23	-	-	-	-	-	-	-	1	1	-	-	2	-	1	-	19	47
	Wright-Patterson AFB, OH	-	8	-	-	-	-	-	-	-	-	1	-	-	-	2	5	-	29	45
Region 6	Altus AFB, OK	-	4	-	-	-	-	-	-	1	2	1	-	-	-	2	3	2	17	32
	Barksdale AFB, LA	-	9	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	5	16
	Cannon AFB, NM	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4
	Holloman AFB, NM	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Laughlin AFB, TX	-	4	-	-	-	-	-	-	-	1	-	-	2	-	-	-	2	8	17
	Little Rock AFB, AR	-	9	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	29
	Sheppard AFB, TX	-	62	-	-	-	-	-	-	-	2	3	-	1	2	3	1	4	43	121
	Tinker AFB, OK	-	85	-	-	-	1	-	-	-	1	2	-	1	5	2	5	-	69	171
	USCG New Orleans, LA	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Region 7	McConnell AFB, KS	-	10	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	11	23
	Offutt AFB, NE	-	47	-	-	-	3	-	-	-	3	-	-	2	8	-	8	-	96	167
Region 8	Buckley AFB, CO	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	8	11
	Ellsworth AFB, SD	-	13	-	-	-	3	-	-	-	2	-	-	1	5	-	2	-	11	37
	EE Warren AFB, WY	-	27	-	-	-	-	-	-	-	1	-	-	-	8	1	1	-	17	55
	Hill AFB, UT	-	31	-	-	-	1	-	-	-	-	-	-	1	3	1	4	-	17	58
	Malmstrom AFB, MT	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
	Minot AFB, ND	-	6	-	-	-	-	-	-	-	-	-	-	3	3	2	1	-	5	20
	Peterson AFB, CO	-	50	-	-	-	-	-	-	-	-	-	-	1	2	1	3	1	26	84
	USAF Academy, CO	-	21	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	14	37
Region 9	Davis-Monthan AFB, AZ	-	9	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	18	29
	Edwards AFB, CA	-	6	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	5	12
	Luke AFB, AZ	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	7
	Nellis AFB, NV	-	9	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	6	17
	Travis AFB, CA	-	22	-	-	-	-	-	-	-	1	-	-	1	10	5	6	1	105	151
	USCG Island Alameda, CA	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Region 10	Fairchild AFB, WA	-	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	4	7
	Mt Home AFB, ID	-	5	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	5	11
	NH Bremerton, WA	1	75	-	-	-	2	-	-	-	4	-	1	2	13	15	12	6	151	282
Total		1	1119	3	1	1	37	1	8	1	42	26	9	23	93	64	132	43	1261	2865

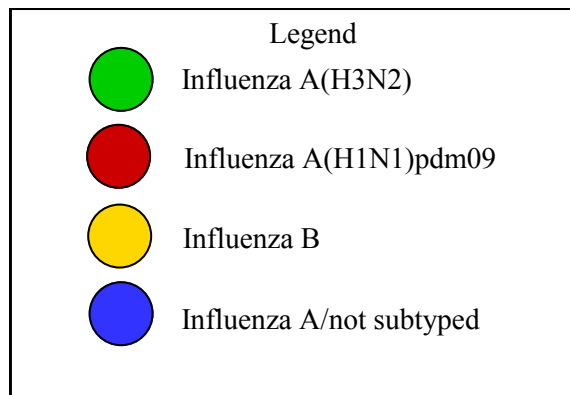
*US Regions are based on Health & Human Services regions. Other locations are defined by Cocom.

DoD Global, Laboratory-Based, Influenza Surveillance Program

Map 1. Percentage of influenza positives by region for the 2014-2015 surveillance year through Week 3

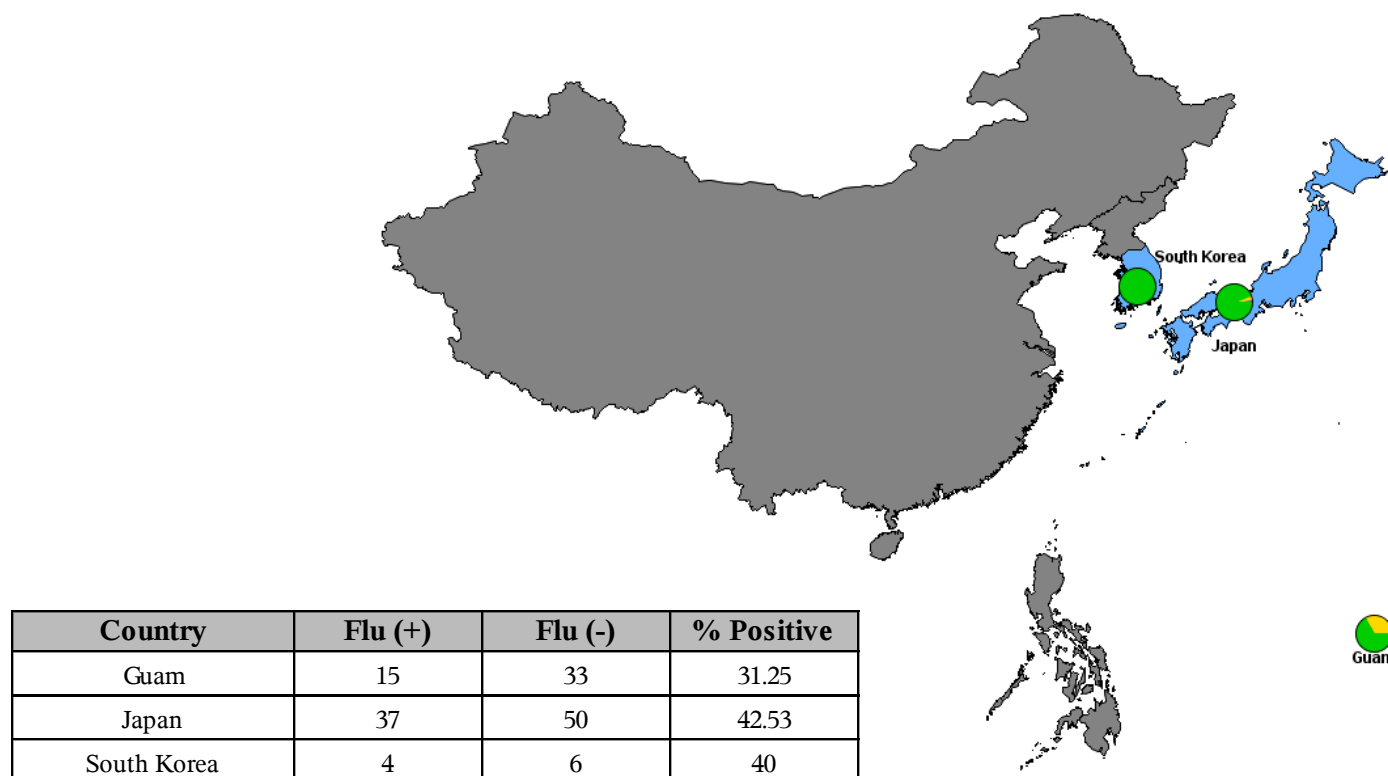


Region	Flu (+)	Flu (-)	% Positive
Region 1	16	53	23.19
Region 2	86	170	33.59
Region 3	25	38	39.68
Region 4	354	451	43.98
Region 5	31	67	31.63
Region 6	180	277	39.39
Region 7	61	166	26.87
Region 8	154	183	45.7
Region 9	56	216	20.59
Region 10	96	294	24.62

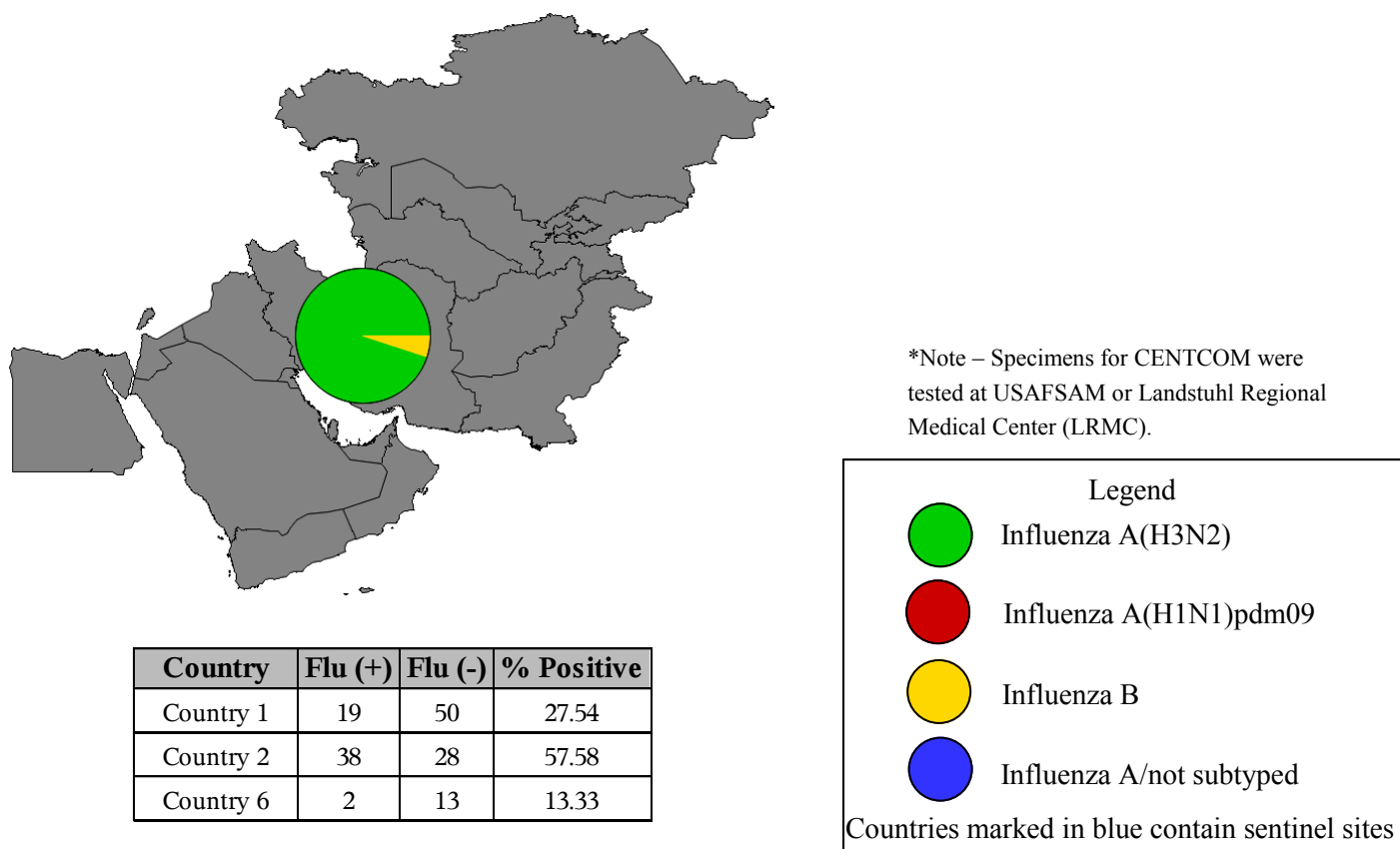


DoD Global, Laboratory-Based, Influenza Surveillance Program

Map 2. Percentage of influenza positives by region for the 2014-2015 surveillance year through Week 3 (Pacific)



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



DoD Global Laboratory-Based Influenza Surveillance Program



USAF School of Aerospace Medicine

2014 - 2015

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



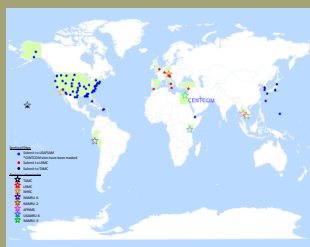
USAF School of Aerospace Medicine

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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)

[https://](https://gumbo2.area52.afnoapps.usaf.mil/epi-consult/influenza)

gumbo2.area52.afnoapps.usaf.mil/epi-consult/influenza

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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