

DoD Global, Laboratory-Based, Influenza Surveillance Program

USAF School of Aerospace Medicine 2014 - 2015

Cumulative Results	
Locations	67
Collected	1271
Tested	1137



Respiratory Highlights 30 November - 13 December 2014 (Surveillance Weeks 49 & 50)

- During 30 November - 13 December 2014, a total of 391 specimens were collected and received from 49 locations. Results were finalized for 280 specimens from 44 locations. During Week 49, the laboratory identified 95 influenza A(H3N2), one A/not subtyped and four influenza B. During Week 50, 64 influenza A(H3N2) and five A/not subtyped were identified. See Table 1 below for results of other respiratory viruses identified during Weeks 49 & 50.
- The CDC has reported 28 more confirmed cases of enterovirus D68 (EV-D68) after several weeks with no new cases, raising the national count to 1,149 in 48 states and Washington, DC. The CDC is not aware of a new cluster of cases, but attributes this increase in cases to the lag time in receipt of specimens at CDC laboratories. ([CDC Update](#), cited 16 December 2014).

Influenza A	282
A(H1N1)pdm09	0
A(H3N2)	275
A/not subtyped	7
Influenza B	16
B/Unknown or pending lineage	12
B & Rhino/Enterovirus	1
B/Victoria	0
B/Yamagata	3
Other Respiratory Pathogens	258

Table 1. Results by region and location for specimens collected and finalized during Weeks 49 & 50

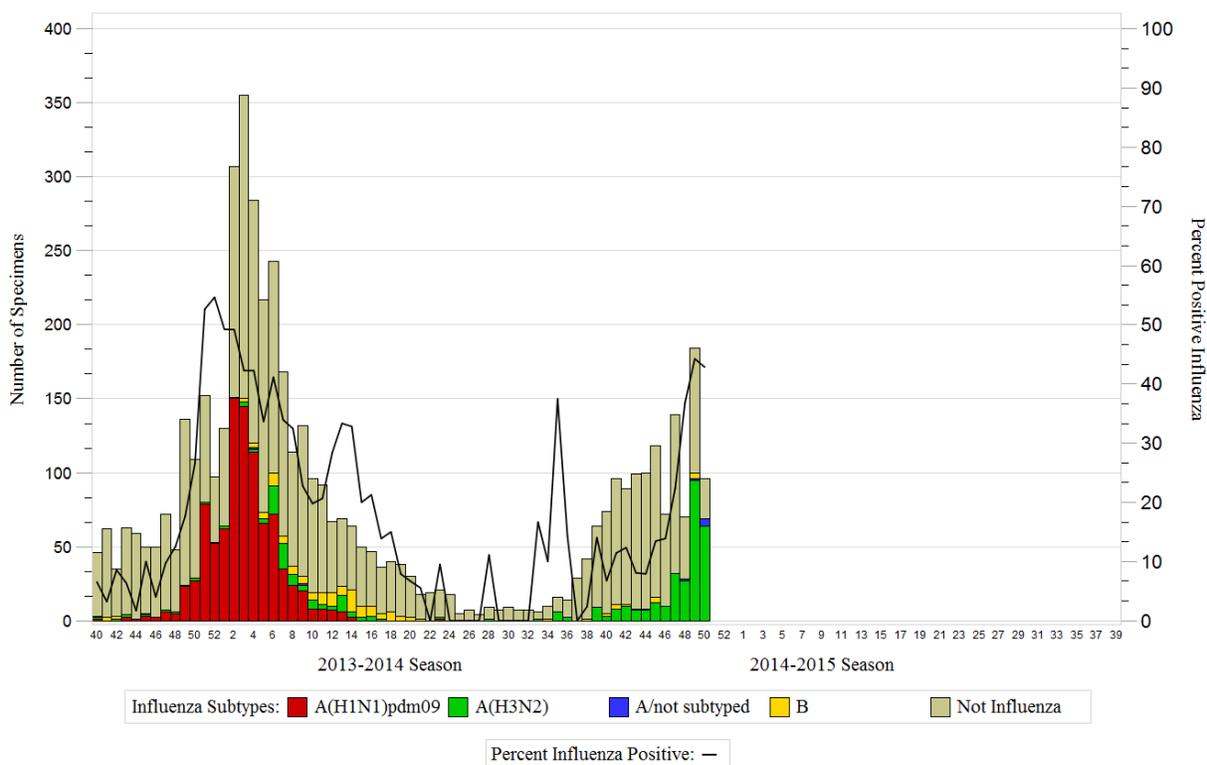
Region*	Location	A(H3N2)	A/not subtyped	B	Adenovirus	Coronavirus	M. pneumoniae	Parainfluenza	RSV	Rhinovirus/Enterovirus	Adeno & Corona	Adeno & Rhino/Entero	RSV & Rhino/Entero	No Pathogen	Total	
PACOM	CFA Okinawa, Japan	-	-	-	1	-	-	-	-	1	-	-	-	-	2	
	Eielson AFB, AK	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
	JB Elmendorf-Richardson, AK	1	-	-	-	-	-	-	-	-	-	-	-	-	1	
	JR Marianas - Andersen AFB, Guam	-	-	1	-	-	-	-	-	-	-	-	1	1	3	
	Ft Drum, NY	2	-	-	-	-	-	1	-	-	-	-	-	-	4	
Region 2	JB McGuire-Dix-Lakehurst, NJ	2	-	-	-	-	-	-	-	-	-	-	-	-	3	
	USMA - West Point, NY	2	1	-	-	1	3	-	-	1	-	-	-	-	11	
	Dover AFB, DE	-	-	-	-	-	1	-	-	-	-	-	-	-	1	
Region 4	Columbus AFB, MS	-	1	-	-	-	-	-	-	-	-	-	-	-	3	
	Eglin AFB, FL	2	-	-	-	1	-	1	-	1	-	-	-	-	9	
	Ft Bragg, NC	10	2	-	1	-	1	1	2	-	-	-	-	-	20	
	JB Charleston (AF), SC	1	-	-	-	-	-	-	-	-	-	-	-	-	1	
	Keesler AFB, MS	4	-	1	-	-	-	1	-	-	-	-	-	-	6	
	Maxwell AFB, AL	5	-	-	-	-	1	-	-	-	-	-	-	-	11	
	Moody AFB, GA	9	-	2	-	1	-	1	1	-	-	-	-	-	15	
	NH Beaufort, SC	-	-	-	-	-	-	-	-	2	-	-	-	-	3	
	NH Camp Lejeune, NC	42	1	-	-	-	-	-	-	-	-	1	1	-	45	
	Robins AFB, GA	6	-	-	-	-	-	-	-	-	-	-	-	-	11	
Region 5	Seymour Johnson AFB, NC	2	-	-	-	-	-	-	-	-	-	-	-	-	4	
	Shaw AFB, SC	1	-	-	-	-	-	-	-	-	-	-	-	-	1	
	Tyndall AFB, FL	2	-	-	-	-	-	-	-	-	-	-	-	-	2	
	Scott AFB, IL	4	-	-	-	-	-	-	-	-	-	-	-	-	4	
	Wright-Patterson AFB, OH	-	-	-	-	-	-	-	-	1	-	-	-	-	2	
	Region 6	Altus AFB, OK	-	-	-	1	-	-	-	-	-	-	-	-	-	1
		Barksdale AFB, LA	4	-	1	-	-	-	-	-	-	-	-	-	-	7
		Holloman AFB, NM	1	-	-	-	-	-	-	-	-	-	-	-	-	1
		Laughlin AFB, TX	1	-	-	-	1	-	-	-	-	1	-	-	-	3
		Little Rock AFB, AR	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Sheppard AFB, TX		15	-	-	1	1	1	-	-	-	-	-	-	-	19	
Tinker AFB, OK		14	-	-	-	-	1	-	-	-	-	-	-	-	18	
McConnell AFB, KS		-	-	-	1	-	-	-	-	-	-	-	-	-	2	
Offutt AFB, NE		8	-	1	-	-	2	-	1	-	-	-	-	-	19	
Buckley AFB, CO		1	-	-	-	-	-	-	-	-	-	-	-	-	3	
Region 7	Ellsworth AFB, SD	1	-	-	-	-	3	-	-	-	-	-	-	-	4	
	FE Warren AFB, WY	2	-	-	-	-	1	-	-	-	-	-	-	-	4	
	Hill AFB, UT	1	1	-	-	-	-	-	-	-	-	-	-	-	2	
	Minot AFB, ND	1	-	-	-	-	1	-	-	-	-	-	-	-	2	
	Peterson AFB, CO	5	-	-	-	-	-	-	-	-	-	-	-	-	6	
	USAF Academy, CO	6	-	-	-	-	-	-	-	-	-	-	-	-	6	
	Region 9	Davis-Monthan AFB, AZ	-	-	-	-	-	1	-	-	-	1	-	-	-	2
		Edwards AFB, CA	1	-	-	-	-	-	-	-	-	-	-	-	-	1
		Nellis AFB, NV	1	-	-	-	-	-	-	-	-	-	-	-	-	1
		Travis AFB, CA	2	-	-	-	-	1	-	-	-	-	-	-	-	5
Region 10	NH Bremerton, WA	-	-	-	-	-	1	1	-	-	-	-	2	-	5	
	Total	159	6	4	4	5	7	16	7	6	1	2	4	59	280	

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

Lab data are current as of 15 December 2014. Results are preliminary and may change as more results are received.

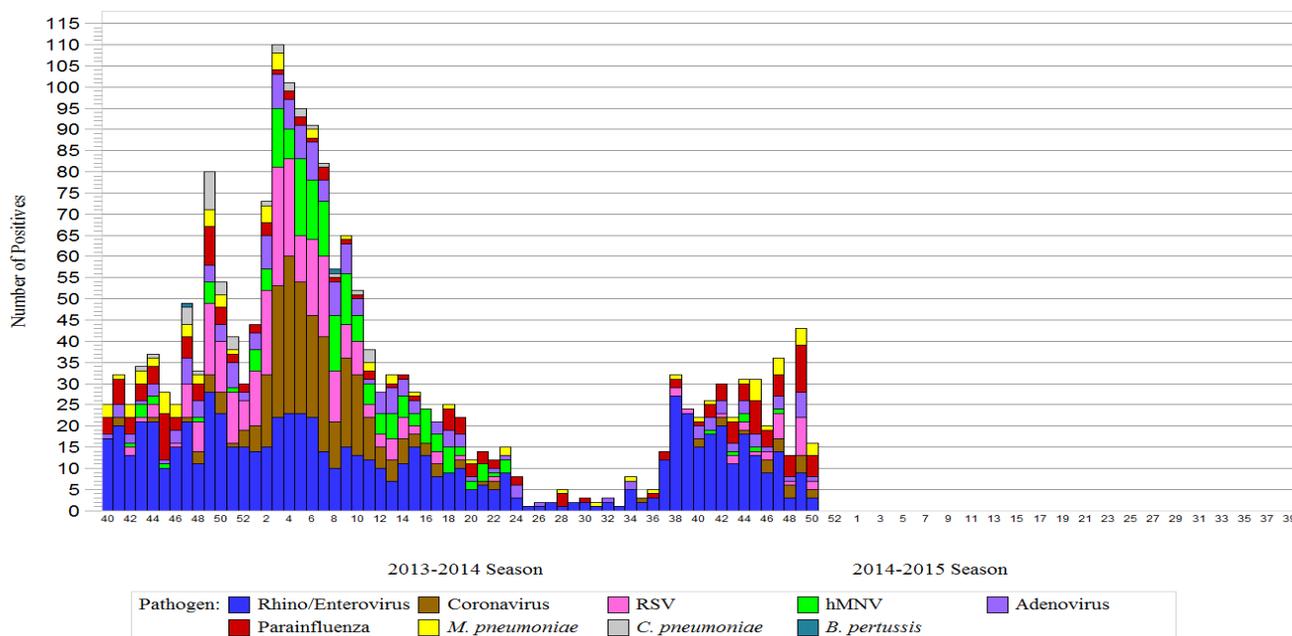
Laboratory Results - Cumulative for Season

Graph 1. Percent influenza positive by week: 2013-2014 surveillance year and through Week 50 of the 2014-2015 surveillance year



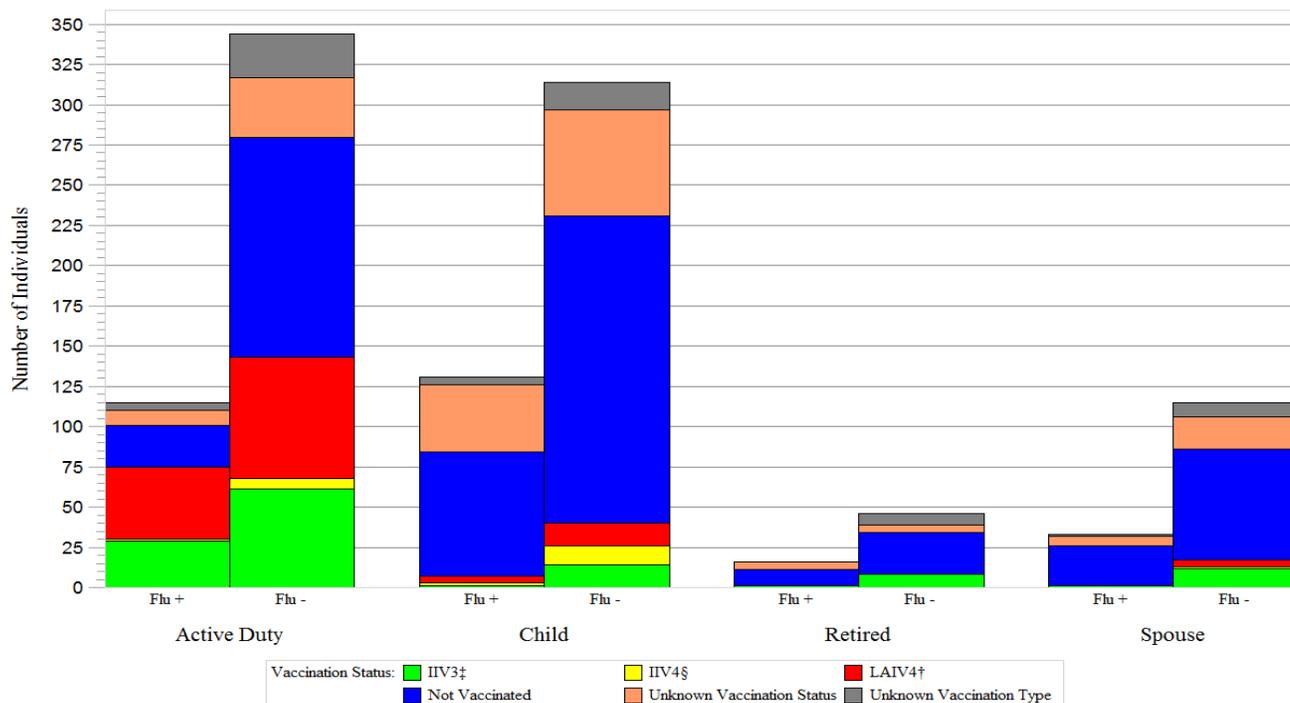
Note: One specimen positive for influenza A(H3N2)v has been excluded from the graph during the 2013-2014 season.

Graph 2. Other respiratory pathogen results by week: 2013-2014 surveillance year and through Week 50 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.

Graph 3. Vaccination status by beneficiary type for the 2014-2015 surveillance year through Week 50



‡ Influenza, inactivated vaccine (trivalent)
 § Influenza, inactivated vaccine (quadrivalent)
 † Live, attenuated influenza vaccine (quadrivalent)

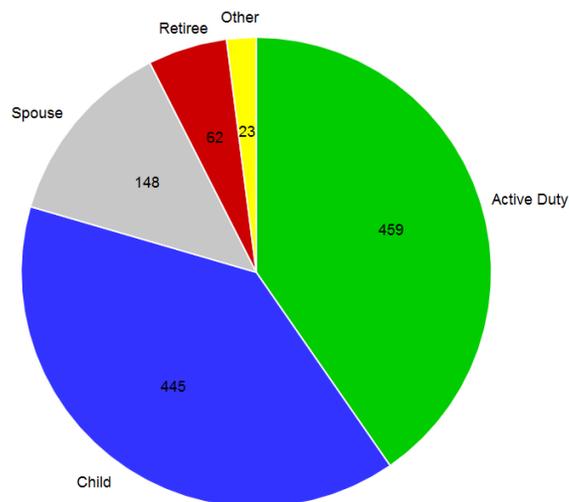
Table 2. ILI by age group for the 2014-2015 surveillance year through Week 50

Age Group	Frequency	Percent
0-5	237	20.84
6-9	91	8.00
10-17	118	10.38
18-24	177	15.57
25-44	386	33.95
45-64	99	8.71
65+	29	2.55

Demographic Summary

Of 1,137 ILI cases, 459 are service members (40.4%), 445 are children (39.1%), 148 (13.0%) are spouses, and 85 (7.5%) are retirees & other beneficiaries. There are no unknown beneficiary types. The median age of ILI cases with known age (n=1,137) is 23.0 (range 0, 84) and 446 (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 50



Laboratory Results—Through Current Surveillance Week 50

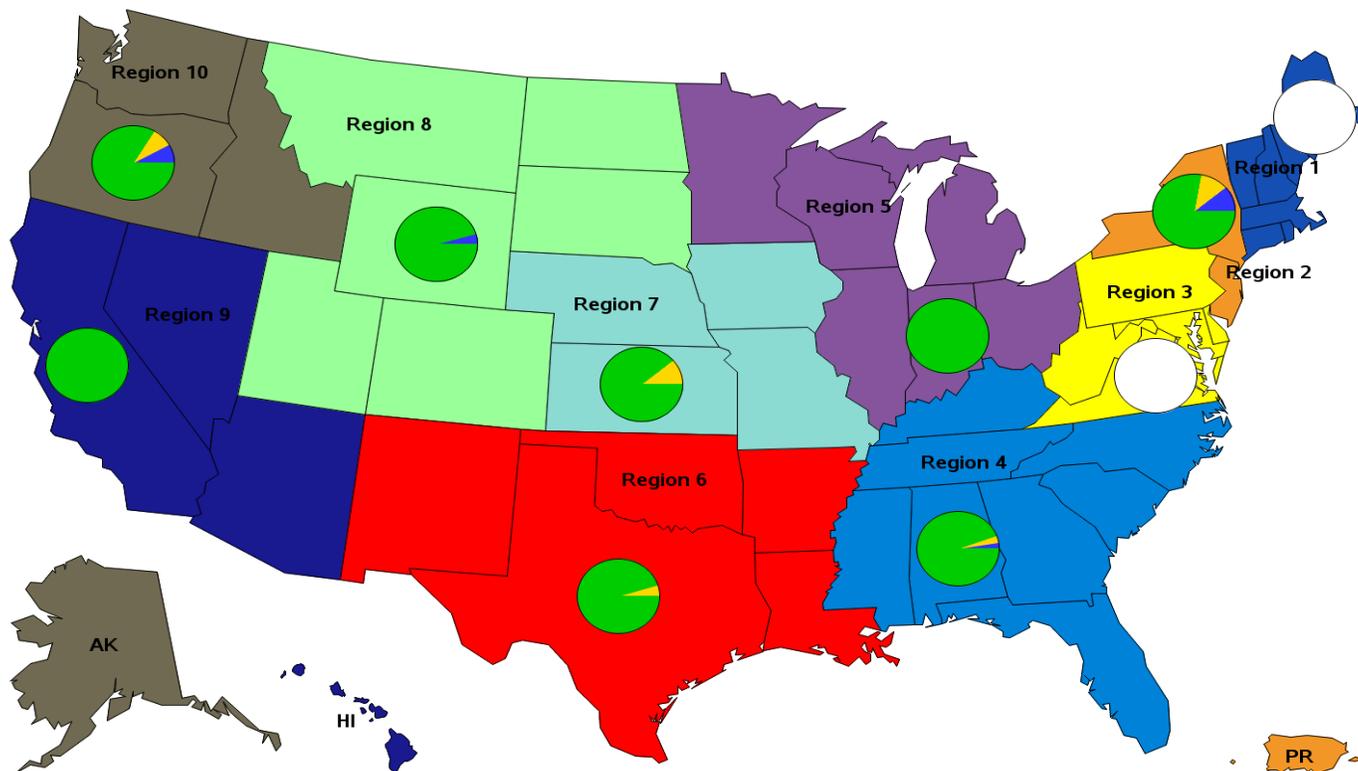
Table 3. Cumulative results by region and location for specimens collected during the 2014-2015 surveillance year

Region*		A(H3N2)	A/not subtyped	B	B/Vamagata B & Rhino/Entero	Adenovirus	Coronavirus	hMPV	M. pneumoniae	Parainfluenza	RSV	Rhinovirus/Enterovirus	Non-Influenza Co-Infection	No Pathogen	Total	
Deployed	Country 1, Location B	16	-	-	-	-	-	-	-	-	-	-	-	32	50	
	Country 2, Location A	1	-	-	-	-	-	-	-	-	-	-	-	7	8	
PACOM	CFA Okinawa, Japan	-	-	-	-	1	-	-	-	-	-	2	-	10	13	
	Eielson AFB, AK	2	-	1	-	-	2	-	-	-	-	1	-	5	11	
	JB Elmendorf-Richardson, AK	7	-	-	-	-	-	-	-	-	-	-	-	4	11	
	JR Marianas - Andersen AFB, Guam	9	-	3	2	-	1	-	3	-	1	2	3	1	12	37
	Kadena AB, Japan	-	-	-	-	-	-	-	-	-	-	-	1	-	2	3
	Misawa AB, Japan	-	-	-	-	-	-	-	-	-	-	-	2	-	3	5
	Osan AB, South Korea	1	-	-	-	-	-	-	-	-	-	-	-	-	3	4
	Yokota AB, Japan	1	-	-	-	-	-	-	-	-	-	-	-	1	3	5
Region 1	Hanscom AFB, MA	-	-	-	-	-	-	-	-	-	-	-	-	4	4	
	NHCNE Newport, RI	-	-	-	-	-	-	-	-	-	-	1	-	8	9	
	USCG Academy, CT	-	-	-	-	-	-	-	-	1	-	1	-	3	5	
Region 2	Ft Drum, NY	2	-	1	-	-	1	-	-	1	2	1	7	4	20	39
	JB McGuire-Dix-Lakehurst, NJ	3	-	-	-	-	-	-	-	-	-	-	-	2	5	
	USMA - West Point, NY	2	1	-	-	-	2	-	3	1	-	6	1	28	44	
Region 3	Dover AFB, DE	-	-	-	-	-	-	-	-	1	-	-	-	-	1	
	JB Andrews, MD	-	-	-	-	-	-	-	-	-	-	2	-	3	5	
	JB Langley-Eustis, VA	-	-	-	-	-	-	-	1	-	-	1	-	6	8	
	NCRM - Ft Belvoir CH, VA	-	-	-	-	1	-	-	-	1	-	4	1	4	11	
	NMC Portsmouth, VA	-	-	-	-	-	-	-	-	-	-	-	-	1	1	
Region 4	Columbus AFB, MS	-	1	-	-	-	-	-	-	-	-	-	-	8	9	
	Eglin AFB, FL	2	-	-	-	-	-	-	1	-	1	1	1	12	18	
	Ft Bragg, NC	11	2	-	-	1	-	1	1	6	-	-	-	7	29	
	Ft Campbell, KY	-	-	-	-	-	-	-	-	1	2	-	-	5	8	
	Hurlburt Field, FL	8	-	-	-	-	-	-	-	-	-	3	-	5	16	
	JB Charleston (AF), SC	4	-	-	-	-	-	-	-	-	-	-	-	1	5	
	JB Charleston (Navy), SC	-	-	-	-	-	-	1	-	-	-	2	-	1	4	
	Keesler AFB, MS	4	-	1	-	1	-	-	-	-	1	1	2	7	17	
	MacDill AFB, FL	-	-	-	-	-	-	-	-	-	-	-	-	5	5	
	Maxwell AFB, AL	18	-	-	-	-	-	-	1	-	4	-	-	18	41	
	Moody AFB, GA	37	-	2	-	2	5	1	1	5	1	7	2	17	80	
	NH Beaufort, SC	-	-	-	-	-	-	-	-	1	-	2	1	2	6	
	NH Camp Lejeune, NC	43	1	-	-	-	-	-	-	-	-	1	1	4	50	
	NH Jacksonville, FL	1	-	-	-	1	-	1	-	-	-	4	1	-	8	
	Robins AFB, GA	9	-	-	-	-	-	-	-	-	-	-	-	14	23	
	Seymour Johnson AFB, NC	3	-	-	-	-	-	-	-	1	1	4	-	7	16	
	Shaw AFB, SC	1	-	-	-	-	-	-	-	-	-	1	-	2	4	
	Tyndall AFB, FL	9	-	2	1	-	-	-	-	-	-	-	1	5	18	
	Region 5	Scott AFB, IL	6	-	-	-	-	-	-	-	-	-	1	-	5	12
		Wright-Patterson AFB, OH	-	-	-	-	-	-	-	-	-	-	5	-	17	22
Region 6	Altus AFB, OK	-	-	-	1	-	1	-	-	-	2	1	7	12		
	Barksdale AFB, LA	4	-	1	-	-	-	-	-	-	-	-	-	3	8	
	Cannon AFB, NM	-	-	-	-	-	-	-	-	-	-	-	-	3	3	
	Holloman AFB, NM	1	-	-	-	-	-	-	-	-	-	-	-	1	1	
	Laughlin AFB, TX	1	-	-	-	1	-	1	-	-	-	-	2	3	8	
	Little Rock AFB, AR	1	-	-	-	-	-	-	-	-	-	-	-	15	16	
	Sheppard AFB, TX	16	-	-	-	1	1	-	1	1	-	-	1	13	34	
	Tinker AFB, OK	16	-	-	-	-	1	-	1	4	-	4	-	31	57	
	USCG New Orleans, LA	1	-	-	-	-	-	-	-	-	-	-	-	-	1	
Region 7	McConnell AFB, KS	-	-	-	-	-	1	-	-	-	-	-	-	1	2	
	Offutt AFB, NE	8	-	1	-	1	-	1	5	-	7	-	-	53	76	
Region 8	Buckley AFB, CO	1	-	-	-	-	-	-	-	-	-	-	1	-	5	7
	Ellsworth AFB, SD	1	-	-	-	1	-	-	1	3	-	2	-	6	14	
	FE Warren AFB, WY	2	-	-	-	-	-	-	-	3	-	1	-	10	16	
	Hill AFB, UT	1	1	-	-	-	-	-	-	2	-	3	-	4	11	
	Minot AFB, ND	1	-	-	-	-	-	-	2	2	-	1	-	1	7	
	Peterson AFB, CO	5	-	-	-	-	-	-	1	2	1	3	1	14	27	
	USAF Academy, CO	10	-	-	-	-	-	-	1	-	-	1	-	4	16	
Region 9	Davis-Monthan AFB, AZ	-	-	-	-	-	-	-	-	1	-	-	-	1	13	15
	Edwards AFB, CA	1	-	-	-	-	-	-	-	-	-	-	-	3	4	
	Luke AFB, AZ	-	-	-	-	-	-	-	-	-	-	-	-	4	4	
	Nellis AFB, NV	1	-	-	-	1	-	-	-	-	-	-	-	2	4	
	Travis AFB, CA	3	-	-	-	1	-	-	-	6	2	6	1	50	69	
Region 10	Fairchild AFB, WA	-	-	-	-	-	-	-	-	-	-	-	-	2	2	
	Mt Home AFB, ID	1	-	-	-	-	-	-	-	-	-	-	-	2	3	
	NH Bremerton, WA	-	1	-	-	-	-	-	1	3	3	9	3	30	50	
Total		275	7	12	3	1	17	13	6	17	49	20	108	28	581	1137

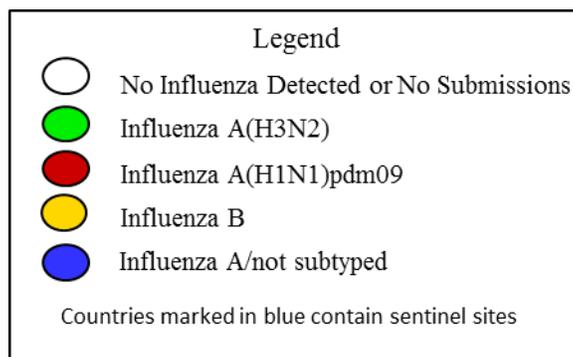
*US Regions are based on Health & Human Services regions. Other locations are defined by COCOM.

DoD Global, Laboratory-Based, Influenza Surveillance Program

Map 1. Percentage of influenza positives by region for the 2014-2015 surveillance year through Week 50

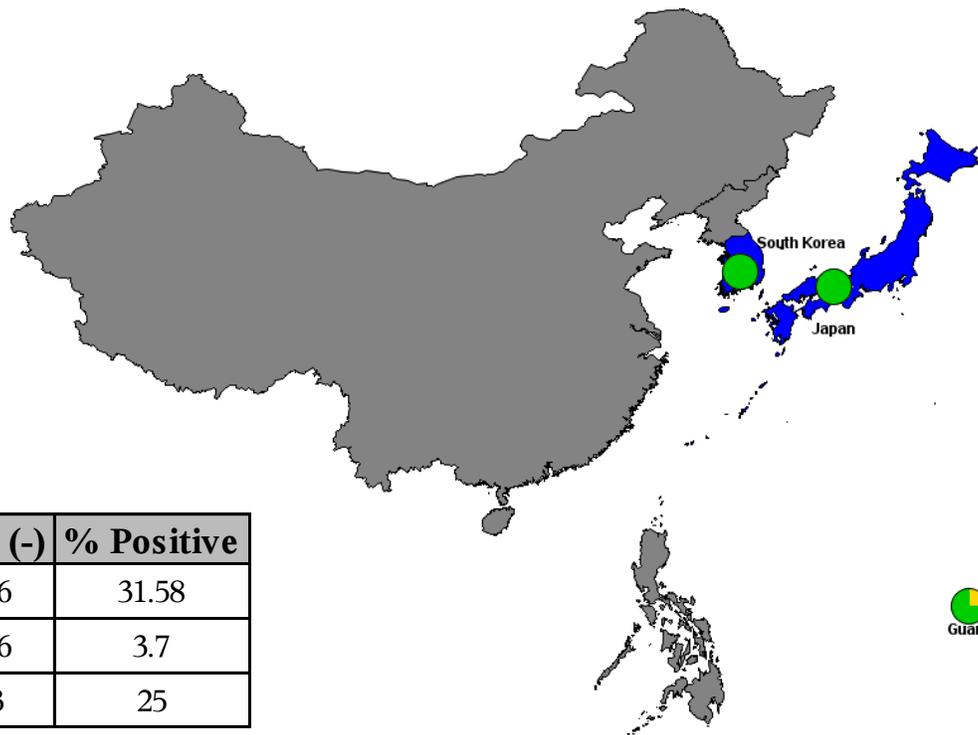


Region	Flu (+)	Flu (-)	% Positive
Region 1	0	18	0
Region 2	9	87	9.38
Region 3	0	28	0
Region 4	159	228	41.09
Region 5	6	40	13.04
Region 6	42	116	26.58
Region 7	9	76	10.59
Region 8	22	85	20.56
Region 9	5	103	4.63
Region 10	12	78	13.33



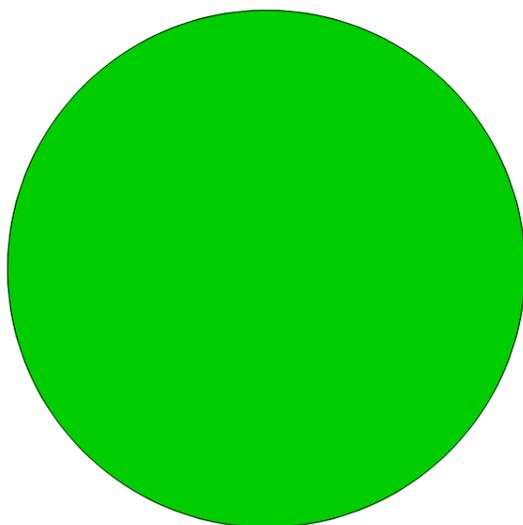
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Map 2. Percentage of influenza positives by region for the 2014-2015 surveillance year through Week 50 (Pacific)



Country	Flu (+)	Flu (-)	% Positive
Guam	12	26	31.58
Japan	1	26	3.7
South Korea	1	3	25

Map 3. Percentage of influenza positives by region for the 2014-2015 surveillance year through Week 50 (CENTCOM)



*Note – Specimens contained in this map were tested at USAFSAM or Landstuhl Regional Medical Center (LRMC). Only locations that have submitted specimens to these locations are included in the table.

Country	Flu (+)	Flu (-)	% Positive
Country 1	16	26	38.1
Country 2	0	7	0
Country 6	0	9	0

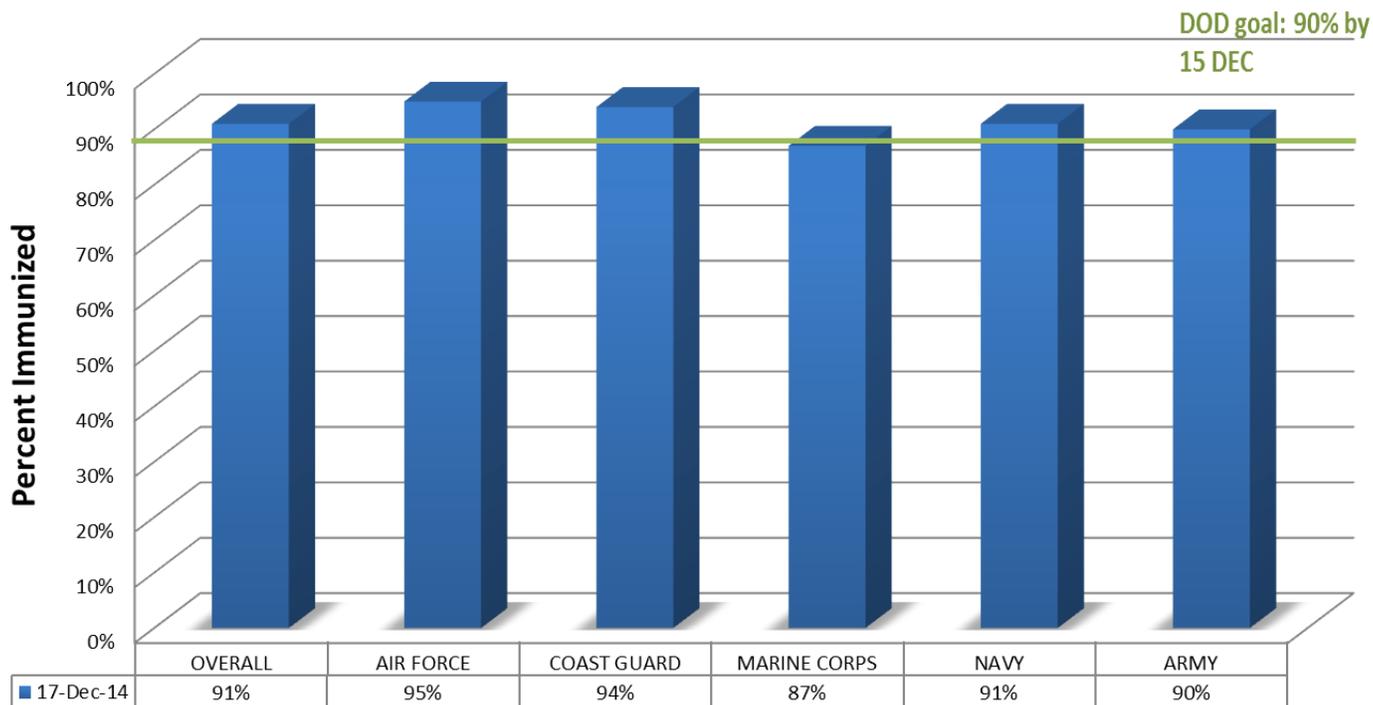
Legend

- No Influenza Detected or No Submissions
- Influenza A(H3N2)
- Influenza A(H1N1)pdm09
- Influenza B
- Influenza A/not subtyped

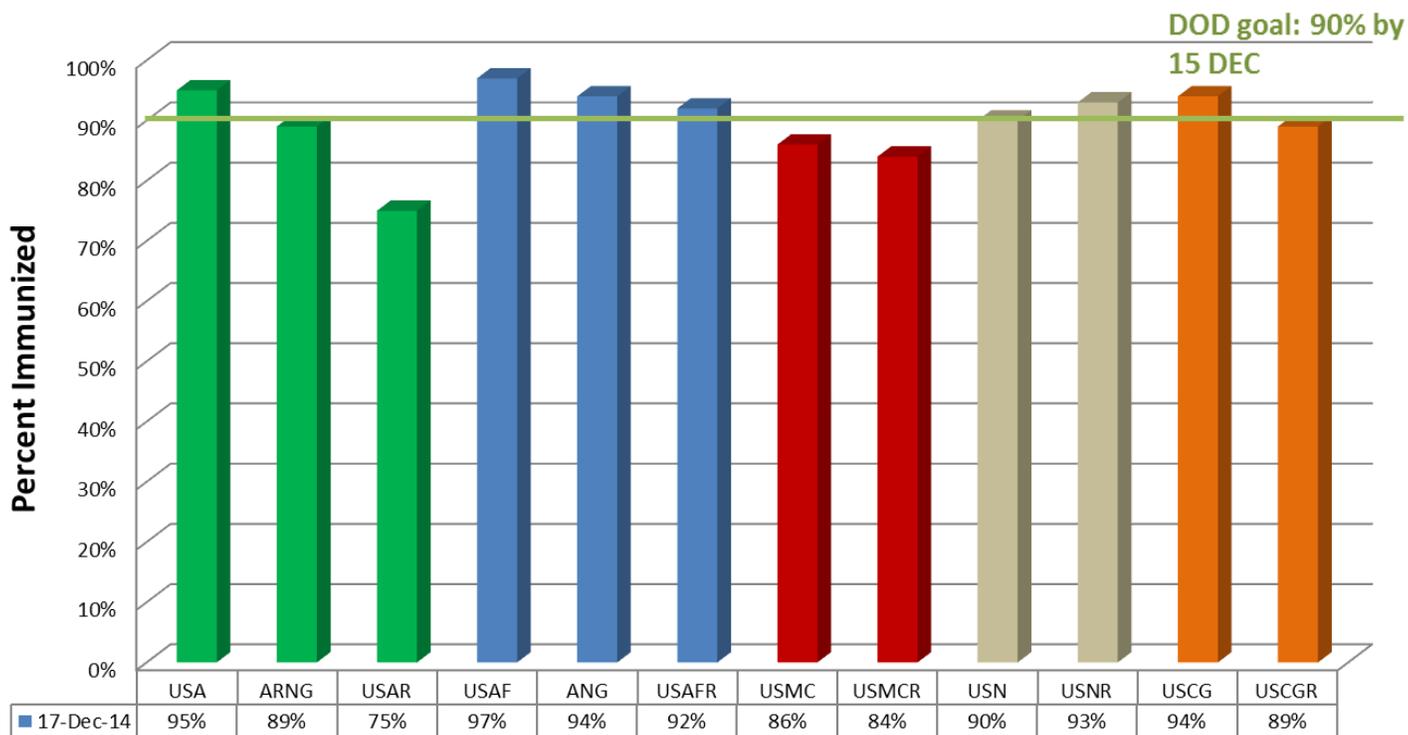
Countries marked in blue contain sentinel sites

DoD Global, Laboratory-Based, Influenza Surveillance Program

Graph 5. Influenza immunization status: Percent immunized by service‡



Graph 6. Influenza immunization status: Percent immunized by service‡



‡Courtesy of DHA Immunizations

DoD Global Laboratory-Based Influenza Surveillance Program

USAF School of Aerospace Medicine

2014 - 2015

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



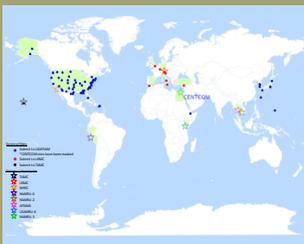
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For Laboratory Services
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Contributions to the CDC for National Influenza Surveillance

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://
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.



Distribution Statement A: Distribution is unlimited. 88ABW-2014-6003, 18 December 2014

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