DEPARTMENT OF DEFENSE (AFHSB)
## Seasonal Influenza Surveillance Summary
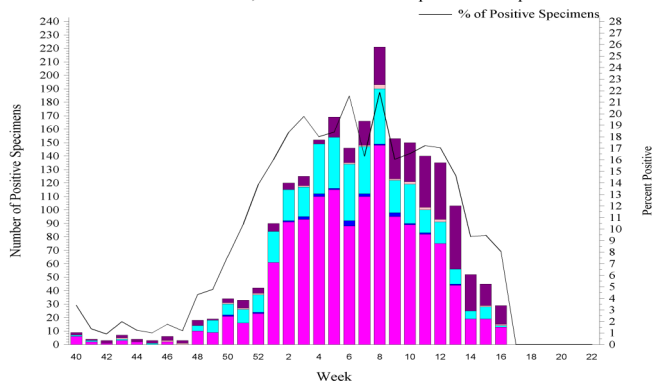
Northern Command -- Week 16 (16 Apr 2017—22 Apr 2017)

In NORTHCOM during week 16[1,2]

- Influenza activity remained minimal for the majority of the U.S.

- The percentage of outpatient visits due to ILI increased slightly and was above baseline and the previous season.

- The percentage of positive lab tests remained steady at 8.1% for service members and dropped to 13.6% for other beneficiaries.

- Three influenza hospitalizations (RMEs) among other beneficiaries were reported for week 16.

NORTHCOM Service Members, Influenza Activity and Virus Subtype, During the Last 2 Weeks

Flu Activity
- High
- Moderate
- Low
- Minimal
- Region

Flu Subtype
- A subtype na
- A H1
- A H3
- A B
- B
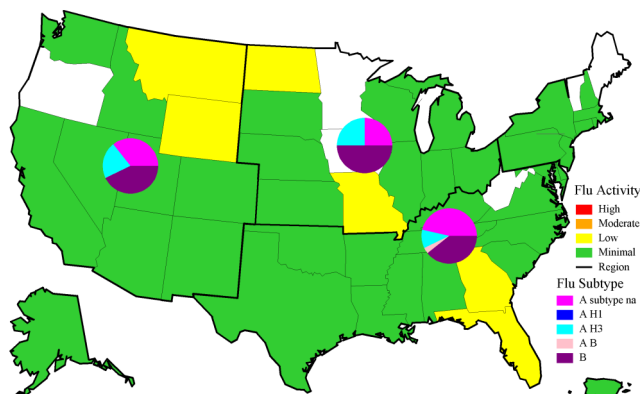
NORTHCOM Service Members, Influenza Positive Specimens Reported to AFHSB

NORTHCOM Beneficiaries, Influenza Positive Specimens Reported to AFHSB
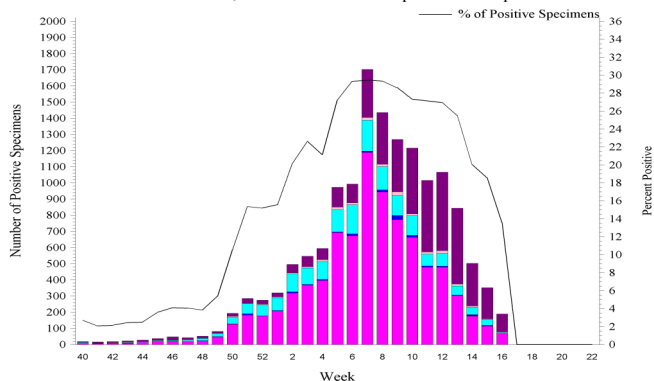
2016 – 2017 NORTHCOM Season Totals[1,2]

	A/H1N1	A/H3N2	A/Untyped	Flu B	AB	Overall % Positive
Service Members	21	422	1347	370	21	13.48
Dependents	141	1831	8512	3939	214	21.20

NORTHCOM Service Members, 2016-2017 and Previous 2 Influenza Seasons
ILI Outpatient Visits

Influenza Season
- 2016 Baseline
- 2016 -2017
- 2015 -2016
- 2014 -2015
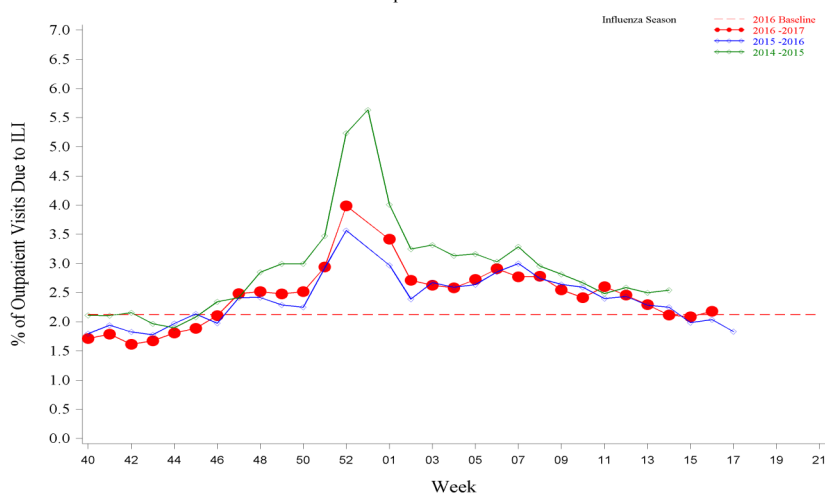
- NHRC laboratory-confirmed influenza cases, US Military Basic Trainees: As of Week 15

|	Week 15[3]				2016 – 2017 Recruit Season Totals[3]				
	A/H1N1	A/H3N2	A/unsubtyped	Flu B	A/H1N1	A/H3N2	A/unsubtyped	Flu B	No. Tested
Ft Benning				1		9		1	146
Ft Jackson						15		2	193
Ft Leonard Wood						6	1		44
NRTC Great Lakes						14		3	99
Lackland AFB					1			3	31
MCRD Parris Island						19		2	70
MCRD San Diego						20	1	2	182
CGTC Cape May					1	26		3	135
Total	0	0	0	1	2	109	2	16	900

European Command -- Week 16

In EUCOM during week 16.[4,5]

- Influenza activity was minimal across EUCOM.

- The percentage of outpatient visits due to ILI increased slightly, but remained below the previous season and baseline.

- The percentage of positive lab tests was 0.0% for service members and other beneficiaries for week 16.
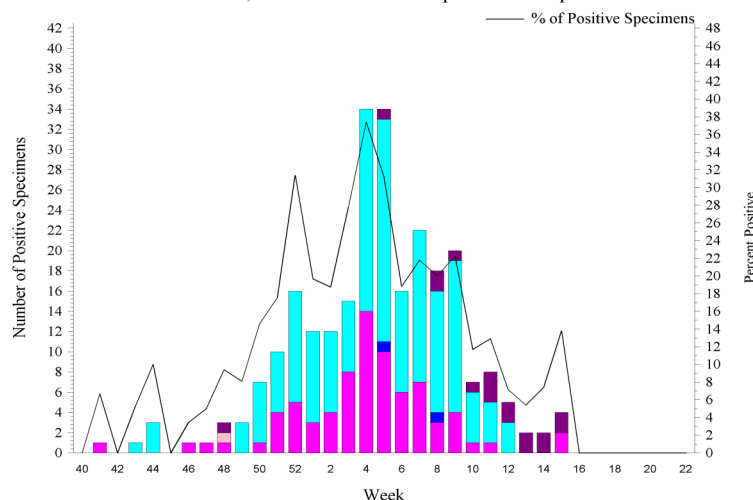
- A/H3N2 continued to predominate over A/H1N1.

EUCOM Service Members, Influenza Activity and Virus Subtype, During the Last 2 Weeks

Flu Activity
- High
- Moderate
- Low
- Minimal

Flu Subtype
- A subtype na
- A H1
- A H3
- A B
- B
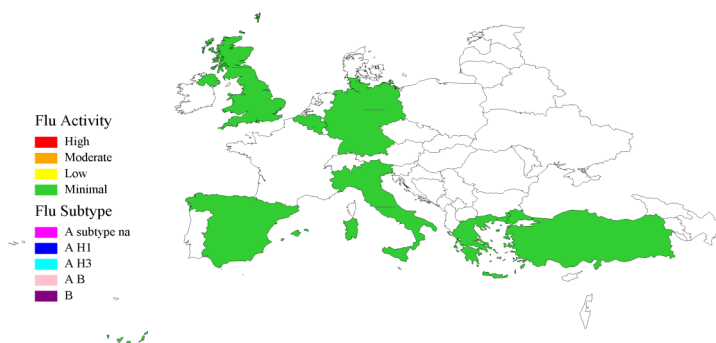
EUCOM Service Members, Influenza Positive Specimens Reported to AFHSB
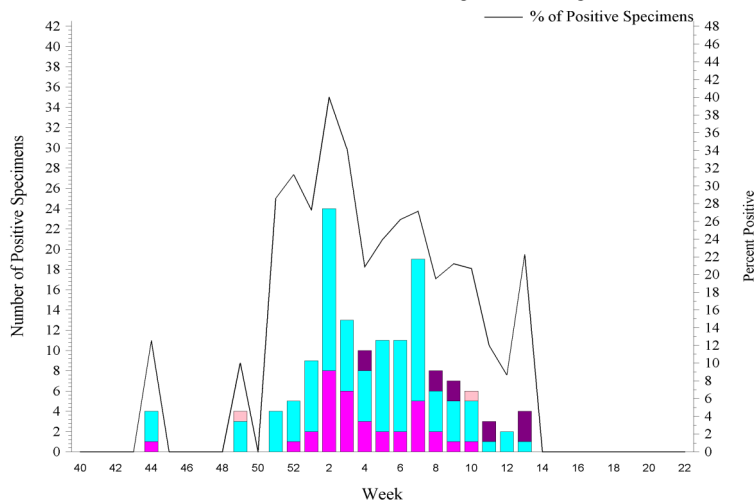
EUCOM Beneficiaries, Influenza Positive Specimens Reported to AFHSB

EUCOM Service Members, 2016-2017 and Previous 2 Influenza Seasons
ILI Outpatient Visits

Influenza Season
- 2016 Baseline
- 2016 -2017
- 2015 -2016
- 2014 -2015
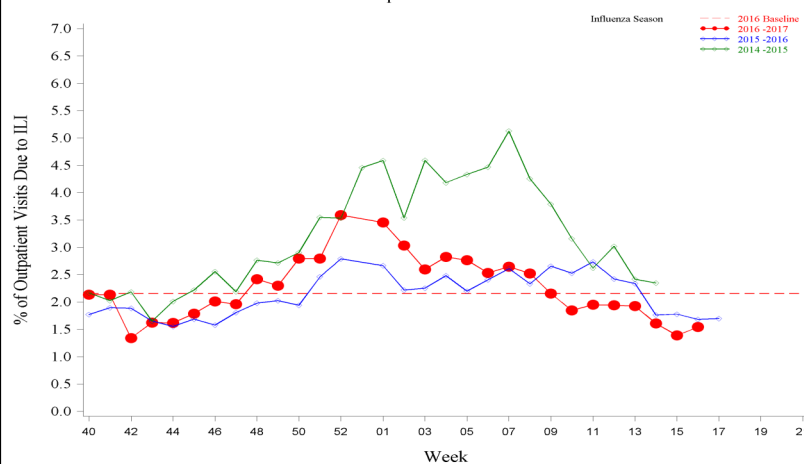
2016-2017 EUCOM Season Totals[1,4,5]						
	A/H1N1	A/H3N2	A/Untyped	Influenza B	AB	Overall % Positive
Service Members	0	97	34	11	2	18.75
Dependents	2	160	77	17	1	17.76

[1]AFHSB, [2]USAFSAM, [3]NHRC, [4]LRMC, [5]PHCR-E, [6]AFRIMS, [7]NMRC-A, [8]NAMRU-3, [9]NAMRU-6

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Pacific Command -- Week 16

In PACOM during week 16[1,6,7]

♦ Influenza activity was minimal across PACOM except for the ROK, which had low activity.

♦ The percentage of outpatient visits due to ILI increased slightly above the previous season, but remained below baseline.

♦ The percentage of positive lab tests decreased to 0.0% for service members and 7.4% for other beneficiaries during week 16.
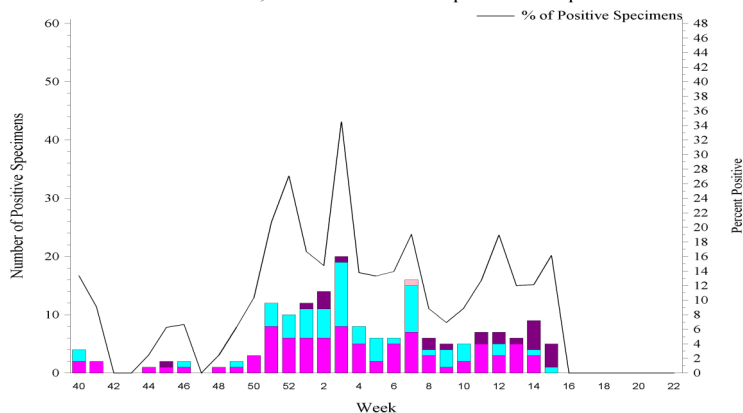
PACOM Service Members, Influenza Activity and Virus Subtype,During the Last 2 Weeks
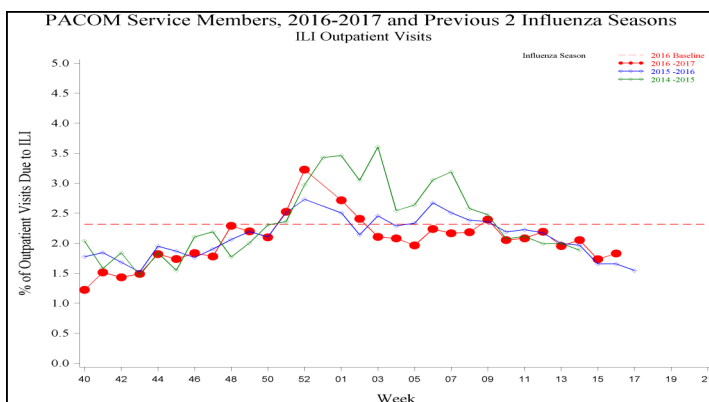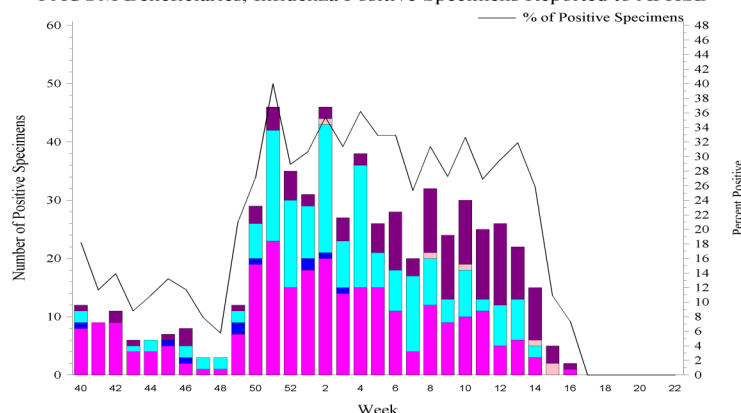South Korea and Japan

Flu Activity
- High
- Moderate
- Low
- Minimal

Flu Subtype
- A subtype na
- A H1
- A H3
- A B
- B
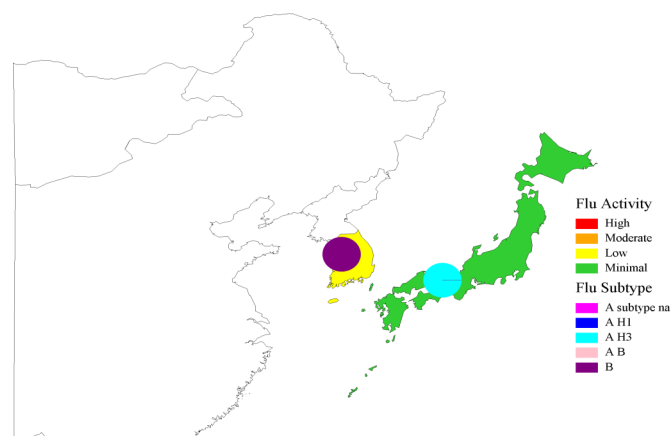
PACOM: Guam and Hawaii Influenza Activity and HL7 Test Positive (MAP: SM+BN, 2 wks)						
Area Name	Influenza Activity	HL7 Type				
		A(H1)	A(H3)	A Untyped	B	AB
Guam	Minimal	0	0	0	0	0
Hawaii*	Minimal	0	0	1	5	0
*Hawaii HL7 Type counts may include samples received from Guam, but tested in Hawaii						

PACOM Service Members, Influenza Positive Specimens Reported to AFHSB

PACOM Beneficiaries, Influenza Positive Specimens Reported to AFHSB

PACOM Service Members, 2016-2017 and Previous 2 Influenza Seasons
ILI Outpatient Visits

Influenza Season
- 2016 Baseline
- 2016-2017
- 2015-2016
- 2014-2015

2016-2017 PACOM Season Totals[1,6,7]						
	A/H1N1	A/H3N2	A/Untyped	Flu B	Flu AB	Overall % Positive
Service Members	0	60	87	23	1	12.67
Dependents	10	177	261	130	6	25.57

[1]AFHSB, [2]USAFSAM, [3]NHRC, [4]LRMC, [5]PHCR-E, [6]AFRIMS, [7]NMRC-A, [8]NAMRU-3, [9]NAMRU-6
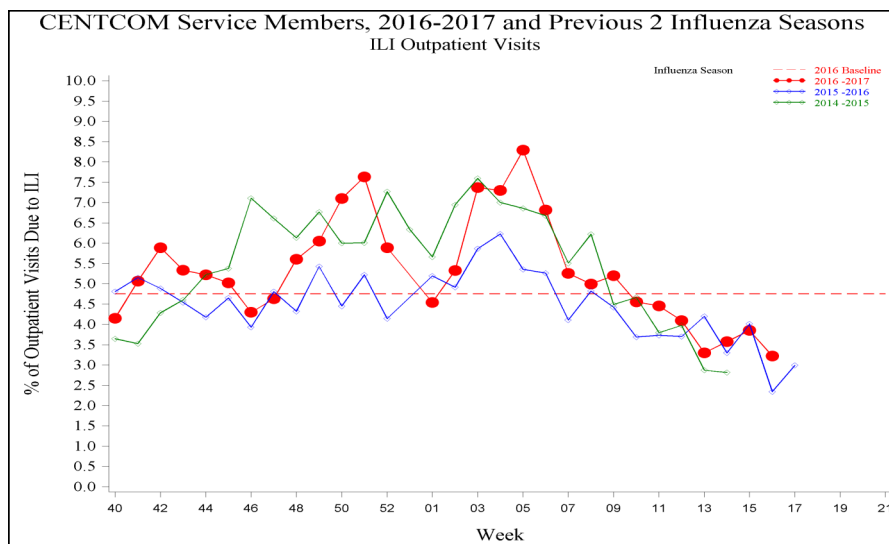
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Central and Africa Commands -- Week 16

In CENTCOM and AFRICOM during week 16[1,8]

- Influenza activity was minimal for locations with available data in CENTCOM and AFRICOM.

- The percentage of outpatient visits due to ILI decreased and remained below baseline and similar to the previous season.

CENTCOM, Influenza Activity,During the Last 2 Weeks

Flu Activity
High
Moderate
Low
Minimal

CENTCOM Service Members, 2016-2017 and Previous 2 Influenza Seasons
ILI Outpatient Visits

Southern Command -- Week 16

In SOUTHCOM during week 16[9]

- Influenza activity was minimal in Honduras this week based on DMSS data.

[1]AFHSB, [2]USAFSAM, [3]NHRC, [4]LRMC, [5]PHCR-E, [6]AFRIMS, [7]NMRC-A, [8]NAMRU-3, [9]NAMRU-6

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Description:

Maps, figures and tables are stratified by Combatant Commands (CCMD). The map provides a measure of influenza activity by state or country within each CCMD for the past two weeks for service members. Influenza activity is defined by the percentage of outpatient visits associated with an Influenza-like Illness (ILI) for each week compared to baseline levels of influenza activity. Additionally, a pie graph by US region or country is generated to display the distribution of influenza types and subtype identified from positive laboratory tests for the past two weeks combined.

Influenza activity: Percentage of Outpatient Visits Associated with ILI:

The percentage of all outpatient visits for ILI is calculated each week for all service members, regardless of component. These data are presented as a map of the past two weeks' activity and a figure to display the entire season's data compared to the two prior seasons and baseline. For the map, the activity level compares the mean reported percent of visits due to ILI for the past two weeks to the mean reported percent of visits due to ILI during baseline weeks. Baseline weeks are defined as non-influenza weeks (weeks 22-39) over the past 3 years.

There are four activity levels reported on each map. The activity level corresponds to the number of standard deviations (SD) below, at or above the mean for the current week compared to the mean of the baseline weeks. Activity levels are classified as minimal, low, moderate, and high. Minimal activity corresponds to an influenza percentage that is less than 2 SD above the mean. Low activity corresponds to an influenza percentage that is equal to or greater than 2 SD above the mean, but less than 4 SD above the mean. Moderate activity corresponds to an influenza percentage that is equal to or greater than 4 SD above the mean, but less than 6 SD above the mean. High activity corresponds to an influenza percentage that is equal to or greater than 6 SD above the mean.

Influenza Positive Specimens:

Lab results from PCR, viral culture, and rapid influenza assays are reported. Although the inclusion of rapid tests may underestimate the weekly and cumulative percent positive estimates due to false negatives, visibility of the positive rapid results provides valuable information for this surveillance report. Influenza types/subtypes are categorized as influenza A not subtyped (A subtype na), influenza A/H1 (A H1), influenza A/H3 (A H3), influenza A and B co-infection (A B), and influenza B (B).

Map: Each US region or country with available data contains a pie chart that displays the distribution of influenza types and subtypes for that area for the past two weeks combined. Two weeks of data are combined instead of using just the current week's data due to delays in reporting of laboratory results.

Figure and Table: Each week, using the total number of influenza laboratory tests performed and the positive test results, the proportions positive for each serotype of influenza are calculated for service members and dependents separately.

Data Sources and Case Definitions:

Medical encounter and demographic data from the Armed Forces Health Surveillance Branch's (AFHSB) Defense Medical Surveillance System (DMSS) are used to generate this report. In addition, health-level 7 (HL-7) format laboratory data is provided by the Navy and Marine Corps Public Health Center (NMCPHC) EpiData Center Division. For the past seasons and baseline calculations, ICD-9 codes from outpatient encounters are used to identify influenza activity. The outcome of influenza activity based on ICD-9 codes is defined using the combined codes for ILI (79.99, 382.9, 460, 461.9, 465.8, 465.9, 466.0, 486, 487.0, 487.1, 487.8, 488, 490, 780.6, or 786.2). For the current season, ICD-10 codes from outpatient encounters are used to identify influenza activity. The outcome of influenza activity based on ICD-10 codes is defined using the combined codes for ILI (B97.89, H66.9, H66.90, H66.91, H66.92, H66.93, J00, J01.9, J01.90, J06.9, J09, J09.X, J09.X1, J09.X2, J09.X3, J09.X9, J10, J10.0, J10.00, J10.01, J10.08, J10.1, J10.2, J10.8, J10.81, J10.82, J10.83, J10.89, J11, J11.0, J11.00, J11.08, J11.1, J11.2, J11.8, J11.81, J11.82, J11.83, J11.89, J12.89, J12.9, J18, J18.1, J18.8, J18.9, J20.9, J40, R05, R50.9). An individual can only be counted as a case once per week.

NORTHCOM Regions:

The regions on the NORTHCOM map (bold, black outlines) are defined using the four US Census regions, with the exception of Hawaii and Guam which are a part of PACOM. *Northeast:* Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, New Jersey, New York, Pennsylvania, Puerto Rico, and the U.S. Virgin Islands. *South:* Delaware, the District of Columbia, Maryland, Virginia, West Virginia, Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Arkansas, Louisiana, Texas., and Oklahoma. *Midwest:* Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin, Iowa, Kansas, Missouri, Nebraska, North Dakota, and South Dakota. *West:* New Mexico, Colorado, Montana, Utah, Wyoming, Arizona, California, Nevada, Alaska, Idaho, Oregon, and Washington.

(All data are preliminary and subject to change as updated data is received)

[1]AFHSB, [2]USAFSAM, [3]NHRC, [4]LRMC, [5]PHCR-E, [6]AFRIMS, [7]NMRC-A, [8]NAMRU-3, [9]NAMRU-6

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