



Cumulative Results

| | |
|-----------|--------|
| Locations | 97 |
| Collected | 11,550 |
| Tested | 11,425 |

Influenza A 2,613

| | |
|----------------------------|-------|
| A(H1N1)pdm09 | 534 |
| A(H1N1)pdm09 Coinfection | 47 |
| A(H1N1)pdm09 & A(H3N2) | 3 |
| A(H1N1)pdm09 & B | 8 |
| A(H3N2) | 1,800 |
| A(H3N2) Coinfection | 190 |
| A(H3N2) & B | 9 |
| A/not subtyped | 19 |
| A/not subtyped Coinfection | 3 |

Influenza B* 1,422

| | |
|-----------------|-------|
| B | 1,313 |
| B & Coinfection | 109 |

Other Respiratory Pathogens 3,638

| | |
|--------------------------------------|-------|
| Adenovirus | 130 |
| <i>Chlamydomphila pneumoniae</i> | 26 |
| Coronavirus | 636 |
| Human Bocavirus | 28 |
| Human Metapneumovirus | 420 |
| <i>Mycoplasma pneumoniae</i> | 42 |
| Parainfluenza | 222 |
| RSV | 546 |
| Rhinovirus/Enterovirus | 1,154 |
| Non-influenza Viral Coinfections | 423 |
| Non-influenza Bacterial Coinfections | 11 |
| -C. pneumo coinfections (4) | |
| -M. pneumo coinfections (7) | |

No Pathogen Detected 3,752

Results are preliminary and may change as more results are finalized.
*Influenza B lineages and specimens submitted for sequencing only will be reported in the periodic molecular sequencing reports.

Respiratory Highlights

13 - 26 May 2018 (Surveillance Weeks 20 & 21)

- During 13 - 26 May 2018, a total of 88 specimens were collected and received from 31 locations. Results were finalized for 80 specimens from 30 locations. The percent influenza positive for Week 20 was 5%. There were no positive influenza specimens detected during Week 21. The influenza percent positive for the season is approximately 35%.

| Surveillance Week | B | B & Rhino/Entero | Total |
|-------------------|---|------------------|-------|
| Week 20 | 2 | 1 | 3 |
| Total | 2 | 1 | 3 |

- According to the World Health Organization (WHO), the first case of Middle East Respiratory Syndrome (MERS-CoV) to occur in the United Arab Emirates (UAE) this year has been reported. This case presented to the hospital with a fever, cough, and shortness of breath on 13 May 2018. The patient, who has underlying conditions that include hypertension and interstitial lung disease, still remains in the hospital but is in stable condition. It is reported that the patient recently traveled to the Kingdom of Saudi Arabia and owns a camel farm that he attends to every day. People who have been in contact with this patient have been identified and are being monitored. The Communicable Disease Department in UAE are working with animal authorities to conduct camel testing at the patient's farm ([World Health Organization](#), cited 30 May 2018).

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DoD Global Respiratory Pathogen Surveillance Program

Table 1. Finalized results by region and location for specimens collected during Weeks 20 & 21

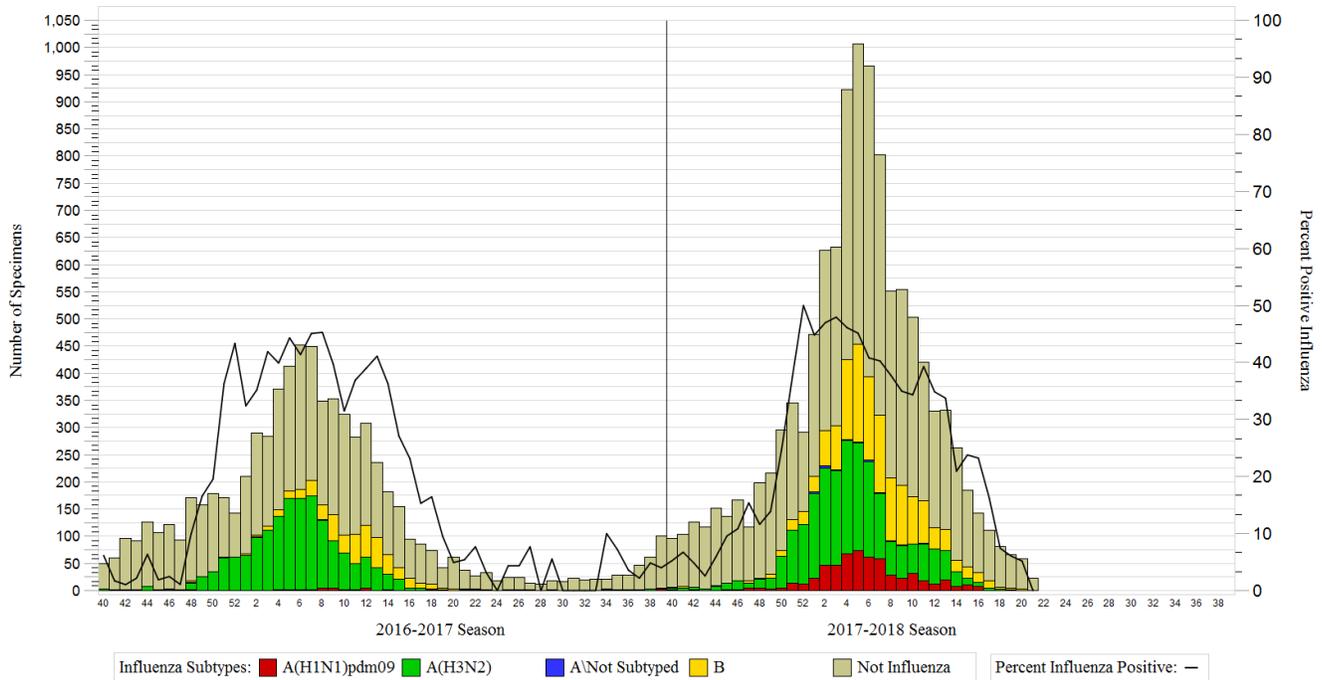
| Region* | | B | B & Rhino/Enterovirus | Adenovirus | HBoV | hMPV | Parainfluenza | RSV | Rhinovirus/Enterovirus | Non-Influenza Viral Coinfection | No Pathogen | Total |
|--------------|---------------------------|----------|-----------------------|------------|----------|----------|---------------|----------|------------------------|---------------------------------|-------------|-----------|
| EUCOM | Landstuhl RM C, Germany | - | - | 1 | - | - | - | - | 2 | - | 4 | 7 |
| | NSA Naples, Italy | - | - | 1 | - | - | - | - | - | - | 1 | 2 |
| | Ramstein AB, Germany | - | - | - | - | 1 | 1 | - | 1 | - | 2 | 5 |
| | USAG Grafenwoehr, Germany | - | - | - | - | - | - | - | 1 | - | - | 1 |
| | USAG Stuttgart, Germany | - | - | - | - | - | 1 | - | - | - | 1 | 2 |
| | USAG Wiesbaden, Germany | - | - | - | - | - | - | - | - | - | 2 | 2 |
| | Vilseck AHC, Germany | - | - | - | - | - | - | - | - | - | 1 | 1 |
| PACOM | Kunsan AB, South Korea | - | - | - | - | - | - | - | - | - | 2 | 2 |
| | Yokota AB, Japan | - | - | - | - | - | - | - | - | - | 1 | 1 |
| Region 2 | Ft Drum, NY | - | - | - | 1 | - | - | - | 2 | - | 1 | 4 |
| | USMA - West Point, NY | - | - | - | - | - | - | - | 1 | - | 1 | 2 |
| Region 3 | Dover AFB, DE | - | - | - | - | - | 1 | - | - | - | - | 1 |
| | JB Langley-Eustis, VA | - | - | 1 | - | - | 1 | - | 2 | 2 | 5 | 11 |
| Region 4 | Maxwell AFB, AL | - | - | - | - | - | - | - | 1 | - | 1 | 2 |
| | Moodys AFB, GA | - | - | - | - | - | - | - | 1 | - | - | 1 |
| | Shaw AFB, SC | - | - | - | - | - | - | - | - | - | 2 | 2 |
| Region 5 | Wright-Patterson AFB, OH | - | - | - | - | - | 2 | - | - | - | 3 | 5 |
| Region 6 | Altus AFB, OK | - | - | - | - | - | - | - | - | - | 1 | 1 |
| | Kirtland AFB, NM | - | - | - | 1 | - | 2 | - | - | - | - | 3 |
| | Laughlin AFB, TX | - | - | - | - | - | - | - | 1 | - | 1 | 2 |
| | Little Rock AFB, AR | - | - | - | - | - | - | - | 1 | - | - | 1 |
| | Sheppard AFB, TX | 2 | 1 | - | - | 1 | 1 | 1 | - | 1 | 2 | 9 |
| | Tinker AFB, OK | - | - | - | - | - | 1 | - | 1 | - | - | 2 |
| Region 7 | Offutt AFB, NE | - | - | - | - | - | - | - | - | - | 1 | 1 |
| Region 8 | Ellsworth AFB, SD | - | - | - | - | - | 1 | - | 1 | - | 1 | 3 |
| | Hill AFB, UT | - | - | - | - | - | - | - | 2 | - | - | 2 |
| | Minot AFB, ND | - | - | - | - | - | - | - | 1 | 1 | - | 2 |
| | Peterson AFB, CO | - | - | - | - | - | 1 | - | - | - | - | 1 |
| Region 9 | Davis-Monthan AFB, AZ | - | - | - | - | - | 1 | - | - | - | - | 1 |
| | Nellis AFB, NV | - | - | - | - | - | - | - | - | - | 1 | 1 |
| Total | | 2 | 1 | 3 | 2 | 2 | 13 | 1 | 18 | 4 | 34 | 80 |

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

Cumulative Laboratory Results

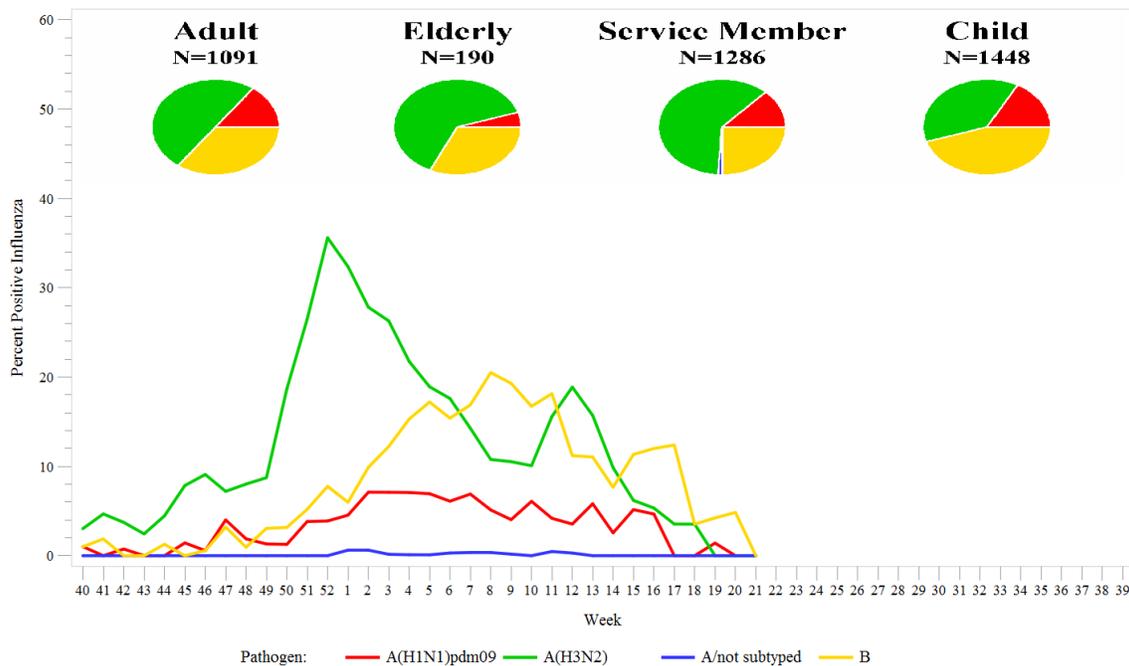
[Link to cumulative results by region and location](#)

Graph 1. Percent influenza positive by week: 2016-2017 surveillance year and through Week 21 of the 2017-2018 surveillance year



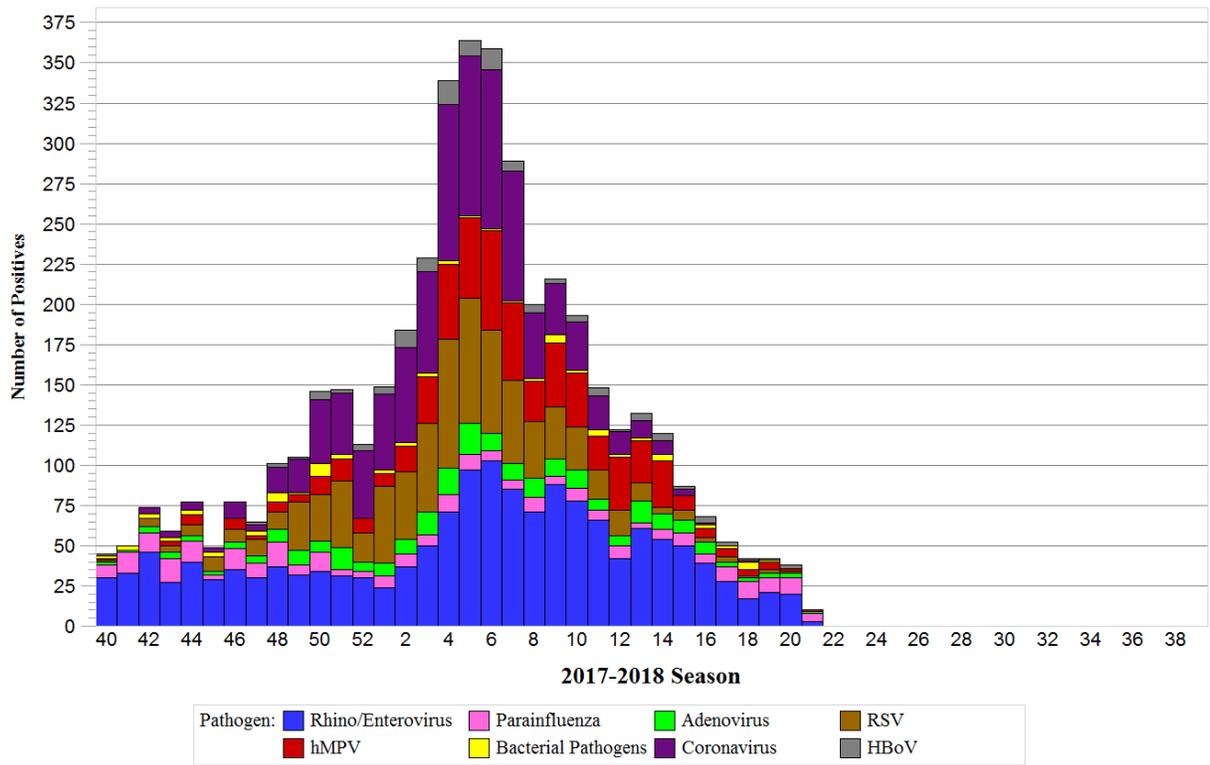
Note: Dual influenza coinfections are excluded from this graph.

Graph 2. Percent positive for influenza through ILI trends by subtype and beneficiary status through Week 21 of the 2017-2018 surveillance year

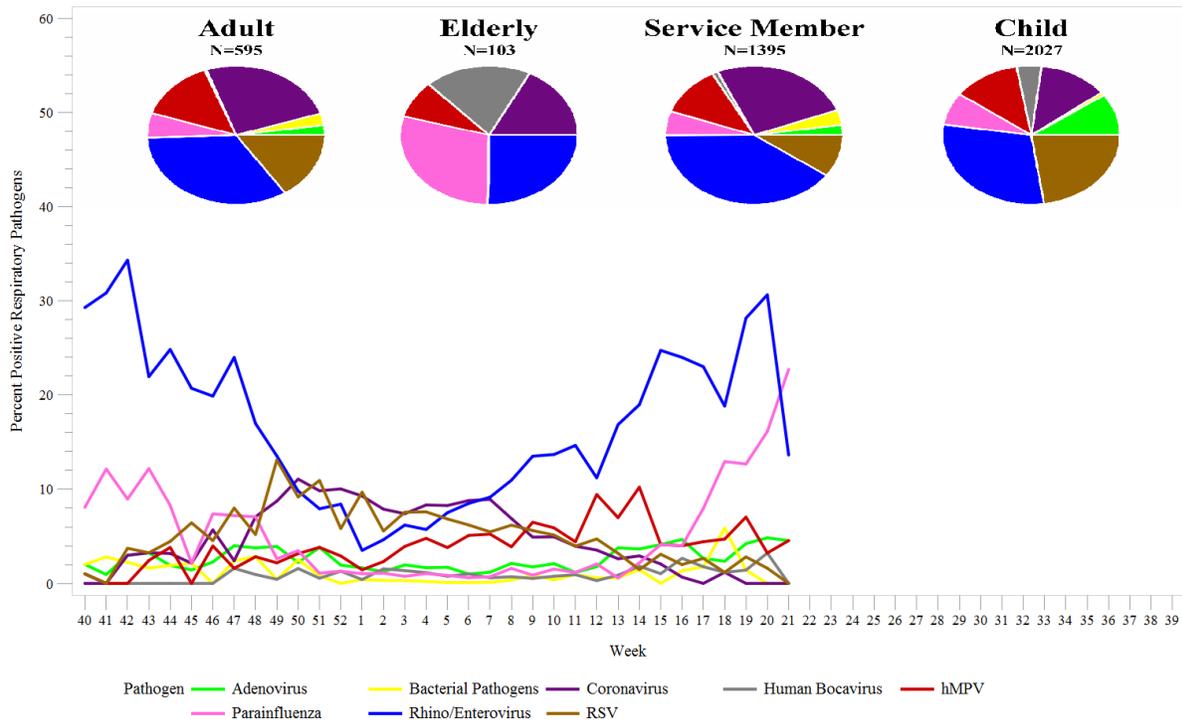


Note: Dual influenza coinfections are excluded from this graph.

Graph 3. Other positive respiratory pathogens through Week 21 of the 2017-2018 surveillance year



Graph 4. Percent positive for respiratory pathogens through ILI trends by week and beneficiary status through Week 21 of the 2017-2018 surveillance year



Graph 5. Vaccination status by beneficiary type through Week 21 of the 2017-2018 surveillance year (excluding 'Unknown' beneficiary type)

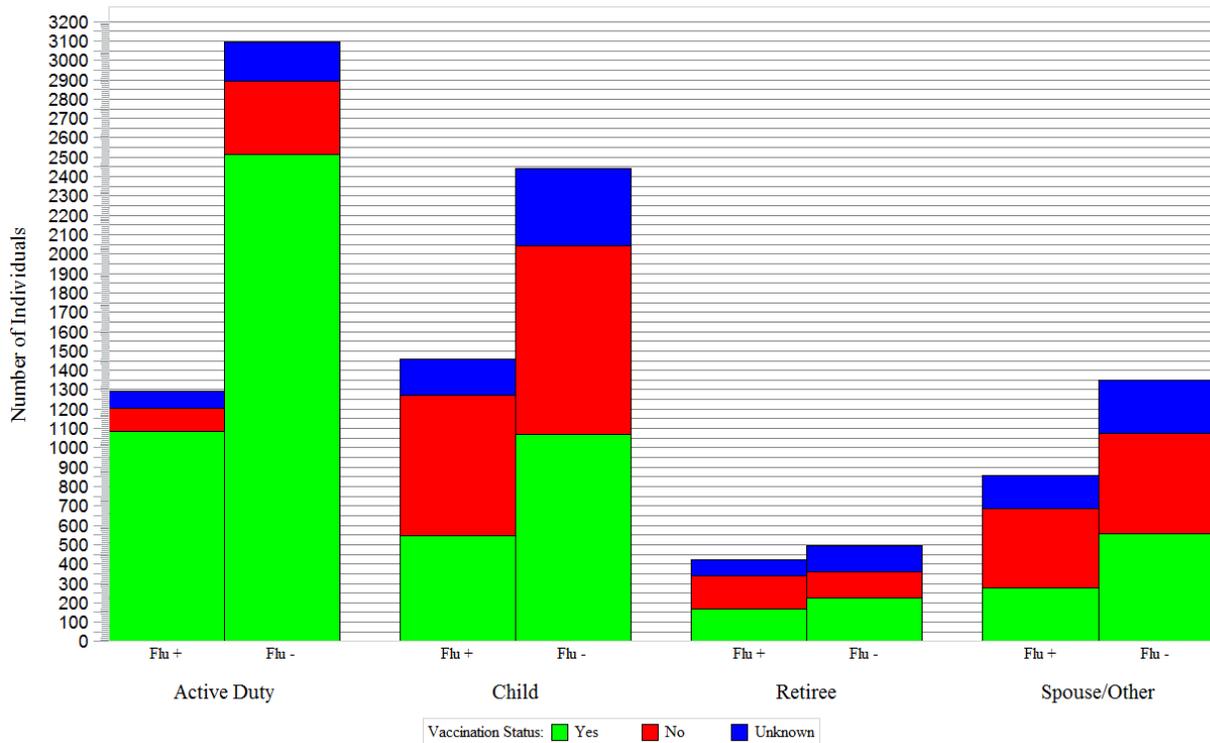
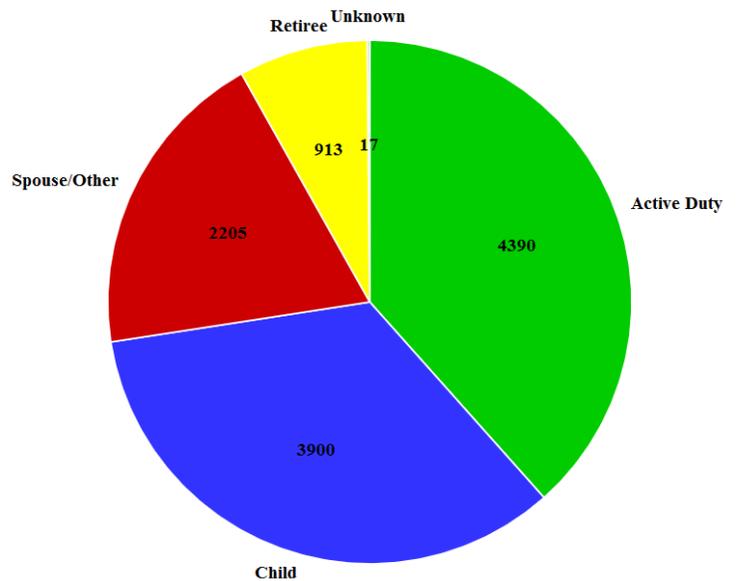


Table 2. ILI by age group through Week 21 of the 2017-2018 surveillance year

| Age Group | Frequency | Percent |
|-----------|-----------|---------|
| 0-5 | 2256 | 19.75 |
| 6-9 | 756 | 6.62 |
| 10-17 | 961 | 8.41 |
| 18-24 | 1744 | 15.26 |
| 25-44 | 3689 | 32.29 |
| 45-64 | 1475 | 12.91 |
| 65+ | 544 | 4.76 |

Graph 6. ILI by beneficiary status through Week 21 of the 2017-2018 surveillance year

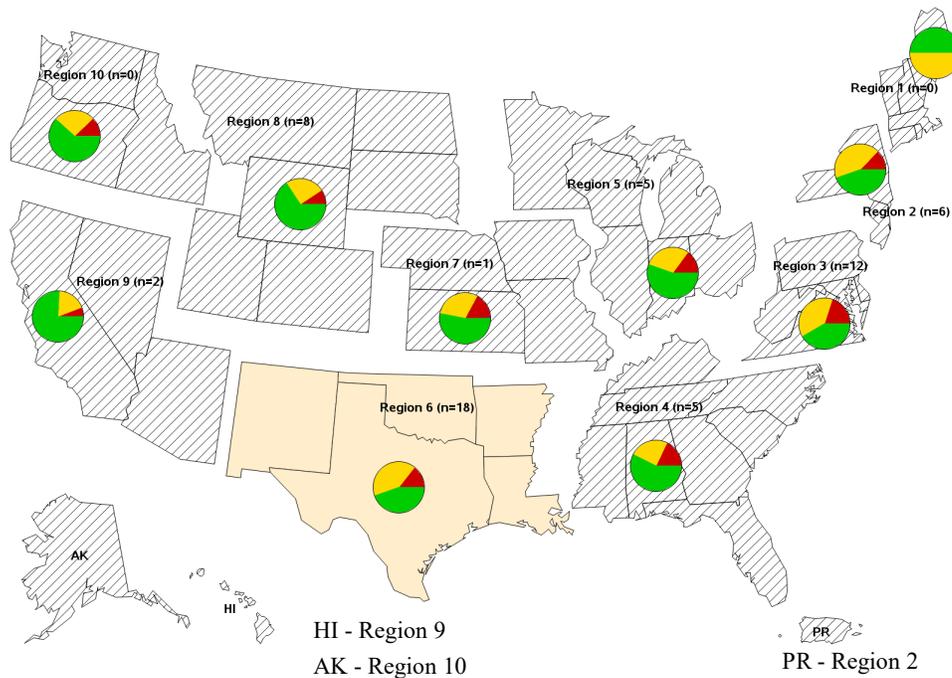


Demographic Summary

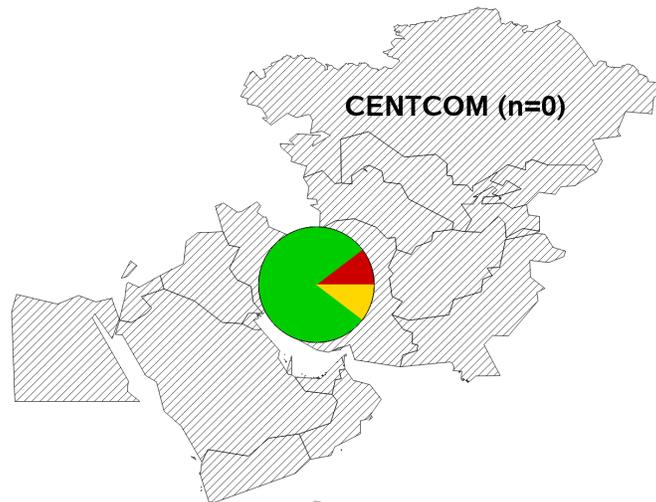
Of 11,425 ILI cases, 4,390 are service members (38.4%), 3,900 are children (34.1%), 2,205 are spouse/other beneficiaries (19.3%), 913 are retirees (8.0%), and 17 are unknown (0.2%). The median age of ILI cases with known age (n=11,425) is 24 (range 0, 98).

DoD Global Respiratory Pathogen Surveillance Program

Map 1. Influenza subtypes and activity level by U.S. region through Week 21 of the 2017-2018 surveillance year



Map 2. Influenza subtypes and activity level for CENTCOM through Week 21 of the 2017-2018 surveillance year



Legend

Influenza Activity - Past 2 weeks (n = # of submissions)

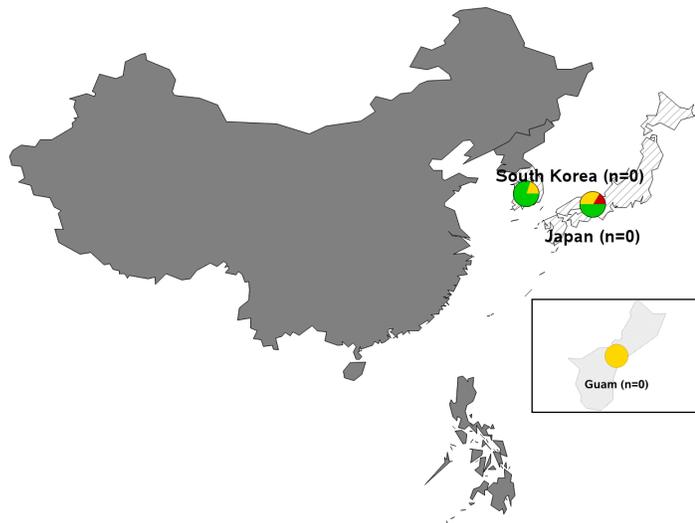
-  No activity (0%+) or no submissions
-  Low (<25%+)
-  Moderate (25-49%+)
-  High (>50%+)

Influenza Results - Cumulative

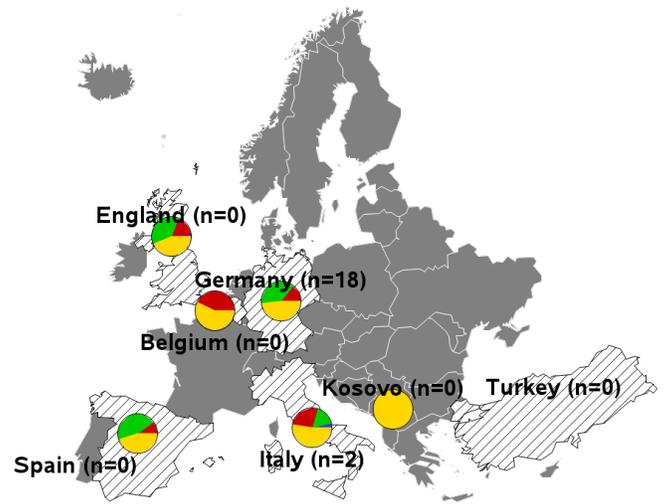
-  Influenza A(H3N2)
-  Influenza A(H1N1)pdm09
-  Influenza B
-  Influenza A/not subtyped

DoD Global Respiratory Pathogen Surveillance Program

Map 3. Influenza subtypes and activity level by country through Week 21 of the 2017-2018 surveillance year (Pacific)



Map 4. Influenza subtypes and activity level by country through Week 21 of the 2017-2018 surveillance year (Europe)



Note - Countries shaded in gray do not contain submitting sites and are only displayed for geographical perspective.

Legend

Influenza Activity - Past 2 weeks (n = # of submissions)

-  No activity (0%+) or no submissions
-  Low (<25%+)
-  Moderate (25-49%+)
-  High (>50%+)

Influenza Results - Cumulative

-  Influenza A(H3N2)
-  Influenza A(H1N1)pdm09
-  Influenza B
-  Influenza A/not subtyped

Table 3. Cumulative specimens submitted for sequencing only by location through Week 21 of the 2017-2018 surveillance year

| Location | Number Received | Number Tested |
|--------------------------------|-----------------|---------------|
| Al Udeid AB, Qatar | 1 | 0 |
| Aviano AB, Italy | 8 | 1 |
| Brian Allgood ACH, South Korea | 184 | 0 |
| Camp Bondsteel, Kosovo | 1 | 0 |
| Ft Bliss, TX | 7 | 0 |
| Ft Bragg, NC | 5 | 2 |
| Ft Hood, TX | 6 | 5 |
| JB Elmendorf-Richardson, AK | 2 | 2 |
| Keesler AFB, MS | 277 | 123 |
| Landstuhl RMC, Germany | 178 | 8 |
| NA S Sigonella, Italy | 22 | 0 |
| NAVSTA Rota, Spain | 13 | 1 |
| NCRM - Walter Reed NMMC, MD | 14 | 2 |
| NMC Portsmouth, VA | 11 | 0 |
| NSA Naples, Italy | 55 | 0 |
| Nellis AFB, NV | 1 | 1 |
| RAF Lakenheath, England | 40 | 8 |
| Ramstein AB, Germany | 47 | 3 |
| SAMMC, TX | 851 | 90 |
| SHAPE, Belgium | 10 | 1 |
| Spangdahlem AB, Germany | 3 | 0 |
| Tripler AMC, HI | 39 | 3 |
| USAG Baumholder, Germany | 9 | 1 |
| USAG Grafenwoehr, Germany | 43 | 0 |
| USAG Hohenfels, Germany | 1 | 0 |
| USAG Kaiserslautern, Germany | 29 | 0 |
| USAG Stuttgart, Germany | 52 | 4 |
| USAG Vicenza, Italy | 35 | 0 |
| USAG Wiesbaden, Germany | 43 | 1 |
| Vilseck AHC, Germany | 60 | 1 |
| Total | 2047 | 257 |

DoD Global Respiratory Pathogen Surveillance Program

Background

The DoD-wide program was established by the Global Emerging Infections Surveillance and Response System (GEIS) in 1997. The surveillance network includes the Defense Health Agency/Armed Forces Health Surveillance Branch—Air Force Satellite Cell (DHA/AFHSB-AF) and 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 (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 GEIS Operations, a Division of the Armed Forces Health Surveillance Branch (AFHSB).

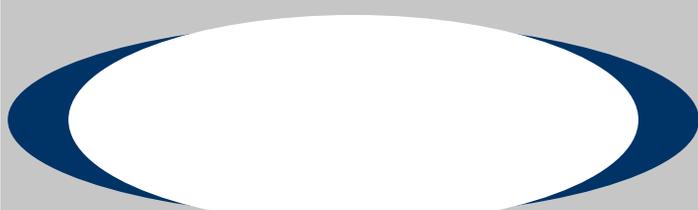
Sentinel Site Surveillance

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. DHA/AFHSB-AF and USAFSAM manages the surveillance program that includes global surveillance among DoD beneficiaries at 79 sentinel sites (including deployed locations) and many non-sentinel sites (please see map below). Collaborating partner laboratories include five DoD overseas medical research laboratories (AFRIMS, NAMRU-2, NAMRU-3, NAMRU-6, USAMRU-K) who collect specimens from local residents in surrounding countries that may not otherwise be covered in existing surveillance efforts. Additionally, the Naval Health Research Center (NHRC) in San Diego, CA collects specimens from DoD recruit training centers and conducts surveillance along the Mexico border.

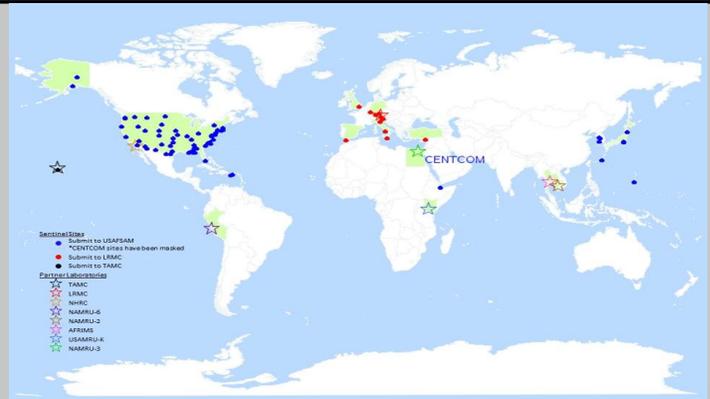
Landstuhl Regional Medical Center (LRMC) and Tripler Army Medical Center (TAMC) assist the program by processing DoD specimens for the EUCOM region and the State of Hawaii, respectively. EUCOM respiratory data is obtained from LRMC and incorporated into our weekly report. This process seeks to provide more timely results and efficient transport of specimens.

Available on our website (listed below) is a list of previous weekly surveillance reports, program information (including an educational briefing and instruction pamphlets for clinic staff), and a dashboard containing respiratory data for our sentinel sites.

Errata:



For Public Health Services
937-938-3196; DSN 798-3196
For Laboratory Services
937-938-4140; DSN 798-4140
USAFSAM.PHRFlu@us.af.mil



Collaborating Partners

In addition to all participating DoD military sentinel sites, collaborating laboratories and medical centers (described above) may be further understood by reviewing the sites' website. Click on the sites' icon to be directed to their webpage.

