

Influenza Situation Report: 2017-2018 Season

Department of the Navy

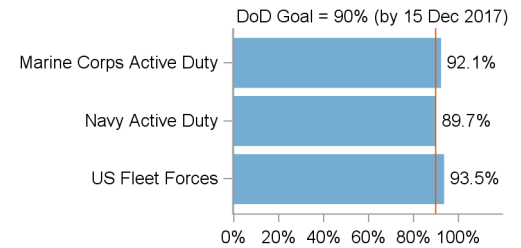


Week 1 (31 Dec 2017 - 06 Jan 2018)

Weekly Highlights:

- * Influenza activity in the DON is **elevated** and increasing. Laboratory-positive cases, dispensed AVs, and percent of ILI outpatient visits are all **elevated**.
- * Severity indicators are **elevated**, exceeding both the surveillance threshold and the maximum number of inpatient cases observed within the past three years. Twenty-two inpatient laboratory-positive cases occurred and seventy-two antivirals were dispensed from an inpatient setting.
- * A shortage of rapid test kits at one MTF was reported, potentially impacting laboratory indicators.

Active Duty Vaccination Rates, 08 Jan 2018

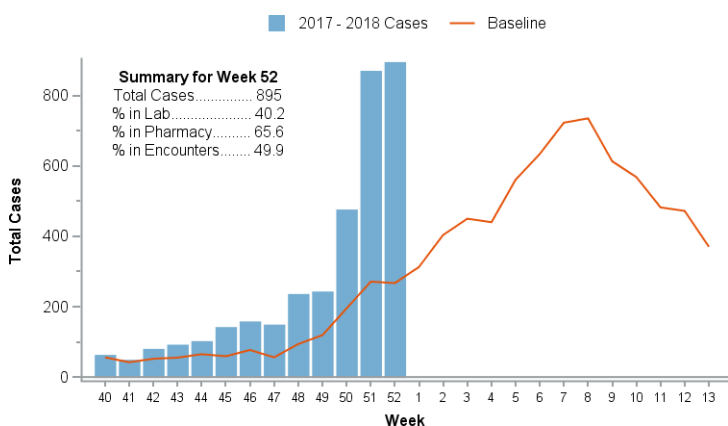


Influenza Surveillance Indicators

OVERVIEW			Trend	Activity Level
Laboratory Cases	N	371	↑	Elevated
Dispensed Antivirals	N	798	↑	Elevated
ILI Outpatient Visits	%	7.8	↑	Elevated
SEVERITY			Trend	Activity Level
Inpatient Laboratory Cases	N	22	↓	Elevated
Inpatient Dispensed Antivirals	N	72	↑	Elevated
ACTIVE DUTY AND RECRUITS			Trend	Activity Level
Active Duty Laboratory Cases	N	66	↑	Elevated
Active Duty Dispensed Antivirals	N	122	↑	Elevated
Recruit Laboratory Cases	N	8	↓	Elevated
Recruit Dispensed Antivirals	N	13	↑	Normal

Overall Burden (Data Lagged, Week 52)

DON Total Influenza Cases from Laboratory, Pharmacy and Encounter Data



Supporting Surveillance

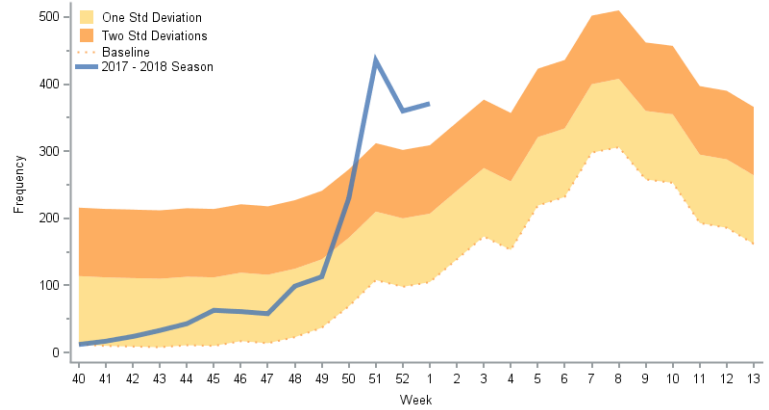
- * **DOD Global Laboratory-based Influenza Surveillance (USAFSAM).**
Week 51 & 52 highlights:
 - * 136 positive influenza A specimens (123 H3N2, 13 H1N1) and 23 positive influenza B specimens.
 - * Access the full report [here](#).
- * **Operational Infectious Diseases (OID) Weekly Surveillance Report (NHRC).**
03JAN2018 report highlights:
 - * Cluster of influenza A/H3 cases at MCRD Parris Island in mid December; seems to have abated by late December.
 - * Access the most recent NHRC OID Surveillance reports [here](#).

Laboratory Surveillance

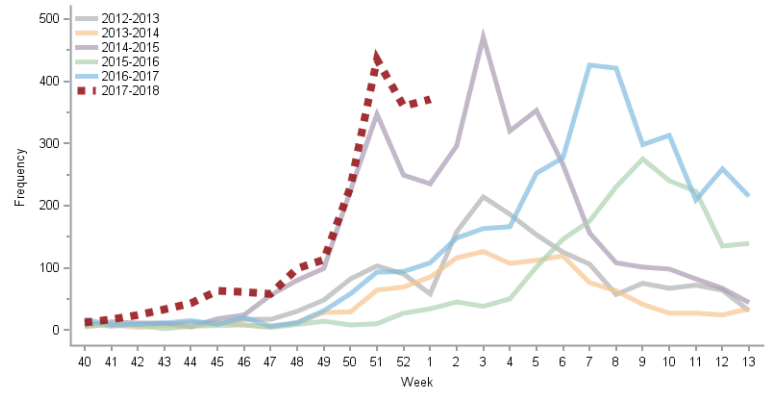
- * **Burden:** Laboratory activity is elevated, exceeding two standard deviations above baseline levels. The number of laboratory-positive cases (N=371) increased over the prior week.
- * **Specimens:** Overall percent positivity is 29.6%, with 84.4% of cases identified as influenza A.
- * **Severity:** Twenty-two inpatient laboratory-positive case were identified this week among family members (N=13), retirees (N=7), and AD service members (N=2). Seventeen cases occurred at NMC San Diego.
- * **Age:** Children ages 0-4 had the highest rate of laboratory-positive influenza cases (N=57). Adults age 45+ had the second highest rate (N=141).
- * **Location:** NH Camp Pendleton (N=74), NMC San Diego (N=69), and NH Pensacola (N=32) had the highest number of laboratory-positive influenza cases for the week.

Data sources: HL7-formatted CHCS chemistry and microbiology databases. Denominators for rates are from M2 enrollment records.

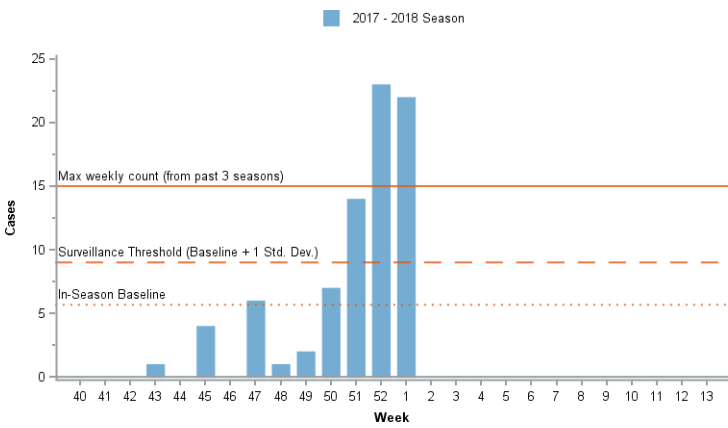
DON Laboratory-Positive Influenza Cases and Seasonal Baseline, 2017-2018 Season



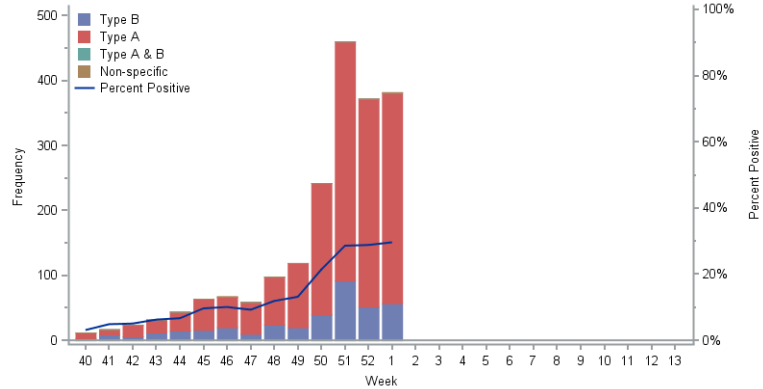
DON Laboratory-Positive, Seasonal Comparison, 2012-2018



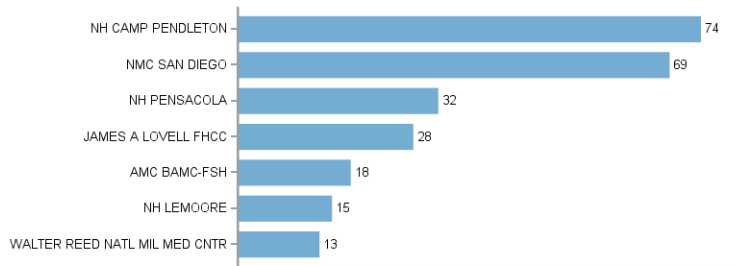
DON Inpatient Laboratory Cases (Severity)



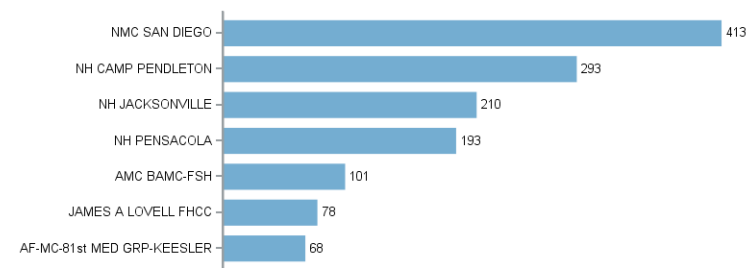
DON Laboratory-Positive Influenza Specimens, by Type



Top MTFs , Laboratory-Positive Cases, Week 1

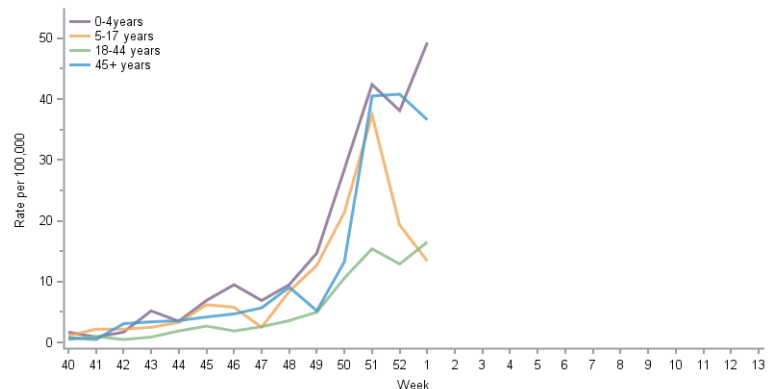


Top MTFs , Laboratory-Positive Cases, 2017-2018 Season



Note: Season counts are since Week 37.

DON Laboratory-Positive Case Rates by Age Group

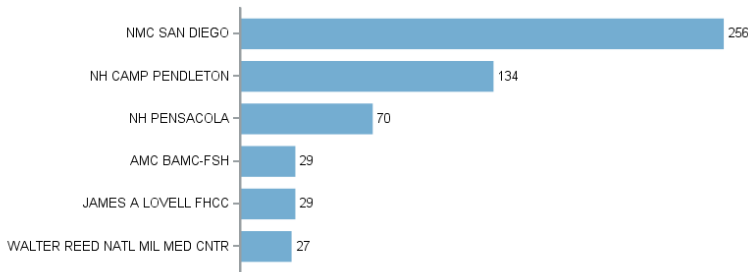


Antiviral Surveillance

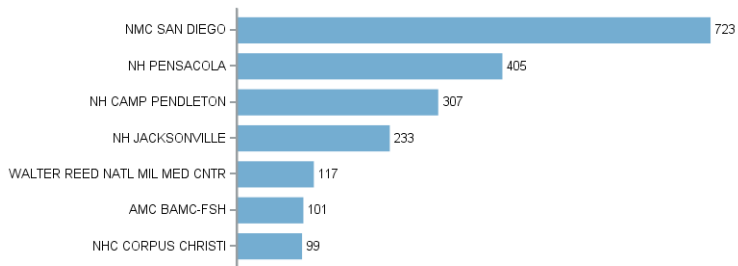
- * **Burden:** Dispensed AVs (N=798) are elevated, exceeding two standard deviations above baseline levels. The number of dispensed AVs increased for the fourth week, with a 36.9% increase over the prior week.
- * **Severity:** Seventy-two inpatient AVs were dispensed this week to family members (N=37), retirees (N=31), former spouses (N=3), and AD service members (N=1).
- * **Types:** All AVs dispensed were Oseltamivir .
- * **Location:** NMC San Diego (N=256), NH Camp Pendleton (N=134), and NH Pensacola (N=70) had the highest weekly number of dispensed AVs.

Data sources: HL7-formatted CHCS pharmacy databases. Denominators for rates are from M2 enrollment records.

Top MTFs, Dispensed Antivirals, Week 1

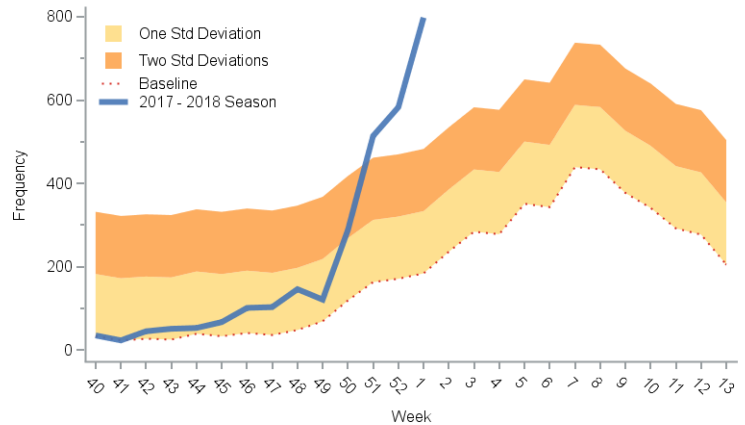


Top MTFs, Dispensed Antivirals, Season

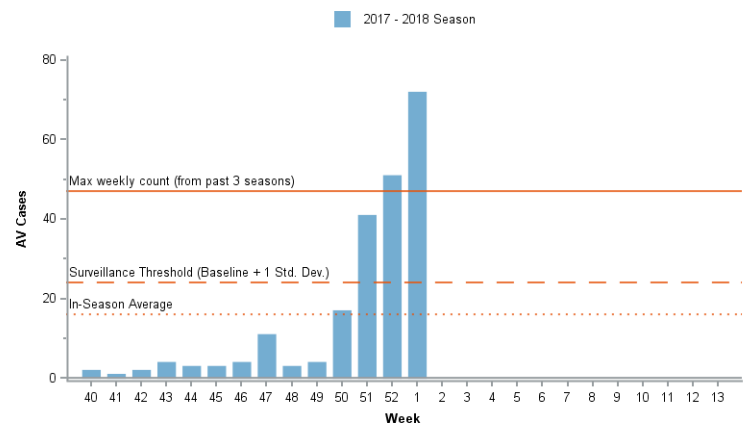


Note: Season counts are since Week 37.

DON Influenza Specific Antiviral Prescriptions and Seasonal Baseline, 2017-2018 Season



DON Inpatient Dispensed Antivirals (Severity)

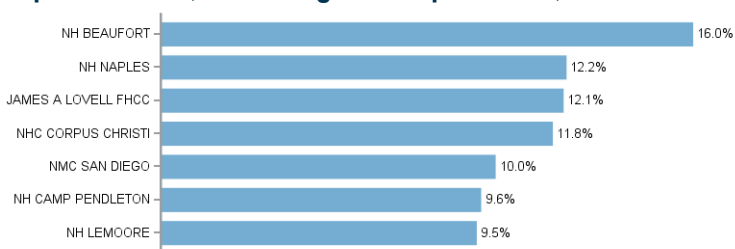


Influenza-Like Illness (Data Lagged, Week 52)

- * **All outpatient:** ILI activity is elevated. The percentage of outpatient medical encounters due to ILI increased to 7.8% in Week 1.
- * **Location:** ILI activity was highest at NH Beaufort (16.1%), followed by NH Naples (12.2), and James A Lovell FHCC (12.1%).

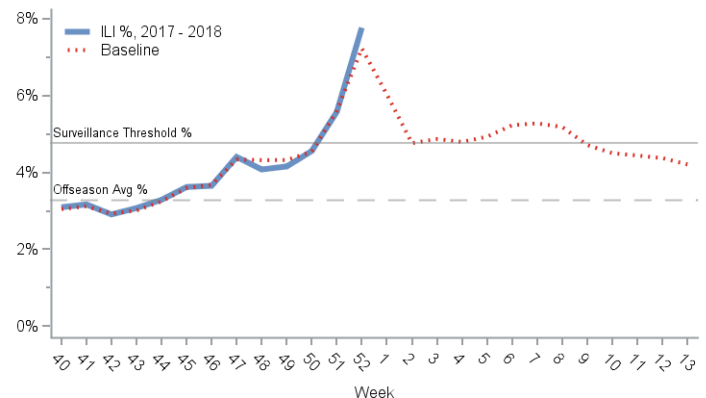
Data source: CAPER

Top DON MTFs, Percentage of Outpatient ILI, Week 52



*Data lagged by one week.

Outpatient Medical Encounters due to ILI, Week 52



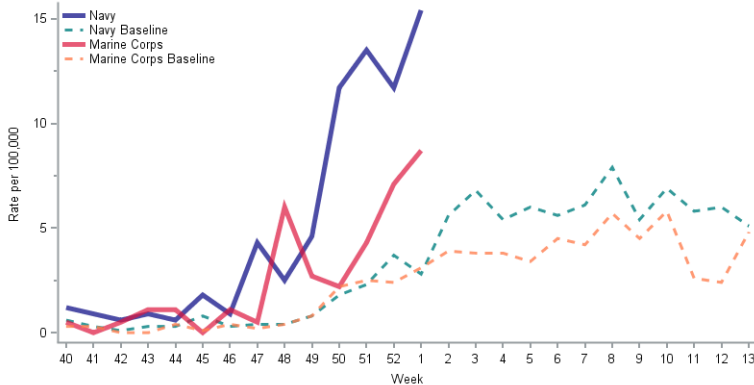
*Data lagged by one week.

Active Duty and Recruits

- * **AD Laboratory cases:** Sixty-six laboratory-positive cases among AD Sailors (N=50) and Marines (N=16).
- * **AD Dispensed Antivirals:** Ninety-five AVs dispensed among Sailors and twenty-seven AVs dispensed to Marines.
- * **Recruits:** Ten laboratory-positive cases among Navy (N=11) recruits.
- * **Location:** Laboratory-positive cases occurred most frequently at NMC San Diego (N=32), NH Camp Pendleton (N=26), and James A Lovell FHCC (N=15).
- * **Vaccination Status:** Fifty AD laboratory-positive cases (75.8%) had a vaccination record more than fourteen days prior to infection.

Data Sources: HL7-formatted CHCS chemistry, microbiology and pharmacy databases, MRRS and ITS.

Laboratory-Positive Cases Among Active Duty Service Members, 2017-2018



Summary of Active Duty and Recruit Cases

	Laboratory		Dispensed AVs	
	Week 1	Season	Week 1	Season
Total Cases	74	349	135	507
Navy AD	50	230	95	364
Marine Corps AD	16	66	27	104
Navy Recruit	8	29	11	23
Marine Corps Recruit	0	24	2	16

Note: Season counts are since Week 37.

In the News

- * A STAT News article discusses concerns with H3N2 flu seasons, including issues with vaccine development and effectiveness, as well as the concept of original antigenic sin. [Details](#)
- * Numerous articles are reporting on the current flu season, including:
 - * An *LA Times* article about Tamiflu shortages in CA [Details](#)
 - * A *New York Times* article about the shortage of IV fluid bags used to treat flu patients. [Details](#)

Medical Event Reports (MER)

MERs for Influenza-Associated Hospitalizations

	MER	Match to Surveillance Data	
	N	N	%
Week 1	3	3	100.0%
Season	25	20	80.0%

*Indicates MERs that matched to cases from laboratory or pharmacy surveillance data. Datasource: DRSi

Note: Season counts are since Week 37.

Bacterial Coinfections

- * **Summary:** 2.4% of laboratory-positive influenza cases had a bacterial coinfection identified this season.
- * **Upper-respiratory:** Thirty-five upper respiratory infections have been identified, all *Streptococcus*.
- * **Lower-respiratory:** Twenty lower respiratory infections have been identified as *Staphylococcus* (N=7), *Corynebacterium* (N=1), *Enterococcus* (N=2), *Escherichia* (N=1), *Enterobacter* (N=1), *Haemophilus* (N=1), *Klebsiella* (N=1), *Pantoea* (N=1), *Pseudomonas* (N=1), *Stenotrophomonas* (N=2), and *Streptococcus* (N=2).

Data Sources: HL7-formatted CHCS chemistry and microbiology databases

Bacterial Coinfections as a Percent of Laboratory Cases

	Coinfections			Lab Cases w/ Coinfection
	Upper (N)	Lower (N)	Total Resp (N)	%
Current Season	31	20	46	2.4%
Baseline	13	3	15	2.7%

Note: Season counts are since Week 37.

Methods and Data Sources

The Influenza SITREP methods can be found [here](#).

- * HL7 formatted CHCS data from microbiology and chemistry data are available from 2004 to present. HL7 formatted CHCS data from pharmacy databases are available from 2006 to present.
- * Data from NH Oak Harbor, NH Bremerton, AMC Madigan, and Fairchild AFB are not captured due to transition to MHS GENESIS.
- * Laboratory-positive and AV baselines are calculated as a weighted average of the 2014-2015, 2015-2016 and 2016-2017 seasons.
- * ILI threshold is calculated based on the off-season percentage outpatient visits for the 2014-2015, 2015-2016 and 2016-2017 seasons, plus two standard deviations.
- * The "Overall Burden" and ILI figures are lagged one week due to encounter data availability.
- * AV surveillance no longer captures Amantadine as of 07 Nov 2017.
- * All figures prepared by the EpiData Center on 09 Jan 2018.