


Influenza Seasonal Summary 2020-2021

The EpiData Center

Reportable, Emerging, and Health Care Associated Infections Division

Prepared August, 2021

Report Number: NMCPHC-EDC-TR-220-2021

Executive Summary: 2020-2021 Department of the Navy (DON) Beneficiary Influenza Season

- Influenza activity was below seasonal baselines, consistent with CDC reports on U.S. trends.[1]
- Laboratory-identified cases hovered at or below baseline through Week 16, and then counts began to increase above baseline.
- Dispensed influenza-associated antiviral (AV) prescriptions were below the seasonal threshold the entire season.
- Emergency department (ED) and inpatient encounters related to influenza-like illness (ILI) were below baseline, while outpatient encounters were at or above baseline levels through Week 52.
- There was an 86.6% frequency decrease in DON active duty (AD) and recruit laboratory-identified influenza cases compared to the previous season.
- Approximately 44% of AD laboratory-identified influenza cases were vaccinated more that 14 days prior to infection.
- Beneficiaries ages 18-44 saw the highest rates of laboratory-identified cases, compared to under age 18 in prior years.
- Rates of laboratory-identified cases were generally below 4% per 100,000 persons for all age groups this season.

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Methods

- The EpiData Center (EDC) utilizes laboratory, pharmacy, and encounter data sources when monitoring influenza activity in the DON. The integration of these data sources provides multiple indicators of influenza burden with highlights on population behavior and provider practices at differing points during the influenza season.
- Detailed methods for the 2020–2021 Influenza Situation Report (SITREP) methods can be found at: https://www.med.navy.mil/sites/nmcphc/Documents/epi-data-center/Influenza/Influenza-SITREP-Methods-2020-2021.pdf
- Military Health System (MHS) GENESIS laboratory data was not applied to the AD or recruit-specific laboratory-based surveillance section of this report.
- MHS GENESIS data was not available for the analyses of pharmacy and encounter data.

Methods Continued

- An influenza case is defined as one of the following:
  1. Occurrence of a laboratory-identified positive test result for influenza for a unique individual, or
  2. An inpatient or outpatient medical encounter with a specific diagnosis code for influenza, or
  3. The prescription of an antiviral for a unique individual.
- An influenza case is counted when identified in at least one of the data sources.
- A 14-day gap-in-care criterion is used in laboratory and pharmacy encounter data to identify duplicate cases.

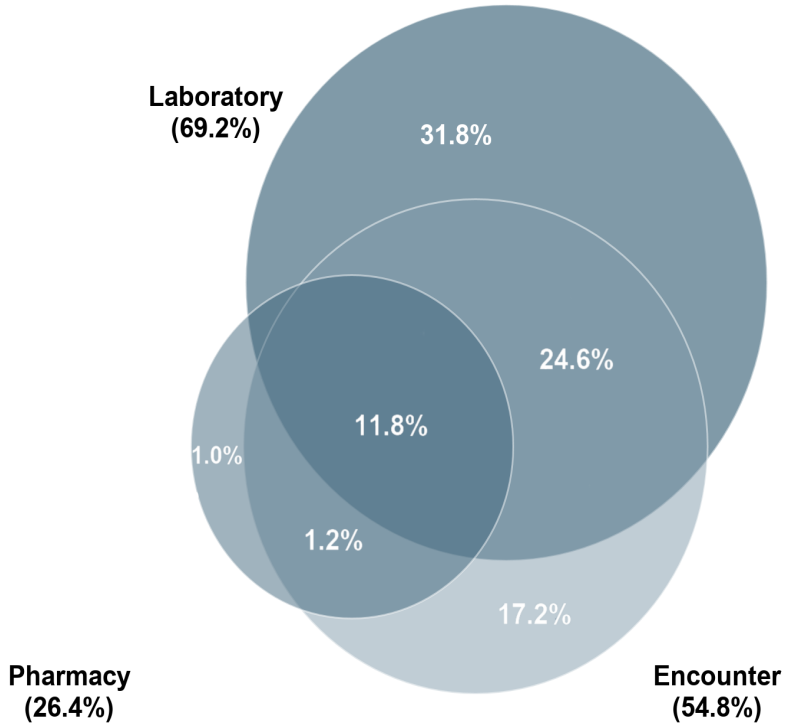
Overall Influenza Burden

BLUF:

During the 2020-2021 influenza season, 972 influenza cases were identified among 944 DON beneficiaries from laboratory, pharmacy, and encounter (inpatient and outpatient) data sources. There was a 94.9% decrease in influenza cases compared to the previous season, most likely due to COVID-19 mitigation measures such as masking, social distancing, restriction of movement, and lockdown. Despite a substantial reduction in the frequency of influenza cases identified this season, demographic trends were similar to the previous season.

Please note: This section does not reflect pharmacy and encounter data from MHS GENESIS MTFs.

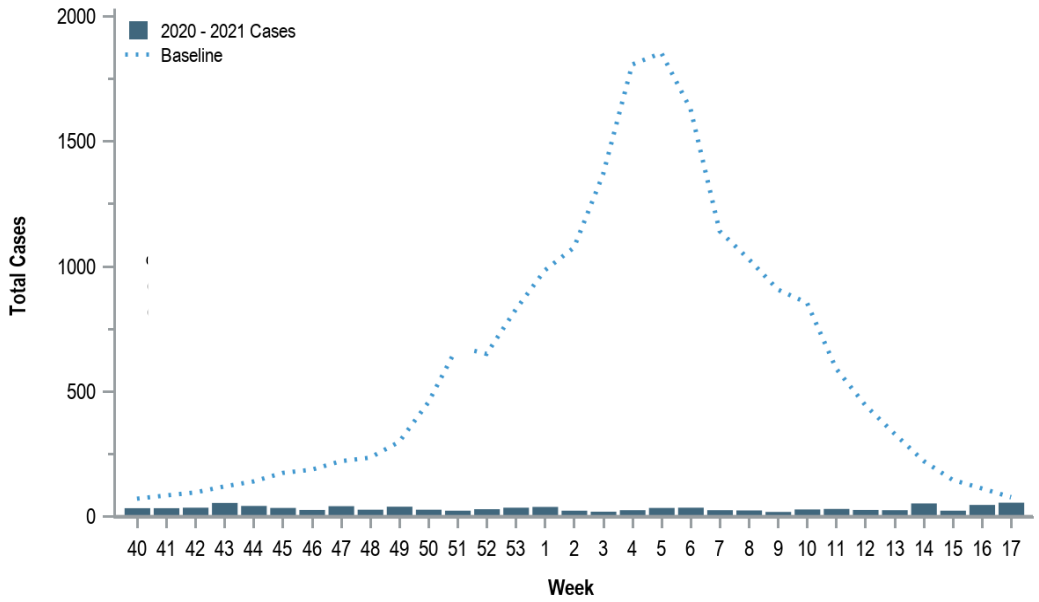
DON Influenza Cases by Data Source, 2020-2021 Season (*n* = 972)



- Cases were identified through one or more data sources; 115 cases (11.8%) were identified in all three data sources.
- Most cases were identified with a laboratory-positive record for influenza (673; 69.2%).
- In previous seasons, the distribution of cases was relatively similar across sources. However, during the 2020-2021 season, the majority of cases were identified from laboratory surveillance and encounter data rather than pharmacy records.

Data sources: HL7-formatted CHCS chemistry, microbiology, and pharmacy; MHS GENESIS chemistry; and Comprehensive Ambulatory Professional Encounter Records databases.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

Weekly Distribution of Influenza Cases from Laboratory, Pharmacy, and Encounter Data Compared to Baseline, 2020-2021 (*n* = 972)



Baseline calculated as the average of the number of laboratory-positive, pharmacy, and encounter influenza cases in 2017-2018, 2018-2019, and 2019-2020 influenza seasons.
Data sources: HL7-formatted CHCS chemistry, microbiology, and pharmacy; MHS GENESIS chemistry; and Comprehensive Ambulatory Professional Encounter Records databases.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

- The frequency of influenza cases was below the three-year baseline throughout the season.
- The highest burden of weekly cases was observed during Week 17, however, it was still below the baseline.

Demographic Characteristics of Influenza Cases Among DON Beneficiaries from All Sources, 2020-2021 (*n* = 955*)

Demographic	Frequency (%)
Sex	
Male	539 (56.4%)
Female	415 (43.5%)
Unknown	1 (0.1%)
Age Group	
0-4	87 (9.1%)
5-17	71 (7.4%)
18-44	603 (63.1%)
45+	193 (20.2%)
Unknown	1 (0.1%)
Beneficiary Category	
Active Duty	234 (24.5%)
Recruit	18 (1.9%)
Spouse	118 (12.4%)
Child	106 (11.1%)
Other: Sponsor	70 (7.3%)
Other: Nonsponsor	3(0.3%)
Unknown**	406 (42.5%)

- Similar to the previous season, more males (56.4%) than females (44.5%) were affected by influenza.
- Most influenza cases were identified among the 18-44 age group (63.1%).

*Unique cases of influenza identified among all data sources.
**MHS GENESIS data does not contain a comparable beneficiary category to CHCS. Records are classified as "Unknown."
Data sources: HL7-formatted CHCS chemistry, microbiology, and pharmacy; MHS GENESIS chemistry; and Comprehensive Ambulatory Professional Encounter Records databases.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

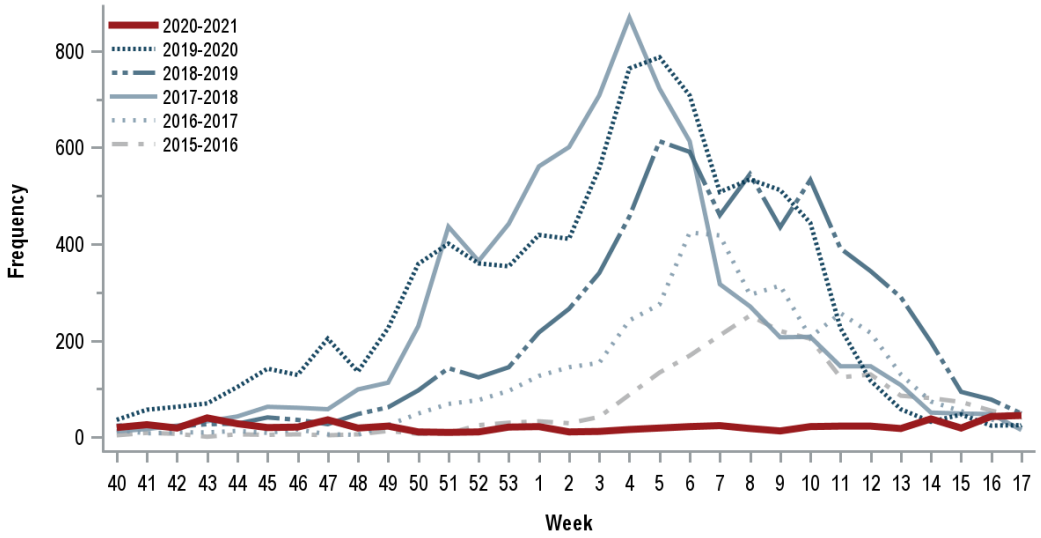
Laboratory-Identified Influenza Cases

BLUF:

Overall, the frequency of laboratory-identified influenza cases (*n* = 693) during the 2020-2021 season decreased 92.1% from the prior season. Influenza cases and infection rates were consistently low this season. Prevention measures implemented due to the COVID-19 pandemic, such as social distancing and masking mandates, may be the primary driver for the case decline from the previous season.

Please note: Laboratory-identified influenza cases were identified from CHCS and MHS GENESIS data.

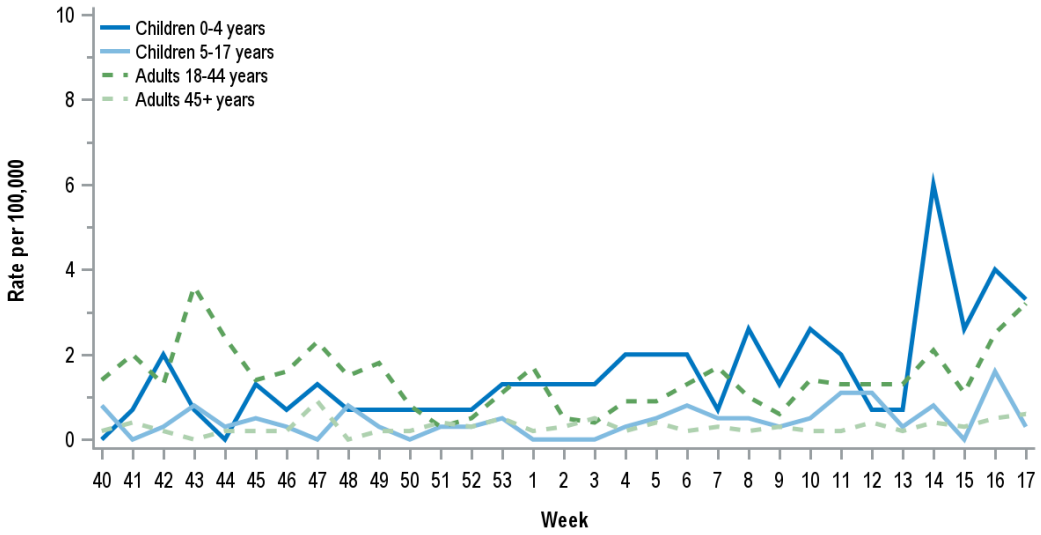
Weekly Distribution of Laboratory-Identified Influenza Cases among DON Beneficiaries Compared to the Previous Five Seasons



Data sources: HL7-formatted CHCS chemistry and microbiology; and MHS GENESIS chemistry databases.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

- Compared to the previous five seasons, the current season had the lowest frequency of laboratory-identified cases from Weeks 1 through 14.
- The frequency of influenza cases began to increase during Week 14, most likely due to less restrictive migration strategies due to the availability of the COVID-19 vaccination.

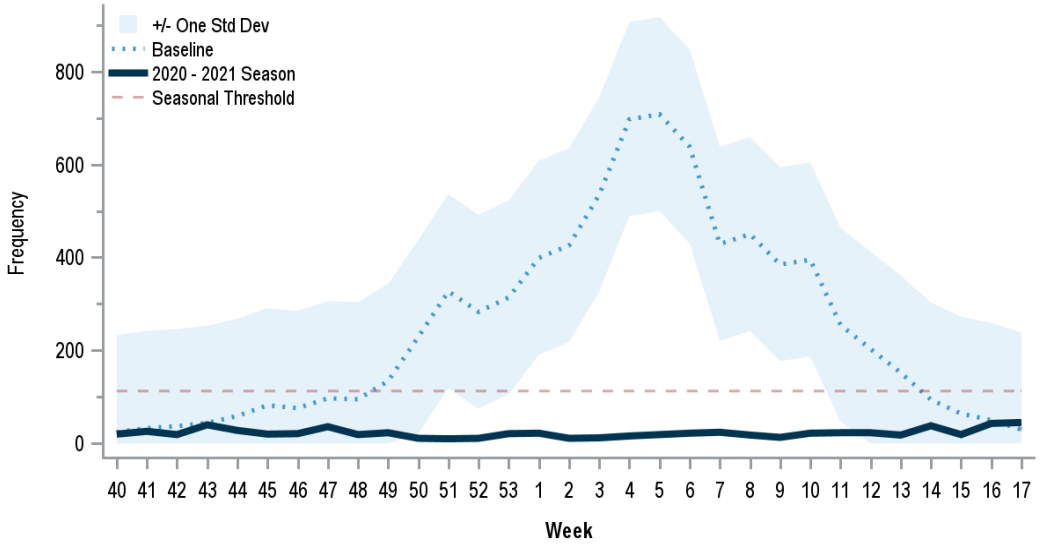
Age Distribution of Laboratory-Identified Influenza Cases among DON Beneficiaries by Week, 2020-2021 Season (*n* = 693)



Rate is calculated as the number of laboratory-positive cases in that group per 100,000 population.
Data sources: HL7-formatted CHCS chemistry and microbiology, and MHS GENESIS chemistry databases.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

- 17.7% of laboratory-identified cases were among children ages 5-17 years (*n* = 51) and children ages 0-4 years (n = 72).
- Laboratory-identified influenza trends were similar across all age groups. An increase in rates of laboratory-identified cases occurred among children ages 0 to 4 after Week 13. However, the changes in patterns may be insignificant due to the extremely low rates across the season.

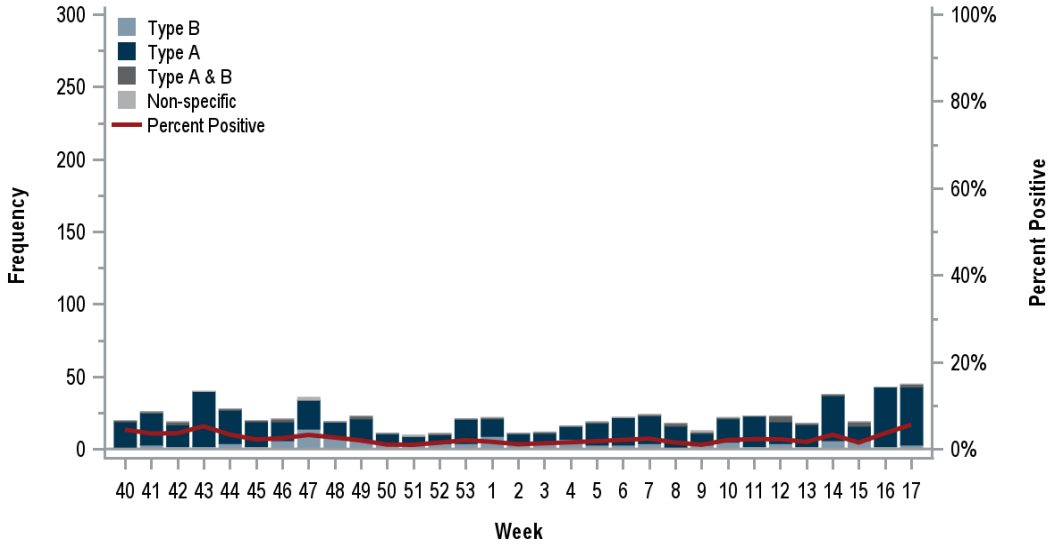
Weekly Distribution of Laboratory-Identified Influenza Cases by Week Compared to Seasonal Baseline, DON Beneficiaries 2020-2021 (*n* = 693)



- Overall, the frequency of laboratory-identified influenza cases during the 2020-2021 season deviated from the historic baseline to extremely low weekly counts.

Baseline calculated as the average of the number of laboratory-positive pharmacy and encounter influenza cases in 2016-2017, 2017-2018, and 2018-2019 influenza seasons.
Data sources: HL7-formatted CHCS chemistry and microbiology, and MHS GENESIS chemistry databases.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

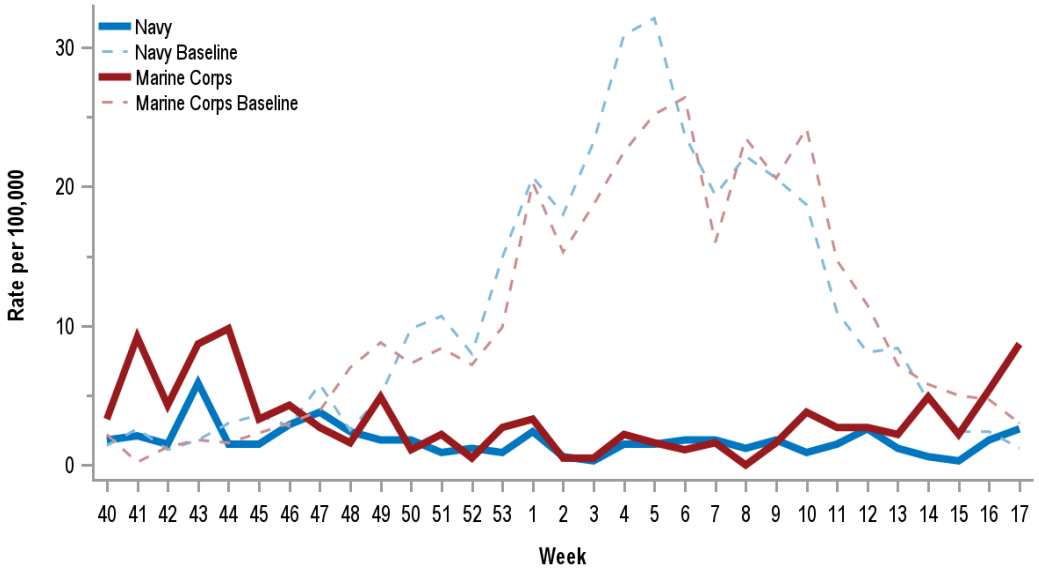
Weekly Distribution of Laboratory-Identified Influenza Cases by Type, 2020-2021 Season (*n* = 693)



Note: Percent positive is calculated as the proportion of positive specimens from all unique specimens with conclusive results.
Data sources: HL7-formatted CHCS chemistry and microbiology, and MHS GENESIS chemistry databases.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

- During the 2020-2021 season, influenza A was the predominant influenza type and accounted for 80.5% of laboratory-identified cases compared to 58.7% in the previous season.
- The weekly percent positivity among laboratory records was substantially lower than previous seasons. Among DON laboratory-identified influenza cases, the highest percent positivity was during Week 17 (5.6%) compared to 32.9% during Week 3 in the 2019-2020 season.

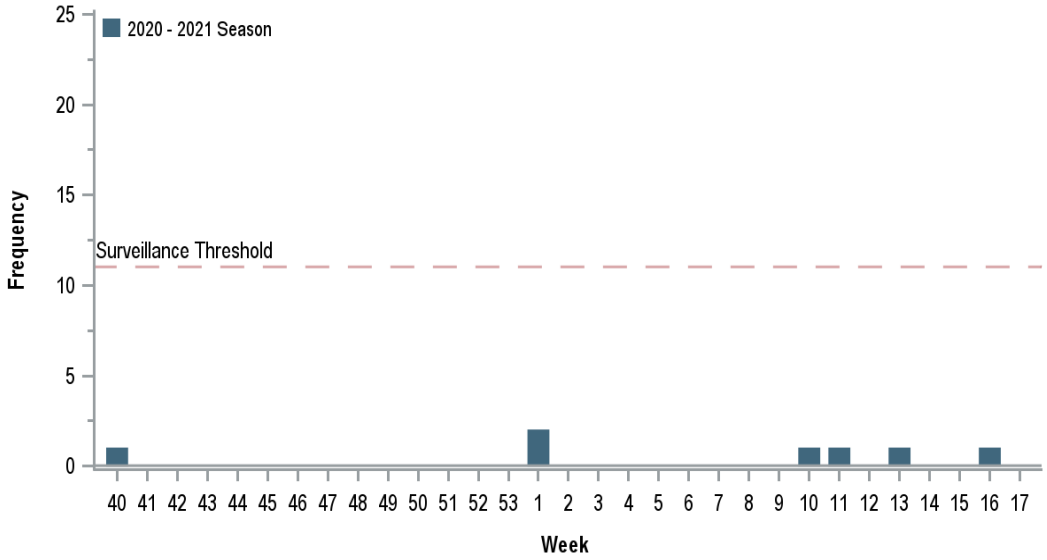
Service Distribution of DON Active Duty and Recruit Laboratory-Identified Influenza Cases by Week, 2020-2021 Season (*n* = 374)



Baseline calculated as the unweighted average of the number of laboratory-positive influenza cases in 2016-2017, 2017-2018, and 2018-2019 seasons.
Data sources: HL7-formatted CHCS chemistry and microbiology databases.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

- During the 2020-2021 season there was an 86.6% decrease in AD and recruit laboratory-identified influenza cases compared to the previous season.
- This season, the peak rate of Navy AD and recruit laboratory-identified cases was 5.9 per 100,000 Sailors compared to 48.9 during the previous season.
- Similarly, the peak rate of Marine Corps laboratory-identified cases was 9.8 per 100,000 Marines compared to 42.4 during the previous season.

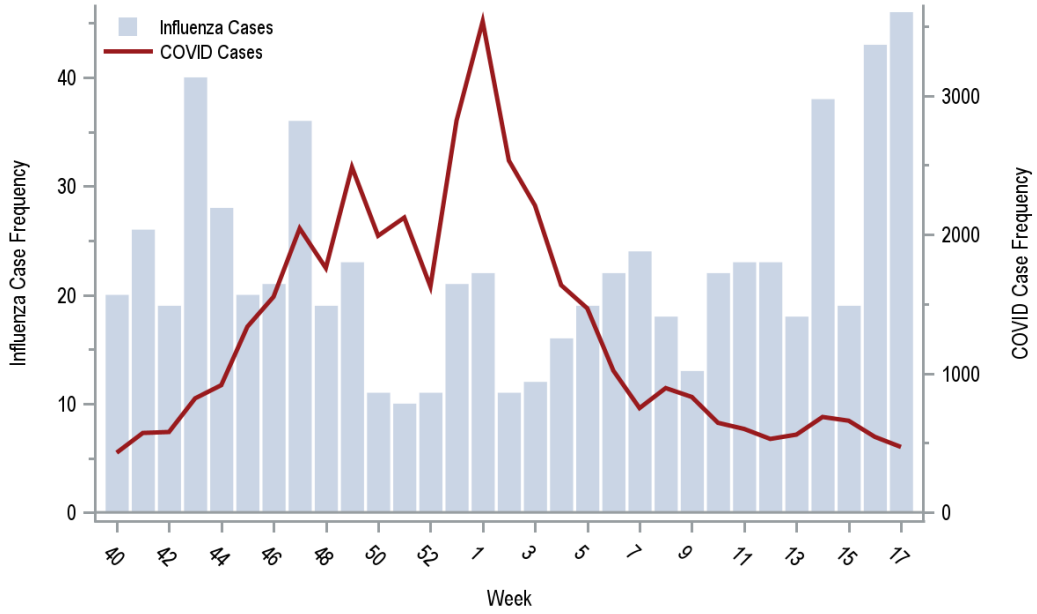
Weekly Distribution of Hospitalized Laboratory-Identified Influenza Cases among DON Beneficiaries, 2020-2021 Season (*n* = 7)



Surveillance threshold is calculated as the in-season average number of inpatient cases plus one standard deviation in 2016-2017, 2017-2018, and 2018-2019 seasons.
Data sources: HL7-formatted CHCS chemistry and microbiology, and MHS GENESIS chemistry databases.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

- Similar to the previous season less than 1.0% of all laboratory-identified cases occurred in the inpatient setting.
- Frequencies of inpatient laboratory-identified influenza cases did not reach the surveillance threshold during the season, indicating a low severity season.

Weekly Comparison of Laboratory-Identified Influenza and COVID-19 Cases among DON Beneficiaries, 2020-2021



Data sources: HL7-formatted CHCS chemistry and microbiology, and MHS GENESIS chemistry databases.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

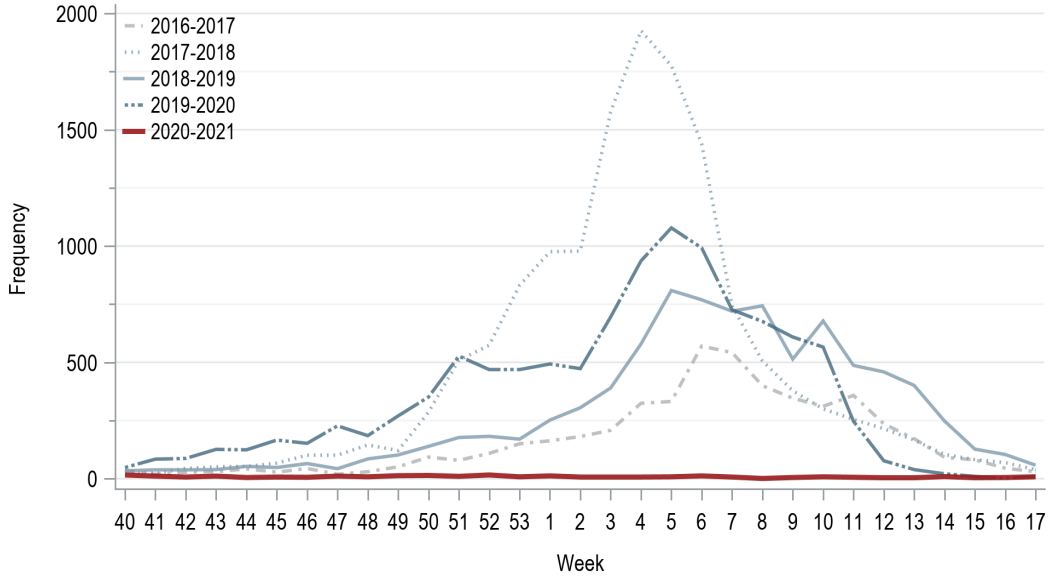
- Week 17 had the highest frequency of influenza cases and the lowest frequency of COVID-19 cases.
- The highest frequency of COVID-19 cases was during Week 1, immediately after Phase 1B of the vaccination roll out.[2]
- Due to the disparity between the frequencies of influenza and COVID-19 cases, it is difficult to compare the overall trends.

Pharmacy-Based Influenza Cases

BLUF:

The number of dispensed AVs (n=257) were at a record-low during the 2020-2021 season, a 97.7% decrease from the previous season, most likely due to preventive measures implemented due to the COVID-19 pandemic and the absence of MHS GENESIS data. The two dispensed AVs this season were oseltamivir (n=254) and baloxavir (n=3). The number of dispensed baloxavir prescriptions remained the same compared to the previous season. Naval Medical Center (NMC) Camp Lejeune (n=49), Naval Hospital (NH) Jacksonville (n=40), and NH Pensacola (n=32), dispensed the highest frequencies of influenza-related AVs during the 2020-2021 season.

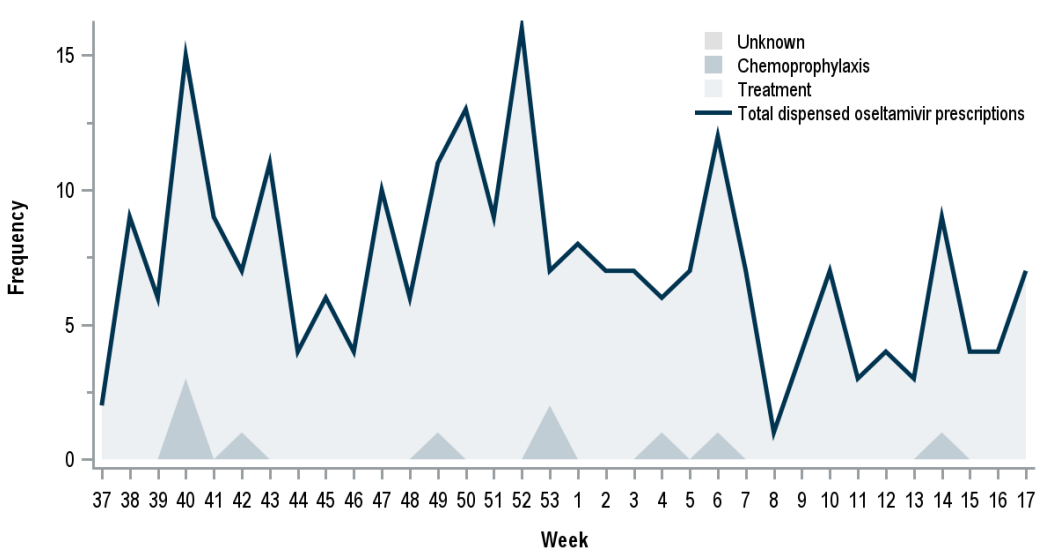
Weekly Distribution of Dispensed Influenza Antiviral Prescriptions among DON Beneficiaries Compared to the Previous Four Seasons



Data sources: HL7-formatted CHCS pharmacy database.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

- Within the past four years, every season has had an overall higher frequency of dispensed AVs than the 2020-2021 season.
- Unlike previous seasons, the number of dispensed AVs for the 2020-2021 season remained relatively constant throughout the season.

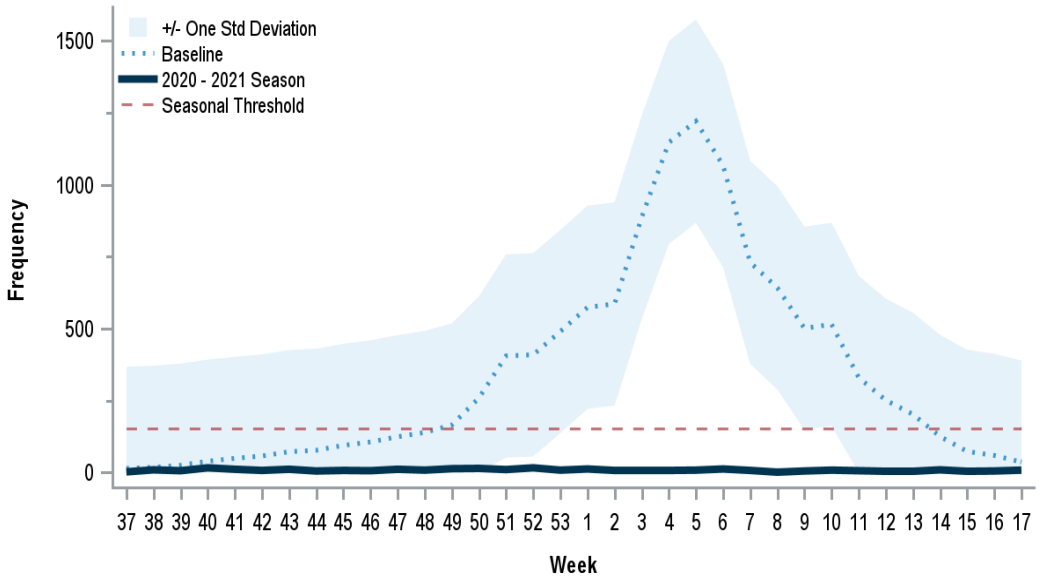
Total Dispensed Influenza Antiviral Prescriptions and Weekly Use, 2020-2021 Season



Data sources: HL7-formatted CHCS pharmacy database.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

- Oseltamivir accounted for 98.8% (n= 254) of all influenza AVs dispensed during the 2020-2021 season, of which 88.6% were prescribed for treatment versus chemoprophylaxis.
- Week 40 and Week 52 had the highest number (n=16) of dispensed AVs.
- Historically, chemoprophylaxis prescription trends mirror the AV treatment trend for the season. However, generalizations of trends cannot be made this season due to low frequencies.

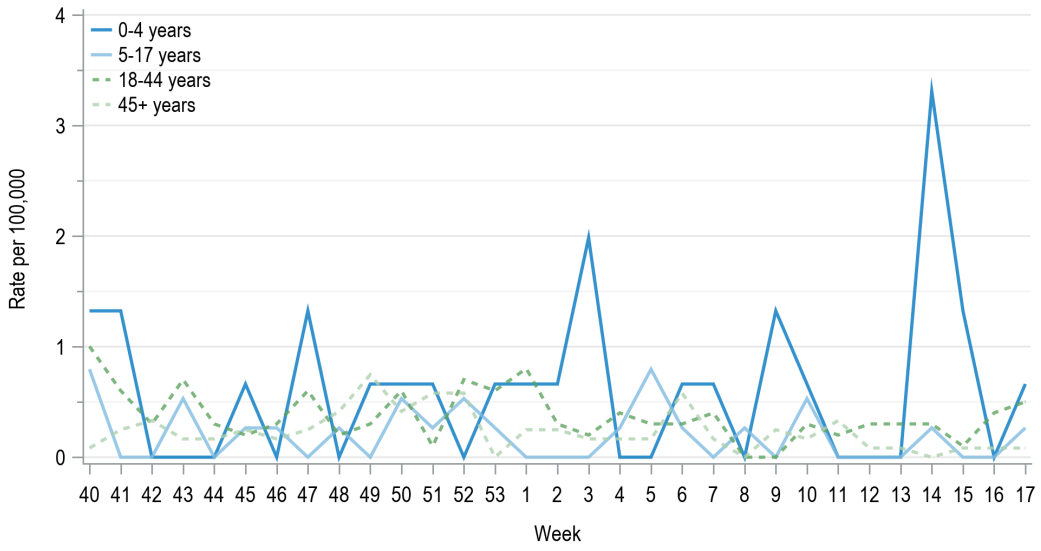
Weekly Distribution of Dispensed Influenza Antiviral Prescriptions Compared with Seasonal Baseline, DON Beneficiaries, 2020-2021 Season (*n* = 257)



- The level of weekly dispensed AVs was lower than the seasonal threshold and baseline for the entire season, which may suggest influenza activity and severity were lower than historic trends.
- During the historical peak period of the influenza season, the number of dispensed AVs was below one standard deviation of the calculated baseline.

Baseline calculated as the unweighted average of the number of antiviral prescriptions dispensed in 2016-2017, 2017-2018, 2018-2019, 2019-2020 seasons.
Data sources: HL7-formatted CHCS pharmacy database.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

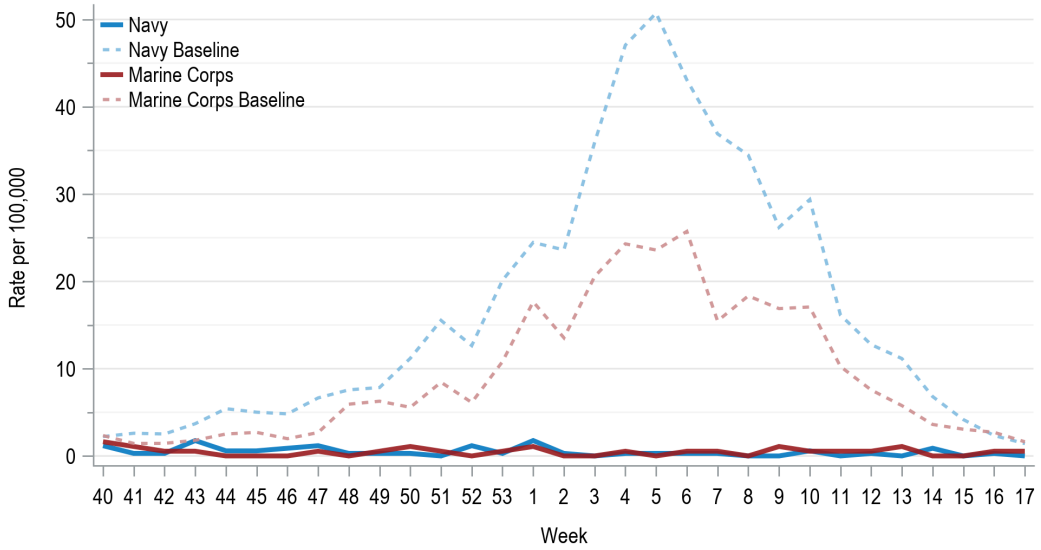
Weekly Distribution Rate of Dispensed Influenza Antiviral Prescriptions, DON Beneficiaries by Age Group, 2020-2021 Season



Data sources: HL7-formatted CHCS pharmacy database.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

- Historically, the highest rates of dispensed AVs were identified among children ages 0-17. This season, the highest rates were observed among children ages 0-4 with a peak rate during Week 14.
- In contrast to previous seasons, older DON beneficiaries, adults (18-45+), generally had higher rates of dispensed AVs compared to children ages 5-17 years.
- The highest rate of dispensed AVs among adults (18-45+) was during Week 52.

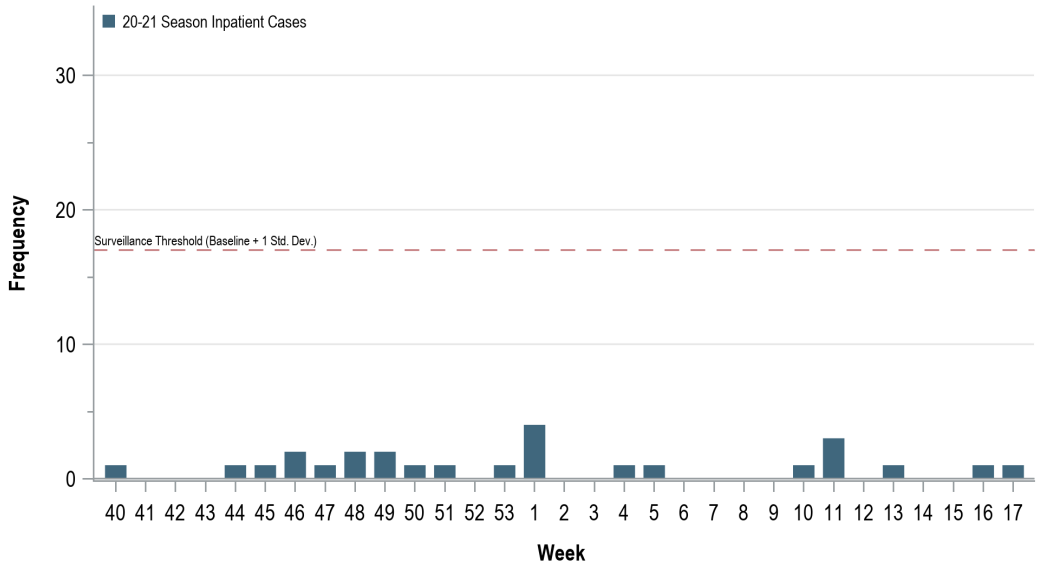
Weekly Distribution Rate of Dispensed Influenza Antiviral Prescriptions, DON Active Duty Members, 2020-2021 Season



Baseline calculated as the unweighted average of the number of antiviral prescriptions dispensed in 2016-2017, 2017-2018, 2018-2019, 2019-2020 seasons.
Data sources: HL7-formatted CHCS pharmacy database.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

- There was relatively little fluctuation in the weekly rate of dispensed AVs among DON AD service members during the 2020-2021 influenza season and the rate was much lower than the average from the previous four seasons.
- Slight increases in the rates of dispensed AVs were observed at the beginning of the season, during Week 40 for Marines and during Weeks 43 and 1 for Sailors.

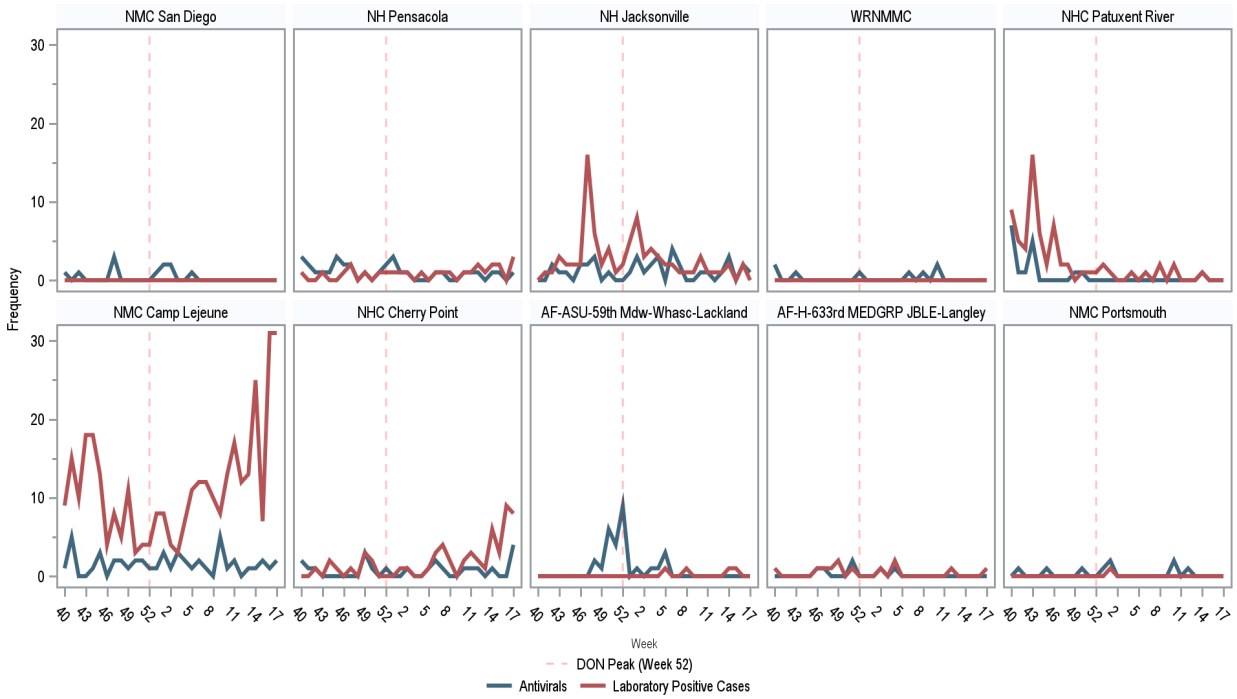
Weekly Distribution of Dispensed Influenza Antiviral Prescriptions in an Inpatient Setting, DON Beneficiaries, 2020-2021 Season (*n* = 26)



Surveillance threshold is calculated as the in-season average number of inpatient cases plus one standard deviation in 2016-2017, 2017-2018, and 2018-2019 seasons.
Data sources: HL7-formatted CHCS pharmacy database.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

- The total number of AVs dispensed in an inpatient setting was well below the surveillance threshold during the 2020-2021 influenza season. During the previous season, the frequency of dispensed AVs in the inpatient setting exceeded the surveillance threshold more than 30% of the time.
- During the 2020-2021 influenza season, the weekly frequency of AVs dispensed to DON beneficiaries in the inpatient setting was less than 10.

Distribution of Weekly Influenza AV and Laboratory-Based Influenza Cases at MTFs with Highest Frequency of Cases, DON Beneficiaries, 2020-2021 Season



Data sources: HL7-formatted CHCS pharmacy, chemistry, and microbiology databases.
Due to the unavailability of MHS GENESIS pharmacy data, this analysis is limited to CHCS pharmacy and laboratory data.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, July 2021.

- NMC Camp Lejeune had the highest number of laboratory-positive cases and dispensed AVs across MTFs.
- At the MTF level, there appears to be a correlation between laboratory-identified cases and dispensed antivirals, although there are no discernable patterns between MTFs.
- No DON-specific laboratory-positive records were identified at NMC San Diego or WRNMMC. NMC San Diego transitioned to MHS GENESIS during the current influenza season.

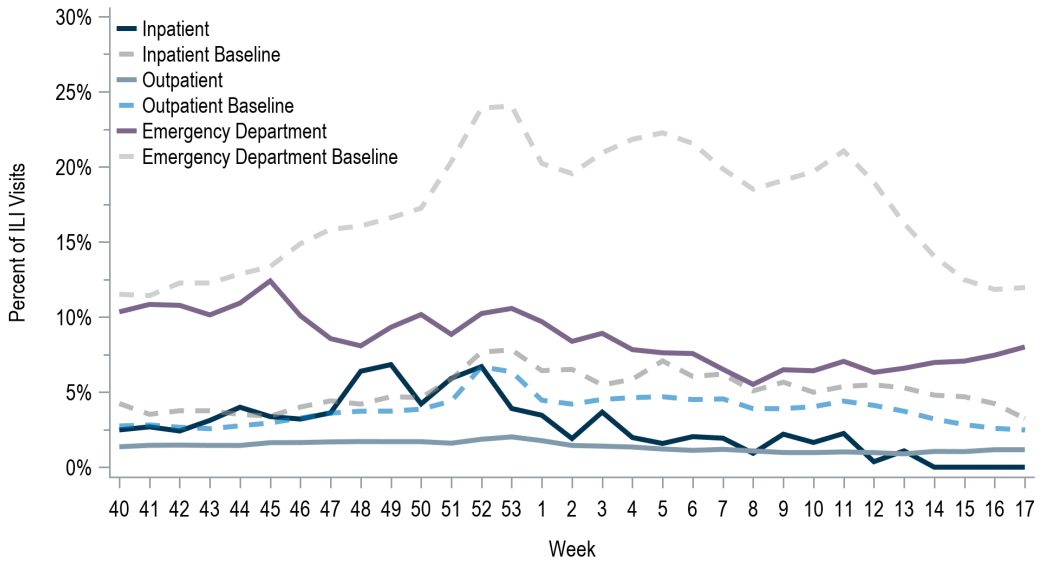
Encounter-Based ILI

BLUF:

ILI trends remained below historical baselines for the entire season. The 2020-2021 influenza season deviated from previous years in both number of cases and peak encounter dates. Historically the peak number of encounters for ILI occurred between Weeks 51-1 at nearly 30% of all ambulatory encounters. This season ILI cases peaked during Week 45 at 12.4% of all ambulatory encounters.

Please note: MHS GENESIS data was not used in the analyses of ILI data.

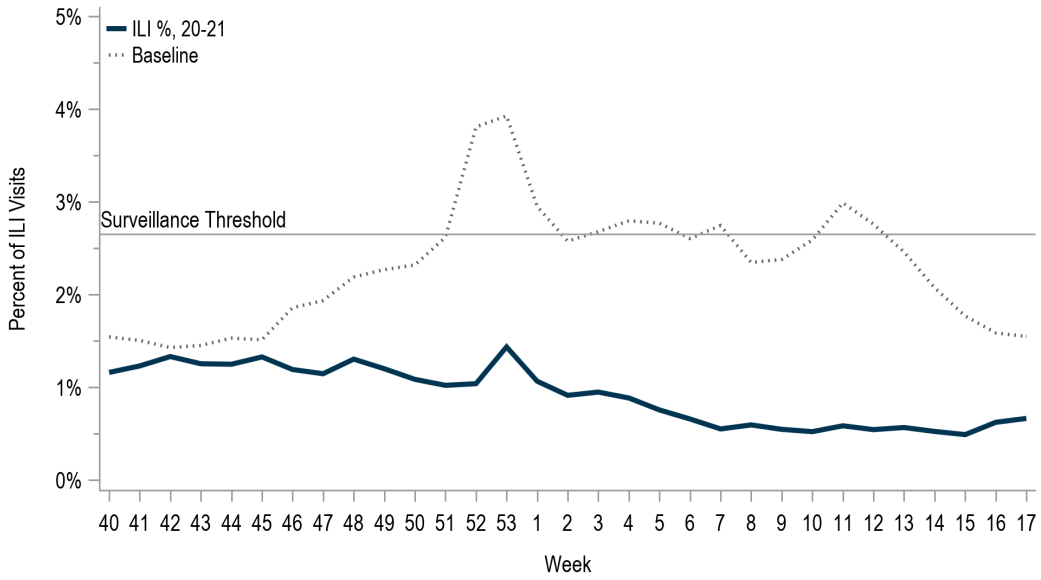
Weekly Distribution of ILI Encounters Compared to Baseline, DON Beneficiaries, 2020-2021 Season



Baseline calculated as the unweighted average of the percentage of outpatient medical encounters due to ILI in 2017-2018, 2018-2019, and 2019-2020 seasons.
Influenza-like illness (ILI) is defined based on the surveillance definitions from the Armed Forces Health Surveillance Branch (AFHSB).
Data sources: CAPER and SIDR.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, June 2021.

- The similarity of COVID-19 and ILI symptoms possibly impacted the rates of ILI during the 2020-2021 season.
- The percentage of ambulatory and ED ILI encounters were well below baseline for the entire season. Inpatient ILI encounters were at or above baseline through Week 52 and then decreased below baseline levels.
- The percentage of ED ILI visits peaked during Week 45 (12.4%), and then increased to slightly above 10.0% during Weeks 48 and 52.
- In contrast to prior seasons, the highest percentage of ILI encounters occurred earlier in the season.

Weekly Percentage of Outpatient Medical Encounters due to ILI Compared to Seasonal Baseline, Active Duty DON Service Members, 2020-2021 Season



- During the 2020-2021 season, the percentage of ILI-related ambulatory encounters compared to all ambulatory encounters among AD DON service members was low and remained below the surveillance threshold.

Baseline calculated as the unweighted average of the percentage of outpatient medical encounters due to ILI in 2017-2018, 2018-2019, and 2019-2020 seasons.
Influenza-like illness (ILI) is defined based on the surveillance definitions from the Armed Forces Health Surveillance Branch (AFHSB).
Data sources: CAPER and SIDR.
Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, June 2021.

Co-infections among Laboratory-Identified Influenza Cases

BLUF:

Co-infections among laboratory–identified influenza cases may impact the severity and duration of illness. During the 2020–2021 season, there was a 96.2% decrease in the frequency of co-infections identified among influenza laboratory-identified cases from the previous season. All influenza co-infections were classified as *Streptococcus*. The overall proportion of co-infections among influenza cases (0.9%) was less than the previous season (1.8%).

Genus of Co-infections among Laboratory-Identified Influenza Cases, DON Beneficiaries, 2020-2021 Season

- During the 2020-2021 season, there were only six co-infected laboratory-identified influenza cases (<1%) compared to 156 cases (1.8%) in the previous season.
- *Streptococcus* was the only identified pathogen was isolated from upper respiration specimens.

	Specimen Type		
Coinfection Genera	**Upper Respiratory (%)**	**Lower Respiratory (%)**	**Total (%)**
Streptococcus	6 (100)	0 (0.0)	6 (100.0)
Total	6	0	6

Data sources: Health Level 7 (HL7) formatted CHCS chemistry and microbiology databases.

Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, May 2021.

Vaccinations among DON Service Members

BLUF:

In order to maximize force medical readiness before peak influenza season, the DON sets an annual goal to exceed 90% influenza immunization of all DON personnel by December 15th of each year.[3] Marine Corps AD reached the 90% vaccination goal during Week 7 while Navy AD reached the goal during Week 11. Navy and Marine Corps reserve, on the other hand, were not able to reach the 90% goal (89.1% and 79.0%, respectively).

Influenza Vaccination Coverage, DON Active and Reserve Components, 2019-2020 Season

- Delivery delays of the influenza vaccine in addition to the coordination of the COVID-19 vaccine distribution likely contributed to the delay in reaching the 90% vaccination goal by December 15, 2020.
- Marine Corps AD reached the 90% vaccination goal during Week 7 while Navy AD reached the goal during Week 11.
- Overall, the DON exceed the 90% vaccination goal with 90.5% vaccinated during the 2020–2021 season.

Service/Component	Total Population	Number Vaccinated[a]	Number Exempt	Percent Vaccinated[b]
Navy Active Duty	311,278	281,811	2,721	91.3%
Navy Reserve	44,079	38,924	373	89.1%
Marine Corps Active Duty	151,742	142,217	706	94.2%
Marine Corps Reserve	32,356	25,301	346	79.0%
Total				

[a]Includes injection and intranasal influenza vaccines for the 2020-2021 season.

[b]Percent vaccinated is calculated as the proportion of service members vaccinated out of total eligible members.

Immunization status is current as of 03 May 2021.

Data source: Medical Readiness Reporting System (MRRS) database.

Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, 03 May 2021.

Vaccination Status of DON Active Duty and Recruit Cases, 2019-2020 Season

		Vaccine Type				
Status	**Immunity Status**	**IIV**	**RIV**	**None**	**Total**	**Percent**
Active Duty	Vaccinated; immune[a]	166	1	-	167	43.8%
	Vaccinated; not immune[b]	172	1	-	173	45.4%
	No vaccination; exempt					-
	No vaccination record	-	-	41	41	10.8%
Total		**338**	**2**	**41**	**-**	**-**
Recruit	Vaccinated; immune[a]	2	-	-		66.7%
	Vaccinated; not immune[b]	1	-	-		33.3%
	No vaccination record					-
Total		**3**	-	-	**3**	-

RIV=recombinant influenza vaccine (injection), IIV=inactive influenza vaccine (injection).

[a]Vaccinated, immune: vaccinated more than 14 days prior to infection.

[b]Vaccinated, not immune: vaccinated less than 14 days prior to infection, or after infection.

Data source: Health Level 7 (HL7) chemistry and microbiology databases and Immunization

Prepared by the EpiData Center, Navy and Marine Corps Public Health Center, 05 May 2021.

- The proportion of the laboratory positive AD service members among the vaccinated and non-vaccinated was relatively similar (43.8% vs 45.4%).
- A mid-season influenza vaccine effectiveness report from AFHSD noted that the estimated vaccine effectiveness in service members was 29%.[4]
- There were only 3 laboratory-positive cases among the recruits, all from Parris Island. This is likely a result of COVID-19 preventive measures implemented at DON recruit training facilities. Although MCRD San Diego transitioned to MHS GENESIS during February 2021, manual review of records confirmed that there were no laboratory-positive cases among recruits at this location.

Conclusions

- The overall influenza activity among DON beneficiaries was historically low, similar to U.S. trends.
  - Most likely due to protective measures – masking, school closures, travel restrictions, vaccination, and shelter-in-place orders implemented due to the COVID-19 pandemic.
  - 92.1% decrease in the frequency of laboratory-identified influenza cases.
  - 97.7% decrease in the frequency of dispensed AVs compared to the previous season.
- Pharmacy and encounter data were not available from MHS Genesis data. However, frequencies of laboratory testing and laboratory-positive cases for all MTFs, including those which had transitioned to MHS GENESIS, were at historic lows.
- Laboratory-identified cases and dispensed AVs among DON beneficiaries were at or below baseline levels throughout the season. Inpatient laboratory-identified cases were well below historic levels indicating a low severity influenza season.
- During the 2020-2021 influenza season, trends of laboratory-identified influenza cases diverged from previous seasons. The highest rates of cases were identified among the 18-44 age group compared to those under the age of 18 in previous seasons.

Conclusions

- Most laboratory-identified cases were recorded from Camp Lejeune, 368 of 693 total cases.
- There was a 86.6% decrease in the frequency of DON AD and recruit laboratory-identified influenza cases during the 2020-2021 season compared to the previous season. There were three recruit cases, all from Parris Island. The low number of recruit cases is likely due to the quarantine of recruits prior to entering recruit training in addition to other protective measures mandated due to the COVID-19 pandemic.
- Among AD laboratory-identified cases, nearly 44% were vaccinated more than 14 days prior to infection. Vaccine efficacy cannot be calculated among this group due to low case frequencies.
- In contrast to previous seasons, the highest percentage of ILI encounters occurred early in the season. ILI-related encounters trends may be skewed due to the similarity in COVID-like symptoms and ILI.
- Less than 2% of laboratory-based influenza cases were identified with a co-infection. *Streptococcus* from upper respiratory specimens was identified in all co-infected specimens.
- Influenza surveillance may inform preparation, policy planning, and decision making for upcoming seasons**.** It also helps the DON continue to meet their vaccination goals and assess the disease impact upon mission readiness.

Limitations

- This analysis does not include records from purchased care providers, shipboard facilities, battalion aid stations, and in-theater facilities.
- MHS GENESIS chemistry data was included in the laboratory-specific analyses for all beneficiaries but was not used for the AD and recruit-specific analyses due to inability to distinguish the status of the service members.
- Microbiology testing results show identified organism(s) and may not indicate the intent of the testing.
- Chemistry testing results include panels. If the test name or test results within a panel are not disease-specific, these results may not be captured in search terms used to query the data.
- Pharmacy records do not include purchased care records and, therefore, the number of dispensed AVs may be an underestimate. MHS GENESIS pharmacy data was not available for this analysis.

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