



INFLUENZA WATCH

Week 5
Ending 2/1/2020

Overview

Overall reported influenza cases declined in San Diego County in Week 5, however elevated activity may be expected at least for several more weeks. Influenza cases can occur throughout the year in the county. It is not too late to get vaccinated, which is the best way to prevent influenza and its potentially serious complications. [Antiviral medications](#) are also important to control influenza. Over 99% of the influenza viruses [tested this season](#) are susceptible to antiviral medications.

Report Content Links

Page 1: Current Season
Page 2: [Communiqué](#)
[Influenza Cases by Type](#)
Page 3: [Activity Level Indicator](#)
Page 4: [Influenza Epi Curve](#)
Page 5: [Influenza Cases by Age](#)
[SDIR Immunizations](#)
Page 6: [Syndromic Indicators](#)
Page 7: [ED ILI% and P&I Deaths](#)
Page 8: [Deaths](#)
Page 9: [Reporting Information](#)

Key Points

Current Week 5 (ending 2/1/2020)

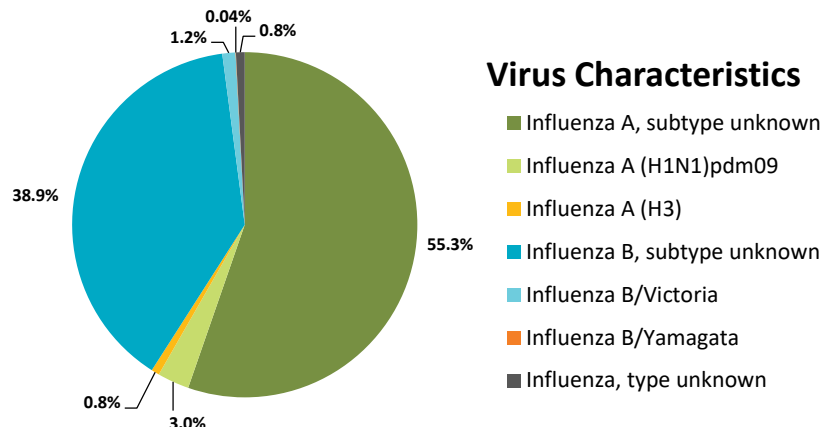
- 1,702 new influenza detections reported
- 11 new influenza-related deaths reported this week
- 8% influenza-like illness (ILI) among emergency department visits
- 6% of death certificates registered with pneumonia and/or influenza

13,569

Total Cases

50Deaths[†]**39**

Outbreaks*



Virus Characteristics

- Influenza A, subtype unknown
- Influenza A (H1N1)pdm09
- Influenza A (H3)
- Influenza B, subtype unknown
- Influenza B/Victoria
- Influenza B/Yamagata
- Influenza, type unknown

[†] Flu deaths less than 18 years of age are reportable to CDPH.

* In a congregate living setting, outbreaks are defined as at least one laboratory-confirmed influenza case in the setting of a cluster (≥2 cases) of influenza-like illness (ILI) within a 72-hour period.

Table 1. Influenza Surveillance Indicators.

Indicator	2019-20 Season			2018-19 Season			Prior 3-Year Average*		
	Week 5	Week 4	Total to Date	Week 5	Total To Date	Season Total	Week 5	Total To Date	Season Total
All influenza detections reported (rapid or PCR)	1,702	1,884	13,569	445	3,938	9,655	557	7,281	12,110
Percent of emergency department visits for ILI	8%	8%		5%			5%		
Percent of deaths registered with pneumonia and/or influenza	6%	9%		7%			9%		
Number of influenza-related outbreaks [∞]	1	14	39	1	5	25	4	48	59
Number of influenza-related deaths reported [^]	11	7	50	0	24	77	10	98	169

Influenza season is July 1 – June 30, Weeks 27-26. Previous weeks case counts or percentages may change due to delayed processing or reporting.

*Includes FYs 2016-17, 2017-18, and 2018-19.

[∞]At least one case of laboratory-confirmed influenza in a setting experiencing two or more cases of influenza like illness (ILI) within a 72-hour period.

Total confirmed influenza outbreaks in prior seasons: 25 in 2018-19, 119 in 2017-18, and 34 in 2016-17.

[^]Current FY deaths are shown by week of report; by week of death for prior FYs. Total deaths reported in prior seasons: 77 in 2018-19, 343 in 2017-18, and 87 in 2016-17.

Antiviral Combination May Aid Recovery from Severe Influenza

Patients with severe influenza treated with a combination of the antiviral drugs favipiravir and oseltamivir compared with oseltamivir alone had faster recoveries, according to findings published in December 2019 in *The Journal of Infectious Diseases*.

Chinese and British researchers conducted the first retrospective study on combination therapy for severe influenza by comparing 40 patients given favipiravir and oseltamivir and 128 patients treated with oseltamivir alone. All patients had severe lab-confirmed influenza, were hospitalized, and were symptomatic for less than 10 days.

The combination therapy group had higher rates of clinical improvement by day 14 than the monotherapy group (62.5% vs 42.2%, $P = 0.0247$). The proportion of undetectable viral RNA at day 10 was higher in the combination group than in the oseltamivir group (67.5% vs 21.9%, $P < 0.01$) and there were no significant differences in mortality rates in the two groups.

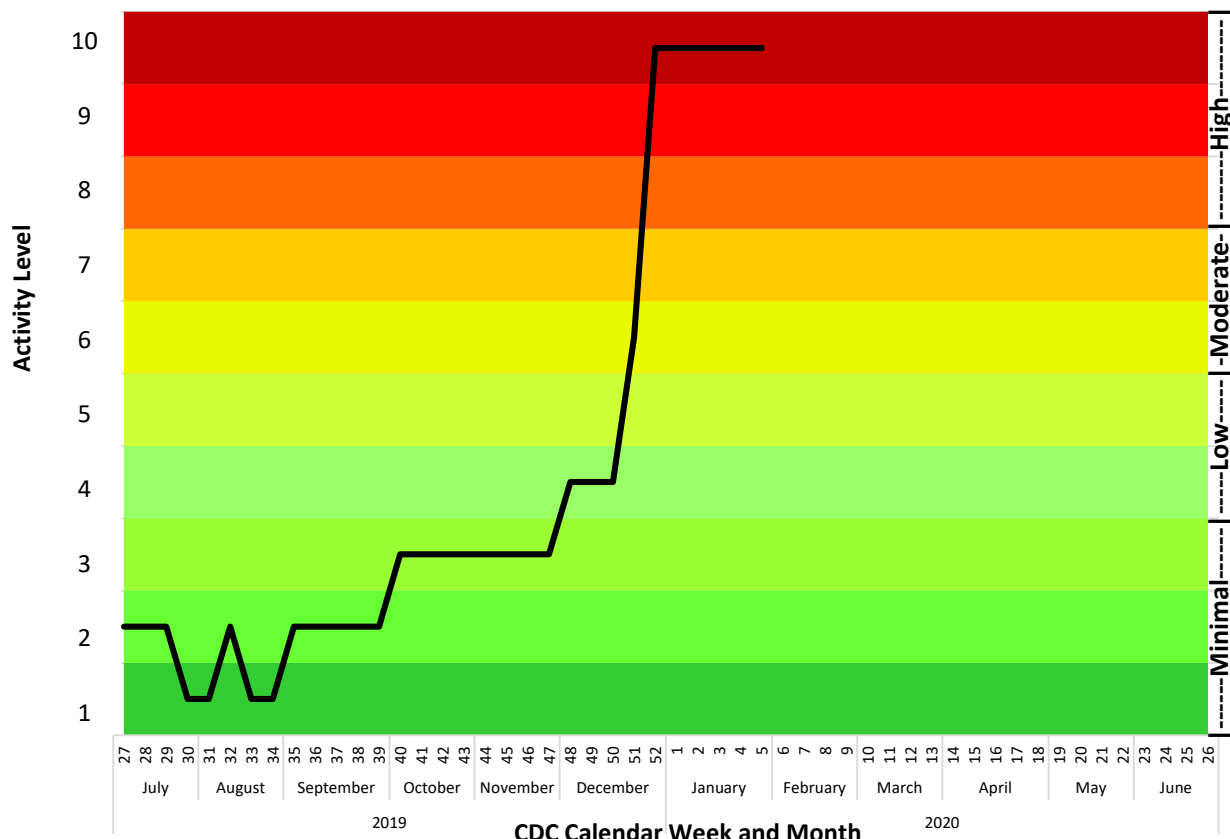
Oseltamivir is the most widely used neuraminidase inhibitor in flu patients, while favipiravir is a novel inhibitor of influenza RNA. No antiviral randomized controlled trials have established a treatment regimen superior to oseltamivir monotherapy in hospitalized patients with influenza due to susceptible strains, but this retrospective study may prompt such trials.

The study may be found here: [Comparative Effectiveness of Combined Favipiravir and Oseltamivir Therapy Versus Oseltamivir Monotherapy in Critically Ill Patients With Influenza Virus Infection](#).

Table 2. Influenza Cases Reported, 2019-2020 Season*

Positive Test Type/Subtype	Week 5	Week 4	Total to Date	Percent to Date
Influenza A, subtype unknown	1,172	1,249	7,506	55.3%
Influenza A (H1N1)pdm09	44	48	404	3.0%
Influenza A (H3)	1	2	103	0.8%
Influenza B, subtype unknown	470	551	5,273	38.9%
Influenza B/Victoria	0	0	167	1.2%
Influenza B/Yamagata	0	0	5	0.04%
Influenza, type unknown	15	34	111	0.8%
Total	1,702	1,884	13,569	100.0%

*Season is July 1- June 30, Weeks 27-26.

**Figure 1. Activity Level of Emergency Department Influenza-Like Illness (ILI),
2019-20 Season to Date.****Legend**

Minimal			Low		Moderate		High		
LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8	LEVEL 9	LEVEL 10
< mean	≥ mean and <1 standard deviation above mean	≥1 and <2 standard deviations above mean	≥2 and <3 standard deviations above mean	≥3 and <4 standard deviations above mean	≥4 and <5 standard deviations above mean	≥5 and <6 standard deviations above mean	≥6 and <7 standard deviations above mean	≥7 and <8 standard deviations above mean	≥8 standard deviations above mean

Influenza Activity Indicator:

The activity level compares the current week's ED ILI% (emergency department influenza-like illness, percent of all visits) to the mean and number of standard deviations above of the mean of the ED ILI% in non-influenza season weeks (CDC disease weeks 27-39) from the current and prior four seasons.

There are 10 activity levels, classified as: Minimal (levels 1-3), Low (levels 4-5), Moderate (levels 6-7), and High (levels 8-10). An activity level of 1 corresponds to when the ED ILI% is below the mean; level 2 corresponds to when the ED ILI% is less than 1 standard deviation above the mean; level 3 corresponds to when the ED ILI% is more than 1 but less than 2 standard deviations above the mean, and so on, with an activity level of 10 corresponding to when the ED ILI% is at 8 or more standard deviations above the mean.

INFLUENZA WATCH

Figure 2. San Diego County Influenza Detections by Type and Week of Report, 2019-20 Season to Date (N=13,569).

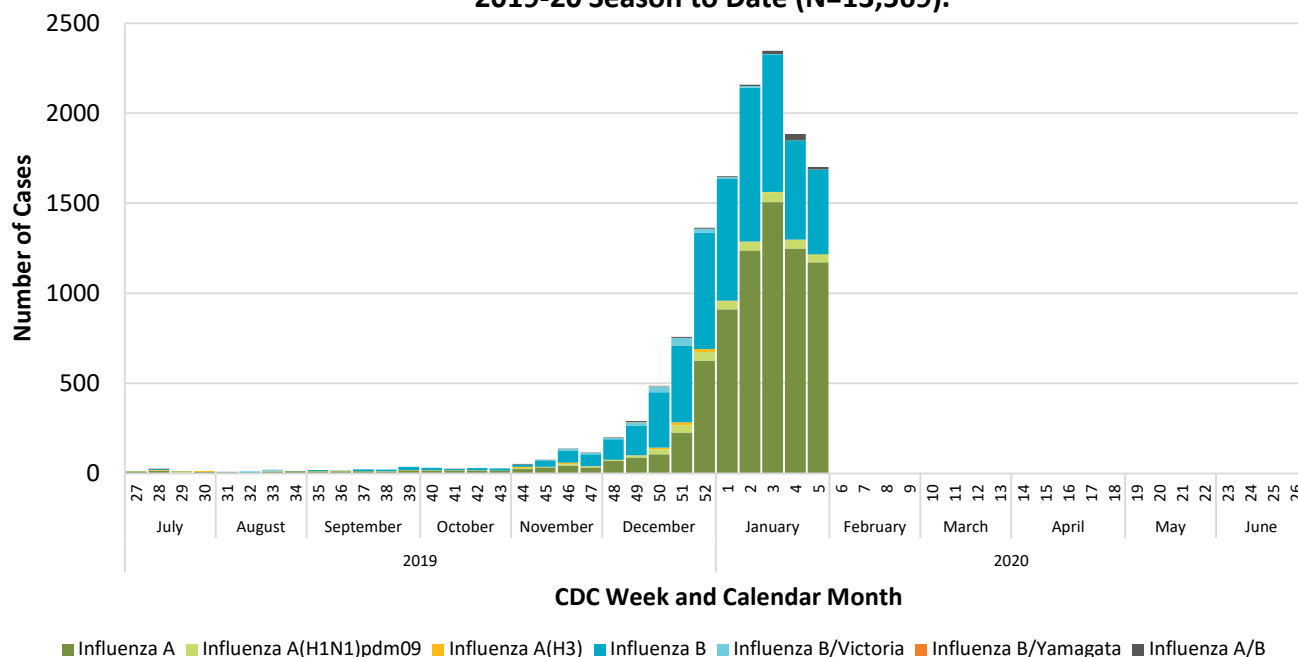
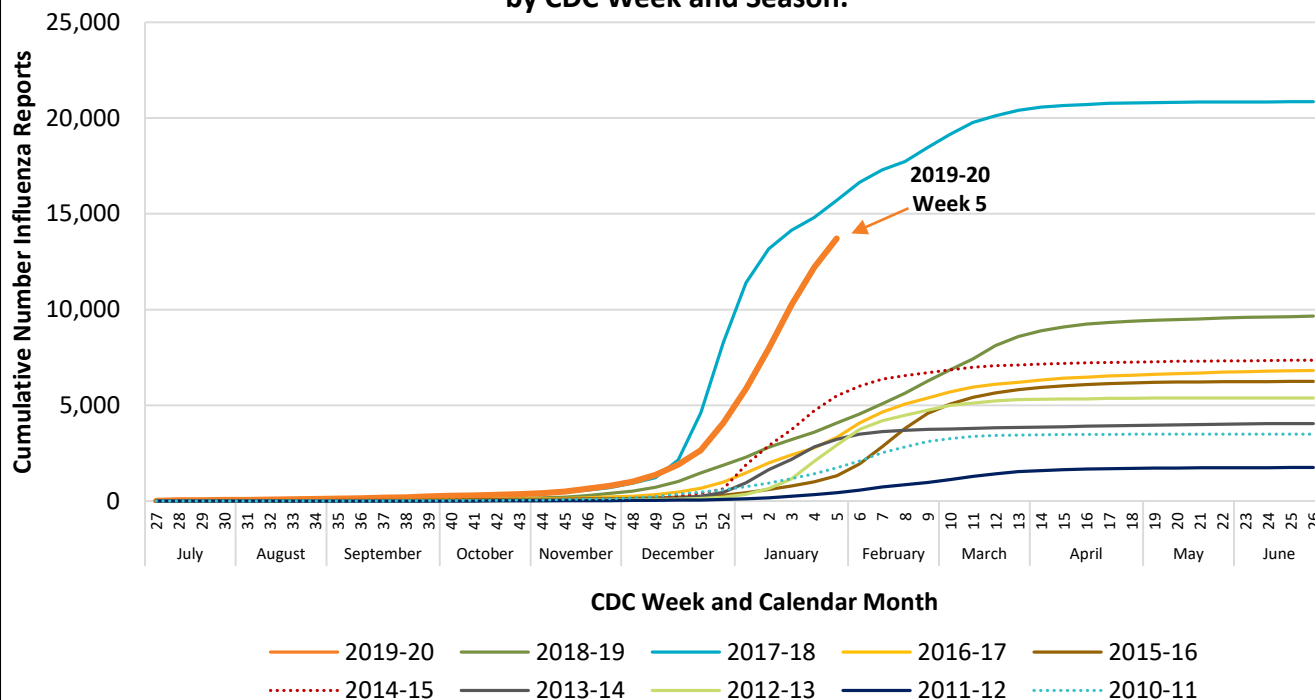


Figure 3. Cumulative Influenza Cases Reported by CDC Week and Season.



INFLUENZA WATCH

Week 5
Ending 2/1/2020

Figure 4. Proportion of Influenza Cases by Age Group and Season.

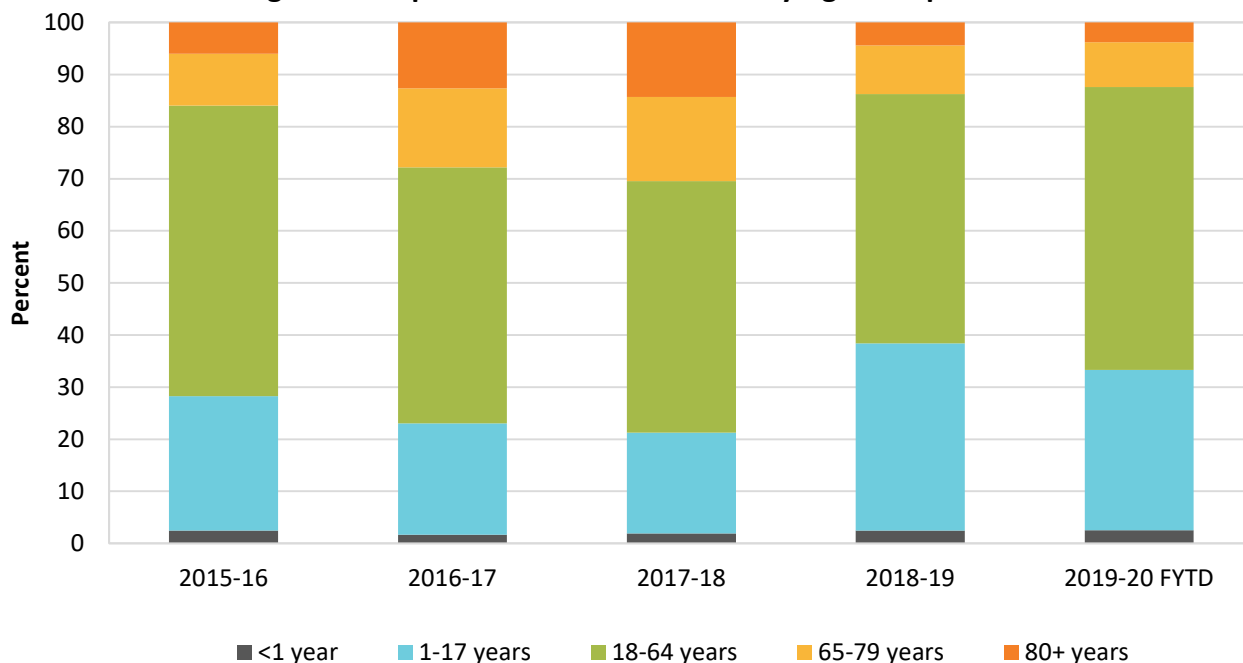
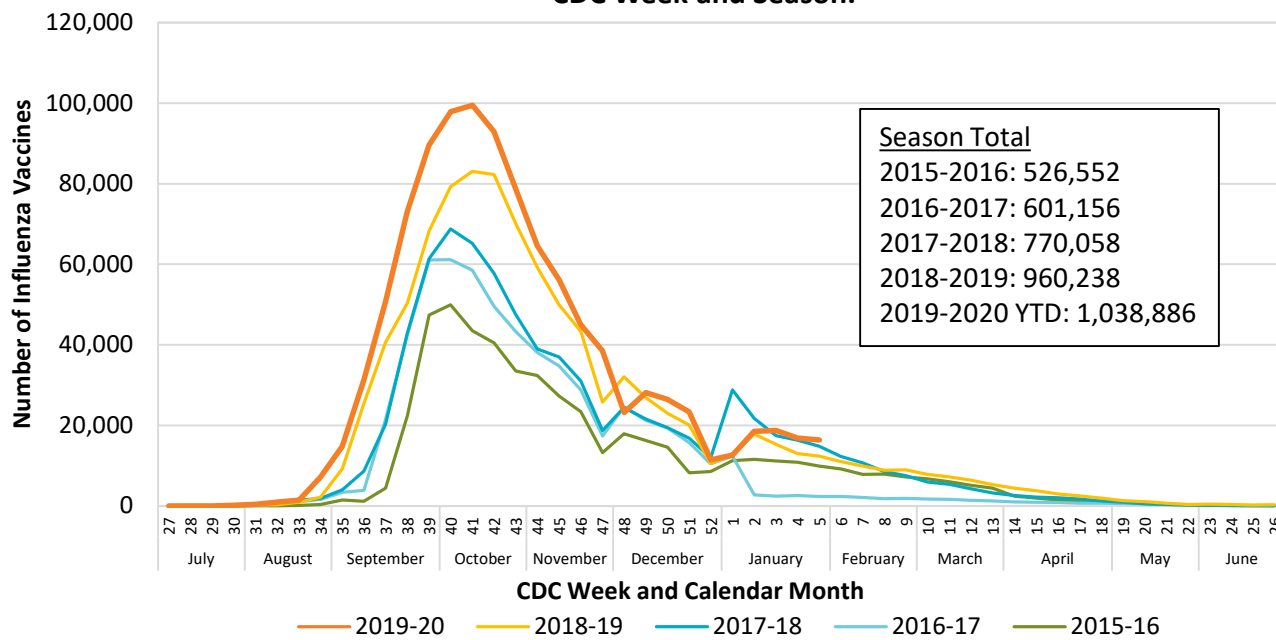


Figure 5. Number of Influenza Vaccinations Administered* by CDC Week and Season.



* Influenza vaccinations administered and entered into the San Diego Immunization Registry ([SDIR](#))

INFLUENZA WATCH

Week 5
Ending 2/1/2020

Figure 6. Percent of Emergency Department Visits for ILI Chief Complaint by CDC Week and Season.

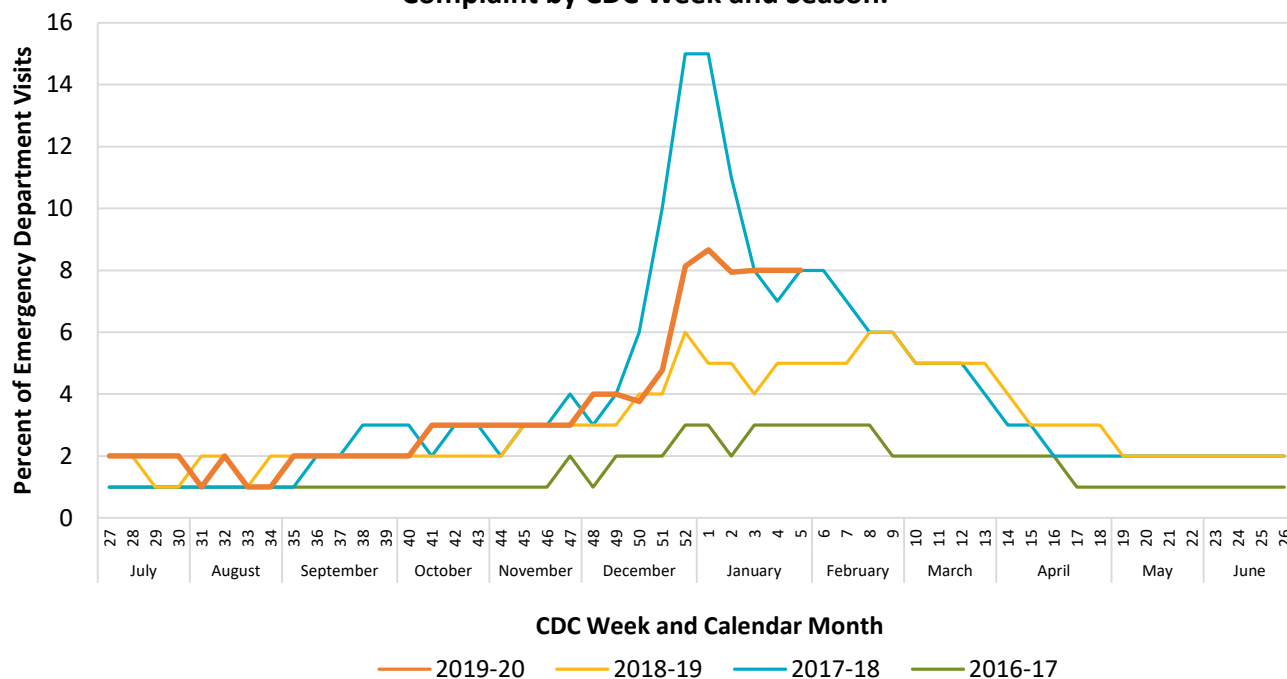
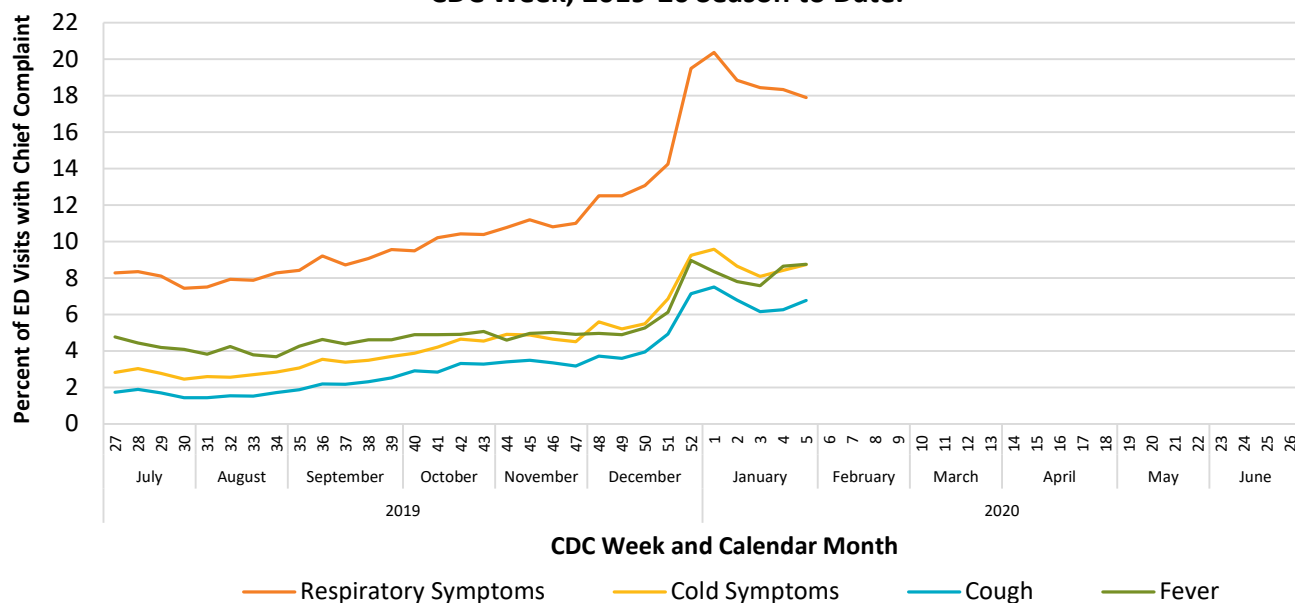


Figure 7. Percent of Emergency Department Visit Chief Complaints for Cough, Cold, Fever, or Respiratory Symptoms* by CDC Week, 2019-20 Season to Date.



* Respiratory category includes cough, cold symptoms, influenza-like illness, and other respiratory symptoms.

INFLUENZA WATCH

Figure 8. Percent of San Diego County Emergency Department Visits for Influenza-like Illness by CDC Week and Season Compared to 5-Year Baseline and Upper 95% Threshold Values (Serfling Method).

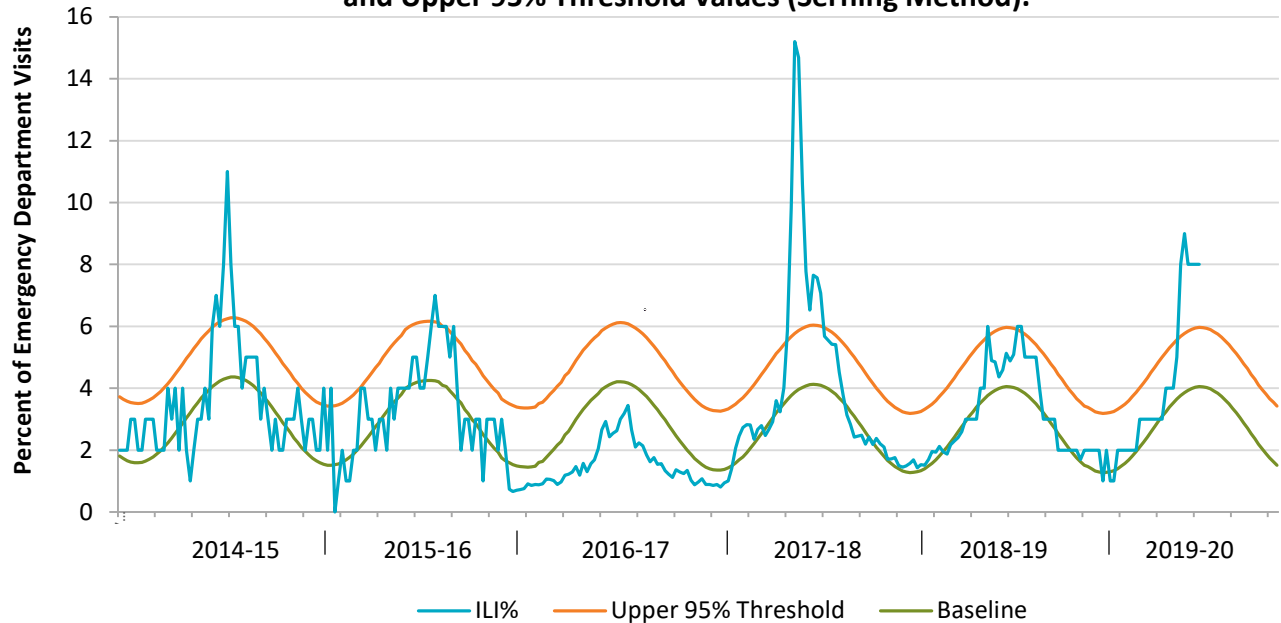
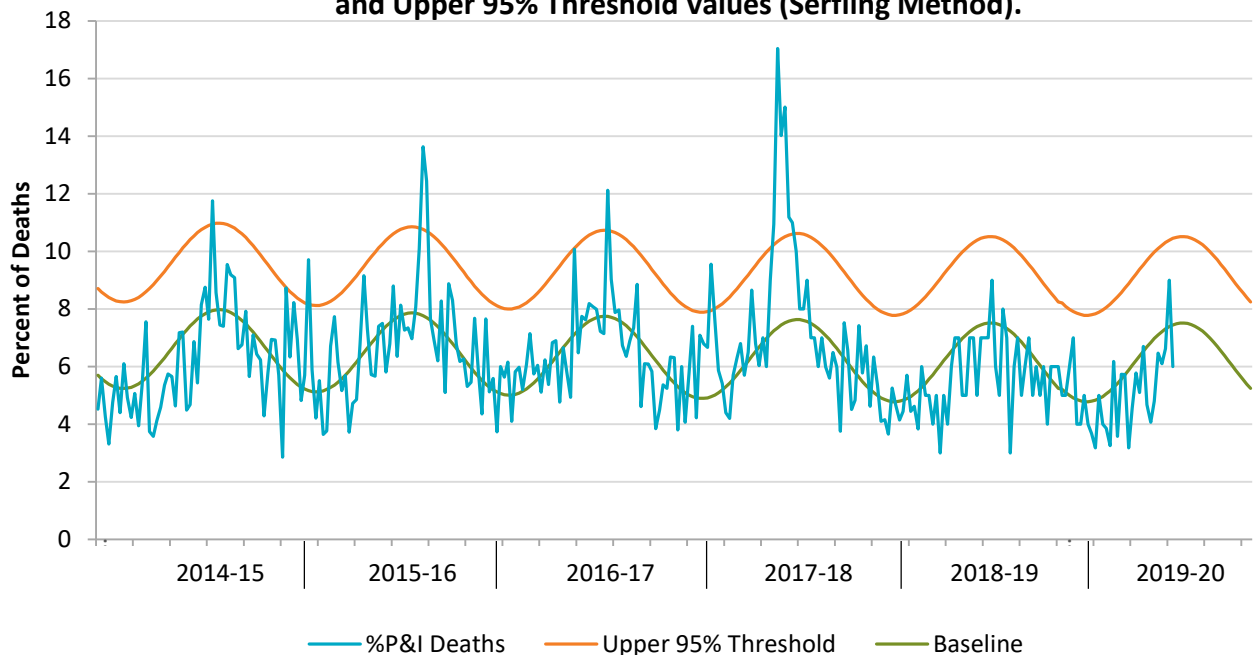
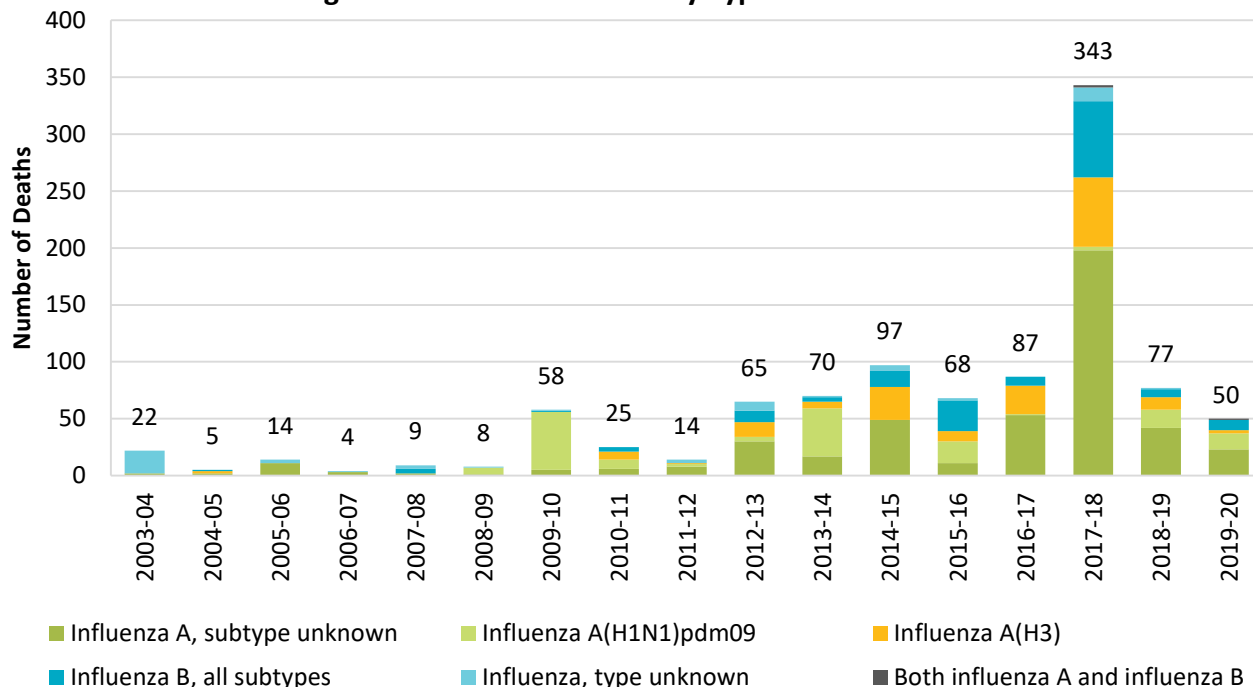
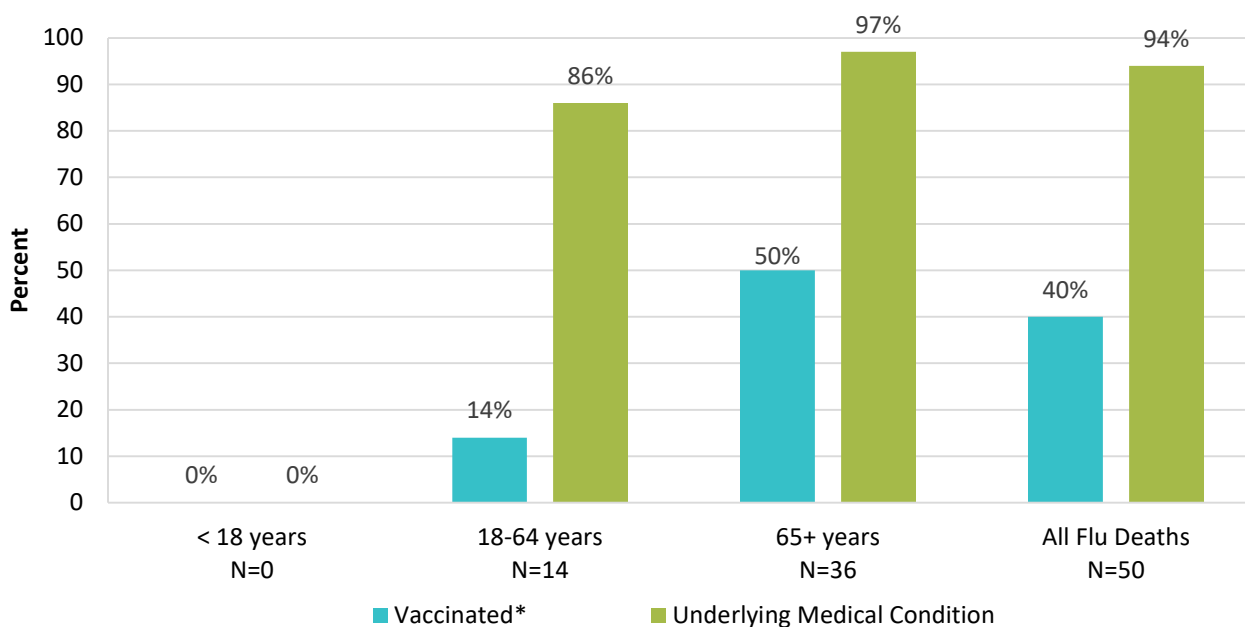


Figure 9. Percent of San Diego County Deaths Registered with Pneumonia and/or Influenza by CDC Week and Season Compared to Prior 5-Year Baseline and Upper 95% Threshold Values (Serfling Method).



INFLUENZA WATCH

Figure 10. Influenza Deaths by Type and Season.

Figure 11. Percent of Influenza Deaths by Age Group, Vaccination Status, and Underlying Medical Condition, 2019-20 Season.


* known to be vaccinated

Influenza Reporting in San Diego County

Individual influenza cases are now reportable to Public Health as of October 1, 2019. Please report laboratory-positive influenza results to the County Epidemiology Program by **FAX (858) 715-6458** using a [Confidential Morbidity Report Form](#), or an [Influenza Case Report Form](#), and/or a copy of the laboratory results. Also, please indicate if the patient died and/or is a resident of a congregate living facility (if known).

Influenza specimens may be sent to [Public Health Laboratory](#) (PHL) for confirmation and subtyping. Please contact PHL at **(619) 692-8500 before submitting** or for questions and use the current PHL Test Request Form found at https://www.sandiegocounty.gov/hhsa/programs/phs/phs_laboratory/. Contact the Epidemiology Program by telephone **(619) 692-8499** or email (EpiDiv.HHSA@sdcounty.ca.gov) with questions about influenza data. Influenza outbreaks should be reported by telephone to **(619) 692-8499**.

Resource Links

- County of San Diego Epidemiology Program www.sdepi.org
- County of San Diego [2018-19 Influenza Season Summary](#)
- Influenza Watch* [Slide Deck](#) – A slide version of this report for presentations
- County of San Diego Immunization Program (SDIZ) www.sdiz.org
- San Diego Regional Immunization Registry (SDIR) <http://www.sdiz.org/CAIR-SDIR/index.html>
- California Department of Public Health (CDPH) [Influenza Update](#)
- Centers for Disease Control and Prevention (CDC) [Influenza Surveillance](#)

Influenza Watch Data Sources

The following sources of data are used to produce this report:

- Influenza case reports:** Medical providers and laboratories report individual cases of confirmed influenza via fax or electronic laboratory reporting (ELR) to Public Health Services Epidemiology Program (Epidemiology).
- Influenza deaths:** Hospital infection control professionals report influenza-related deaths. Pediatric flu deaths (under 18 years of age) are legally reportable in California; however, San Diego County requests that all influenza-related deaths be reported for surveillance purposes. Influenza-related deaths are also identified through death certificate registration. The County Office of Vital Records notifies Epidemiology when a new death is registered with influenza listed as a cause of death or underlying condition. In addition, influenza case reports are compared to death data for San Diego County, and matches are evaluated to determine if their influenza infection was related to the cause of death.
- Percent pneumonia and influenza deaths:** The percentage of all deaths registered that had either pneumonia and/or influenza listed as a cause of death is obtained directly from the Vital Records VRIS data system on a weekly basis.
- Influenza-like illness (ILI):** Electronic emergency department (ED) visit data is submitted to Epidemiology daily, and the number of all ILI chief complaints and total visits are used to calculate the ED ILI percentage for each week. ILI is defined as fever ($>100^{\circ}\text{F}$ or 37.8°C) and cough and/or sore throat, in the absence of a known cause.
- Influenza outbreaks:** In a congregate living setting, outbreaks are defined as at least one laboratory-confirmed influenza in the setting of a cluster (≥ 2 cases) of influenza-like illness (ILI) within a 72-hour period. Influenza outbreaks are reportable in California. Epidemiology identifies outbreaks when facilities call to report. Other potential outbreaks are identified when multiple cases share an address or have a residential address that matches a skilled nursing or long-term care facility.
- Number of vaccines:** The San Diego Immunization Registry (SDIR) provides weekly updates on the number of flu vaccinations given based on the number of flu vaccinations registered by participating providers.

The purpose of the weekly *Influenza Watch* is to summarize current influenza surveillance in San Diego County.

Please note that reported weekly data are preliminary and may change due to delayed submissions and additional laboratory results.