County of San Diego

January 24, 2018
*Volume 17, Issue 16*

# INFLUENZA WATCH

*Week 3*
*Ending 1/20/2018*

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.***

**Report Contents**



## Current Week

### Current Week 3 (ending 1/20/2018)

- 1,183 new influenza detections reported: *Elevated level*
- 9% influenza-like-illness (ILI) among emergency department visits: *Elevated level*
- 32 new influenza-related deaths reported this week
- 23 new ICU cases reported this week
- 14% of deaths registered with pneumonia and/or influenza: *Elevated level*

## Current Season Summary

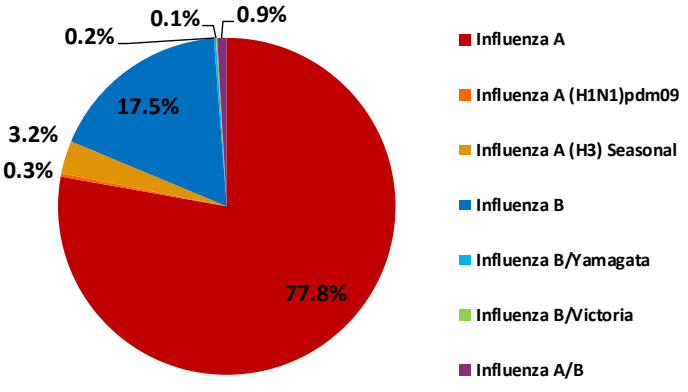
**13,712** Total Cases

**223** ICU Cases

**174** Deaths†

**106** Outbreaks*

### Virus Characteristics




† Including 20 deaths less than 65 years of age, reportable to CDPH.
* At least one case of laboratory-confirmed influenza in a setting experiencing ≥2 cases of influenza like illness (ILI) within a 72-hour period.

### Table 1. Influenza Surveillance Indicators

| Indicator | FY 2017-18* | | | FY 2016-17 | | Prior 3-Year Average** | |
|---|---|---|---|---|---|---|---|
| | Week 3 | Week 2 | FYTD# | Week 3 | FYTD# | Week 3 | FYTD# |
| All influenza detections reported (rapid or PCR) | 1,183 | 2,170 | 13,712 | 322 | 2,110 | 402 | 2,005 |
| Percent of emergency department visits for ILI | 9% | 7% | | 3% | | 6% | |
| Percent of deaths registered with pneumonia and/or influenza | 14% | 17% | | 8% | | 8% | |
| Number of influenza-related deaths reported^ | 32 | 51 | 174 | 7 | 21 | 6 | 15 |

# FYTD=Fiscal Year To Date (FY is July 1- June 30, Weeks 27-26). Total deaths reported in prior years: 87 in 2016-17, 68 in 2015-16, and 97 in 2014-15.
* Previous weeks case counts or percentages may change due to delayed processing or reporting.
** Includes FYs 2014-15, 2015-16, and 2016-17.
^ Current FY deaths are shown by week of report; by week of death for prior FYs.

COUNTY OF SAN DIEGO HHSA HEALTH AND HUMAN SERVICES AGENCY PUBLIC HEALTH SERVICES

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LIVE WELL SAN DIEGO

## Aerosol Spread of Influenza

Sick people can pass influenza to others just by breathing, according to a recently published study conducted at the University of Maryland that demonstrated how the virus can spread by airborne routes.

The researchers recruited volunteers with influenza-like illness in the 2012-13 influenza season, and of the 355 college-age people tested, 142 (40%) were positive for influenza. Among those with the virus, the researchers obtained nasopharyngeal samples on days one through three after symptom onset. To measure transmission, each participant sat in a chamber for 30 minutes with his or her face in a large metal cone, part of an apparatus that captured and measured influenza virus in exhaled breath. Patients were also asked to cough, sneeze, and say the alphabet three times. Altogether, researchers collected 218 nasopharyngeal samples and 218 breathing samples.

When the team analyzed the samples, they found that a significant number of patients routinely shed infectious virus into particles small enough for airborne transmission. They found that 11 (48%) of the 23 fine aerosol samples acquired when patients were not coughing had detectable viral RNA, and, of those, eight contained infectious virus, suggesting that coughing is not a prerequisite for generating fine aerosol droplets. In the few sneezes captured by measurement tools, investigators did not detect greater viral RNA copy numbers in coarse or fine aerosols, suggesting that sneezing does not make as important a contribution as virus shed through aerosols.

The study suggests that sick patients contaminate the air around them by breathing, and not just by coughing or sneezing, especially during the first few days of illness. This supports the recommendation that when individuals are becoming ill with influenza, they should go home and stay out of public spaces, including workplaces and schools, so they do not infect others.

The study may be found online here: Infectious virus in exhaled breath of symptomatic seasonal influenza cases from a college community.

### Table 2. Influenza Detections Reported, FY 2017-18*

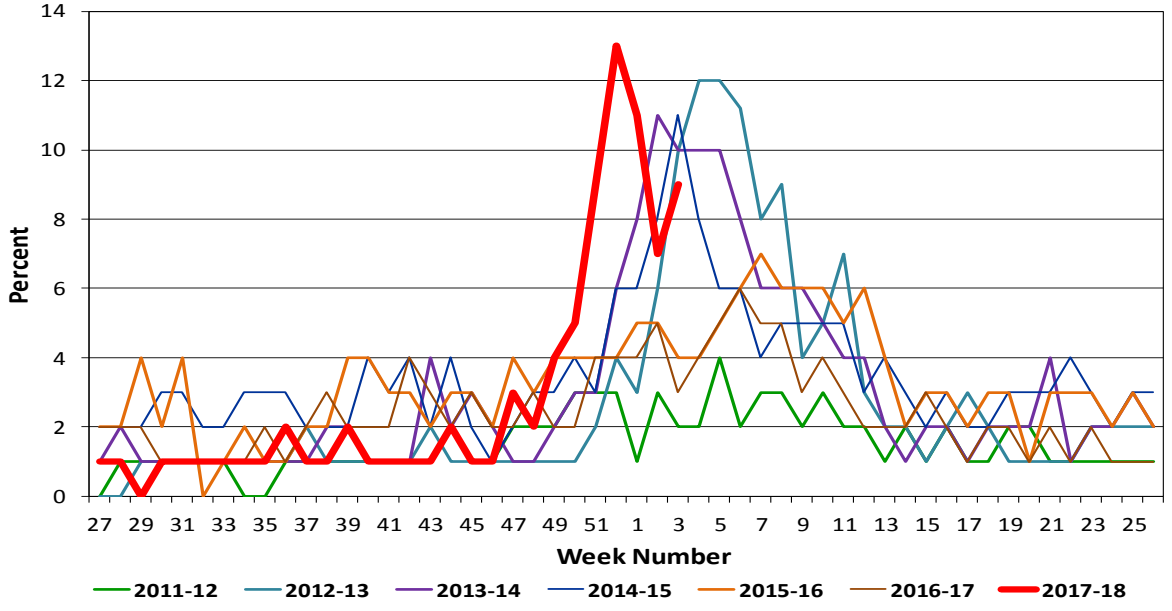
| Positive Test Type/Subtype | Week 3 | Total FY-To-Date |
|---|---|---|
| Influenza A† | 811 | 10,671 |
| Influenza A(H1N1) Pandemic 2009 | 4 | 45 |
| Influenza A (H3) Seasonal | 6 | 432 |
| Influenza B† | 353 | 2,396 |
| Influenza B/Victoria | 0 | 16 |
| Influenza B/Yamagata | 0 | 28 |
| Influenza A/B† | 9 | 124 |
| **Total** | 1,183 | 13,712 |

* FY is July 1- June 30.

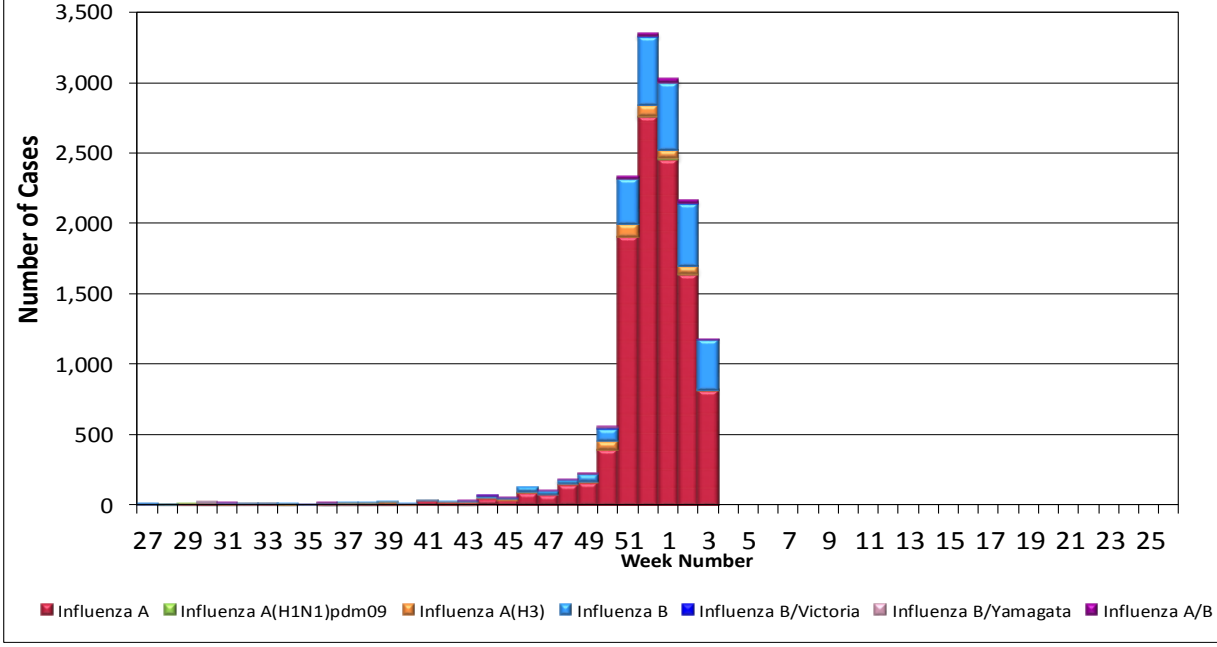
† No further characterization performed, or results were not yet available at time of publication.

Note: Totals may change due to further laboratory findings.

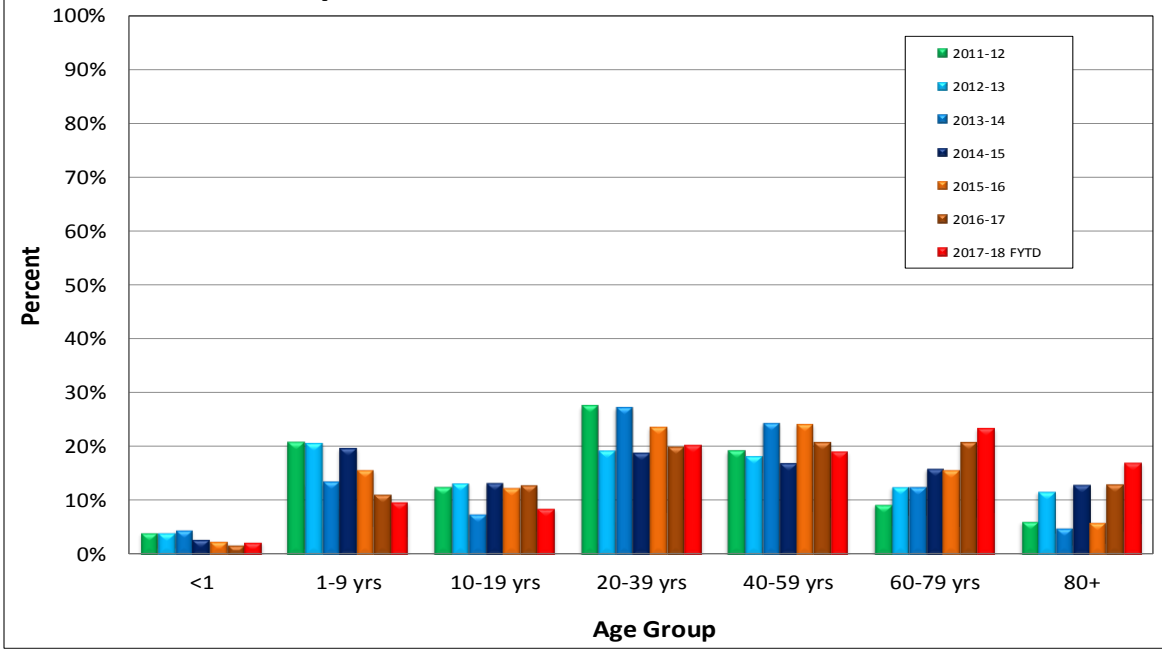
## Figure 1. Percent of Emergency Department Visits for Influenza-like Illness by Week and FY




## Figure 2. San Diego County Influenza Detections by Type and Week of Report, 2017-18 FYTD (N=13,712)



## Figure 3. Percent of Reported Influenza Cases by Age Group and Season, 2011-12 to 2017-18 FYTD




## Figure 4. Cumulative Influenza Case Reports by Episode Week & Season

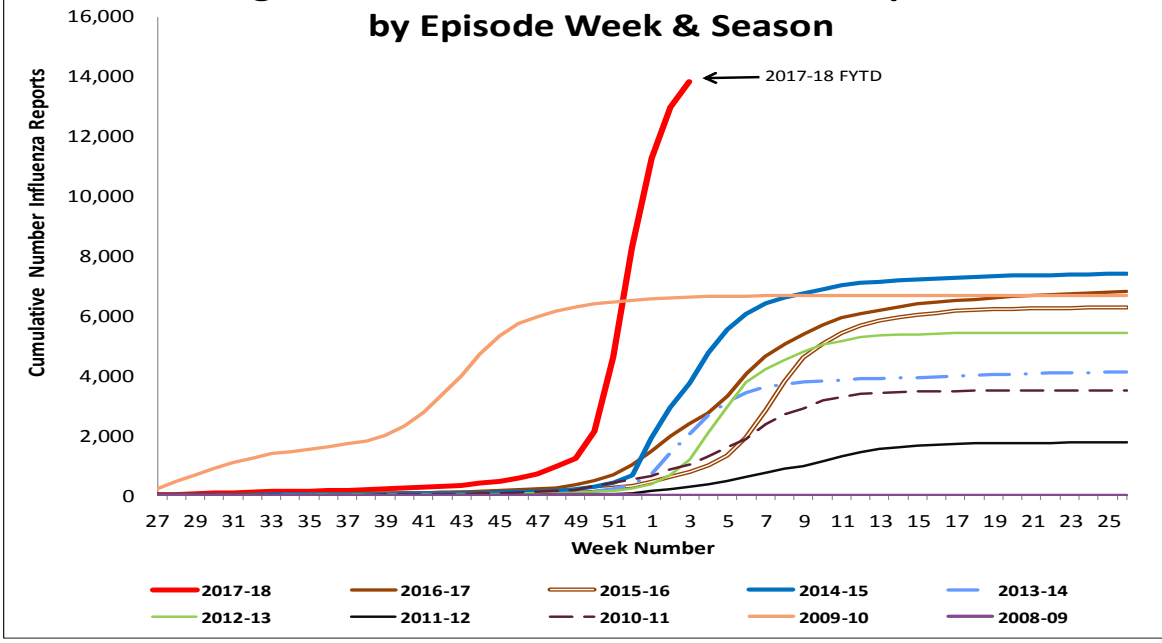


**Figure 5. Percent of San Diego County Emergency Department Visits for Influenza-like Illness by Week and FY Compared to 5-Year Baseline & Upper 95% Threshold Values (Serfling Method)**

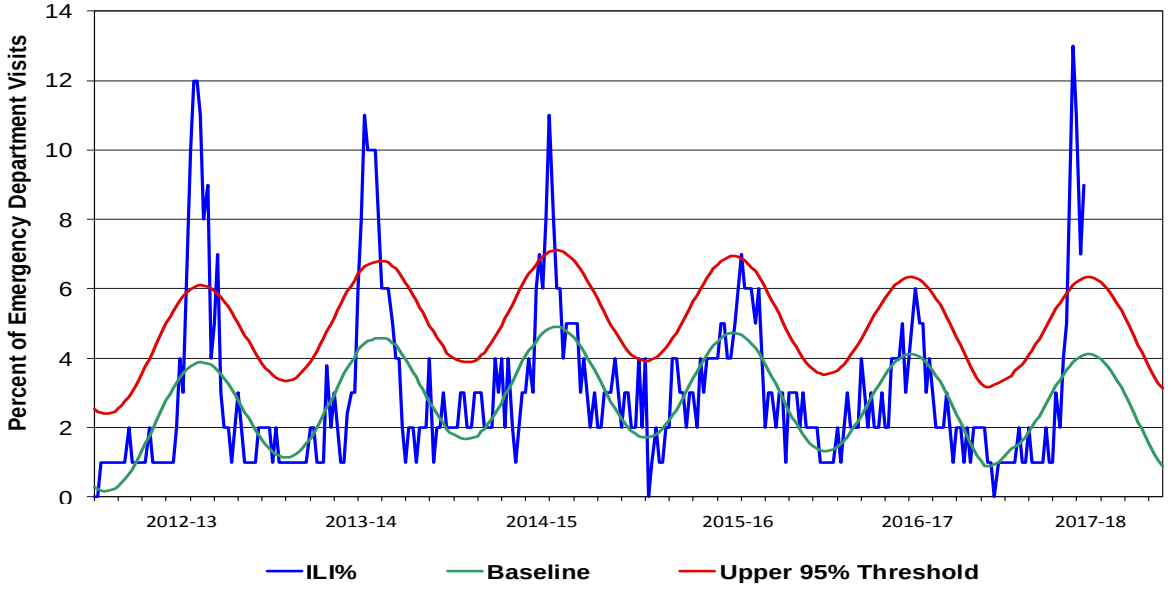
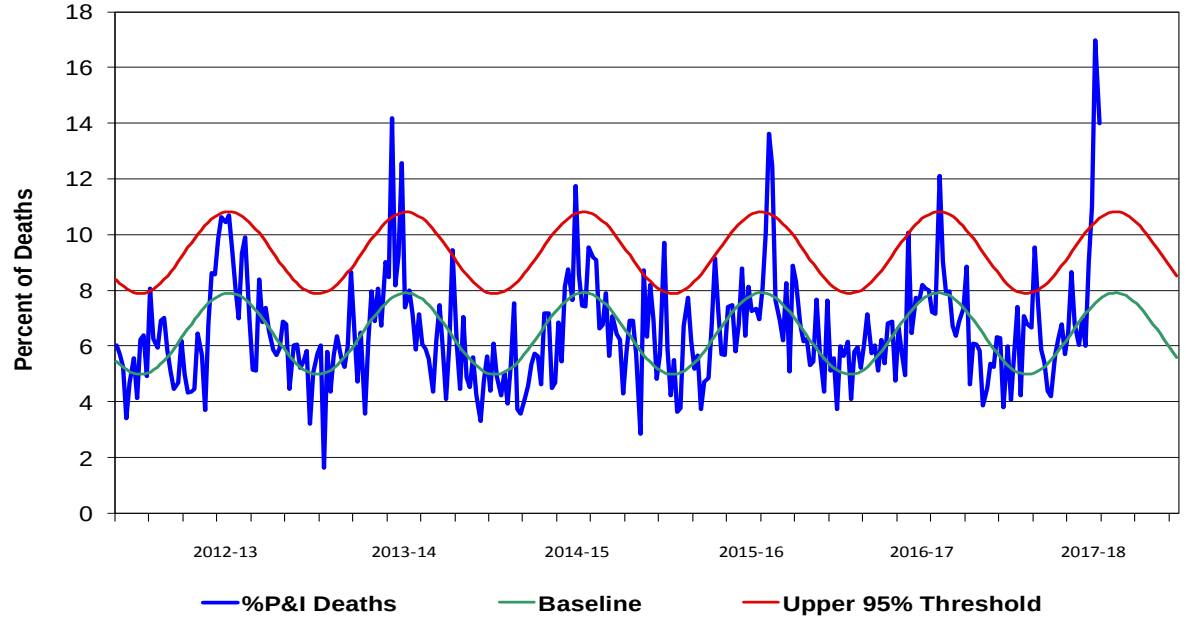
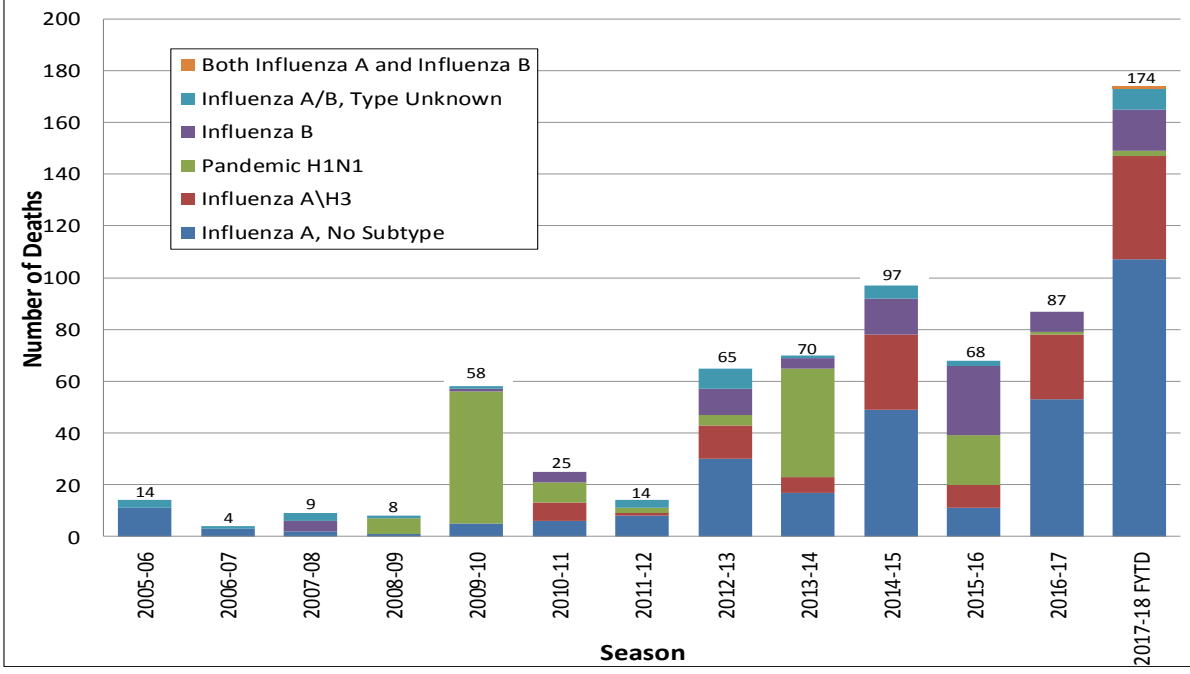


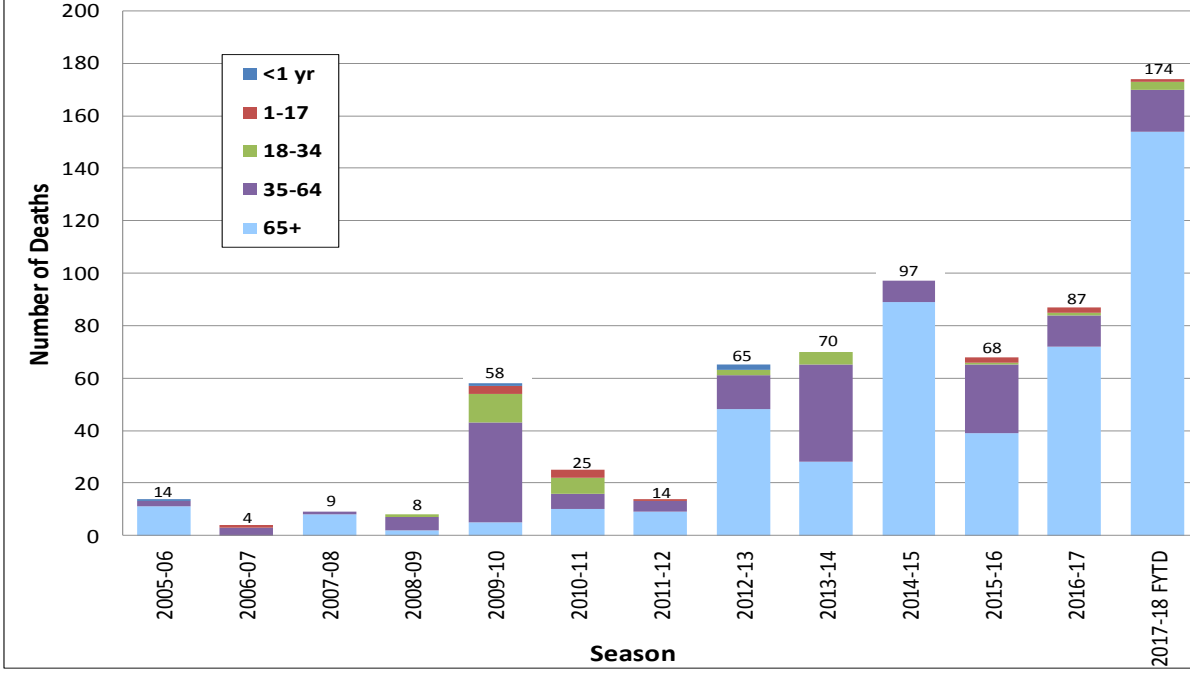

**Figure 6. Percent of San Diego County Deaths Registered with Pneumonia and/or Influenza by Week and FY Compared to Prior 5-Year Baseline & Upper 95% Threshold Values (Serfling Method)**



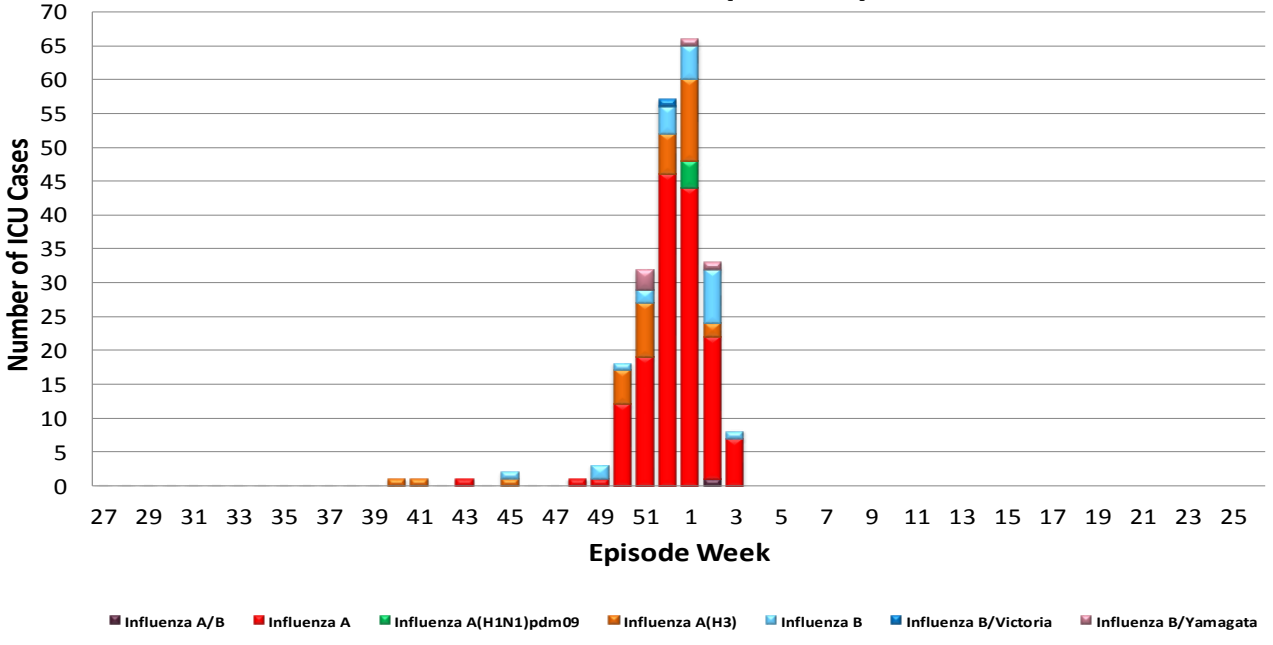
## Figure 7. Influenza Deaths by Type and Season




## Figure 8. Influenza Deaths by Age and Season



## Figure 9. Number of Influenza Cases Requiring ICU Care by Episode Week and Type of Influenza, 2017-18 FYTD (N=223)




Episode week is the week of symptom onset, or earliest available date in which the case is identified.

## Influenza Reporting in San Diego County

Local providers are encouraged to report laboratory positive influenza detections to the County Epidemiology Program by **FAX (858) 715-6458**. Please fax a Case Report Form and/or a printed laboratory result, and indicate if the patient was admitted to ICU or died, and/or is a resident of a congregate living facility.

For questions regarding sending specimens to Public Health Laboratory (PHL), call (619) 692-8500. Click here for the updated PHL PCR Test Request Form. Contact the Epidemiology Program with any questions at **(619) 692-8499** or by email to: EpiDiv.HHSA@sdcounty.ca.gov.

**Resources**

San Diego County Influenza Surveillance Weekly Slide Deck - presentation version of this report
County of San Diego Immunization Program www.sdiz.org
California Department of Public Health Influenza
Centers for Disease Control and Prevention Influenza Surveillance Weekly Report