SACRAMENTO COUNTY

INFLUENZA
2012-2018

During the 2012-2013 through 2017-2018 influenza seasons, healthcare facilities in Sacramento County were required to report any influenza-related intensive care unit (ICU) hospitalizations and deaths in persons less than 65 years of age to Sacramento County Public Health (SCPH). Data from these six influenza seasons are summarized in this report.

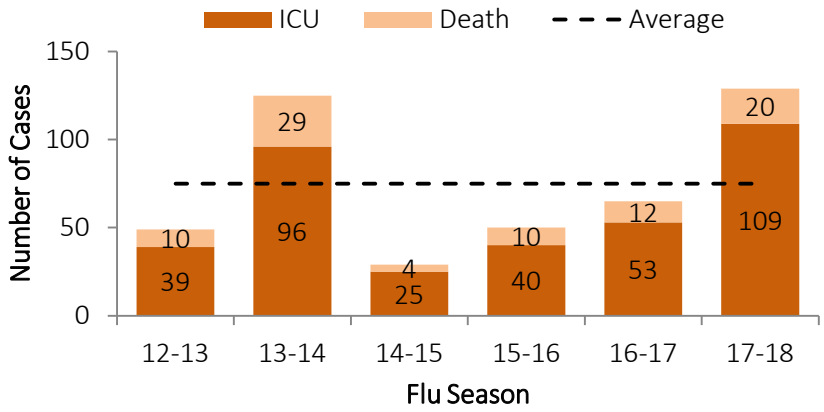
During the 2012-2013 through 2017-2018 influenza seasons, SCPH confirmed an average of 74 influenza cases each season among persons less than 65 years old [Figure 1]. On average, 60 (81.1%) cases were hospitalized in the ICU and 14 (18.9%) died of influenza-related complications during these six seasons. The most cases were reported during the 2013-2014 and 2017-2018 seasons with 125 and 129 cases, respectively. This is consistent with the state-wide trend.

Influenza A was the predominant influenza type throughout the six seasons [Figure 2], accounting for 81.2% of the reported cases who were positive for either influenza A or B [Figure 3]. Of those, 26.3% were subtype 2009 H1N1, 21.1% were subtype H3, and 52.6% were not subtyped. Influenza B accounted for 19.1% of all reported cases. The 2017-2018 season had the highest percent of influenza B cases compared to previous seasons, accounting for more than one-third of the reported cases.

Source: California Reportable Disease Information Exchange (CalREDIE).

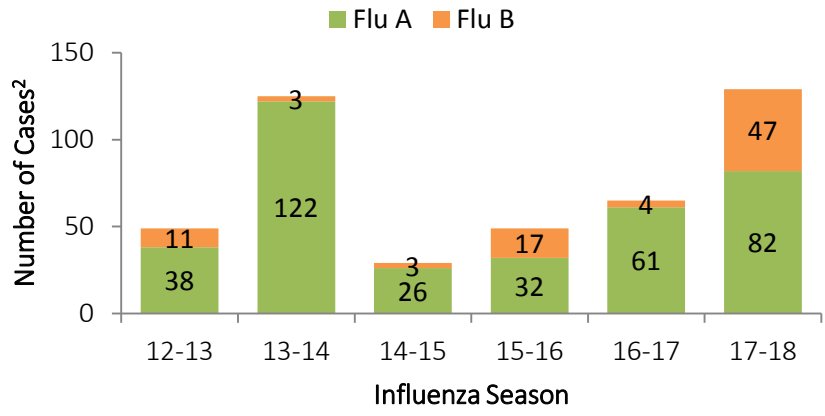
Note: A confirmed case must be <65 years old; exhibit symptoms (fever >100° F AND cough or sore throat) or be clinically diagnosed; laboratory positive; and admitted to the ICU or deceased.

Figure 1. Number of Influenza Cases[1] by Season, 2012-2018 (N=447)



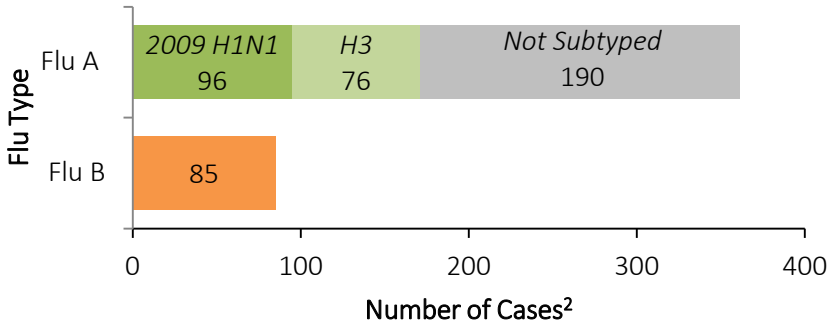
[1]Includes confirmed cases only.

Figure 2. Influenza Cases[1] by Season, 2012-2018 (N=446)



[2]Includes cases that were positive for influenza A or influenza B only.

Figure 3. Influenza Cases[1] by Type, 2012-2018 (N=446)



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Increasing age was associated with a higher incidence of influenza-related ICU hospitalizations or deaths among those less than 65 years old with the average annual incidence five times higher among persons 50-64 years old compared to those 0-19 years old [Table 1]. There was also a 1.32 times higher risk among those 20-49 years old compared to those 0-19 years old. There were no notable differences by gender.

Of the 447 cases reported to SCPH during the six influenza seasons, 337 (75.4%) indicated having one or more of the underlying medical conditions listed in Table 2. Of those with underlying medical conditions, 58.8% had chronic pulmonary disease, 49.6% had metabolic disorder, and 34.1% had cardiac disease.

Vaccination information was available for approximately 45.0% of the reported cases. Of these, 44.6% received the influenza vaccine for that season [Figure 4].

Table 1. Demographics of Influenza Cases[1], 2012-2018 (N=447)

	Population	N (%)	Average Annual Incidence**	Relative Risk
Age Category				
0-19	396,541	68 (15.2%)	2.86	Reference
20-49	616,831	140 (31.3%)	3.78	1.32
50-64	276,664	239 (53.5%)	14.40	5.04
Gender				
Male	722,955	222 (49.7%)	5.12	1.04
Female	756,345	224 (50.1%)	4.94	Reference

**Per 100,000 population.

Table 2. Underlying Medical Conditions of Influenza Cases[1], 2012-2018

Medical History	**N (%)**
Underlying Medical Condition	337 (75.4%)
Chronic Pulmonary Disease	*198 (58.8%)*
Metabolic Disorder	*167 (49.6%)*
Cardiac Disease	*115 (34.1%)*
Gastrointestinal Disease	*80 (23.7%)*
Neurological Disorder	*72 (21.4%)*
Immunosuppressive Medications	*42 (12.5%)*

Figure 4. Vaccination Status of Influenza Cases[1], 2012-2018 (N=447)