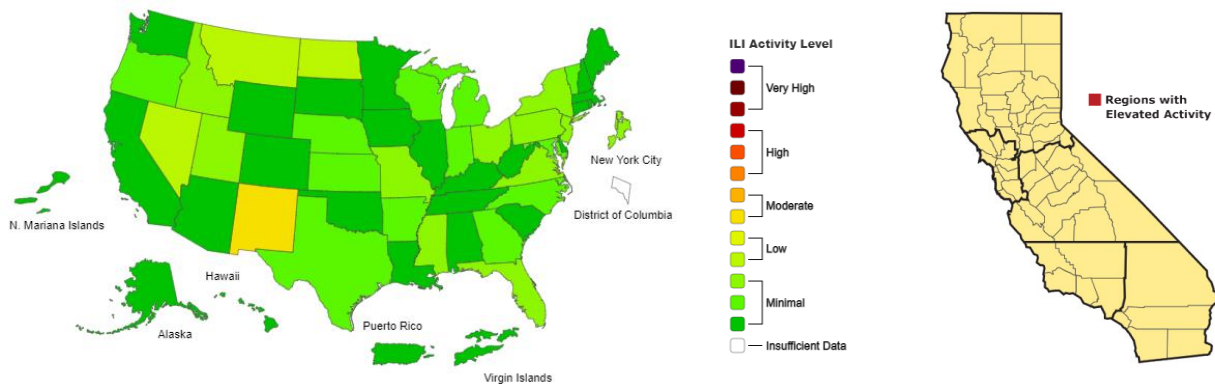


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Influenza (flu) is a contagious respiratory illness caused by influenza viruses that infect the nose, throat, and lungs. Some people, such as older people, young children, and people with certain health conditions, are at higher risk for serious flu complications. According to CDC's Weekly Influenza Surveillance Report and CDPH's Influenza and Other Respiratory Viruses Weekly Report (Figure 1), the current influenza and influenza-like illness (ILI) activity level in Riverside County was minimal^{1,2}. Riverside County collects ILI data via a variety of sources, including CDC's Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE), California Integrated Vital Records System (Cal-IVRS), California Immunization Registry (CAIR), Riverside University Health System (RUHS) outpatient services and selected sentinel providers. This report provides a summary of current influenza syndromic surveillance data in Riverside County.

Figure 1. 2021-2022 Influenza Season Week 42 Ending Oct 23, 2021



43 Key Points at-a-glance

- Minimal ILI activity level in Riverside County
- 2.4% ILI among emergency department visits
- 2.1% ILI among outpatient service visits
- 10 deaths reported due to pneumonia and influenza
- 13.7% influenza vaccination coverage in residents

Emergency Department Syndromic Surveillance

Emergency department (ED) data were collected via ESSENCE. ILI records were captured based on discharge diagnosis. During week 43, ILI accounted for 2.4% (N=324) of all ED visits in Riverside County (Figure 2), 11 of them (3.4%) were admitted to the hospital after ED visit (Figure 3). Comparing to the previous week, ILI-related ED visits decreased by 0.1% while hospitalization rate after ILI-related ED visit decreased by 0.2%. ILI-related ED visits occurred across all age groups (Figure 4). However, after adjustment for age³, children aged 0-4 accounted for 69.2% of all ILI-related ED visits during this flu season (Figure 5).

Figure 2. Percent of ILI-related ED Visits

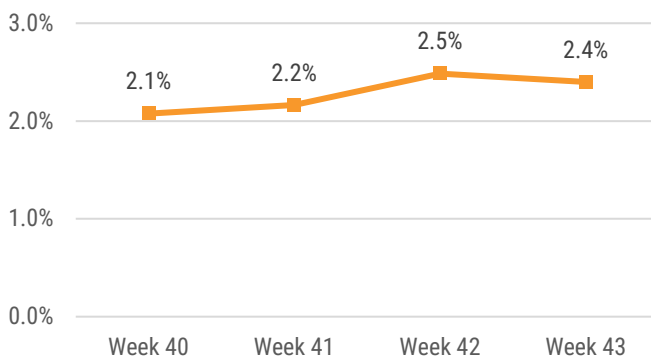
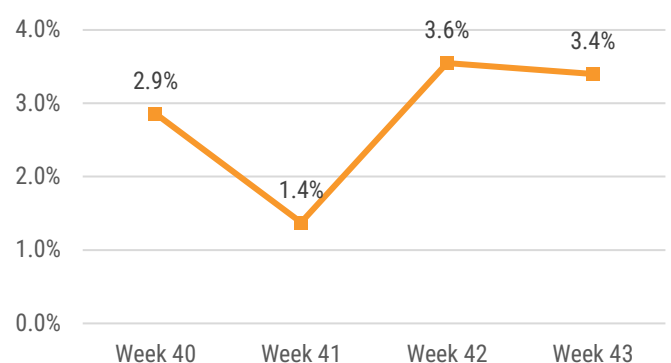


Figure 3. Percent of Hospitalizations after ILI-related ED Visit



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Figure 4. ILI-related ED Visits by Age Group

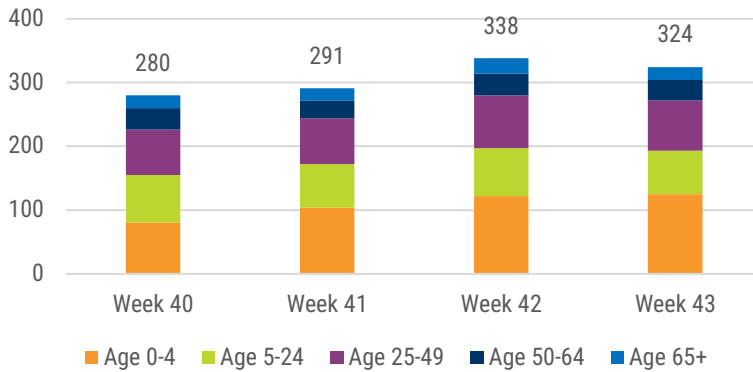
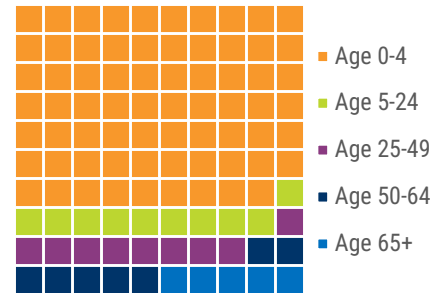


Figure 5. Age-adjusted Proportion of ILI-related ED Visits by Age Group, Week 40-43



Outpatient Service Syndromic Surveillance

RUHS reports ILI-related outpatient visits weekly, including any face-to-face, phone and video visits. ILI records were retrieved based on visit diagnosis, which was not laboratory-confirmed. During week 43, the percentage of outpatient visits attributed to ILI was 2.1% (N=150) with a decrease of 0.3% than the previous week (Figure 6). The national baseline for 2021-2022 influenza season is 2.5% and the regional baseline for California is 2.4%⁴. Similarly, ILI-related outpatients visits occurred across all age groups (Figure 7). After adjustment for age³, children aged 0-4 accounted for 55.8% of all ILI-related outpatient visits during this flu season (Figure 8).

Figure 6. Percent of ILI-related RUHS Outpatient Visits

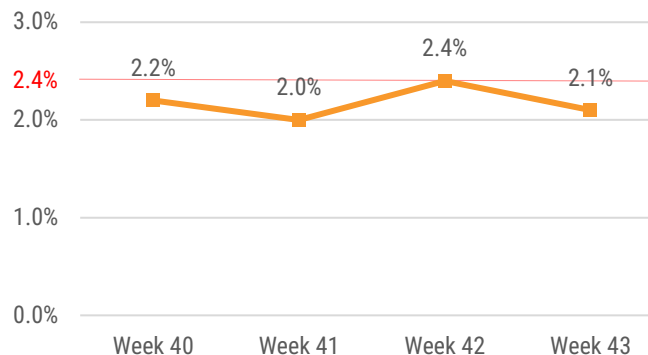


Figure 7. ILI-related RUHS Outpatient Visits by Age Group

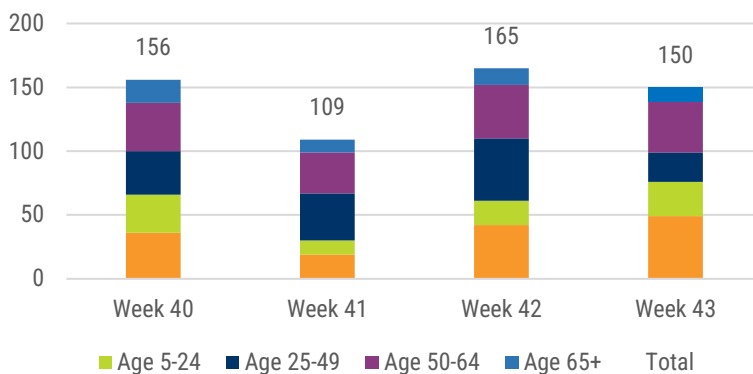
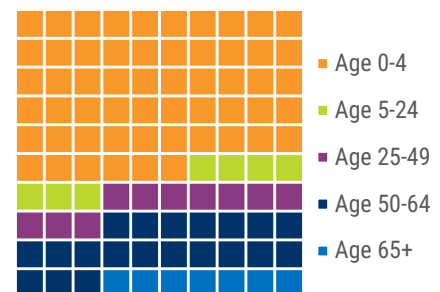


Figure 8. Age-adjusted Proportion of ILI-related RUHS Outpatient Visits by Age Group, Week 40-43



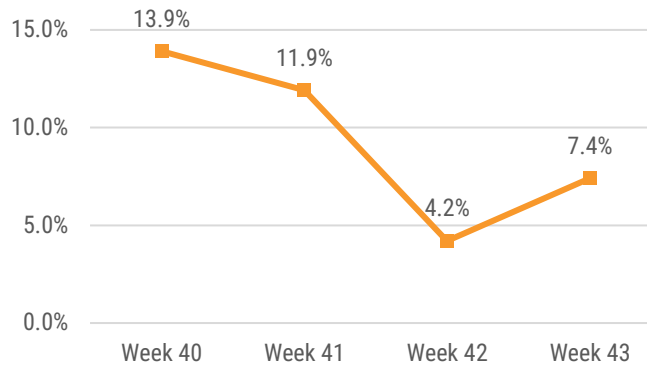
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Sentinel Site Syndromic Surveillance

Five sentinel sites in Riverside County were selected to facilitate a comprehensive influenza surveillance program. Unfortunately, only the Student Health Services in University of California, Riverside submitted data. During week 43, ILI accounted for 7.4% (N=38) of all sentinel site visits with an increase of 3.2% than the previous week (Figure 9). All of them were aged 5-25. Data from sentinel sites are significantly affected by their served population and the results may not be applicable to the general population.

Figure 9. Percent of ILI-related Sentinel Site Visits



Deaths Registered with Either or Both of Pneumonia and Influenza

Pneumonia and influenza (P&I) are among the leading causes of death in the United States, accounting for over 1.7% of all deaths in 2019. During week 43, 7.9% (N=10) of deaths were due, in part, to P&I in Riverside County (Figure 10). P&I deaths in the recent weeks may be undercounted because of the 14-day death certificate processing time. Newly identified P&I deaths will be added to the according week. Overall, people aged 65+ accounted for the majority of P&I deaths in Riverside County and very few P&I deaths happened among young people aged 24 or below (Table 1).

Figure 10. Percent of P&I Deaths in Riverside County

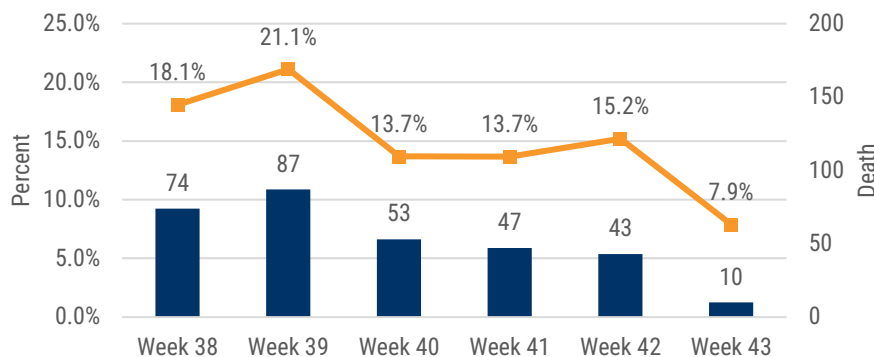


Table 1. Percent of P&I Deaths by Age Group in Riverside County, Week 38-43

	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age 65+
P&I Death & Percent	0 (0%)	4 (1.3%)	44 (14.0%)	78 (24.8%)	188 (59.9%)

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Influenza Vaccinations

Influenza causes millions of illnesses, hundreds of thousands of hospitalizations and tens of thousands of deaths in the United States, but less than half of Americans get an annual flu vaccine. Flu vaccine distribution generally begins in August and continues until all of the vaccines are distributed. By the end of week 43, approximately 13.7% of residents in Riverside County (N=338,955) had received a flu vaccine (Figure 11), significantly lower than the coverage estimate of 49.4% in California during the 2020-2021 flu season⁵. Vaccination coverage was highest among people aged 65+ and lowest among people aged 5-24 (Table 2). Only 54.2% of the records had valid race and ethnicity information. Proportionately, Latinxs were slightly underrepresented than their counterparts (Table 3).

Figure 11. Influenza Vaccinations in Riverside County, August 2021-Present

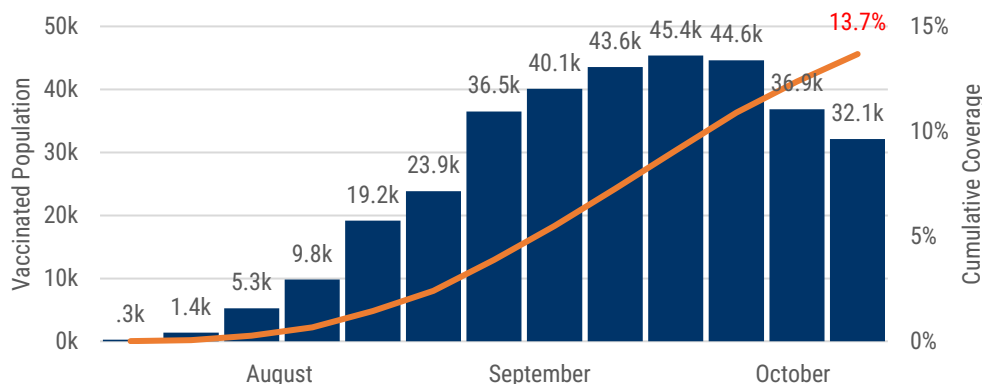


Table 2. Influenza Vaccinations by Age Group in Riverside County, August 2021-Present

	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age 65+	Total
Influenza Vaccination & Percent	15,713 (10.6%)	51,312 (7.5%)	63,832 (8.0%)	77,246 (17.6%)	130,852 (32.5%)	338,955 (13.7%)

Table 3. Influenza Vaccinations by Racial/Ethnic Group in Riverside County, August 2021-Present

	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Black or African American	White	Latinx
Influenza Vaccination & Proportion	590 (0.3%)	14,914 (8.1%)	1,314 (0.7%)	10,539 (5.7%)	69,949 (38.1%)	86,314 (47.0%)
Proportion Based on Standard Population ³	0.5%	6.2%	0.3%	6.2%	38.3%	48.6%

Public Health Recommendations

The best way to reduce risk from seasonal flu infection and its potentially serious complications is to get vaccinated annually. Flu vaccines are designed to protect against the four viruses that will be most common this flu season and are recommended for individuals 6 months and older. Flu vaccines for the 2021-2022 flu season are available now. COVID-19 preventive measures, such as social distancing, hand washing, and mask wearing, can also effectively prevent influenza.

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Notes

1. Weekly US Map: Influenza Summary Update: <https://www.cdc.gov/flu/weekly/usmap.htm>
2. Influenza and Other Respiratory Viruses Weekly Report: <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Immunization/Influenza.aspx>
3. Population estimates in Riverside County were retrieved from 2021 population estimates from California Department of Finance
4. National and regional baseline information for outpatient illness surveillance: <https://www.cdc.gov/flu/weekly/overview.htm>
5. Influenza Vaccination Coverage for Persons 6 Months and Older: <https://www.cdc.gov/flu/fluview/interactive-general-population.htm>