Influenza Surveillance Report – 2020-2021 Season Summary

Data from September 27 – May 22, 2021

Introduction

The purpose of this report is to provide ongoing description and assessment of the activity and types of circulating influenza viruses, and to assess morbidity, hospitalization and mortality related to influenza. It is meant to provide healthcare providers and facilities, public health professionals, policy makers, the media and the public with a general understanding of the severity and burden of the current flu season on a weekly basis in Nevada and nationwide. Data from several surveillance programs analyzed in this report is provisional and may change as additional information becomes available.

If you have questions or comments about this report, are interested in having your medical facility join the sentinel provider program, or have any questions about your facility's participation or reporting, please contact Max Wegener, MPH at mwegener@health.nv.gov.

Influenza activity: Due to the impact of COVID-19 on ILI surveillance, and the fact that reporting relies heavily on ILI activity, reporting will be suspended for the 2020-21 influenza season.

Table 1:

2020-2021 Season Summary			
	Influenza -related Hospitalization	Influenza -related Mortality	Pneumonia and Influenza Mortality
Nevada	64 (2.13 per 100,000)	7/21,840 (0.03%)	4,084/21,840 (18.7%)*
Region 9	Not available	68/322,022 (0.02%)*	52,799/322,022 (16.4%)*
National	Not Available	699/2,307,233 (0.03%)*	292,861/2,307,233 (12.69%)*

*CDC data based on cause of death listed in vital records

Local Health Authority (LHA) reports

Weekly influenza reports from the three LHAs are available on the respective websites:

- Southern Nevada Health District: https://www.southernnevadahealthdistrict.org/stats-reports/influenza-surveillance.php
- Washoe County Health District: https://www.washoecounty.us/health/programs-and-services/communicable-diseases-and-epidemiology/statistics_surveillance_reports/influenza-surveillance/index.php
- Carson City Health & Human Services: Western NV Regional Influenza Report: http://gethealthycarsoncity.org/seasonalflu/

Sentinel Provider Program Description

The sentinel provider program is a partnership between clinicians, healthcare facilities, local health authorities (LHA), the Nevada Division of Public and Behavioral Health, and the Centers for Disease Control and Prevention (CDC). Sentinel providers voluntarily submit a weekly report to the CDC of the number of patients seen at their facility with influenza-like illness (ILI) by age group as well as the total number of patients seen for any reason. ILI is defined as fever (≥ 100°F, 37.8°C) in the presence of cough and/or sore throat without a known cause other than influenza. Sentinel providers may also submit nasal, throat, and/or nasopharyngeal swabs for selected patients to the Nevada State Public Health Laboratory (NSPHL) for viral testing and subtyping at no cost to the patient or provider.

Sentinel Provider Influenza-Like Illness (ILI) Activity:

Figure 1 shows the percent of ILI patients by age group for the season. Those age 0-4 represented 14% of all reported ILI cases in Nevada. 16% of cases were ages 5-24, 25% ages 25-49, 23% ages 50-64, and 22% ages 65 and older.

For the season, 247,694 patient visits were reported by sentinel providers in Nevada, of which 2,732 met criteria for ILI, representing 1.1% of the sample. Total ILI activity was below the Nevada baseline of 1.4%.

Figure 2 shows the percent of reported visits statewide for which the patient met clinical criteria for ILI. The current influenza season (2020 week 40 – 2021 week 20), in bold, is overlaid with the prior four seasons.

Figure 3 displays a comparison of the percent of visits which met ILI criteria for Nevada, Region 9, and nationally.

Figure 1: Percent of ILI patients by age

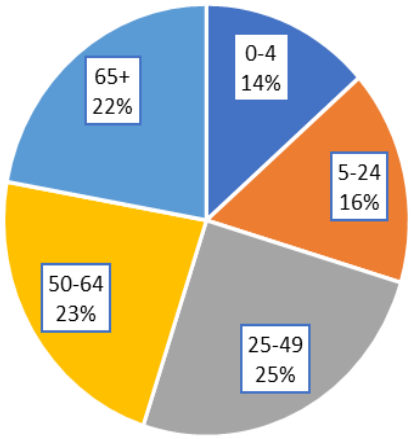


Figure 2:

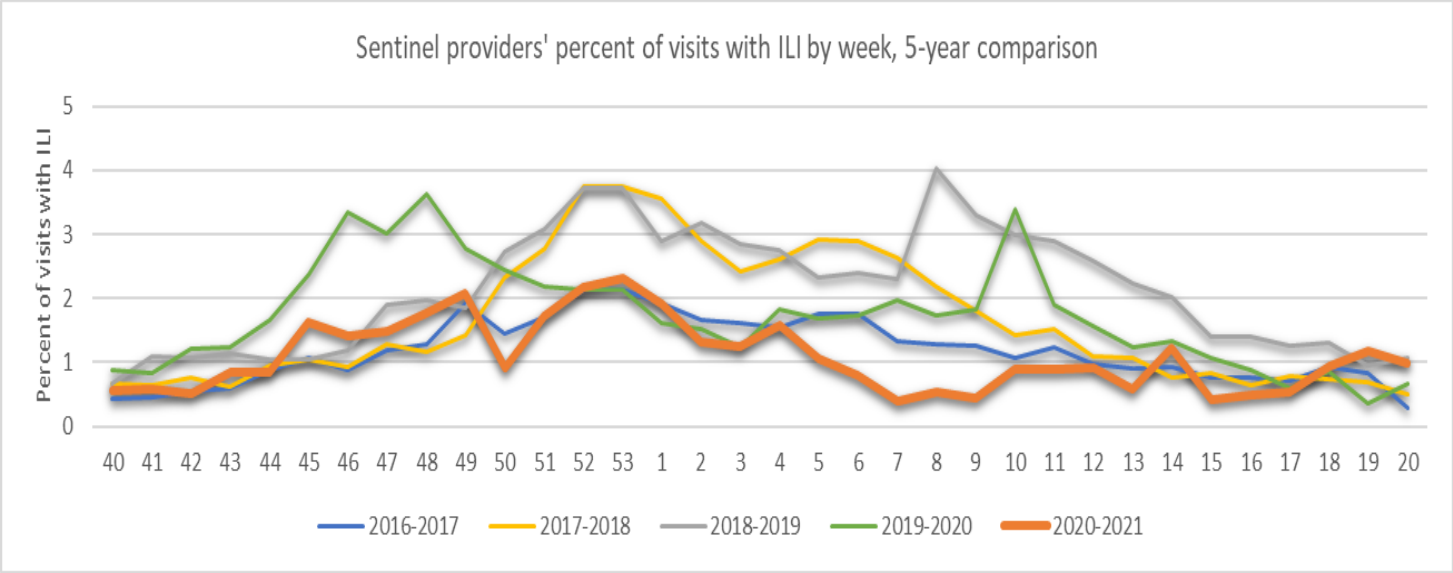
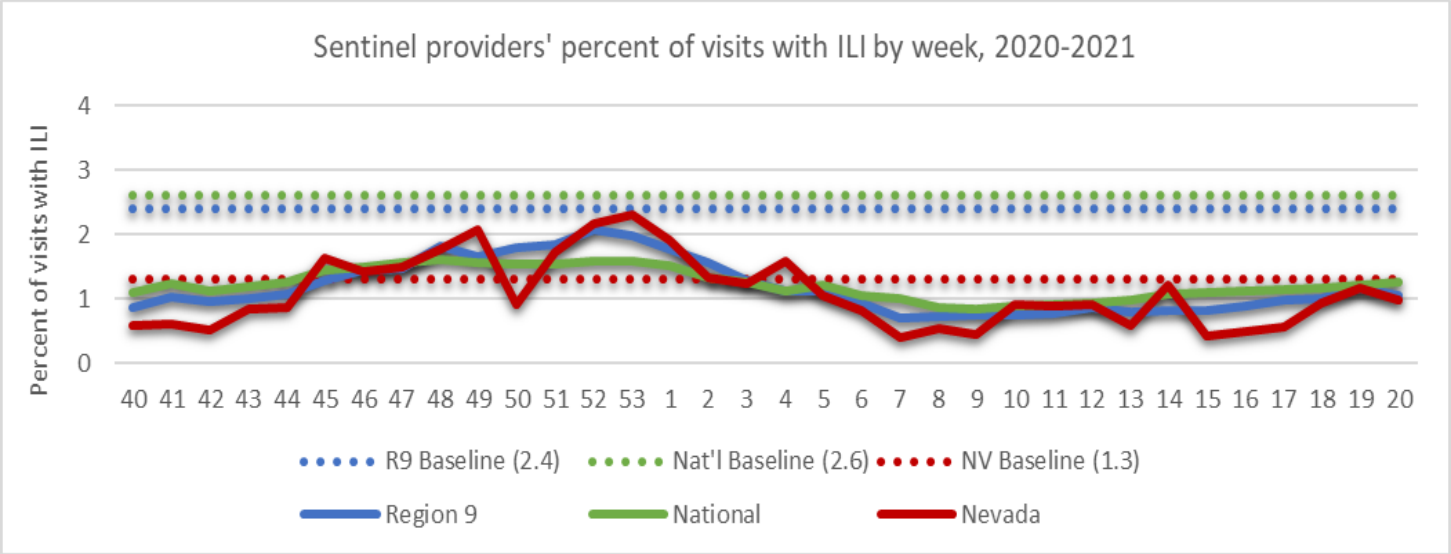


Figure 3:



Sentinel Providers Virologic Testing

The Nevada State Public Health Laboratory (NSPHL) and other laboratories provide influenza virus testing and subtyping for specimens submitted by sentinel providers. For the season, 18 specimens were positive of 119,034 submitted (0.015%). **Figure 4** shows the number of laboratory-confirmed influenza cases by subtype expressed as a percentage of all laboratory-confirmed specimens tested. Of the 18 positive specimens to date, 11 were typed as influenza B (subtyping not performed) and 7 were typed as influenza A (subtyping not performed). **Table 2** shows the number of sentinel site specimens tested by laboratory this season and the number and percent positive for influenza of any type.

Figure 4

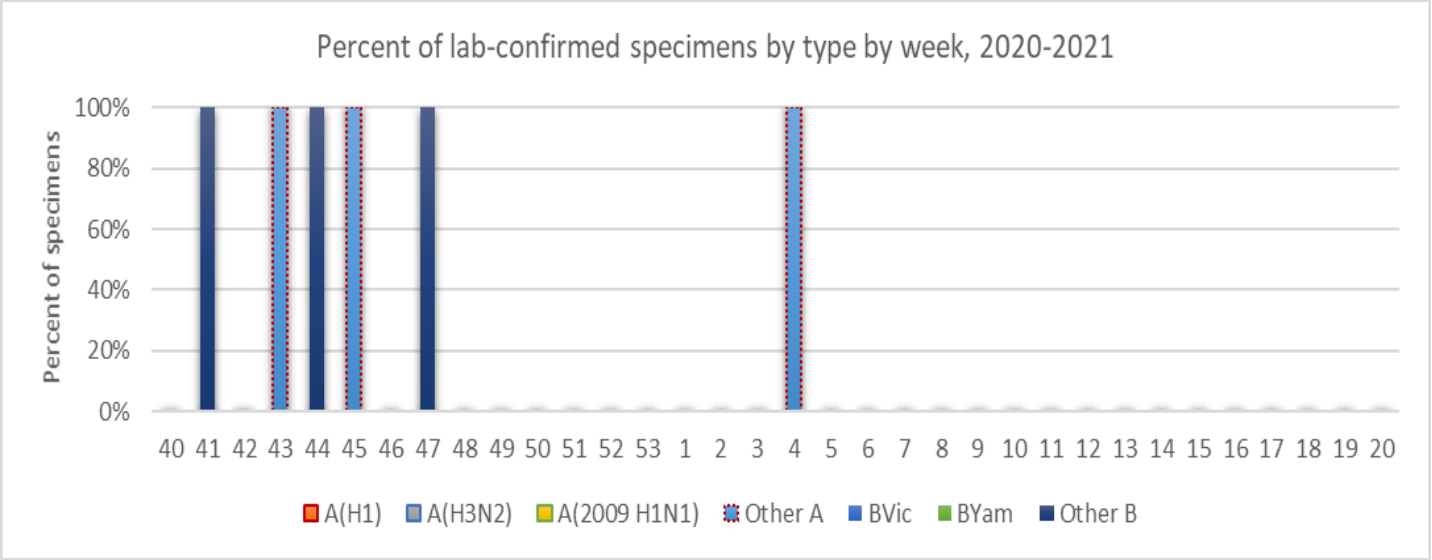


Table 2:

Lab	# of tests performed	# positive	% positive
Nevada State Public Health Lab (NSPHL)	118,709	18	0.015%
Southern Nevada Public Health Lab (SNPHL)	295	0	0%
All other labs	30	0	0%
Total	119,034	18	0.015%

Influenza Hospitalizations

LHAs investigate and report to DPBH Influenza-associated hospitalizations. **Figure 5** shows the number of patients hospitalized with influenza by jurisdiction. For the 2020-2021 season, Southern Nevada Health District reported 50, Washoe County Health District reported 11, Carson City Health and Human Services reported 2, and Rural Health Services reported 1. In total, there were 64 hospitalizations reported statewide for the 2020-2021 season. **Figure 6** shows the number of hospitalized patients by influenza type. During the season, there were 4 Influenza A (not subtyped), 8 Influenza B (not subtyped), and 52 that were not typed at all. **Table 3** shows the characteristics of those who have been hospitalized in the state during the 2020-2021 season.

Figure 5:

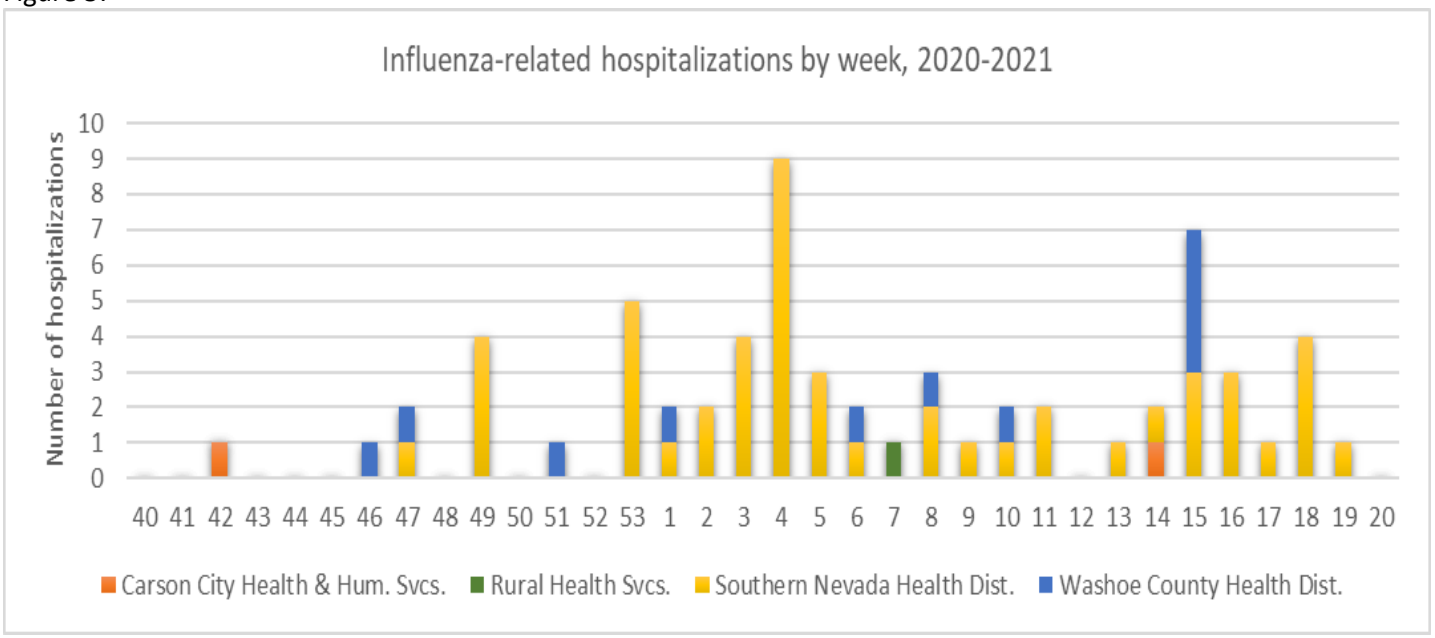


Figure 6:

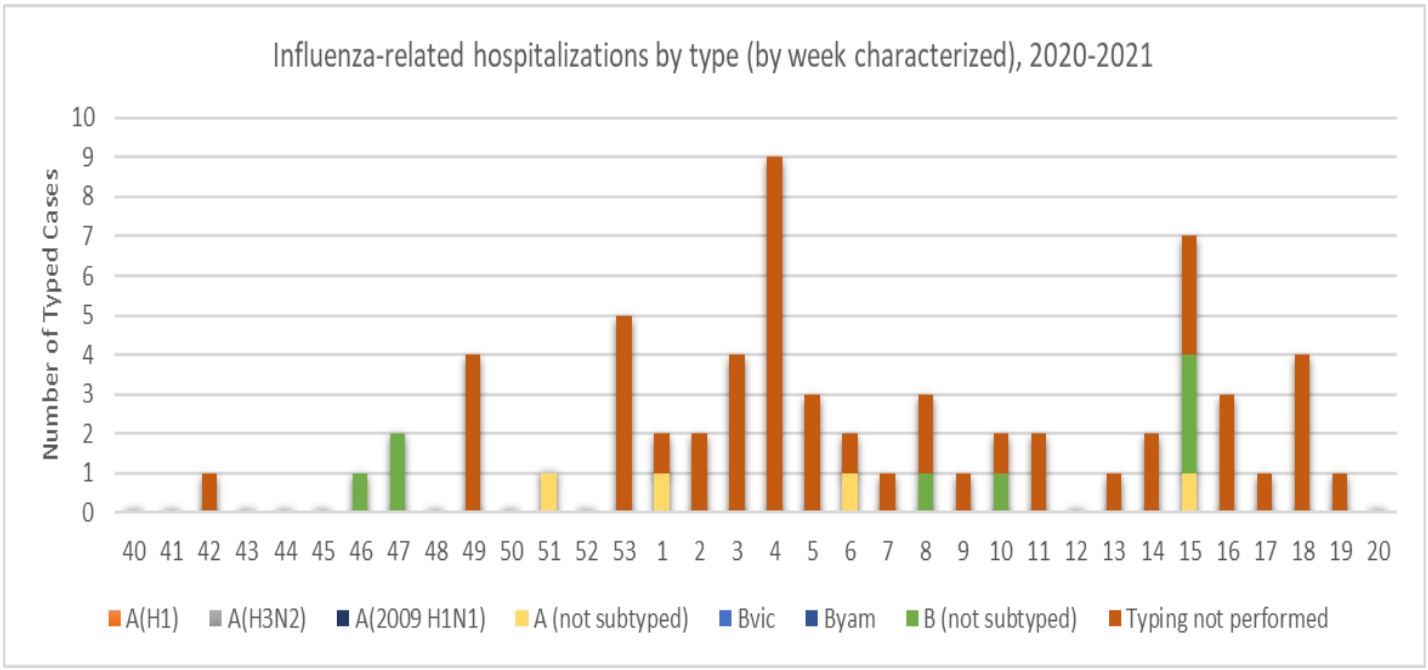


Table 3:

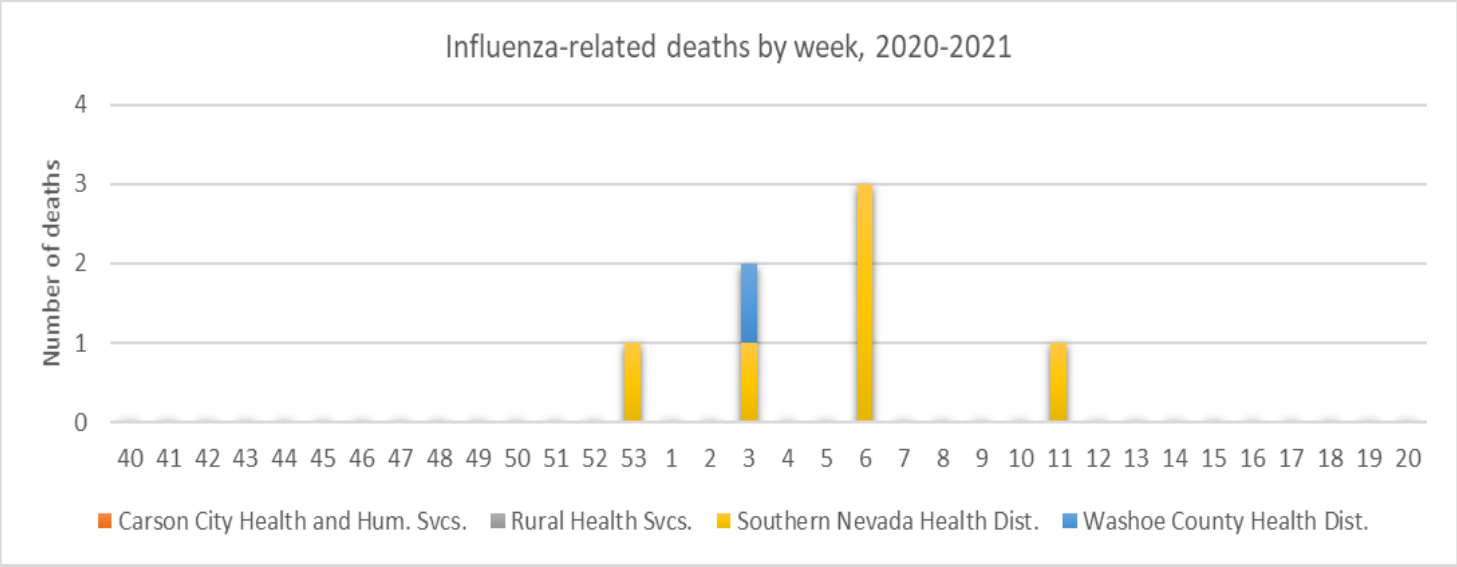
Characteristics of Hospitalized	N=64
Age-groups	
0-24	6.3%
25-54	23.4%
55+	70.3%
Hospitalized 24hrs or more	100%
Needing ventilator	10.9%
Flu vaccine prior	31.3%
Antiviral during	65.6%
Admitted to ICU	28.1%
Pregnant[1]	3.1%
LTC resident[2]	0.0%
Underlying medical condition[3]	84.4%
COVID test performed	23.4%
COVID positive[4]	33.3%

1.Includes those 2 weeks postpartum
2.Includes all residential care facility types
3.Highest 3 in order: diabetes, chronic lung disease, and weakened immune system
4. Includes positive: antibody, antigen, or PCR results (COVID test performed as denominator)

Influenza Deaths

Influenza-associated deaths are deaths from a clinically compatible illness that was confirmed to be influenza by an appropriate laboratory or rapid diagnostic test with no period of complete recovery between illness and death. LHAs investigate all influenza deaths and typically review medical records retroactively up to 30 days from the date of death for an influenza diagnosis. **Figure 7** shows the number of influenza deaths by region for this flu season. There were 7 deaths reported statewide during the 2020-2021 season.

Figure 7:



Syndromic Surveillance

Syndromic surveillance uses near real-time, pre-diagnostic health data to analyze disease incidence. It may support the identification and characterization of outbreaks as supplemental data or as an early indicator of a possible outbreak. DPBH uses the National Syndromic Surveillance Platform (NSSP) Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE), a CDC web application, to collect these data from hospitals and urgent care facilities within the state. Chief complaint is used for immediate analysis; discharge diagnosis is used as it becomes available.

Syndromic Surveillance ILI Activity

Figure 8 shows the number of visits with ILI for emergency, inpatient, and outpatient settings. During the season there were 8,912 emergency visits, 532 hospital admissions, and 3,476 outpatient visits reported. **Figure 11** shows the percent of all visits with ILI by age group. For the whole season 10% of visits were for ages 0-4, 20% for ages 5-24, 38% for ages 25-49, 19% for ages 50-64, and 13% for ages 65 and up.

Figure 8:

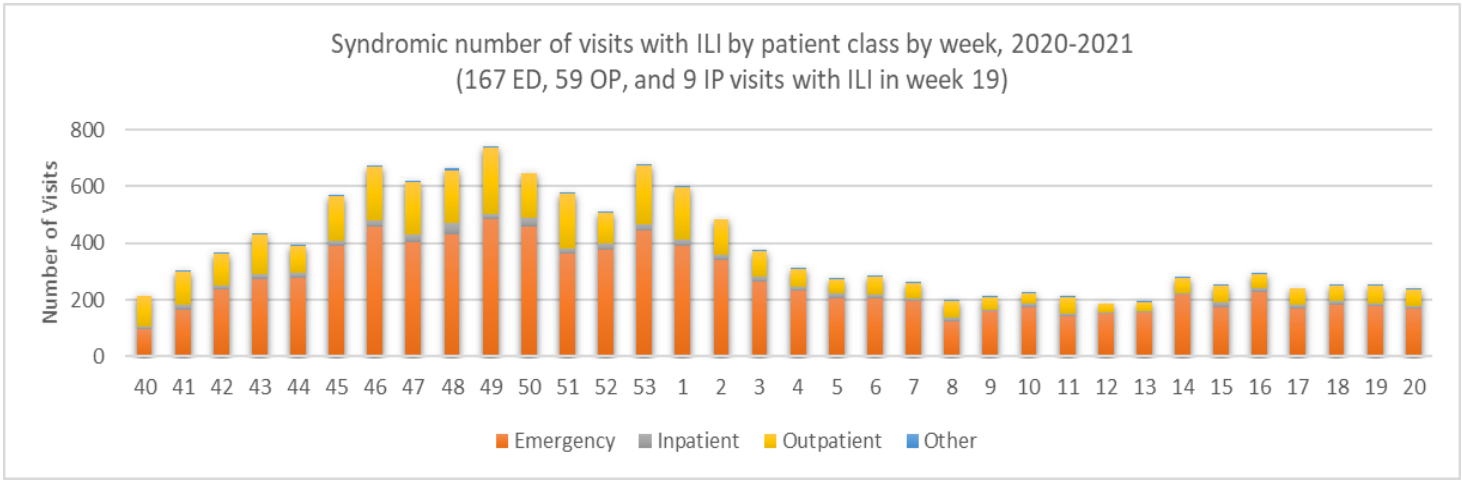
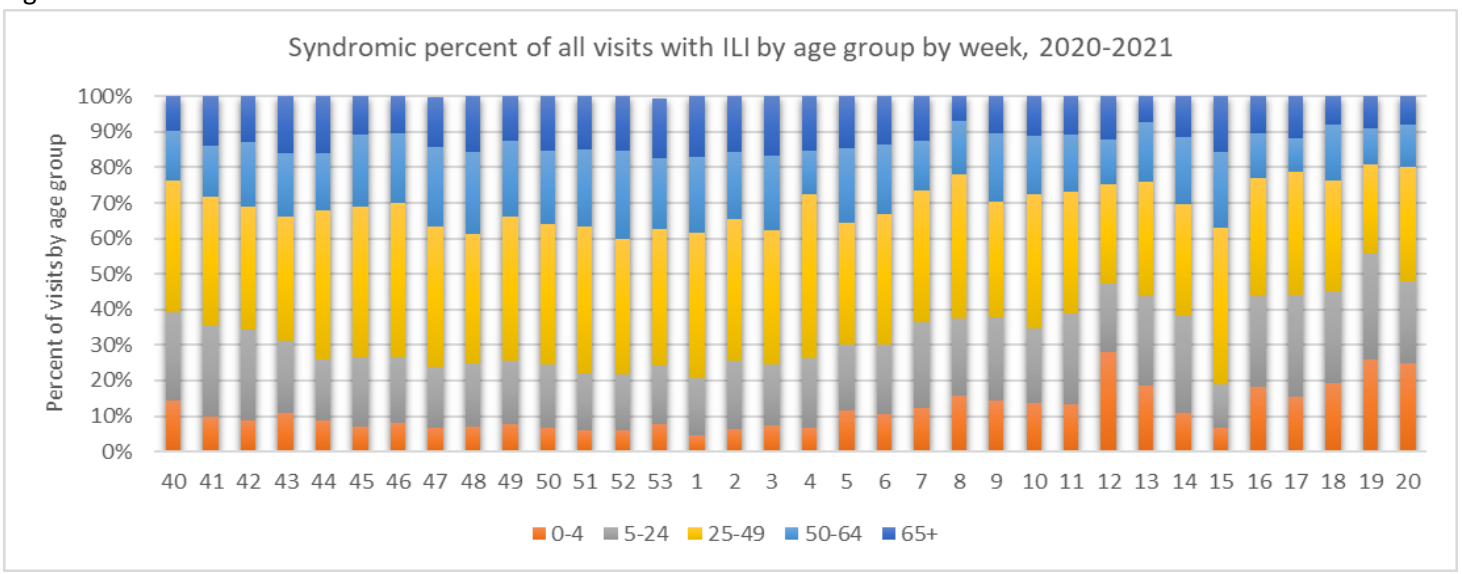


Figure 09:



Pneumonia and Influenza (P&I) Mortality Surveillance

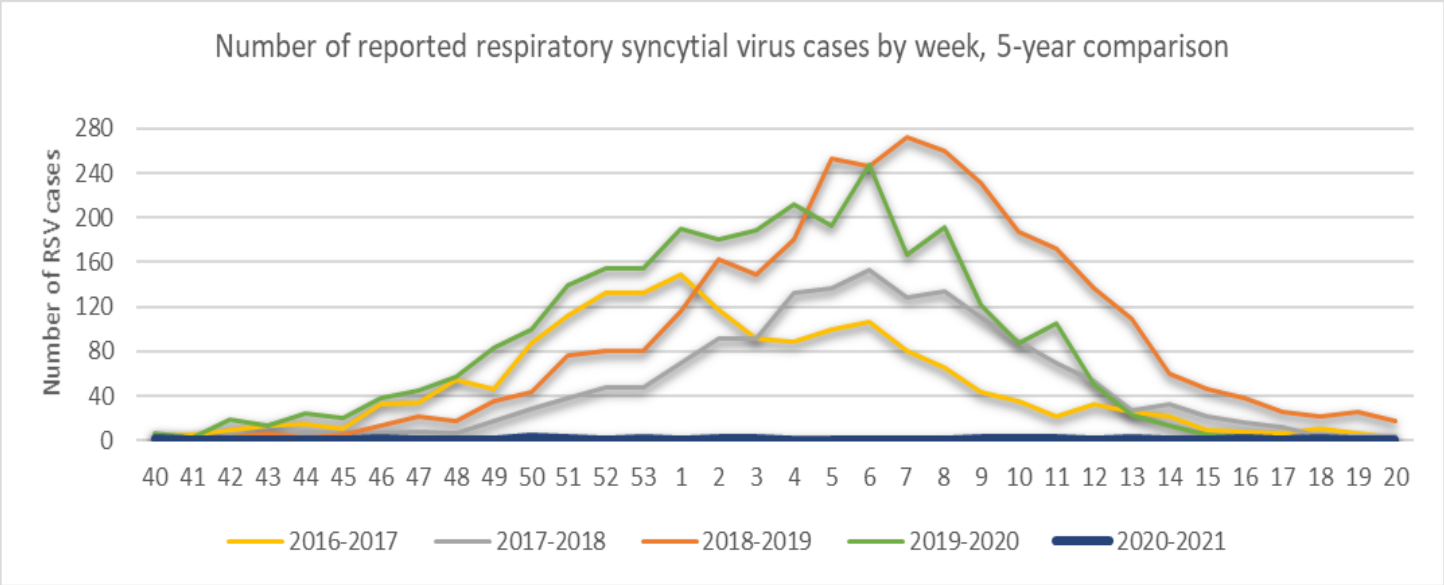
Death certificate data are used to calculate pneumonia and influenza deaths. The Division of Public and Behavioral Health is presently evaluating its data extraction methodology and will report P&I deaths in the future from internal data.

The CDC makes P&I death information available in its FluView Interactive GIS application. According to data from the CDC, Nevada's P&I mortality is 18.7% of all deaths reported (4,084 out of 21,840) for the season. Region 9's P&I mortality is 16.4% of all deaths reported (52,799 out of 322,022); nationally 12.7% of all deaths are due to P&I (292,861 out of 2,307,233). Nevada's influenza-related mortality is 0.03% (7 out of 21,840). Region 9's influenza-related mortality is 0.02% (68 out of 322,022) and nationally 0.03% of all deaths are influenza-related (699 out of 2,307,233).

Respiratory syncytial virus (RSV)

For the 2020-2021 season, 16 Respiratory Syncytial Virus (RSV) cases have been reported. **Figure 10** shows the number of reported RSV cases for the current season compared with the number reported in the past four seasons.

Figure 10:



References

Figures 1, 2, and 3, and Table 1 are derived from ILINet sentinel surveillance data submitted by sentinel providers directly to the CDC.

Table 1 also uses data from CDC's FluView Interactive GIS application.

Figure 4 and Table 2 use ILINet laboratory surveillance data.

Figures 5, 6, 7, and Table 3 are compiled from data collected by local health authorities and abstracted from medical records.

Figures 8 and 9 are populated from the National Syndromic Surveillance System (NSSP) Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE).

Figure 10 is generated from data submitted to Nevada's NBS/NETSS reporting systems.