Steve Sisolak
Governor

Richard Whitley, MS
Director

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public and Behavioral Health
Helping people. It's who we are and what we do.

Lisa Sherych
Administrator

Ihsan Azzam, Ph.D., M.D.
Chief Medical Officer

Influenza Surveillance Report – 2020-2021 Season – Week 19

Data from May 09 – May 15, 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:

Week 19 Summary					
	ILI Current Activity	ILI Activity Baseline	Influenza -related Hospitalization	Influenza -related Mortality	Pneumonia and Influenza Mortality
Nevada	1.2%	1.3%	1 (0.03 per 100,000)	0/362 (0%)	34/362 (9.4%)*
Region 9	1.2%	2.4%	pending	0/4,730 (0%)*	300/4,730 (6.3%)*
National	1.2%	2.6%	pending	6/34,623 (0.02%)*	3,635/34,623 (10.5%)*

*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 week 19. Those aged 0-4 represented 21% of all reported ILI cases in Nevada. 19% of cases were ages 5-24, 19% ages 25-49, 18% ages 50-64, and 23% ages 65 and older.

In week 19, 6,659 patient visits were reported by sentinel providers in Nevada, of which 78 met criteria for ILI, representing 1.2% of the sample. ILI activity was below the Nevada baseline of 1.3%. **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.

For week 19, 1.2% of patients reported in Region 9 (AZ, CA, HI, NV, and US Pacific Islands) and 1.2% of patients reported nationally met criteria for ILI. The regional activity level is lower than the regional baseline of 2.4% and the national activity level is lower than the national baseline of 2.6%.

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

Figure 1:

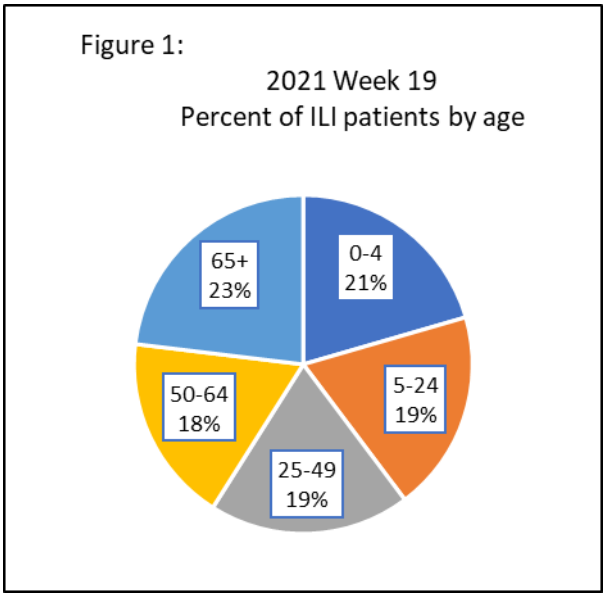


Figure 2

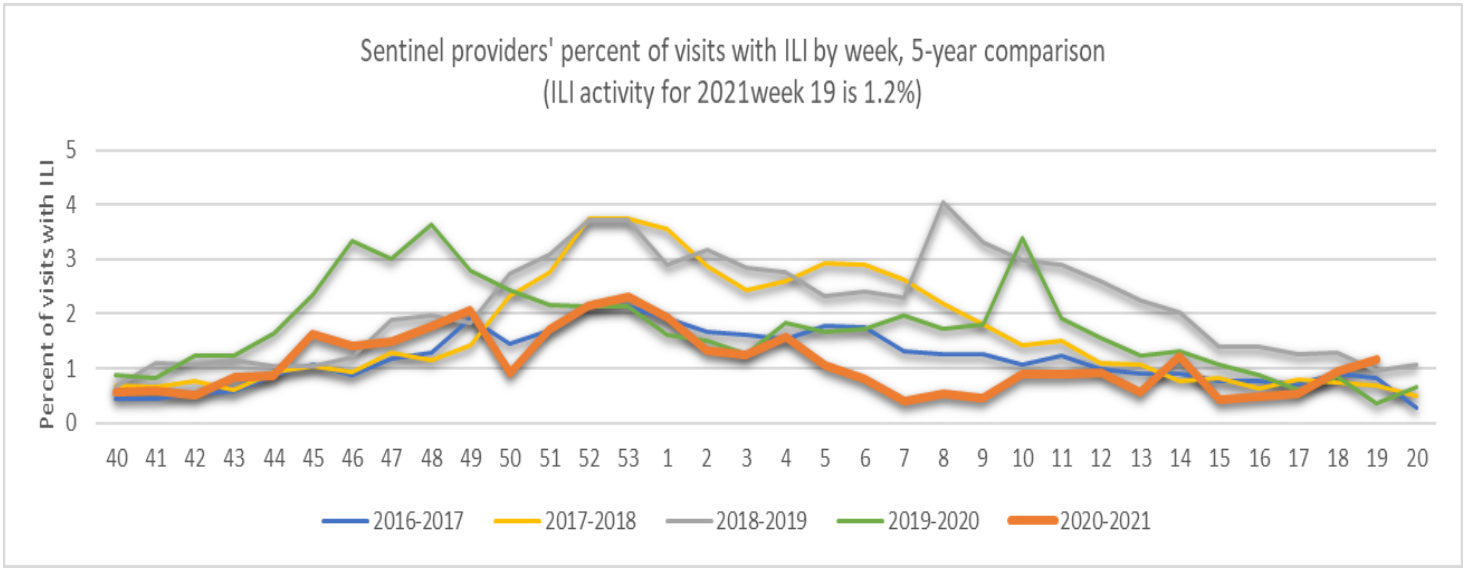
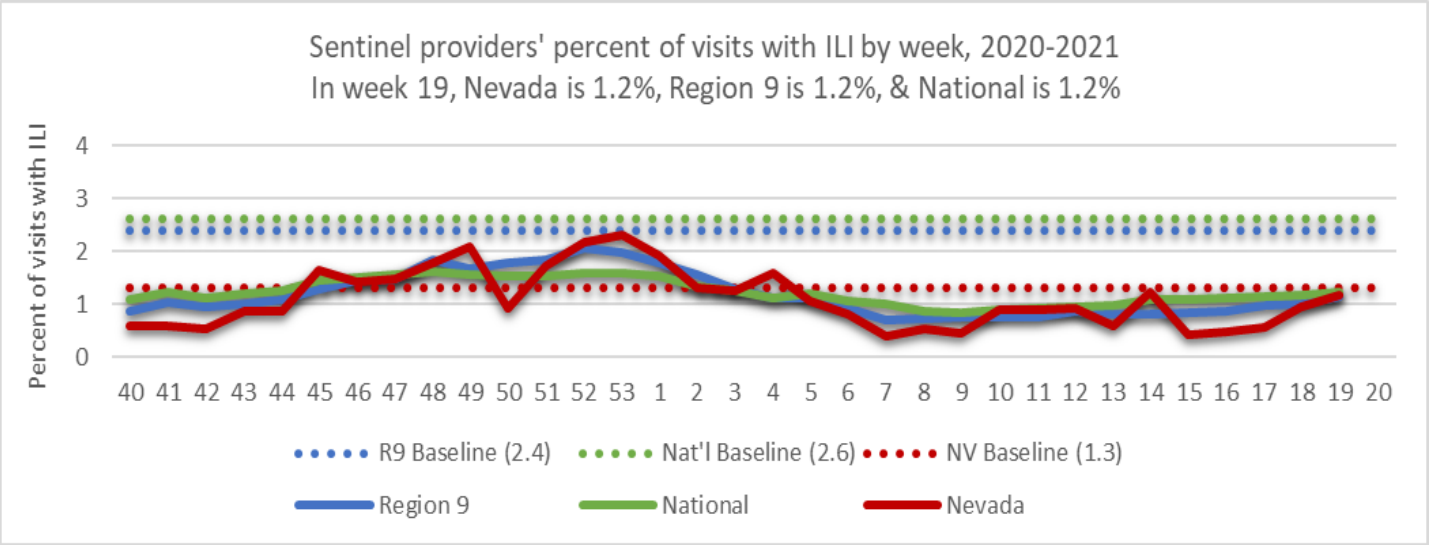


Figure 3:



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 week 19, zero specimens were positive of 814 submitted (0%). From week 40 to date, 18 specimens were positive of 118,224 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

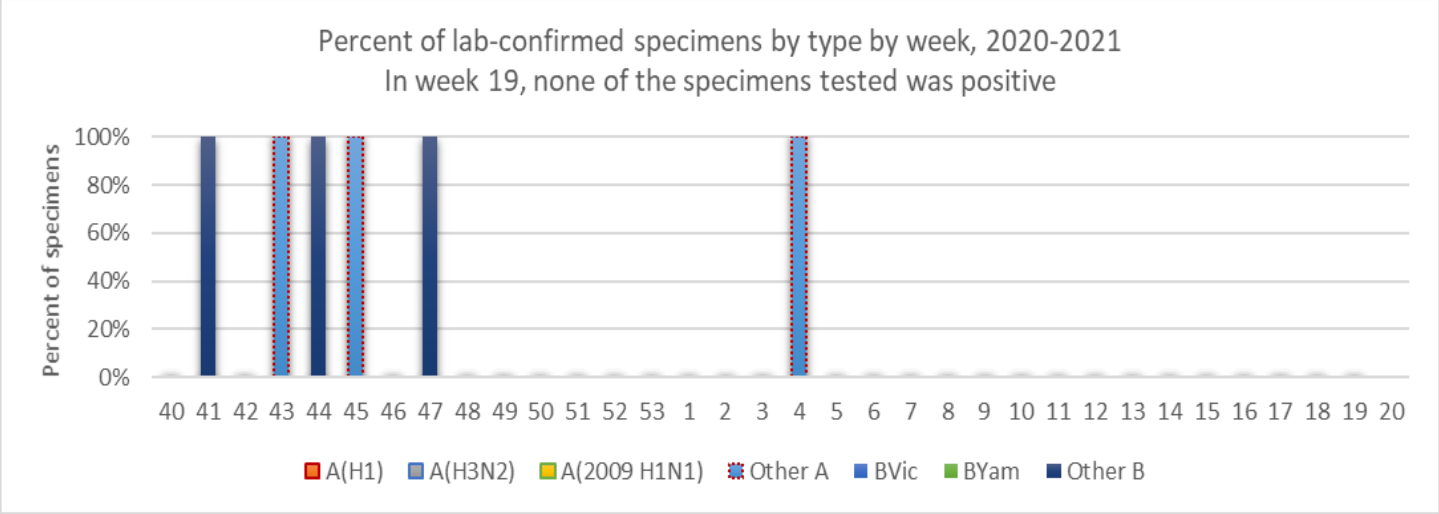


Table 2:

Lab	# of tests performed	# positive	% positive
Nevada State Public Health Lab (NSPHL)	117,903	18	0.015%
Southern Nevada Public Health Lab (SNPHL)	291	0	0%
All other labs	30	0	0%
Total	118,2251	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. In week 19, Southern Nevada Health District had one hospitalization. Washoe County Health District, Rural Health Services, and Carson City Health and Human Services each reported no hospitalizations. From week 40 to date, 63 hospitalizations have been reported statewide. **Figure 6** shows the number of hospitalized patients by influenza type. **Table 3** shows the characteristics of those who have been hospitalized in the state as of week 16.

Figure 5

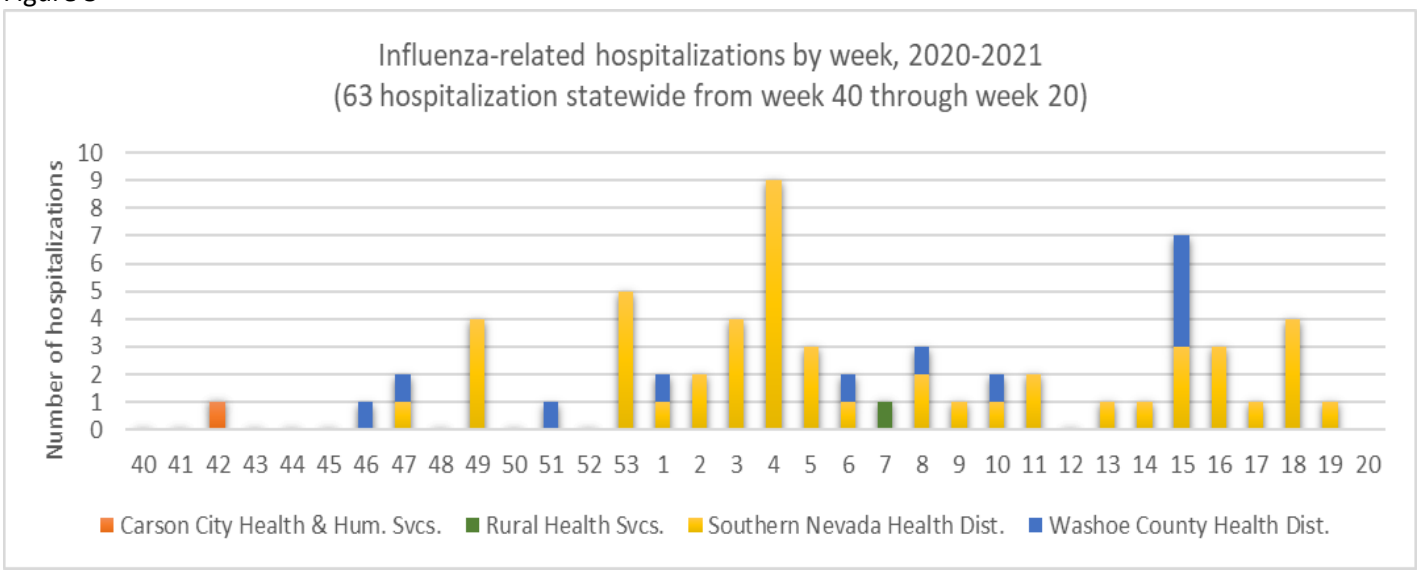


Figure 6:

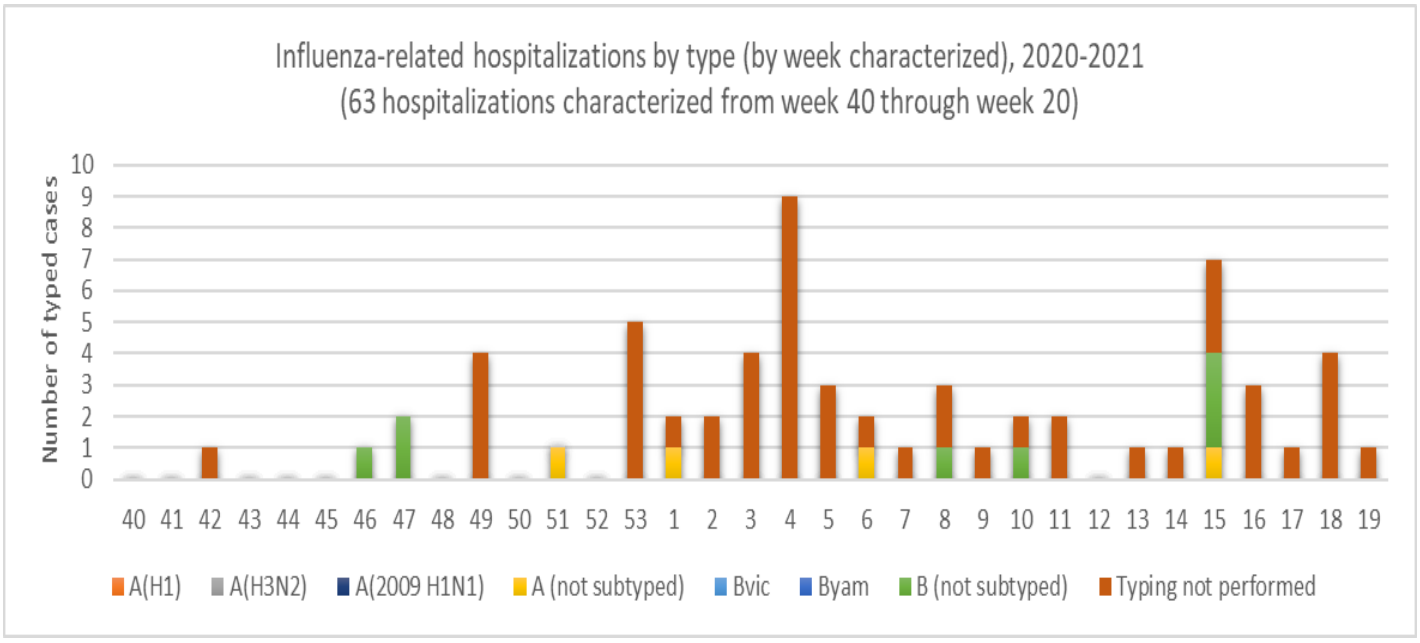


Table 3:

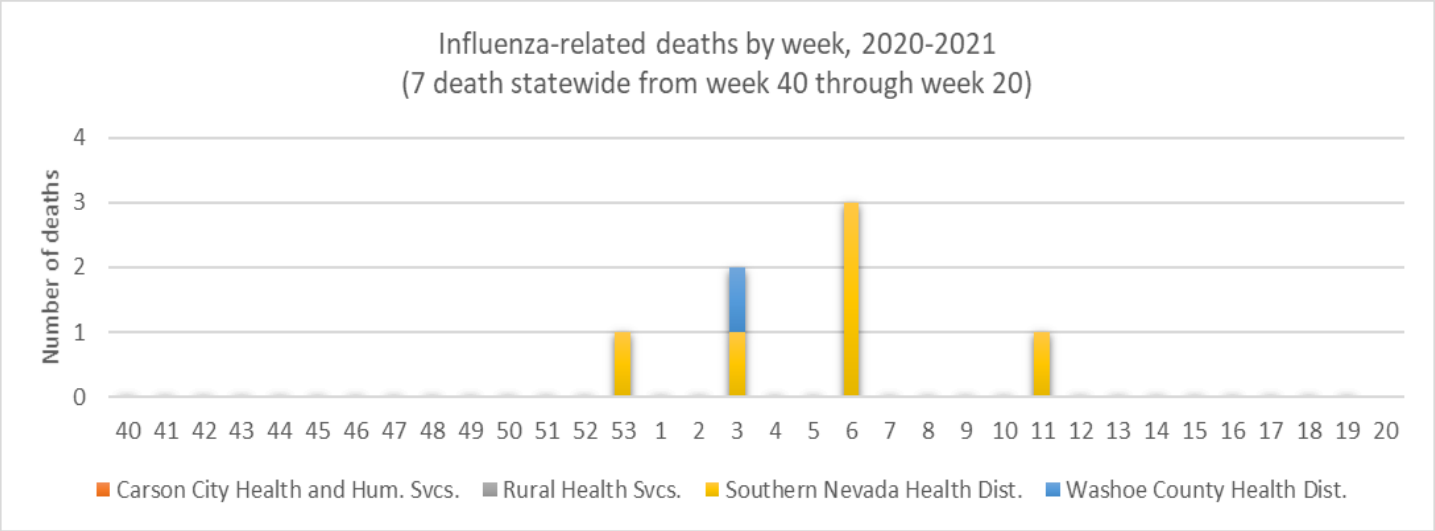
Characteristics of Hospitalized	N=57
Age-groups	
0-24	3.5%
25-54	19.3%
55+	77.2%
Hospitalized 24hrs or more	100%
Needing ventilator	12.3%
Flu vaccine prior	29.8%
Antiviral during	68.4%
Admitted to ICU	29.8%
Pregnant[1]	1.8%
LTC resident[2]	0.0%
Underlying medical condition[3]	86.0%
COVID test performed	22.8%
COVID positive[4]	30.8%

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. No deaths were reported in week 19. There have been seven influenza-associated deaths reported statewide since week 40.

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. While ILI syndrome is typically indicative of influenza activity, COVID-19 disease would typically meet criteria to be classified as ILI, so it is anticipated that ILI activity will continue to remain elevated while COVID-19 is circulating. For week 19 there were 176 emergency visits, 10 hospital admissions, and 64 outpatient visits reported. **Figure 9** shows the number of emergency visits with ILI by week over five years; **figure 10** shows the number of inpatient visits with ILI by week over five years. **Figure 11** shows the percent of all visits with ILI by age group. For week 19, 26% of visits were for ages 0-4, 30% for ages 5-24, 25% for ages 25-49, 10% for ages 50-64, and 9% for ages 65 and up.

Figure 8:

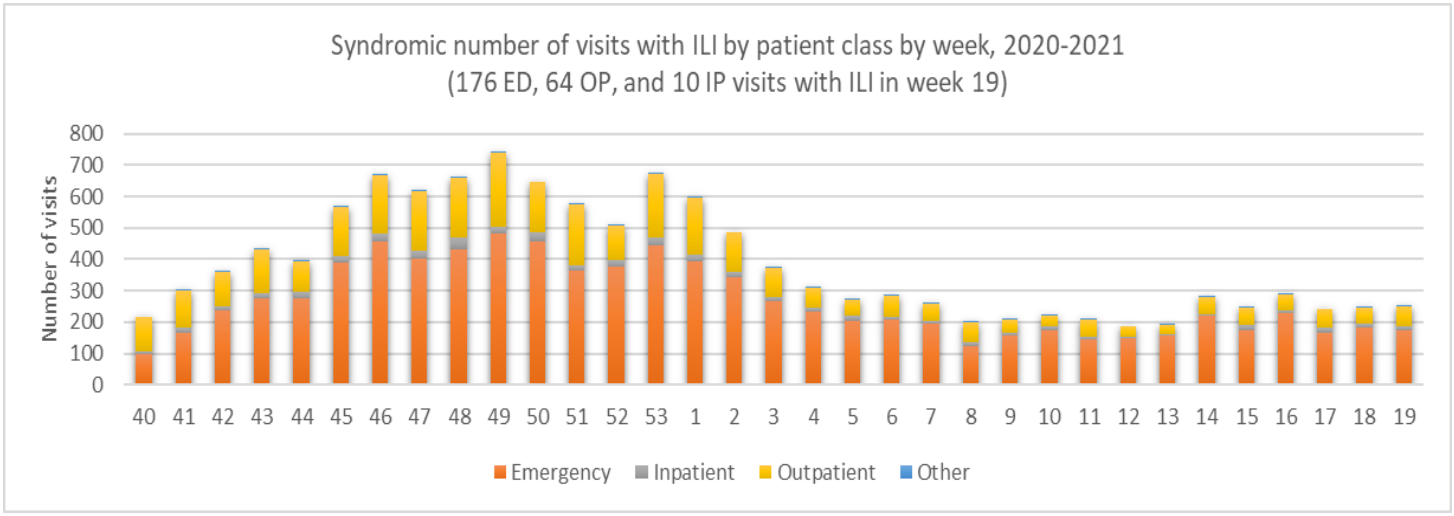


Figure 9

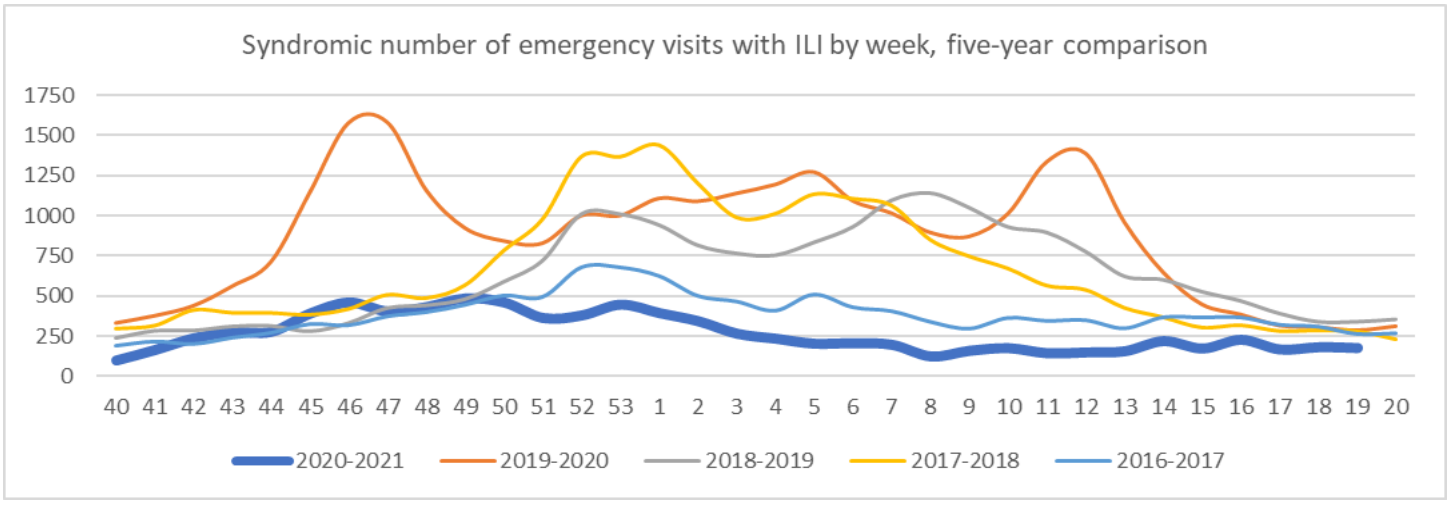


Figure 10:

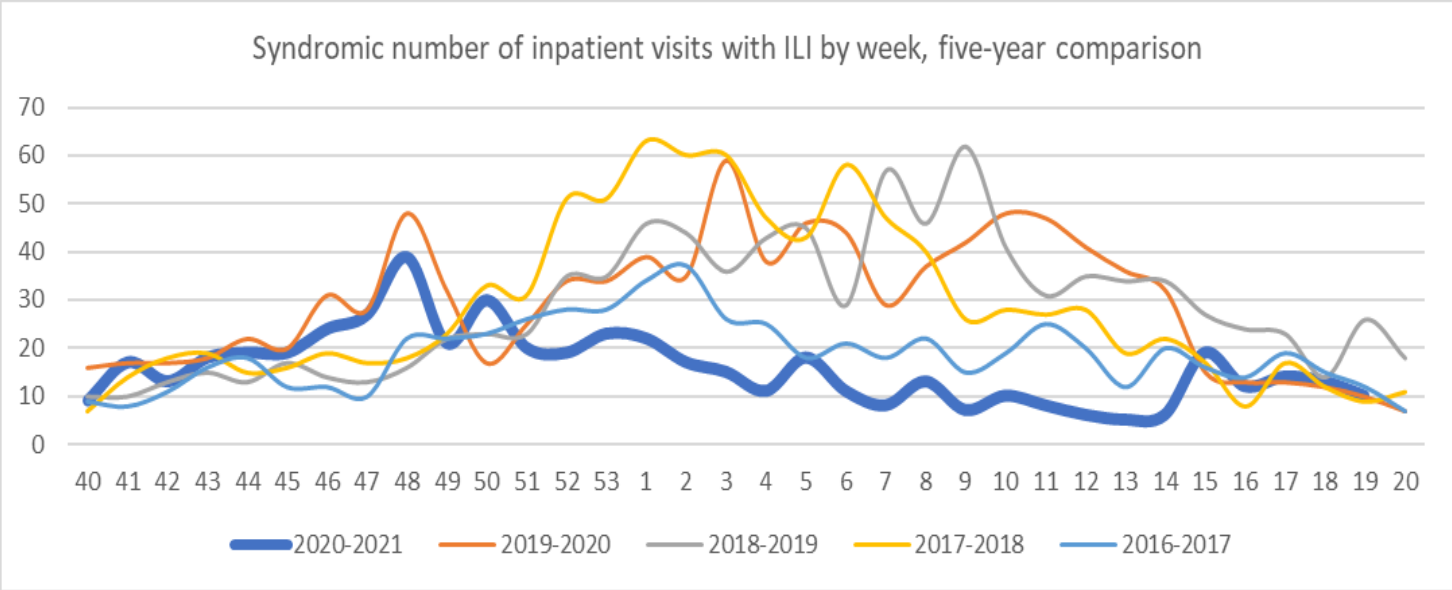
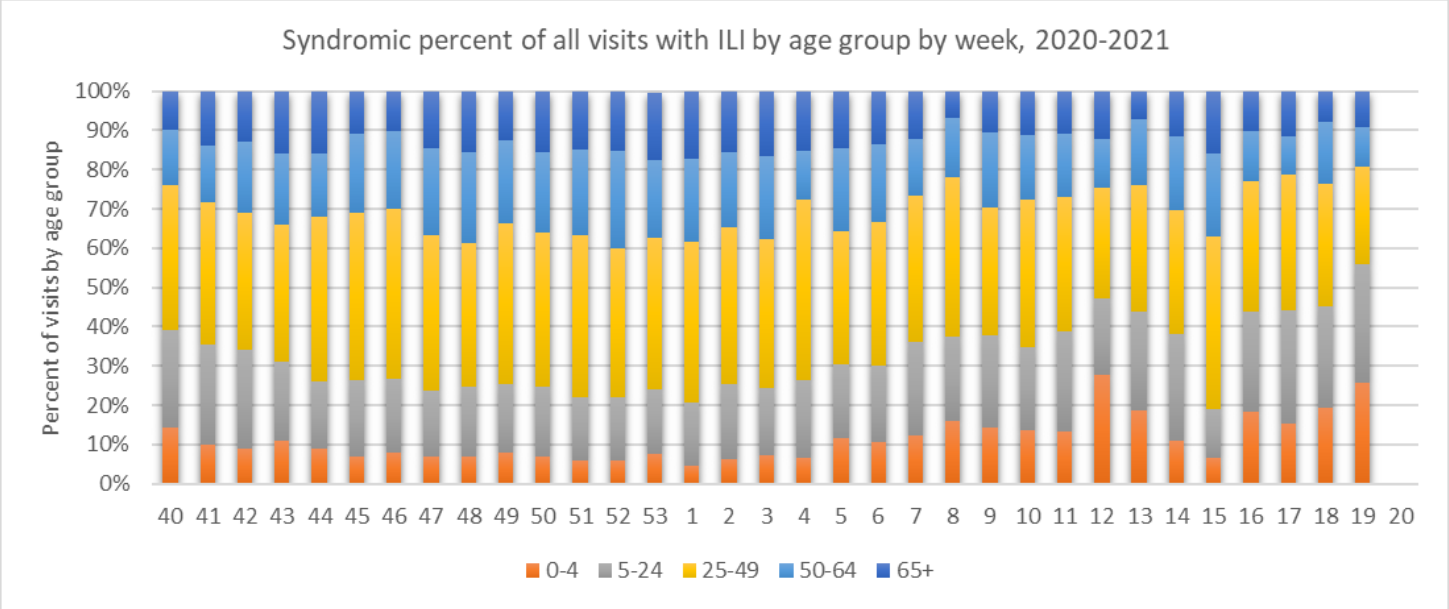


Figure 1



Pneumonia and Influenza (P&I) Mortality Surveillance

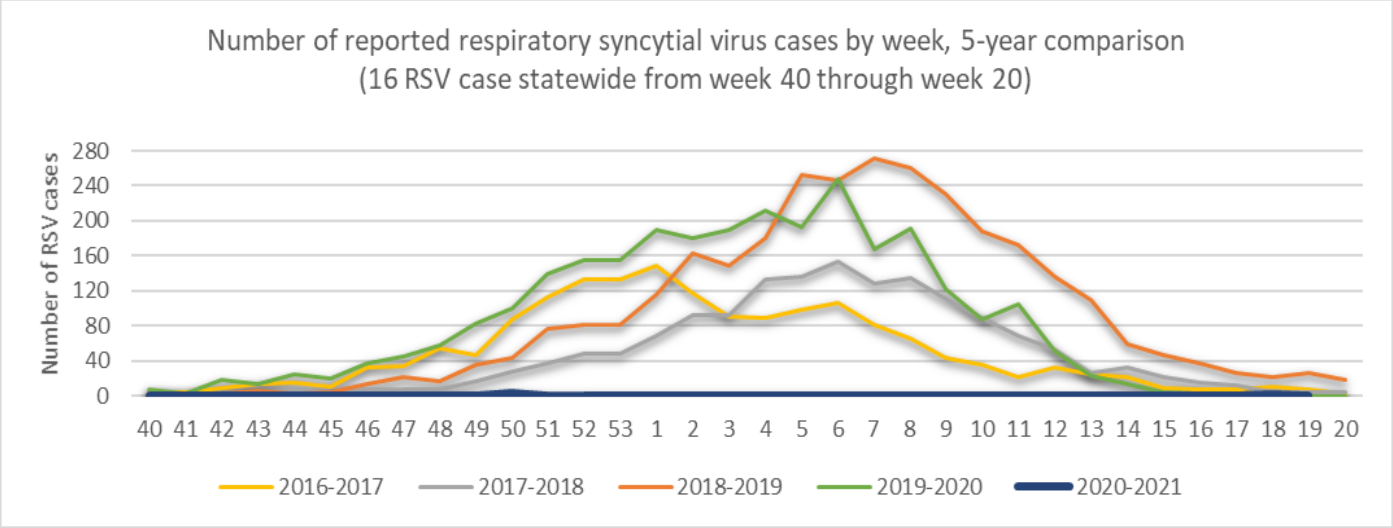
Death certificate data are used to calculate pneumonia and influenza deaths. The Division of Public and Behavioral Health is presently evaluating its data extraction methodology and will report P&I deaths in the future from internal data.

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 8.7% of all deaths reported (33 out of 381) for the most recent week. Region 9's P&I mortality is 6.2% of all deaths reported, which is below its baseline of 7.3%; nationally 11.0% of all deaths are due to P&I, which is above its baseline of 6.9%. Region 9's influenza-related mortality is 0% (0 out of 4,360) and nationally 0.01% of all deaths are influenza-related (3 out of 33,546).

Respiratory syncytial virus (RSV)

From week 40 through week 20, 16 Respiratory Syncytial Virus (RSV) case has been reported. **Figure 12** shows the number of reported RSV cases for the current season compared with the number reported in the past four seasons. Due to a lag in reporting the case count for recent weeks is expected to increase.

Figure 12:



COVID Like-Illness (CLI)

Data was collected using ESSENCE syndromic surveillance system along with a definition created by the CDC that counts CLI cases using chief complaint and discharge diagnosis data. Yellow or red dots on the graphs below indicate alerts, signaling a higher than expected percentage of CLI visits using the exponentially weighted moving average (EMWA) statistic built into ESSENCE.

Figure 13 shows the percentage of CLI per MMWR week starting with week 01 of 2020. For week 19 2021, CLI percentages began to decrease again after increasing slightly the past several weeks. CLI percentages remain below values needed to trigger any alerts, at 1.5%. **Figure 14** shows a breakdown by visit type for CLI by MMWR week starting at week 01 of 2020. For week 19 2021, 2.7% of inpatient visits met the CLI criteria, 2.2% of ED visits met CLI criteria, and 0.7% of outpatient visits met CLI criteria.

Figure 13:

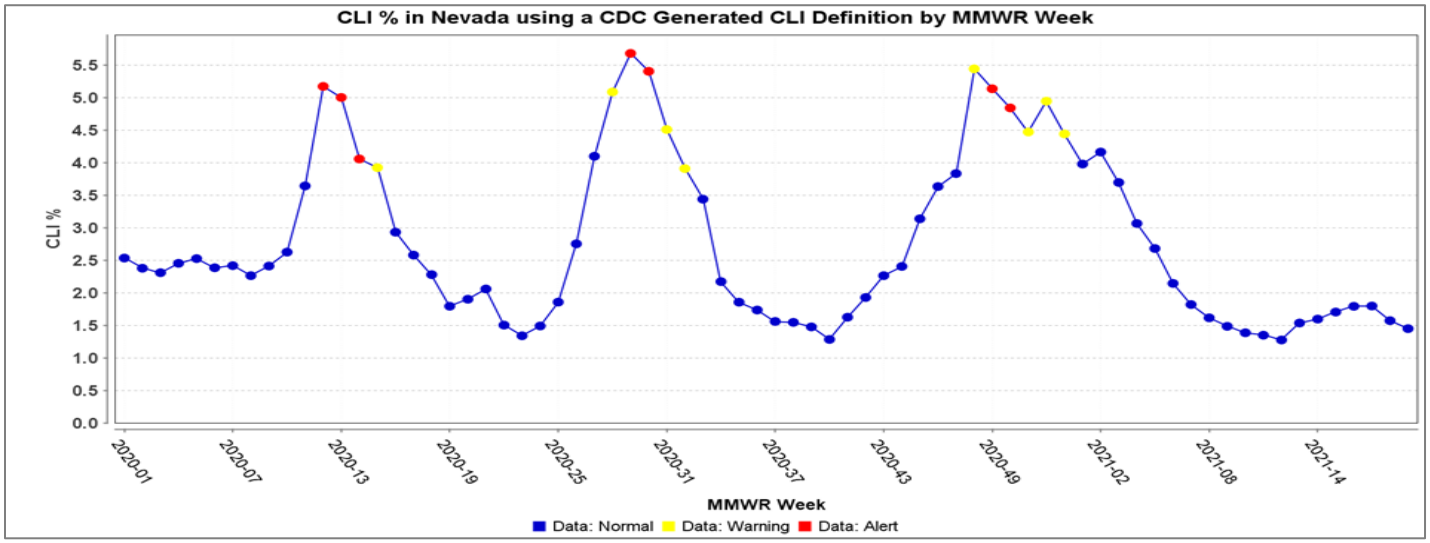
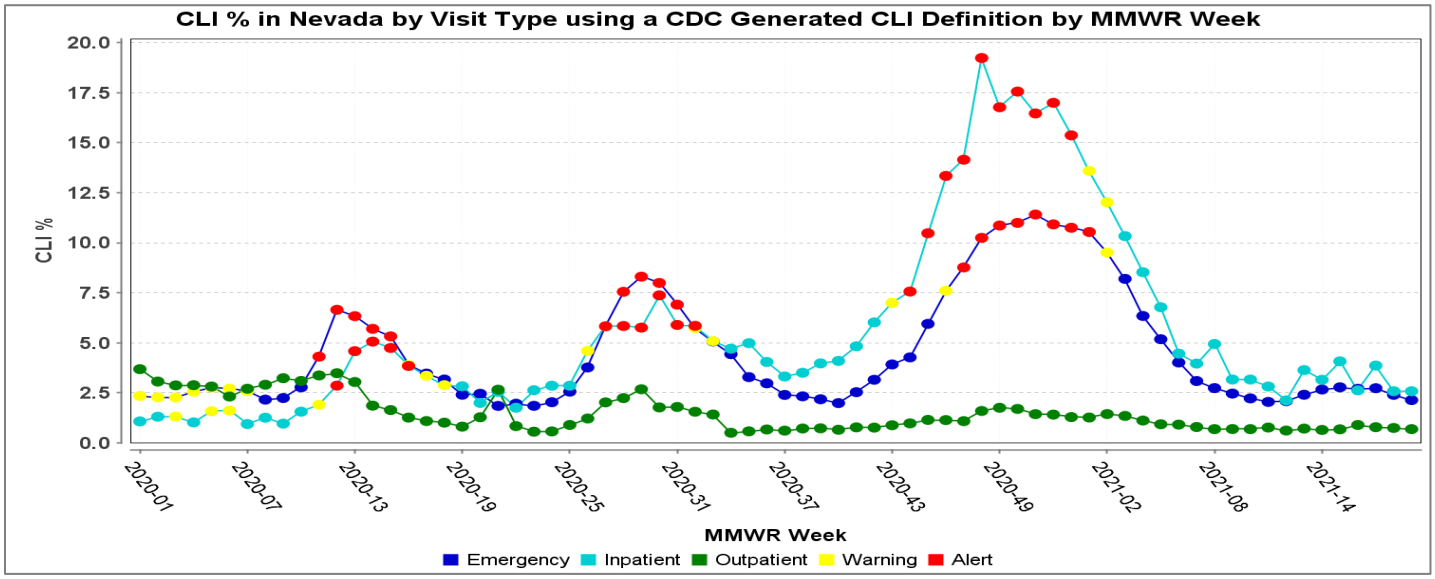


Figure 14:



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, 9, 10, 11, 13, and 14 are populated from the National Syndromic Surveillance System (NSSP) Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE).

Figure 12 is generated from data submitted to Nevada's NBS/NETSS reporting systems.