Influenza Surveillance Report – As of Week 35 (8/28 – 9/03/2022)

Introduction

The purpose of this report is to provide an ongoing assessment of influenza activity and its burden in Nevada. Data from several surveillance programs analyzed in this report are 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 at mwegener@health.nv.gov.

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.gov/health/programs-and-services/ephp/statistics-surveillance-reports/influenza-surveillance/index.php
- Carson City Health & Human Services: Western NV Regional Influenza Report: http://gethealthycarsoncity.org/seasonalflu/

Sentinel Provider Influenza-Like Illness (ILI) Activity:

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 (DPNH), 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. There are currently 25 regularly reporting sentinel sites in Nevada.

An updated ILI definition was implemented in the 2021-2022 season and is defined as fever (≥ 100°F, 37.8°C) in the presence of cough and/or sore throat. This updated definition omits the previous criteria of *without a known cause other than influenza* to increase the number of other respiratory illnesses captured by surveillance.

Figure 1: Percent age distribution for those with ILI reported from Nevada sentinel sites by MMWR Week

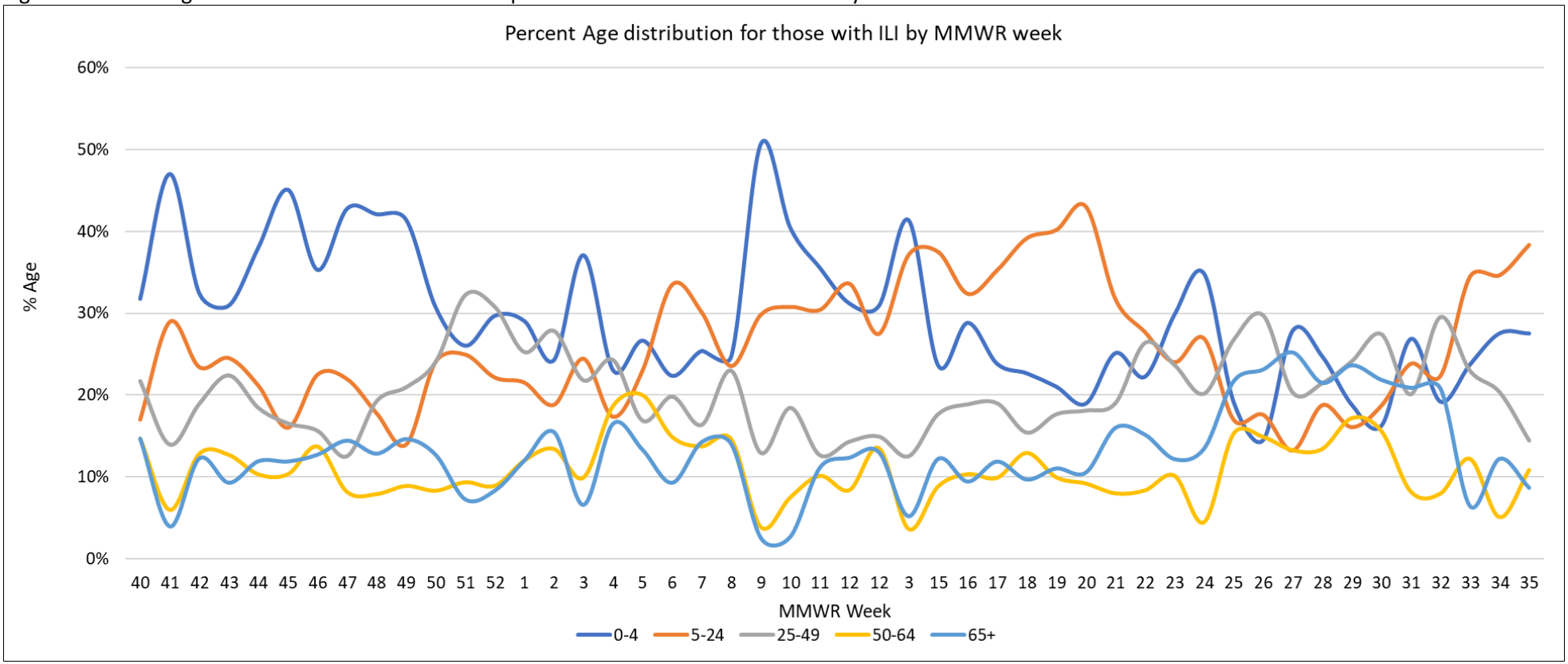
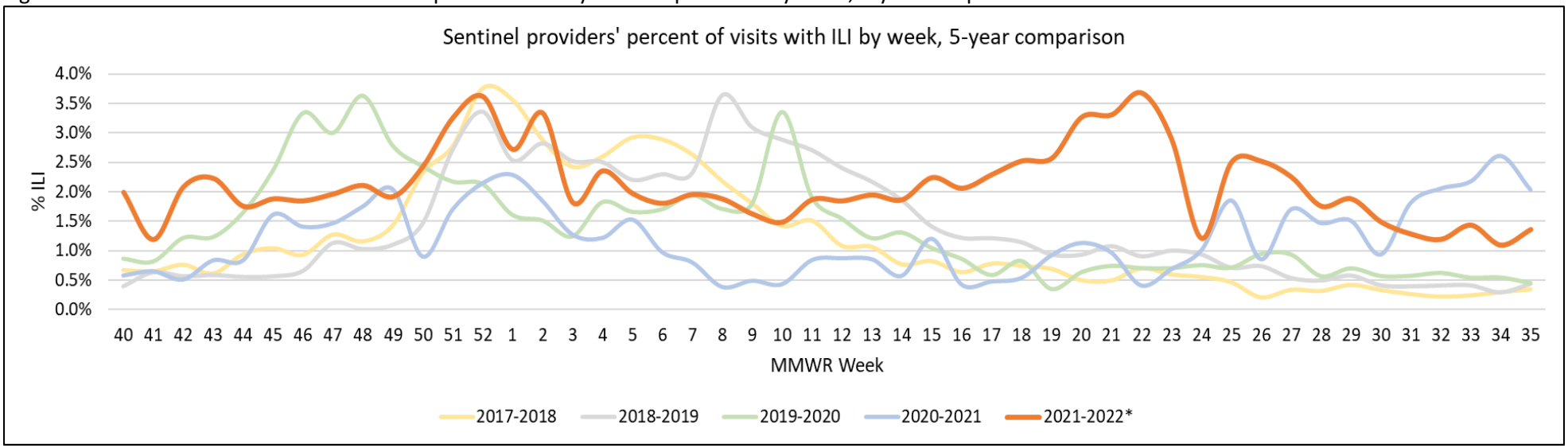
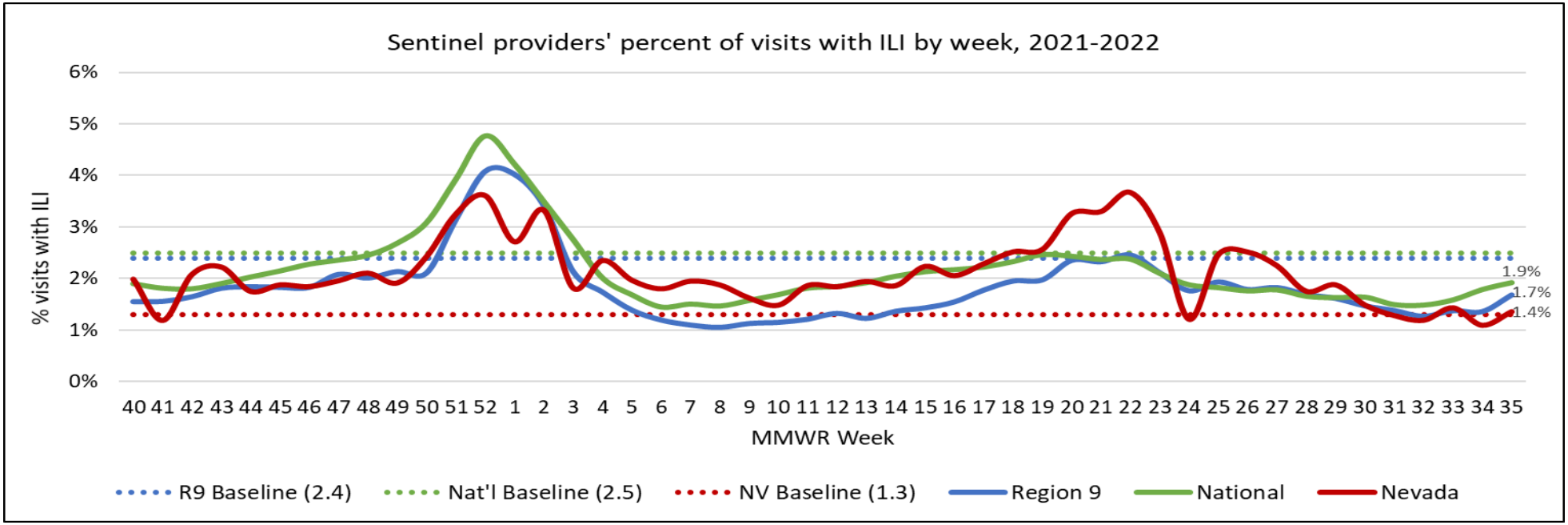


Figure 2: Percent of visits with ILI out of total patients seen by sentinel providers by week, 5-year comparison



**Updated ILI definition includes patients with any febrile respiratory illness which is more sensitive than previous seasons resulting io possible case number inflation*

Figure 3: Percent of sentinel provider visits with ILI by week at the national, regional, and state levels: 2021-2022



State Level Virologic Surveillance

The Nevada State Public Health Laboratory (NSPHL) and the Southern Nevada Public Health Laboratory (SNPHL) provide influenza virus testing and subtyping for specimens submitted for Nevada residents. In the event that a Nevada resident is tested in a different state, out of jurisdiction public health laboratories also report these test results to DPBH.

Figure 4: Laboratory confirmed specimens showing subtype of the positives by MMWR week

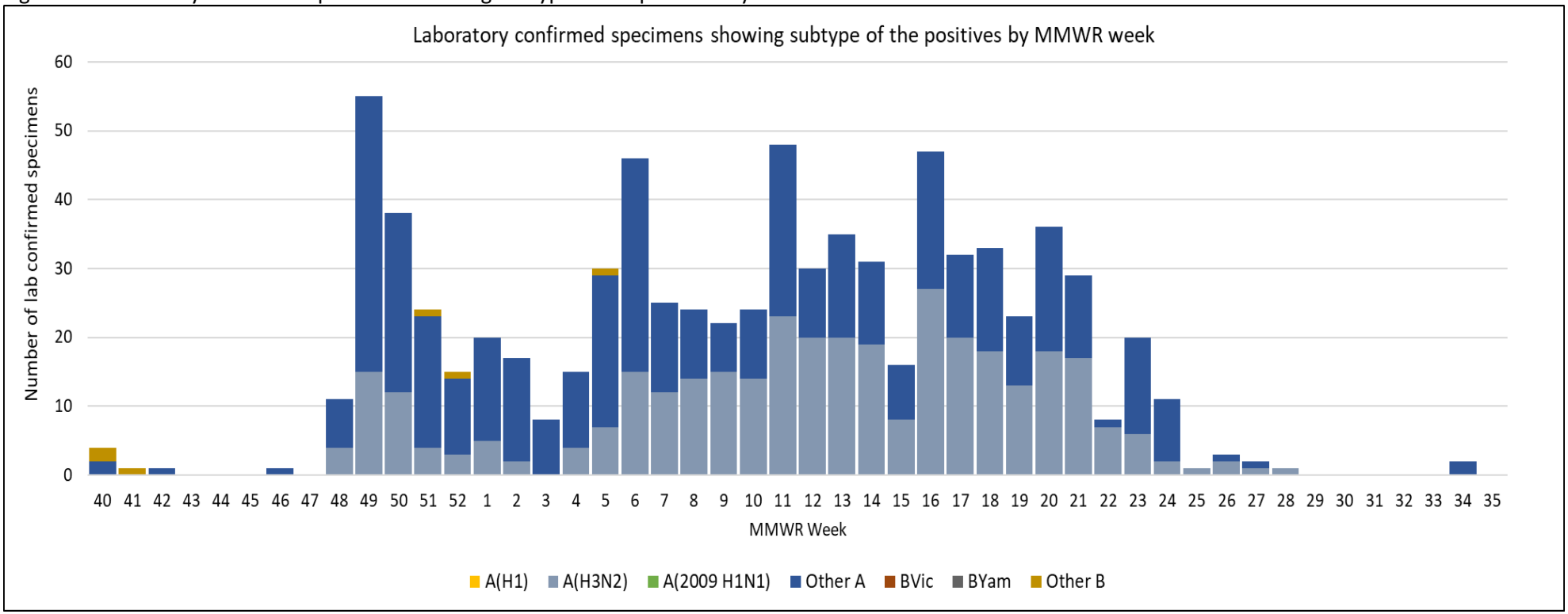


Table 1: Total number of specimens tested along with the number testing positive and the specimen positivity rate (weeks 40-25)

Lab	# of tests performed	# positive	% positive
Nevada State Public Health Lab (NSPHL)[1]	89,052	649	0.7%
Southern Nevada Public Health Lab (SNPHL)	506	135	26.7%
Out of jurisdiction public health labs[2]	60	5	8.3%
Total	**89,618**	**789**	**0.9%**

1. Includes specimens submitted using multiplex testing for COVID and influenza – could include asymptomatic patients

2. Includes 11 out of jurisdiction public health laboratories submitting for Nevada residents

Local Health Authority (LHA) Influenza Hospitalizations Reporting

LHAs investigate and report Influenza-associated hospitalizations to DPBH via OPHIE. An influenza-associated hospitalization is defined as a hospital admission date 14 days or less *after* a positive influenza test, **OR** a hospital admission date three days or less *before* a positive influenza test. LHAs include the Southern Nevada Health District, the Washoe County Health District, Carson City Health and Human Services, and Rural Health Services.

Figure 5: Influenza-associated hospitalizations by MMWR week for each LHA , 2021-2022

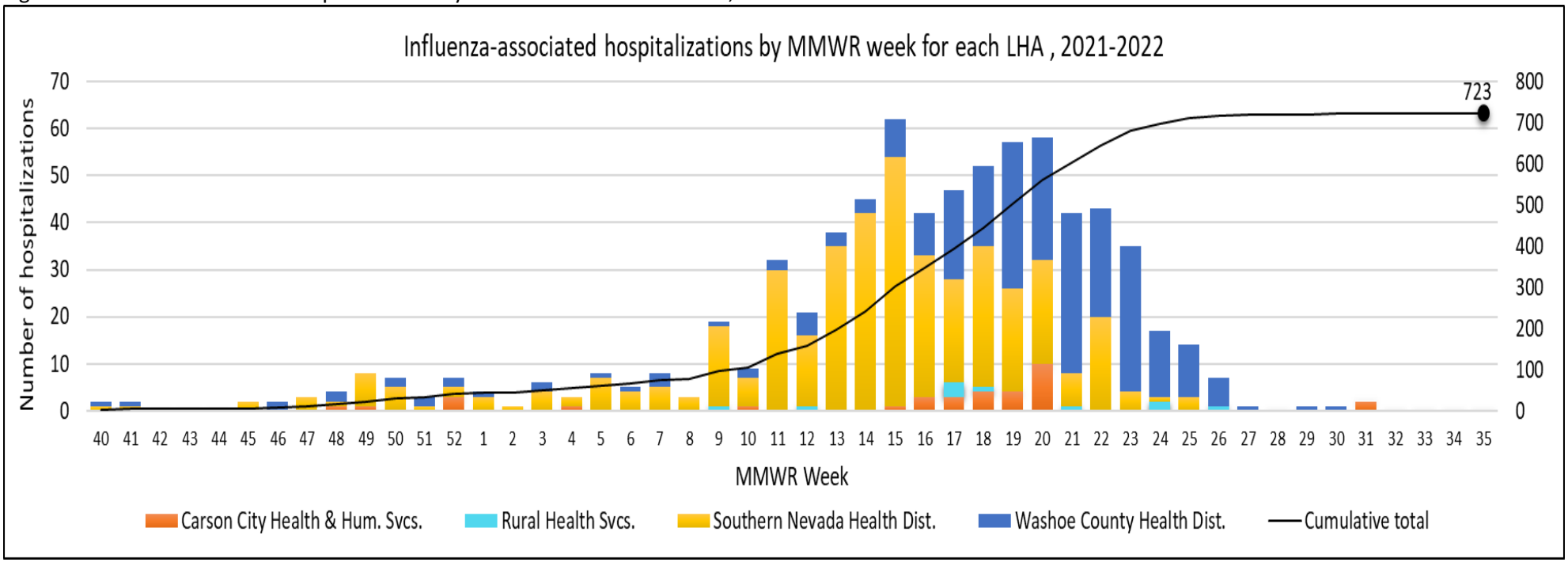


Table 2: Current week's count of hospitalizations by LHA along with the season's cumulative count and percent of the cumlative hospitalizations

LHA	Current Week counts	Cumulative count	Percent of cumulative
Carson City Health & Hum. Svcs.	0	34	5%
Rural Health Svcs.	0	10	1%
Southern Nevada Health Dist.	0	411	57%
Washoe County Health Dist.	0	268	37%
Total	**0**	**723**	**100%**

Figure 6: Influenza-related hospitalizations for reported subtype by MMWR week, 2021-2022

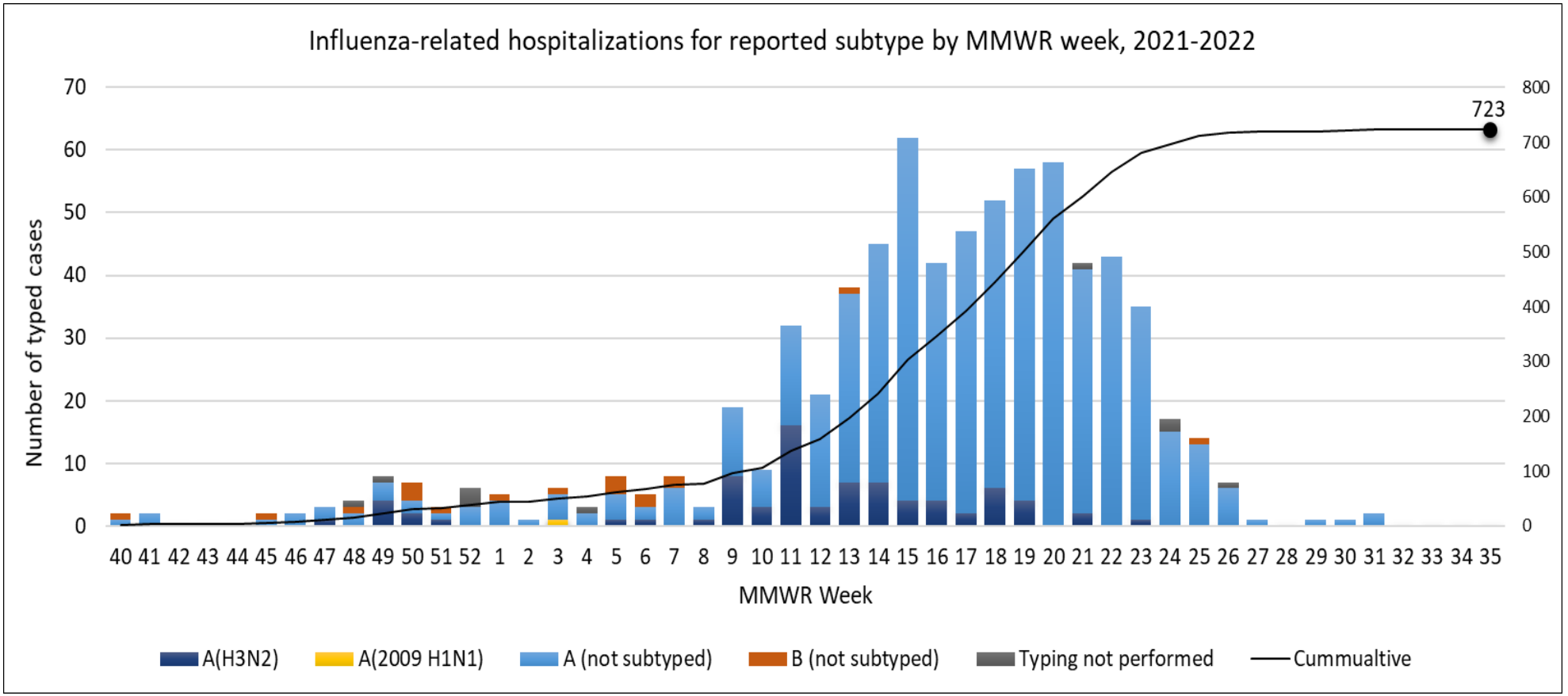


Table 3: Current week's count of hospitalizations by subtype along with the season's cumulative count and percent of the cumlative hospitalizations

Flu subtype	Current Week counts	Cumulative count	Percent of cumulative
A(H3N2)	0	78	10.8%
A(2009 H1N1)	0	1	0.1%
A (not subtyped)	0	616	85.2%
B (not subtyped)	0	18	2.5%
Typing not performed	0	10	1.4%
Total	**14**	**723**	**100%**

Influenza Mortality Reporting

Death certificate data are used to calculate pneumonia, influenza, and COVID-19 (PIC) deaths. The Division of Public and Behavioral Health is presently evaluating its data extraction methodology and will report PIC deaths in the future from internal data. The CDC makes PIC death information available in its FluView Interactive GIS application which was used to populate influenza and PIC deaths for the national and regional level and PIC for Nevada in **Figure 7**. Percentages for PIC and influenza mortality are calculated using the location's total deaths for that week as the denominator. Influenza associated death data presented in **Figure 7** and **Figure 8** were provide by LHAs which investigate all influenza deaths and typically review medical records retroactively up to 30 days from the date of death for an influenza diagnosis.

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. PIC includes all deaths with pneumonia, influenza, and/or COVID-19 listed on the death certificate.

Figure 7: National, Regional, and Nevada Influenza and PIC mortality % by MMWR week

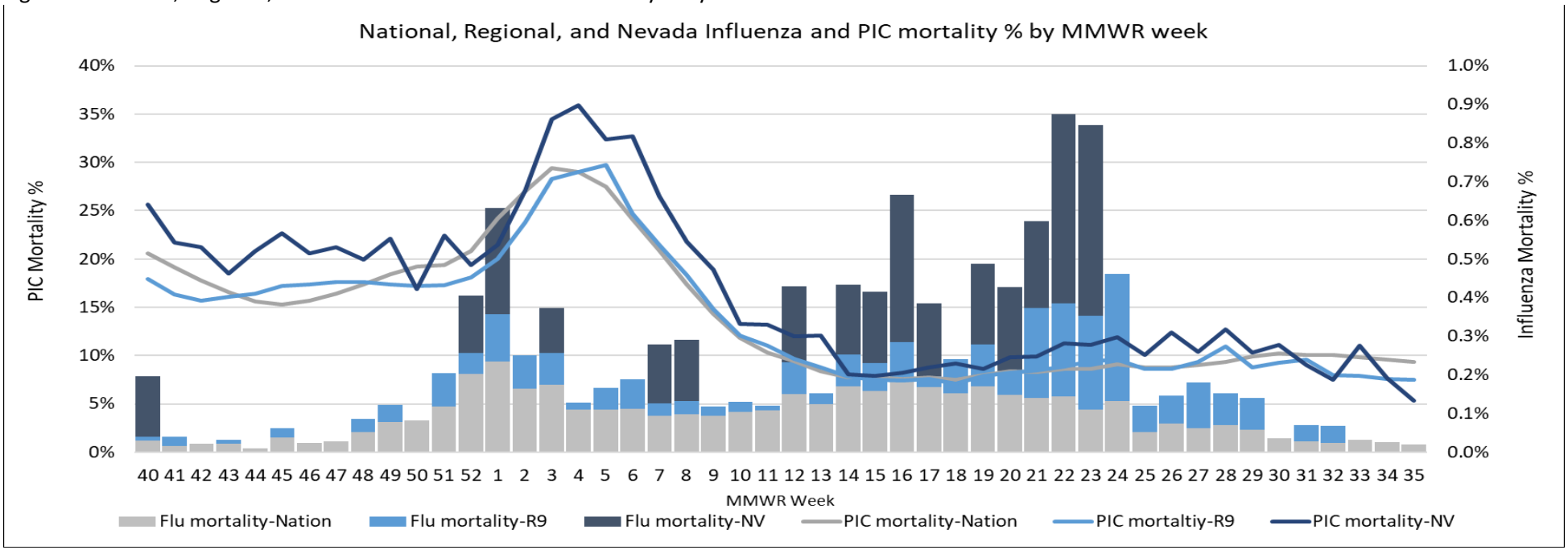


Table 4: Percent influenza and PIC mortality reported for the current week

Location	Influenza mortality	PIC mortality
Nation	0.02%	9.40%

R9	0.00%	7.50%
NV	0.00%	5.30%

Figure 8: LHA reported influenza-related deaths by MMWR week, 2021-2022

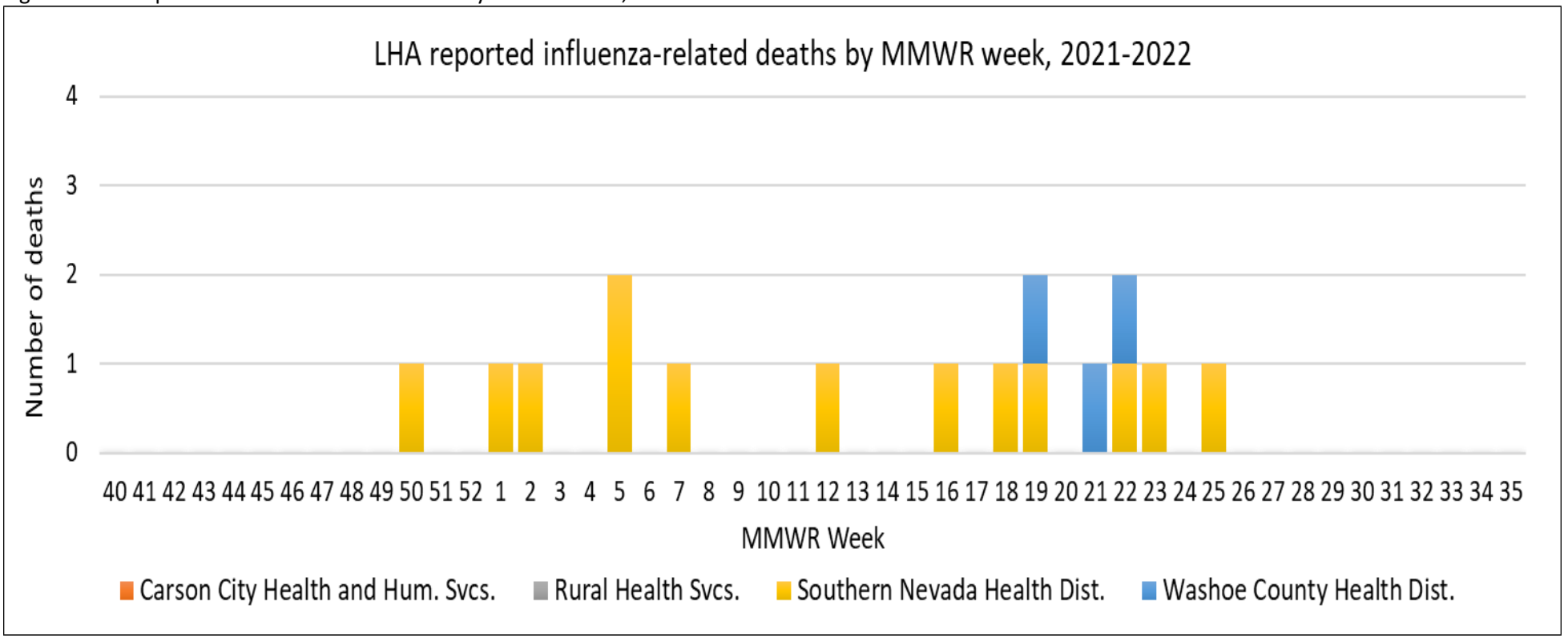


Table 5: Current week's count of hospitalizations by LHA along with the season's cumulative count and percent of the cumlative hospitalizations

LHA	Current Week counts	Cumulative count	Percent of cumulative
Carson City Health & Hum. Svcs.	0	0	0.0%
Rural Health Svcs.	0	0	0.0%
Southern Nevada Health Dist.	0	13	81.3%
Washoe County Health Dist.	0	3	18.7%
Total	**0**	**11**	**100%**

Syndromic Surveillance Influenza-Like Illness (ILI) Activity:

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.

It is important to note that the sample of hospitals and urgent cares queried for this and other syndromic surveillance analysis in this report is robust (N=79) but not all hospitals or other medical facilities in Nevada report into ESSENCE.

Figure 9: Syndromic surveillance - number of emergency visits with ILI by week, five-year comparison

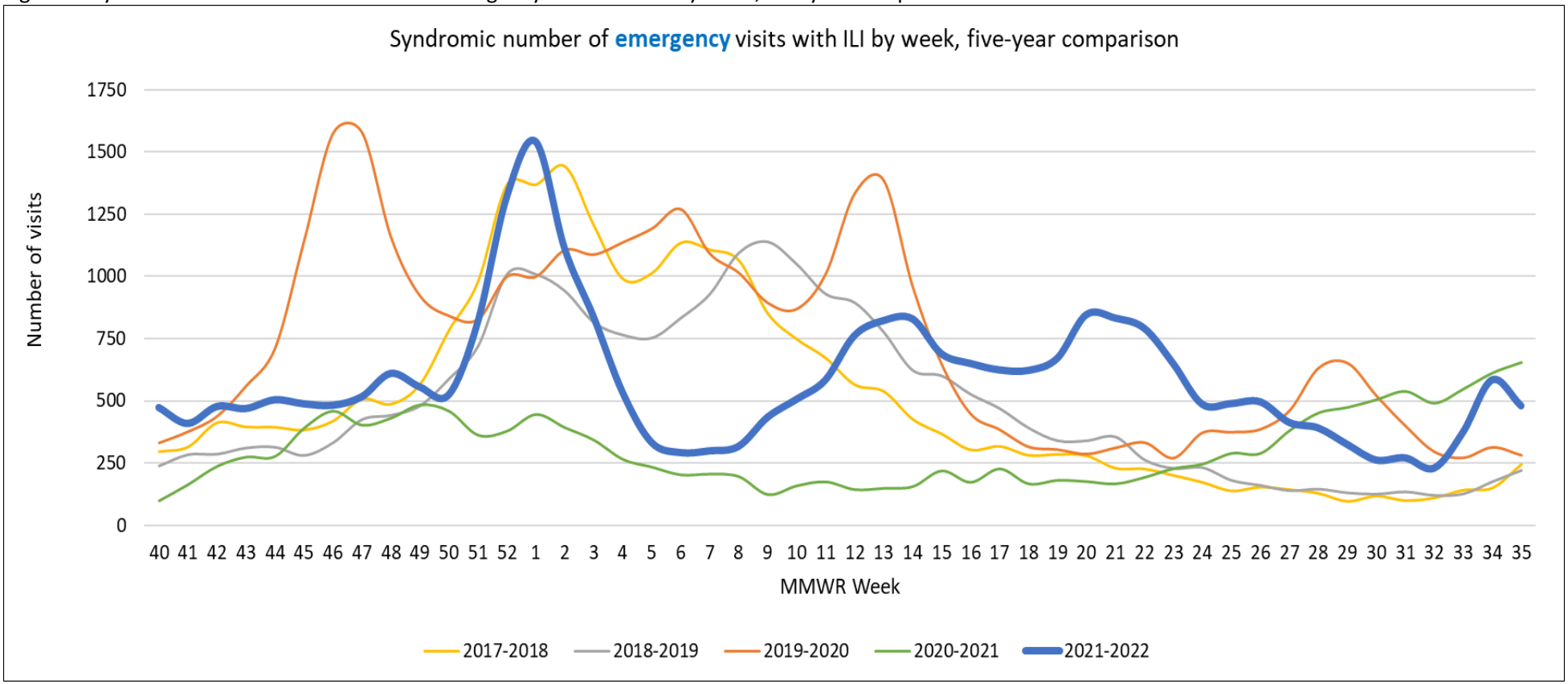


Figure 10: Syndromic surveillance - number of inpatient visits with ILI by week, five-year comparison

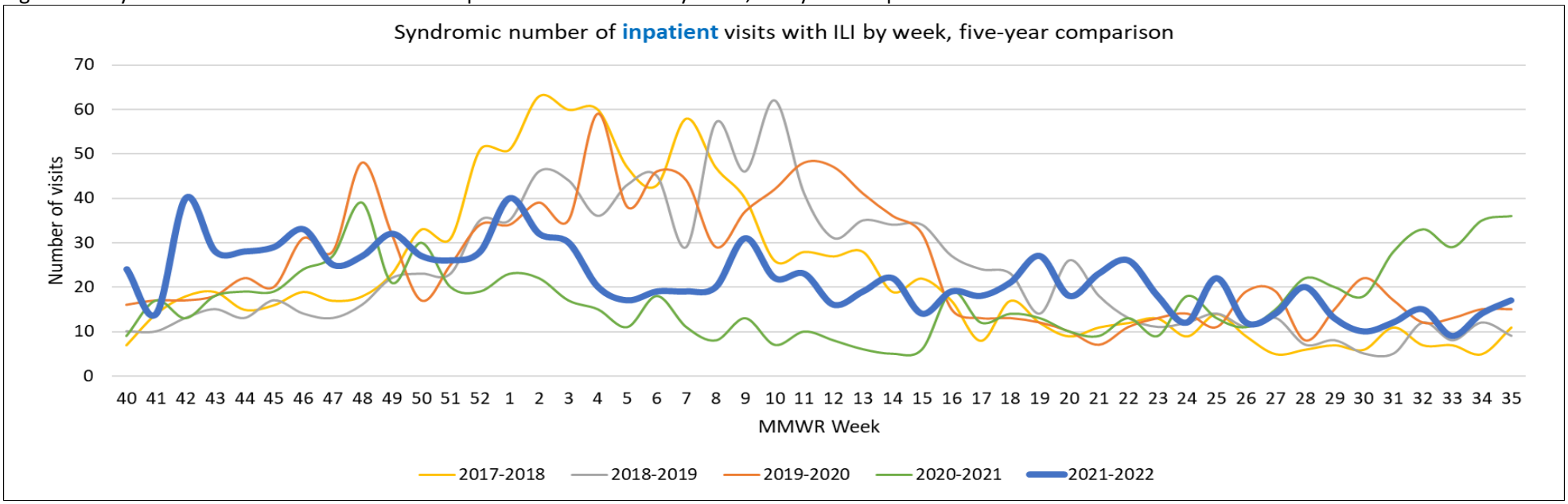


Figure 11: Syndromic surveillance - number of outpatient visits with ILI by week, five-year comparison

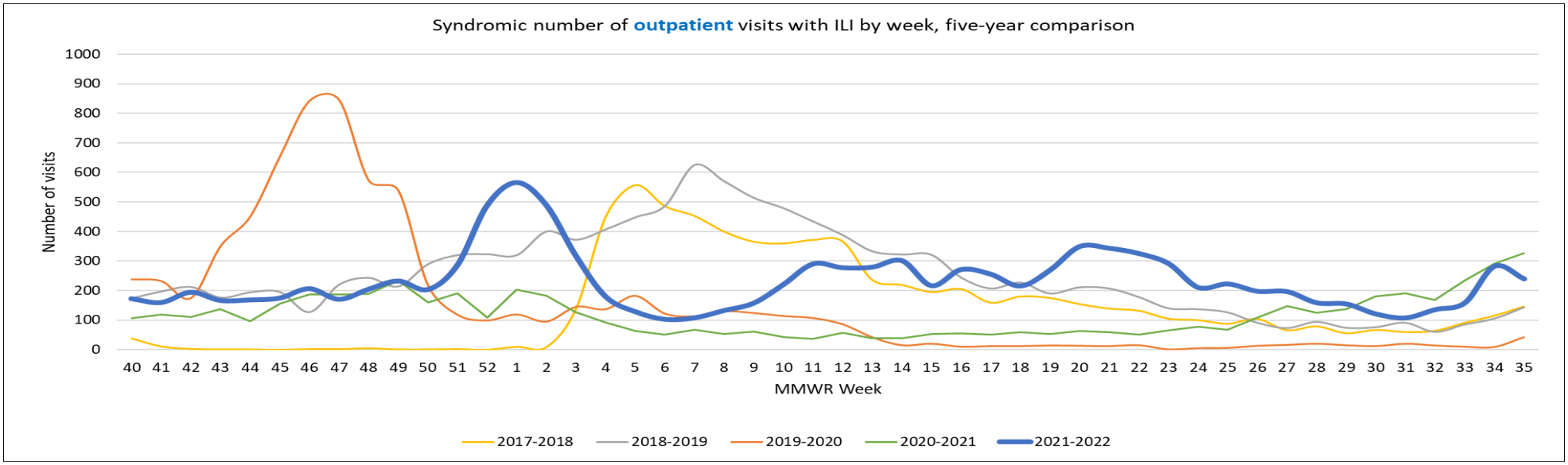
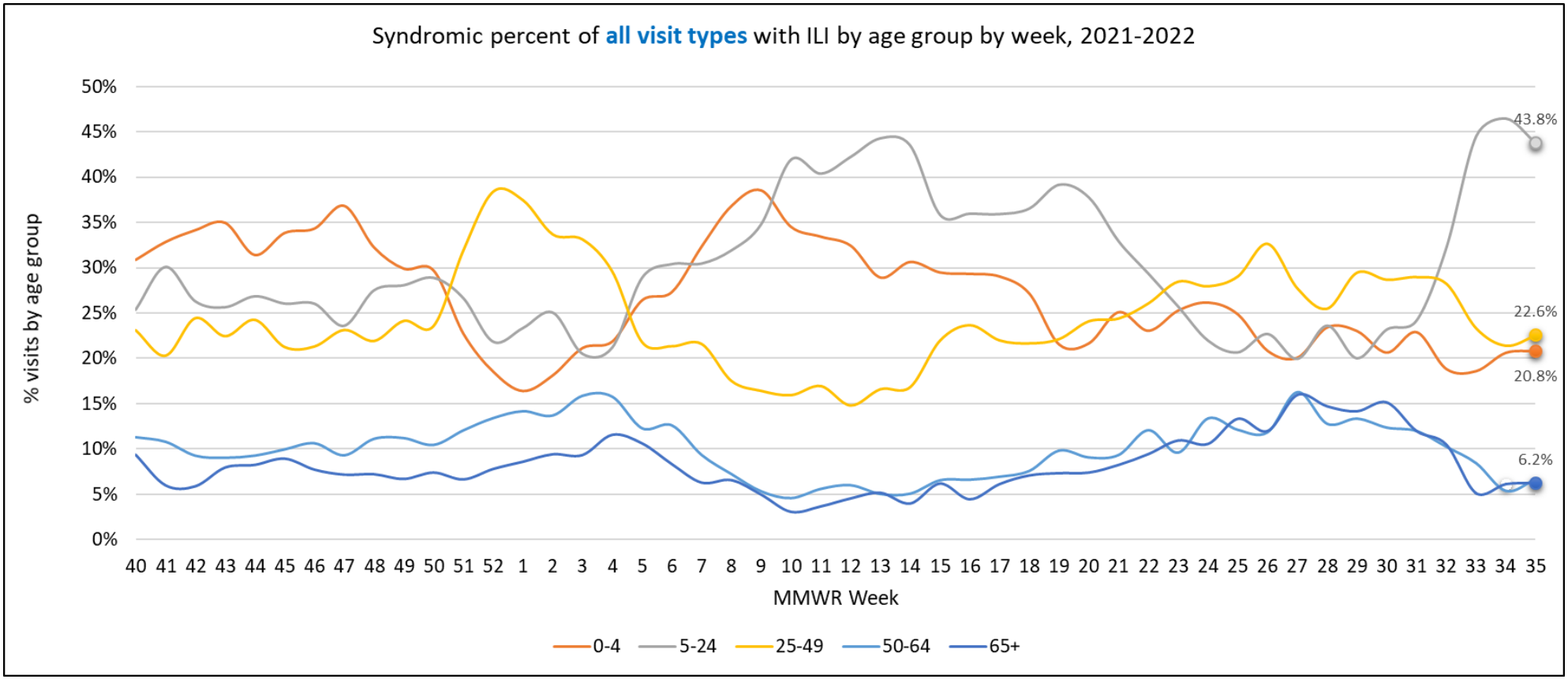


Figure 12: Syndromic surveillance - percent of all visit types with ILI by age group by week, 2021-2022



Syndromic Surveillance COVID-Like Illness (CLI) Activity:

Data were collected using the 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 (EWMA) statistic built into ESSENCE (for more details please read pages 95-98 here).

Figure 13: CLI % in Nevada using a CDC Generated CLI Definition by MMWR Week

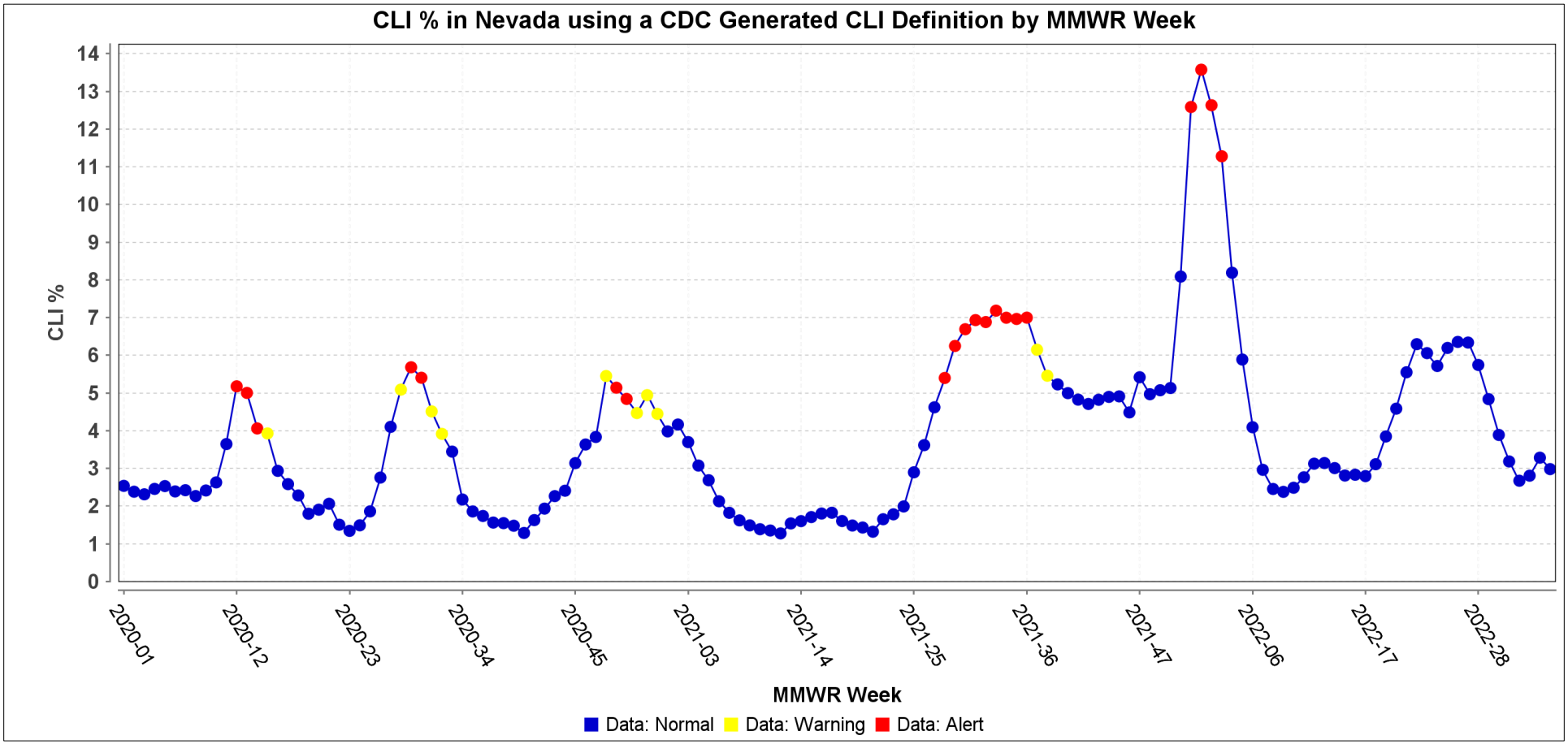
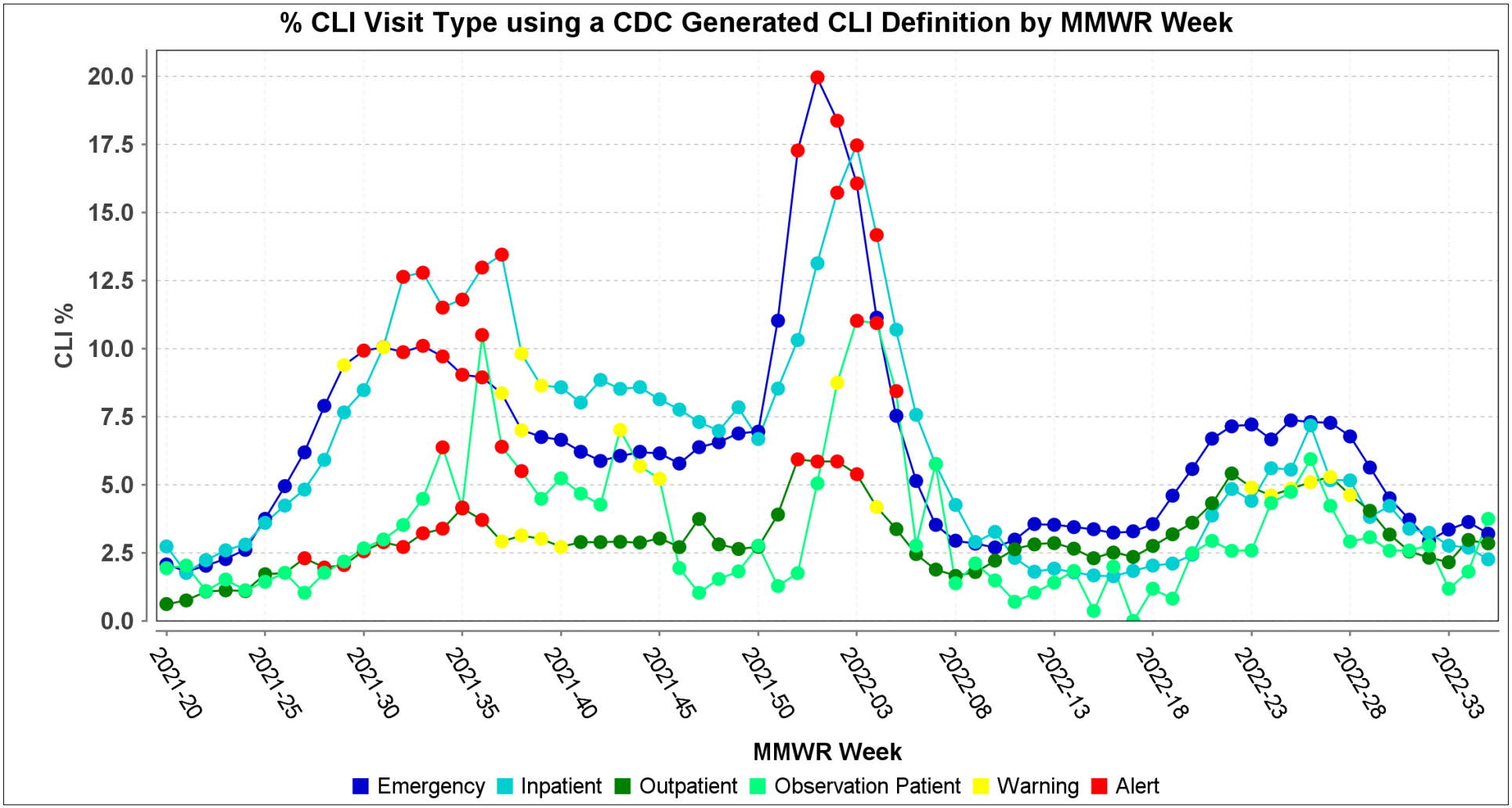
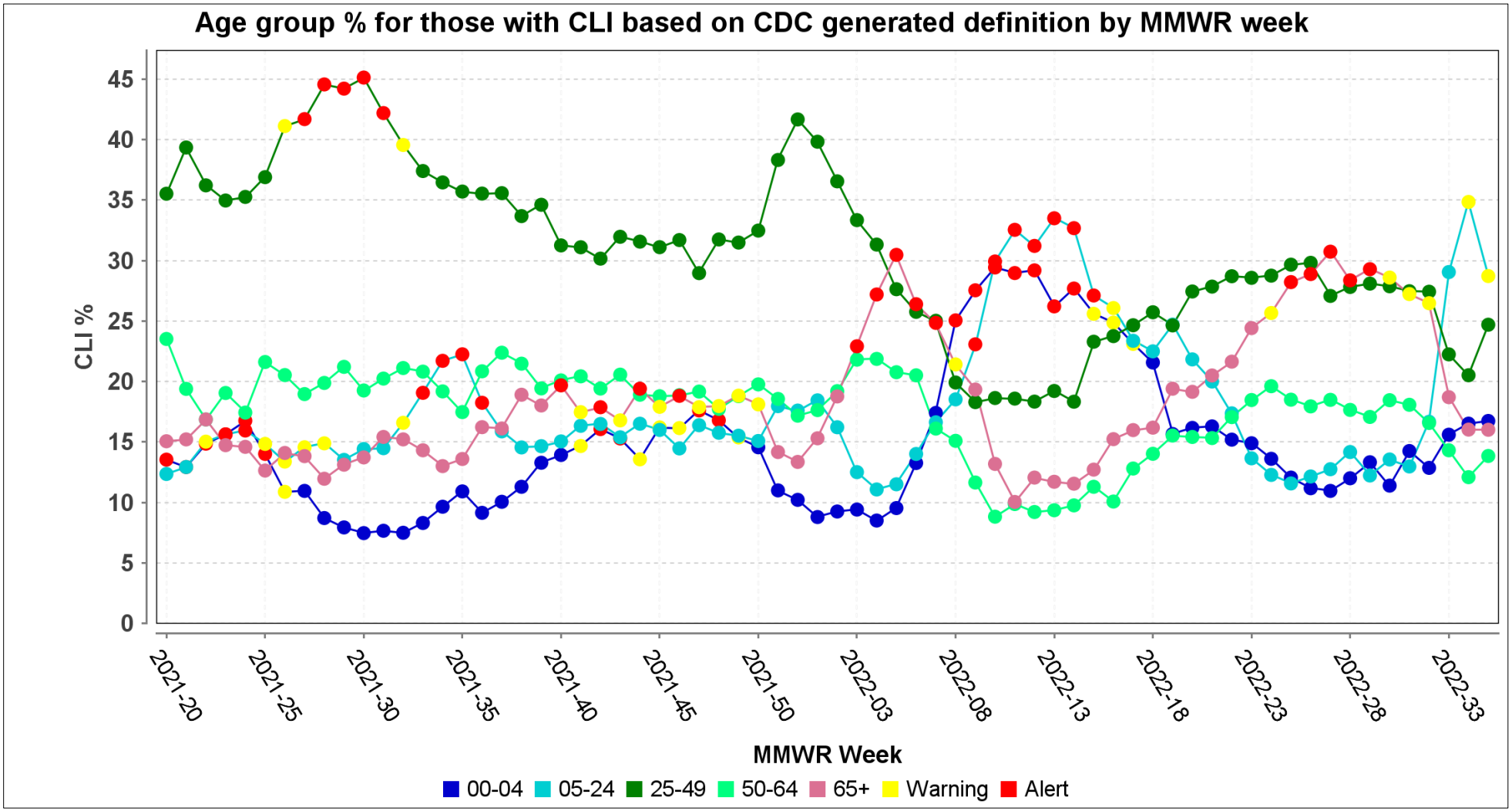


Figure 14: % CLI Visit Type using a CDC Generated CLI Definition by MMWR Week



Emergency: Patient encounter in an emergency department setting
Inpatient: Patients admitted to a hospital
Outpatient: Patient encounter in an outpatient setting
Observation: Patients who are monitored in a hospital setting to determine whether they need inpatient admission

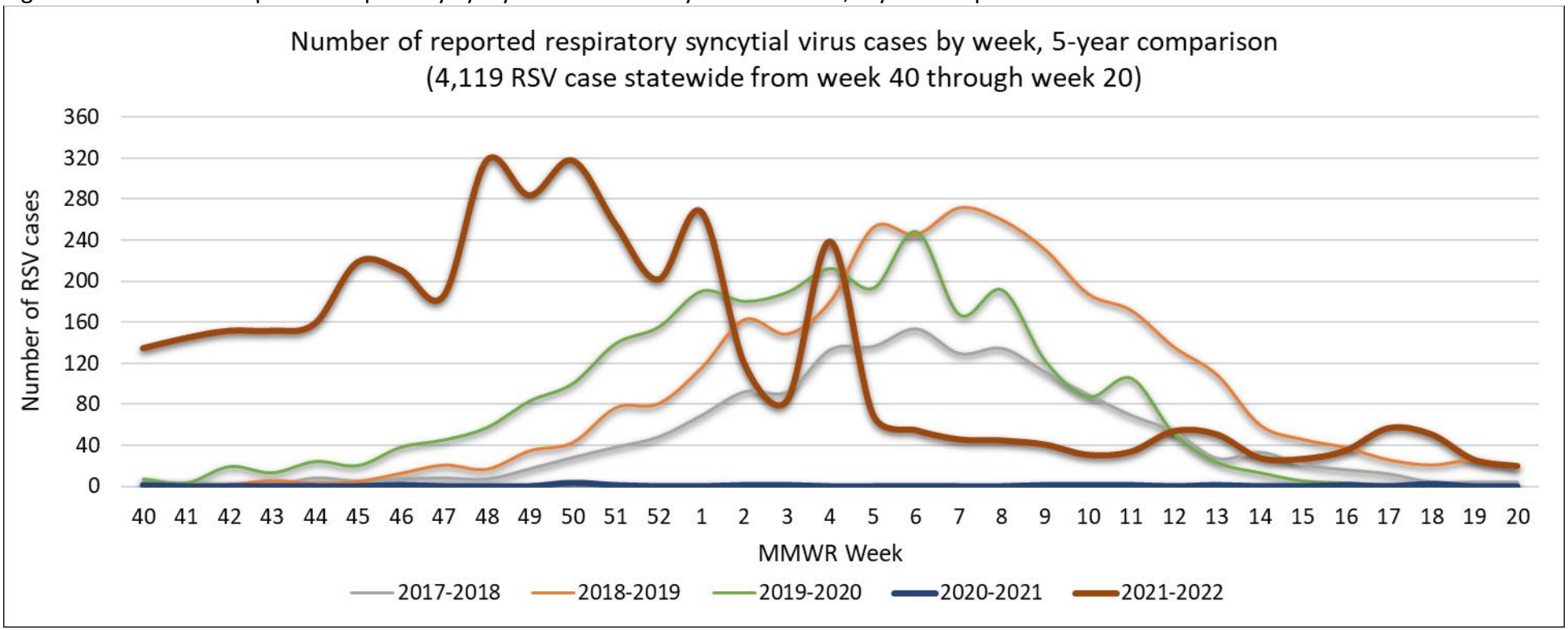
Figure 15: Age group % for those with CLI based on CDC generated definition by MMWR week


Age group % for those with CLI based on CDC generated definition by MMWR week
CLI %
0
5
10
15
20
25
30
35
40
45
2021-20
2021-25
2021-30
2021-35
2021-40
2021-45
2021-50
2022-03
2022-08
2022-13
2022-18
2022-23
2022-28
2022-33
MMWR Week
00-04
05-24
25-49
50-64
65+
Warning
Alert

Respiratory Syncytial Virus (RSV) Activity:

Respiratory Syncytial Virus (RSV) activity data are provided by the DPBH's Office of Analytics who collect the data from Nevada's National Notifiable Disease Surveillance System (NNDSS)-the National Electronic Disease Surveillance System Base System (NBS). Due to lags in reporting the case count from recent weeks, current week counts are expected to increase with every subsequent report. RSV data are only collected during the influenza season (MMWR week 40 for current year to MMWR Week 20 on the next year).

Figure 16: Number of reported respiratory syncytial virus cases by MMWR week, 5-year comparison



References

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

Figure 4 and Table 1 use ILINet laboratory surveillance data.

Figures 5, 6, 8 and Tables 2, 3, 4, 6 are compiled from data collected by local health authorities and abstracted from medical records.

Figure 7 and Table 5 uses data from CDC's FluView Interactive GIS application.

Figures 9, 10, 11, 13, 14, and 15 are populated from the National Syndromic Surveillance System (NSSP) Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE).

Figure 16 is generated from data submitted to Nevada's NBS/NETSS reporting systems.