Influenza Weekly Report

2013 Week 17 (April 21 – 27) through 2014 Week 17 (April 20 – 26)

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Data for the graphs and tables on the following pages are provisional and may be updated as additional information becomes available.

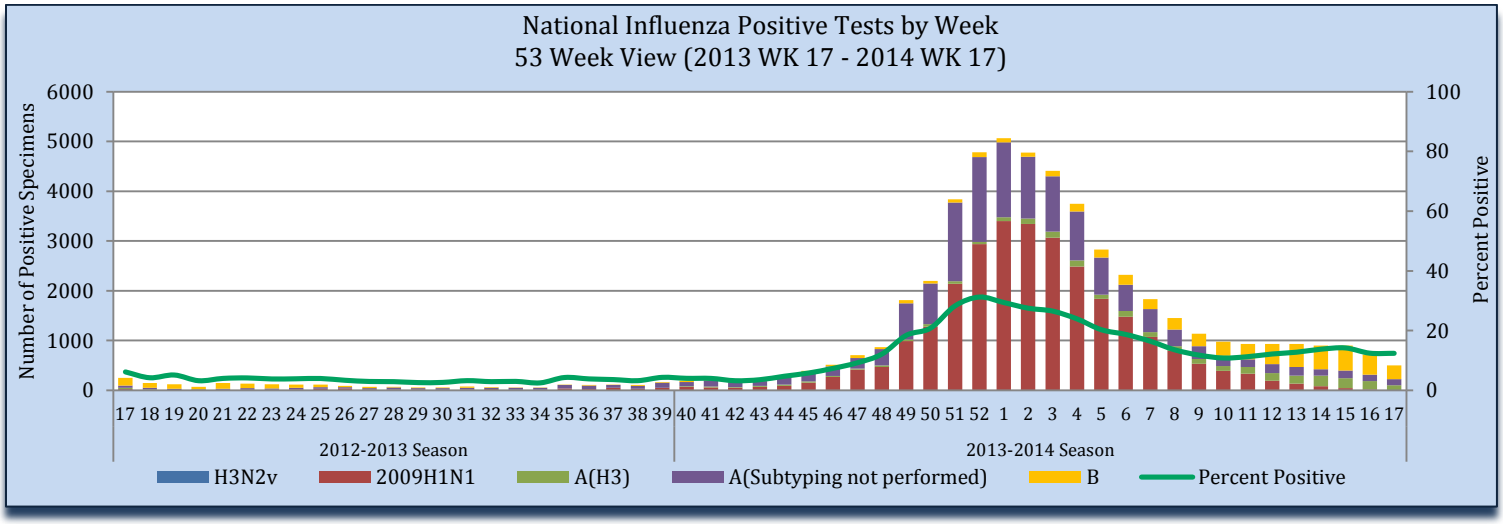
Purpose

The purpose of this report is to provide an overview of and statistics for the influenza season in Nevada for the local public health authorities, sentinel providers and the public.

Influenza-Like Illness Network Surveillance (ILINet)

Respiratory specimens tested for influenza by the World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NRVESS) collaborating laboratories by sub-type. There were 4,031 specimens collected nationally during week 17 that were tested for influenza; of these 500 tested positive or the percent positive was 12.0%.

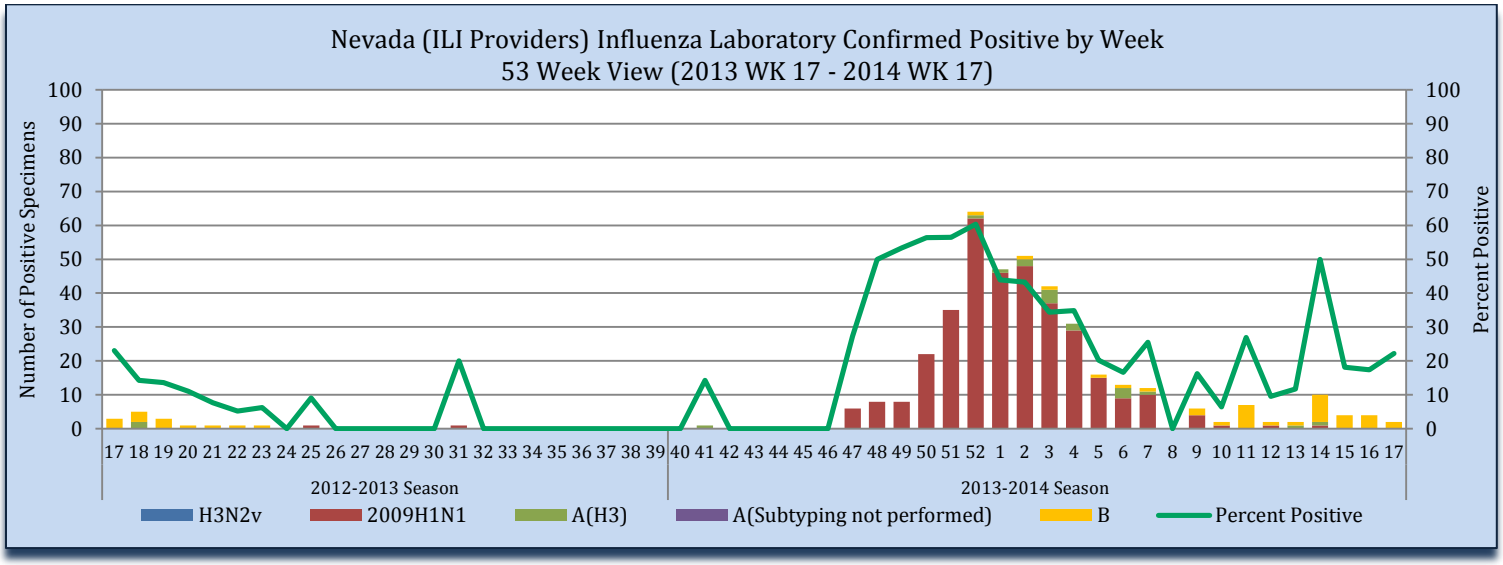
Figure 1



Source of Data: CDC: FluView Weekly Report.

Of the 9 specimens tested for influenza at both the Nevada State Public Health Laboratory and Southern Nevada Public Health Laboratory for sentinel providers, 2 tested positive for influenza during week 17 or 22.2%.

Figure 2



Source of Data: CDC: ILINet.

Nevada State Public Health Laboratory (NSPHL) has tested 801 specimens this season with 328 positive from sentinel providers (40.9% positive). Southern Nevada Public Health Laboratory (SNPHL) has reported 67 positive influenza specimens through the Pediatric Early Warning Sentinel Surveillance (PEWSS). Nationally, there have been 285,445 specimens sent to the WHO and NERVSS laboratories with 50,580 positive or 17.7%. The national numbers in Table 1 are reflected in Figure 1. The state of Nevada data in Table 1 is reflected in Figure 2.

Table 1

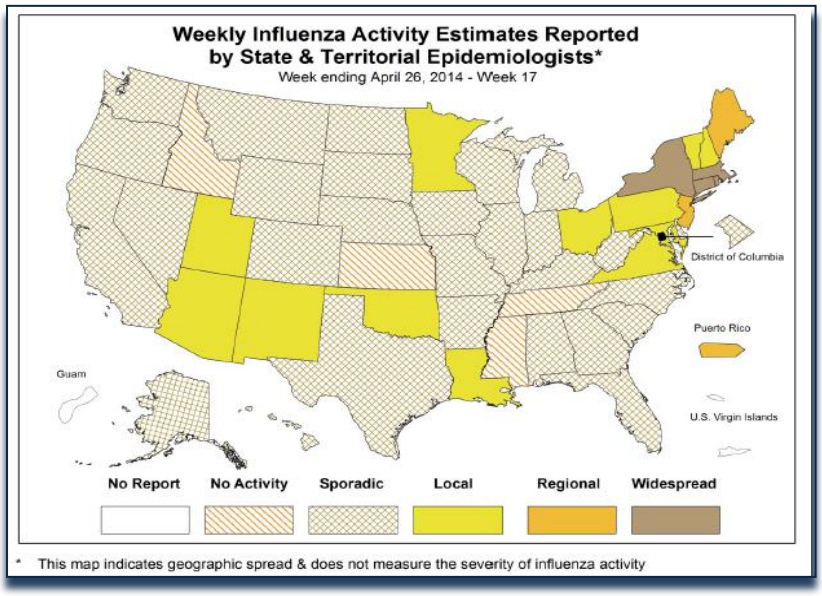
ILINet Surveillance: Influenza Specimens Tested State and Nationally

	NSPHL	SNPHL	State of Nevada (Week 17)		State of Nevada (Season)		National (Week 17)		National (Season)	
			#	%	#	%	#	%	#	%
Specimens Tested	801	392	9		1,193		4,031		285,445	
Positives to Influenza	328	67	2	22.2	395	33.1	500	12.4	50,580	17.7
Influenza A:	316	43	0	0.0	359	90.9	223	44.6	45,390	89.7
A(2009 H1N1)	301	41	0	0.0	342	95.3	8	3.6	28,219	62.5
A(Sub-typing not performed)	0	0	0	0.0	0	0.0	123	55.2	14,669	32.3
A(H3)	15	2	0	0.0	17	4.7	92	41.3	2,502	5.5
Influenza B:	12	24	2	100	36	9.1	277	55.4	5,189	10.3

Source of Data: CDC: FluView Report and CDC: ILINet.

For week 17, Nevada reported sporadic activity to the CDC, along with 27 states and District of Columbia (Alabama, Alaska, Arkansas, California, Colorado, Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kentucky, Michigan, Missouri, Montana, Nebraska, North Carolina, North Dakota, Oregon, South Carolina, South Dakota, Texas, West Virginia, Washington, Wisconsin, and Wyoming). Activity level[1] is derived from data analyzed from Influenza-like Illness (ILI) surveillance (laboratory and sentinel data), and data reported to the state through NBS/NETSS.

Figure 3



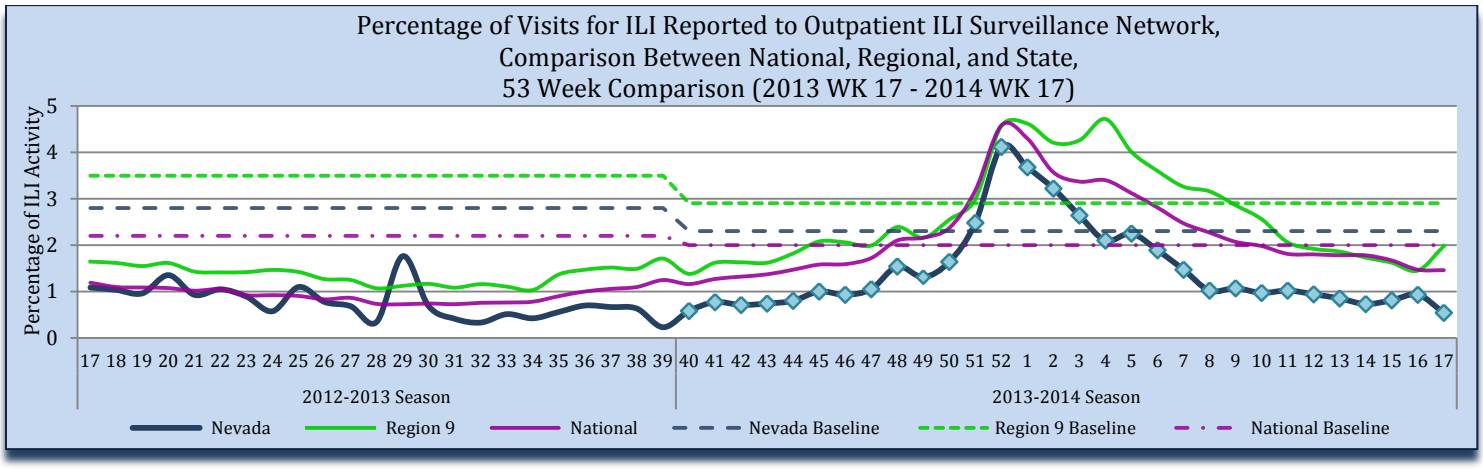
Source of Maps: CDC: FluView Report.

Influenza-like Illness (ILI) Network Surveillance has each sentinel providers report the number of patients that meet the ILI case definition[2] and number of patients that visit the provider weekly, which increased to 16,943 (week 17) from 16,079 (week 16). The "percentage of visits" is the number of ILI patients divided by the total number of patient visit per week. Nevada's ILI percentage of visits to providers decreased to 0.5% from 0.9% during week 17, and is below the state baseline of 2.3%. Region 9 increased in ILI to 2.0% from 1.5%, and includes the following states/territories: Arizona, California, Guam, Hawaii, and Nevada. The nation remained the same at 1.5% during week 17 and is below the national baseline of 2.0%.

1: Activity level: Appendix Table 4.

2: ILI case definition: Technical Notes.

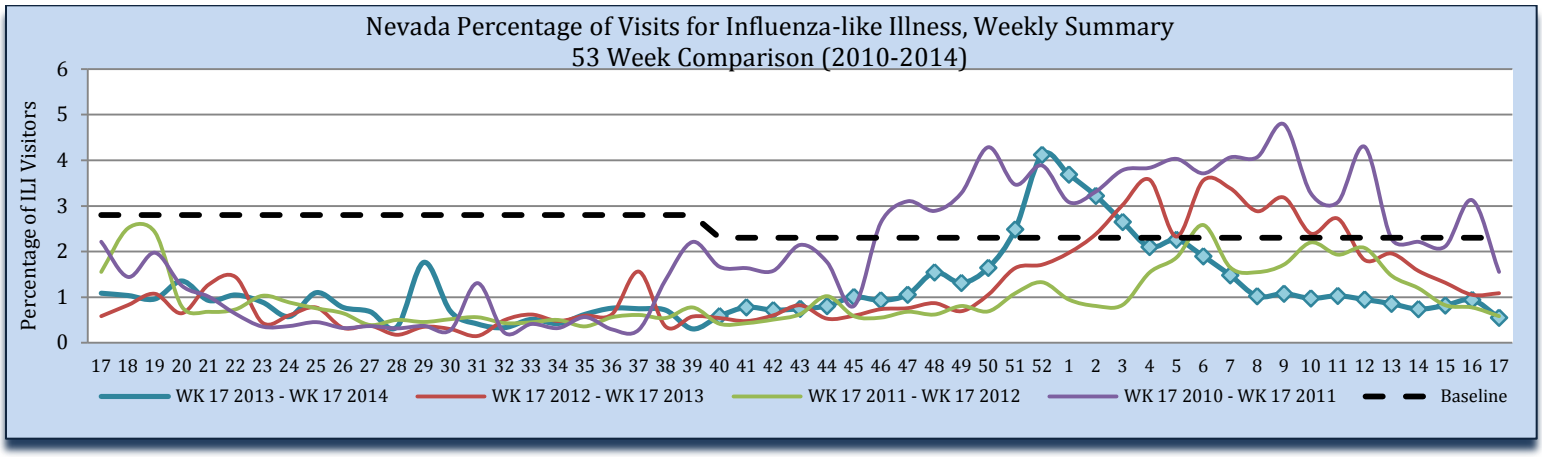
Figure 4



Source of Data: CDC: Flu View Report and CDC: ILINet.

During week 17, 0.5% of visits to sentinel providers were due to ILI. This is a 0.5% point decrease from week 17 of the 2012-2013 influenza season, an influenza season is from week 40 through week 39.

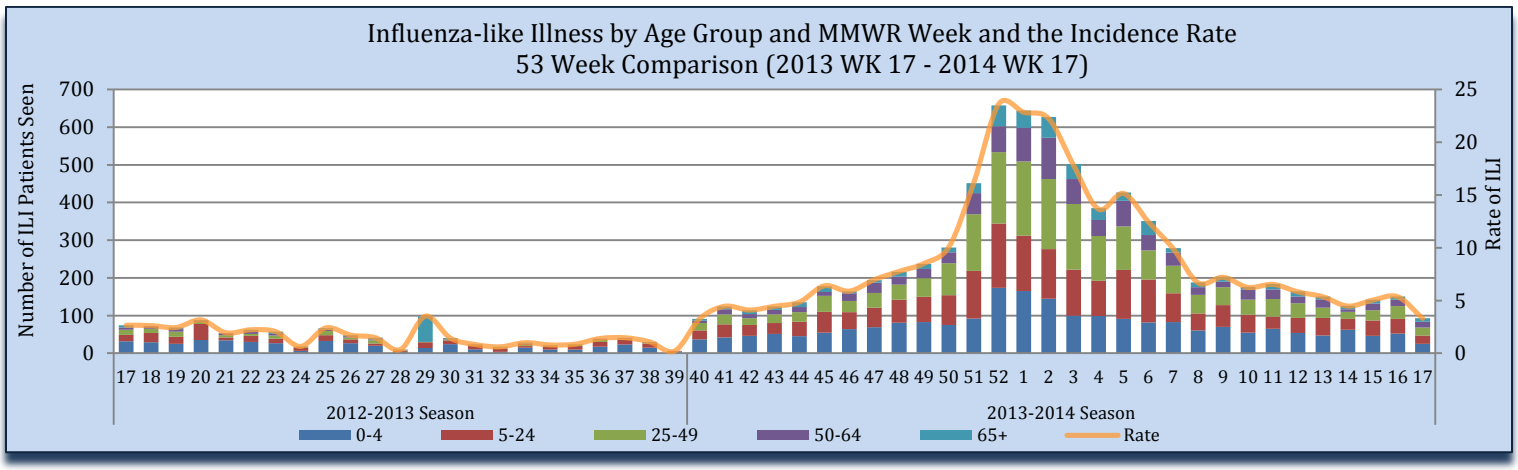
Figure 5



Source of Data: CDC: ILINet.

The number of ILI patients and rate decreased from week 16 to week 17, from 151 to 93, and the rate from 5.4 to 3.3 per 100,000 population. The rate is calculated by the number of patients presented with ILI divided by the state population multiplied by 100,000. The estimated state population for 2014 is 2,819,321.

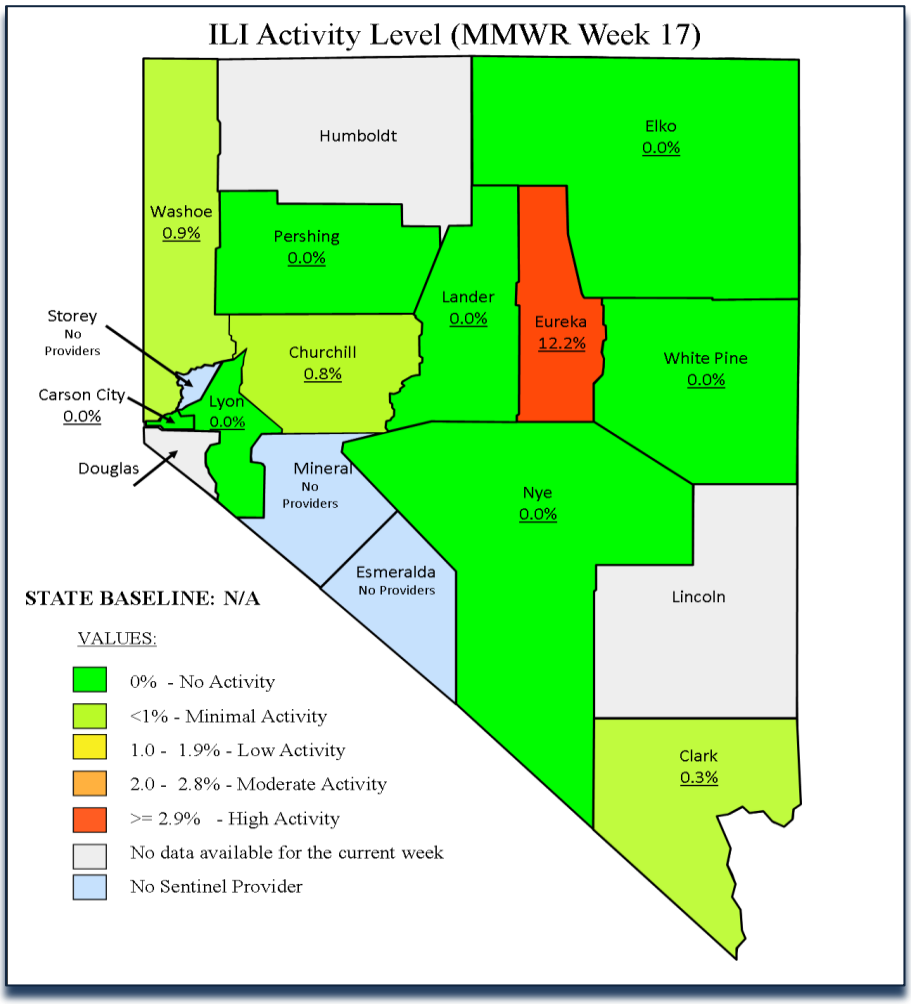
Figure 6



Source of Data: CDC: ILINet.

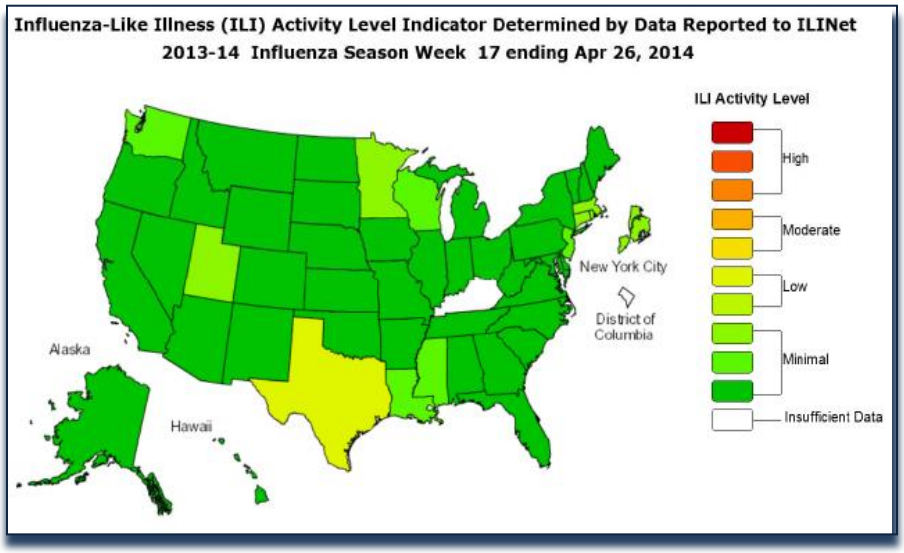
Providers for the sentinel surveillance are grouped by county, then the percent is calculated by ILI visits and total patient visits. During week 17, Eureka County had high activity; Douglas, Humboldt and Lincoln counties did not report (Figure 7). Overall, Nevada had minimal activity monitored through ILINet (Figure 8).

Figure 7



Source of Data: CDC: ILINet.

Figure 8

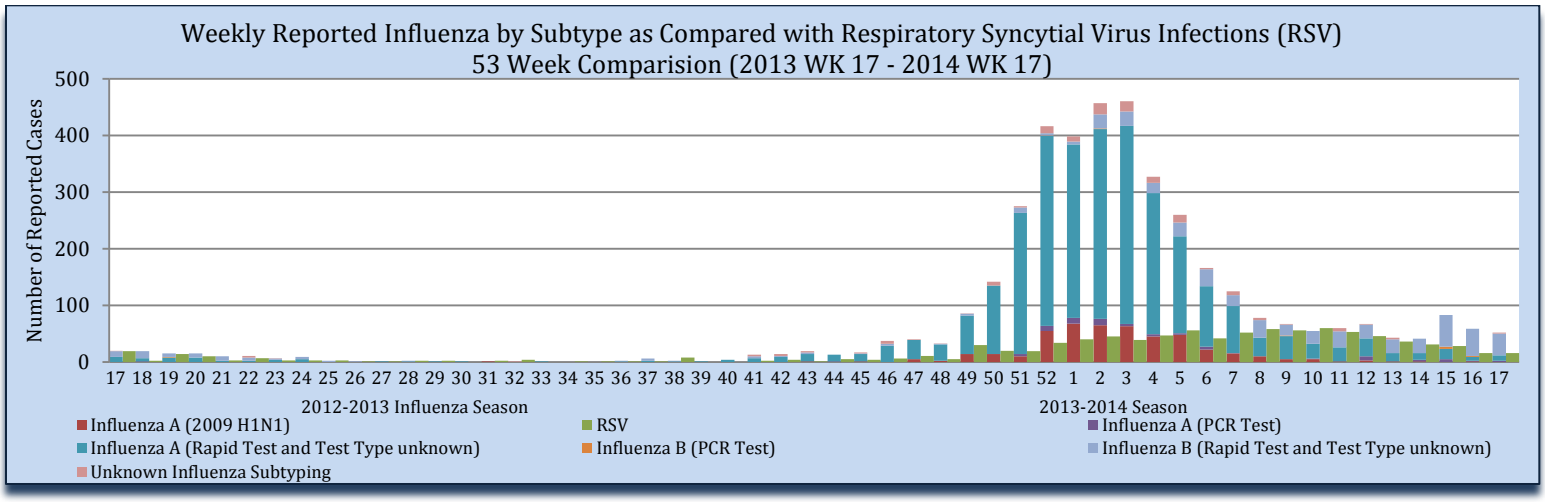


Source of Map: CDC: FluView Report.

Influenza Positive Surveillance (NBS and NETSS)

Positive cases of influenza are reported to the state health division for surveillance purposes. Figure 10 and 11 as well as Table 2 reflects all positive influenza cases reported to the state. Types of influenza testing include commercial rapid diagnostic test (rapid), viral culture, fluorescent antibody, enzyme immunoassay, RT-PCR (PCR), and Immunohistochemistry. The two most common test types in Nevada are Rapid and PCR tests. During week 17, there were 12 Influenza A cases. There were 40 positive Influenza B cases. Overall, there were 52 influenza positive tests in Nevada, whereas during the previous season for week 17, there were 20 cases.

Figure 9



Source of Data: OPHIE: NBS and SNHD: NETSS.

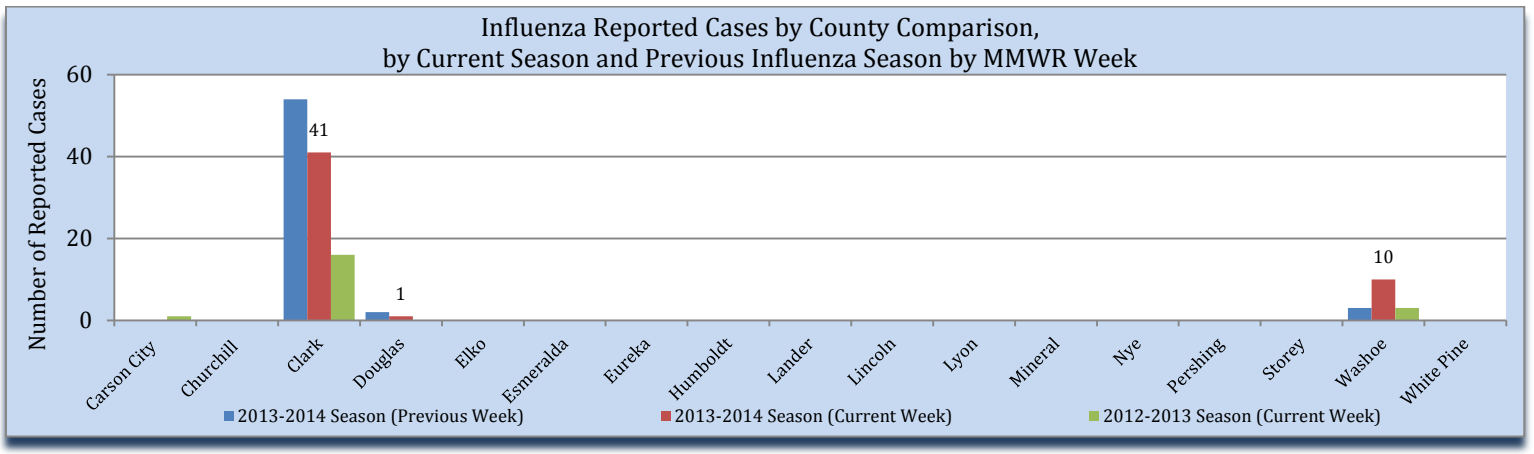
Table 2

Reporting Jurisdiction	Reported Influenza Cases by County Jurisdiction and Influenza Type									
	Current Week (Week 17)					Cumulative Influenza Season				
	H1N1	A	B	Unknown	Total	H1N1	A	B	Unknown	Total
Carson City Health and Human Services	0	1	0	0	1	18	375	28	16	437
Rural Health Services	0	0	0	0	0	97	242	33	46	418
Southern Nevada Health District	0	7	32	0	41	177	1,667	397	38	2,279
Washoe County Health District	0	4	6	0	10	183	510	49	31	773
State of Nevada	0	12	38	0	52	475	2,794	507	131	3,907

Source: OPHIE: NBS and SNHD: NETSS.

Clark County experienced a decrease in influenza to 41 from 54 influenza cases during week 17. Washoe County experienced an increase for week 17, to 10 from 3 influenza cases. Douglas County had influenza activity during the week.

Figure 10



Source: OPHIE: NBS and SNHD: NETSS.

Hospitalizations

There have been 417 hospitalizations associated with influenza this season (week 40 2013 through week 17).

Table 3

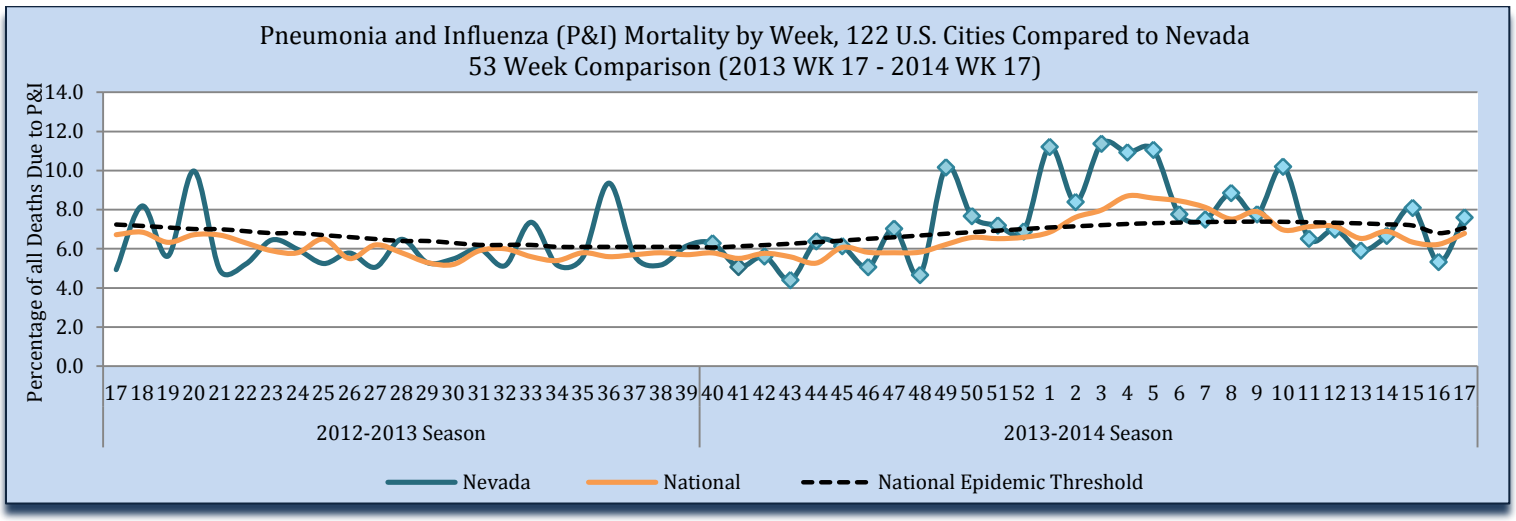
Influenza Hospitalizations				
Reporting Jurisdiction	Current Week (Week 17)		Cumulative Influenza Season	
	#	%	#	%
Carson City Health and Human Services	0	0.0	22	5.3
Rural Health Services	0	0.0	7	1.7
Southern Nevada Health District	7	100	291	69.8
Washoe County Health District	0	0.0	97	23.3
State of Nevada	7	100	417	100

Source: Reported to Office of Public Health Informatics and Epidemiology from each Jurisdiction.

Pneumonia and Influenza (P&I) Mortality Surveillance

The Pneumonia and Influenza (P&I) mortality percentage is the deaths, where Pneumonia and Influenza is listed as a cause of death, divided by the total deaths in Nevada for each week. There were 19 P&I deaths and 250 total deaths for week 17, as of May 5th. The P&I mortality percentage is above the national epidemic threshold at 7.6%, (threshold at 7.1%). Nationally, the P&I mortality is below the national epidemic threshold at 6.8%.

Figure 11



Source: OVR: WEVRRS and CDC: FluView.

Appendix

Activity level in figure 3 is based on the following information.

Activity Level	ILI Activity*/Outbreaks		Laboratory Data
No Activity	Low	And	
Sporadic	Not Increased	And	Isolated lab-confirmed cases †
			Or
	Not Increased	And	Lab confirmed outbreak in one institution ‡
Local	Increased ILI in 1 region**, ILI activity in other regions is not increased	And	Recent (within the past 3 weeks) lab evidence of influenza in region with increased ILI
			Or
	2 or more institutional outbreaks (ILI or lab confirmed) in 1 region; ILI activity in other regions is not increased	And	Recent (within the past 3 weeks) lab evidence of influenza in region with the outbreaks; virus activity is no greater than sporadic in other regions
Regional	Recent (within the past 3 weeks) lab evidence of influenza in region with the outbreaks; virus activity is no greater than sporadic in other regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
			Or
	Institutional outbreaks (ILI or lab confirmed) in ≥2 and less than half of the regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
Widespread	Increased ILI and/or institutional outbreaks (ILI or lab confirmed) in at least half of the regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the state

*ILI activity can be assessed using a variety of data sources including ILINet providers, school/workplace absenteeism and other syndromic surveillance systems that monitor influenza-like illness.
† Lab confirmed case = case confirmed by rapid diagnostic test, antigen detection, culture, or PCR.
‡ Institution includes nursing home, hospital, prison, school, etc.
**Region: population under surveillance in a defined geographical subdivision of a state. Nevada has 5 regions.

Technical Notes

- Influenza-like illness (ILI): a fever greater than or equal 100℉ with cough and/or sore throat
- Percent positive: The number of positive influenza laboratory tests divided by the total number of tests performed.
- Incidence rate is per 100,000 population as estimated by the state demographer.

This report contains information from national and state-level data sources. Influenza surveillance data is collected by a various systems, including:

- Influenza-like Illness Network (ILINet): a sentinel surveillance system in collaboration with the Centers for the Disease Control and Prevention (CDC) where outpatient providers report ILI information weekly.
- National Electronic Telecommunication System for Surveillance (NETSS): a system whereby data is transmits to CDC. Influenza data collected through NETSS does not provide influenza sub-typing information.
- National Electronic Disease Surveillance System (NEDSS): a system for collecting data and monitoring disease trends and outbreaks.
- NEDDS Based System (NBS): an implementation of the NEDSS standards. It provides a secure, accurate, and efficient means of collecting, transmitting, and analyzing public health data.

Citations

1. CDC. FluView: A Weekly Influenza Surveillance Report. http://www.cdc.gov/flu/weekly/pastreports.htm.
2. Nevada State Demographer's Office. 2003-2014 ASRHO Estimates and Projections. Division of Public and Behavioral Health edition. Vintage 2012.
3. OPHIE. DPBH. NBS. 2010-2014. Accessed May 2014.
4. Office of Vital Records (OVR). DPBH. Web Enabled Vital Records Registry System (WEVRRS) [unpublished data]. 2012-2014. Accessed May 2014.
5. Southern Nevada Health District (SNHD). NETSS/Trisano. 2010-2014. Accessed May 2014.

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