

Influenza Weekly Report

2013 Week 01 (December 29 – January 5) through 2014 Week 01 (December 29- January 4)

Department of Health and Human Services
Division of Public and Behavioral Health
Office of Public Health Informatics and Epidemiology



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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.

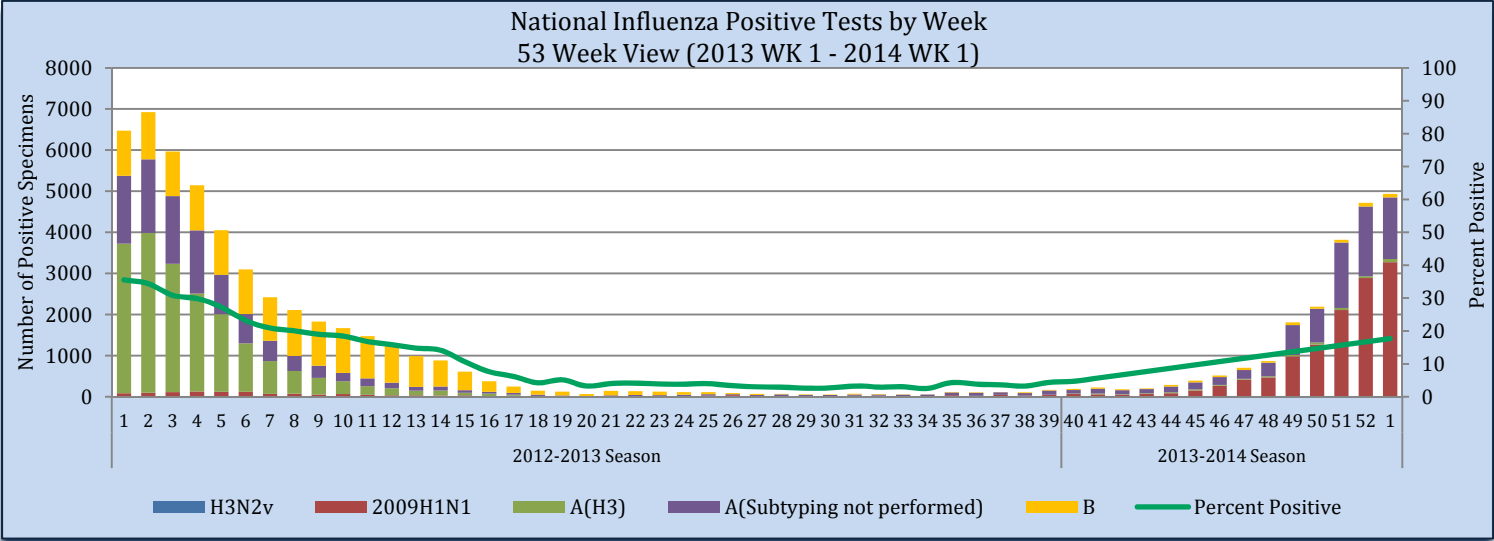
Purpose

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 16,753 specimens collected nationally during week 1 that were tested for influenza; of these 4,935 tested positive or the percent positive was 17.7%.

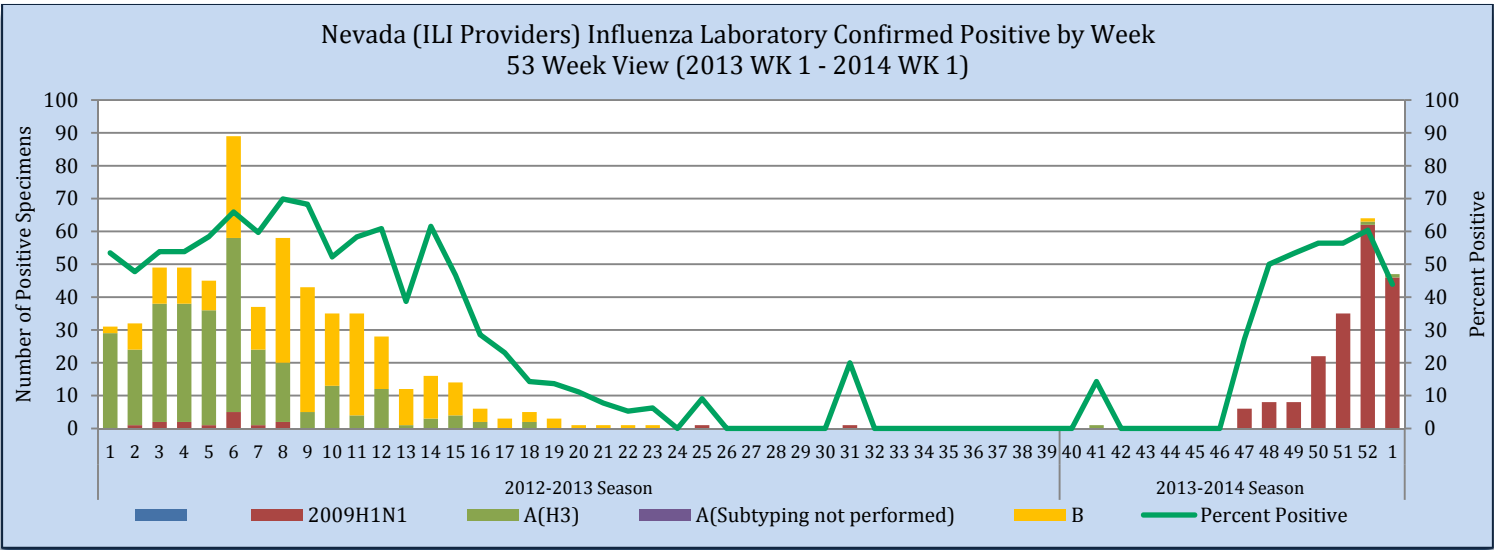
Figure 1



Source of Data: CDC: FluView Weekly Report.

Of the 107 specimens tested for influenza at both the Nevada State Public Health Laboratory and Southern Nevada Public Health Laboratory for sentinel providers, 47 were positive for influenza during week 1 or 43.9%.

Figure 2



Source of Data: CDC: ILINet.

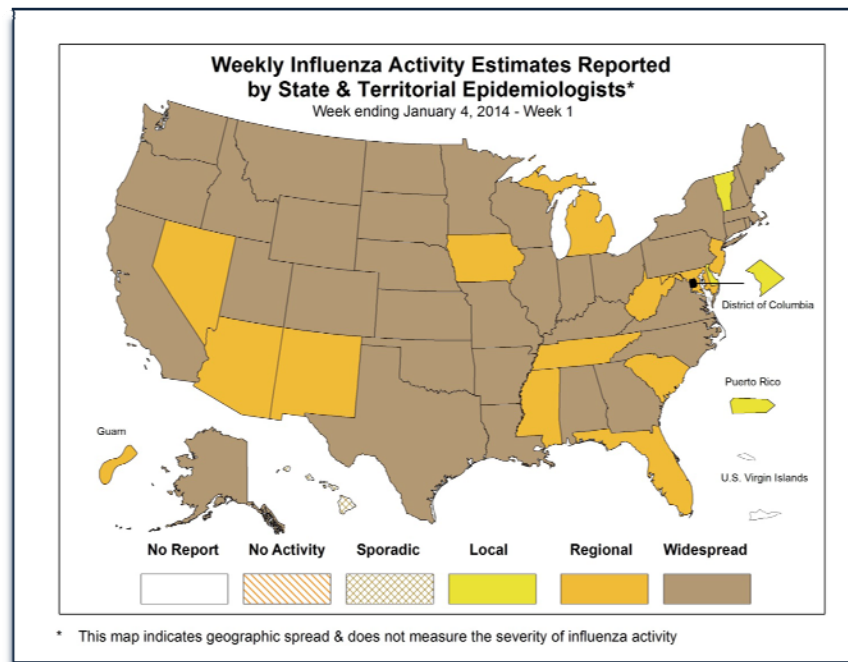
Nevada State Public Health Laboratory (NSPHL) has tested 281 specimens this season with 175 positive from sentinel providers (62.3% positive). Southern Nevada Public Health Laboratory (SNPHL) has reported 16 positive influenza specimens through the Pediatric Early Warning Sentinel Surveillance (PEWSS). Nationally, there have been 122,228 specimens sent to the WHO and NERVSS laboratories with 21,045 positive or 17.2%. 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 1)		State of Nevada (Season)		National (Week 1)		National (Season)	
			#	%	#	%	#	%	#	%
Specimens Tested	281	144	107		425		16,753		122,228	
Positives to Influenza	175	16	47	43.9	191	44.9	4,935	29.5	21,045	17.2
Influenza A:	174	16	47	100	190	99.5	4,851	98.3	20,375	96.8
A(2009 H1N1)	171	16	46	97.9	187	98.4	3,273	67.5	12,159	59.7
A(Sub-typing not performed)	0	0	0	0.0	0	0.0	1,500	30.9	7,768	38.1
A(H3)	3	0	1	2.1	3	1.6	78	1.6	448	2.2
Influenza B:	1	0	0	0.0	1	0.5	84	1.7	669	3.2

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

For week 1, Nevada reported regional activity to CDC, along with 12 states and territories (Arizona, Florida, Guam, Iowa, Maryland, Michigan, Mississippi, New Jersey, New Mexico, South Carolina, Tennessee, and West Virginia,). Activity level¹ 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

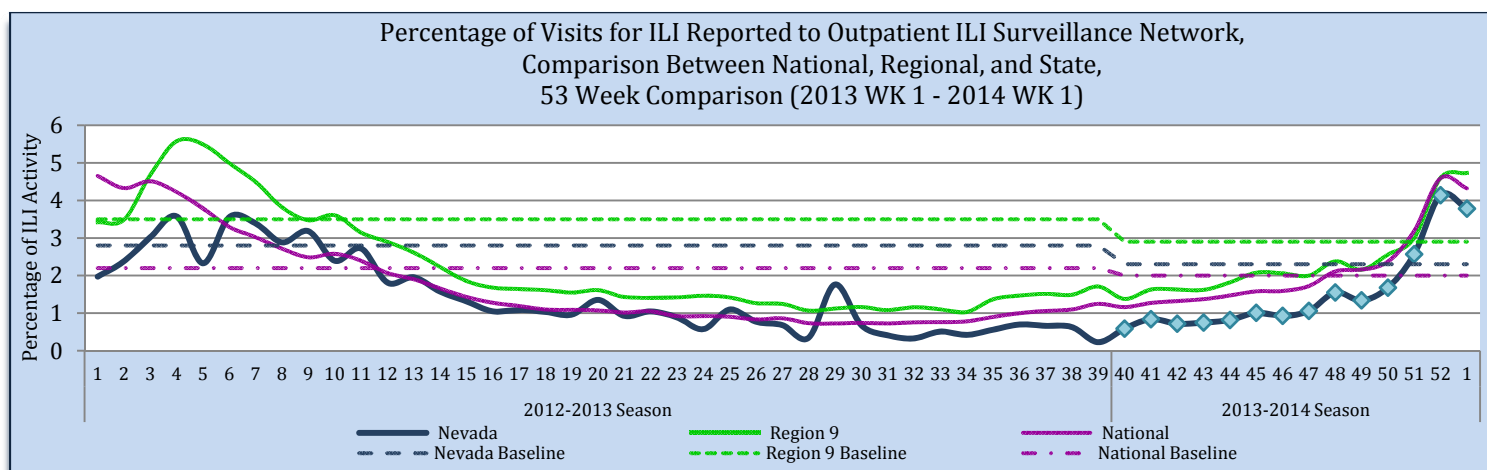
Source of Maps: CDC: FluView Report.

Influenza-like Illness (ILI) Network Surveillance has each sentinel providers report the number of patients that meet the ILI case definition² and number of patients that visit the provider weekly, which increased from 15,190 (week 52) to 17,009 (week 1). 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 3.8% during week 1, and is above the state baseline of 2.3%. Region 9 increased in ILI to 4.7% from 4.6%, and includes the following states/territories: Arizona, California, Guam, Hawaii, and Nevada. The nation decreased to 4.3% from 4.6% during week 1.

1: Activity level: Appendix Table 4.

2: ILI case definition: Technical Notes.

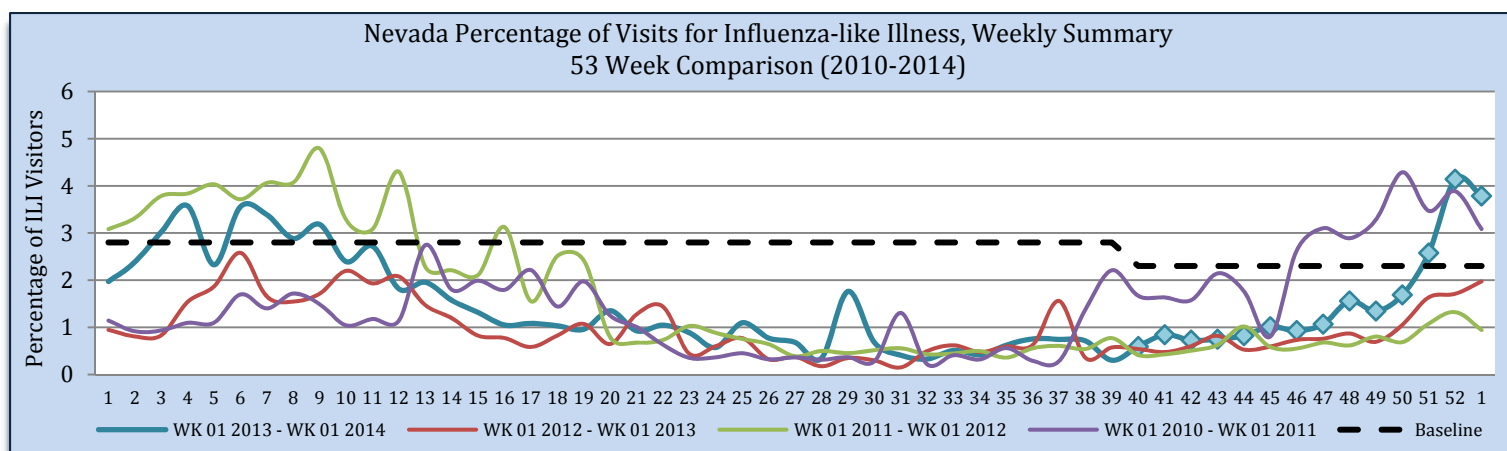
Figure 4



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

During week 1, 3.8% of visits to sentinel providers were due to ILI. This is a 1.8% point increase from week 1 of the 2012-2013 influenza season.

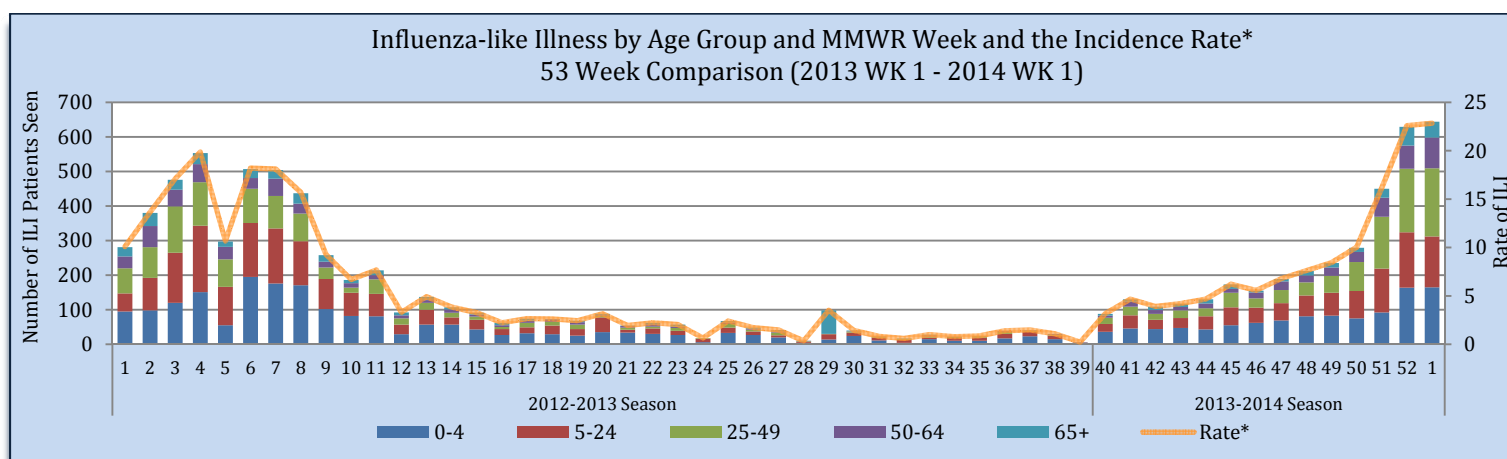
Figure 5



Source of Data: CDC: ILINet.

The number of ILI patients and rate remained steady from week 52 to week 1, from 629 to 644, and 22.6 to 22.8 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.

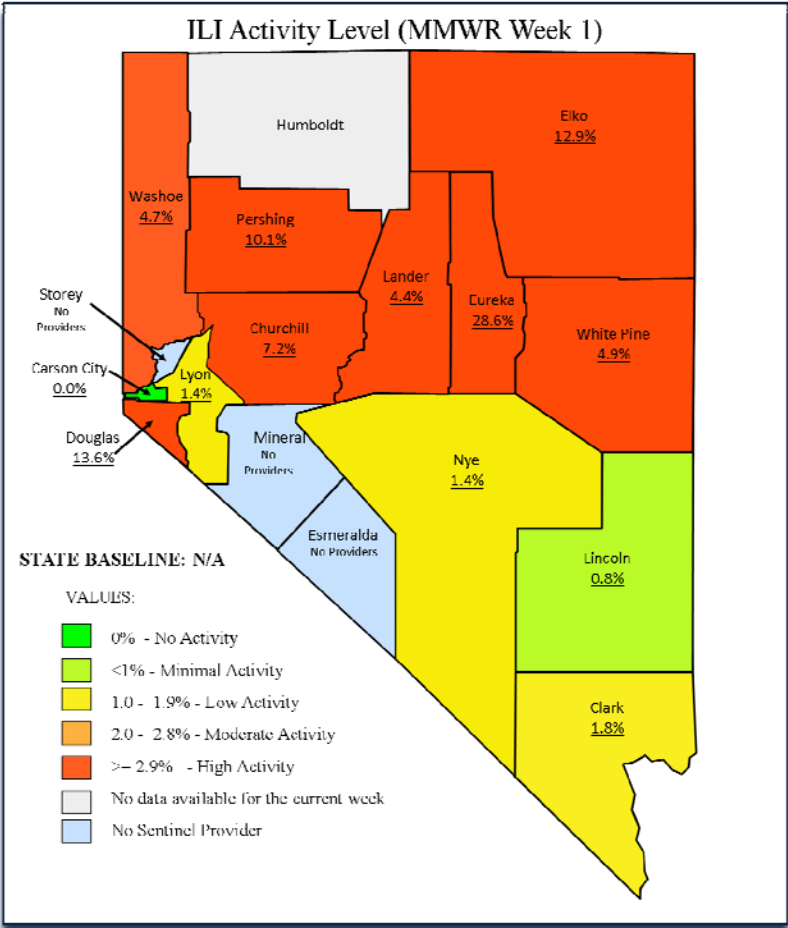
Figure 6



Source of Data: CDC: ILINet.

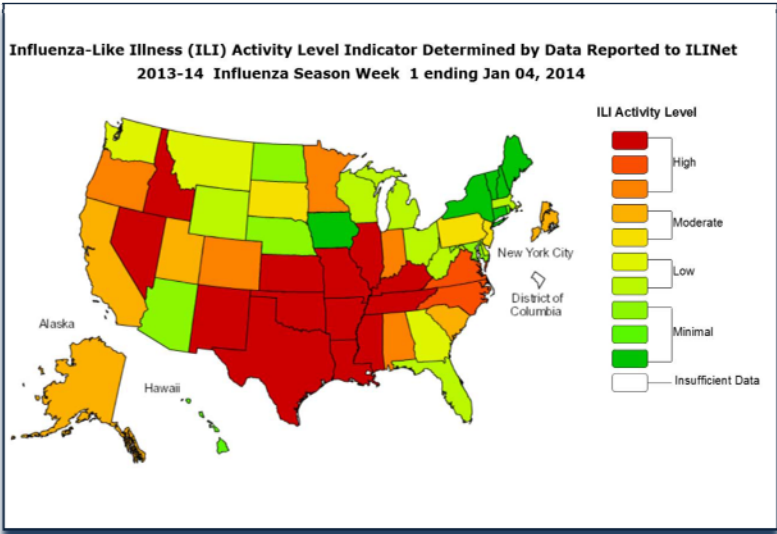
Providers for the sentinel surveillance are grouped by county, then the percent is calculated by ILI visits and total patient visits. During week 1, Churchill, Douglas, Elko, Eureka, Lander, Pershing, Washoe and White Pine counties had high activity; Humboldt County did not report for week 1 (Figure 7). Overall, Nevada had high activity monitored through ILINet (Figure 8).

Figure 7



Source of Data: CDC: ILINet.

Figure 8

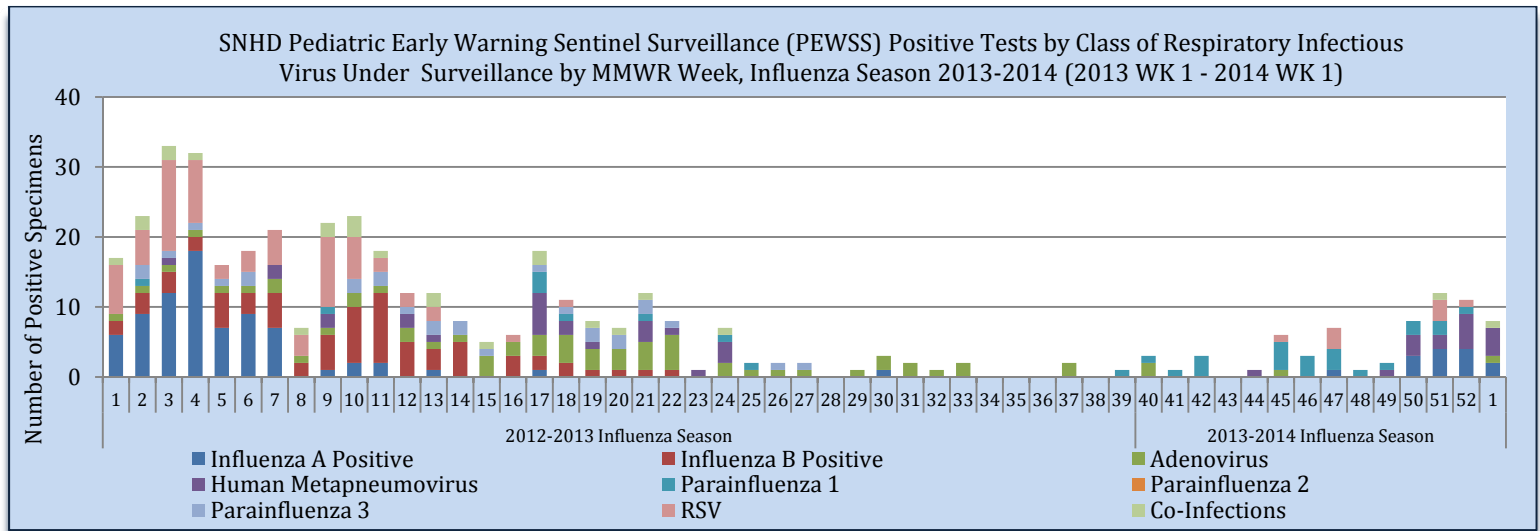


Source of Map: CDC: FluView Report.

Pediatric Early Warning Sentinel Surveillance (PEWSS)

Respiratory Syncytial Virus (RSV) has been detected at sporadic levels; Influenza A 2009 H1N1, Human Metapneumovirus and Parainfluenza 1 is at low levels for week 1.

Figure 9

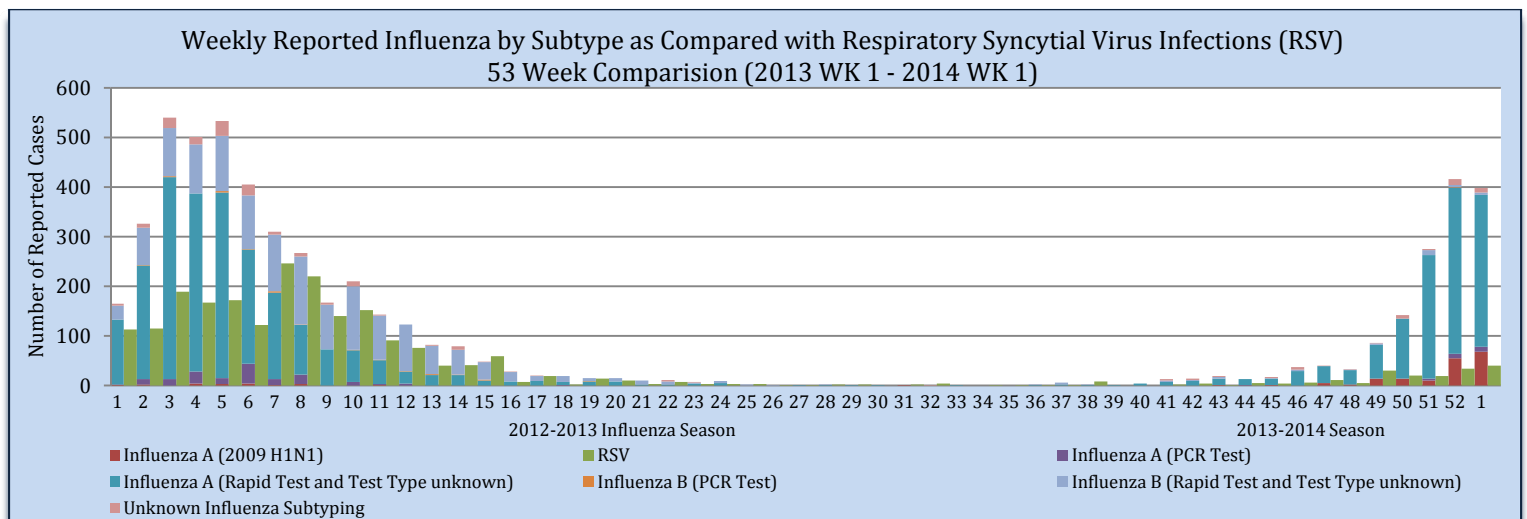


Source of Data: Southern Nevada Health District: PEWSS.

Influenza Positive Surveillance (NBS and NETSS)

Positive cases of influenza are reported to the state health division for surveillance purposes. Figure 10 and 11 reflect 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 1, there were 68 H1N1 cases and 316 Influenza A cases. There were 5 positive Influenza B cases. Overall, there were 398 influenza positive tests in Nevada, whereas during the previous season for week 1, there were 165 cases.

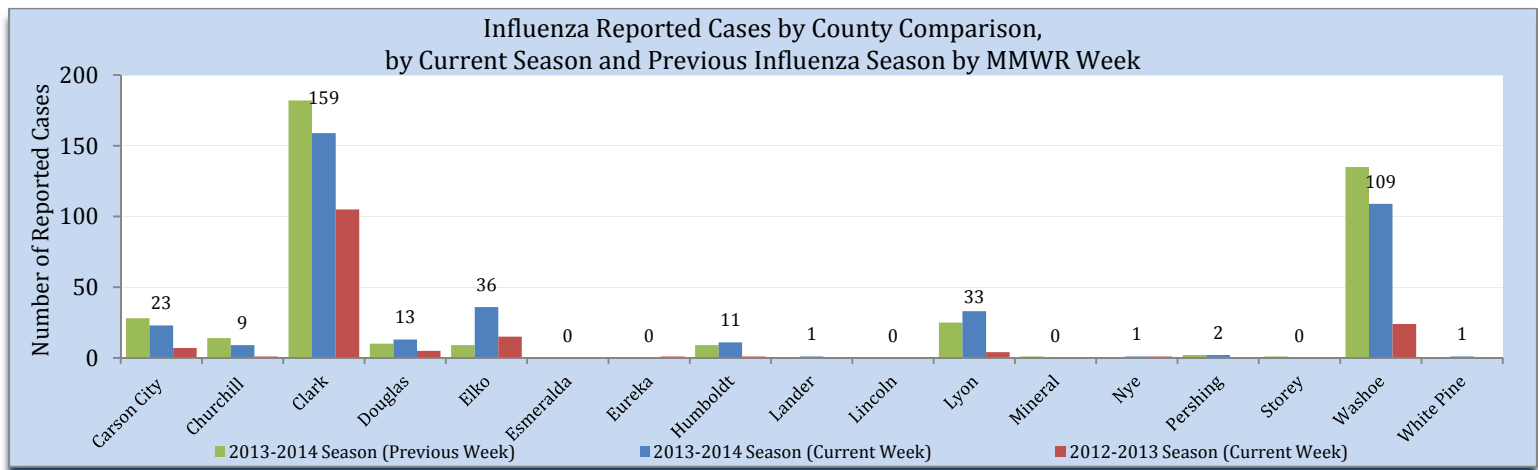
Figure 10



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

Clark County experienced a decrease in influenza from week 52 with 182 to 159 influenza cases during week 1. Washoe County experienced a decrease in influenza from week 52, from 135 to 109 influenza cases. Carson City, Churchill, Douglas, Elko, Humboldt, Lander, Lyon, Nye, Pershing, and White Pine counties all had influenza detected during week 1.

Figure 11



Source: OPHIE: NBS and SNHD: NETSS.

Hospitalizations

There have been 131 hospitalizations associated with influenza this season.

Table 2

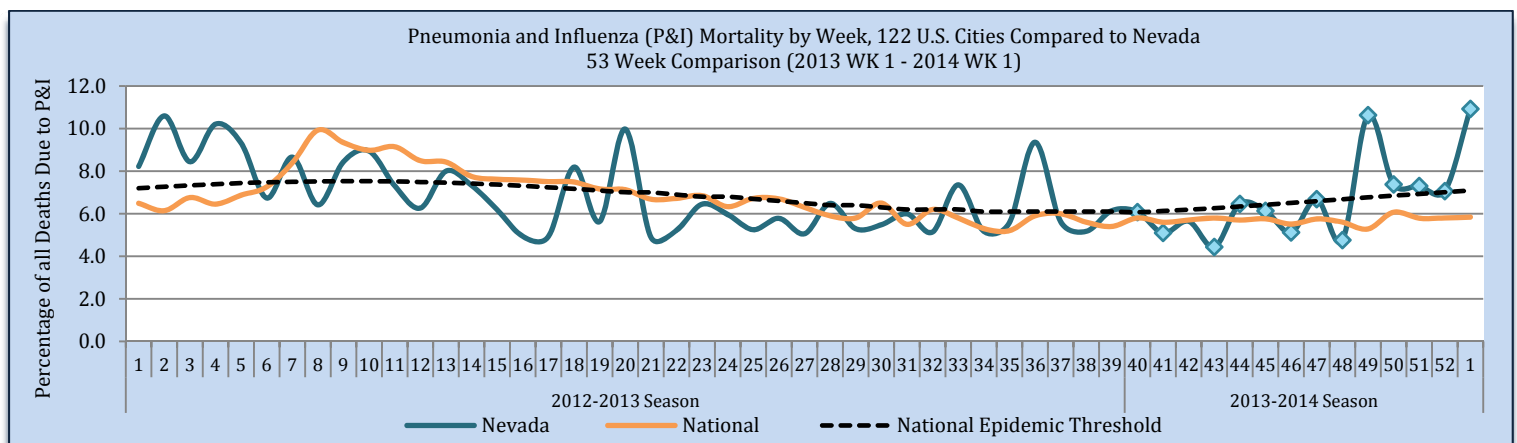
Reporting Jurisdiction	Influenza Hospitalizations			
	Current Week (Week 1)		Cumulative Influenza Season	
	#	%	#	%
Carson City Health and Human Services	10	22.7	17	13.0
Rural Health Services	0	0.0	3	2.3
Southern Nevada Health District	20	45.5	71	54.2
Washoe County Health District	14	31.8	40	30.5
State of Nevada	44	100	131	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 46 P&I deaths and 421 total deaths for week 1, as of February 18. The P&I mortality percentage is above the national epidemic threshold at 10.9%, (threshold 7.1%). Nationally, the P&I mortality is below the threshold at 6.8%.

Figure 12



Source: OVR: WEVRRS and CDC: FluView.

Appendix

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

Table 3

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°F 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. 2003-2012 ASRHO Estimates and Projections. Division of Public and Behavioral Health edition. Vintage 2012.
3. OPHIE. DPBH. NBS. 2010-2013. Accessed February 2014.
4. Office of Vital Records (OVR). DPBH. Web Enabled Vital Records Registry System (WEVRRS) [unpublished data]. 2012-2013. Accessed February 2014.
5. Southern Nevada Health District (SNHD). NETSS/Trisano. 2010-2013. Accessed February 2014.

6. SNHD. Pediatric Early Warning Sentinel Surveillance (PEWSS). 2013 PEWSS Reports. February 2014.
<http://www.southernnevadahealthdistrict.org/stats-reports/influenza.php>.

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