

Influenza Weekly Report

2013 Week 02 (January 6 – 12) through 2014 Week 02 (January 5 - 11)

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.

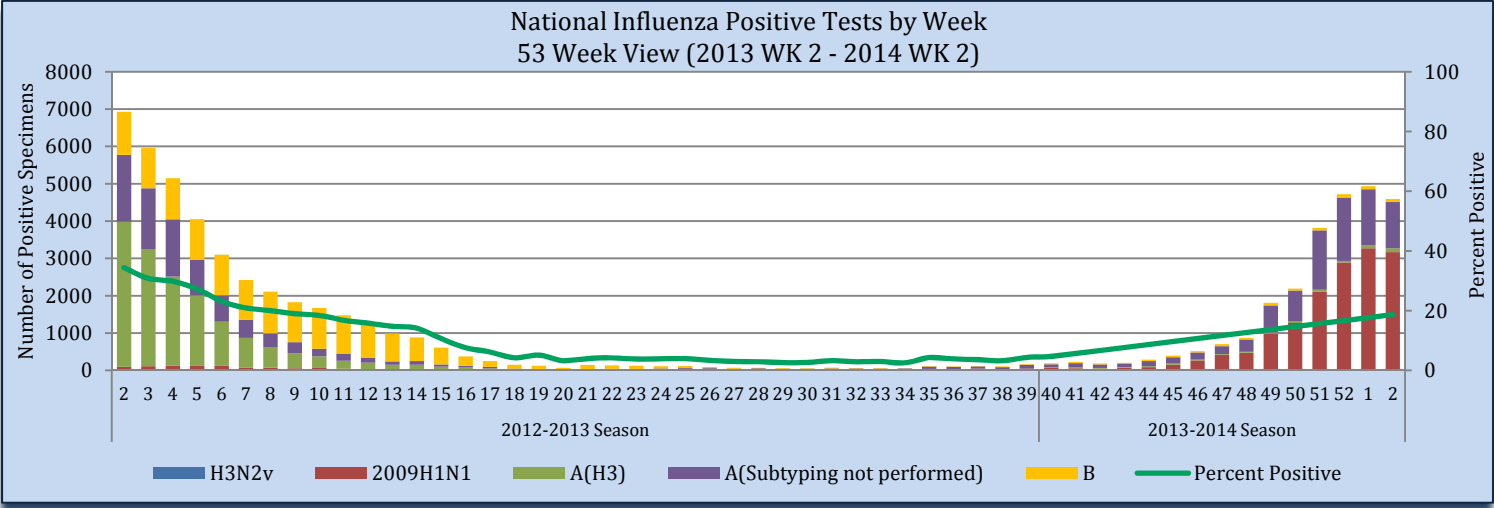
Purpose

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. Of the 16,727 specimens collected nationally during week 2 that were tested for influenza; of these 4,592 tested positive or the percent positive was 18.7%.

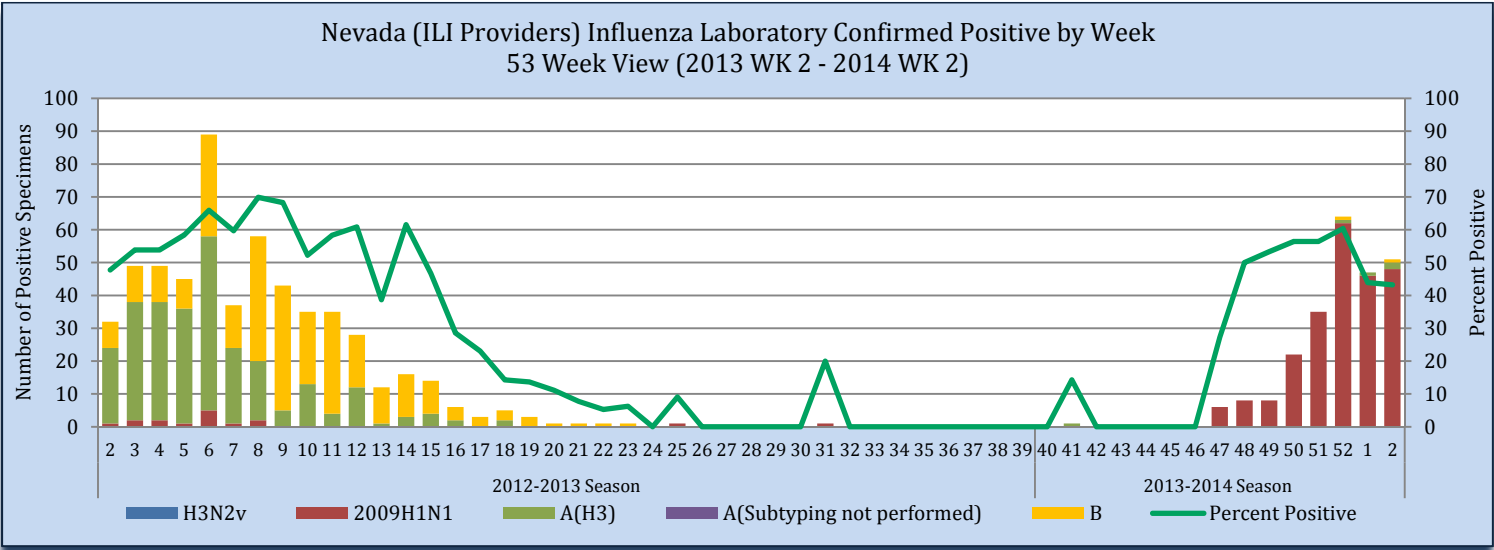
Figure 1



Source of Data: CDC: FluView Weekly Report.

Of the 118 specimens tested for influenza at both the Nevada State Public Health Laboratory and Southern Nevada Public Health Laboratory, 51 were positive with influenza during week 2 or 43.2% of the specimens tested were positive, this is the percent positive.

Figure 2



Source of Data: CDC: ILINet.

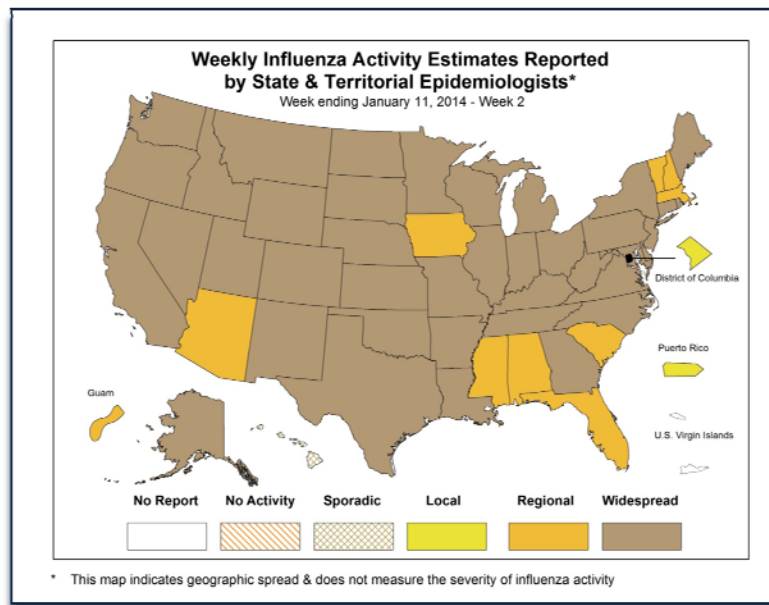
Nevada State Public Health Laboratory (NSPHL) has tested 381 specimens this season with 220 positive from sentinel providers (57.7% positive). Southern Nevada Public Health Laboratory (SNPHL) has reported 22 positive influenza specimens through the Pediatric Early Warning Sentinel Surveillance (PEWSS). Nationally, there have been 138,955 specimens sent to the WHO and NERVSS laboratories with 25,637 positive or 18.4%. The nation 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 2)		State of Nevada (Season)		National (Week 2)		National (Season)	
			#	%	#	%	#	%	#	%
Specimens Tested	381	162	118		543		16,727		138,955	
Positives to Influenza	220	22	51	43.2	242	44.6	4,592	27.5	25,637	18.4
Influenza A:	218	22	50	98.0	240	99.2	4,510	98.2	24,885	97.1
A(2009 H1N1)	214	21	48	96.0	235	97.9	3,167	70.2	15,326	61.6
A(Sub-typing not performed)	0	0	0	0.0	0	0.0	1,240	27.5	9,008	36.2
A(H3)	4	1	2	4.0	5	2.1	103	2.3	551	2.2
Influenza B:	2	0	1	2.0	2	0.8	82	1.8	751	2.9

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

For week 2, Nevada reported widespread activity to CDC, along with 39 states (Alaska, Arkansas, California, Colorado, Connecticut, Delaware, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming). Activity level¹ is derived from data analyzed from ILI surveillance (laboratory and sentinel data), and data reported to the state through NBS/NETSS.

Figure 3

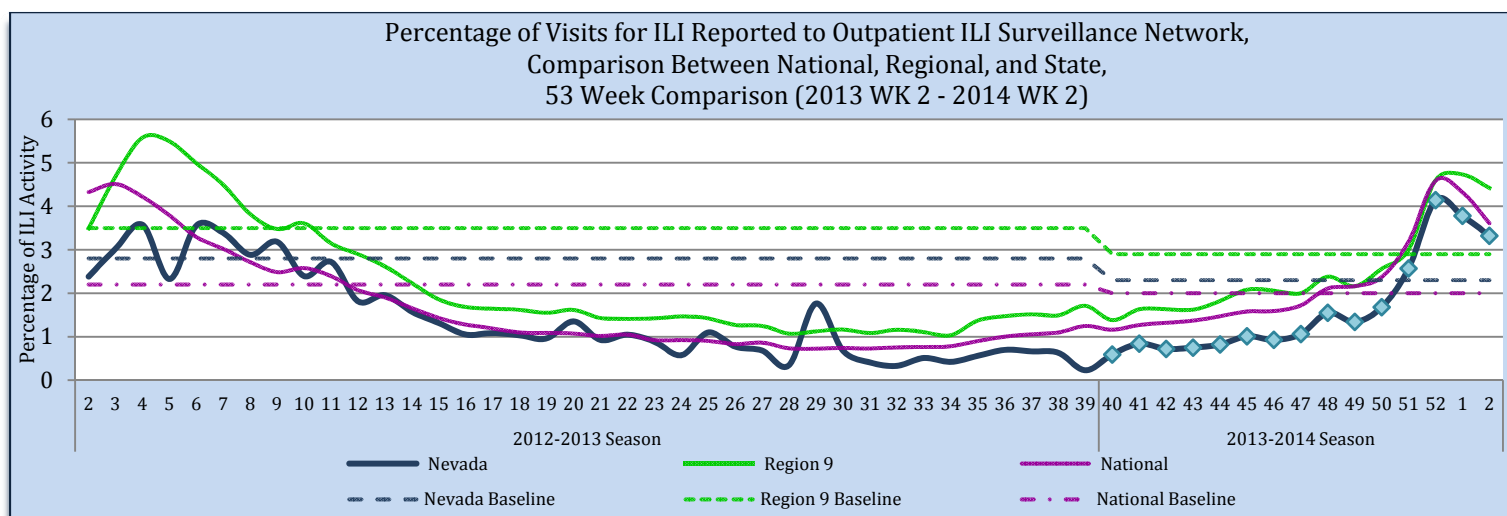
Source of Maps: CDC: FluView Report.

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 17,009 (week 1) to 18,758 (week 2). 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 3.3% during week 2, and is above the state baseline of 2.3%. Region 9 decreased in ILI to 4.4% from 4.7%, and includes the following states/territories: Arizona, California, Guam, Hawaii, and Nevada. The nation decreased to 3.6% from 4.3% during week 2.

1: Activity level: Appendix Table 4.

2: ILI case definition: Technical Notes.

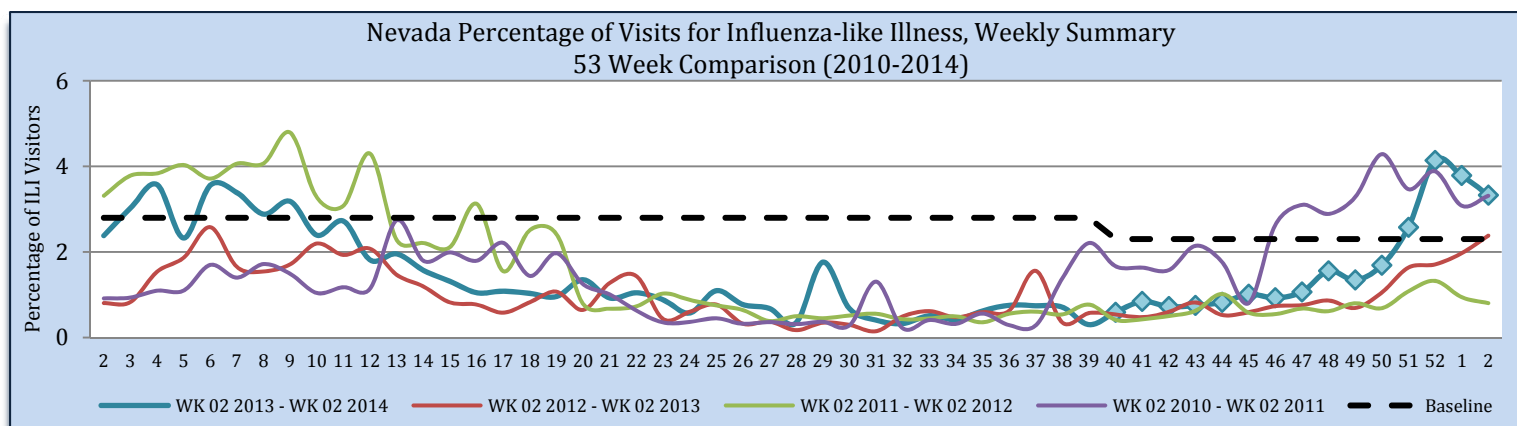
Figure 4



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

During week 2, 3.3% of visits to sentinel providers were due to ILI. This is a 0.9% point increase from week 2 of the 2012-2013 influenza season.

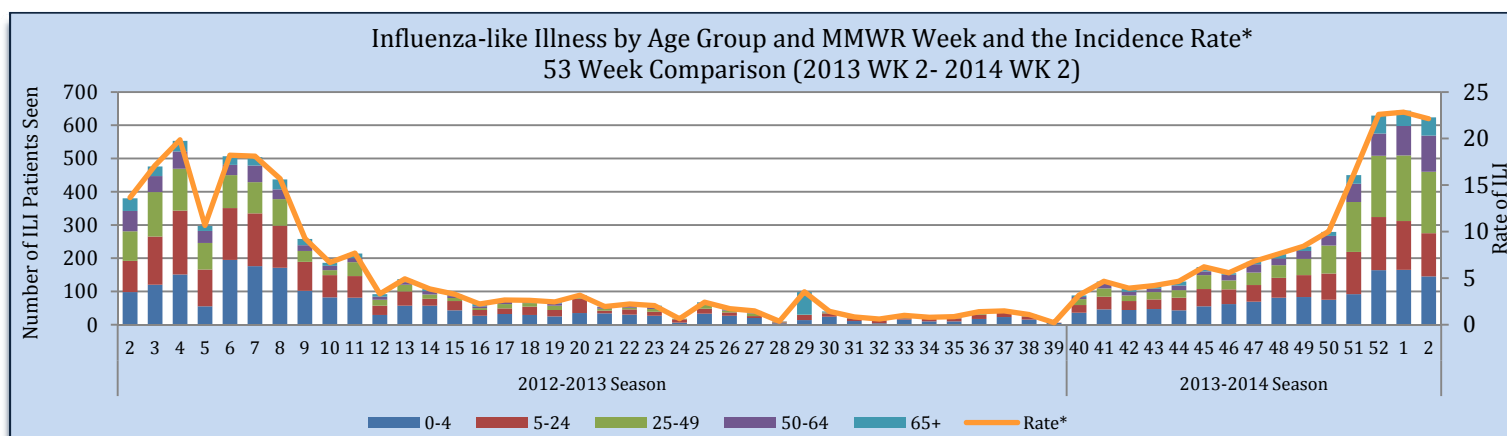
Figure 5



Source of Data: CDC: ILINet.

The number of ILI patients and rate decreased from week 1 to week 2, from 644 to 624, and 22.8 to 22.1 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.

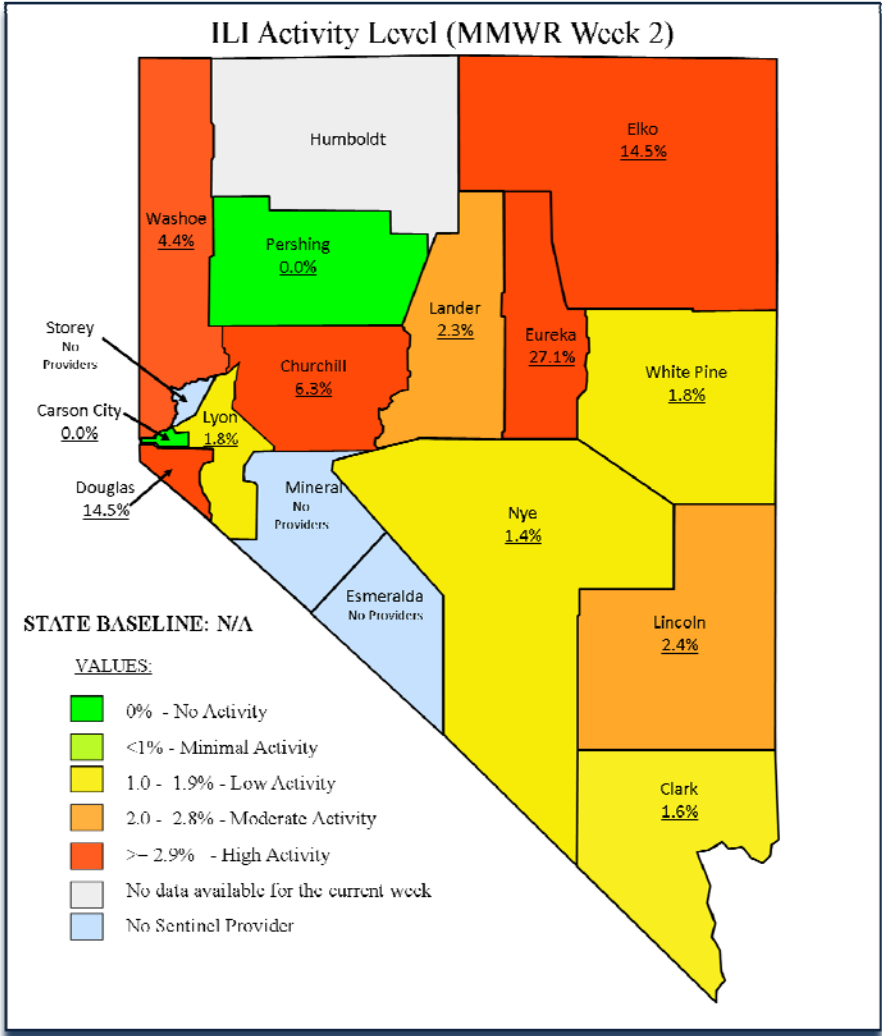
Figure 6



Source of Data: CDC: ILINet.

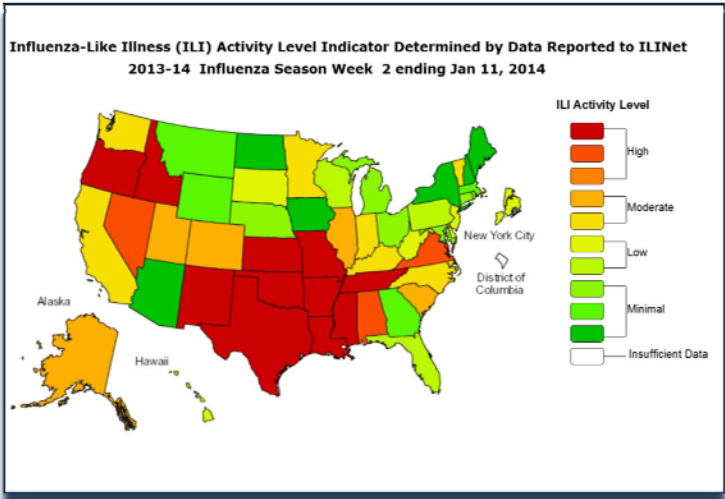
Providers for the sentinel surveillance are grouped by county, then the percent is calculated by ILI visits and total patient visits. During week 2, Churchill, Douglas, Elko, Eureka, and Washoe counties had high activity; Lander, and Lincoln counties had moderate activity; Humboldt County did not report for week 2 (Figure 7). Overall, Nevada had high activity monitored through ILINet (Figure 8).

Figure 7



Source of Data: CDC: ILINet.

Figure 8



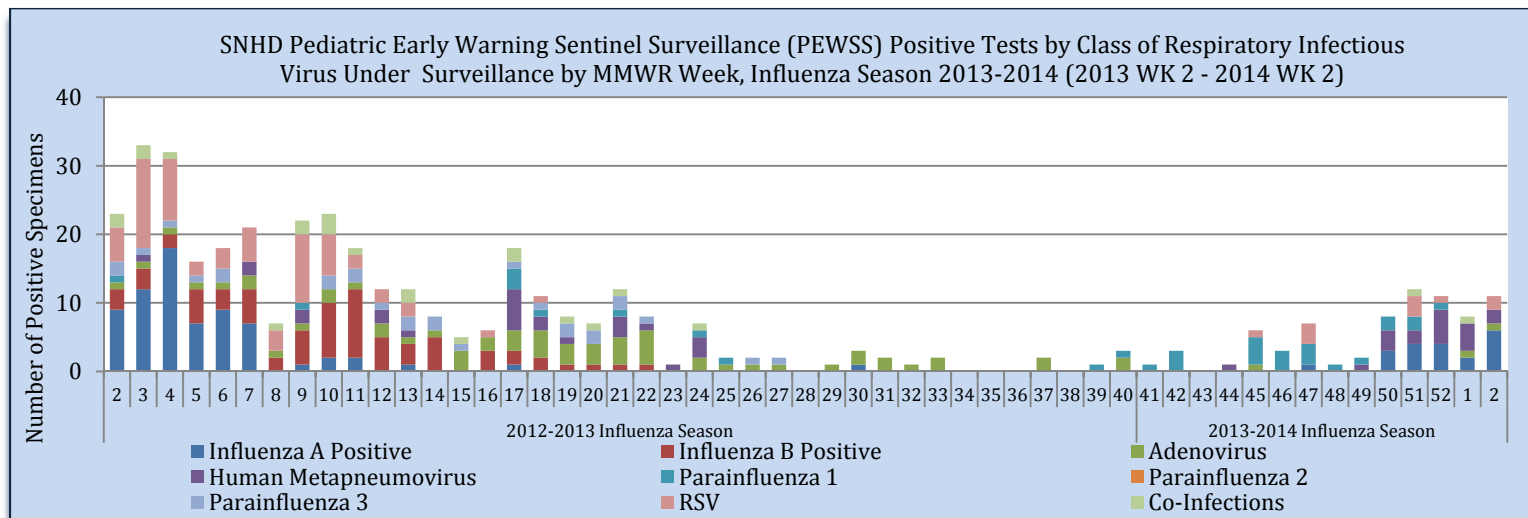
Source of Map: CDC: FluView Report.

Pediatric Early Warning Sentinel Surveillance (PEWSS)

The PEWSS program is a Southern Nevada Health District surveillance program that monitors the level of respiratory virus activity within the community. Sample collection and testing is performed year round and provides a weekly snapshot of respiratory viruses circulating. Five pediatric clinics participate by collecting samples from children who present with ILI. Figure 9 reflects counts from the PEWSS weekly snapshots.

Adenovirus, Parainfluenza 1, Respiratory Syncytial Virus (RSV) has been detected at sporadic levels; Influenza A 2009 H1N1, and Human Metapneumovirus and Parainfluenza1 is at high levels for week 2.

Figure 9

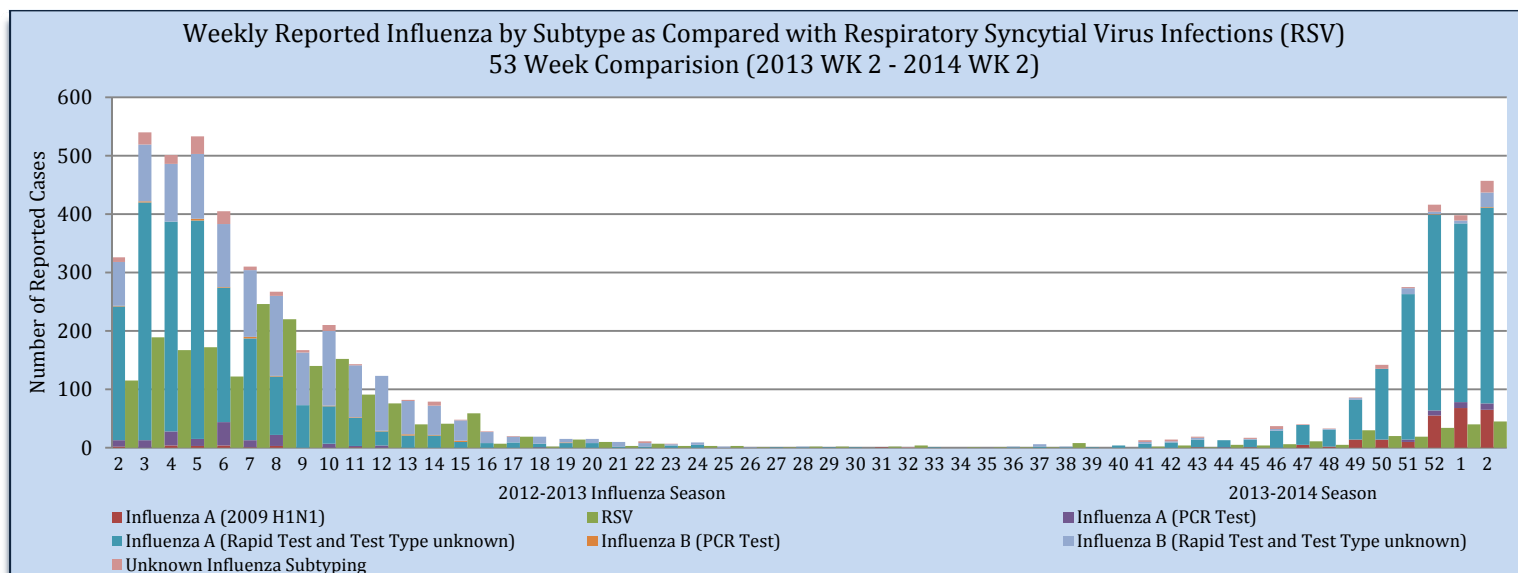


Source of Data: Southern Nevada Health District: PEWSS.

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 2, there were 65 H1N1 cases and 346 Influenza A cases. There were 26 positive Influenza B cases, during week 2. Overall, there were 457 influenza positive tests in Nevada, whereas during the previous season for week 2, there were 326 cases.

Figure 10



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

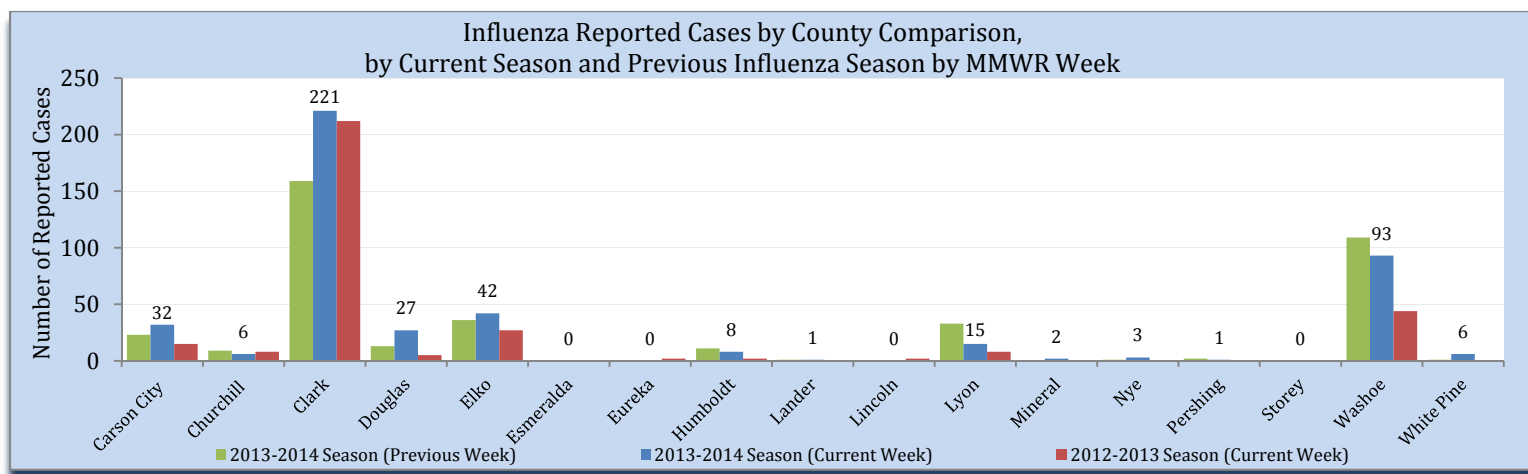
Table 2

Reporting Jurisdiction	Reported Influenza Cases by County Jurisdiction and Influenza Type									
	Current Week (Week 2)					Cumulative Influenza Season				
	H1N1	A	B	Unknown	Total	H1N1	A	B	Unknown	Total
Carson City Health and Human Services	0	72	2	0	74	7	240	4	4	255
Rural Health Services	8	32	11	18	69	43	142	17	25	227
Southern Nevada Health District	26	188	7	0	221	66	817	27	15	925
Washoe County Health District	31	54	6	2	93	131	389	17	20	557
State of Nevada	57	286	21	56	420	231	1,588	65	64	1,964

Source: OPHIE: NBS and SNHD: NETSS.

Clark County experienced an increase in influenza from week 1 with 159 to 221 influenza cases during week 2. Washoe County experienced a decrease in influenza from week 1, from 109 to 93 influenza cases. Carson City, Churchill, Douglas, Elko, Humboldt, Lander, Lyon, Mineral Nye, Pershing, and White Pine counties all had influenza detected during week 2.

Figure 11



Source: OPHIE: NBS and SNHD: NETSS.

Hospitalizations

There have been 197 hospitalizations associated with influenza this season.

Table 3

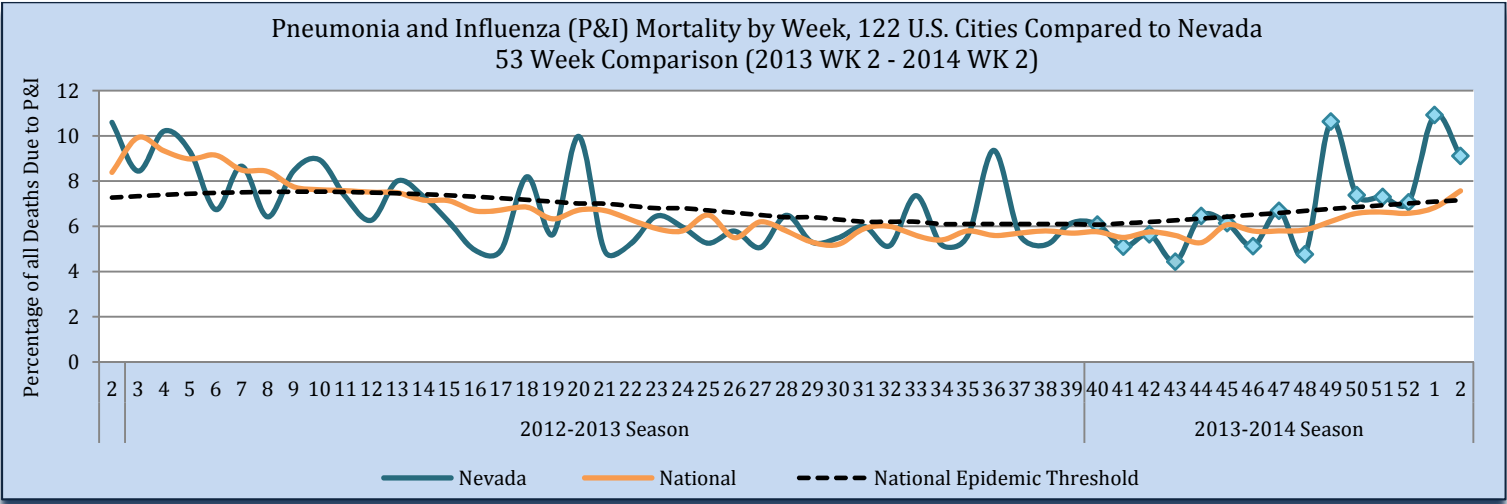
Reporting Jurisdiction	Influenza Hospitalizations			
	Current Week (Week 2)		Cumulative Influenza Season	
	#	%	#	%
Carson City Health and Human Services	1	1.5	18	9.1
Rural Health Services	1	1.5	4	2.0
Southern Nevada Health District	43	65.2	114	57.9
Washoe County Health District	21	31.8	61	31.0
State of Nevada	66	100	197	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 cause of death, by the total death in Nevada for during week 2. There were 34 P&I death and 373 total deaths for week 2, as of February 18. The P&I mortality percentage is above the national epidemic threshold at 9.1%, (threshold 7.5%). Nationally, the P&I mortality is below the epidemic threshold at 6.8%.

Figure 12



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°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>.

Comments, suggestions, and requests for further information may be addressed to:

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