Influenza Weekly Report

2013 Week 05 (January 27 – February 2) through 2014 Week 05 (January 26 – February 1)

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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.

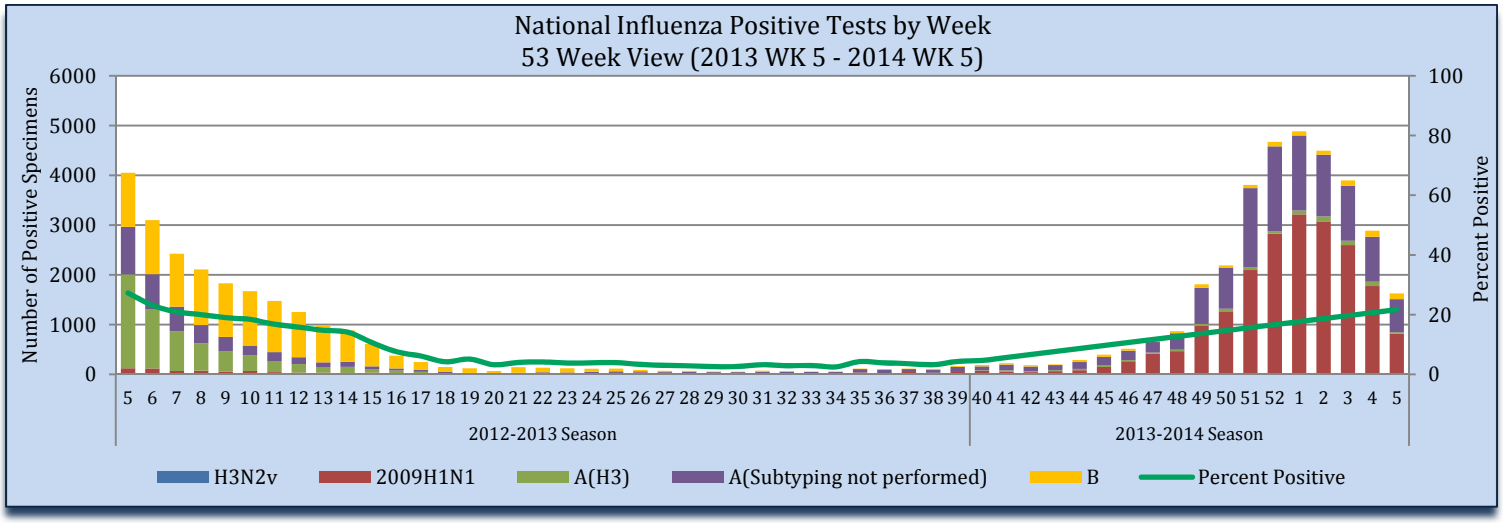
Purpose

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 8,282 specimens collected nationally during week 5 that were tested for influenza; of these 1,626 tested positive for influenza or the percent positive was 21.7%.

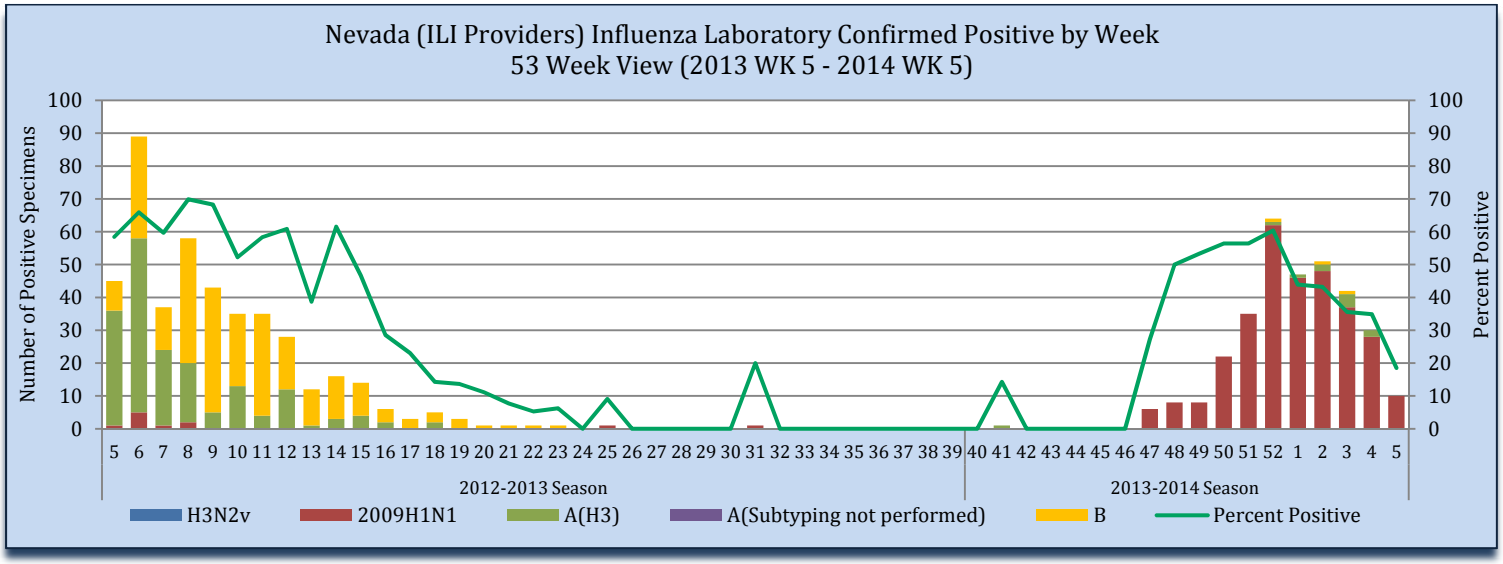
Figure 1



Source of Data: CDC: FluView Weekly Report.

Of the 54 specimens tested for influenza at both the Nevada State Public Health Laboratory and Southern Nevada Public Health Laboratory for sentinel providers, 10 were positive with influenza during week 5 or 18.5%.

Figure 2



Source of Data: CDC: ILINet.

Nevada State Public Health Laboratory (NSPHL) has tested 611 specimens this season with 290 positive from sentinel providers (47.5% positive). Southern Nevada Public Health Laboratory (SNPHL) has reported 34 positive influenza specimens through the Pediatric Early Warning Sentinel Surveillance (PEWSS). The state of Nevada data in table 1 is reflected in figure 2. Nationally, there have been 174,683 specimens sent to the WHO and NERVSS laboratories with 33,841 positive or 19.4%. The national numbers in table 1 are reflected in figure 1.

Table 1

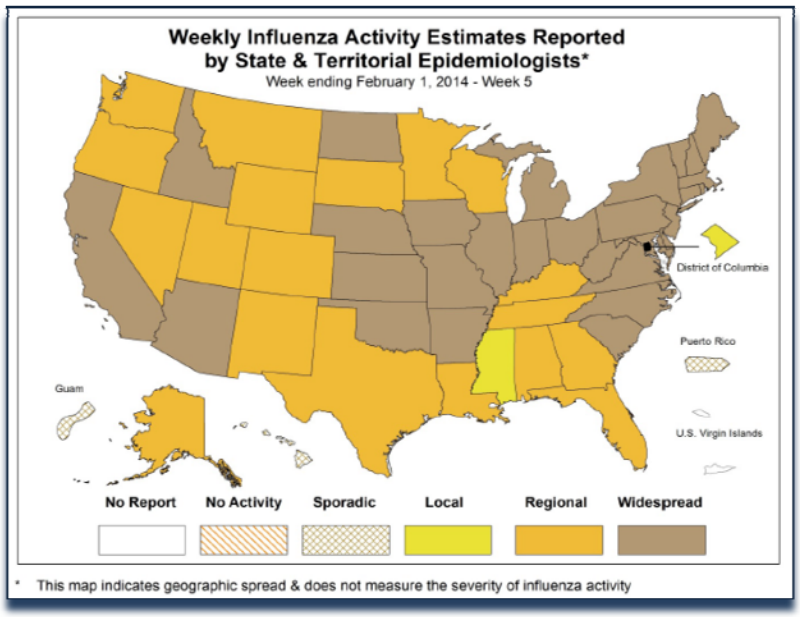
ILINet Surveillance: Influenza Specimens Tested State and Nationally

	NSPHL	SNPHL	State of Nevada (Week 5)		State of Nevada (Season)		National (Week 5)		National (Season)	
			#	%	#	%	#	%	#	%
Specimens Tested	611	190	54		801		8,288		174,683	
Positives to Influenza	290	34	10	18.5	324	40.4	1,626	19.6	33,841	19.4
Influenza A:	288	33	10	100	321	99.1	1,511	92.9	32,742	96.8
A(2009 H1N1)	278	32	10	100	310	96.6	816	54.0	20,270	61.9
A(Sub-typing not performed)	0	0	0	0.0	0	0.0	664	43.9	11,719	35.8
A(H3)	10	1	0	0.0	11	3.4	31	2.1	753	2.3
Influenza B:	2	1	0	0.0	1	0.9	115	7.1	1,098	3.2

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

For week 5, Nevada reported regional activity to the CDC, along with 18 states (Alabama, Alaska, Colorado, Florida, Georgia, Kentucky, Louisiana, Minnesota, Montana, New Mexico, Oregon, South Dakota, Tennessee, Texas, Utah, 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



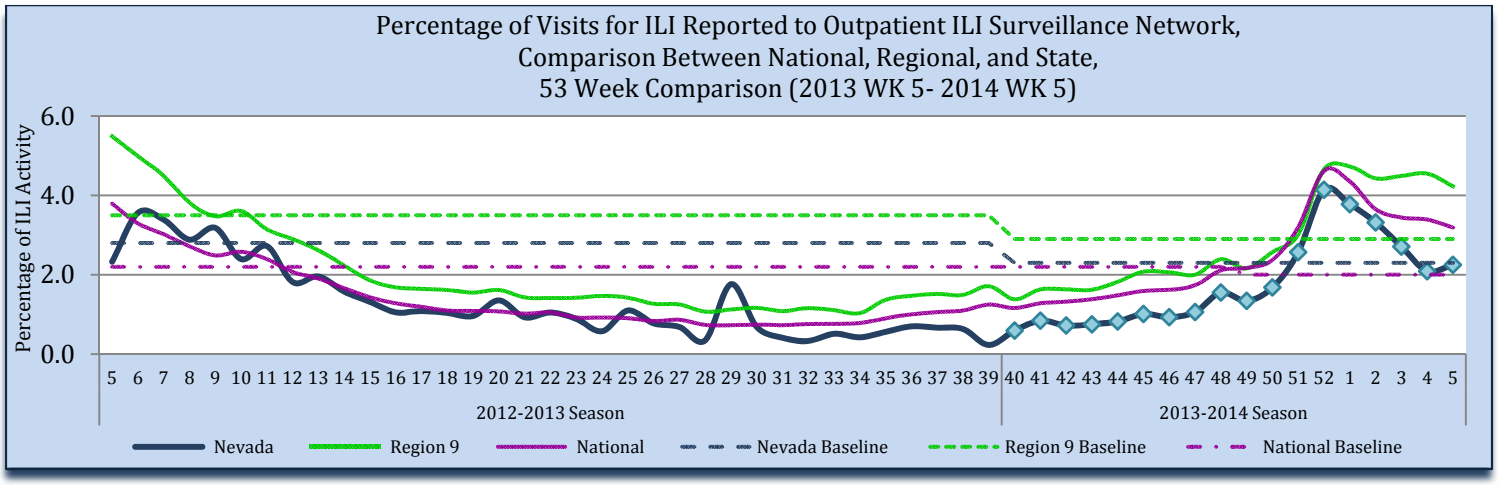
Source of Maps: CDC: FluView Report.

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 from 17,131 (week 4) to 17,408 (week 5). 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 increased to 2.3% during week 5, and is at the state baseline of 2.3%. Region 9 decreased in ILI to 4.2% from 4.6%, and includes the following states/territories: Arizona, California, Guam, Hawaii, and Nevada. The nation decreased from 3.4% to 3.2% during week 5.

1: Activity level: Appendix Table 4.

2: ILI case definition: Technical Notes.

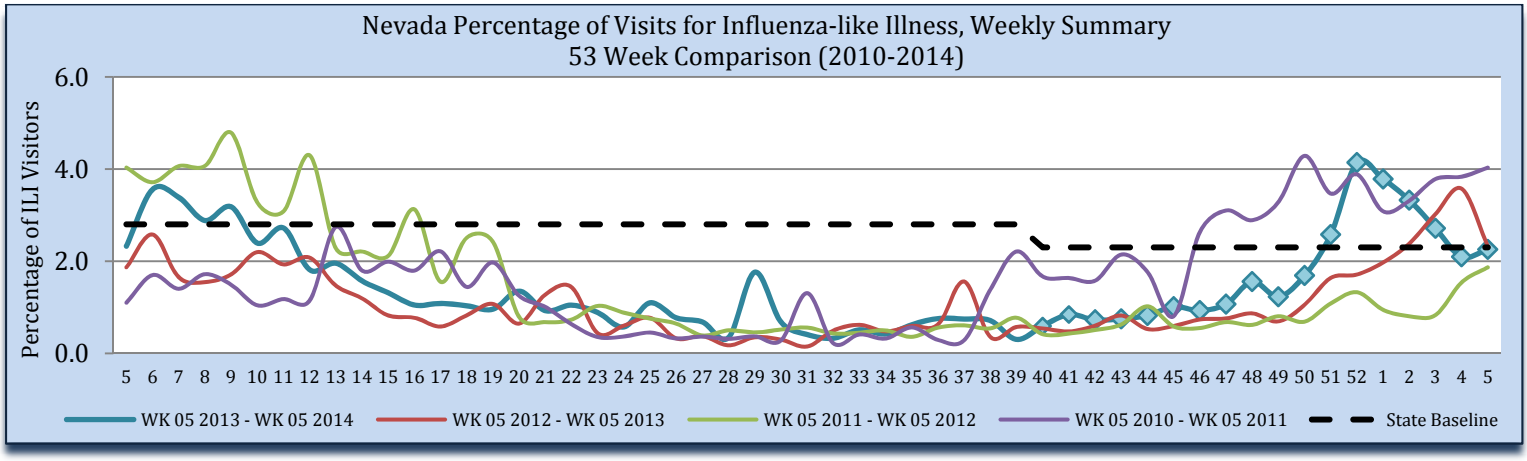
Figure 4



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

During week 5, 2.3% of patient visits in Nevada to sentinel providers were due to ILI. This is a .1% percentage point decrease from week 5 of the 2012-2013 influenza season.

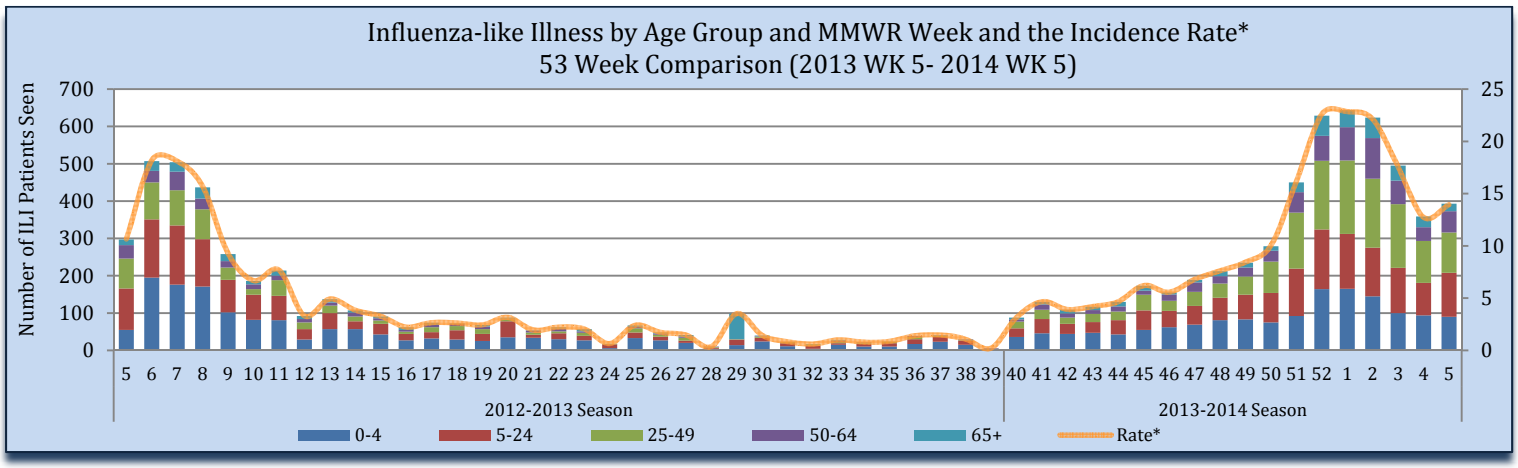
Figure 5



Source of Data: CDC: ILINet.

The count and rate increased from week 4 to week 5, from 359 to 393, and 12.8 to 13.9 per 100,000 population. The rate is calculated by the number of patients presented with ILI divided the state population by 100,000. The estimated state population for 2014 is 2,819,321.

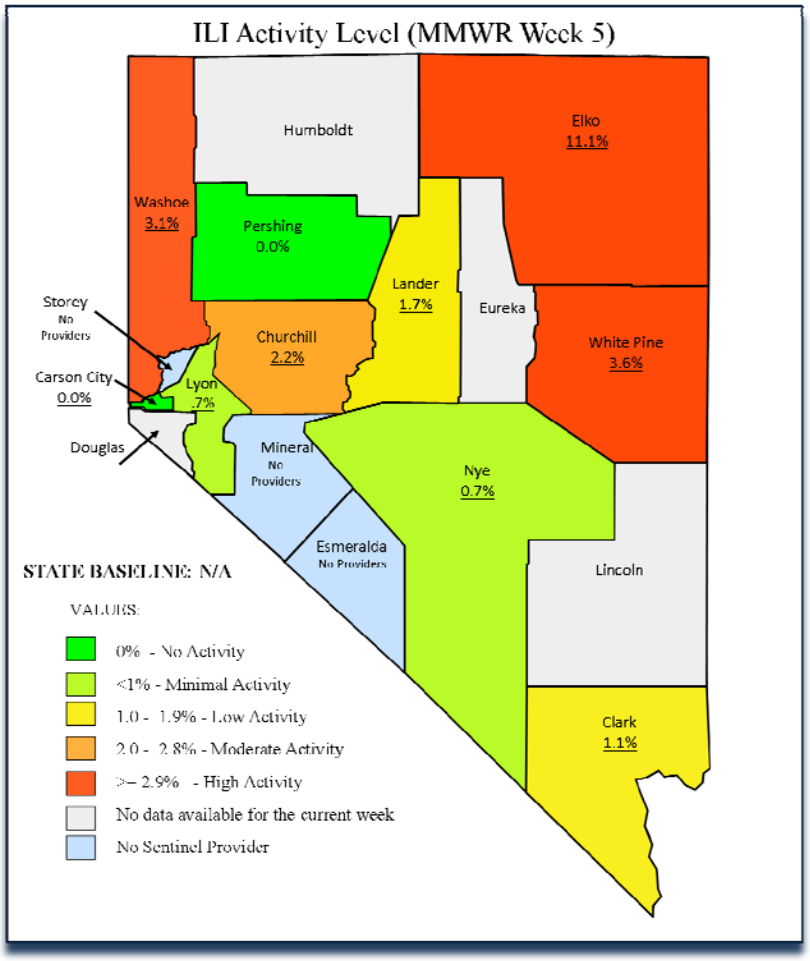
Figure 6



Source of Data: CDC: ILINet.

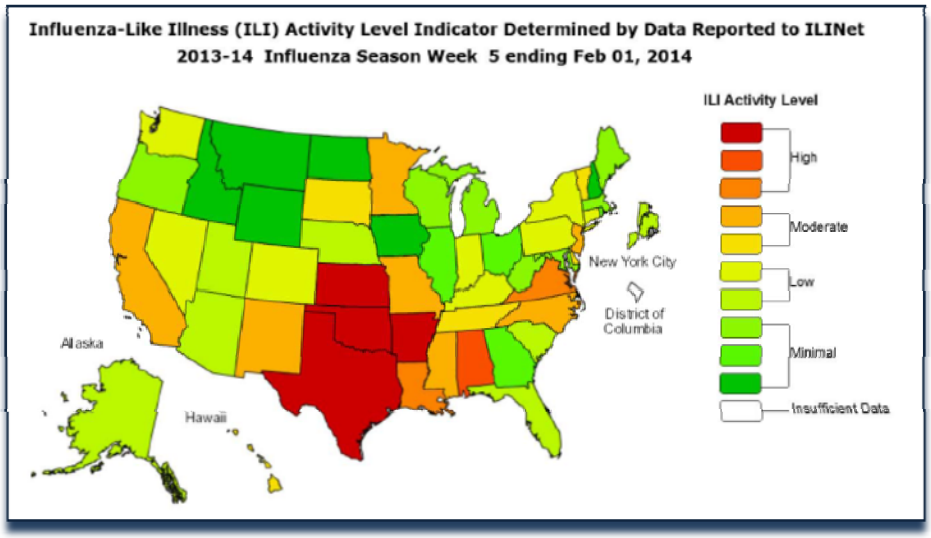
Providers for the sentinel surveillance are grouped by county, then the percent is calculated by ILI visits and total patient visits. During week 5, Elko, Washoe and White Pine counties had high activity; Churchill County had moderate activity; Douglas, Eureka, Humboldt, and Lincoln counties did not report for week 5 (Figure 7). Overall, Nevada had low activity monitored through ILINet (Figure 8).

Figure 7



Source of Data: CDC: ILINet.

Figure 8

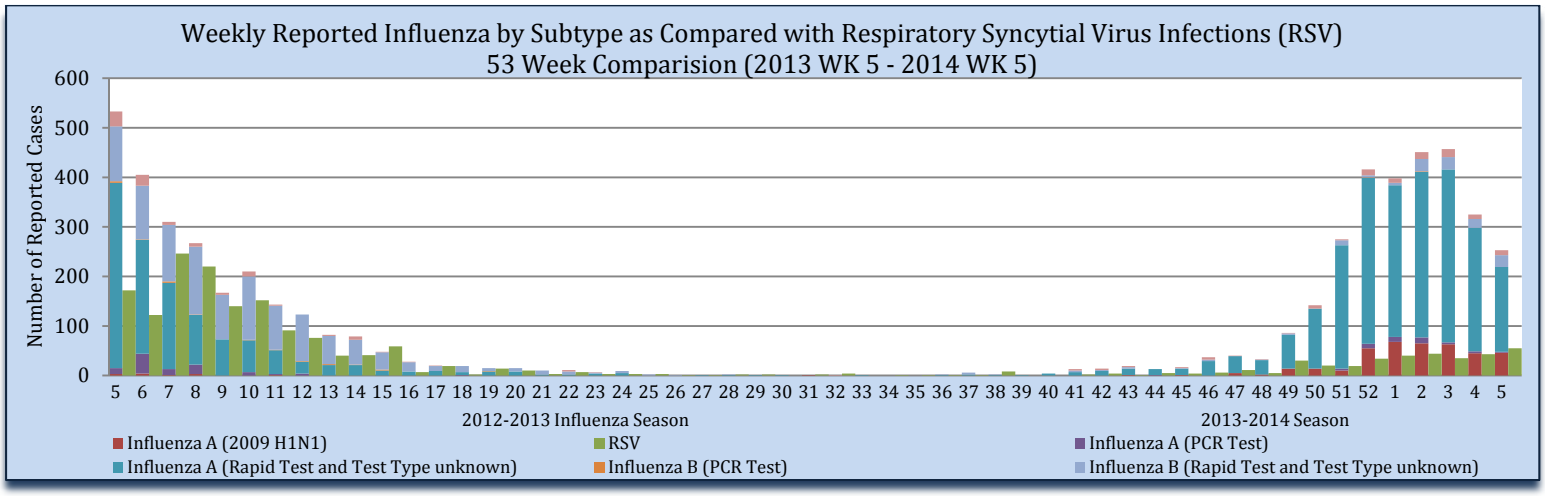


Source of Map: CDC: FluView Report.

Influenza Positive Surveillance (NBS and NETSS)

Positive cases of influenza are reported to the state health division for surveillance purposes. Figure 10 and 11 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 5, there were 46 H1N1 cases and 171 Influenza A cases with unknown sub typing. There were 24 positive Influenza B cases. Overall, there were 253 influenza positive tests in Nevada, whereas during the previous season for week 5, there were 533 cases.

Figure 9



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

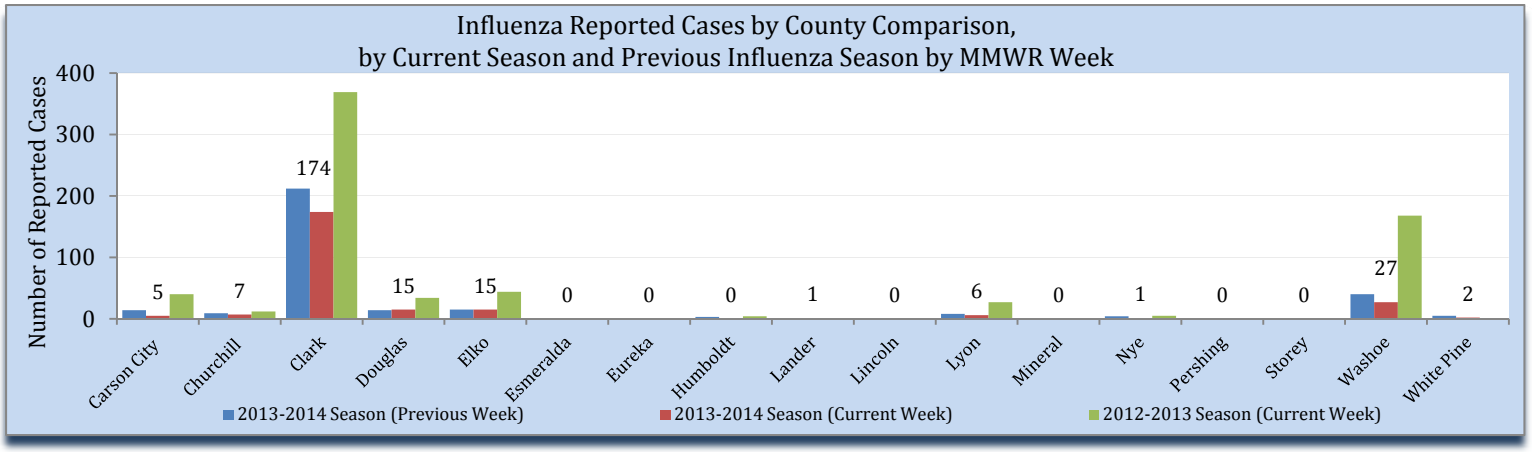
Table 2

Reporting Jurisdiction	Reported Influenza Cases by County Jurisdiction and Influenza Type									
	Current Week (Week 5)					Cumulative Influenza Season				
	H1N1	A	B	Unknown	Total	H1N1	A	B	Unknown	Total
Carson City Health and Human Services	3	17	4	2	26	15	338	12	15	380
Rural Health Services	12	11	3	0	26	85	213	24	26	348
Southern Nevada Health District	19	135	15	5	174	135	1,340	76	24	1,575
Washoe County Health District	13	10	2	2	27	177	466	20	27	690
State of Nevada	47	173	24	9	253	412	2,357	132	92	2993

Source: OPHIE: NBS and SNHD: NETSS.

Clark County experienced a decrease in influenza from week 4 with 212 to 174 influenza cases during week 5. Washoe County experienced a decrease in influenza from week 4, from 40 to 27 influenza cases. Carson City, Churchill, Douglas, Elko, Lander, Lyon, Nye, and White Pine counties all had influenza activity during week 5.

Figure 10



Source: OPHIE: NBS and SNHD: NETSS.

Hospitalizations

There have been 305 hospitalizations associated with influenza this season.

Table 3

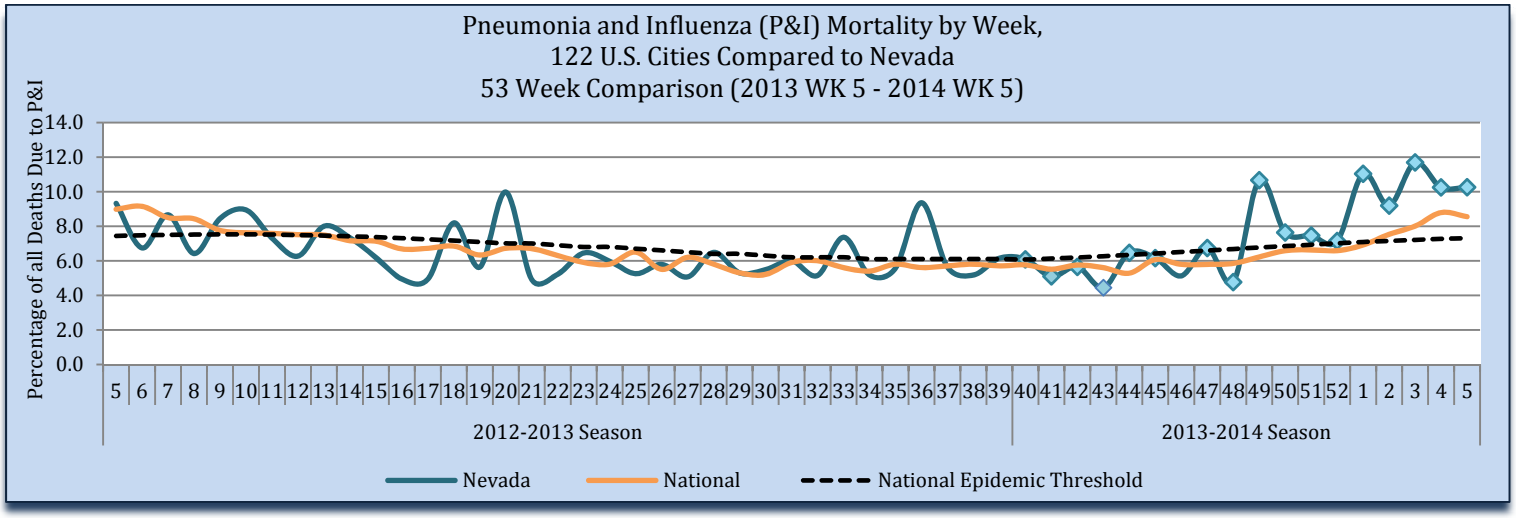
Influenza Hospitalizations				
Reporting Jurisdiction	Current Week (Week 5)		Cumulative Influenza Season	
	#	%	#	%
Carson City Health and Human Services	1	2.8	21	6.9
Rural Health Services	1	2.8	6	2.0
Southern Nevada Health District	26	72.2	200	65.6
Washoe County Health District	8	22.2	78	25.6
State of Nevada	36	100	305	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 32 P&I deaths and 312 total deaths for week 5, as of February 10. The P&I mortality percentage is above the national epidemic threshold at 10.3%, (threshold at 7.3%). Nationally, the P&I mortality has surpassed the national epidemic threshold at 8.6%.

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.
- Rapid influenza diagnostic tests - Rapid Test.
- Real-time reverse transcription polymerase chain reaction - rRT-PCR or PCR.

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.

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