

Update Number 1: October 20, 2009

Data for the Week Ending October 17, 2009

Update Overview

This is the first weekly "Influenza Surveillance Update" that the Southern Nevada Health District will be distributing over the course of the influenza season, to provide accurate, up-to-date, and useful surveillance information to healthcare providers and the public. The updates will be released each Tuesday through the Health Alert Network and the Health District's website.

Current Status

Circulation

Influenza activity throughout Southern Nevada increased in the past week. In addition to increased reporting of influenza by healthcare providers (Table 3.1) and increased numbers of patients reported to have been hospitalized for influenza (Figure 3.4 and Table 3.1), sentinel provider reports of patients seeking care for influenza-like illness (Figure 2.1) and school absenteeism increased. In addition, the positivity rate for influenza through pediatric laboratory surveillance has increased since the beginning of October (Figure 1.1 and Table 1.1). This is consistent with national trends, as all 10 geographic regions of the country are reporting elevated levels of influenza (Source: CDC FluView).

Severity

There is currently no evidence of increased severity of disease in Southern Nevada. Although the number of hospitalizations has increased (Figure 3.4), this is expected, as the overall infection rate in the community increased in October. An indicator of the severity of disease, the proportion of hospitalized patients requiring intensive care unit admission, has remained consistent at about one-third of patients since the beginning of the influenza season (Table 3.1). In addition, no deaths from influenza have been reported since the beginning of September (Figure 3.5).

Circulating Strains

Local and National laboratory surveillance indicates that nearly all reported cases of influenza are the result of 2009 Influenza A (H1N1). Local pediatric laboratory surveillance has identified no seasonal influenza A H1 or H3 infections and only one influenza B infection out of 125 sample tested since the beginning of influenza season (Figure 1.1 and Table 1.1). This is consistent with national surveillance (Figure 1.2 and Table 1.2).

Antiviral Resistance

The circulating strain of 2009 Influenza A (H1N1) continues to display sensitivity to oseltamivir and zanamivir and resistance to adamantanes. Although sporadic cases of oseltamivir-resistance have been identified in the United States, nearly all patients had documented treatment or prophylaxis with oseltamivir, and occasional development of oseltamivir resistance during treatment or prophylaxis is not unexpected (Source: CDC - <http://www.cdc.gov/flu/weekly/>).

Of Note...

SNHD Vaccination Clinics

The Southern Nevada Health District has received approximately 48,000 doses of Influenza A (H1N1) 2009 vaccine to date, including both live attenuated vaccine and inactivated vaccine. At this time, the vaccine is being made available to the CDC-recommended priority groups deemed most at-risk for severe illness or complications, including:

- Pregnant women
- People who live with or care for children younger than 6 months of age
- Health care and emergency medical services personnel with direct patient contact
- Children 6 months through 4 years of age
- Children 5 through 18 years of age who have chronic medical conditions

Information about vaccination clinics can be found on the health district's website at <http://www.southernnevadahealthdistrict.org/h1n1/vaccine.php>

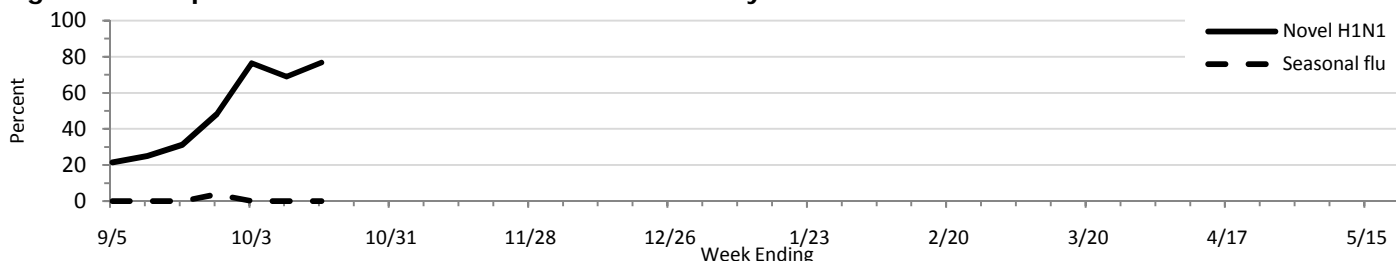
Influenza Vaccination Coverage, 2008-2009 Season, United States

The Centers for Disease Control and Prevention recently published findings of influenza vaccination coverage for the 2008-2009 influenza season, and found no significant increases in vaccination coverage over previous seasons. For children, reported coverage was found to be 40.9% for ages 6-23 months, 32.0% for 2-4 years, and 20.8% for 5-17 years. Among adults, reported coverage was 32.1% for persons aged 18-49 years with high-risk conditions, 42.3% for persons 50-64 years, and 67.2% for persons ≥65 years. State-specific results were not available in the publication. (*MMWR* 58(39);1091-1095)

Section One: Laboratory Surveillance

Enhanced pediatric influenza surveillance (EPIS) is conducted through four Clark County, NV medical practices. Each practice submits up to 10 specimens each week from pediatric patients presenting with respiratory disease and the specimens are tested for influenza and typed by RT-PCR. National surveillance is conducted through laboratories participating in the Center for Disease Control and Prevention (CDC) National Respiratory and Enteric Virus Surveillance System (NREVVSS) program.

Figure 1.1 Proportion of Influenza Viruses - Clark County Pediatric Influenza Surveillance



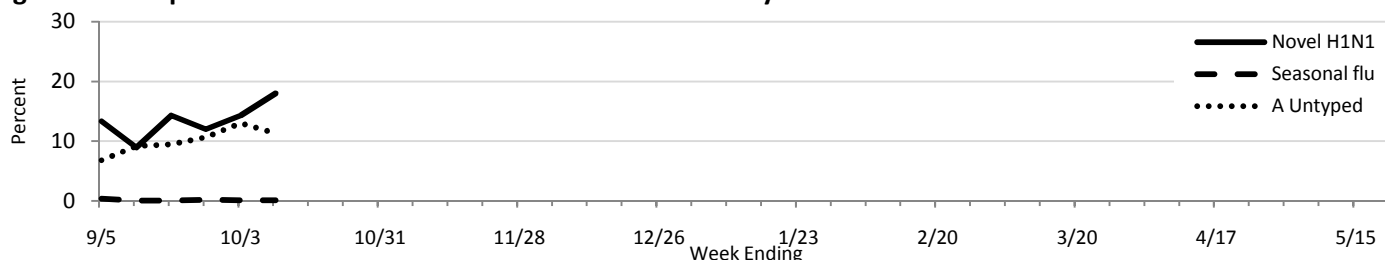
Note: The category of "seasonal flu" includes all influenza A types other than 2009 H1N1 and all influenza B. Source: EPIS

Table 1.1 Laboratory Testing - Clark County Pediatric Influenza Surveillance

Testing Category	Week Ending										Season to Date From 8/30/09	
	9/19		9/26		10/3		10/10		10/17		n	%
	n	%	n	%	n	%	n	%	n	%		
Influenza Negative	11	69	13	48	8	24	9	31	7	23	68	42
2009 H1N1 Positive	5	31	13	48	26	76	20	69	23	77	93	57
Flu A H1 (seasonal) Positive	0	0	0	0	0	0	0	0	0	0	0	0
Flu A H3 (seasonal) Positive	0	0	0	0	0	0	0	0	0	0	0	0
Flu B Positive	0	0	1	4	0	0	0	0	0	0	1	1
Specimens Tested	16		27		34		29		30		162	

Source: EPIS

Figure 1.2. Proportion of Influenza Viruses - National Laboratory Influenza Surveillance



Note: The category of "seasonal flu" includes all influenza A types other than 2009 H1N1 and all influenza B. Source: CDC/NREVVSS

Table 1.2 Laboratory Testing Results - National Influenza Surveillance

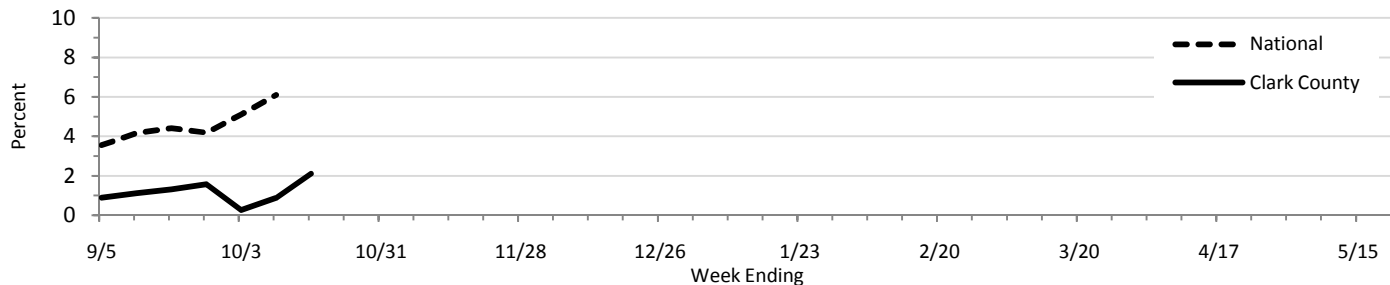
Testing Category	Week Ending								Season to Date From 8/30/09	
	9/19		9/26		10/3		10/10		n	%
	n	%	n	%	n	%	n	%		
Influenza Negative	7,418	76	7,188	77	7,848	73	9,828	71	42,684	75
2009 H1N1 Positive	1,395	14	1,116	12	1,549	14	2,505	18	7,949	14
Flu A H1 (seasonal) Positive	4	0	3	0	1	0	0	0	16	0
Flu A H3 (seasonal) Positive	1	0	6	0	1	0	0	0	22	0
Flu A Positive, Untyped	924	9	994	11	1,408	13	1,573	11	5,952	11
Flu B Positive	2	0	7	0	9	0	15	0	37	0
Specimens Tested	9,744		9,314		10,816		13,921		56,660	

Note: National data lags local data by one week, thus national data for the most recent week are unavailable. Source: CDC/NREVVSS

Section Two: Sentinel Physician Inﬂuenza-Like Illness Surveillance

Data from physicians enrolled in the Center for Disease Control and Prevention’s Outpatient Inﬂuenza-like Illness Surveillance Network (ILINet) indicate the percentage of all patients in a given week presenting with inﬂuenza-like illness (ILI), which is deﬁned as a fever and either a cough or sore throat.

Figure 2.1 Percentage of Visits for Inﬂuenza-Like Illness Reported to ILINet, Locally and Nationally

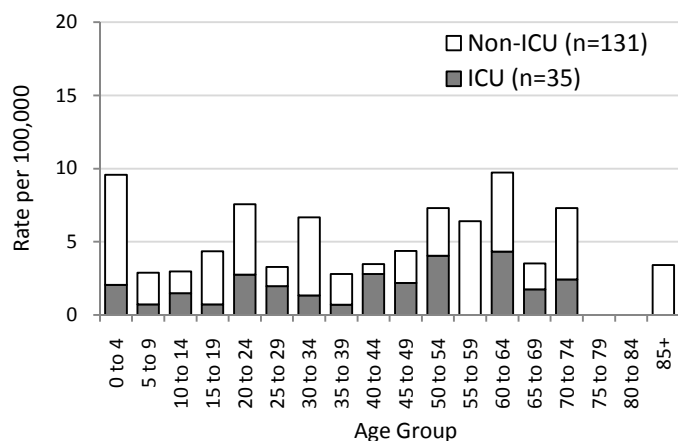


Note: ILI data collection for the previous week are not complete on Tuesdays when this report is issued, and results will lag other parts of this report by one week. Source: CDC/ILINet

Section Three: Clark County Reportable Disease Surveillance

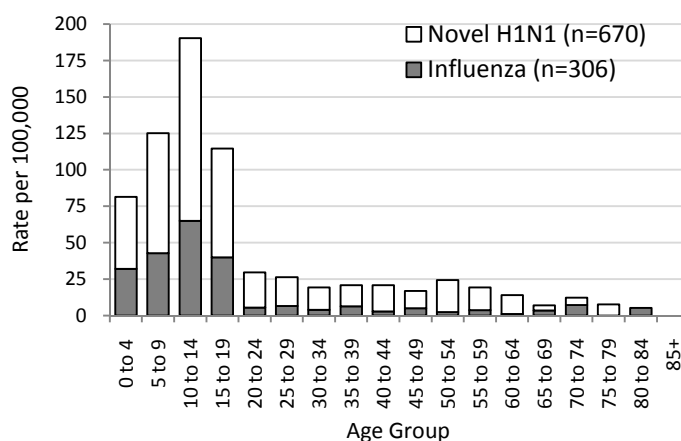
Per Nevada Administrative Code 441A.575, healthcare providers and laboratories must report all laboratory-confirmed cases of inﬂuenza to the health authority. Reported hospitalizations are further investigated for the presence of underlying risk factors and for the severity of illness, including intensive care unit (ICU) admission.

Figure 3.1 Clark County Reported Inﬂuenza Hospitalization Rates by Age, Season to Date



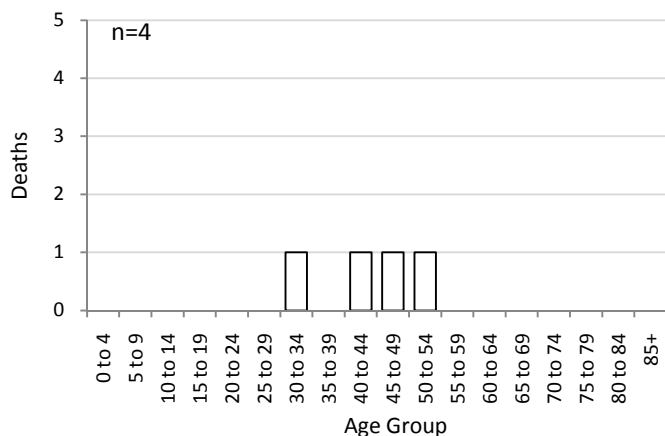
Source: Southern Nevada Health District

Figure 3.2 Clark County Reported Inﬂuenza Case Rates by Age, Season to Date



Source: Southern Nevada Health District

Figure 3.3 Clark County Reported Inﬂuenza Deaths by Age, Season to Date

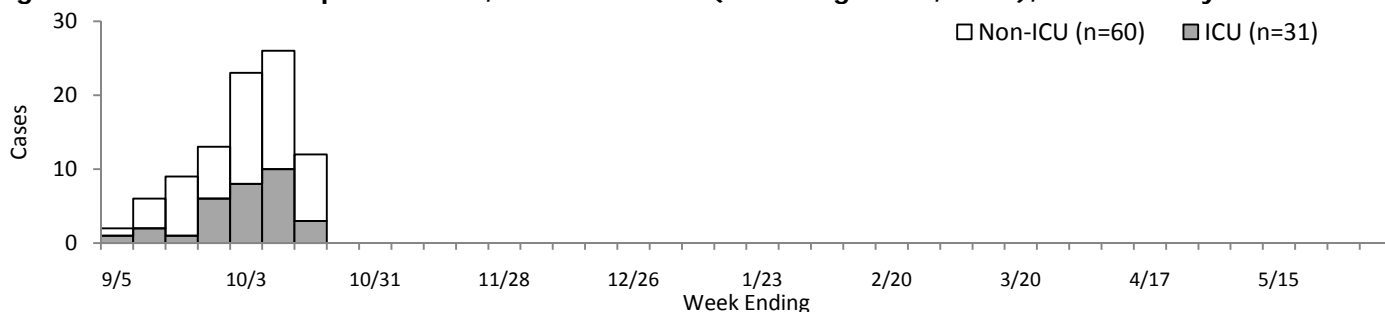


Source: Southern Nevada Health District

Textbox 3.1 Details of Inﬂuenza-Related Deaths, Clark County, Week Ending October 17, 2009

1 death: 31F without underlying conditions

Figure 3.4 Influenza Hospitalizations, Season to Date (From August 30, 2009), Clark County



Note: Data are presented by "event date", the earliest known date for a case. Although this is ideally a disease onset date, a standardized, hierarchical process is used to assign this date when the onset date is unavailable.

Figure 3.5 Influenza Deaths, Season to Date (From August 30, 2009) by Date of Death, Clark County

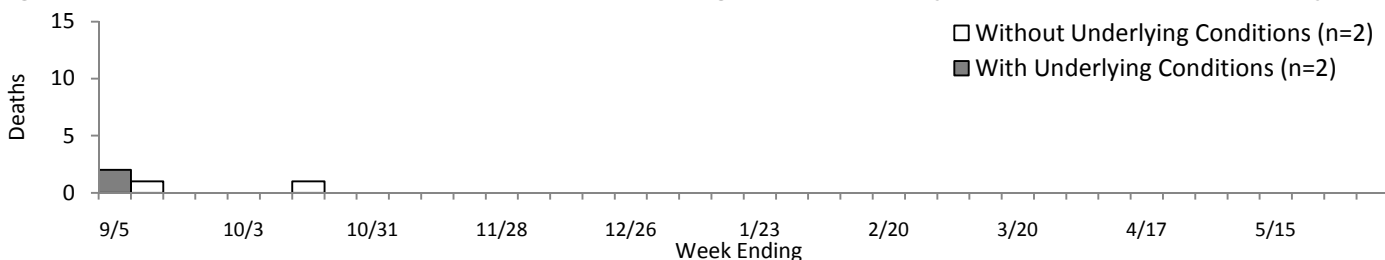


Table 3.1 Counts Influenza Cases by Type, Hospitalizations by Type, and Deaths, Most Recent Week and Season to Date (From August 30, 2009)

Age Group	Reported Week Ending October 17, 2009					Season To Date (From August 31, 2009)													
	Cases Reported			Deaths	Hospitalizations					Cases Reported				Deaths	Hospitalizations				
	Influenza	Novel N1H1 Influenza	Total		Non-ICU Admissions	ICU Admissions	Total Admissions	Influenza	Novel N1H1 Influenza	Total	Non-ICU Admissions	ICU Admissions	Total Admissions						
0 to 4	17	43	60	0	6	1	7	47	72	119	0	11	3	14					
5 to 9	17	71	88	0	3	0	3	59	114	173	0	3	1	4					
10 to 14	31	93	124	0	1	1	2	87	168	255	0	2	2	4					
15 to 19	12	53	65	0	3	0	3	55	103	158	0	5	1	6					
20 to 24	3	18	21	0	4	3	7	8	35	43	0	7	4	11					
25 to 29	3	12	15	0	0	2	2	10	30	40	0	2	3	5					
30 to 34	3	11	14	1	3	1	4	6	23	29	1	8	2	10					
35 to 39	1	11	12	0	1	0	1	9	21	30	0	3	1	4					
40 to 44	2	16	18	0	0	1	1	4	26	30	1	1	4	5					
45 to 49	1	5	6	0	2	1	3	7	16	23	1	3	3	6					
50 to 54	1	14	15	0	2	2	4	3	27	30	1	4	5	9					
55 to 59	2	7	9	0	2	0	2	4	17	21	0	7	0	7					
60 to 64	0	4	4	0	1	2	3	1	12	13	0	5	4	9					
65 to 69	0	1	1	0	2	1	3	2	2	4	0	3	1	4					
70 to 74	3	2	5	0	0	0	0	3	2	5	0	1	1	2					
75 to 79	0	0	0	0	0	0	0	0	2	2	0	2	0	2					
80 to 84	0	0	0	0	0	0	0	1	0	1	0	0	0	0					
85+	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Total	96	361	457	1	30	15	45	306	670	976	4	67	35	102					

Note: Case and hospitalization data for the most recent week are limited to those cases reported in the one-week period ending on the date listed, and are based solely on the date in which the case was reported to SNHD. Cases listed as "Novel H1N1 Influenza" are limited to cases confirmed by RT-PCR. Cases listed as "Influenza" include all patients who had tested positive by a rapid influenza test and have either had no confirmatory testing or confirmatory testing indicating the presence of seasonal influenza. Case categories are mutually exclusive, as are hospitalization categories. Deaths listed are by the date on which the patient died.