

2014-2015 Season (9/28/2014 – 10/3/2015)

**Synopsis:**

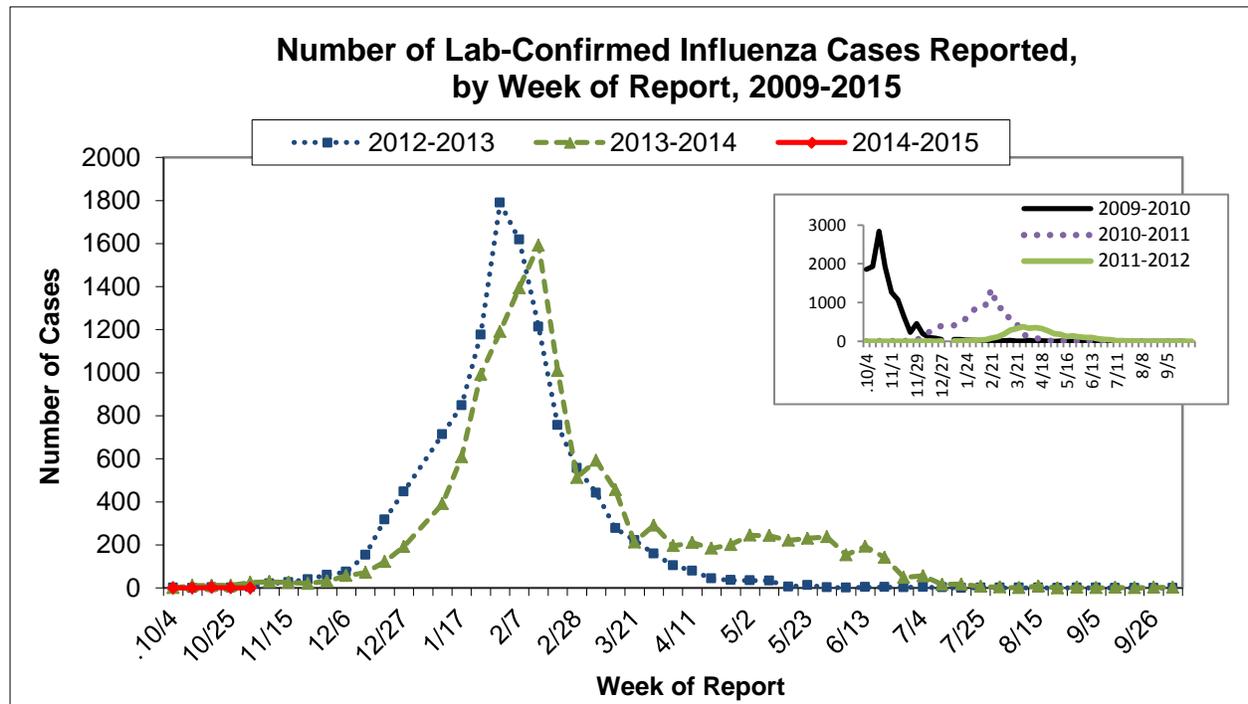
Arizona has identified the first locally-acquired influenza case of the 2014-2015 season, with confirmation at the Arizona State Public Health Laboratory. During the past week, influenza activity continued to be low. Arizona reported Sporadic activity for week 44.

**Influenza activity highlights:**

- The first locally-acquired influenza case of the 2014-2015 season was identified, with confirmation at the Arizona State Public Health Laboratory. The 2 confirmed cases reported in week 42 were not confirmed to be locally acquired.
- Influenza-like illness activity at sentinel providers was below Arizona’s threshold in week 43.
- Influenza-like illness activity at sentinel schools increased in week 44.
- The cases included in this report represent a small proportion of the true number of cases of influenza. Many people do not visit the doctor when ill and doctors should not be expected to run tests on all patients exhibiting influenza-like symptoms.

**Laboratory-Confirmed Influenza Activity by Season [2009-2015]**

Positive influenza tests are reported to ADHS. Many types of tests are included in the numbers below: rapid antigen tests, direct fluorescent antigen tests, viral culture, and molecular testing.

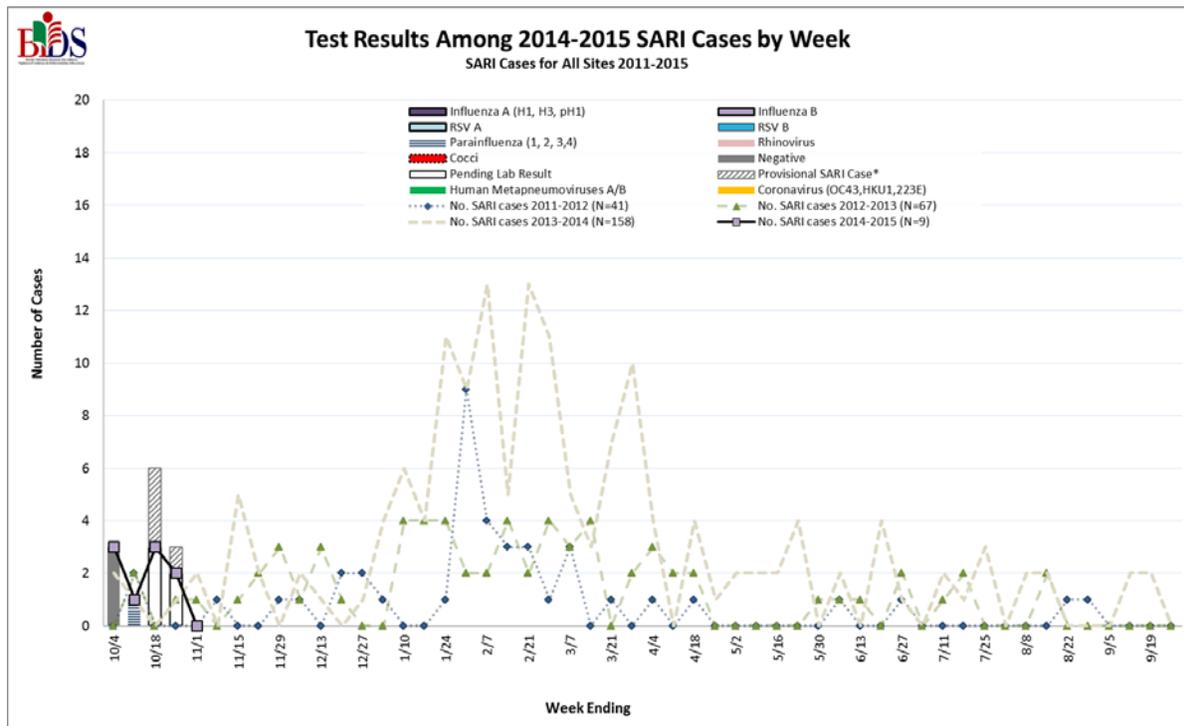


## Severe Acute Respiratory Infections (SARI) Surveillance

Severe acute respiratory infections (SARI) surveillance is currently conducted at selected hospitals in counties along the Mexican border by the Office of Border Health's Border Infectious Disease Surveillance (BIDS) program. SARI is defined as a hospital admission with a fever of at least 100°F plus either a cough or a sore throat. This surveillance facilitates the detection of circulating influenza viruses and allows us to monitor various causes of morbidity and mortality among inpatients with SARI.

SARI cases are tested using an RT-PCR viral panel that detects: influenza A (H1) seasonal subtype, A (H3) seasonal subtype, A (H1N1) pdm09, and B; respiratory syncytial virus A and B; parainfluenza virus 1, 2, 3, and 4; human metapneumoviruses A/B; rhinovirus; adenovirus (B, C, and E); and coronavirus (NL63, HKU1, 229E, and OC43). Bacterial testing is conducted for *Mycoplasma pneumonia*, *Chlamydia pneumonia*, *Legionella pneumophila* and *Bordetella pertussis* if a bacterial specimen is available for off-site testing. However, if a bacterial specimen is not submitted, patient chart reviews are conducted to find additional bacterial testing results performed on site.

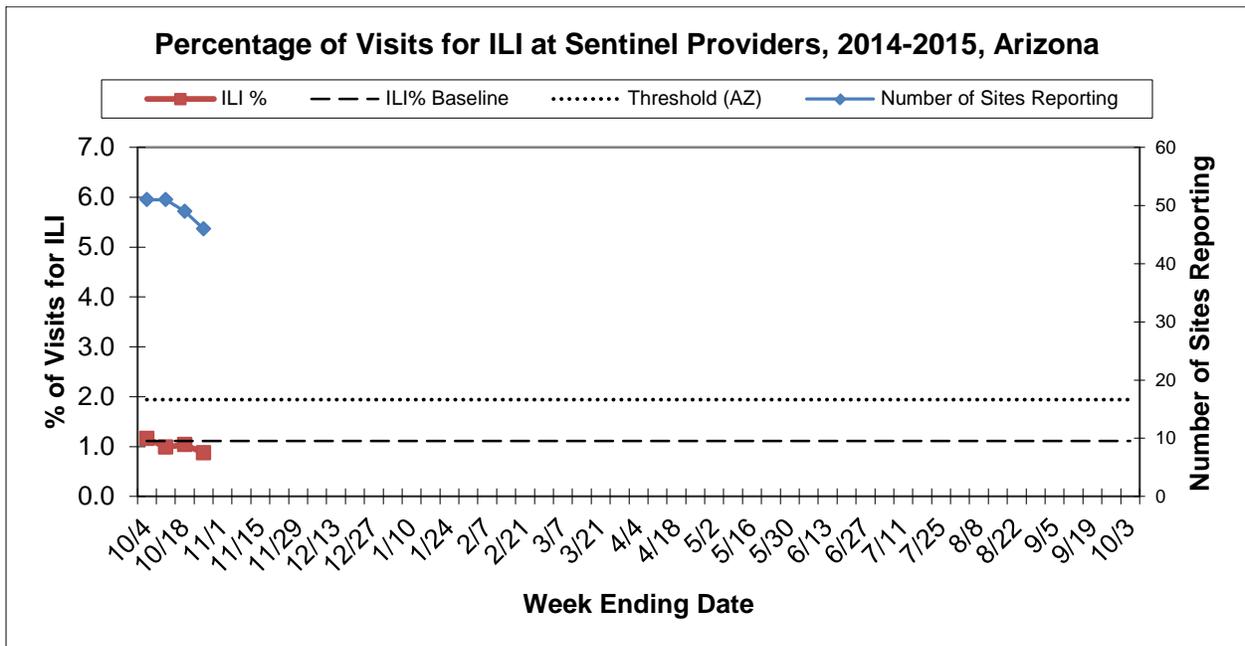
9 suspect SARI cases have been identified this season. Parainfluenza has been detected in one case.



## Influenza-Like Illness (ILI) Surveillance from Sentinel Outpatient Providers

ILI is defined as a fever of at least 100°F plus either a cough or a sore throat. In weeks when a relatively low number of enrolled facilities report data, the ILI proportion may not be as representative of Arizona activity as for other weeks. The state ILI baseline is 1.1% and the epidemic threshold is 1.9%\*.

	Week 43	Week 42
Proportion of patient visits to sentinel providers for ILI	0.9%	1.0%
Comparison to epidemic threshold*	Below threshold	Below threshold
Intensity level <i>(see definitions at the end of report)</i>	Minimal	Minimal

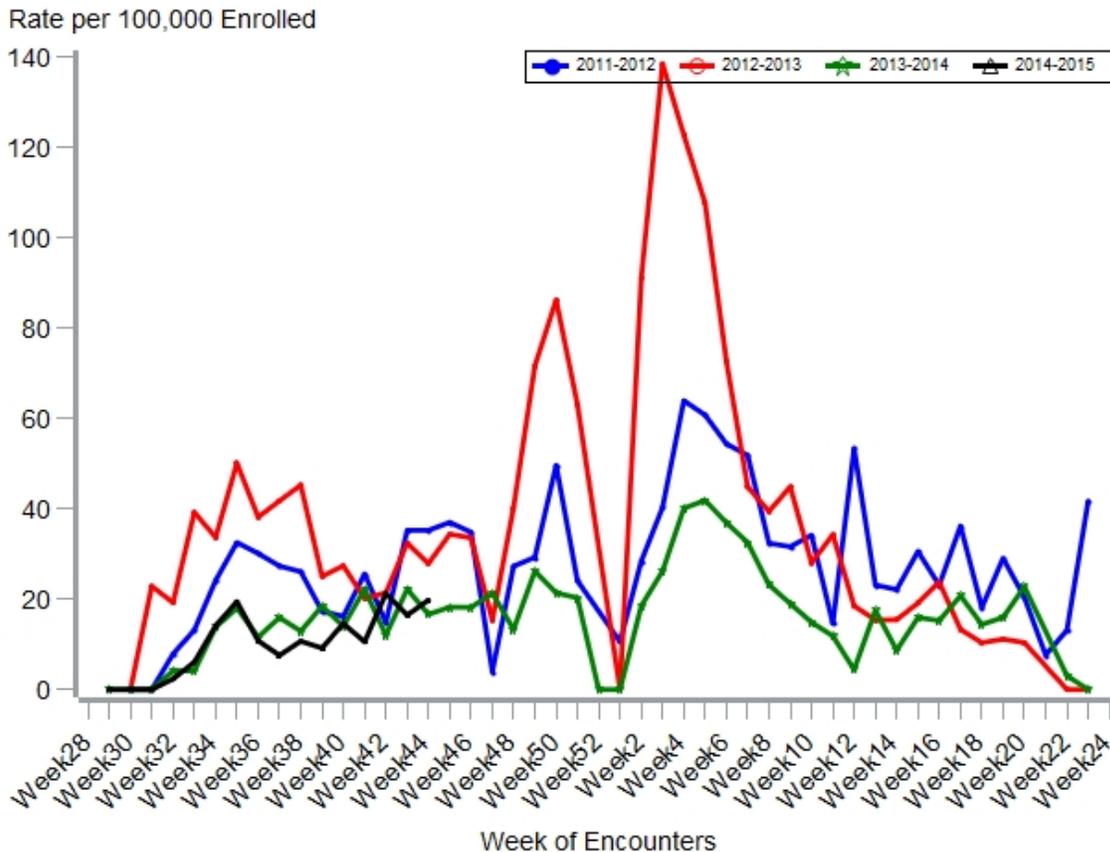


\*Note: The baseline is defined as the mean of the state ILI% in weeks in the 2011-2014 flu seasons in which two or more consecutive weeks each accounted for less than 2% of the season's total number of specimens testing positive for influenza at the Arizona State Public Health Laboratory. The epidemic threshold is defined as the mean plus two standard deviations.

## School Surveillance for Influenza-Like Illness (ILI)

School nurses in approximately 140 Arizona schools around the state use a specific computer program (the Child Health Indicator Program) for electronic management of student health records. The graph presents the weekly trend of ILI syndromes reported among students during the past four school years. School nurse encounters are not diagnosed cases of communicable diseases but are based on the nursing codes that school nurses enter to track student conditions. Also, the numbers in the graph are only from schools that used CHIP during the school year.

### Influenza-Like Illness Per School Enrollment in Arizona (per 100,000)

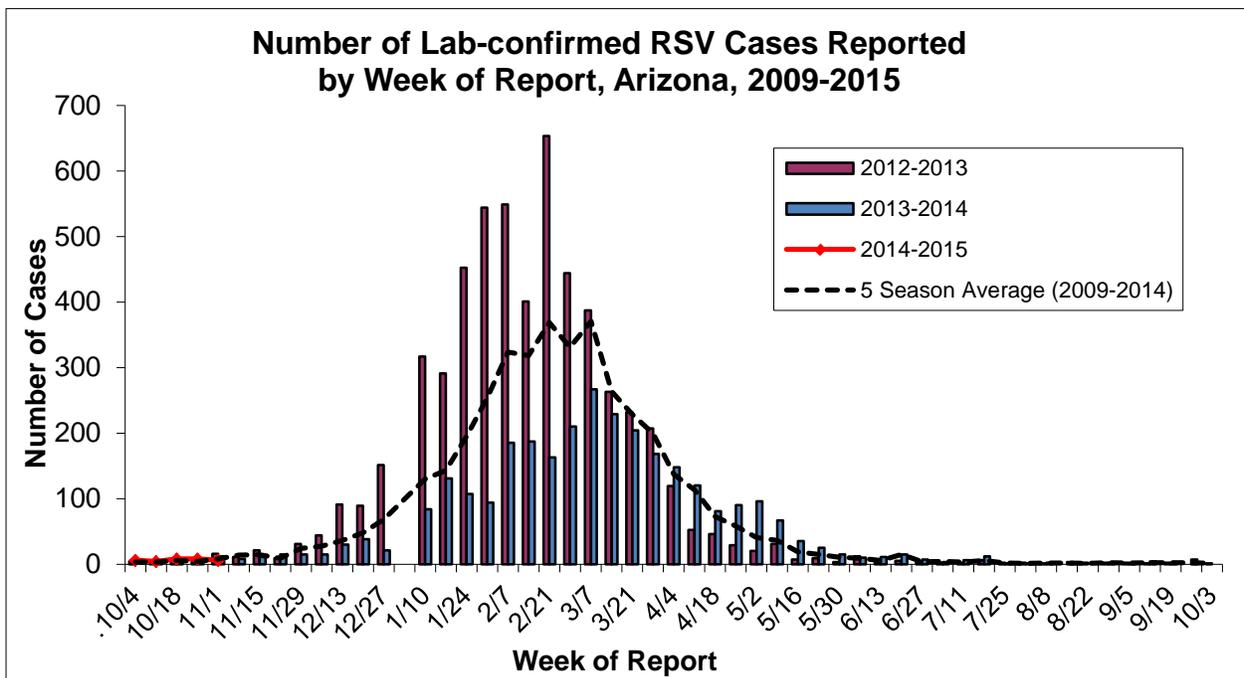


**RSV activity highlights:**

- 6 laboratory-confirmed cases of RSV were reported in the past week from three counties. 32 cases have been reported this season from 6 counties.
- 26 (84%) of the 32 reported cases this season are under the age of 5 years.
- The cases included here reflect only laboratory-confirmed cases that have been reported to the health department. There may be additional cases in the community that have not been tested.
- Data in this report are provisional and may change as more reports are received.

**Laboratory-Confirmed RSV Activity by Season [2009-2015]:**

Positive RSV tests are reported to ADHS. These include many types of tests, including rapid diagnostic tests, direct florescent antigen tests, viral culture.

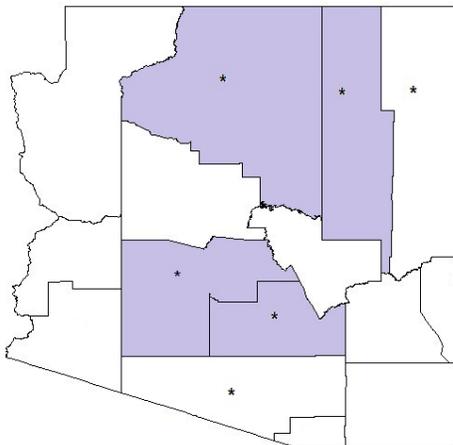


**Reported Laboratory-Confirmed Cases Compared to Last Week and Last Season**

	<b>Cumulative Season Total</b>	<b>Current Week Total</b>
<b>2014-2015</b>	32	6
<b>2013-2014</b>	29	12
<b>% increase, compared to 2013-2014 season</b>	10%	-50%
<b>% increase, compared to last week</b>	23.1%	-25%

### Lab-Confirmed RSV Cases Reported by County

County	2014-2015 Season	Past Three Weeks	Last Week
Apache	1	0	0
Cochise	0	0	0
Coconino	1	1	1
Gila	0	0	0
Graham	0	0	0
Greenlee	0	0	0
La Paz	0	0	0
Maricopa	25	18	4
Mohave	0	0	0
Navajo	1	1	0
Pima	2	0	0
Pinal	2	2	1
Santa Cruz	0	0	0
Yavapai	0	0	0
Yuma	0	0	0
<b>Total</b>	<b>32</b>	<b>22</b>	<b>6</b>



**Key:**

- \* = Any activity reported this season
- = Activity reported in the previous three weeks
- = No activity reported in the previous three weeks

### Age Group of Lab-Confirmed RSV Cases

Age Group	Number of Cases (2014-2015 Season)	Cases per 100,000 population
<1 year	20	23.0
1-4 years	6	1.6
5-14 years	3	0.3
15-64 years	1	0.0
65 years or older	1	0.1
Age unknown	1	N/A
<b>Total</b>	<b>32</b>	<b>0.5</b>

## **Glossary of Key Terms:**

2014-2015 Influenza Season – The season is defined by surveillance weeks. The first day of the 2014-2015 influenza season was September 28<sup>th</sup>, 2014, or week 40 and the 2014-2015 surveillance season will continue through October 3<sup>rd</sup>, 2015, or week 39.

Regions – Regions in Arizona are defined by county: Central (Gila, Maricopa, Pinal); Northern (Apache, Coconino, Navajo, Yavapai); Southern (Cochise, Graham, Greenlee, Pima, Santa Cruz); Western (La Paz, Mohave, Yuma)

Activity Levels: Indicator of the geographic spread of influenza activity, reported to CDC by all states each week.

Widespread: Increased influenza-like illness from sentinel providers (ILI) in three or more regions and large numbers of laboratory-confirmed influenza cases in those regions.

Regional: Increased ILI in two regions and elevated numbers of laboratory-confirmed influenza cases in those regions.

Local: Increased ILI in one region and elevated numbers of laboratory-confirmed influenza cases in that region.

Sporadic: No increase in ILI activity and only isolated laboratory-confirmed influenza cases.

No Activity: No increase in ILI activity and no laboratory-confirmed influenza cases.

Intensity Levels: Intensity levels are based on the percent of outpatient visits in a state due to ILI and are compared to the average percent of ILI visits that occur during spring and fall weeks with little or no influenza virus circulation. Intensity levels range from minimal, corresponding to ILI activity from outpatient clinics being below the average, to intense, which would correspond to ILI activity from outpatient clinics being much higher than average.