Arizona Department of Health Services

# ARIZONA – INFLUENZA and RSV SUMMARY

**Weeks 28-29 (7/10/2016 – 7/23/2016)**

## 2015-2016 Season (10/4/2015 – 10/1/2016)

Arizona is in the period of summer influenza and RSV surveillance. See the week 25 report for more complete data and additional surveillance indicators for the 2015-2016 influenza season.

**Synopsis:**

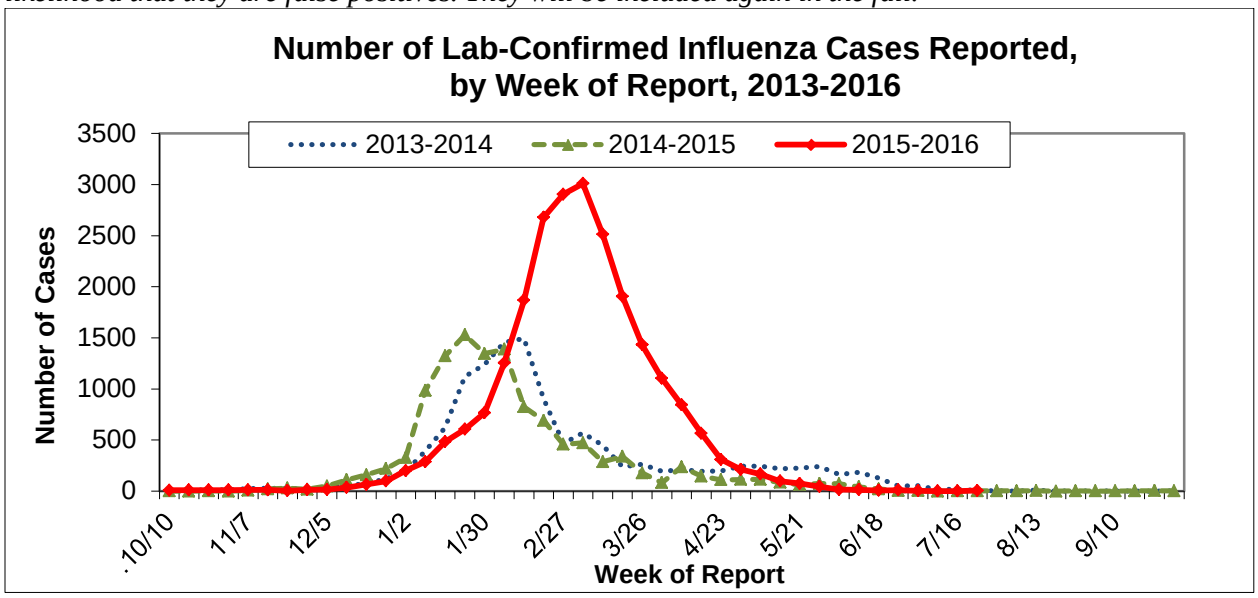
During the past two weeks, influenza activity continued to be low. Arizona reported Sporadic Activity for week 28 and No Activity for week 29.

**Influenza activity highlights:**

- 7 laboratory-confirmed cases of influenza were reported in the past two weeks, from two counties. 71% of cases reported in the past two weeks were influenza A and 29% were influenza B.
- 24 laboratory-confirmed cases of influenza have been reported since the beginning of summer surveillance on 6/20/2016. 67% of cases reported since 6/20/2016 were influenza A and 25% were influenza B.
- In the past two weeks, 4 (100%) specimens tested positive for influenza at ASPHL: 1 influenza A (H3) virus, 1 influenza B/Victoria virus and 2 influenza B/Yamagata viruses.
- No laboratory-confirmed influenza-associated pediatric deaths have been reported during the period of summer influenza surveillance. Four influenza-associated pediatric deaths have been reported for the 2015-2016 season.
- 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 [2013-2016]**

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.**Note: Rapid antigen tests with collection dates after 6/20/2016 are not counted as confirmed cases because of the high likelihood that they are false positives. They will be included again in the fall.*



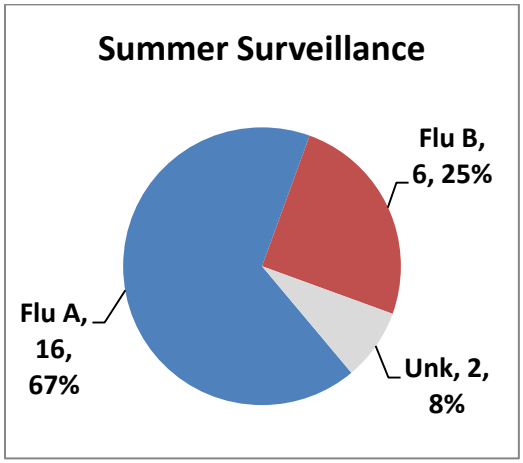
## Laboratory-Confirmed Cases Reported, by County, 2015-2016 Influenza Season

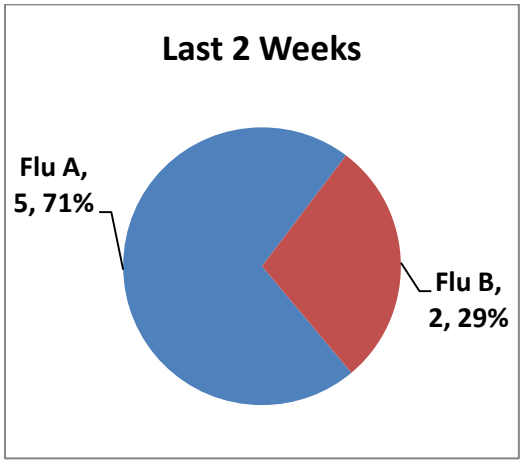
(Includes ALL reported lab-confirmed flu reports, regardless of subtype)

| County | *2015-2016 Season* | *Summer Surveillance Period (starting June 20th)* | *Last Two Weeks* |
|---|---|---|---|
| Apache | 201 | 0 | 0 |
| Cochise | 602 | 0 | 0 |
| Coconino | 705 | 3 | 0 |
| Gila | 112 | 0 | 0 |
| Graham | 145 | 0 | 0 |
| Greenlee | 114 | 0 | 0 |
| La Paz | 14 | 0 | 0 |
| Maricopa | 14,344 | 8 | 0 |
| Mohave | 322 | 6 | 6 |
| Navajo | 470 | 0 | 0 |
| Pima | 3,434 | 4 | 0 |
| Pinal | 1,538 | 0 | 0 |
| Santa Cruz | 148 | 0 | 0 |
| Yavapai | 1,126 | 2 | 1 |
| Yuma | 405 | 1 | 0 |
| **Total** | **23,680** | **24** | **7** |

## Influenza Types and Subtypes

There are two main types of influenza – Type A and Type B – that cause illness in people. Influenza A viruses can be further divided into subtypes such as A (H1), or A (H3). While most tests can distinguish between influenza A and B, only specialized testing such as that done at the State Public Health Laboratory and a few other labs around the state can differentiate subtypes. Viral culture or molecular testing (reverse transcriptase polymerase chain reaction or RT-PCR) are the methods used to identify subtypes; knowing the type and subtype of the influenza viruses circulating can help health professionals make the best treatment and vaccination decisions.



## Data from the Arizona State Public Health Laboratory (ASPHL)

- 4 (100%) specimens tested positive for influenza at ASPHL: 1 influenza A (H3) virus, 1 influenza B/Victoria virus and 2 influenza B/Yamagata viruses.

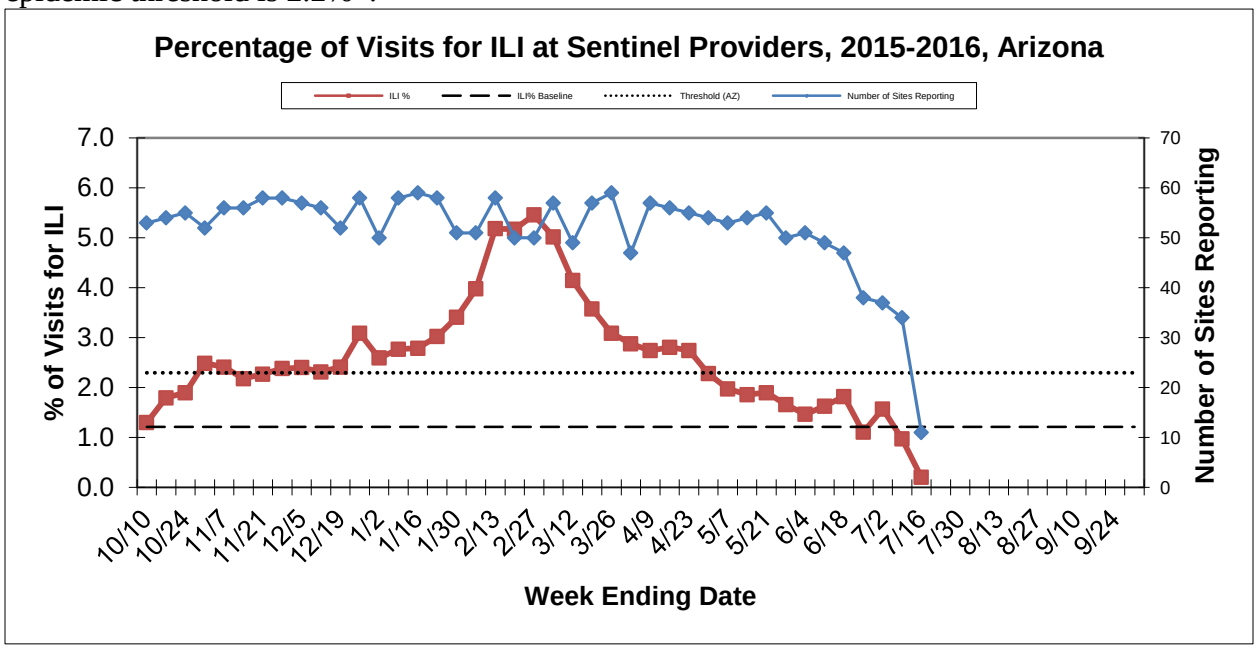
## Age of Reported Influenza Cases

The age groups most affected by influenza vary somewhat season-to-season, depending in part on the circulating influenza types and subtypes and any existing immunity in the community. Variations in age groups of reported influenza cases can also be caused by differences in laboratory testing and reporting practices year-to-year.

| Age Group | 2015-2016 Season (N=23,680) | Summer Surveillance Period (N=24) |
|---|---|---|
| **0 to 4 years** | 4,102 (17%) | 0 (0%) |
| **5 to 18 years** | 5,098 (22%) | 3 (13%) |
| **19 to 49 years** | 7,355 (31%) | 10 (42%) |
| **50 to 64 years** | 3,160 (13%) | 4 (17%) |
| **65 years or older** | 3,874 (16%) | 7 (29%) |
| **Unknown age** | 91 (1%) | 0 (0%) |

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

ILI is defined as a fever of at least 100ºF 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 1.2% and the epidemic threshold is 2.2%*.




*Note: The baseline is defined as the mean of the state ILI% in weeks in the 2012-2015 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.

## Mortality Surveillance

### Influenza-associated Pediatric Deaths

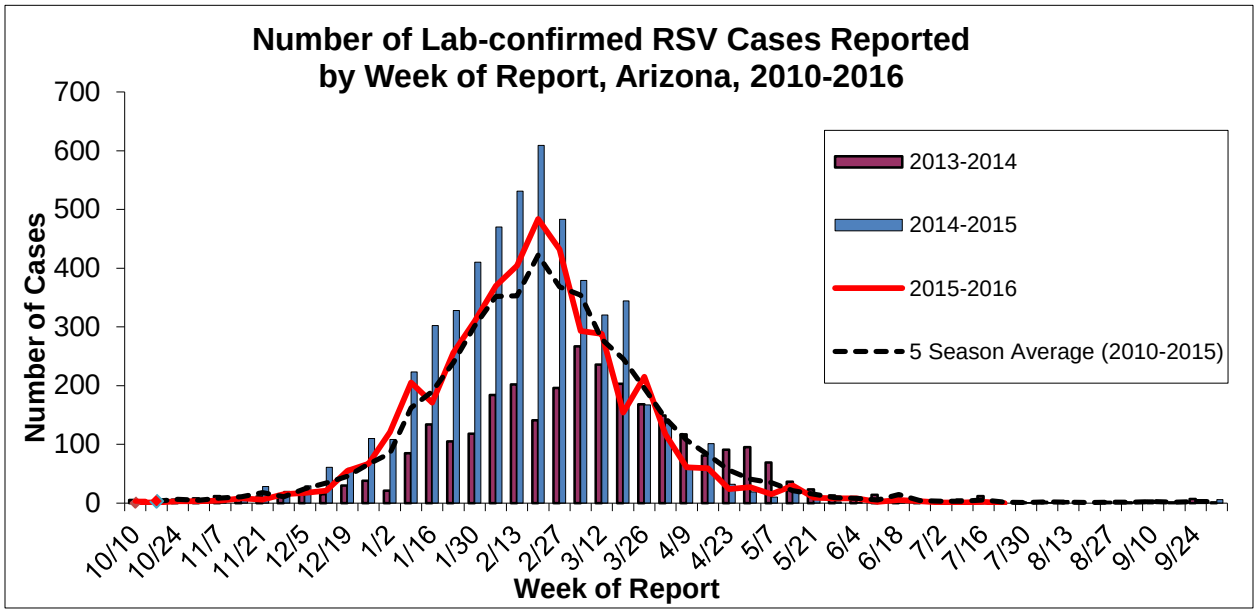
Influenza-associated pediatric deaths are reportable to the public health departments in Arizona. Four influenza-associated pediatric deaths have been identified in the 2015-2016 season. No pediatric influenza-associated deaths have been identified during the summer surveillance period (beginning June 20th).

**RSV activity highlights:**

- 2 laboratory-confirmed cases of RSV were reported in the past two weeks, from two counties.
- 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 [2010-2016]:**

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



## Lab-Confirmed RSV Cases Reported by County

| County | *2015-2016 Season* | *Summer Surveillance Period (starting June 20th)* | *Last Two Weeks* |
|---|---|---|---|
| Apache | 51 | 0 | 0 |
| Cochise | 123 | 0 | 0 |
| Coconino | 121 | 1 | 0 |
| Gila | 18 | 0 | 0 |
| Graham | 7 | 0 | 0 |
| Greenlee | 1 | 0 | 0 |
| La Paz | 3 | 0 | 0 |
| Maricopa | 2,637 | 5 | 1 |
| Mohave | 31 | 0 | 0 |
| Navajo | 80 | 0 | 0 |
| Pima | 521 | 1 | 1 |
| Pinal | 312 | 0 | 0 |
| Santa Cruz | 27 | 0 | 0 |
| Yavapai | 221 | 0 | 0 |
| Yuma | 123 | 0 | 0 |
| **Total** | **4,276** | **7** | **2** |

### Glossary of Key Terms:

*2015-2016 Influenza Season* – The season is defined by surveillance weeks. The first day of the 2015-2016 influenza season was October 4th, 2015, or week 40 and the 2015-2016 surveillance season will continue through October 1st, 2016, 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.