

2017–2018 Influenza Season (10/01/2017 – 9/29/2018)

Synopsis:

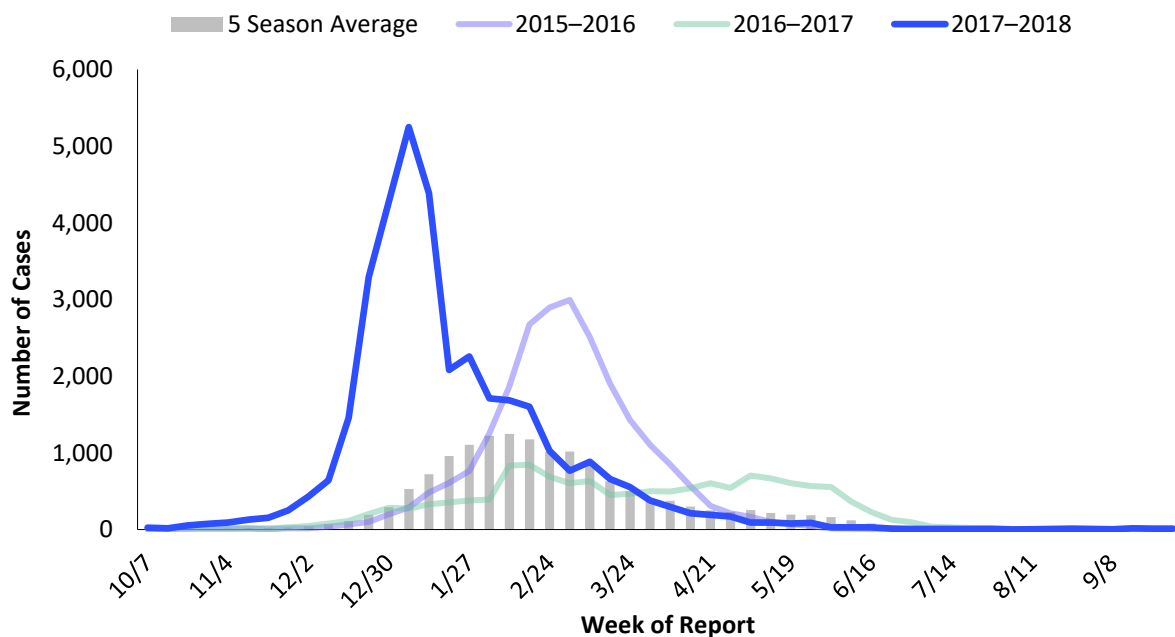
Arizona is in the period of summer influenza and RSV surveillance. Arizona reported Sporadic Activity for week 39. Subscribe to the *Flu & RSV* report at azhealth.gov/email.

Influenza activity highlights:

- 10 laboratory-confirmed cases of influenza were reported in the past week, from 5 counties. 35,570 cases have been reported this season, with laboratory-confirmed cases identified in 15 counties.
- 26,361 (74%) reports this season are influenza A, 8,736 (25%) are influenza B, and 473 (1%) are of unknown type.
- To date, 1,178 pneumonia and influenza deaths were identified this season.
- Five influenza-associated pediatric deaths have been reported for the 2017–2018 season, three in Maricopa County residents, one in a Navajo County resident, and one in a Pima County resident. Two cases were PCR positive for influenza A (H3), one for influenza B/Victoria, and two for influenza B/lineage unknown.

Laboratory-Confirmed Influenza Activity by Season

In the past week, there were **10 laboratory confirmed cases**, similar to the same week last season. There have been a total of over 21,700 more cases to date this season compared to last season.



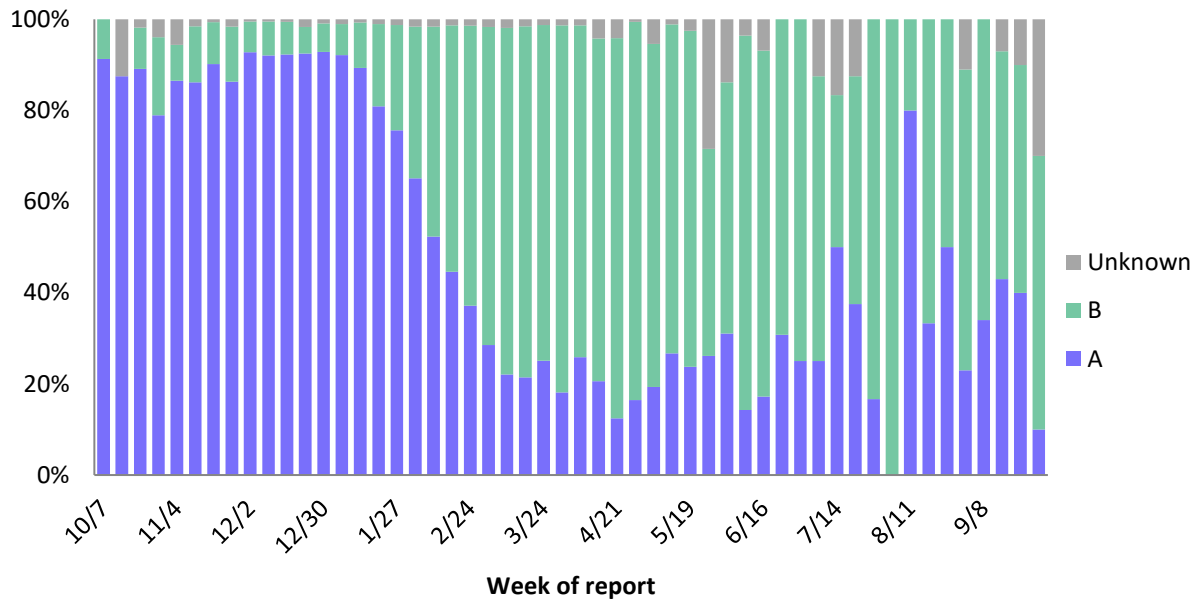
Number of Lab-Confirmed Influenza Cases Reported, by Week of Report: 2012–2018

See [Table 1](#) in the appendix for additional information

Influenza Types and Subtypes

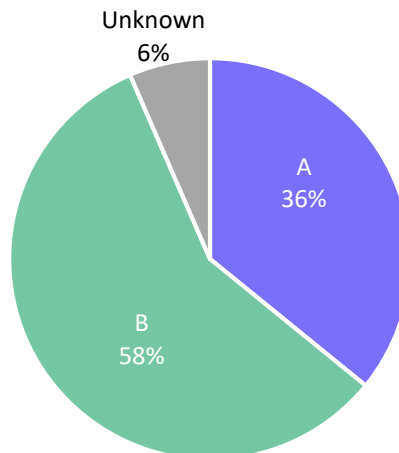
There are two main types of influenza – Type A and Type B – that cause illness in people. Influenza A viruses can be further divided into subtypes such as A (H1), or A (H3). While most tests can distinguish between influenza A and B, only specialized testing such as that done at the State Public Health 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.

Last week, **10%** of influenza cases were **type A** and **60%** were **type B**.



See [Table 2](#) in the appendix for additional information

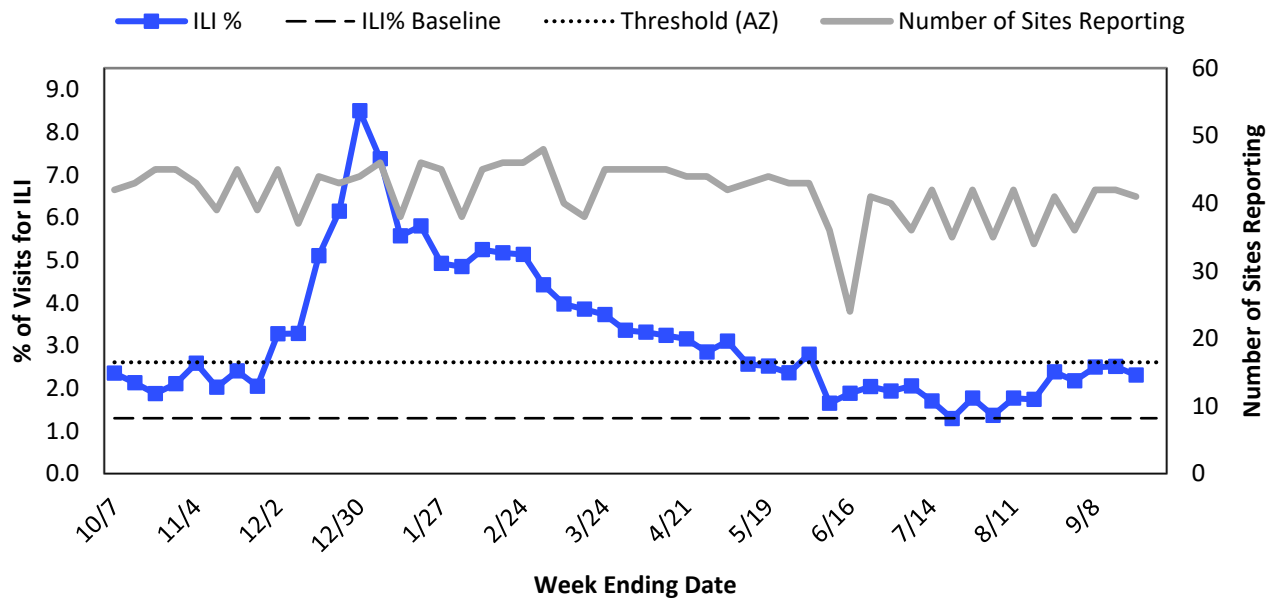
Since the start of summer surveillance (July 8th), **36%** of influenza cases were **type A** and **58%** were **type B**.



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 1.3% and the epidemic threshold is 2.6%*.

ILI percent was below threshold at **2.5%** in week 37 and **2.3%** in week 38.



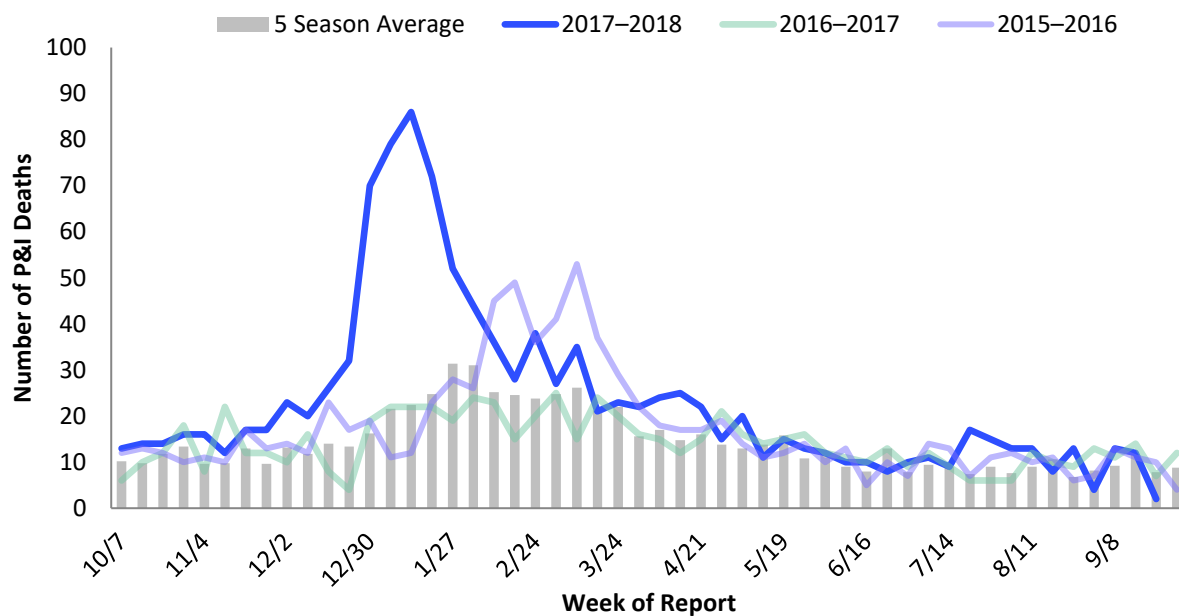
Percentage of Visits for ILI at Sentinel Providers, 2017–2018, Arizona

*Note: The baseline is defined as the mean of the state ILI% in weeks in the 2014–2017 influenza 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.

Pneumonia and Influenza Mortality from Death Certificates

Influenza-associated deaths in adults are not reportable in Arizona, and thus the number of laboratory-confirmed deaths each year is not available. Many influenza-related deaths are due to complications of influenza infection, including pneumonia, and influenza is infrequently listed as the cause of death on death certificates. Influenza mortality surveillance often uses the category of “pneumonia and influenza” (P & I) on death certificates as an indicator of the severity of an influenza season or of the trends within a season, even though not all pneumonias are associated with influenza. See the CDC website for more information http://www.cdc.gov/flu/about/disease/us_flu-related_deaths.htm.

To date, there have been **1,178 P&I deaths** identified this season, over 450 more deaths than this same time last season.



***Note: Typically there is a >2 week reporting lag for cause of death, these numbers are provisional and will be revised as more data is received.**

See [Table 5](#) in the appendix for additional information

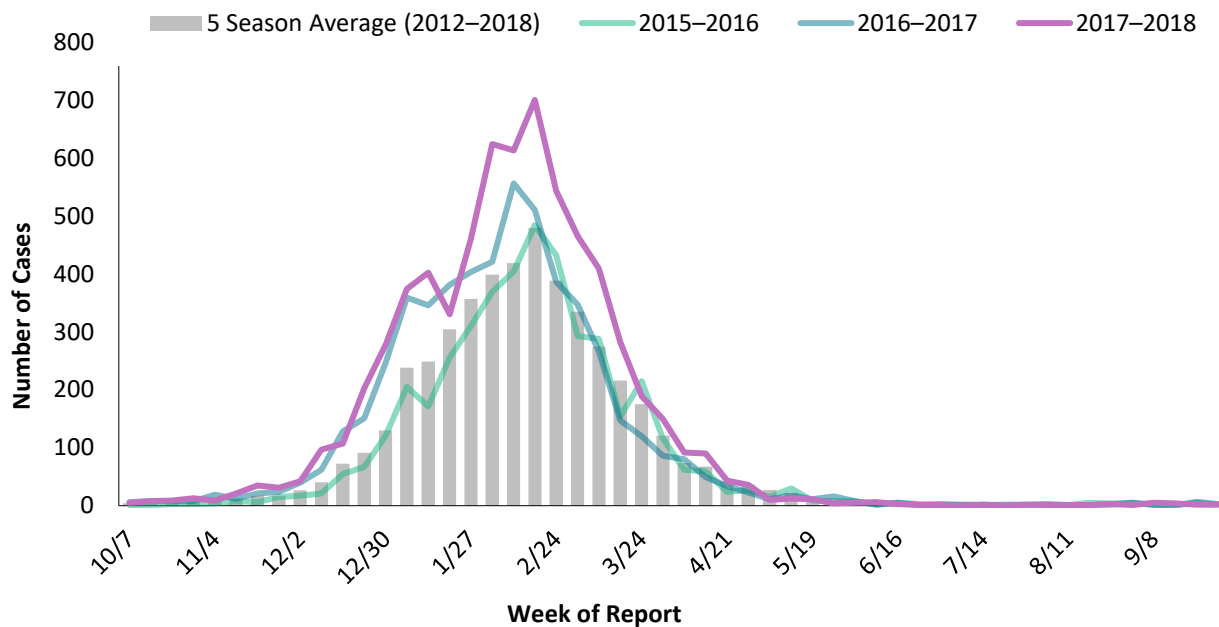
RSV activity highlights:

- 2 laboratory-confirmed cases of RSV were reported in the past week, from 2 counties. 6,737 cases have been reported this season, with laboratory-confirmed cases identified in 15 counties.
- 4,538 (67%) of 6,737 reported cases this season are under the age of 5 years.
- Subscribe to the Flu & RSV report at [azhealth.gov/email](mailto:azhealth.gov@email).

Laboratory-Confirmed RSV Activity by Season

Positive RSV 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.

In the past week, there were **2 laboratory confirmed cases**, similar to the same week last season. There have been over 1,350 more total cases to date this season compared to last season.



Number of Lab-confirmed RSV Cases Reported by Week of Report, Arizona, 2012–2018

See [Table 6](#) in the appendix for additional information

Appendix

Table 1: Laboratory-Confirmed Influenza Cases Reported, by County, 2017–2018 Influenza Season

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

County	2017–2018 Season	Summer Surveillance Period (starting July 8 th)	Last Week
Apache	811	0	0
Cochise	766	1	0
Coconino	1,108	1	0
Gila	464	0	0
Graham	392	10	1
Greenlee	101	0	0
La Paz	141	0	0
Maricopa	19,582	55	4
Mohave	1,523	3	0
Navajo	1,003	0	0
Pima	4,405	16	1
Pinal	2,720	4	3
Santa Cruz	297	1	1
Yavapai	1,507	1	0
Yuma	750	0	0
Total	35,570	92	10

Back to Report: [Laboratory-Confirmed Influenza Activity by Season \[2012–2018\]](#)

Table 2: Influenza Type, by Season

	2017–2018 Number	2017–2018 Percent	2016–2017 Number (Percent)	2015–2016 Number (Percent)	2014–2015 Number (Percent)
Total	35,570	100%	13,850 (100%)	23,657 (100%)	12,594 (100%)
Influenza A	26,361	74%	8,397 (61%)	17,179 (73%)	11,013 (87%)
Influenza B	8,736	25%	5,238 (38%)	6,207 (26%)	1,428 (11%)
Unknown	473	1%	215 (1%)	271 (1%)	153 (2%)

Back to Report: [Influenza Types](#)

Table 3: Influenza subtyping of culture or RT-PCR results, by season

	2017–2018 Number	2017–2018 Percent	2016–2017 Number (Percent)	2015–2016 Number (Percent)	2014–2015 Number (Percent)
Influenza Subtypes	4,702	100%	2,882 (100%)	2,757 (100%)	2,202 (100%)
Influenza A (H1N1) pdm09	265	6%	76 (2%)	1,321 (48%)	5 (<1%)
Influenza A (H3)	3,496	74%	2,021 (70%)	999 (36%)	2,127 (97%)
Influenza B/Victoria	207	4%	223 (8%)	54 (2%)	20 (1%)
Influenza B/Yamagata	734	16%	562 (20%)	383 (14%)	50 (2%)

Table 4: Age of Reported Influenza Cases

Age Group	2017–2018 (N=35,570)	Summer Surveillance Period (N=92)
0 to 4 years	5,330 (15%)	14 (15%)
5 to 18 years	6,734 (19%)	15 (16%)
19 to 49 years	8,436 (24%)	29 (31%)
50 to 64 years	4,886 (14%)	17 (19%)
65 years or older	10,053 (28%)	17 (19%)
Unknown age	131 (<1%)	0 (0%)

Table 5: P&I Mortality Compared to Past Seasons

Season	Cumulative Season Total
2017–2018	1,178
2016–2017	718
2015–2016	887
5 Season average	740

Back to Report: [Pneumonia and Influenza Mortality from Death Certificates](#)

Table 6: Laboratory-Confirmed RSV Cases Reported by County

County	2017–2018 Season	Summer Surveillance Period (starting July 8 th)	Last Week
Apache	205	2	1
Cochise	86	1	0
Coconino	244	6	1
Gila	44	0	0
Graham	31	0	0
Greenlee	7	0	0
La Paz	9	0	0
Maricopa	4,101	13	0
Mohave	78	0	0
Navajo	122	0	0
Pima	820	2	0
Pinal	508	0	0
Santa Cruz	43	0	0
Yavapai	180	0	0
Yuma	259	0	0
Total	6,737	24	2

Back to Report: [Laboratory-Confirmed RSV Activity by Season \[2012–2018\]](#)

Glossary of Key Terms:

2017–2018 Influenza Season – The season is defined by surveillance weeks. The first day of the 2017–2018 influenza season was October 1st, 2017, or week 40 and the 2017–2018 surveillance season will continue through September 29th, 2018, or week 39. Data in this report are provisional and may change as more reports are received.

Laboratory Confirmed Case – Under Arizona Administrative Code R9-6-204, all positive influenza test results are reported to ADHS by laboratories. 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. 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.

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 Level – 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.