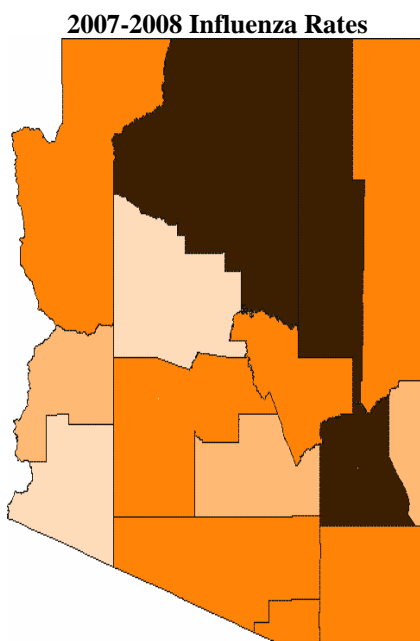


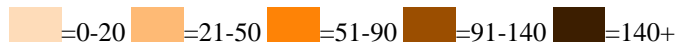
Annual Influenza Summary:

The 2007-2008 influenza season, which started with the first lab-confirmed case on November 19th, 2007, peaked mid-to-late February and subsided at the end of May. Like recent influenza seasons, flu rates were highest in those four years of age or less and in those aged sixty-five years or more. Influenza rate differences were also noted in gender status. Here, women aged from fifteen years to sixty-four years of age had higher flu rates compared to males; whereas, males had higher rates in those less than one year of age and in those aged sixty-five years of age or more compared to females. In all, 5,168 lab-confirmed cases of influenza, from all fifteen counties, were reported to ADHS. National influenza surveillance data are available at the CDC's influenza surveillance site: <http://www.cdc.gov/flu/weekly/fluactivity.htm>.

Influenza Activity by County:

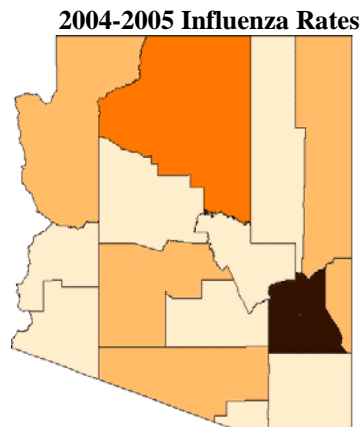
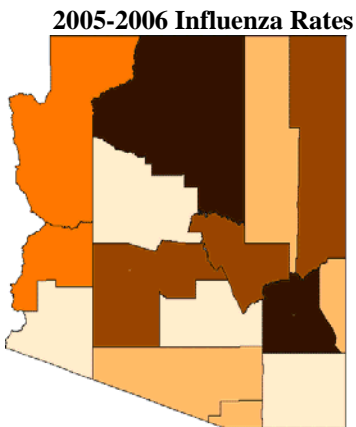
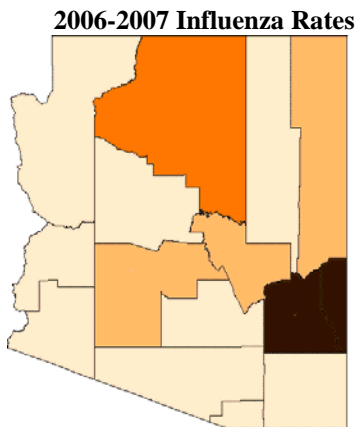


Key: Rates of lab-confirmed influenza per 100,000 population



Influenza Rates, per 100,000 population, by Season

County	07-08	06-07	05-06	04-05
Apache	75	48	100	29
Cochise	68	3	16	2
Coconino	362	68	164	52
Gila	52	47	121	9
Graham	1,020	382	601	433
Greenlee	36	398	24	48
La Paz	37	9	61	14
Maricopa	75	28	109	30
Mohave	61	11	72	50
Navajo	143	18	47	13
Pima	78	20	47	24
Pinal	21	7	6	7
Santa Cruz	56	11	25	14
Yavapai	20	3	18	5
Yuma	2	0	19	0
Total	80	27	88	29



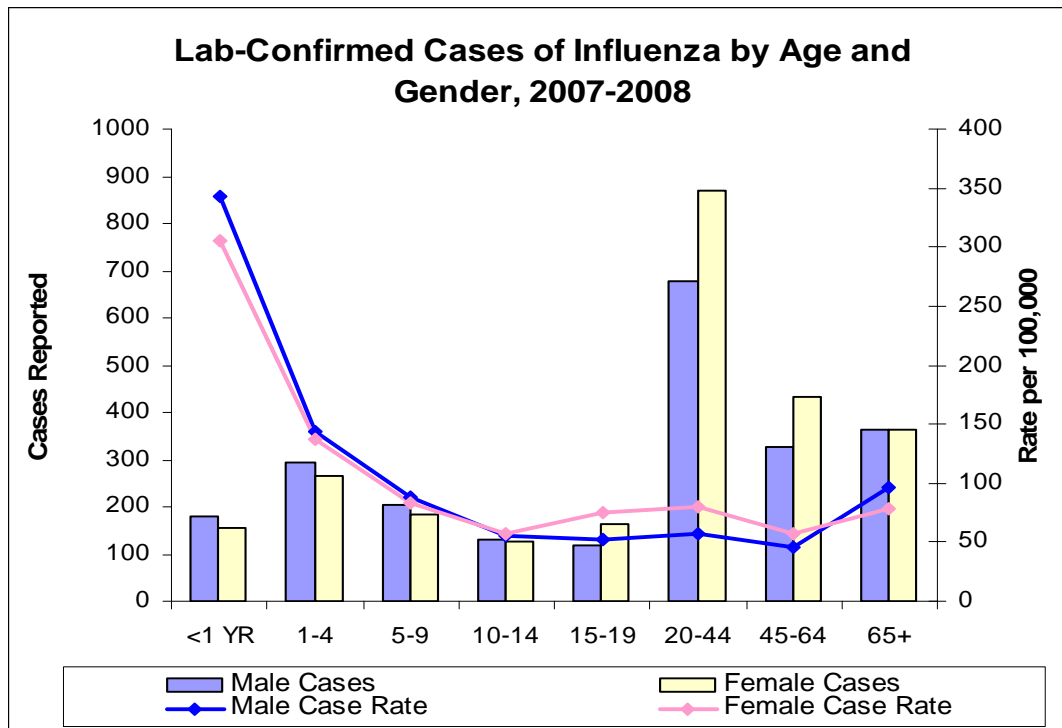
Some counties experienced higher rates of flu than others. Coconino and Graham counties had the highest rates of influenza in the state followed by Navajo, Pima, Apache and Maricopa. These differences may be due in part to a difference in reporting between the counties.

Lab-Confirmed Influenza Cases Reported by County - 2007-2008 Season [5,168 cases]:

Since October 2004, laboratories have been required to report positive influenza tests to ADHS.

County	07-08 Season	06-07 Season	05-06 Season	04-05 Season
Apache	57	36	74	21
Cochise	94	4	21	2
Coconino	489	91	214	67
Gila	29	26	66	5
Graham	370	137	213	156
Greenlee	3	33	2	4
La Paz	8	2	13	3
Maricopa	2913	1065	3971	1054
Mohave	122	22	136	90
Navajo	165	21	52	14
Pima	782	195	453	225
Pinal	62	19	15	16
Santa Cruz	26	5	11	6
Yavapai	44	7	37	10
Yuma	4	0	36	0
Total	5168	1663	5314	1673

Influenza Activity by Age and Gender:

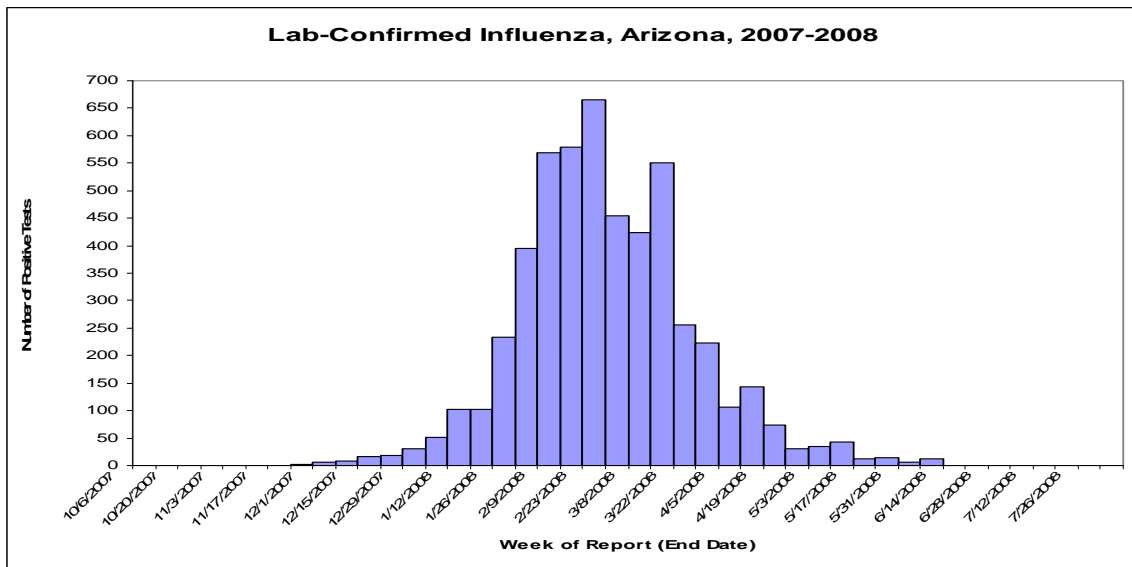


Laboratory Subtyping:

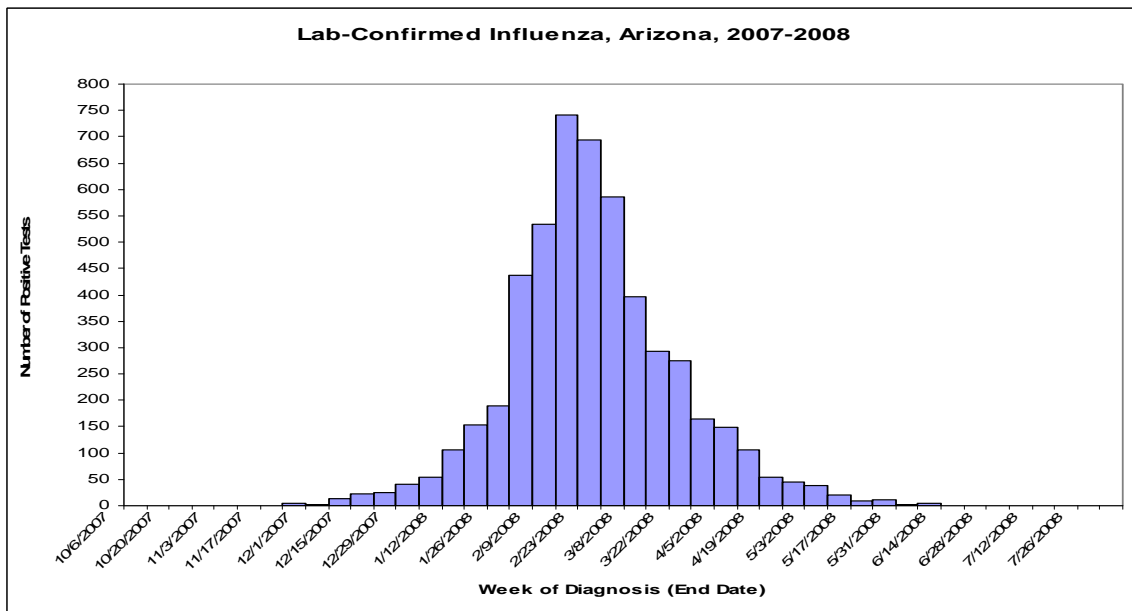
Of the 5,168 lab-confirmed influenza cases reported in the 2007-2008 season, 2,898 were influenza A (673 confirmed by culture or PCR), 1900 were influenza B (497 confirmed by culture or PCR), and 370 were unknown.

Some lab results are reported after significant delay creating irregularities when by week of report (Graph A). By looking at these data by week of diagnosis, it is easier to see the influenza trends in Arizona for the 2007-2008 season (Graph B).

Graph A: Lab-Confirmed Influenza by Week of Report



Graph B: Lab-Confirmed Influenza by Week of Diagnosis



Subtyping – Culture or PCR Results:

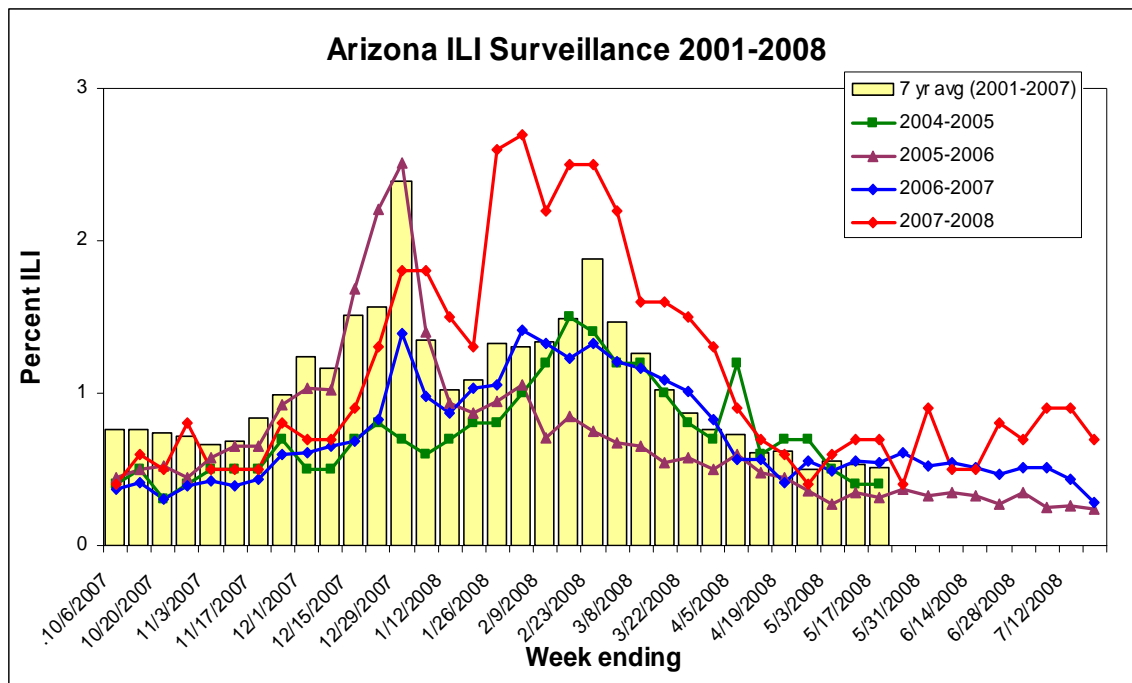
Viral isolation, or culture, is currently the “gold standard” for diagnosis of influenza virus infections. The influenza subtype can be determined by a test called hemagglutination inhibition (HI) using viral isolates. Polymerase chain reaction (PCR) can also be used to confirm and identify influenza B and the hemagglutinin (H) component of influenza A.

	Season (2007-2008)	Percent Total (2007-2008)	Season (2006-2007)	Percent Total (2006-2007)
Total	5168	100%	1663	100%
Influenza A	2898	56%	1116	67%
A/H1 or A/H1N1	184	4%	235	14%
A/H3 or A/H3N2	234	5%	31	2%
A/Unsubtyped	257	5%	185	11%
Influenza B	1900	37%	355	21%
B/Malaysia	0	0%	38	2%
B/Shanghai	181	4%	5	1%
B/Unsubtyped	325	6%	120	7%
Unknown	370	7%	192	12%

Influenza-Like Illness (ILI) Surveillance from Sentinel Providers

The proportion of patient visits to sentinel providers for ILI in the state peaked at 2.7% during the last week of January and early part of February and nearly reached the peak level again in mid-to-late- February. The peak value is roughly five times the baseline average of ILI (0.5%) in Arizona. Likewise, in comparison to the seven year average, the 2007-2008 ILI data is considerably higher, especially after the beginning of the new year, which indicates more of an active influenza season.

ILI is defined as a fever of at least 100°F plus either a cough or a sore throat.

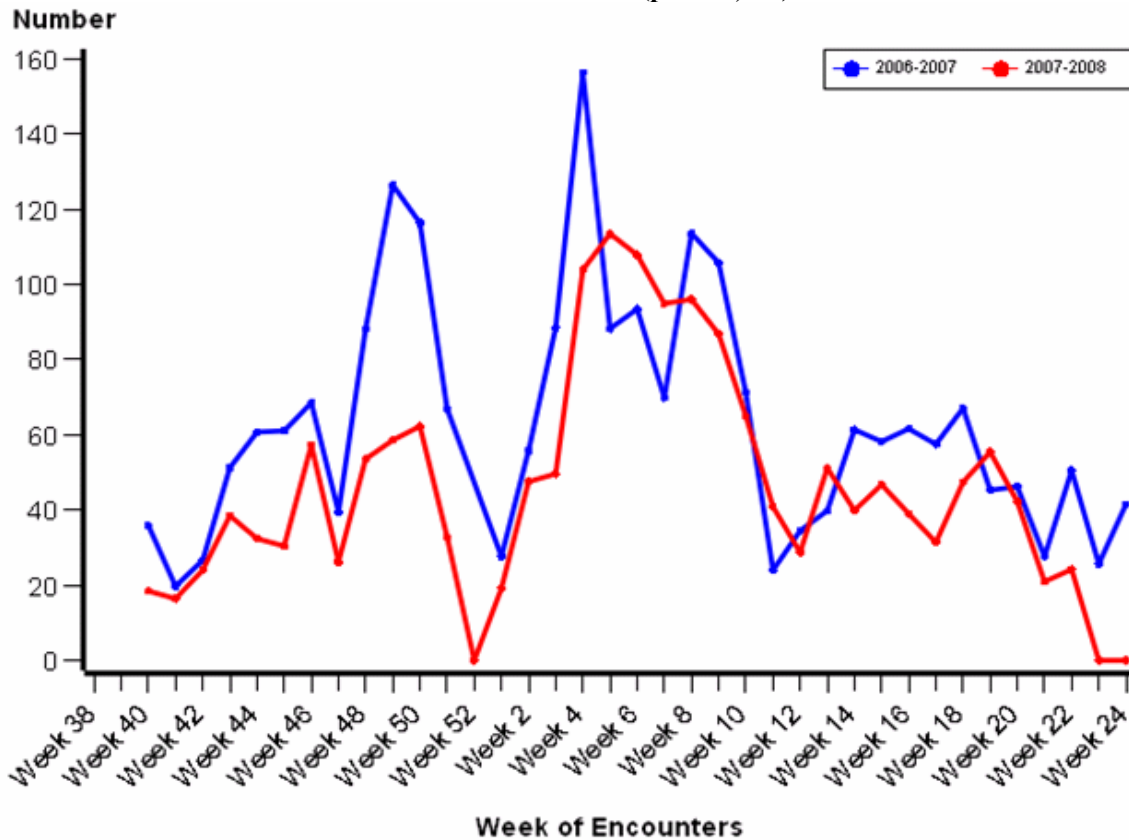


Influenza-Like Illness (ILI) Surveillance from Participating Arizona Schools

ADHS and the Arizona School Nurse Consortium developed and implemented a software program called Child Health Indicator Program (CHIP) to assist school nurses in electronic management of student health records. Currently, nurses in 340 Arizona schools use the software to collect information on student health conditions for 266 nursing diagnosis codes, including influenza-like illness (ILI), rash, and gastrointestinal illness (GI).

The graph presents the weekly trend of ILI syndromes reported among students during the school years of 2006-2007 and 2007-2008. The number of 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)

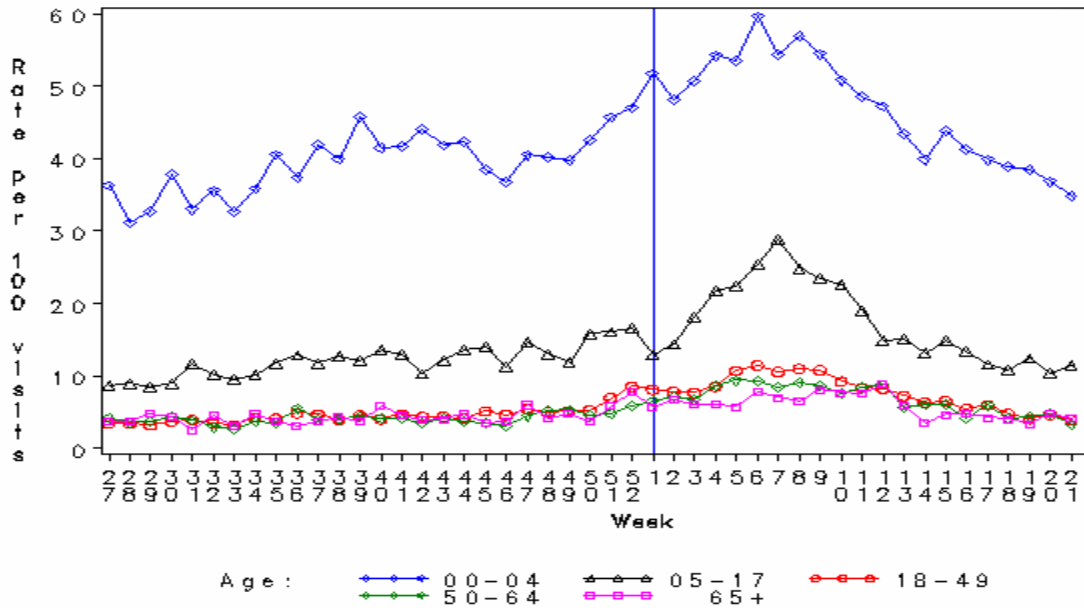


Influenza-Like Illness (ILI) Surveillance from Biosense

BioSense is a national, real-time biosurveillance system that can be used for early event detection and health situational awareness. Currently, eight hospitals in Arizona submit data including patient chief complaint, physician diagnosis, supporting patient demographic data, daily hospital census to BioSense on daily basis. More information on BioSense can be found at <http://www.cdc.gov/biosense/>.

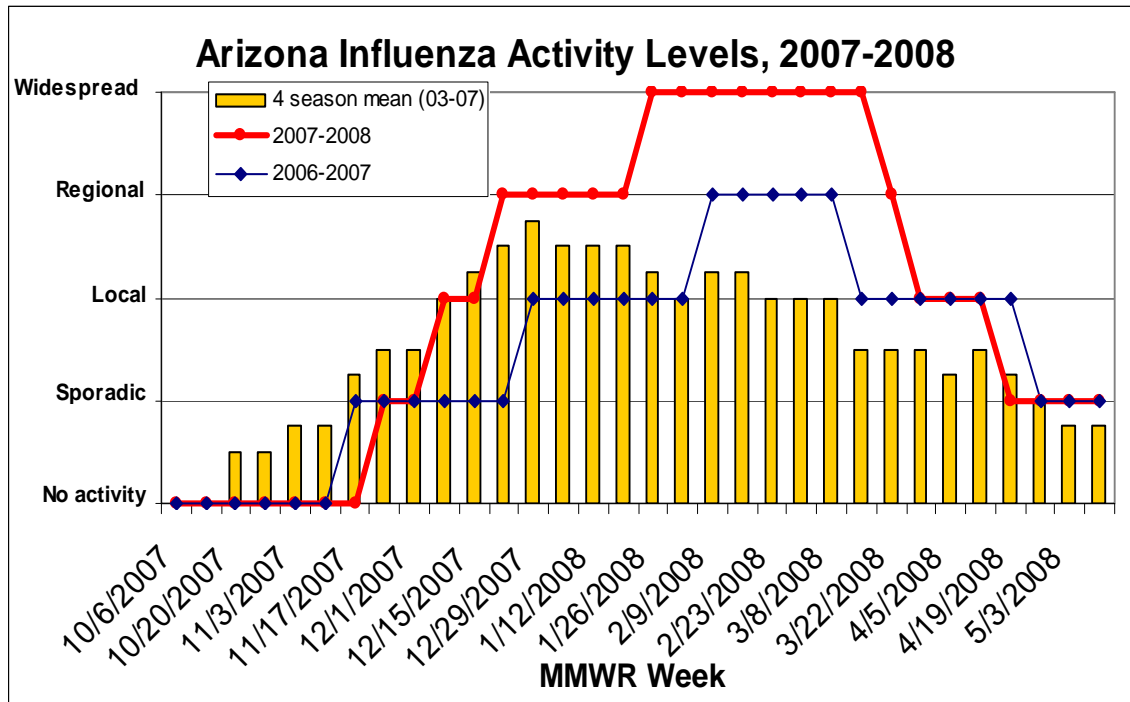
The graphs are time series analysis results based on BioSense emergency department chief complaint data in Arizona. The lines in the graph are the rate of Flu-Fever-Cough cases per 100 visits by age group.

**BioSense Hospitals Emergency Department Chief Complaint Data, Flu-Fever-Cough
Arizona
Season 2007-2008**



Historical Arizona Influenza Activity Levels

The graph below shows the influenza activity levels reported to the CDC this season in comparison to the nine previous seasons. It is important to note that definitions changed in 2007; therefore, activity levels are not directly comparable. However, the seasonality differences can be seen here. Definitions of these reporting categories can be found at <http://www.cdc.gov/flu/weekly/fluactivity.htm>.



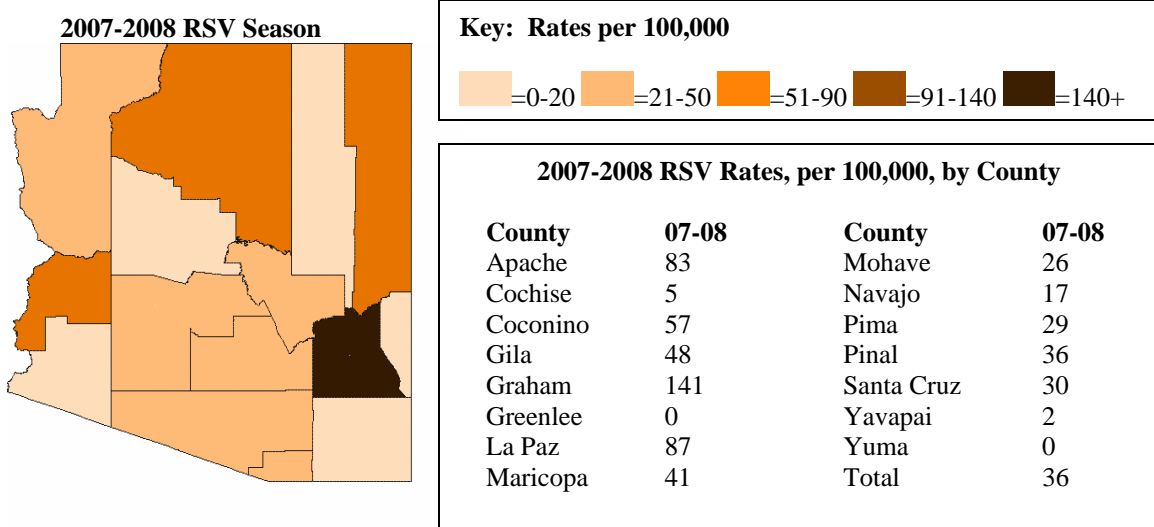
Pediatric Influenza Deaths

Two influenza-associated pediatric deaths were reported in Arizona during the 2007-2008 season. Both deaths occurred shortly after the peak of the influenza season and both cases were infected with influenza B virus. One of the influenza-associated pediatric deaths involved a co-infection with *Staphylococcus aureus*. Neither child was vaccinated with the seasonal influenza vaccine.

Annual RSV Summary:

During the 2007-2008 season, ADHS received 2,319 reports of laboratory-confirmed respiratory syncytial virus (RSV). Highest rates of infection were noted in those less than one year of age and in those from one year to four years of age. Few gender differences were noted across the noted age groups with the exception of the infant age or less than one year of age. Here, male infants have a notably higher rate of infection compared to infant females.

RSV Activity by County:



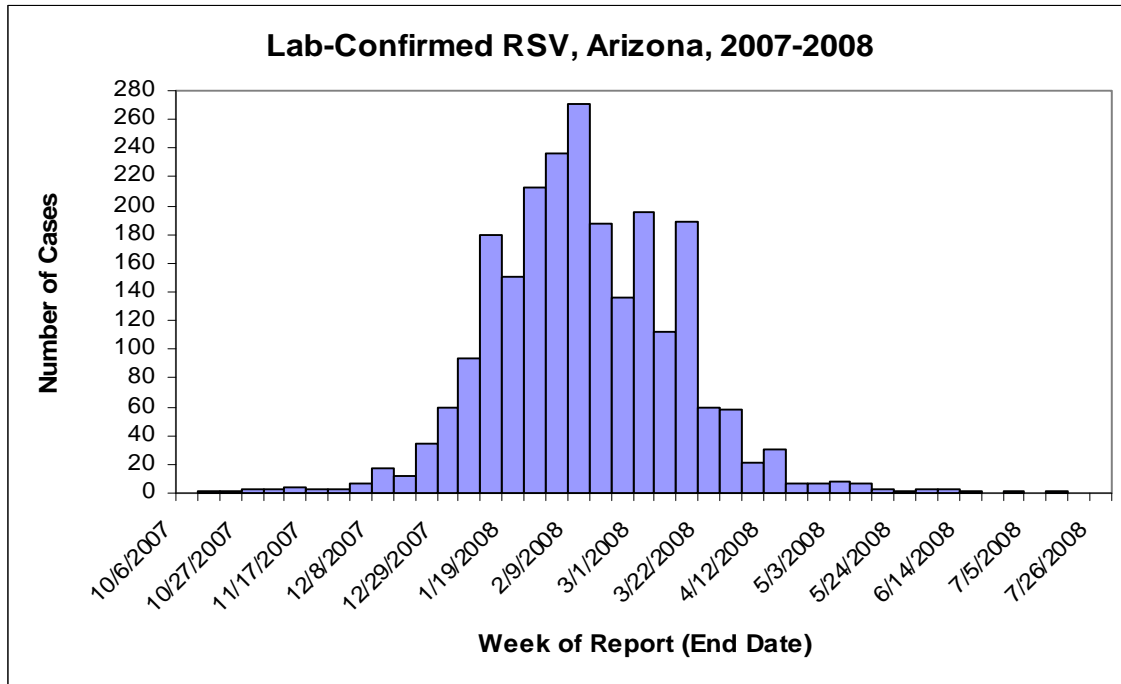
Some counties experienced higher rates of RSV than others. Graham and La Paz counties had the highest rates of RSV in the state followed by Apache, Coconino, and Gila. These differences may be due in part to a difference in reporting between the counties.

Lab-Confirmed RSV Cases Reported by County - 2007-2008 Season [2,319 cases]:

Since October 2004, laboratories have been required to report positive RSV tests to ADHS.

County	2007-2008 Season	2006-2007 Season
Apache	63	19
Cochise	7	41
Coconino	77	49
Gila	27	45
Graham	51	49
Greenlee	0	0
La Paz	19	1
Maricopa	1587	1578
Mohave	52	37
Navajo	19	19
Pima	291	306
Pinal	104	55
Santa Cruz	14	11
Yavapai	4	3
Yuma	0	5
Unknown	4	0
Total	2319	2218

Laboratory Surveillance for RSV:



RSV Activity by Age and Gender:

