2017-18 Season Summary

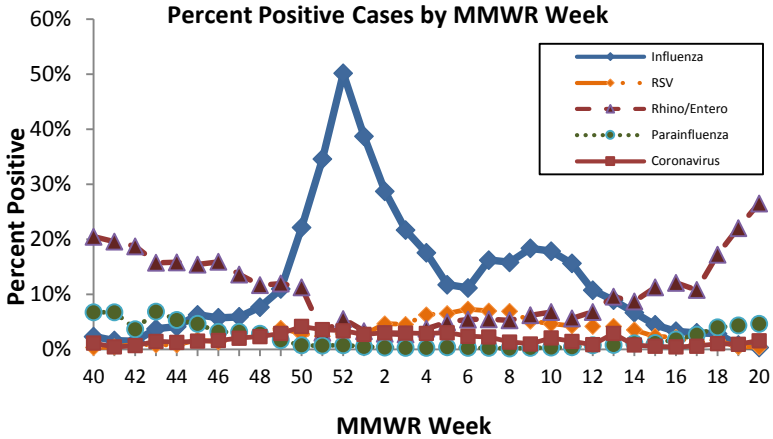
The traditional influenza surveillance season begins in October and ends mid-May of the following year, covering a 32 week period. Los Angeles County uses MMWR weeks to refer to surveillance weeks, with week 1 corresponding to the first week in January. The 2017–18 season (October 1, 2017–May 13, 2018) in Los Angeles County had higher influenza activity than the previous 5 influenza seasons. Peak activity occurred during week 52 (December 24–30, 2017) when 50% of respiratory specimens tested by sentinel labs were positive for influenza (Table 1). In addition, syndromic surveillance detected the highest proportion of visits to emergency departments for influenza-like-illness (ILI) during that same week (Figure 1). This season also saw the greatest number of influenza-associated deaths reported since these deaths became reportable in Los Angeles County. The greatest weekly number of influenza-associated deaths (54) occurred during week 1 (December 31, 2017–January 6, 2018). Of the positive influenza test results we received during the 2017–18 season, 66% were influenza A viruses (Table 1).

Table 1. Los Angeles County Influenza Surveillance Summary

	2017-18		2016-17
	Peak Week 52*	YTD**	
Sentinel Laboratory Data			
Positive Flu Tests/Total Tests	2971/5926	6,855/107,199	6,855/68,732
(Percent Positive Flu Tests)	0.501	0.172	0.1
Percent Flu A/B	87/13	66/34	92/8
Outbreaks†			
Community Respiratory Outbreaks	6	67	35
Influenza Confirmed Outbreaks	5	77	30
Total	11	144	65
Influenza-Associated Deaths †‡			
Pediatric Flu Deaths	0	2	1
Adult Flu Deaths	61	276	76
Total	61	278	77

*Week 52 corresponds to December 24-30, 2017.
The influenza surveillance year spans** (surveillance weeks 40-20)
†Numbers are provisional and subject to change
‡Confirmed influenza death is defined by a positive lab test, ILI symptoms, and clear progression from illness to death

Figure 1. Respiratory Viruses, LAC, 2016-17
Percent Positive Cases by MMWR Week



Sentinel Laboratory Data

Nine sentinel laboratories serving healthcare providers and institutions across LAC reported weekly influenza and other respiratory virus data this season. Although individual cases of influenza are not reportable to the LAC Department of Public Health (DPH), analyzing data from these sentinel labs provides information on influenza and other respiratory virus circulating in the county. This season, a total of 107,199 respiratory isolate tests were reported to LAC DPH (Table 1). Figure 1 shows the percent of respiratory specimens positive by viral etiology and week. This season, influenza activity began to increase at the beginning of December, peaked at the during Week 52 (Dec 24–30, 2017) and stayed high through March. There was a decline in influenza activity in January and February, but activity trended upwards again in March corresponding with increased influenza B activity. Other viruses co-circulated with influenza, contributing to the overall impact of respiratory illness in LAC.

During this season, the majority of influenza positive specimens were influenza A (66%).

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Table 2. Demographic Characteristics of Influenza Fatalities LAC 2012-2018							
		2017-18 N (%)	2016-17 N (%)	2015-16 N (%)	2014-15 N (%)	2013-14 N(%)	2012-13 N (%)
Age (years)	Median	75.7	82.5	62	81	56	68
	Range	9-105	4-102	1-103	1-101	0-89	0-100
	0-5	0	1 (1)	2 (2)	1 (2)	1 (1)	5 (7)
	6-17	2 (1)	0	1 (1)	3 (5)	3 (3)	3 (4)
	18-40	10 (4)	2 (3)	10 (12)	5 (9)	13 (12)	4 (6)
	41-64	47 (17)	16 (20)	31 (38)	8 (14)	59 (56)	22 (31)
	65+	219 (79)	61 (76)	38 (46)	39 (69)	30 (28)	36 (52)
Gender	Male	127 (46)	35 (44)	44 (54)	30 (54)	67 (64)	35 (50)
	Female	151 (54)	47 (56)	38 (46)	26 (46)	38 (36)	35 (50)
Race	Hispanic	66 (24)	16 (20)	27 (33)	16	48 (46)	29 (42)
	White Non-Hispanic	118 (42)	39 (49)	24 (29)	26	41 (39)	25 (37)
	Asian/Pacifc Islander	40 (14)	4 (5)	14 (17)	8	7 (7)	6 (9)
	Black	30 (11)	5 (6)	9 (11)	4	9 (8)	8 (12)
	Native American	0	0	1 (1)	1 (2)	0	0
	Unknown	24 (9)	14 (18)	6 (7)	1 (2)	0	2 (3)
Total Fatalities		**278**	**80**	**82**	**56**	**105**	**70**

Influenza-Associated Deaths

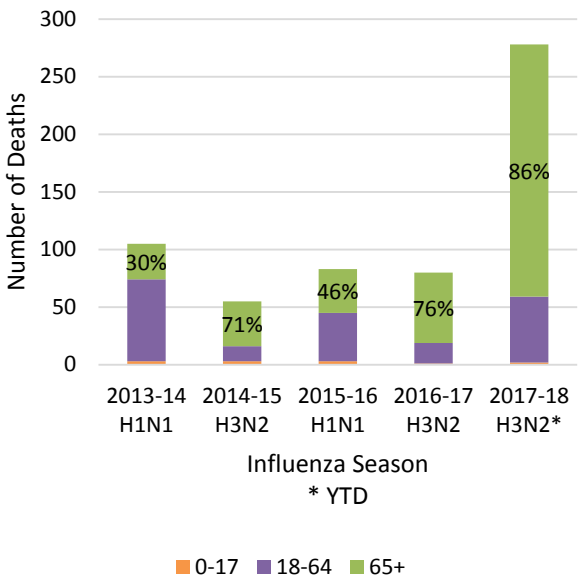
Since October 15, 2010, laboratory confirmed influenza fatalities of all ages and due to any strain are required to be reported to the ACDC within 7 calendar days. Cases are reported to ACDC from physicians, infection prevention specialists at hospitals, the coroner's office, and via death certificate.

To date, a total of 278 influenza-associated deaths (IADs) have been confirmed in Los Angeles County this season*. There were more deaths reported this season than any season since LAC initiated mandatory reporting.

The majority of deaths (79%) occurred in those 65 years of age and older (219), which is consistent with other Influenza A H3N2 predominant seasons that more severely affect the 65 and older population (Table 2). Figure 2 compares the distribution of LAC IADs by age-specific rates across the past 5 influenza seasons. During Influenza A H3N2 seasons, the 65+ age group accounts for a greater proportion of IADs compared to influenza A H1N1 predominant seasons.

*This number may change as more information becomes available.

Figure 2. Influenza Deaths by Season, 2012-2018



Respiratory Outbreaks

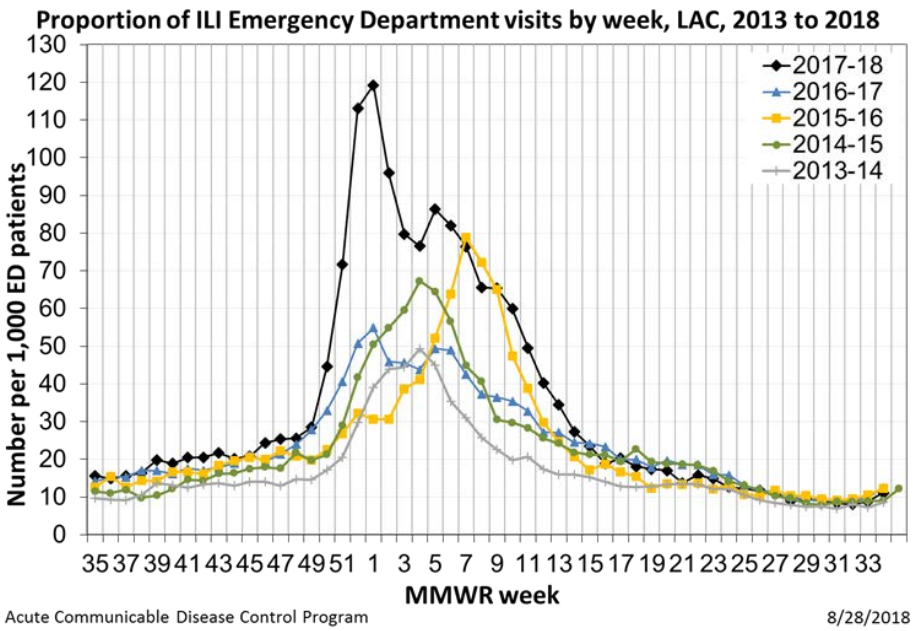
Similar to other indicators, there were more respiratory outbreaks reported this season than in any of the last 5 seasons. The majority of respiratory outbreaks this season were reported in skilled nursing facilities (53%), followed by schools and pre-schools (23%) (Table 3). Respiratory outbreak definitions vary by setting, however in general, the occurrence of a cluster of influenza-like illness (fever >100° F with cough and/or sore throat) is cause for investigation.
Of the 144 outbreaks reported this season, 113 were confirmed to be caused by influenza. One was caused by a different respiratory pathogen and 30 were of unknown etiology.

Table 3. Characteristics of Confirmed Community Respiratory Outbreaks, LAC 2012-2017

	2017-18 N (%)	2016-17 N (%)	2015-16 N (%)	2014-15 N (%)	2013-14 N (%)	2012-13 N (%)
Total	**144**	**72**	**48**	**58**	**29**	**73**
Location						
Skilled Nursing Facility (SNF)	77 (53)	32 (44)	14 (29)	25 (43)	12 (41)	23 (32)
School or Pre-School	33 (23)	22 (31)	22 (46)	20 (34)	11 (38)	41 (56)
Assisted Living	28 (20)	15 (21)	8 (17)	12 (21)	3 (10)	6 (8)
Daycare/child care	3 (2)	2 (3)	2 (4)	1 (2)	1 (3)	3 (4)
Other	3 (2)	1 (1)	2 (4)	0	2† (7)	0
Etiology						
Influenza	113 (78)	37 (51)	22 (46)	37 (64)	7 (24)	17 (23)
Other Respiratory	1 (1)	8 (11)	2 (4)	1 (2)	0	1 (1)
Respiratory unknown etiology	30 (21)	27 (38)	24 (50)	20 (34)	22 (76)	55 (76)

Syndromic Surveillance

ACDC's Syndromic Surveillance Project monitors initial self-reported symptoms from patients presenting to participating emergency departments throughout Los Angeles County. These symptoms are categorized into different clinical syndromes according to specific code words. LAC's influenza surveillance looks at the syndrome of Influenza-like illness and includes symptoms such as: fever, congestion, sneezing, sore throat, runny nose, and cough. Similar to other indicators, there were more ILI emergency department visits this season than were reported in any of the last 5 seasons.



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