



# Dallas County Health and Human Services 2017–2018 Influenza Surveillance Report

Week 10 ending March 10, 2018

## Epidemiologic Summary

- Influenza activity has decreased in Dallas County with 8.7% of tests returning positive during week 10. Nationally, 15.0% of specimens reported to CDC were positive for influenza.
- During week 10, the most frequently identified influenza virus type in Dallas County was influenza B (63%). All influenza B strains tested locally have been the Yamagata strain.
- Numbers of emergency department visits for influenza-like illness in Dallas County and influenza-associated hospitalizations decreased during week 10.
- No influenza-associated deaths of an adult were reported in week 10. One influenza-associated pediatric death has been reported during the 2017-2018 season in Dallas County.
- RSV activity continues to decline.

**Table 1.** Summary of Influenza Surveillance from Dallas County Hospitals and Hospital Laboratories

Week Ending	02/03	02/10	02/17	02/24	03/03	03/10	9/10/17 – Present
CDC Week	5	6	7	8	9*	10*	
<b>Total Influenza PCR Tests</b>	1,741	1,969	1,800	1,479	1,222	958	27,485
Number of positive PCR tests	369	310	383	215	125	56	4,917
Percent of positive PCR tests	21.2	15.7	21.3	14.5	10.2	5.9	
<b>Total Rapid Influenza Diagnostic Tests</b>	5,108	4,604	4,055	3,136	2,255	1,594	54,777
Number of positive RIDTs	1,300	1,074	917	571	320	168	12,251
Percent of positive RIDTs	25.5	23.3	22.6	18.2	14.2	10.5	
<b>Total Influenza Tests Performed</b>	6,863	6,585	5,870	4,632	3,492	2,562	83,244
Total positive influenza tests <sup>1</sup>	1,669	1,384	1,301	786	445	224	17,176
Percent positive influenza tests	24.3	21.0	22.2	17.0	12.7	8.7	
Positive influenza A tests <sup>2</sup>	766	552	457	256	145	83	11,030
Positive influenza B tests	903	832	844	530	300	141	6,146
Non-differentiated influenza tests <sup>3</sup>	0	0	0	0	0	0	0

<sup>1</sup> Includes positive rapid antigen, PCR, DFA, or culture results

<sup>2</sup> Further subtyping is performed only by select hospital laboratories for specimens referred to DCHHS by institutions for PCR-testing

<sup>3</sup> Non-differentiated refers to rapid test results which did not differentiate between influenza A and B

**Table 2.** Summary of Influenza Hospitalizations and Deaths from Dallas County Hospitals, Vital Statistics and Medical Examiner's Office

Week Ending	02/03	02/10	02/17	2/24	03/03	03/10	03/17	9/10/17 – Present
CDC Week	5	6	7	8	9*	10*	11*	
Influenza hospitalizations <sup>4</sup>	214	200	194	112	70	37	N/A	2,873
Influenza ICU admissions <sup>4</sup>	47	36	32	24	12	9	N/A	549
Confirmed pediatric deaths <sup>5</sup>	0	0	0	0	0	0	0	1
Confirmed adult deaths <sup>6</sup>	6	3	3	2	3	0	0	77
Possible influenza-associated deaths <sup>7</sup>	0	1	0	0	0	0	0	2

<sup>4</sup> Reflects all influenza-associated hospitalizations reported from hospitals located within Dallas County by week of any positive influenza tests; Data source: 14 Hospitals in Dallas County

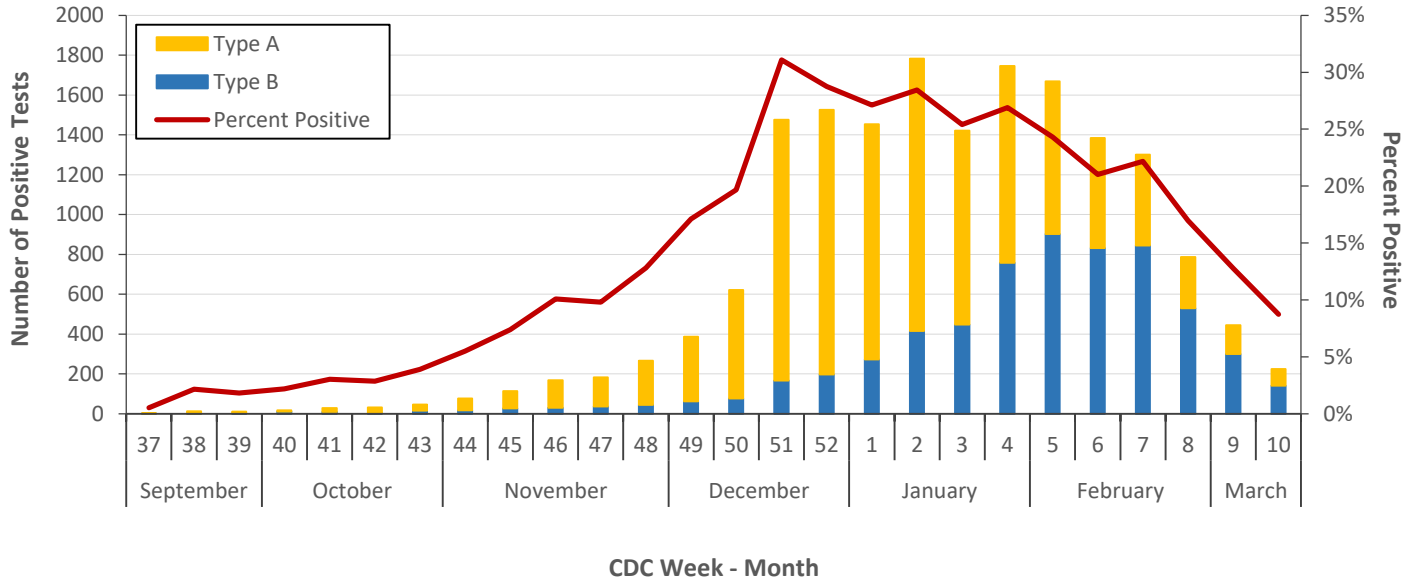
<sup>5</sup> Confirmed influenza-associated deaths of Dallas County residents <18 years of age

<sup>6</sup> Confirmed influenza-associated deaths as defined by a positive laboratory test and any of the following: (1) death certificate denotation, (2) medical record documentation of compatible symptoms and clear progression from illness to death, or (3) determination by the County Medical Examiner's office (ME) of no alternate cause of death

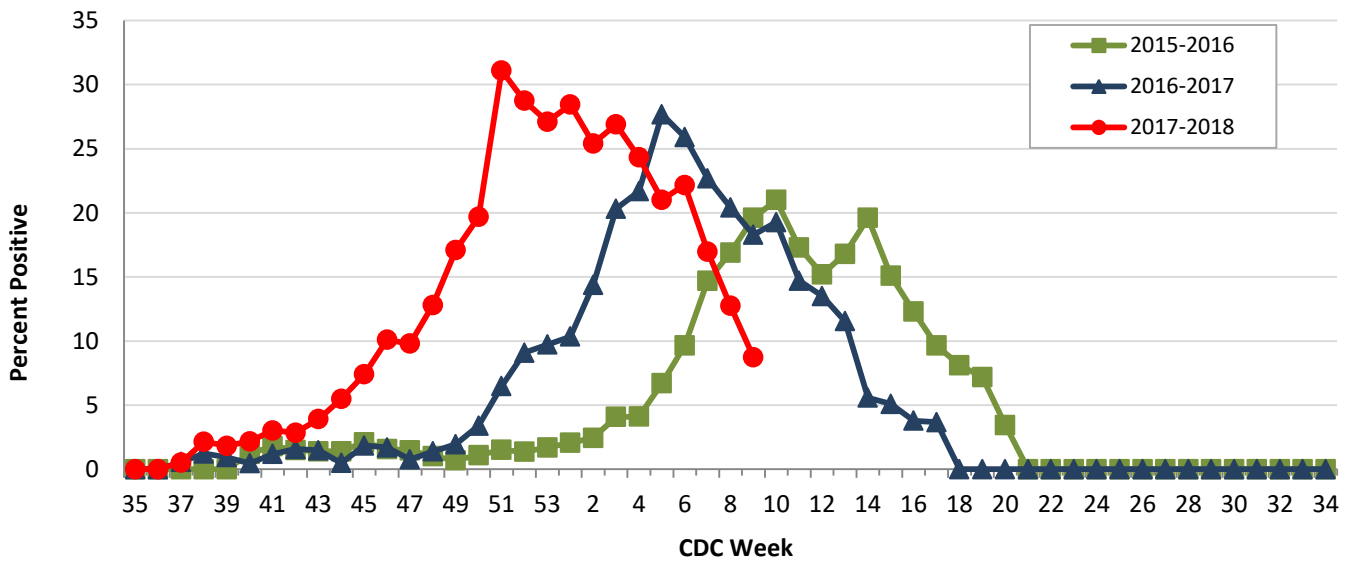
<sup>7</sup> Possible influenza-associated deaths are defined as cases with laboratory-confirmed influenza, but pending final autopsy results for determination of primary cause of death

\*Indicates preliminary results which are subject to change with late-arriving data from surveillance sites designated for DCHHS' seasonal influenza program

**Figure 1.** Influenza Positive Tests Reported to DCHHS by Hospital Laboratories: 2017—2018 Seasons



**Figure 2.** Influenza Positive Tests Reported to DCHHS by Hospital Laboratories: 2015—2018 Seasons



Note: For Figure 2 and all subsequent trend overlays there is no week 53 for the 2015-2016, 2016-17, or 2017-2018 influenza seasons, therefore week 53 data point for those seasons is an average of week 52 and week 1.

**Table 3.** Influenza Typing and Subtyping from Cumulative Dallas County, Texas, and U.S. Laboratory Surveillance Data: 2017—2018 Season

	Dallas <sup>1</sup> (n=432)	Texas <sup>2</sup> (n= 1,466)	U.S. <sup>3</sup> (n= 43,810)
Influenza A	366 (84.7%)	1,083 (73.9%)	33,778 (77.1%)
H1N1 2009 subtype	139 (38.7%)	276 (25.8%)	4,415 (13.2%)
H3N2 subtype	220 (61.3%)	792 (74.2%)	28,950 (86.8%)
Not subtyped	7	15	413
Influenza B	68 (15.7%)	379 (25.9%)	10,032 (22.9%)
Yamagata strain	68 (100%)	279 (*90.3%)	6,562 (65.4%)

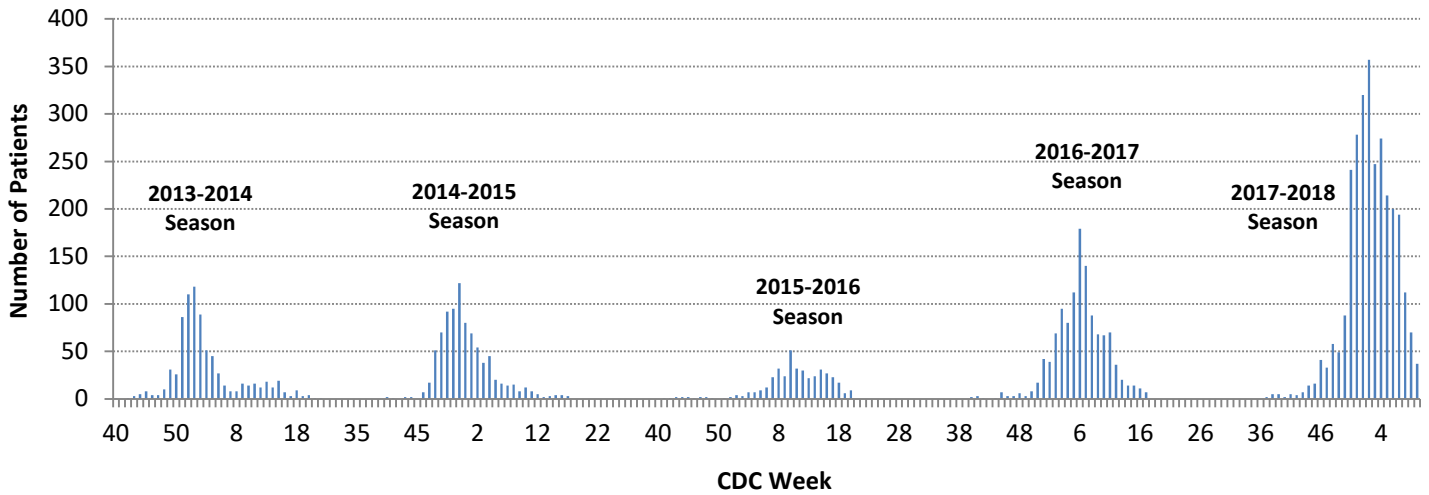
<sup>1</sup> DCHHS LRN laboratory PCR testing of designated Dallas County surveillance site isolates; counts may not sum to total as samples can test positive for multiple subtypes

<sup>2</sup> DSHS 2017–2018 Texas Influenza Surveillance Information Activity Report available at <https://www.dshs.state.tx.us/idcu/disease/influenza/surveillance/>

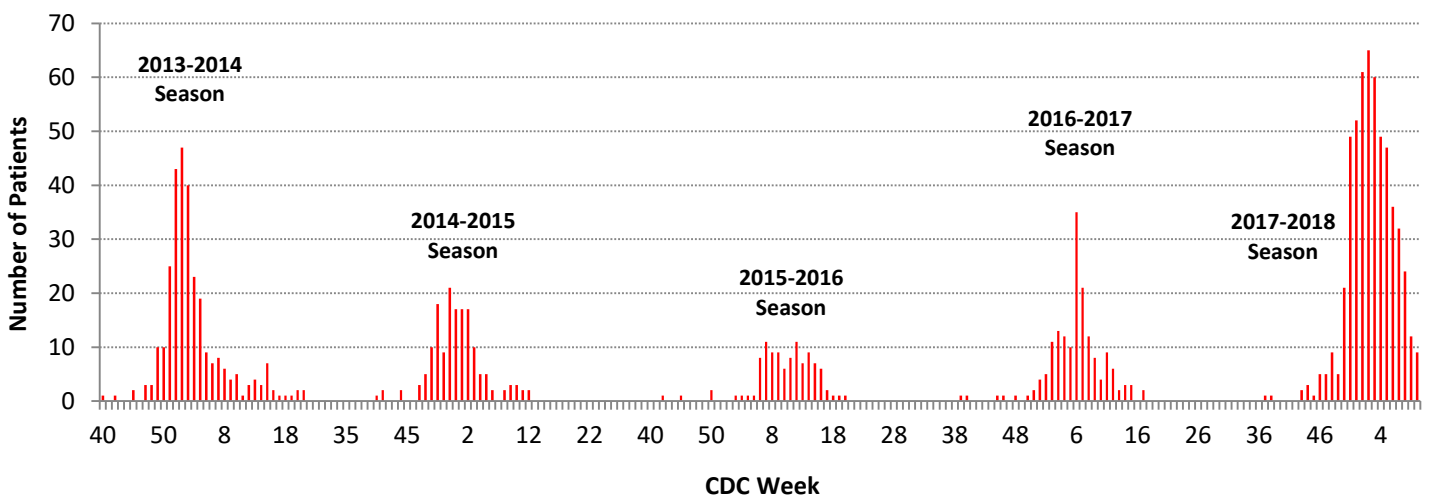
<sup>3</sup> CDC FluView Weekly Influenza Surveillance Report available at <http://www.cdc.gov/flu/weekly/>

\* Of all the Influenza B positives, only 309 specimens had lineage testing performed

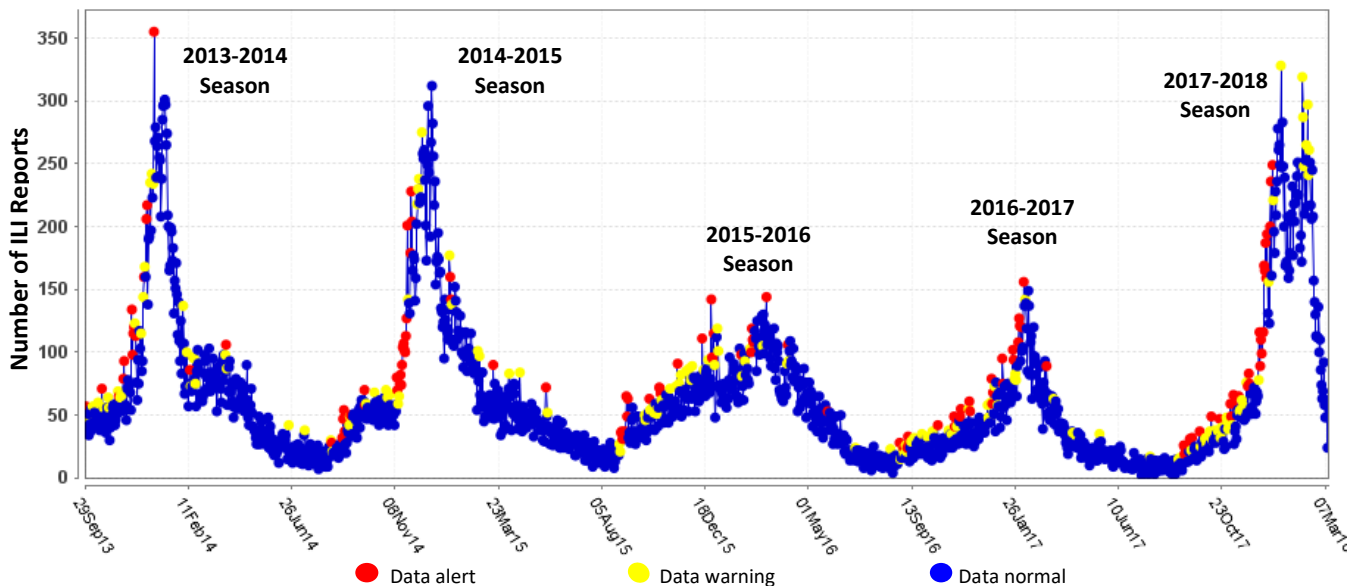
**Figure 3.** Influenza Hospitalizations by Week of Admission, Dallas County: 2013–2018 Seasons



**Figure 4.** Intensive Care Unit Hospitalizations for influenza by Week of Admission, Dallas County: 2013–2018 Seasons



**Figure 5.** Syndromic Surveillance of Emergency Department Visits for Influenza-like Illness (ILI), Dallas County: September 29, 2013 – March 10, 2018



Data source: 18 emergency departments in Dallas County hospitals participating in the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) voluntarily reporting the numbers of persons presenting with self-reported chief complaints of ILI.

**Table 4.** Characteristics of Influenza-associated ICU Hospitalizations, Dallas County Hospitals: Week 37 to Present

ICU Admissions		N=468
Influenza Type	Influenza A*	323 (69.0%)
	Influenza B	142 (30.4%)
Gender	Female	234 (50.0%)
	Male	234 (50.0%)
Race	Black	142 (30.3%)
	Hispanic	70 (15.0%)
	White	206 (44.0%)
	Other	50 (10.7%)
Age	0 to 4	22 (4.7%)
	5 to 18	18 (3.9%)
	>18 to 50	84 (18.0%)
	>50 to 65	121 (25.9%)
	>65	223 (47.7%)
Presence of $\geq 1$ underlying high risk medical conditions		394 (84.2%)
Mechanical Ventilation		151 (32.3%)
BiPAP		134 (28.6%)
ECMO		14 (3.0%)

Data Source(s): All Hospitalizations in Dallas County reported to DCHHS with any positive rapid antigen, PCR, DFA or culture result for influenza; \* includes seven patients co-infected with influenza A and type B; <sup>1</sup> Available from the CDC website at [https://www.cdc.gov/flu/about/disease/high\\_risk.htm](https://www.cdc.gov/flu/about/disease/high_risk.htm)

**Table 5.** Characteristics of Influenza-Related Deaths, Dallas County Residents: Week 37 to Present

Total Deaths		N=78
Influenza Type	Influenza A*	52 (66.7%)
	Influenza B <sup>†</sup>	28 (35.9%)
Gender	Female	42 (53.8%)
	Male	36 (46.2%)
Race	Black	16 (20.5%)
	Hispanic	16 (20.5%)
	White	36 (46.2%)
	Other	10 (12.8%)
Age	0 to 18	1 (1.3%)
	>18 to 65	22 (28.2%)
	>65	55 (70.5%)
Presence of $\geq 1$ underlying high risk medical conditions		74 (94.9%)

\*Of the six influenza A viruses that were subtyped, four were H1N1 and two were H3N2. <sup>†</sup> Two individuals were dual positive for influenza A and B.

**Table 6.** Confirmed Influenza-associated Pediatric and Adult Deaths, Dallas County: 2011–2018 Seasons

	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017	2017–2018
Pediatric	3	3	0	1	1	1
Adult	6	55	19	14	16	77

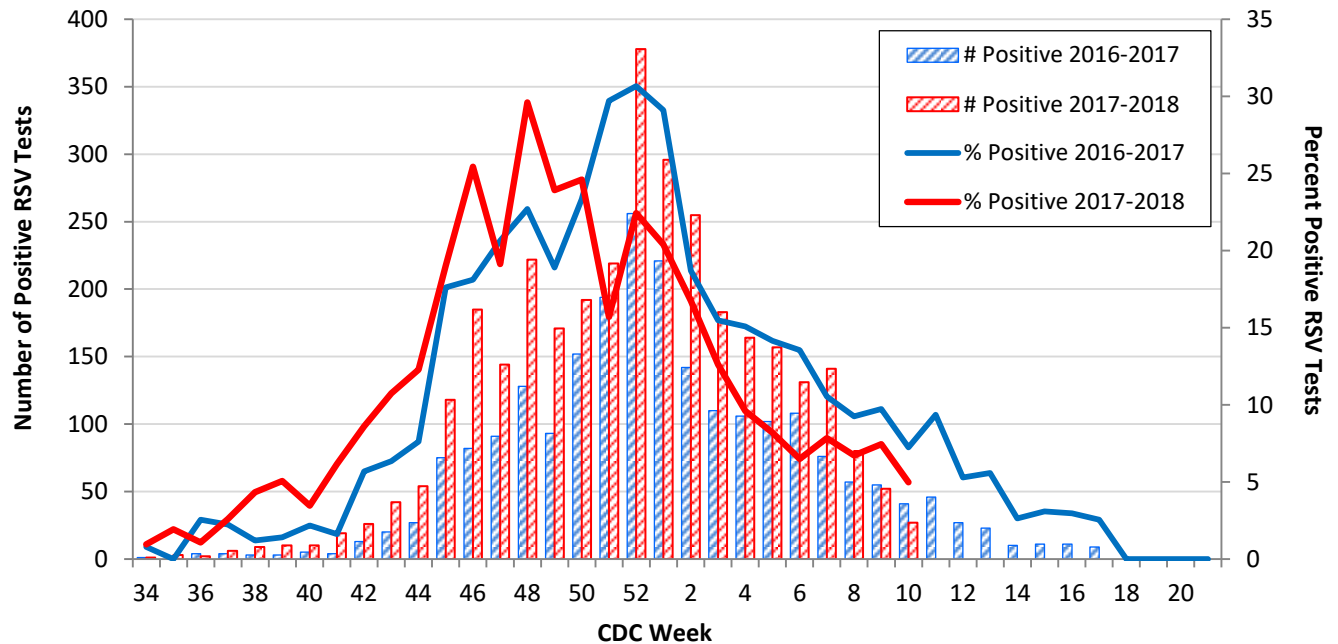
Data source: Reports of confirmed influenza-associated deaths, as defined in Table 2.

**Table 7.** Non-Influenza Respiratory Virus Testing by North Texas Laboratories Reported to NREVSS, Week 10

Virus	Number of Laboratories Reporting	Tests Performed	Total Positive Tests	Percentage of Tests Positive
Adenovirus (respiratory)	4	189	2	1.1%
HMPV	4	179	16	8.9%
Parainfluenza virus	4	189	2	1.1%
Rhinovirus/Enterovirus	4	179	30	16.8%
RSV	4	543	27	5.0%

Data source: National Respiratory and Enteric Virus Surveillance System (NREVSS) and hospitals reporting directly to DCHHS

**Figure 6.** Number and Percent Positive RSV Rapid Antigen and PCR Tests by Week, NREVSS Surveillance Data, North Texas: August 27, 2016 – March 10, 2017



Data source: National Respiratory and Enteric Virus Surveillance System (NREVSS) and hospitals reporting directly to DCHHS

**Table 8.** Number and Percent Positive RSV Rapid Antigen and PCR Tests by Week, NREVSS Surveillance Data, North Texas: August 26, 2017 – March 10, 2017

Week Ending	01/27	02/03	02/10	02/17	02/24	03/03	03/10	8/26/17–Present
CDC Week	4	5	6	7	8	9	10*	
RSV tests performed weekly	1,709	1,916	2,019	1,799	1,192	699	543	24,555
Total positive RSV tests	164	157	131	141	80	52	27	3,297
Percent positive RSV tests	9.6	8.2	6.4	7.8	6.7	7.4	5.0	

\*Indicates preliminary results which are subject to change as adjustments are made for late-arriving data

Data source: National Respiratory and Enteric Virus Surveillance System (NREVSS)

Figure 7. Percentage of Student Absences by Week, Dallas County: 2016-2017 and 2017-2018

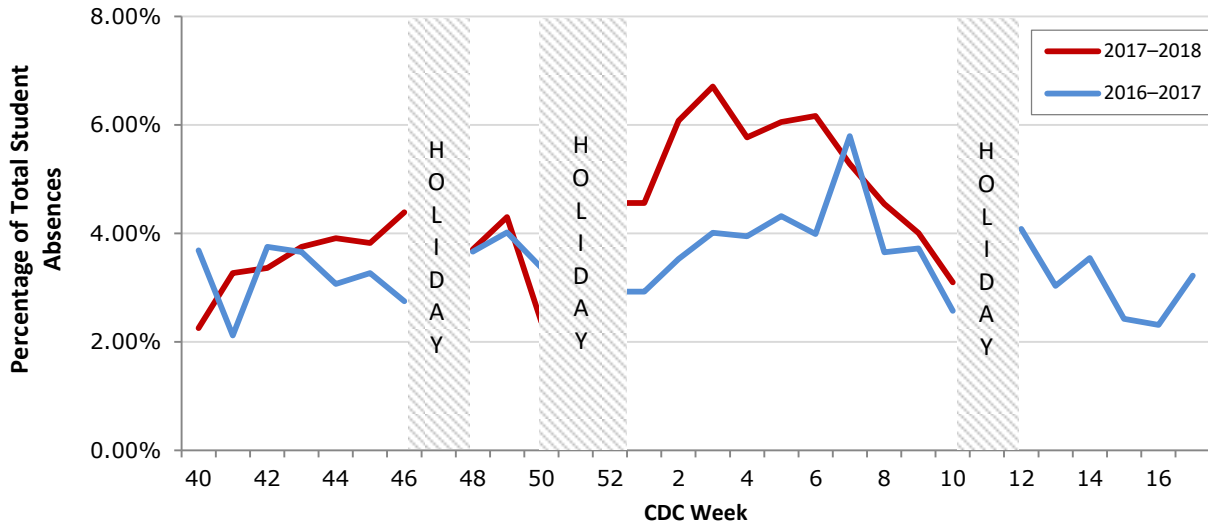
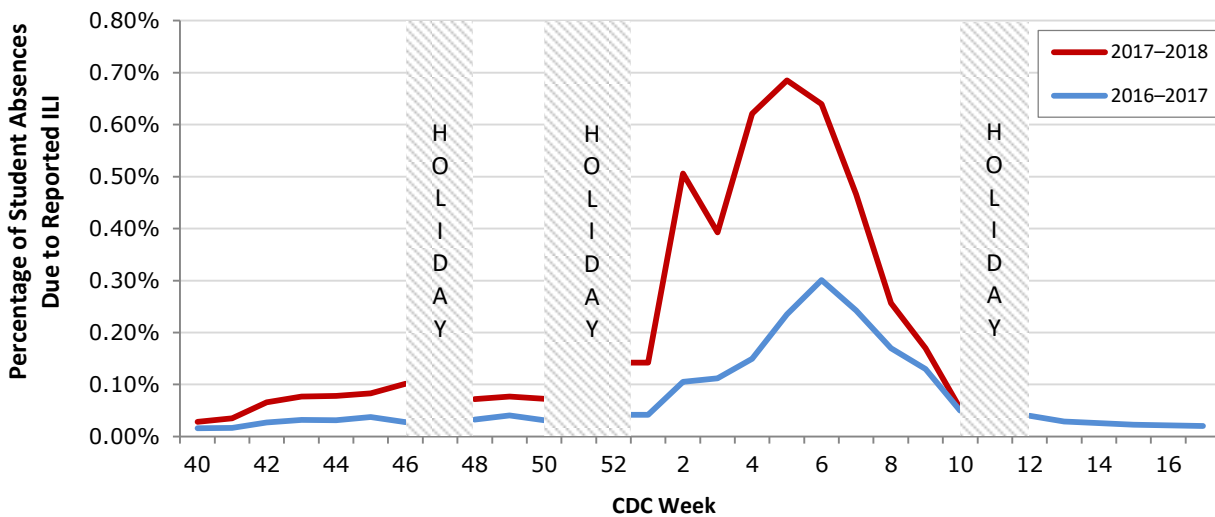


Figure 8. Percentage of Student Absences Due to ILI by Week, Dallas County: 2016-2017 and 2017-2018



Data source: Voluntary reporting from Independent School Districts representing over 510 elementary, middle, and secondary schools and over 420,000 students in Dallas County

**Please report any of the following patients to DCHHS within 1 working day:**

- **Hospitalized patients with influenza** (any subtype). Confirmation can be by any laboratory test, rapid antigen, culture, PCR, DFA/IFA, or performed in an outpatient or inpatient laboratory.
- **Deaths of persons with confirmed influenza** (any subtype). We are requesting all pediatric influenza-associated deaths to be reported *immediately* to facilitate specimen procurement and testing.
- Suspected influenza infections involving institutional outbreaks or a resident of any **Long Term Care facility** (please report *immediately*).

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