



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

Week 15 ending April 14, 2018

Epidemiologic Summary

- Influenza activity continued to decrease in Dallas County with 1.4% of tests returning positive during week 15. Nationally, 10.9% of specimens reported to CDC were positive for influenza.
- During week 15, the most frequently identified influenza virus type in Dallas County was influenza B (71%). 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 remain low during week 15.
- Three influenza-associated pediatric deaths have been reported during the 2017-2018 season in Dallas County.
- RSV continues to decline.

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

Week Ending	03/10	03/17	03/24	03/31	04/07	04/14	9/10/17
CDC Week	10	11	12	13	14*	15*	– Present
Total Influenza PCR Tests	958	916	886	787	619	638	31,331
Number of positive PCR tests	56	28	30	19	2	3	4,999
Percent of positive PCR tests	5.9	3.1	3.4	2.4	0.3	0.5	
Total Rapid Influenza Diagnostic Tests	1,656	1,264	882	828	628	390	58,831
Number of positive RIDTs	181	88	54	51	17	11	12,485
Percent of positive RIDTs	10.9	7.0	6.1	6.2	2.7	2.8	
Total Influenza Tests Performed	2,624	2,182	1,772	1,619	1,249	1,033	91,161
Total positive influenza tests ¹	237	116	84	70	19	14	17,492
Percent positive influenza tests	9.0	5.3	4.7	4.3	1.5	1.4	
Positive influenza A tests ²	86	44	23	25	5	4	11,134
Positive influenza B tests	151	72	61	45	14	10	6,358
Non-differentiated influenza tests ³	0	0	0	0	0	0	0

¹ Includes positive rapid antigen, PCR, DFA, or culture results

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

³ 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	03/10	03/17	03/24	03/31	04/07	04/14	04/21	9/10/17
CDC Week	10	11	12	13	14*	15*	16*	– Present
Influenza hospitalizations ⁴	37	19	27	19	2	5	N/A	2,945
Influenza ICU admissions ⁴	9	2	5	5	0	0	N/A	561
Confirmed pediatric deaths ⁵	0	0	0	1	0	0	0	3
Confirmed adult deaths ⁶	0	0	0	0	0	0	0	79
Possible influenza-associated deaths ⁷	0	0	0	0	0	0	0	0

⁴ 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

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

⁶ 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

⁷ 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

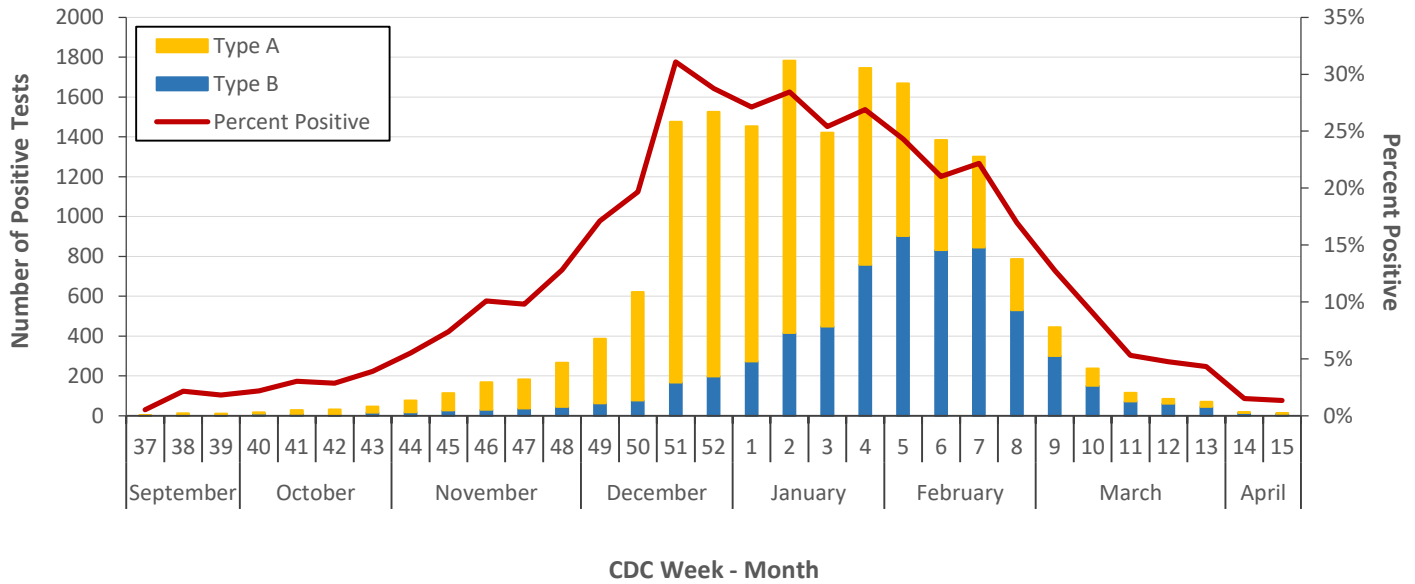
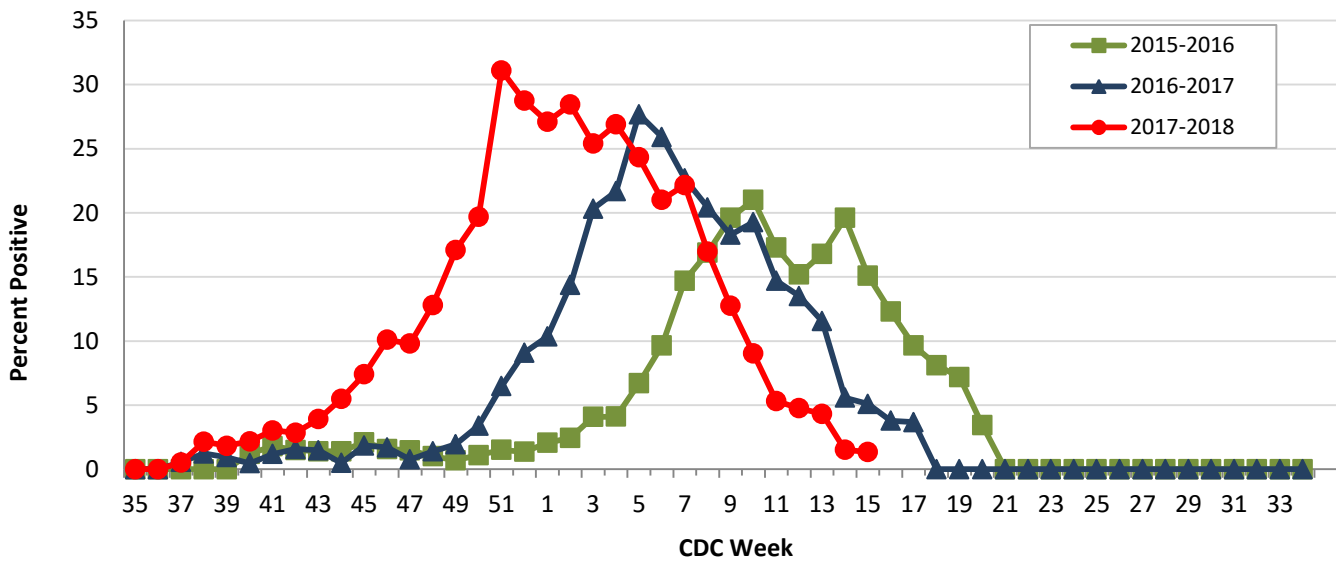


Figure 2. Influenza Positive Tests Reported to DCHHS by Hospital Laboratories: 2015—2018 Seasons



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.

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

	Dallas ¹ (n=447)	Texas ² (n=1,540)	U.S. ³ (n=50,664)
Influenza A	379 (84.8%)	1,105 (71.8%)	36,858 (72.7%)
H1N1 2009 subtype	144 (38.7%)	284 (26.1%)	5,271 (14.5%)
H3N2 subtype	228 (61.3%)	806 (73.9%)	30,991 (85.5%)
Not subtyped	7	15	596
Influenza B	70 (15.7%)	431 (28.0%)	13,806 (27.3%)
Yamagata strain	70 (100%)	302 (*90.7%)	9,371 (67.9%)

¹ 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

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

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

* Of all the Influenza B positives, only 333 specimens had lineage testing performed

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

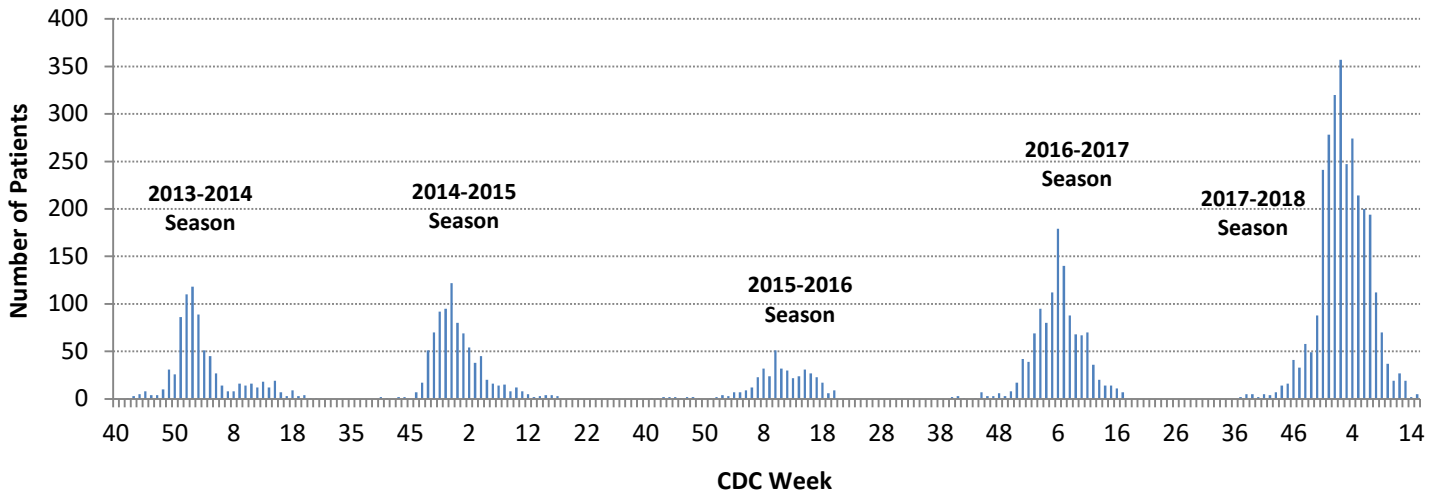


Figure 4. Intensive Care Unit Hospitalizations for influenza by Week of Admission, Dallas County: 2013–2018 Seasons

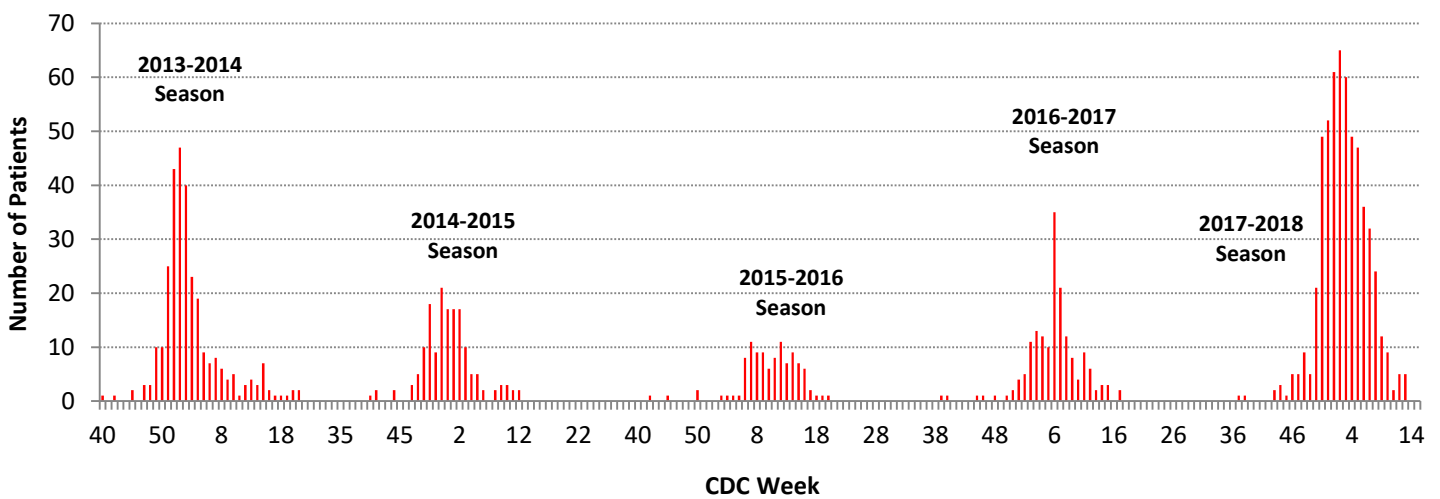
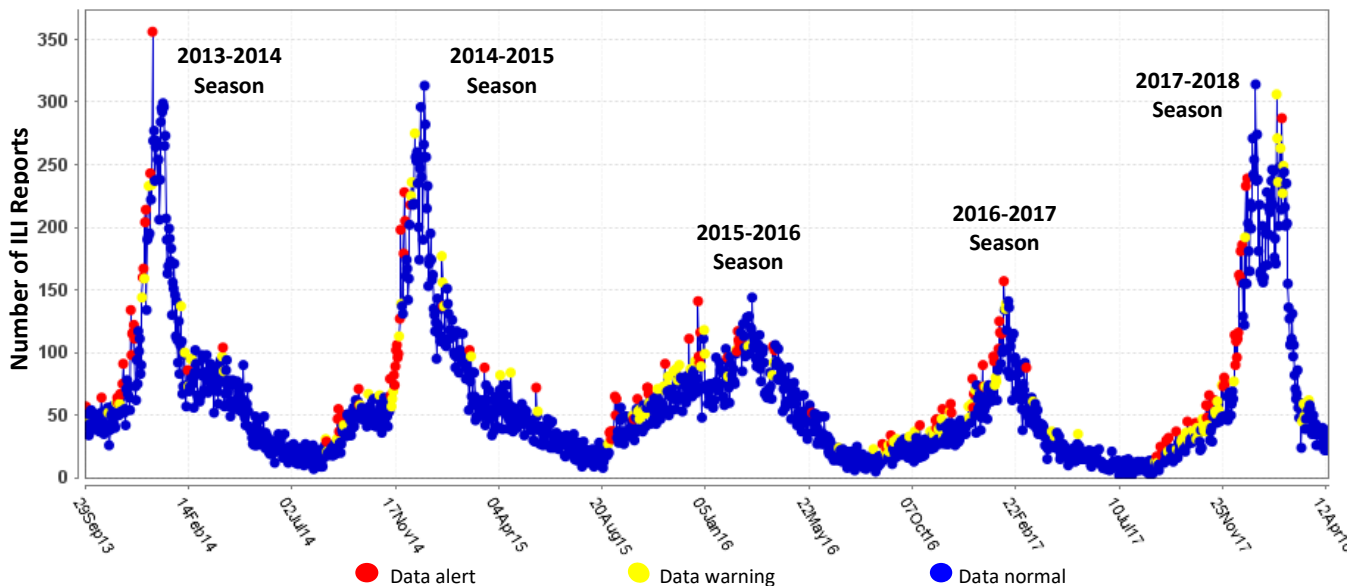


Figure 5. Syndromic Surveillance of Emergency Department Visits for Influenza-like Illness (ILI), Dallas County: September 29, 2013 – April 14, 2018



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=573
Influenza Type	Influenza A*	394 (68.8%)
	Influenza B	176 (30.7%)
Gender	Female	278 (48.5%)
	Male	295 (51.5%)
Race	Black	173 (30.2%)
	Hispanic	108 (18.9%)
	White	238 (41.5%)
	Other	54 (9.4%)
Age	0 to 4	23 (4.0%)
	5 to 18	19 (3.3%)
	>18 to 50	116 (20.2%)
	>50 to 65	154 (26.9%)
	>65	261 (45.6%)
Presence of ≥ 1 underlying high risk medical conditions		482 (84.1%)
Mechanical Ventilation		173 (30.2)
BiPAP		168 (29.3%)
ECMO		14 (2.4%)

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; ¹ Available from the CDC website at 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=82
Influenza Type	Influenza A*	55 (67.1%)
	Influenza B [†]	29 (35.4%)
Gender	Female	44 (53.7%)
	Male	38 (46.3%)
Race	Black	16 (19.5%)
	Hispanic	18 (22.0%)
	White	38 (46.3%)
	Other	10 (12.2%)
Age	0 to 18	3 (3.7%)
	>18 to 65	23 (28.0%)
	>65	56 (68.3%)
Presence of ≥ 1 underlying high risk medical conditions		77 (93.9%)

*Of the six influenza A viruses that were subtyped, four were H1N1 and two were H3N2. [†] 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	3
Adult	6	55	19	14	16	79

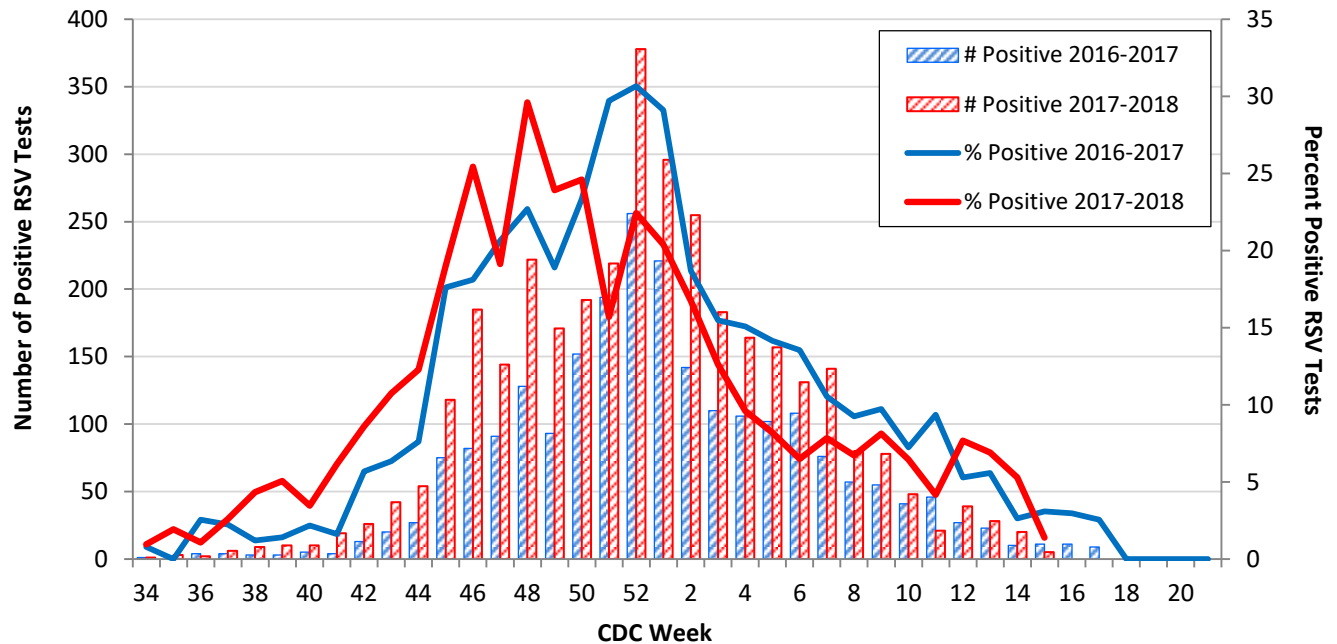
Data source: Reports of confirmed influenza-associated deaths, as defined in Table 2.

Table 7. Non-Influenza Respiratory Virus Testing by North Texas Laboratories Reported to NREVSS, Week 15

Virus	Number of Laboratories Reporting	Tests Performed	Total Positive Tests	Percentage of Tests Positive
Adenovirus (respiratory)	4	291	10	3.4%
HMPV	4	291	13	4.5%
Parainfluenza virus	4	291	16	5.5%
Rhinovirus/Enterovirus	4	156	40	25.6%
RSV	4	361	5	1.4%

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 – April 14, 2018



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 – April 14, 2018

Week Ending	03/03	03/10	03/17	03/24	03/31	04/07	04/14	8/26/17–Present
CDC Week	9	10	11	12	13	14	15*	
RSV tests performed weekly	961	744	504	508	406	378	361	27,175
Total positive RSV tests	78	48	21	39	28	20	5	3,457
Percent positive RSV tests	8.1	6.5	4.2	7.7	6.9	5.3	1.4	

*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

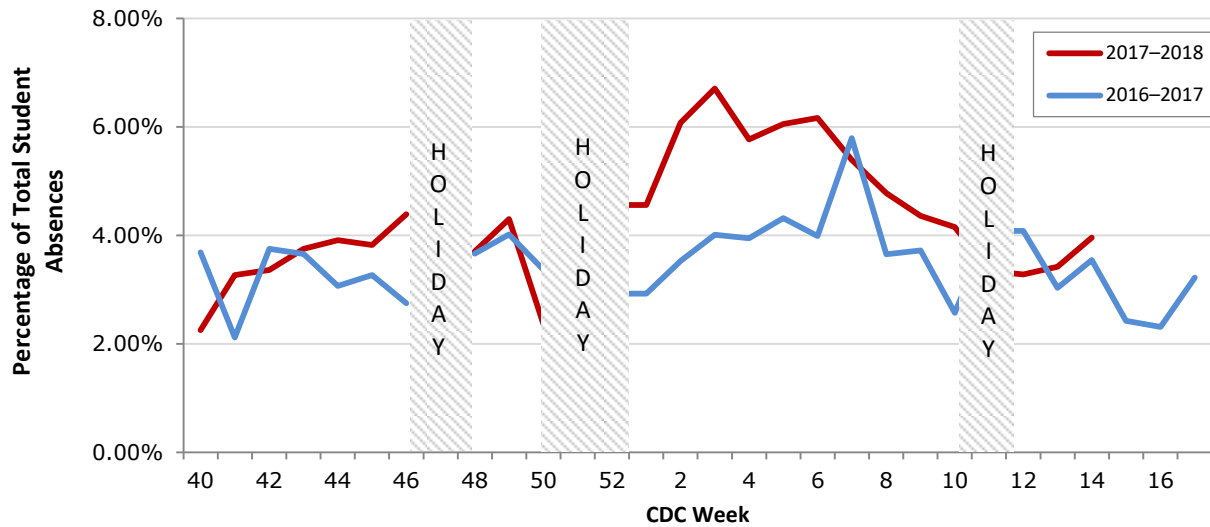
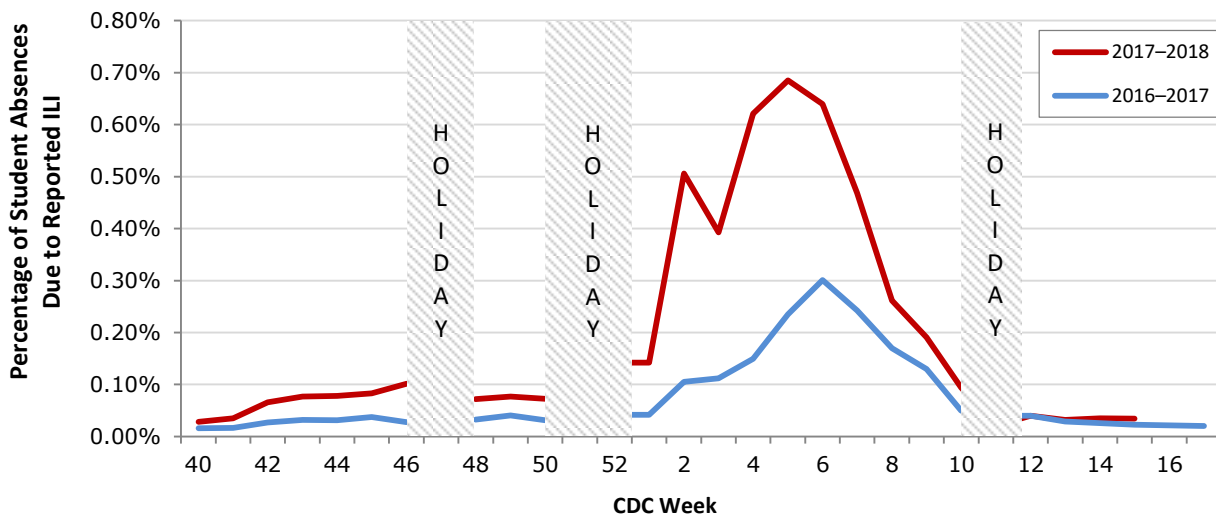


Figure 8. Percentage of Student Absences Due to ILI by Week, Dallas County: 2016-2017 and 2017-2018



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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