



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

Week 1 ending January 06, 2018

Epidemiologic Summary

- Influenza activity remains high in Dallas County with 27.1% of tests returning positive during week 1. Nationally, 24.7% of specimens reported to CDC were positive for influenza.
- During week 1, in Dallas County the most frequently identified influenza virus type was influenza A (81%). The predominant influenza A has been subtype A(H3N2) at 57%.
- Daily numbers of emergency department visits for influenza-like illness in Dallas County have increased and 320 influenza-associated hospitalizations were reported during week 1.
- 13 influenza-associated deaths of an adult were reported in week 1, and three were reported in week 2. No influenza-associated pediatric deaths have been reported during the 2017-2018 season in Dallas County.
- RSV activity remains high with 20.4% of tests from area surveillance sites testing positive.

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

Week Ending	12/02	12/09	12/16	12/23	12/30	01/06	9/10/17 – Present
CDC Week	48	49	50	51	52*	1*	
Total Influenza PCR Tests	787	807	1,042	1,400	1,532	1,743	12,970
Number of positive PCR tests	78	83	177	402	503	510	1,968
Percent of positive PCR tests	9.9	10.3	17.0	28.7	32.8	29.3	
Total Rapid Influenza Diagnostic Tests	1,242	1,387	2,069	3,259	3,694	3,514	21,067
Number of positive RIDTs	189	303	445	1,074	1,023	942	4,449
Percent of positive RIDTs	15.2	21.9	21.5	32.0	27.7	26.8	
Total Influenza Tests Performed	2,085	2,257	3,160	4,747	5,310	5,360	34,890
Total positive influenza tests ¹	267	386	622	1,476	1,526	1,453	6,418
Percent positive influenza tests	12.8	17.1	19.7	31.1	28.7	27.1	
Positive influenza A tests ²	223	323	546	1,310	1,328	1,181	5,443
Positive influenza B tests	44	63	76	166	198	272	975
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	12/02	12/09	12/16	12/23	12/30	01/06	01/13	9/10/17 – Present
CDC Week	48	49	50	51	52*	1*	2*	
Influenza hospitalizations ⁴	58	49	88	241	278	320	N/A	1,168
Influenza ICU admissions ⁴	9	5	21	49	52	61	N/A	215
Confirmed pediatric deaths ⁵	0	0	0	0	0	0	0	0
Confirmed adult deaths ⁶	2	1	2	3	2	14	7	31
Possible influenza-associated deaths ⁷	0	0	0	0	1	0	1	2

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, compatible symptoms, and clear progression from illness to death, or 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

Table 3. 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	0
Adult	6	55	19	14	16	31

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

*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

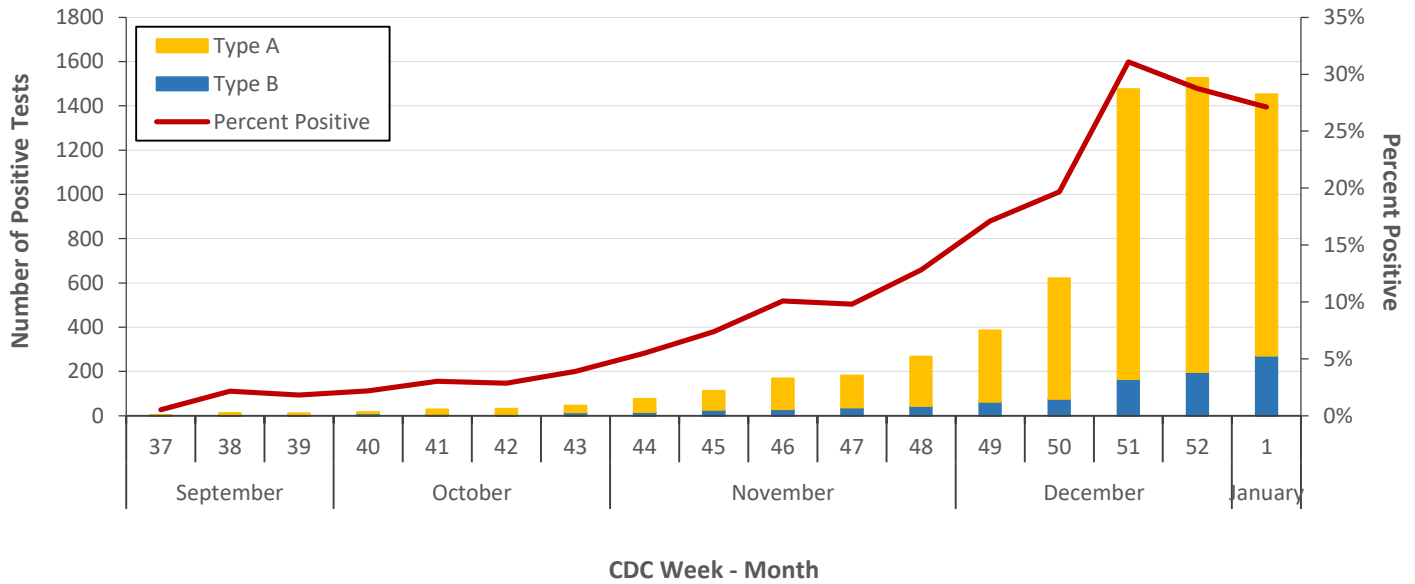
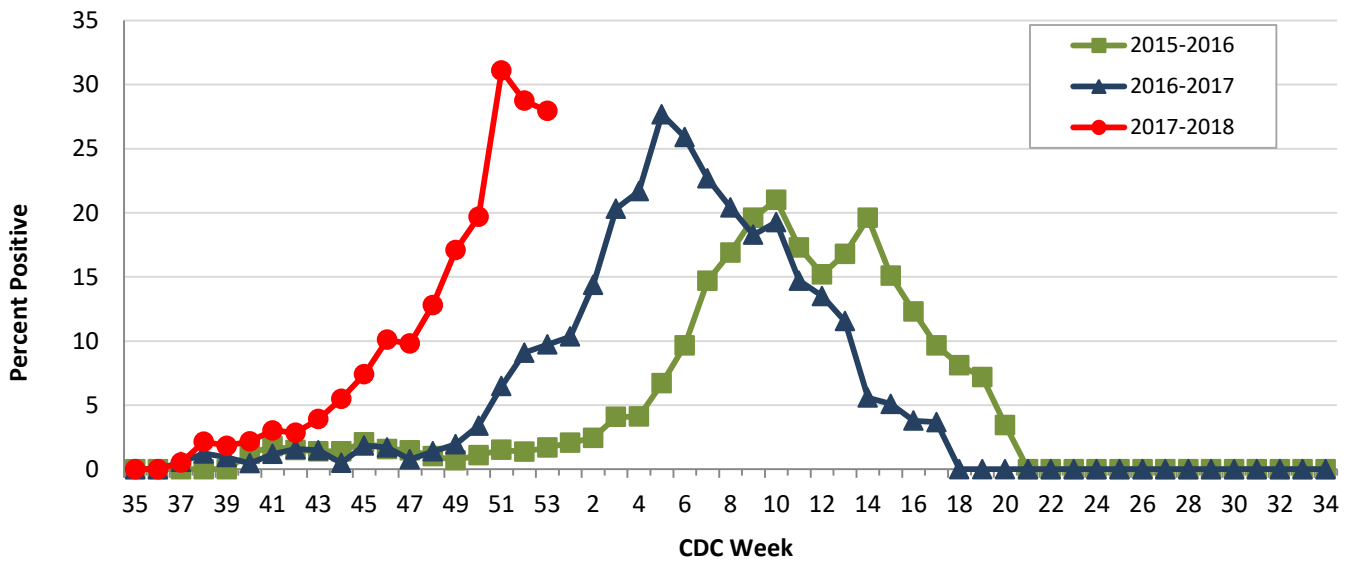


Figure 2. Influenza Positive Tests Reported to DCHHS by Hospital Laboratories: 2015–2018 Seasons



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

Table 4. Influenza Typing and Subtyping from Cumulative Dallas County, Texas, and U.S. Laboratory Surveillance Data: 2017-2018 Season

	Dallas ¹ (n=220)	Texas ² (n= 637)	U.S. ³ (n= 12,472)
Influenza A	201 (91.4%)	553 (86.8%)	10,872 (87.2%)
H1N1 2009 subtype	86 (43.0%)	165 (30.0%)	957 (8.9%)
H3N2 subtype	114 (57.0%)	386 (70.5%)	9,773 (91.1%)
Not subtyped	1	2	142
Influenza B	21 (9.5%)	81 (12.7%)	1,600 (12.8%)
Yamagata strain	21 (100%)	70 (95.9%)	1,036 (64.8%)

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/>

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

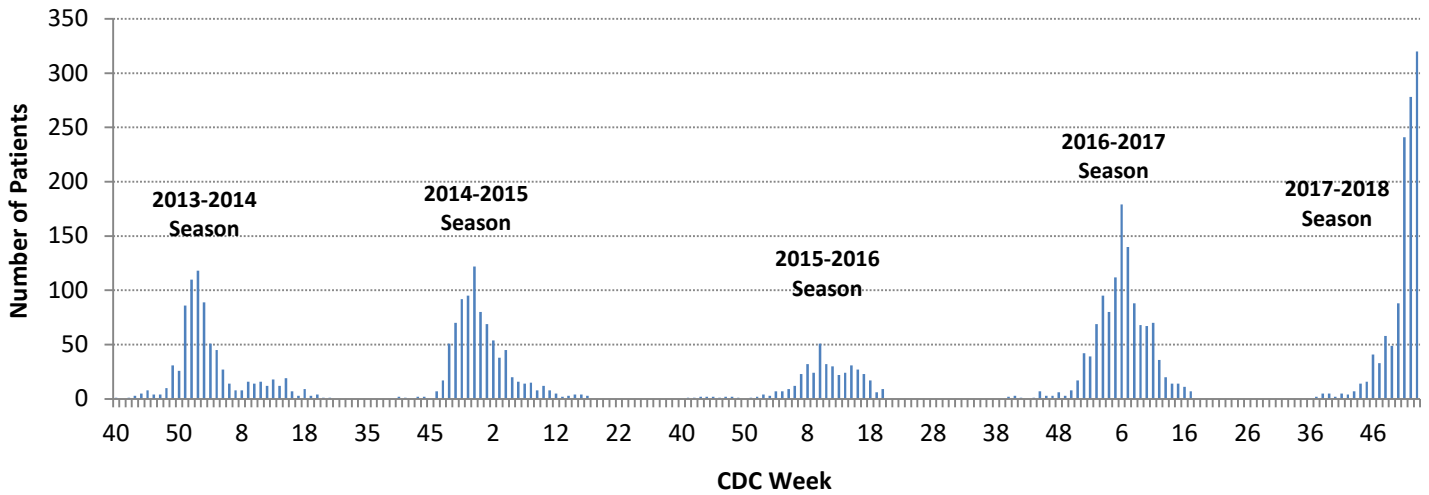


Figure 4. Intensive Care Unit Hospitalizations for influenza by Week of Admission, Dallas County: 2013-2018 Seasons

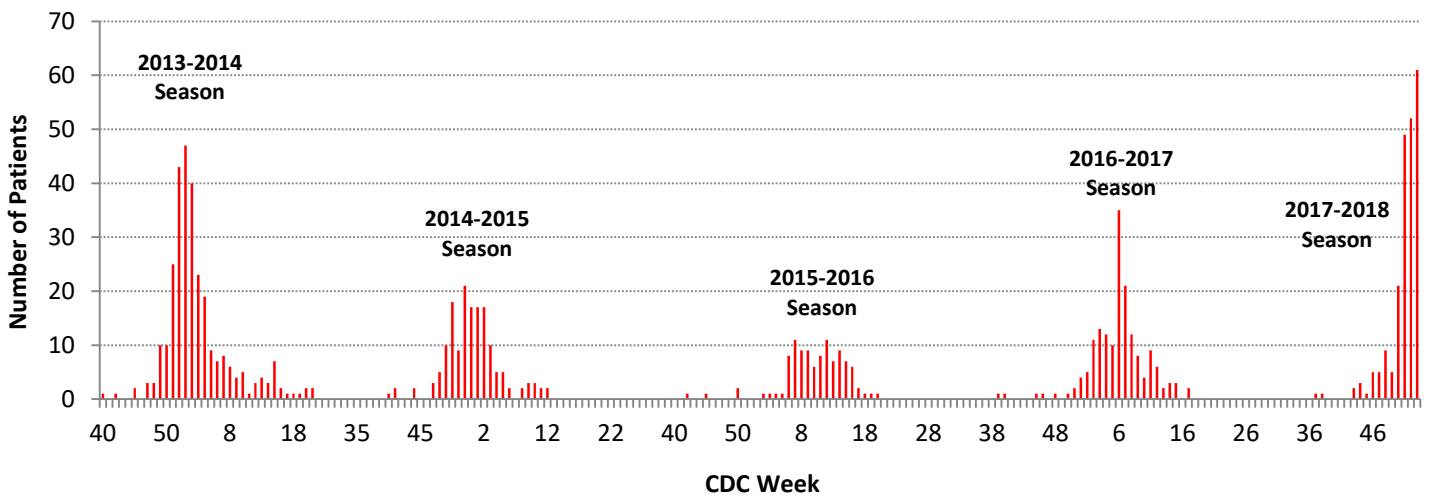
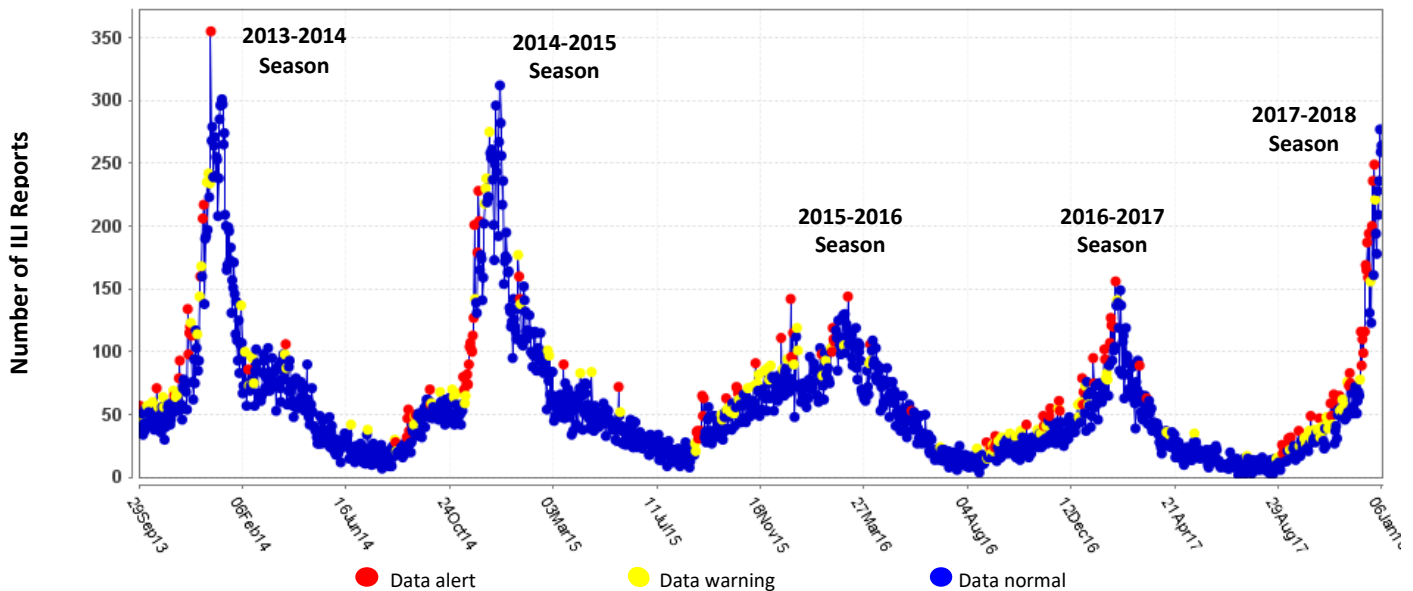


Figure 5. Syndromic Surveillance of Emergency Department Visits for Influenza-like Illness (ILI), Dallas County: September 29, 2013 – January 06, 2018



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 5. Characteristics of Influenza in Dallas County ICU Hospitalizations, September 12, 2017 to Date

ICU Admissions		N=202
Influenza A*		175 (87.5%)
Gender	Female	112 (55.6%)
	Male	89 (44.3%)
Race	Black	69 (34.7%)
	Hispanic	28 (14.7%)
	White	84 (42.2%)
	Other	18 (9.1%)
Median Age (Range)		64 (6 months - 99 years)
Presence of ≥ 1 underlying high risk medical conditions		167 (82.7%)
Mechanical Ventilation		60 (29.7%)
BiPAP		59 (29.2%)
ECMO		8 (4.0%)

Data Source(s): All Hospitalizations of Dallas County residents reported to DCHHS with any positive rapid antigen, PCR, DFA or culture result for influenza; * includes five 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

Figure 6. Percentage of Student Absences by Week, Dallas County: 2016-2017 and 2017-2018

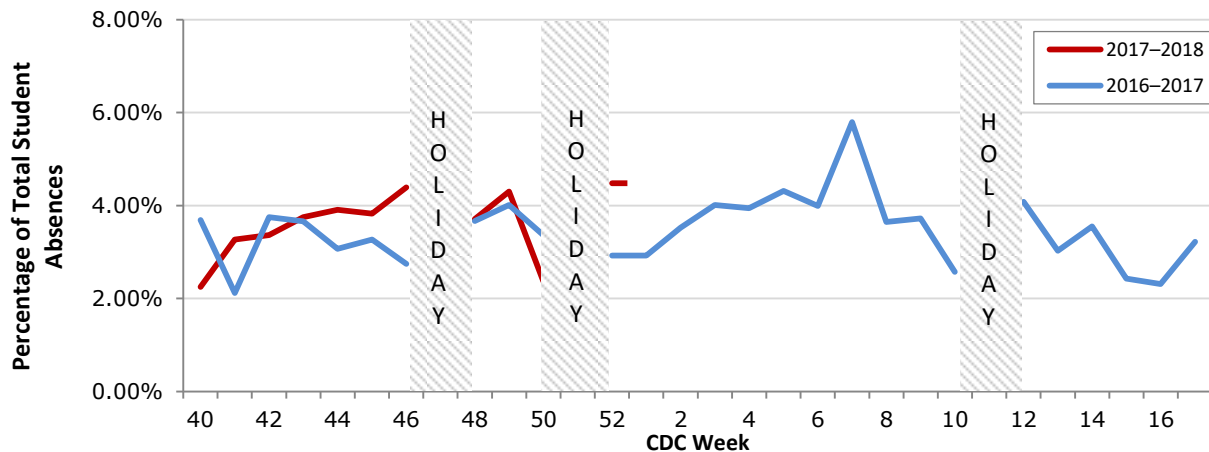
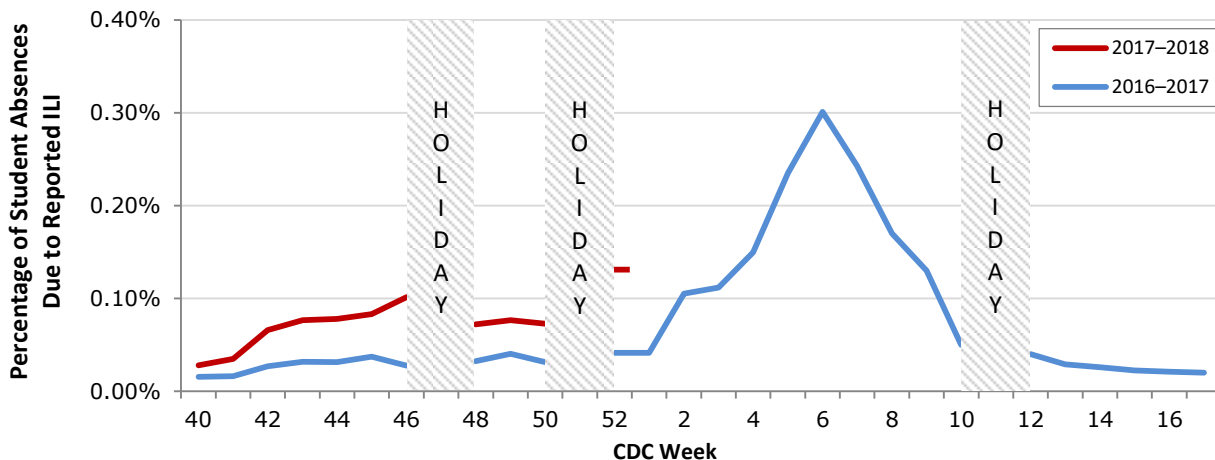


Figure 7. Percentage of Student Absences Due to ILI by Week, Dallas County: 2016-2017 and 2017-2018



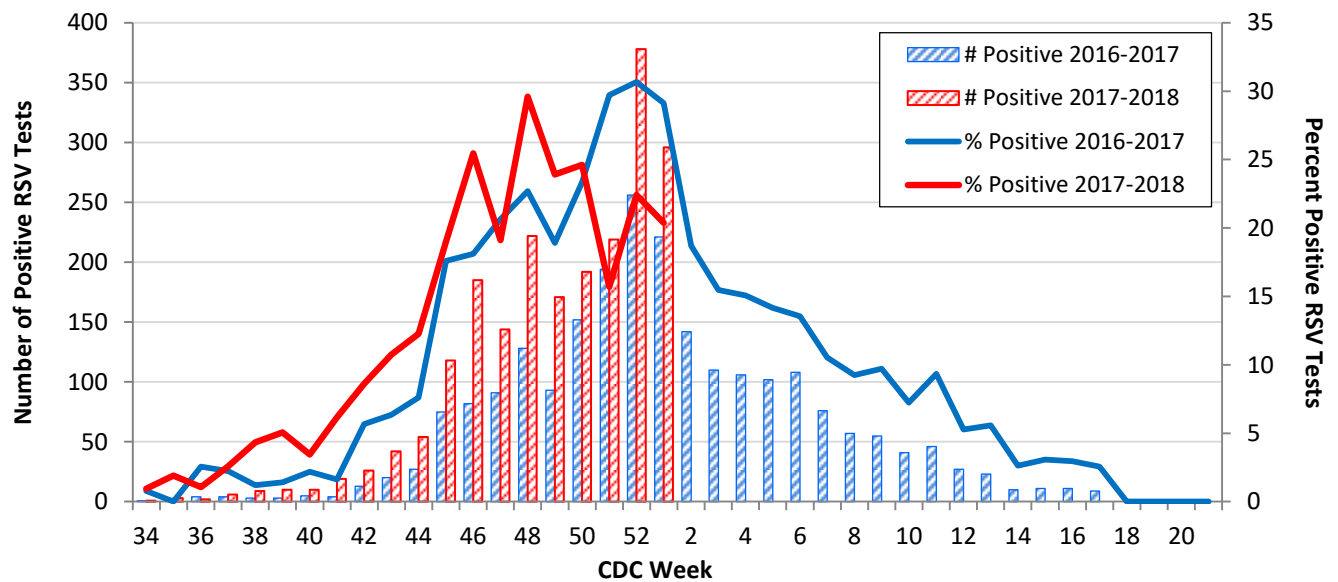
Data source: Voluntary reporting from Independent School Districts representing over 510 elementary, middle, and secondary schools and over 420,000 students in Dallas County

Table 6. Non-Influenza Respiratory Virus Testing by North Texas Laboratories Reported to NREVSS, Week 1

Virus	Number of Laboratories Reporting	Tests Performed	Total Positive Tests	Percentage of Tests Positive
Adenovirus (respiratory)	5	523	6	1.2%
HMPV	5	502	19	3.8%
Parainfluenza virus	5	523	11	2.1%
Rhinovirus/Enterovirus	5	502	47	9.4%
RSV	5	1,452	296	20.4%

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

Figure 8. Number and Percent Positive RSV Rapid Antigen and PCR Tests by Week, NREVSS Surveillance Data, North Texas: August 27, 2016 – January 06, 2017



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

Table 7. Number and Percent Positive RSV Rapid Antigen and PCR Tests by Week, NREVSS Surveillance Data, North Texas: August 26, 2017 – January 06, 2017

Week Ending	11/25	12/02	12/09	12/16	12/23	12/30	01/06	8/26/17–Present
CDC Week	47	48	49	50	51	52	1*	
RSV tests performed weekly	753	750	715	780	1,394	1,686	1,452	11,704
Total positive RSV tests	144	222	171	192	219	378	296	2,107
Percent positive RSV tests	19.1	29.6	23.9	24.6	15.7	22.4	20.4	

*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)

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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