Dallas County Health and Human Services 2016–2017 Influenza Surveillance Report

Week 15 ending April 15, 2017

Epidemiologic Summary

- Influenza activity decreased in Dallas County with 5.0% of tests returning positive during week 15. Nationally, 12.6% of specimens reported to CDC were positive for influenza.
- Daily numbers of emergency department visits for influenza-like illness in Dallas County were slightly above baseline levels and 14 influenza-associated hospitalizations were reported during week 15.
- No influenza-associated deaths were reported in week 15. One influenza-associated pediatric death has been reported during the 2016-2017 season in Dallas County.
- RSV activity slightly increased with 3.1% of tests from area surveillance sites testing positive.

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

Week Ending	3/11	3/18	3/25	4/1	4/8	4/15	9/11/16 –
CDC Week	10	11	12	13	14*	15*	Present
Total Influenza PCR Tests	840	723	726	666	555	522	19,470
Number of positive PCR tests	138	101	84	57	19	28	2,391
Percent of positive PCR tests	16.4	14.0	11.6	8.6	3.4	5.4	
Total Rapid Influenza Diagnostic Tests	1,025	887	638	485	559	366	23,749
Number of positive RIDTs	241	151	104	79	41	18	4,008
Percent of positive RIDTs	23.5	17.0	16.3	16.3	7.3	4.9	
Total Influenza Tests Performed	1,972	1,714	1,415	1,195	1,168	916	45,954
Total positive influenza tests ¹	380	252	191	138	62	46	6,427
Percent positive influenza tests	19.3	14.7	13.5	11.6	5.3	5.0	
Positive influenza A tests ²	237	133	77	44	22	8	5,263
Positive influenza B tests	143	119	114	94	40	38	1,164
Non-differentiated influenza tests ³	0	0	0	0	0	0	2

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

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

Week Ending	3/11	3/18	3/25	4/1	4/8	4/15	9/11/16-
CDC Week	10	11	12	13	14*	15*	Present
Influenza hospitalizations ⁴	67	70	36	20	14	14	1,187
Confirmed pediatric deaths ⁵	1	0	0	0	0	0	1
Confirmed adult deaths ⁶	0	1	0	0	0	0	16
Possible influenza-associated deaths ⁷	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(s): 15 Hospitals in Dallas County

Table 3. Confirmed Influenza-associated Pediatric and Adult Deaths, Dallas County: 2011–2017 Seasons

	2011–2012	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017
Pediatric	1	3	3	0	1	1
Adult	0	6	55	19	14	16

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

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

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

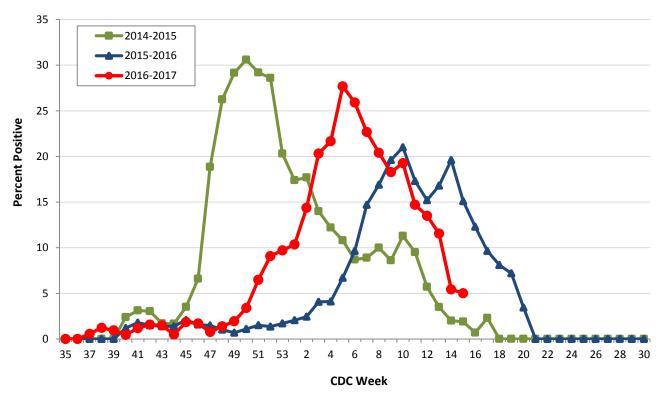
^{*}Indicates preliminary results which are subject to change with late-arriving data from surveillance sites designated for DCHHS' seasonal influenza program

1100 30.0% Type A 1000 Type B 25.0% 900 Percent Positive **Number of Positive Tests** 800 20.0% 700 **Percent Positive** 600 15.0% 500 400 10.0% 300 200 5.0% 100 0 0.0% 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 1 2 3 4 5 8 9 10 11 12 13 14 15 16 17 6 7 October February September November December January March April 2016 2017

CDC Week - Month - Year

Figure 1. Influenza Positive Tests Reported to DCHHS by Hospital Laboratories: 2016 - 2017 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 week1.

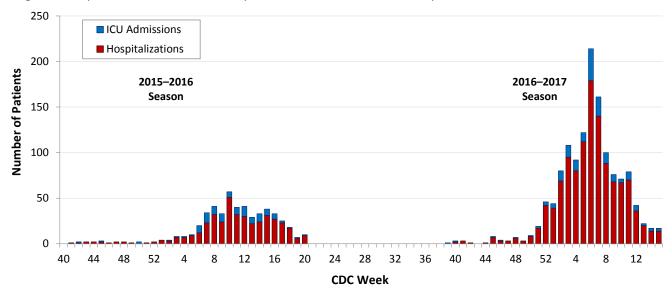
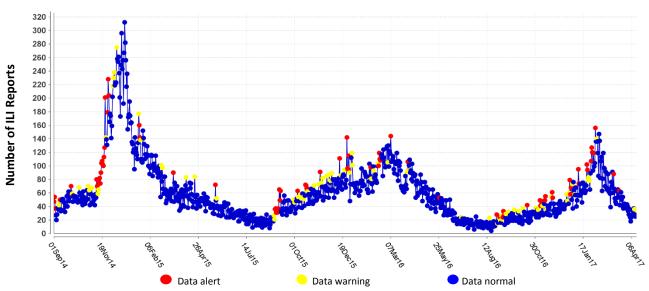


Figure 3. Hospitalized Influenza Patients by Week of Admission, Dallas County: 2015-2017 Seasons

Figure 4. Syndromic Surveillance of Emergency Department Visits for Influenza-like Illness (ILI), Dallas County: September 1, 2014 – April 15, 2017



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. Influenza Typing and Subtyping from Cumulative Dallas County, Texas, and U.S. Laboratory Surveillance Data: 2016-2017 Season

	Dallas¹ (n=687)	Texas² (n=1,729)	U.S.³ (n=37,992)
Influenza A	614 (89.6%)	1,450 (82.9%)	30,778 (81.0%)
H1N1 2009 subtype	75 (12.3%)	206 (14.3%)	841 (2.8%)
H3N2 subtype	534 (87.7%)	1,237 (85.7%)	29,601 (97.2%)
Not subtyped	5	7	336
Influenza B	73 (10.4%)	299 (17.1%)	7,214 (19.0%)

 $^{^{}m 1}$ DCHHS LRN laboratory PCR testing of designated Dallas County surveillance site isolates

² DSHS 2015–2016 Texas Influenza Surveillance Information Activity Report available at https://www.dshs.state.tx.us/idcu/disease/influenza/surveillance/2017/

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

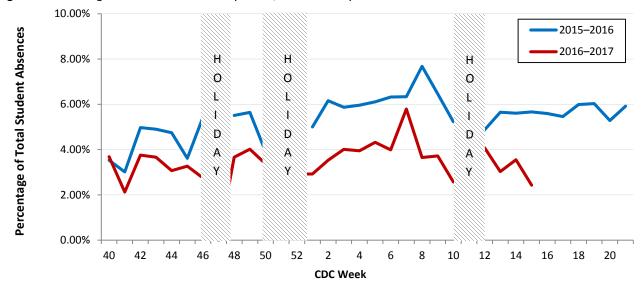
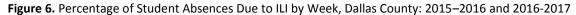
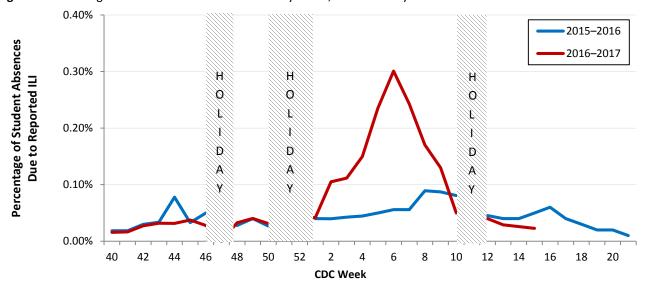


Figure 5. Percentage of Student Absences by Week, Dallas County: 2015–2016 and 2016-2017





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 5. 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)	5	299	8	2.7%	
HMPV	5	280	16	5.7%	
Parainfluenza virus	5	299	24	8.0%	
Rhinovirus/enterovirus	5	280	96	34.3%	
RSV	5	353	11	3.1%	

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

300 35 # Positive 2015-2016 30 # Positive 2016-2017 250 Percent Positive RSV Tests **Number of Positive RSV Tests** % Positive 2015-2016 25 200 % Positive 2016-2017 20 150 15 100 10 50 5 39 41 43 45 5 37 47 49 51 1 9 11 13 15 19 **CDC** Week

Figure 7. Number and Percent Positive RSV Rapid Antigen and PCR Tests by Week, NREVSS Surveillance Data, North Texas: August 22, 2015 – April 15, 2017

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

Table 6. Number and Percent Positive RSV Rapid Antigen and PCR Tests by Week, NREVSS Surveillance Data, North Texas: August 20, 2016 – April 15, 2017

Week Ending	3/4	3/11	3/18	3/25	4/1	4/8	4/15	8/20/16-
CDC Week	9	10	11	12	13	14*	15*	Present
RSV tests performed weekly	556	556	482	502	406	374	353	16,035
Total positive RSV tests	54	41	46	27	23	10	11	2,290
Percent positive RSV tests	9.7	7.4	9.5	5.4	5.7	2.7	3.1	

^{*}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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