



Dallas County Health and Human Services 2009-2010 Influenza Surveillance Program

2009 Influenza A (H1N1) Report

CDC Week 35--Week ending September 5, 2009

**2009 H1N1 Influenza virus has also been referenced as novel influenza A (H1N1) or as swine-origin influenza virus (S-OIV)*

Epidemiologic Overview

- Through Week 35, the numbers of patients presenting to area Emergency Departments with influenza-like illnesses have increased above the baseline expected for this time of year (about 53% of these patients are between the ages of 5 to 24).
- The percentage of positive influenza tests increased to 13.3% during Week 35 in Dallas County.
- The novel influenza A (H1N1) virus continues to be the predominant influenza strain currently circulating in Dallas County, comprising nearly 100% of subtyped influenza A specimens.
- As of Week 35, sixty Dallas County residents with confirmed pH1N1 infection have been hospitalized. Twenty-five percent of these admissions involved stays in Intensive Care Units. Over three-fourths of these patients had identified underlying high-risk conditions for more severe disease.
- One pediatric fatality associated with 2009 H1N1 influenza was confirmed today in an 11-year-old Dallas County resident. The child had no underlying medical conditions, but did have confirmed invasive bacterial coinfection. Two other deaths associated with 2009 H1N1 infection in Dallas County residents have been previously reported in adults with underlying medical conditions.
- One oseltamivir-resistant H1N1 virus has been identified in a resident of Dallas County.

Figure 1. Influenza Laboratory Surveillance: Dallas County Providers, Hospitals, & Viral Labs

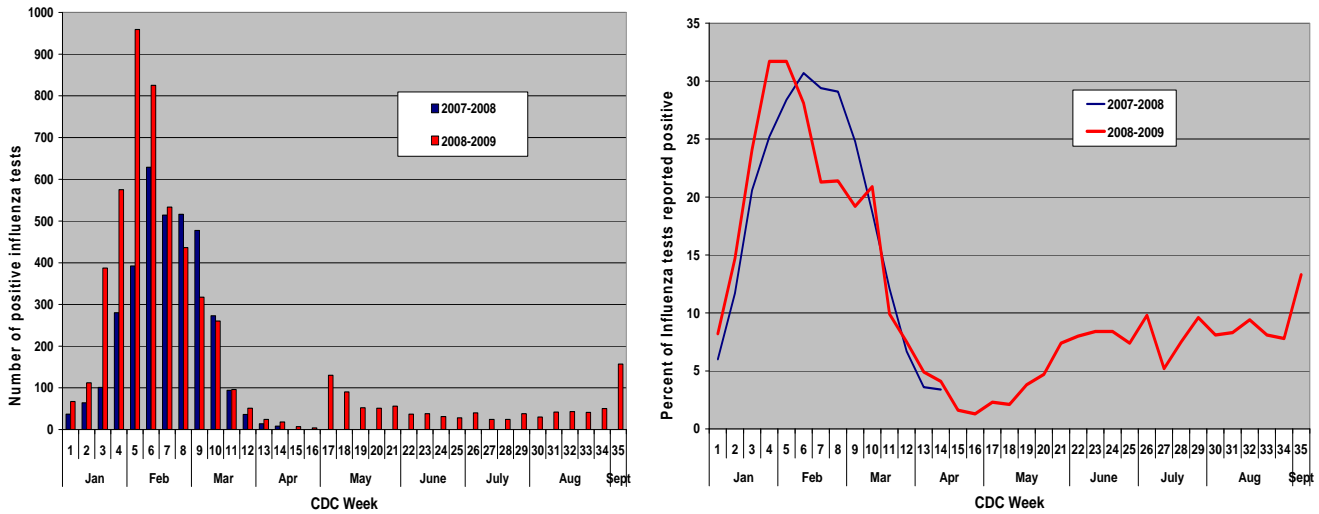
Week Ending	Jul 11	Jul 18	Jul 25	Aug 1	Aug 8	Aug 15	Aug 22	Aug 29	Sept 5
CDC Week	27	28	29	30	31	32	33	34	35
# Influenza Tests Performed Weekly	462	321	396	369	508	456	504	641	1194
# Total Positive Influenza Tests	24	24	38	30	42	43	41	50	157
% Positive Influenza Tests	5.2	7.5	9.6	8.1	8.3	9.4	8.1	7.8	13.3
# Positive A Influenza*	22	24	36	29	41	38	40	50	156
# Positive B Influenza	0	0	0	0	1	1	1	0	1
# Non-differentiated Influenza**	0	0	2	1	0	4	0	0	0
# Influenza Hospitalizations***	5	4	4	7	7	8	6	9	13
# Influenza-associated Deaths	0	0	0	0	0	0	1	1	0

**Further subtyping results available only for specimens submitted to DCHHS LRN (see figure 4).*

***Non-differentiated refers to institutional rapid test results which did not differentiate between influenza A and B.*

****Reflects hospitalizations reported from hospitals located within Dallas County*

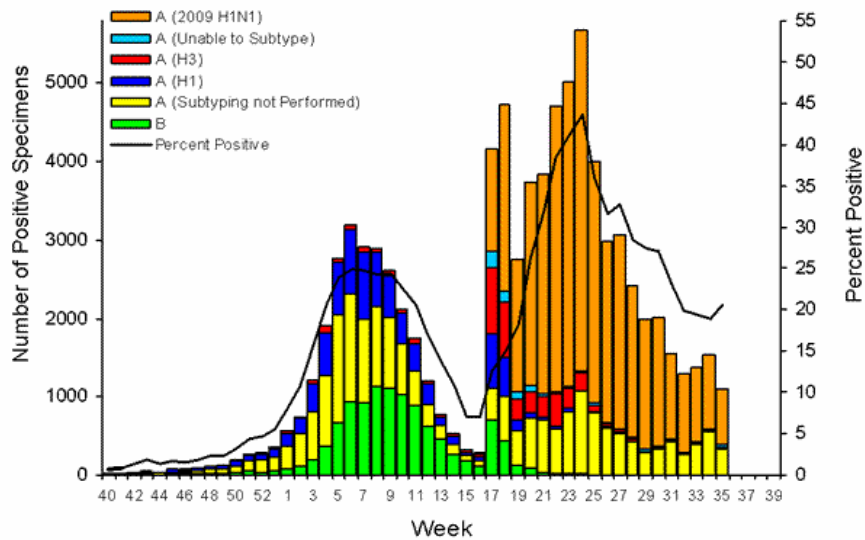
Figure 2. Number and Percentage Positive Influenza Tests by Week, Dallas County: 2007-08 and 2008-09



- Data for Week 35 obtained from the same surveillance sites as designated for DCHHS’ seasonal influenza program, with over 20 participating Dallas area hospitals, urgent care centers, and sentinel providers. Data from additional sources submitted during Week 35 are not included in the above tabulations, in order to more accurately assess trends.

Figure 3. Number and Percentage of Positive Influenza Tests by Week, U.S.: WHO/NREVSS*

Influenza Positive Tests Reported to CDC by U.S. WHO/NREVSS Collaborating Laboratories, National Summary, 2008-09



(*www.cdc.gov/flu/weekly/)

Excerpted from CDC FluView report* for Week 35 (August 23– September 5, 2009) in United States:

- Influenza activity in the US is beginning to increase.
- Over 97% of influenza viruses tested by CDC during Week 35 were novel influenza A (H1N1).
- The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold.

Figure 4. Dallas County LRN Influenza A PCR Test Results: 4/23/09 – 9/5/09
(Preliminary Data as of 9/5/09)
N = 1457

Week Ending	April 24- May 30	May 31- June 27	June 28- July 25	July 26- Aug 29	Sept 5
CDC Week	16-21	22-25	26-29	30-34	35
Influenza A (Total Positive PCR Tests)	218	104	70	111	48
Subtype	Seasonal H1N1	16 (7%)	0	0	0
	Seasonal H3N2	26 (12%)	6 (6%)	0	1(1%)
	Novel H1N1	176 (81%)	98 (94%)	70 (100%)	110 (99%)
PCR-Negative Specimens	739	6	3	13	2

- Patients who are rapid test negative may still have infection with novel influenza A (H1N1). **Inpatients with severe unexplained febrile respiratory illness who have tested negative for influenza A by rapid testing or DFA can have further testing for influenza by PCR arranged through contacting DCHHS.**
- Please note current revised criteria for testing and acceptance of specimens for the DCHHS LRN laboratory. The DCHHS laboratory is currently accepting respiratory specimens for influenza subtyping testing only from hospitalized patients, and from established sentinel surveillance sites for epidemiologic purposes.
http://www.dallascounty.org/departments/hhservices/documents/DCHHSSIVAdvisory050609_000.pdf
- Instructions for submitting respiratory specimens to the DCHHS LRN laboratory:
<http://www.dallascounty.org/departments/hhservices/SeasonalInfluenza.html#LaboratoryInformation>

Figure 5. Characteristics of Hospitalized Novel H1N1 Cases, Dallas County:
April 23, 2009 – September 5, 2009
(N= 60 Confirmed)

Characteristic	
Sex	63% Male 37% Female
Median Length of Stay (Range)	3 days (1 day – 9 days)
ICU Admissions	15 (25%)
Mechanical Ventilation	10 (17%)
BIPAP	5 (8.0%)
Chest X-ray infiltrates	18(30%)
Reason for Admission	Asthma Exacerbation (11), Pneumonia (13), Respiratory Distress (5), Seizure (2), Encephalopathy (3)
Deaths	2
23 Hour Observations	8

Figure 6. Age Distribution of Hospitalized Confirmed Novel H1N1 Cases, Dallas County, April 23, 2009-September 5, 2009

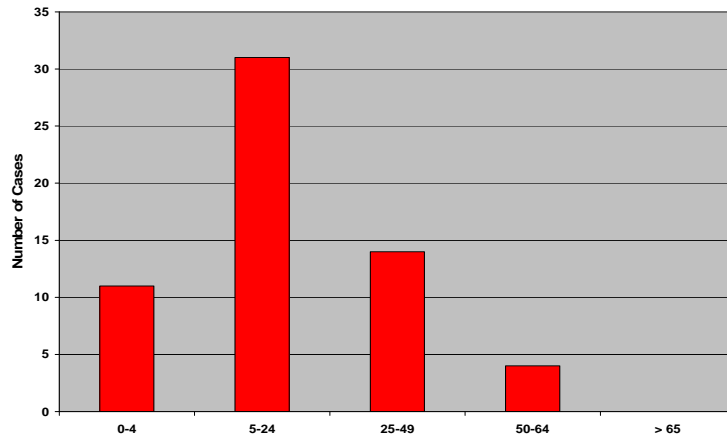


Figure 7. Percent of Hospitalized Confirmed H1N1 Cases with a Known Underlying Medical Condition, Dallas County, April 23, 2009- September 5, 2009

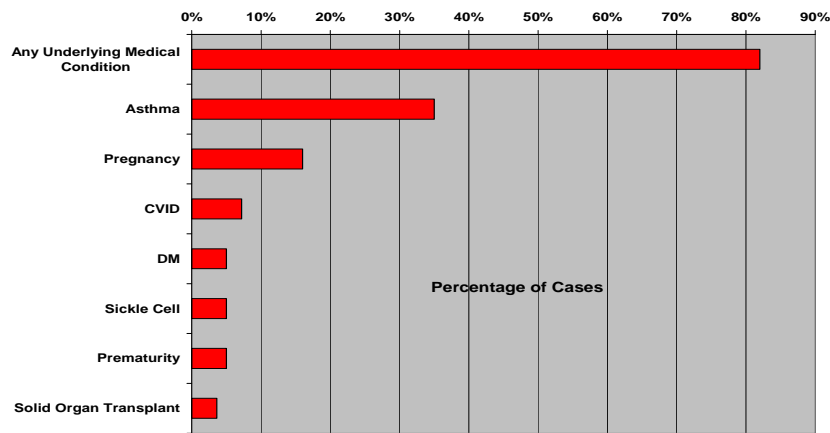


Figure 8. Hospitalized *Confirmed* Novel H1N1 Cases by Date of Admission, Dallas County April 23, 2009 – September 12, 2009

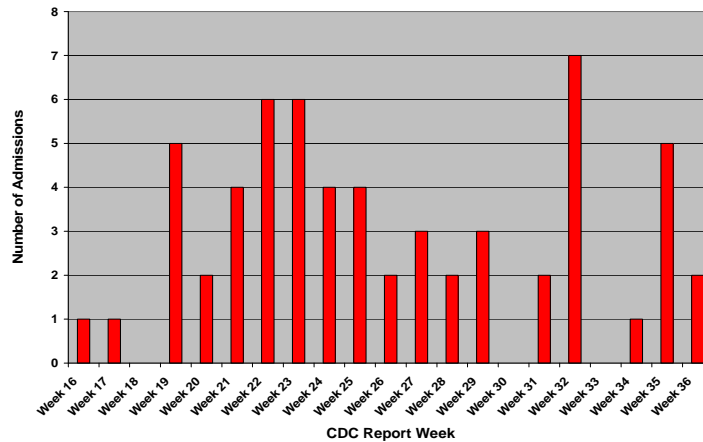


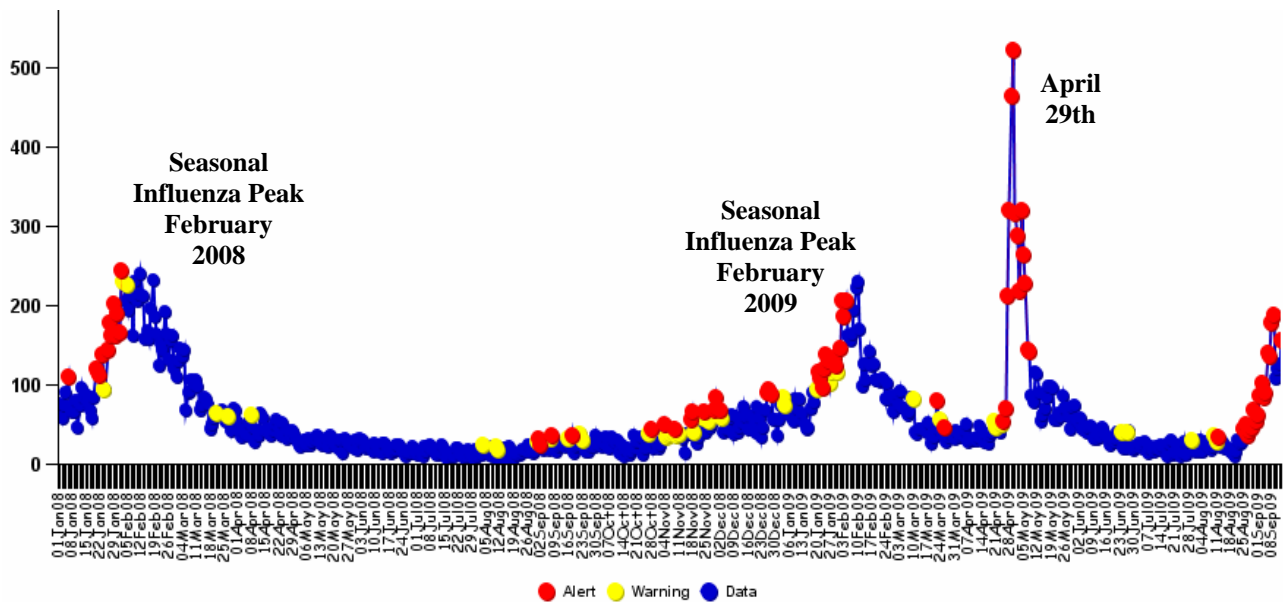
Figure 9. Antiviral Resistance of Influenza Isolates: United States, 2008-09 Season*

	Viruses tested (n)	Resistant Viruses, Number (%)	Viruses tested (n)	Resistant Viruses, Number (%)	Viruses tested (n)	Resistant Viruses, Number (%)
		Osetamivir		Zanamivir		Adamantanes
Seasonal Influenza A (H1N1)	1,148	1,143 (99.6%)	1,148	0 (0)	1,152	6 (0.5%)
Influenza A (H3N2)	261	0 (0)	261	0 (0)	258	258 (100%)
Influenza B	654	0 (0)	654	0 (0)	N/A*	N/A*
2009 Influenza A (H1N1)	1,372	8† (0.6)	574	0 (0)	526	526 (100%)

*www.cdc.gov/flu/weekly

- Five pH1N1 isolates from Dallas County residents have undergone resistance testing at CDC. Four isolates have been susceptible to oseltamivir. One oseltamivir-resistant isolate was from a resident who acquired the infection outside of Dallas County while on chemoprophylaxis.
- CDC has reported that seven of eight US patients identified with oseltamivir-resistant 2009 H1N1 isolates had documented prior exposure to oseltamivir.

Figure 10. ESSENCE Syndromic Surveillance for Influenza-like Illness: Dallas County, Jan 1, 2008 – September 13, 2009



- Data obtained from hospitals participating in the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) from January 2008 through the present. Depicted are the numbers of persons presenting to Emergency Departments in 17 Dallas County hospitals with chief complaints of influenza-like illness.

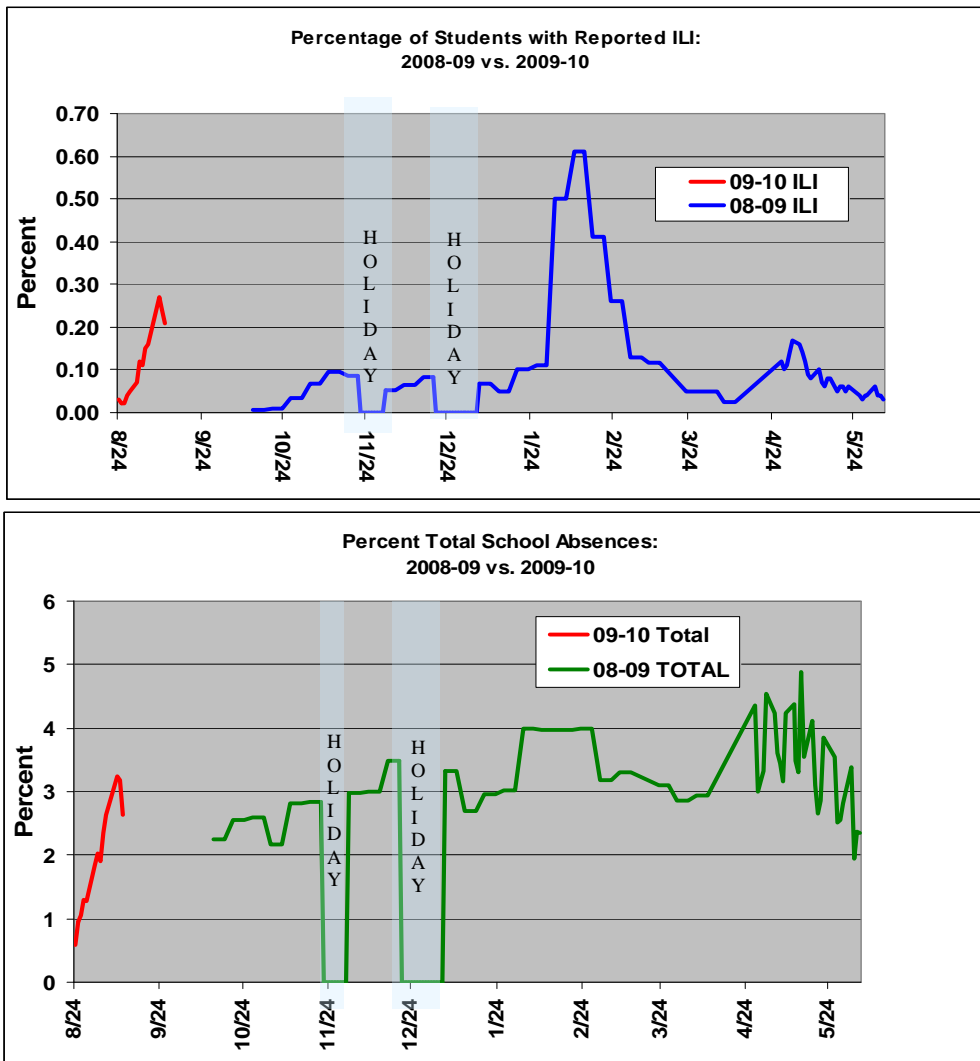
National, state, and local updates and interim guidance are available respectively at:

<http://www.cdc.gov/h1n1flu/>

<http://www.dshs.state.tx.us/swineflu/default.shtm>

<http://www.dallascounty.org/department/hhservices/SeasonalInfluenza.html>

Figure 11. Percentage of Total Student Absences and Percentage of Absences due to Influenza-like Illness: Reported Daily from 14 Independent School Districts in Dallas County, (10/18/08-9/10/09)



- School absences and influenza-like illnesses are reported voluntarily from 14 Independent School Districts, representing over 510 elementary, middle, and secondary schools and over 420,000 students in Dallas County.
- Data are submitted from additional charter and private schools on a voluntary basis
- Data trends are also followed on an individual basis by school and an aggregate basis by districts
- For Week 35, no schools reported above 4% ILI among students and no schools had above 15% total absenteeism.

Please send inquiries to DCHHS: Influenza@dallascounty.org

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