

Influenza-Associated Hospitalization and Death Surveillance: Dallas County 2009–2015



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July 22, 2015

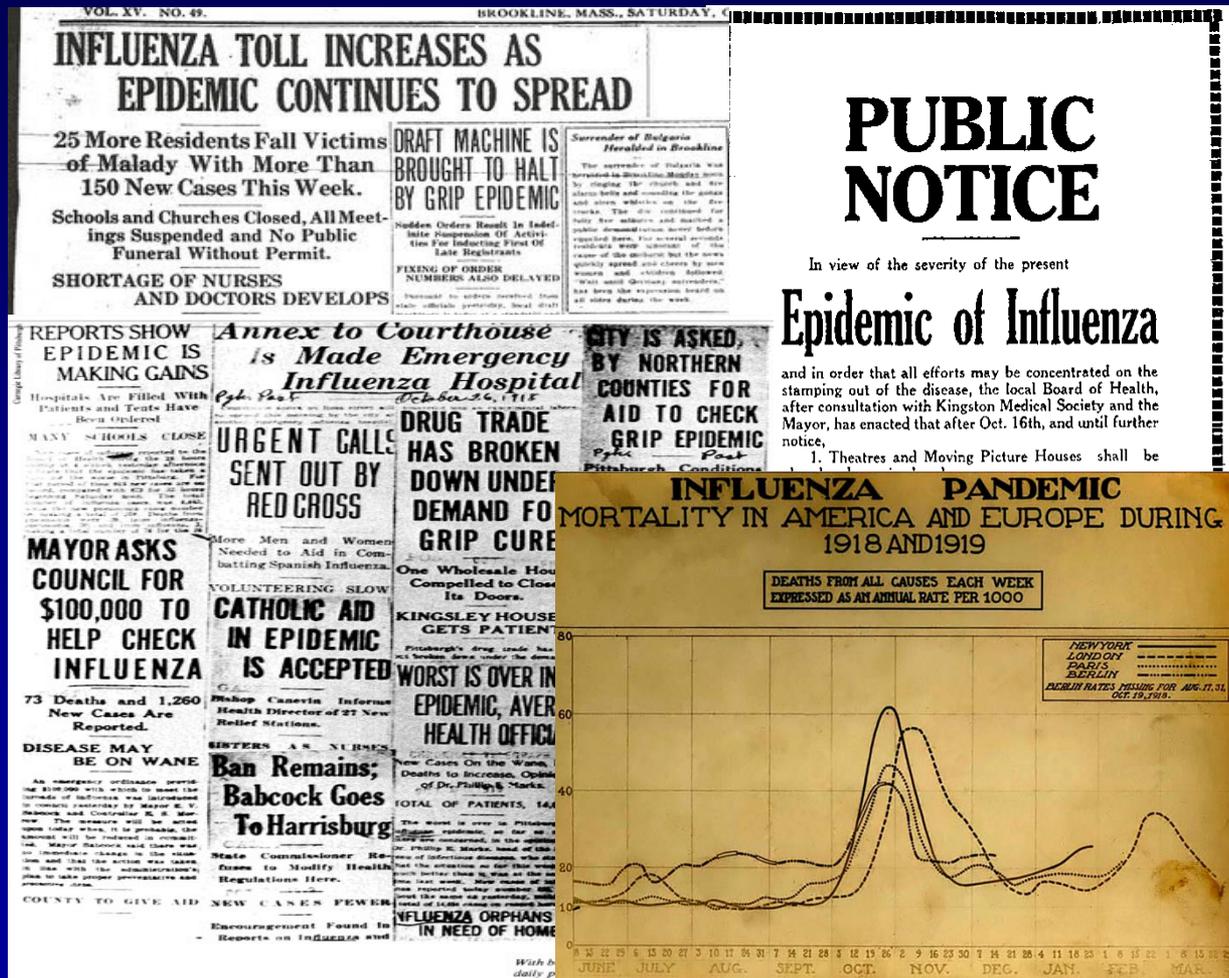
Dallas County Health and
Human Services

Overview: Flu Hospitalization and Death Surveillance

- To describe influenza-associated hospitalization and death surveillance in Dallas County
 - Why is this important?
 - How do we do it?
 - Who else is doing it?

Severity of Flu Seasons: 1918 Pandemic

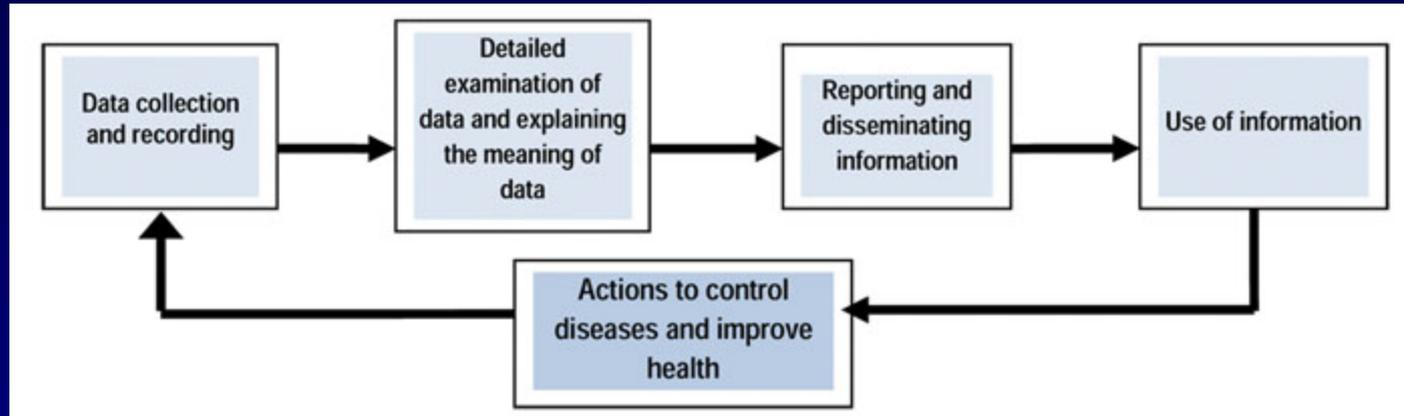
- Flu seasons can be highly variable
- Most notorious pandemic in the last century
- Highest mortality rates in adults 20 to 50 years of age



Purpose of National Flu Surveillance

- Find out when and where influenza activity is occurring
- Track influenza-related illness
- Detect changes in influenza viruses
- Determine what influenza viruses are circulating
- Measure the impact influenza is having on hospitalizations and deaths in the United States

Focusing Flu Surveillance: Dallas County



- Since 2009 DCHHS has conducted flu hospitalization surveillance
- Provides a snap shot of what is occurring locally
- Gives insight into severity of season
- Allows analysis of prior of seasonal trends
- **Drives public health and clinical action (includes patient care preparedness)**

Components of National Flu Surveillance

1. Virological Surveillance – WHO Collaborating Labs and NREVSS Labs
2. Outpatient Illness Surveillance – ILINet
3. Mortality Surveillance – 122 Cities Mortality Reporting System
4. Hospitalization Surveillance – 10 Emerging Infections Programs (FluSurv-NET)
5. Summary of the Geographic Spread of Influenza – State reported

DCHHS Influenza Surveillance Methods

1. Virologic Laboratory Surveillance
 - Hospital Laboratories
 - Large Outpatient Clinics
 - DCHHS Laboratory Response Network
2. Syndromic Surveillance
 - Hospital Emergency Department visits

DCHHS Influenza Surveillance Methods

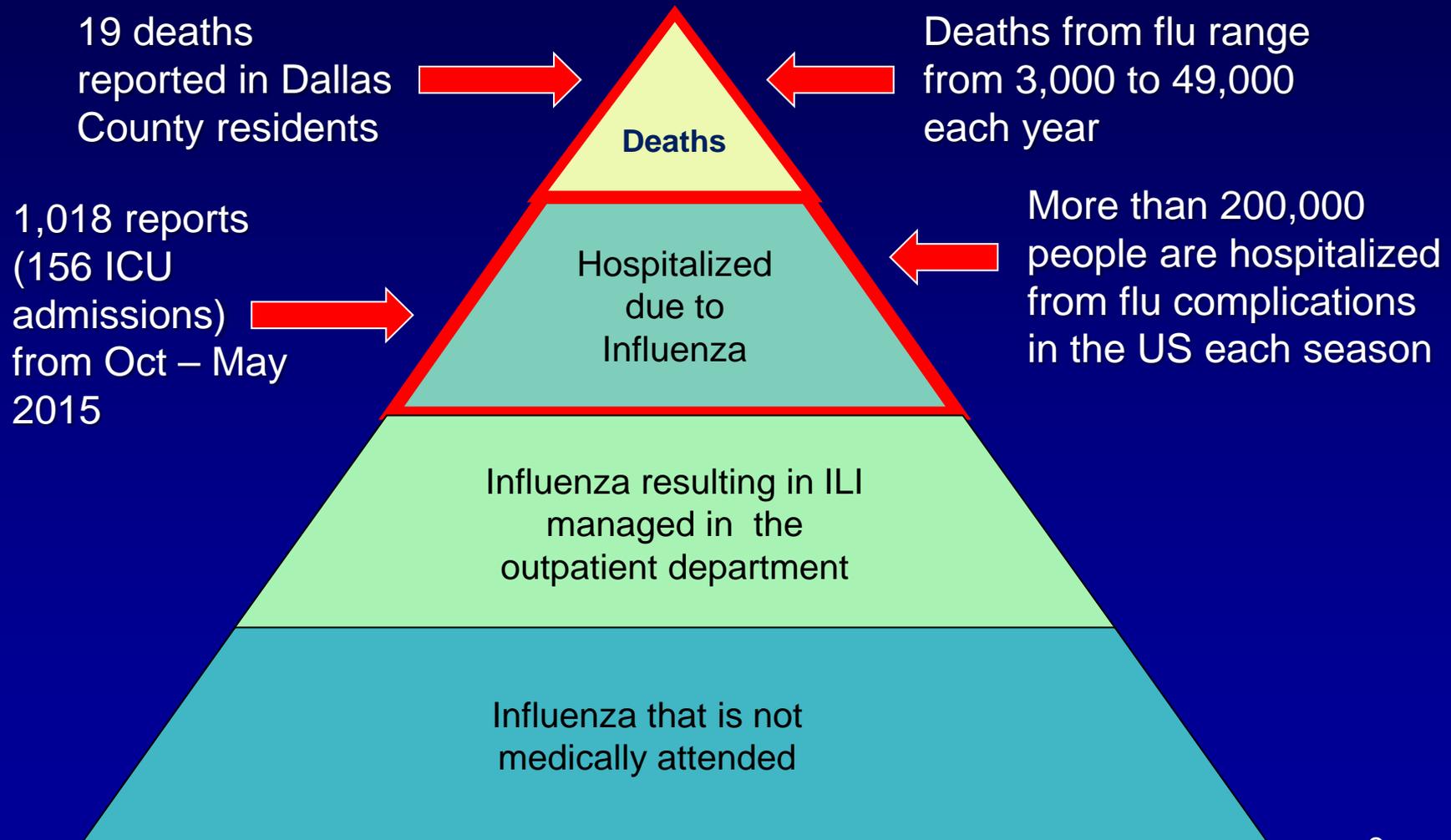
3. School Surveillance

- Total absenteeism
- Absenteeism due to influenza-like illness (ILI)

4. Hospital and ME Surveillance

- Inpatient, ICU admissions and deaths

Distribution of Influenza within the Population



Influenza-Associated Hospitalization: DCHHS Case Definition

- Hospital admission within 14 days after a positive flu test
 - A positive commercially available rapid diagnostic test
 - Reverse Transcription-Polymerase chain reaction (RT-PCR) positive
 - Positive viral culture
 - Positive immunofluorescence antibody staining (Direct [DFA] or Indirect [IFA])
 - Serologic testing

Confirmed Influenza-Associated Death: DCHHS Case Definition

- Pediatric Death: Less than 18 years of age
 - Clinically compatible illness that was confirmed to be influenza by an appropriate laboratory or rapid diagnostic test. There should be no period of complete recovery between the illness and death.
- Adult Death: 18 years of age or older
 - Clinically compatible symptoms, positive laboratory test, and clear progression from illness to death,
 - or determination by the County Medical Examiner's office of no alternate cause of death.
- Testing can be performed pre- or post-mortem

Hospitalization Surveillance: How Do We Do It?

- Identify hospitals and large outpatient clinics in the area that see a substantial percentage of influenza cases during the season
 - Currently 17 hospitals and 1 large outpatient group report voluntarily***
- Build relationships with Infection Preventionists, Medical Directors and Laboratory Staff at these facilities
- Be of assistance - DCHHS LRN provides confirmation testing and subtyping as needed

Hospitalization Surveillance: How Do We Do It?

- Request medical records for persons admitted to the ICU only (face sheet, history and physical, labs, ID consults and discharge or death summaries)
- Conduct chart abstractions and enter into line list – can be time and resource intensive
- Previously requested all influenza-associated hospitalizations
- In the previous two seasons received >1000 reports

Weekly Report Form



Dallas County Health and Human Services

HOSPITAL/CLINIC INFLUENZA SURVEILLANCE WEEKLY REPORT FORM

Name of Hospital/Clinic	
Report for Week Beginning:	_____ to _____

1. Laboratory Summary For Week: (See 1 A below)

Total Number of Influenza Tests Performed: (Including Negative)	# Positive Influenza Results by Type		# Influenza A Tests by Subtype (if PCR Done)	
	Type A	Type B	HSN2	H1N1
Please Check All Types of Testing Performed at Your Facility	<input type="checkbox"/> Culture	Positive, No Typing Done	Unsubtypable	
	<input type="checkbox"/> DFA			
	<input type="checkbox"/> PCR			
	<input type="checkbox"/> Rapid			

2. Hospitalized Patients: (See 1 B below)

Total number of patients admitted during this week with confirmed Influenza Infection (including ICU):	
Total number admitted to ICU:	

3. Deaths: (See 1 C below)

Please report all Influenza related deaths to DCHHS within 1 work day.	
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INSTRUCTIONS FOR SEASONAL INFLUENZA SURVEILLANCE REPORTING

- All information is requested weekly, beginning Sunday and ending Saturday.
 - Please report the total number of influenza tests and the number of positive tests performed at your facility.
 - We are requesting reporting of ALL admitted patients with confirmed influenza to DCHHS within 1 work day. Fax a copy of the face sheet/admission record, and influenza test result for each inpatient influenza case. Contact the DCHHS laboratory at 972-692-2762 to arrange for submission of the influenza isolate for testing.
 - Please report all Pediatric and Adult deaths associated with influenza to DCHHS within 1 work day.
 - Please report suspected outbreaks and institutionalized patients (LTCF) with influenza as soon as possible.
- Please fax this report to (214) 819-1933 or email this information to influenza@dallascounty.org by 5pm, Monday of the following week.
- For any patients with ILI and recent travel history to areas endemic for H7N9 or Middle East Respiratory Syndrome (MERS), please contact the Epidemiologist on-call at 214-677-7899 immediately to arrange for submission of the respiratory specimen for testing. Additional H7N9 and MERS resources are available at <http://www.cdc.gov/flu/avianflu/h7n9-virus.htm> and <http://www.cdc.gov/coronavirus/mers/>.

If you have any questions, please contact Sonya Hughee at 214-819-2004. Information collected will be used to update your facility, other participating facilities and the community regarding influenza activity in Dallas County. Your participation provides meaningful information for our entire community - Thank you for reporting!

Revised 9.24.14 SH

Name of facility



Total number of influenza tests performed



Positives by type or subtype if available



Total hospitalized
Total admitted to ICU



Total deaths



- Form distributed to hospitals and clinics
- Identify new ICP contacts each season

Hospitalization Surveillance

Figure 7. Characteristics of Influenza Hospitalizations, Dallas County: September 23, 2012 – April 27, 2013

	N=801*
Influenza Subtype (n**=283)	Influenza A (H3N2) (55%); Influenza B (41%); Influenza A (H1N1) (4%)
Gender	Female (53%)
Race/Ethnicity	White (34%); Hispanic (33%); Black (23%); Asian (3%); Other/Unknown (7%)
Median Age	44 years (Range: 4 days – 99 years)
Presence of ≥1 underlying medical condition or age < 2 years old	79%
Primary Reason for Admission	Respiratory Distress (374); Pneumonia (271); Seizures (49); Myositis (14)
ICU Admissions	108 (13.4%)
Deaths	12

- Chart abstractions provide better picture of flu activity
- Circulating strains
- Age groups impacted
- Severity of illness

Table 2. Characteristics of Influenza Hospitalizations, Dallas County Residents: September 12, 2013 to May 24, 2014

Total Hospitalizations	N = 896
Influenza A	724 (80.1%)
Gender	Female (54.2%), Male (45.8%)
Race/Ethnicity	Black (32.4%), Hispanic (26.1%), White (33.4%), Other (8.1%)
Median age (range)	47.0 years (6 days – 105 years)
Transfers from long-term care facilities	14 (1.7%)
ICU Admissions	N = 234 (26.1%)
Mechanical Ventilation	100 (42.7%)
BiPAP	82 (35.0%)
ECMO	4 (1.7%)
Presence of ≥1 underlying high risk medical condition ¹	183 (78.2%)

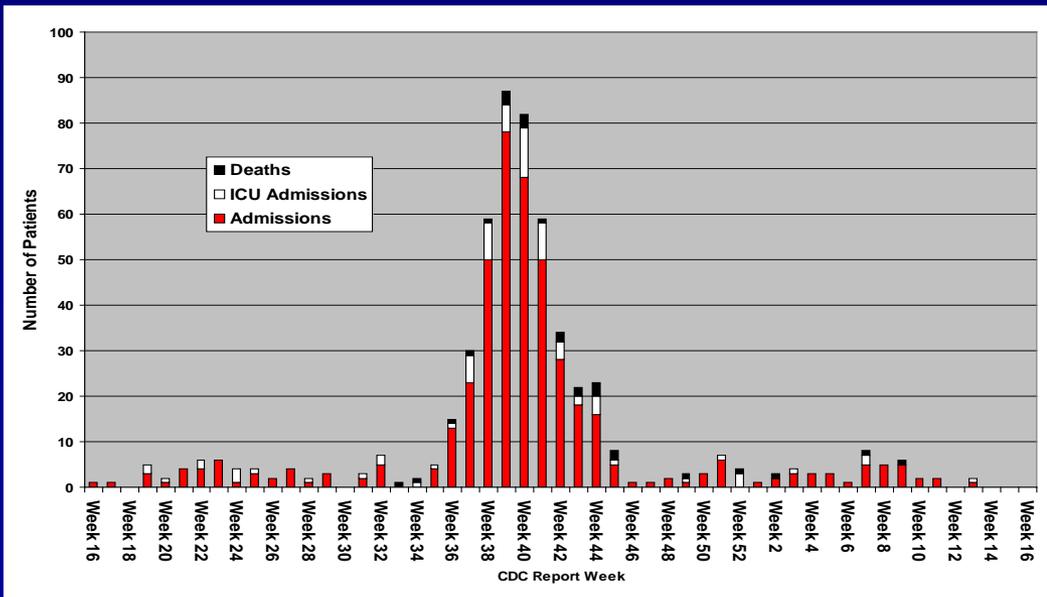
- Capture LTAC transfers and reach out to the facility

H1N1 Reporting in Dallas County: 2009–2010

MMWR 773

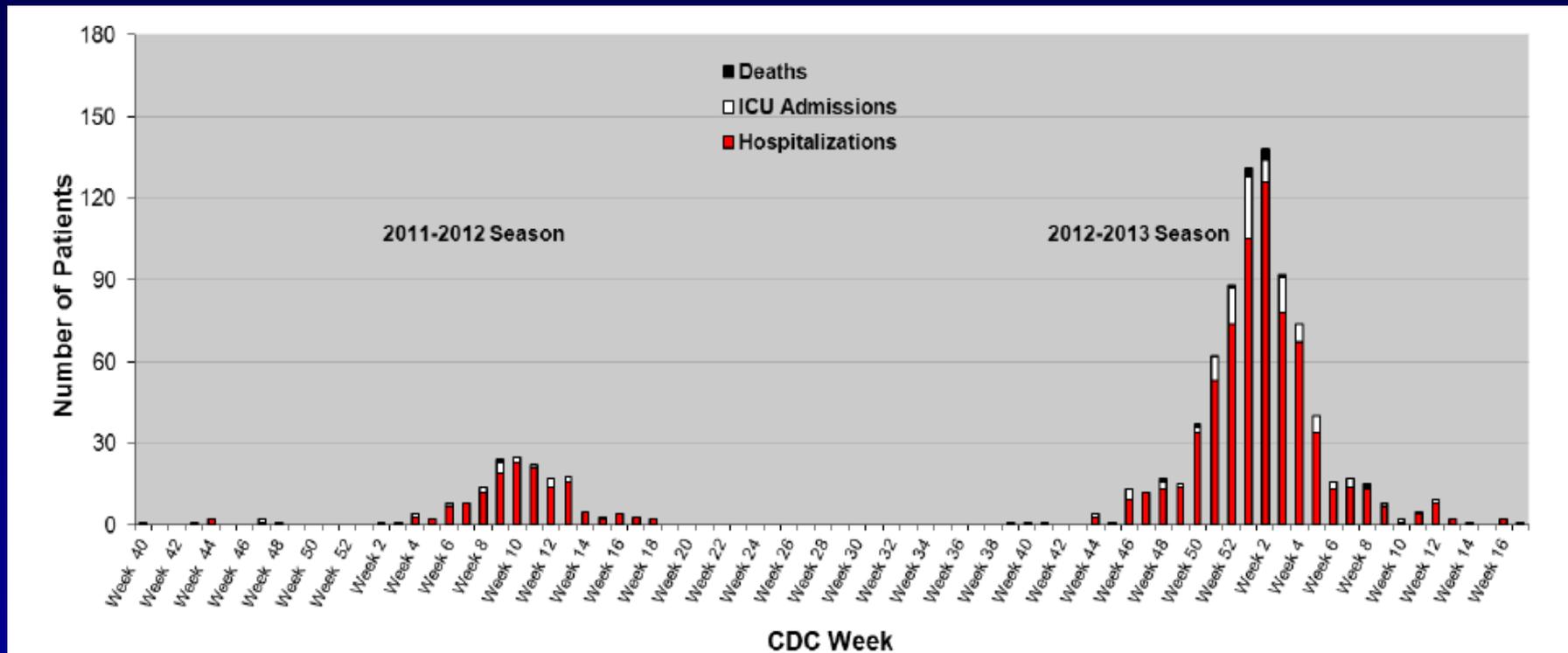
**Neurologic Complications
Associated with Novel Influenza A
(H1N1) Virus Infection in Children –
Dallas, Texas, May 2009**

H1N1 Hospitalizations and
Deaths in Dallas County



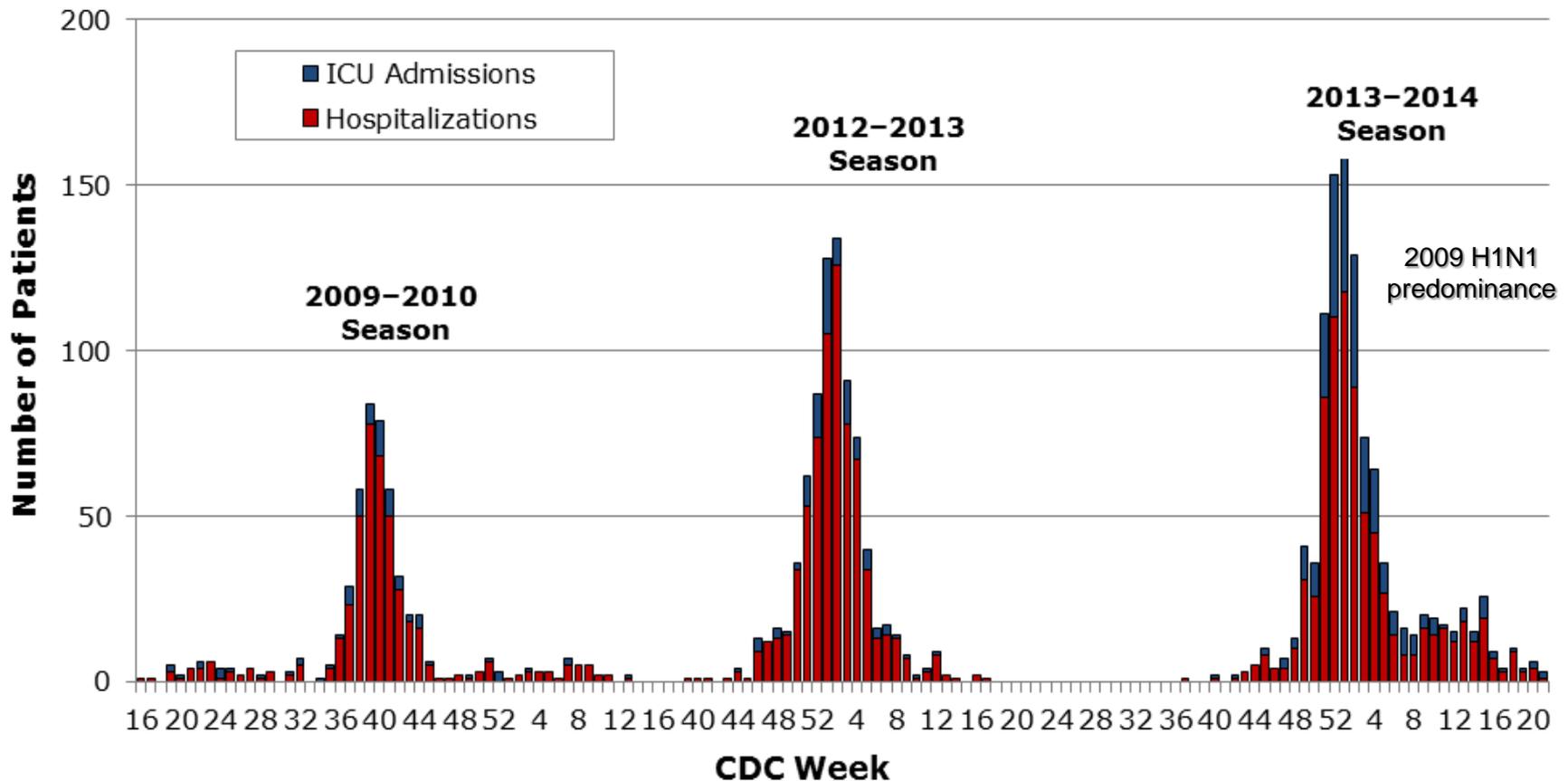
- Hospitalization surveillance can also provide insight into new or unusual presentations associated with illness

Hospitalized Influenza Patients by Week of Admission, Dallas County: 2011–2013



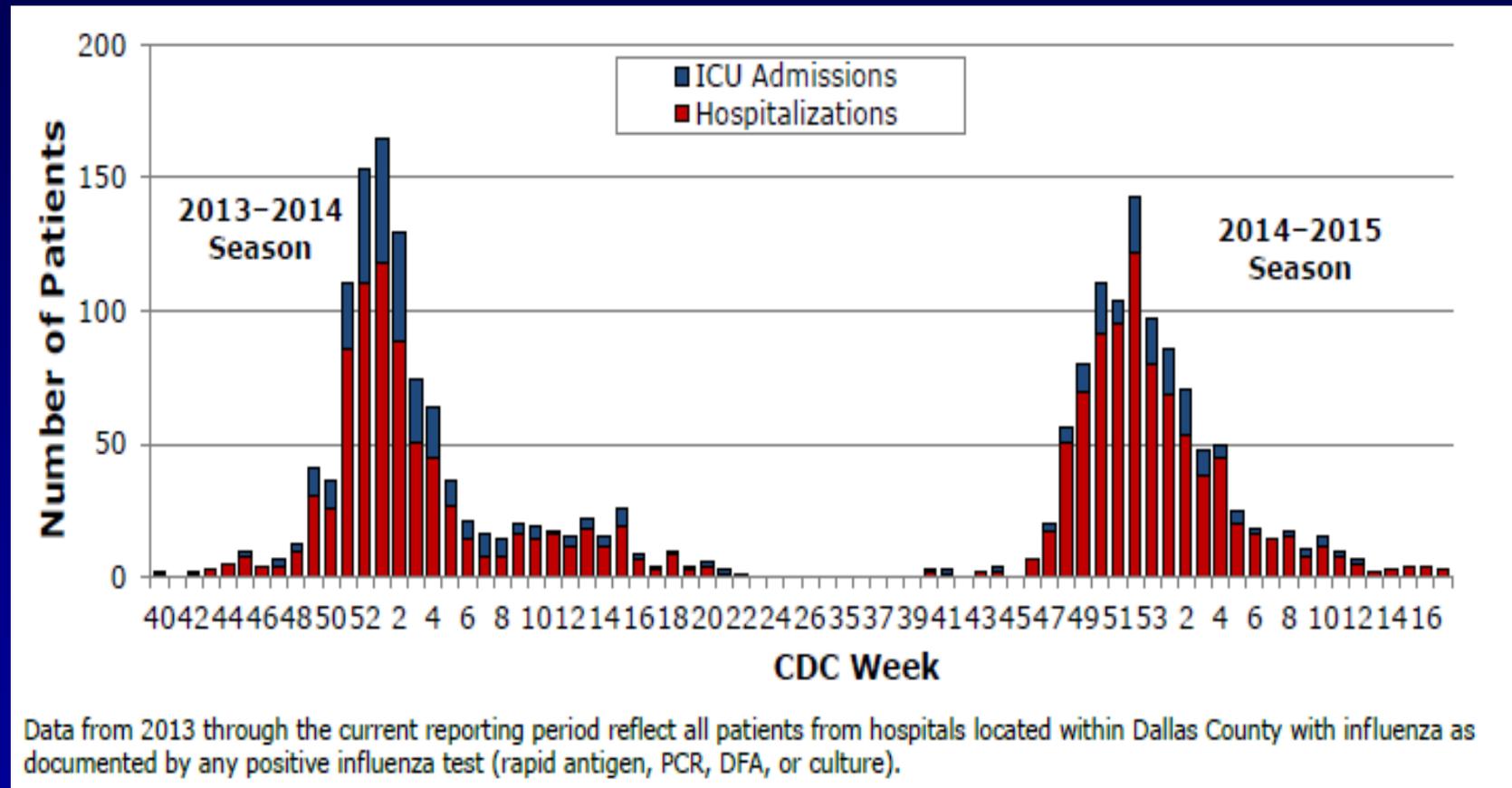
- Hospitalization surveillance over multiple seasons provides baseline data
- Understand what is normal or abnormal

Hospitalized Influenza Patients by Week of Admission, Dallas County: 2009–2014



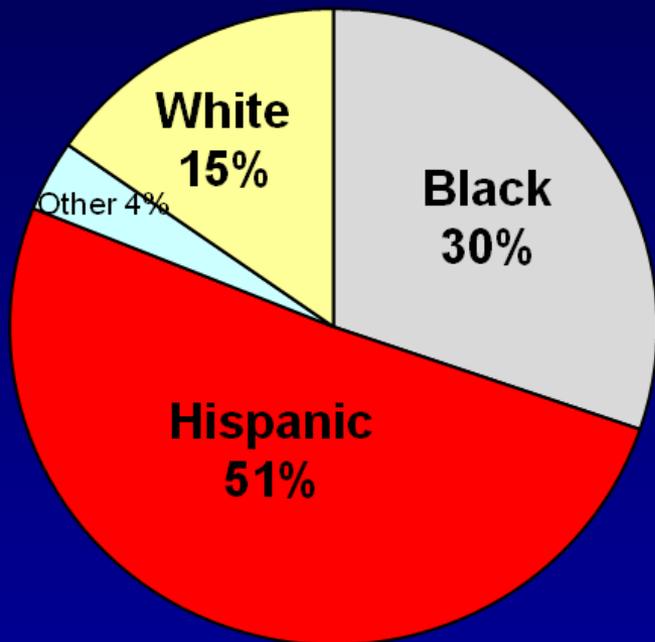
- 2013-2014 first H1N1 predominant season after pandemic
- CDC estimates 60% of hospitalizations occurred in 18-64 age group

Hospitalized Influenza Patients by Week of Admission, Dallas County: 2013–2015



- Hospital Surveillance data assists medical community by providing overall picture of what is occurring in the county
- Increased ICU admissions and ventilator allocation

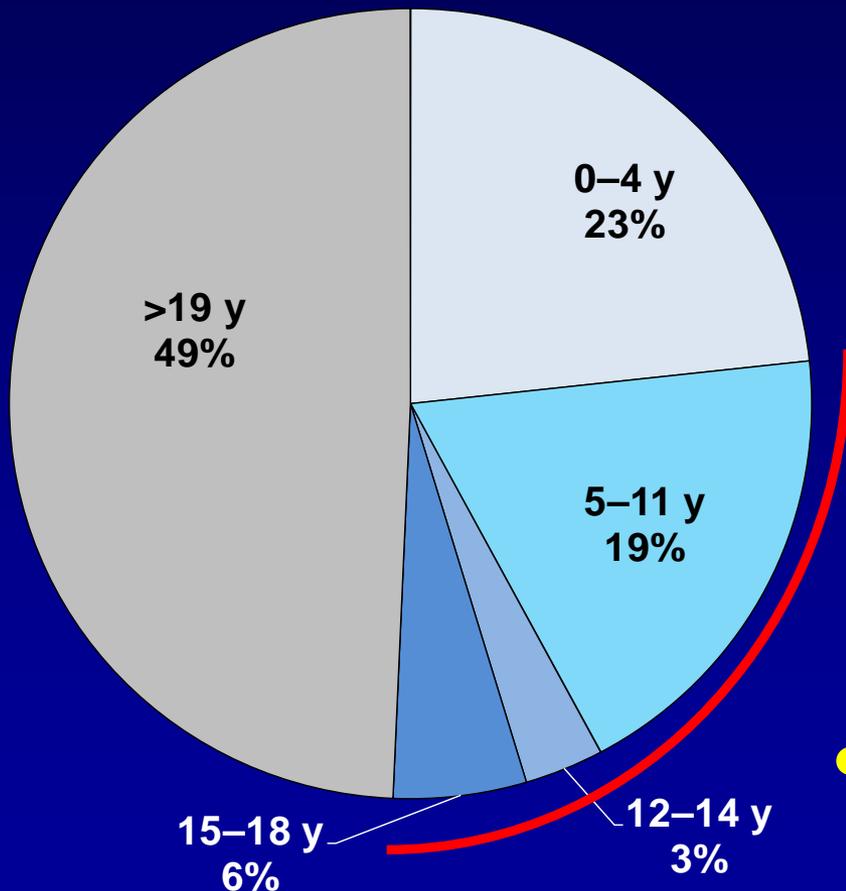
Predominance of H1N1 Hospitalizations in Minorities: Dallas County, 2009-10



N=538 Hospitalizations

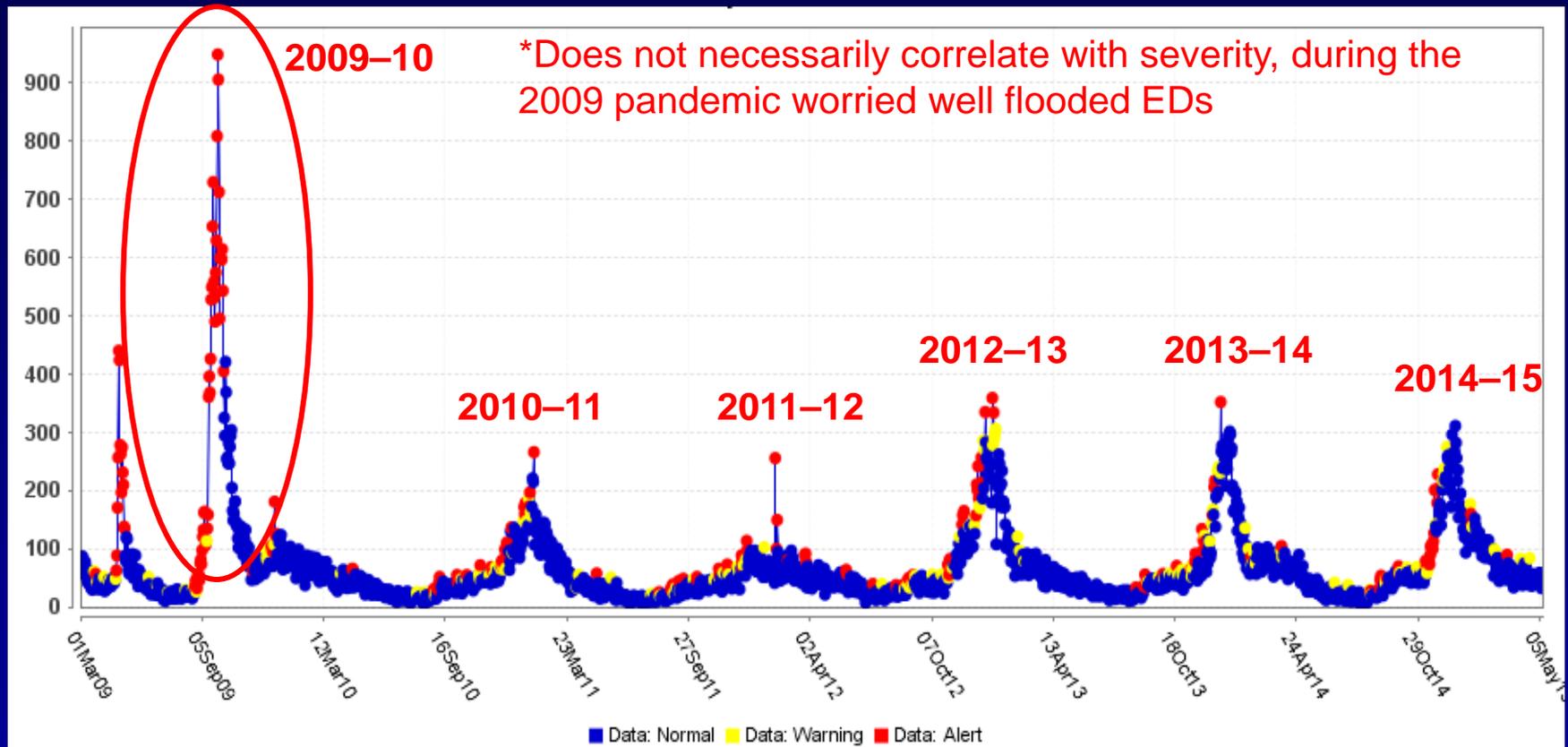
- Disproportionately higher rates of H1N1 hospitalization being noted in US minorities
- 81% of hospitalizations in Dallas have been in Hispanics or Blacks

H1N1 Hospitalizations in School Children, Dallas County: April 2009 – May 2010



- 51% of all hospitalized cases ≤ 18 yrs
- 28% (137) were school-aged children
- 68% had underlying medical conditions
- 5 deaths in children < 18 years of age
- Useful in making recommendations to schools

Syndromic Surveillance Dallas County: 2009–2015



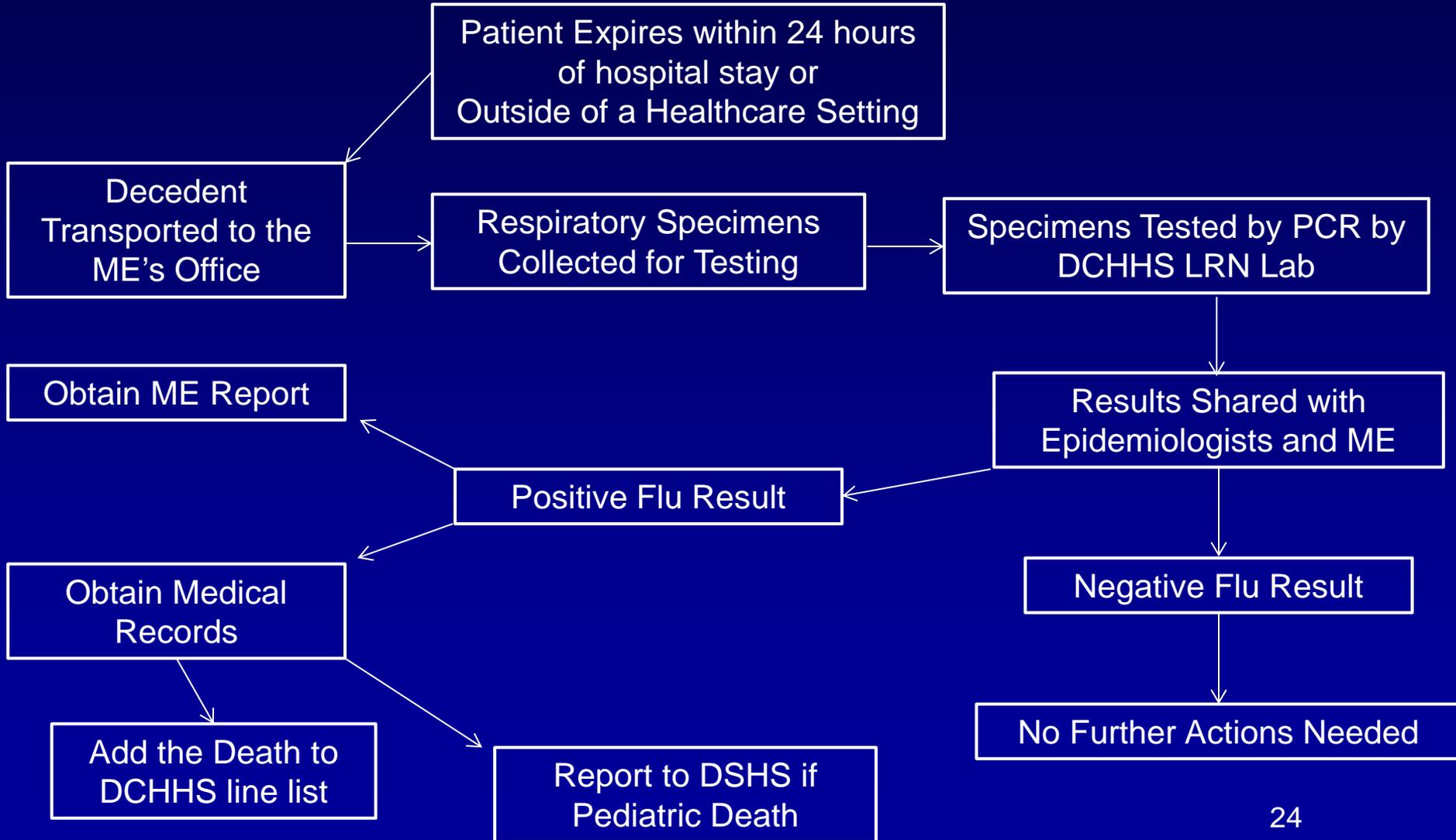
Electronic Surveillance System for the Early Notification of Community based Epidemics (ESSENCE): patients presenting to EDs in 22 Dallas County hospitals with chief complaints of ILI.

Why not just use ESSENCE?

Flu Death Surveillance: How Do We Do It?

- Identify contacts at the vital statistics office and medical examiner's (ME) office
- Build relationships by disseminating useful information to them
- DCHHS Epi team communicates with ME's office regularly and involves them in developing guidance
- Investigate each report and confirm case criteria is met

ME Surveillance



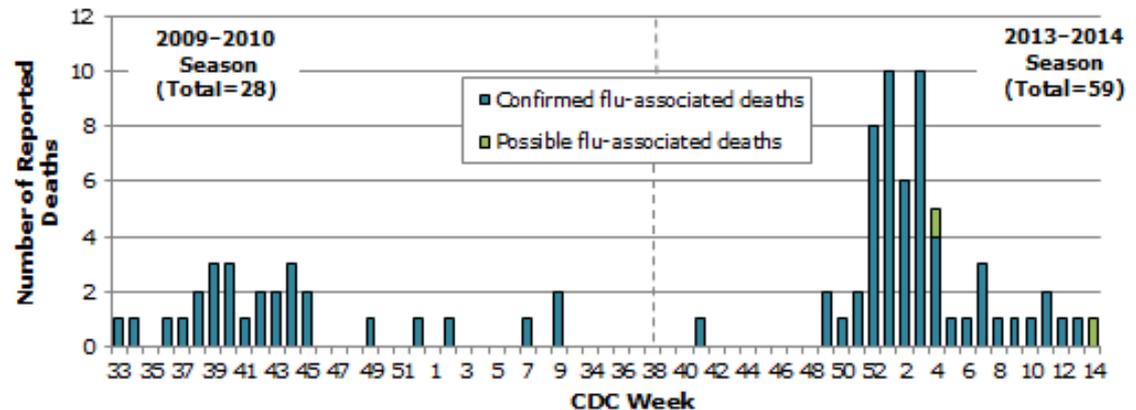
Mortality Surveillance

Table 3. Characteristics of Influenza-related Deaths, Dallas County Residents: September 12, 2013 to Current Date

Total Deaths	N=59
Influenza A	51 (86.4%)
Gender	Female (39.0%), Male (61.0%)
Median age (range)	56.0 years (8-95 years)
Presence of ≥ 1 underlying high risk medical condition ¹	46 (78.0%)
Deaths in Hospitalized Patients	N= 44 (74.6%)
Influenza A	37 (84.1%)
Gender	Female (34.1%), Male (65.9%)
Median age (range)	58.5 years (8-95 years)
Presence of ≥ 1 underlying high risk medical condition ¹	39 (88.6%)

Dallas County Health and Human Services began reporting pediatric in deaths in 2009.

Figure 4. Influenza-associated Deaths by Week of Death, Dallas County: 2009–2010 Season Compared with 2013–2014 Season



- Abstract autopsy reports, discharge summaries and cause of death summaries

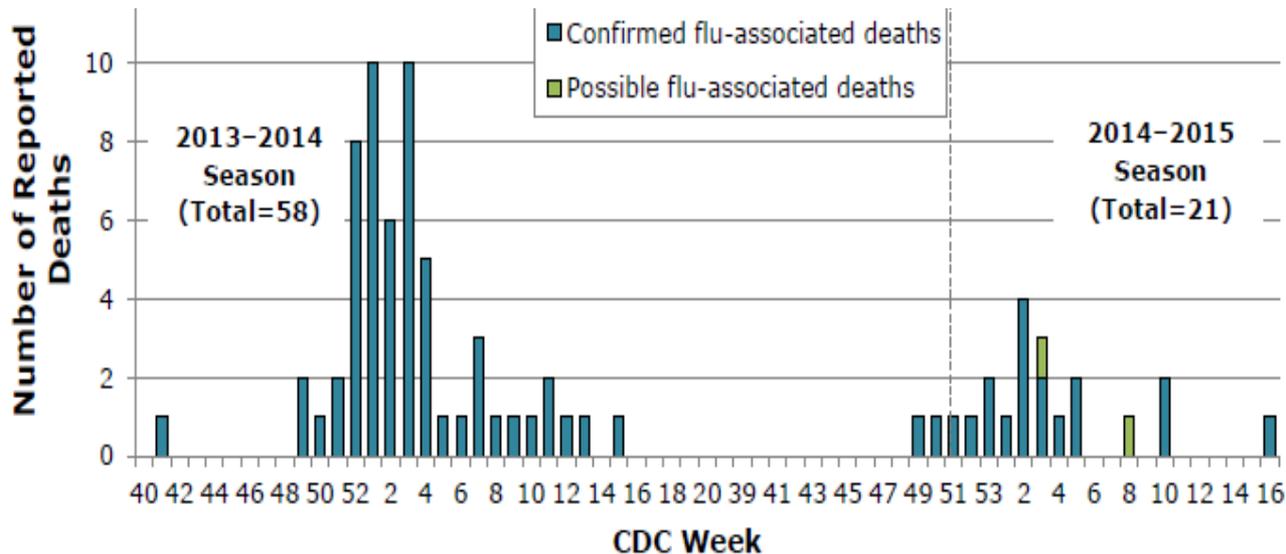
Influenza-Associated Mortality, Dallas County

Table 2. Influenza-associated Pediatric and Adult Deaths, Dallas County: 2009–2014 Seasons

Confirmed Deaths	2009–2010	2010–2011	2011–2012	2012–2013	2013–2014	2014–2015
Pediatric	5	2	1	3	3	0
Adult	23	3	0	6	55	19

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

Figure 4. Influenza-associated Deaths by Week of Death, Dallas County: 2013–2014 Season Compared with 2014–2015 Season



Influenza-Associated Mortality, Dallas County

Figure 3. Age Distribution of Hospitalized Influenza Patients, Dallas County: 2009–2010 Season Compared with 2013–2014 Season YTD

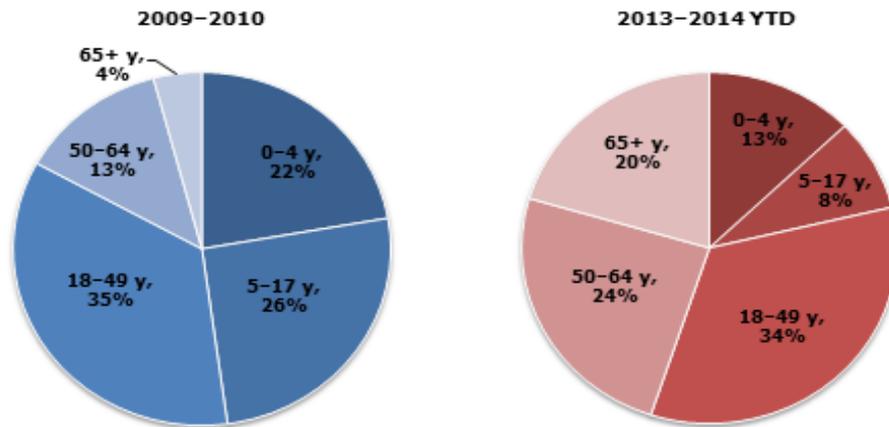
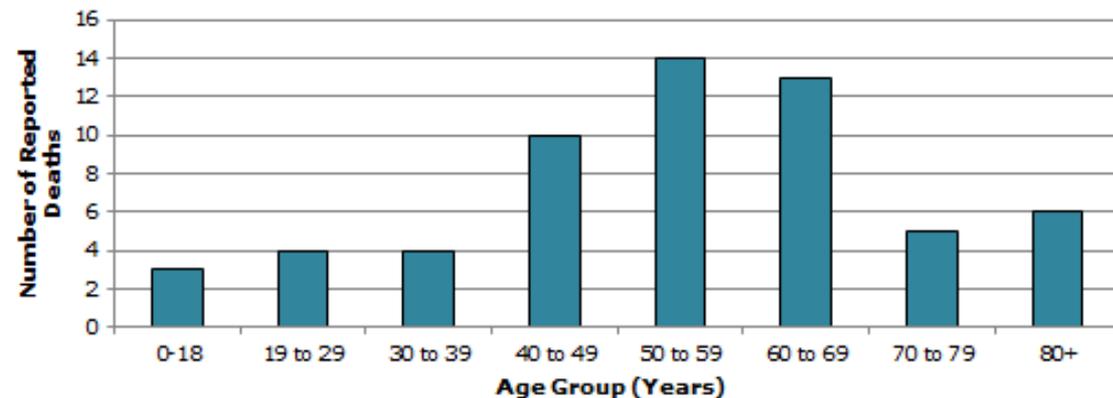


Figure 5. Influenza-associated Deaths by Age Group, Dallas County: September 12, 2013 to May 21, 2014



Data source(s): Includes all confirmed and possible influenza-associated deaths reported to date this season.

Surveillance Findings Critical to Communication

- Provide updates quickly and broadly to all practicing physicians (local medical society and hospitals)
 - Prior to the notification that the vaccine was not very effective last season, we had already received numerous reports of vaccinated patients with influenza
 - Allows DCHHS to put out health advisories and urge importance of antiviral therapy
- Provide education and guidance to patients and parents
 - Media, public health departments, schools, faith-based organizations

Physician Alerts Prompted by Public Health Surveillance Data



DALLAS COUNTY
DEPARTMENT OF HEALTH AND HUMAN SERVICES
EPIDEMIOLOGY

Zachary Thompson
Director

From: Sonya Hughes, MPH, Influenza Surveillance Coord
Joey Stringer, Ed Bannister, PhD, LRN Laboratory
Wendy Chung, MD, Chief Epidemiologist
To: Dallas County Medical Providers
Date: December 5, 2014

Health Advisory: Influenza Activity

Influenza activity has been increasing in Dallas County, with positive and increased influenza-associated emergency department visits and hospitalizations as of the last reporting period ending 11/29/14. This season, influenza activity has been reported most frequently nationally and locally. Higher activity has been noted in past seasons when influenza A (H3N2) health advisory has also been issued regarding the detection of influenza A (H3N2) viruses which are significantly different from the current season's vaccine. (CDC Health Advisory 374: <http://emergency.cdc.gov/han>)

With increasing influenza activity in our community, healthcare providers should be aware of the following recommendations:

- Clinicians should encourage all patients 6 months of age and older to receive an influenza vaccine this season to be vaccinated.
- Clinicians should encourage all persons with influenza-like illness to seek care promptly to determine if antiviral medications is warranted. (<http://www.cdc.gov/flu/about>)
- Decisions about starting antiviral treatment should not be based on influenza diagnostic tests (IDTs) but on clinical judgment.



DALLAS COUNTY
DEPARTMENT OF HEALTH AND HUMAN SERVICES
EPIDEMIOLOGY

Zachary Thompson
Director

Dr. Christopher Perkins
Health Authority/ Medical Director

From: Sonya Hughes, MPH, Epidemiology Surveillance Coordinator
Joey Stinger, Ed Bannister PhD, LRN Laboratory Director
Wendy Chung, MD, Chief Epidemiologist

To: Dallas County Medical Providers

Date: January 3, 2014

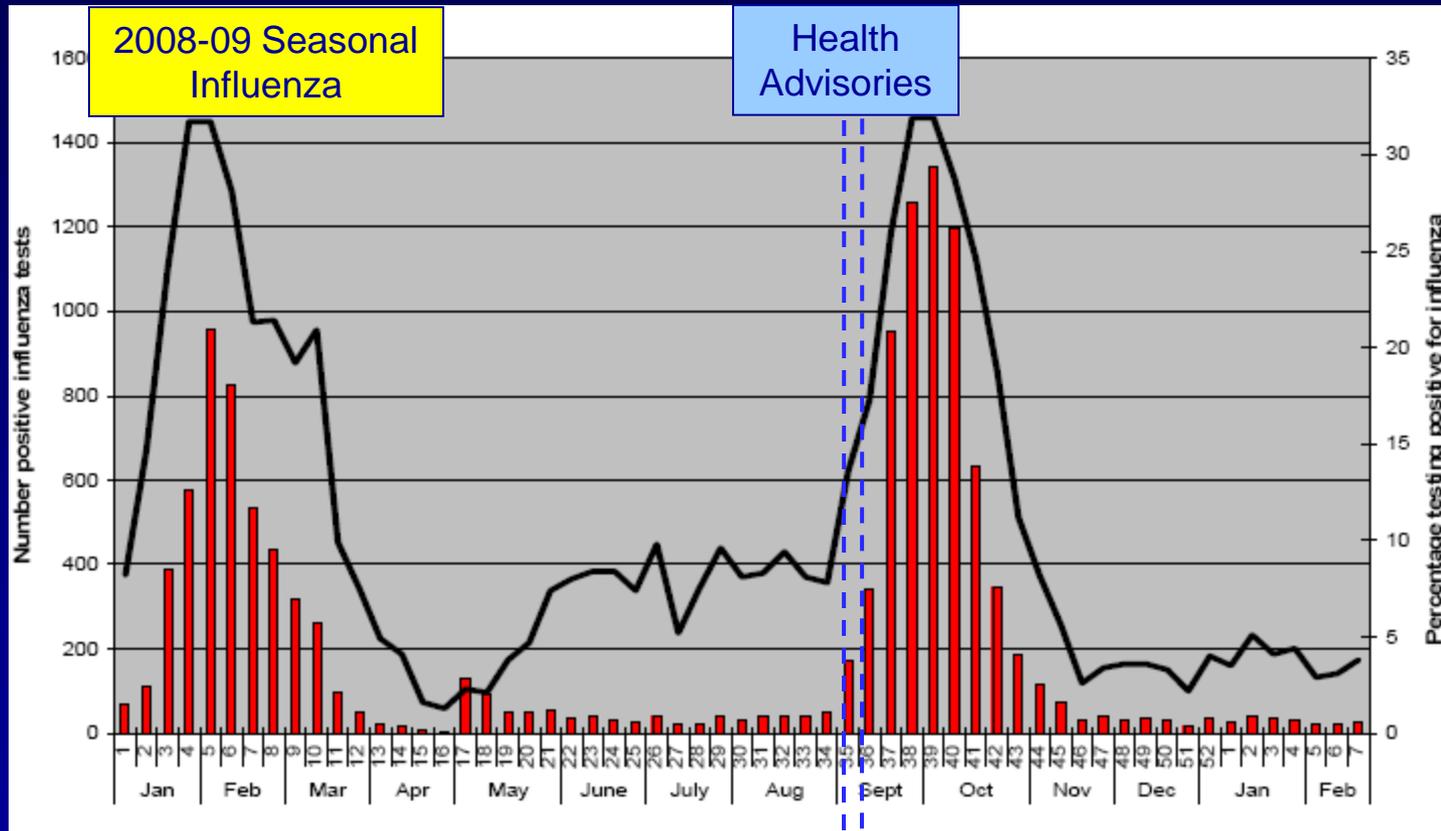
Health Advisory: Influenza Activity in Dallas County

High levels of influenza activity are continuing in Dallas County, with 26% of influenza tests returning positive, and increased influenza-associated emergency department visits and hospitalizations as of the last reporting period ending 12/28/13. The 2009 pH1N1 virus has been the predominant influenza strain circulating nationally and locally. Please see the CDC health advisory which noted that if pH1N1 virus continues to circulate widely, illness that disproportionately affects young and middle-aged adults may occur this season. (<http://www.bt.cdc.gov/HAN/han00359.asp>)

Thus far in the 2013-14 season, the overall numbers of hospitalizations being reported in recent weeks in Dallas County have been commensurate with numbers reported during peak weeks of past severe influenza seasons. Monitoring is ongoing for any indications of increased severity of illness from pH1N1 infection. Although the majority of persons hospitalized with severe illness have had known risk factors for influenza-associated complications, several have not.

With the increases in influenza activity in our community, healthcare providers should continue to be aware of the following recommendations:

Number and Percentage Positive Influenza Tests by Week, Dallas County: 2008–2010



Health Alerts regarding Increasing Influenza Activity issued to Medical Community, based on Influenza Surveillance Program Data as soon as increase was noted

Who Else is Doing It?



California Influenza and Other Respiratory Disease Surveillance for Week 20 (May 17, 2015 to May 23, 2015)

Note: This report includes data from many sources of influenza surveillance and it should be viewed as a preliminary "snapshot" of influenza activity for each surveillance week. Because data are preliminary, the information may be updated in later reports as additional data are received. These data should not be considered population-based or representative of all California public health jurisdictions.

Overall geographic influenza activity in California was "sporadic*" during Week 20.

Influenza Report Highlights

- Outpatient influenza-like illness (ILI)
 - 1.4% of patient visits during Week 20 were for ILI, which is lower compared to Week 19 (2.4%); the percentage of outpatient visits for ILI does not exceed the epidemic threshold for this time of year
- Hospitalization data
 - 4.6% of Kaiser patients hospitalized during Week 20 were admitted with a pneumonia and/or influenza (P&I) diagnosis, which is similar to Week 19 (4.4%); the percentage of P&I admissions is below the epidemic threshold for this time of year
- Influenza virus detections by Respiratory Laboratory Network and Sentinel Laboratories
 - 30 (5.6%) of 540 specimens tested positive for influenza during Week 20, which is similar to Week 19 (5.9%)
 - Influenza B viruses continue to circulate at low levels
 - Nationally, 19.2% of influenza A (H3) viruses characterized match the 2014–2015 influenza vaccine component as of Week 19
- Influenza-associated deaths among patients 0–64 years of age
 - 4 laboratory-confirmed influenza deaths were reported during Week 20
- Influenza-associated outbreaks
 - 6 laboratory-confirmed influenza outbreaks were reported during Week 20

*For the Centers for Disease Control and Prevention (CDC) definitions of influenza geographic distribution, please go to <http://www.cdc.gov/flu/weekly/overview.htm>.

A. Outpatient and Inpatient Data

1. Influenza Sentinel Providers

Sentinel providers (physicians, nurse practitioners, and physician assistants) situated throughout California report on a weekly basis the number of patients seen with influenza-like illness (ILI) and the total number of patients seen for any reason. ILI is defined as any illness with fever ($\geq 100^{\circ}\text{F}$ or 37.8°C) AND cough and/or sore throat (in the absence of a known cause other than influenza).

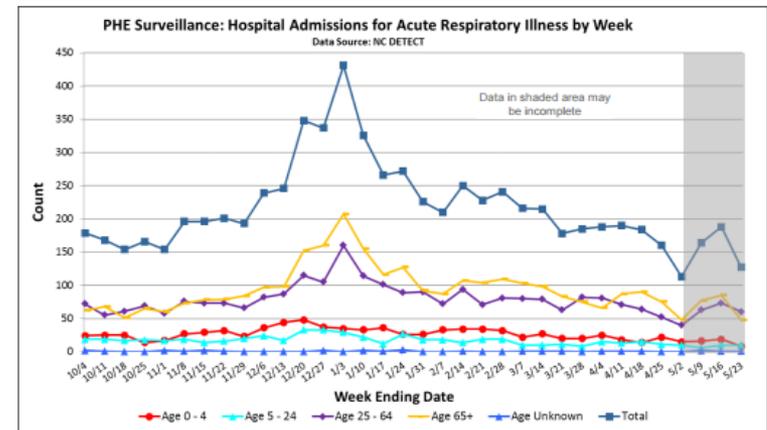
A total of 71 enrolled sentinel providers have reported data for Week 20. Based on available data, the percentage of visits for ILI in Week 20 (1.4%) does not exceed the epidemic threshold for this time of year (Figure 1).

Final Summary 2014-15

PHE Acute Respiratory Admissions Surveillance

The number of patients admitted to the hospital with fever plus respiratory symptoms in the absence of a known cause other than influenza is reported on a weekly basis by Public Health Epidemiologists (PHEs) located in seven of the largest hospital networks across North Carolina. The graph below shows the number of acute respiratory illness admissions to participating hospitals by age group.

In conjunction with other surveillance information, these data help us monitor for changes in severity of illness during periods when influenza is circulating. Please note that these reports are not limited to patients with laboratory-confirmed influenza infection. Also, these numbers reflect admissions to participating hospitals only and might not be reflective of the entire state.



- Acute respiratory admissions decreased during week 20 (ending 5/23/2015).
- The highest number of acute respiratory admissions was reported among patients age 25-64 years followed age 65 and over by during week 20.

Importance of Hospitalization and Death Surveillance

- Provides baseline data and depicts seasonal severity
- Provides a snapshot of what is going on locally and supports recommendations provided to the medical community
- Allows analysis of prior seasonal trends
- Drives public health and clinical action

Weekly Influenza Report

Summary of current activity



2014–2015 Influenza Season
Dallas County Health and Human Services

Surveillance Week 17
Ending 5/2/15

Epidemiologic Summary

- Influenza activity continues to decrease overall in Dallas County with 2.3% of tests returning positive. Nationally, 5.5% of specimens reported to CDC were positive for influenza during week 17.
- During week 17, 83.3% of circulating strains were influenza B in Dallas County. Overall influenza A (H3N2) has been the predominant influenza strain circulating locally and nationally, comprising 99.7% of subtyped influenza A specimens in the DCHHS laboratory this season.
- Over 80% of the influenza A (H3N2) viruses analyzed to date in the US are significantly different (drifted) from the H3N2 virus included in this season's flu vaccine.
- Influenza-associated hospitalizations are declining overall in Dallas County.
 - During weeks 16-17, no new intensive care unit (ICU) admissions were reported.
- No adult influenza-related deaths were reported during week 17. No influenza-associated pediatric deaths have been reported in Dallas County during the 2014–2015 season.
- Prompt treatment with antiviral medications is recommended for high risk or severely ill patients. In the United States, all recently circulating influenza viruses tested have been susceptible to the neuraminidase inhibitor antiviral medications, oseltamivir and zanamivir; however, rare sporadic instances of oseltamivir-resistant 2009 H1N1 and A (H3N2) viruses have been detected worldwide.
- RSV activity decreased this week with 2.4% of tests from area surveillance sites testing positive.

Table 1. Influenza Surveillance Summary: Dallas County Providers, Hospitals and Viral Labs: September 28, 2014 – May 2, 2015

Week Ending	3/28	4/4	4/11	4/18	4/25	5/2	9/28 – Present
CDC Week	12	13	14	15	16	17	
Influenza tests performed weekly	940	714	705	583	549	533	60,453
Total positive influenza tests ¹	54	25	14	11	4	12	10,470
Percent positive influenza tests	5.7	3.5	2.0	1.9	0.7	2.3	
Positive influenza A tests ²	15	1	3	2	0	2	9,131
Positive influenza B tests	39	24	11	9	4	10	1,339
Non-differentiated influenza tests ³	0	0	0	0	0	0	0
Influenza hospitalizations ⁴	6	2	3	4	4	3	1,016
Confirmed pediatric deaths ⁵	0	0	0	0	0	0	0
Confirmed adult deaths ⁶	0	0	0	0	1	0	19
						(+0 Wk 18)	
Possible influenza-associated deaths ⁷	0	0	0	0	0	0	2
						(+0 Wk 18)	

¹Indicates preliminary results which are subject to change with late-arriving data from surveillance sites designated for DCHHS' seasonal influenza program; ² Includes positive rapid antigen, PCR, DFA, or culture results; ³ Further subtyping is performed only for specimens referred by institutions for PCR-testing; ⁴ Non-differentiated refers to rapid test results which did not differentiate between influenza A and B; ⁵ Reflects all influenza-associated hospitalizations reported from hospitals located within Dallas County by week of positive test; ⁶ Confirmed influenza-associated deaths of Dallas County residents <18 years of age; ⁷ 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; ⁸ Possible influenza-associated deaths are defined as cases with laboratory-confirmed influenza, but pending final autopsy results for determination of primary cause of death.

Influenza surveillance data table

Total tests, total positives, influenza-associated hospitalizations and deaths

Weekly Influenza Report

Percent positive of flu tests by week for previous 3 seasons



DCOHS 2014–2015 Influenza Season

Surveillance Week 17
Ending 5/2/15

Figure 1. Percent Positive Influenza Tests by Week, Dallas County: 2012–2014 Seasons

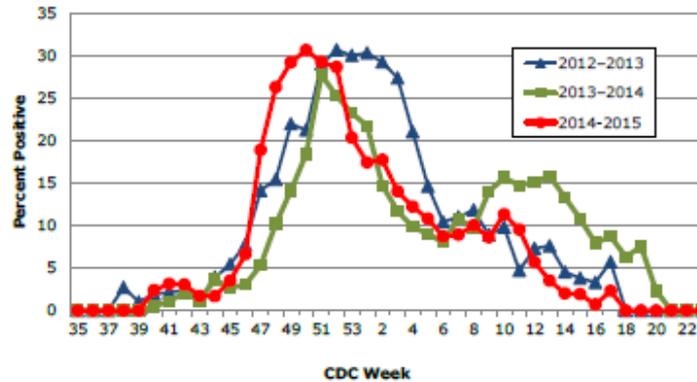
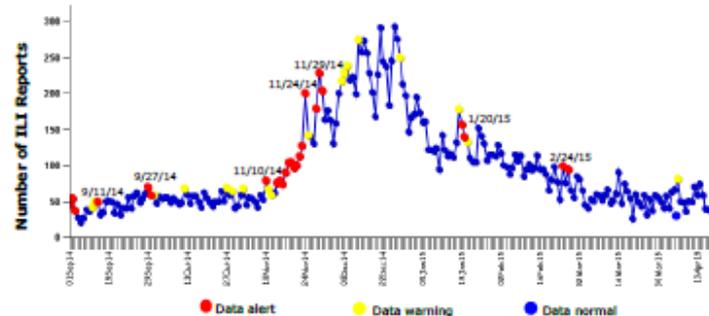


Figure 2. Syndromic Surveillance of Emergency Department Visits for Influenza-like Illness (ILI), Dallas County: September 1, 2014 – April 23, 2015*



Syndromic surveillance of ED visits for ILI

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. *Updated data is pending due to technical problems with surveillance system. **Updated data is pending due to technical problems with the surveillance system.

Weekly Influenza Report

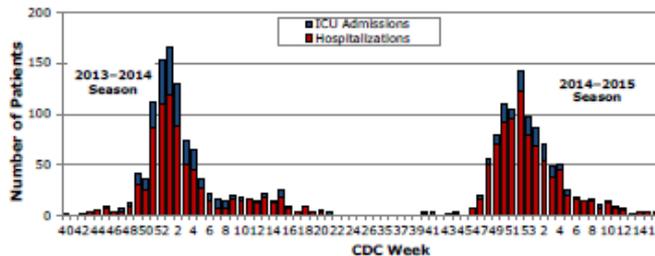
Hospitalized
Influenza
Cases



DCHHS 2014–2015 Influenza Season

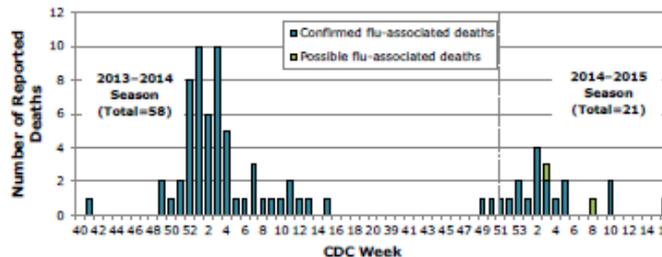
Surveillance Week 17
Ending 5/2/15

Figure 3. Hospitalized Influenza Patients by Week of Admission, Dallas County: 2013–2014 Season Compared with 2014–2015 Season



Data from 2013 through the current reporting period reflect all patients from hospitals located within Dallas County with influenza as documented by any positive influenza test (rapid antigen, PCR, DFA, or culture).

Figure 4. Influenza-associated Deaths by Week of Death, Dallas County: 2013–2014 Season Compared with 2014–2015 Season



Data source(s): Data from 2013 through the current reporting period reflect deaths reported from the ME with PCR-confirmation of influenza, or reported from hospitals with any laboratory-confirmed influenza (rapid antigen, PCR, DFA, or culture). Confirmed influenza death is defined by a positive lab test, compatible symptoms, and clear progression from illness to death, or determination by the ME of no alternate cause of death.

Table 2. Influenza-associated Pediatric and Adult Deaths, Dallas County: 2009–2014 Seasons

Confirmed Deaths	2009–2010	2010–2011	2011–2012	2012–2013	2013–2014	2014–2015
Pediatric	5	2	1	3	3	0
Adult	23	3	0	6	55	19

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

Influenza-associated
Deaths



Weekly Influenza Report

Influenza Typing and Subtyping



DCHHS 2014–2015 Influenza Season

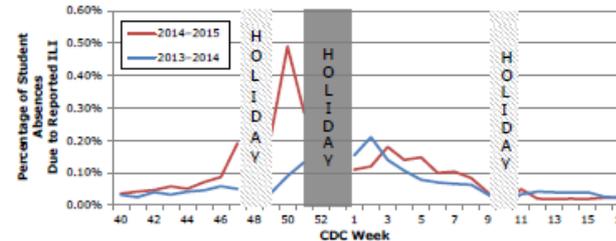
Surveillance Week 17
Ending 5/2/15

Table 3. Influenza Typing and Subtyping from Cumulative Dallas County, Texas, and U.S. Laboratory Surveillance Data: 2014–2015 Season

	Dallas ¹ (n=341)	Texas ² (n=16,789)	U.S. ³ (n=123,252)
Influenza A	329 (97.0%)	13,856 (82.5%)	103,937 (84.3%)
H1N1 2009 subtype	1 (0.3%)	19 (0.7%)	238 (0.5%)
H3N2 subtype	328 (99.7%)	2,643 (99.3%)	52,064 (99.5%)
Not subtyped	0	11,194	51,634
Influenza B	12 (3.0%)	2,933 (17.5%)	19,315 (15.7%)

¹ DCHHS LRN laboratory PCR testing of designated Dallas County surveillance site isolates; ² DSHS 2013–2014 Texas Influenza Surveillance Information Activity Report available at <http://www.dshs.texas.gov/isa/influenza/surveillance/2013/>; ³ CDC FluView Weekly Influenza Surveillance Report available at <http://www.cdc.gov/flu/weekly/>.

Figure 5. Percentage of Student Absences Due to ILI by Week, Dallas County: 2013–2014 and 2014–2015



Data source: Voluntary reporting from Independent School Districts representing over 510 elementary, middle, and secondary schools and over 430,000 students in Dallas County.

Table 4: Non-Influenza Respiratory Virus Testing by North Texas Laboratories Reported to NREVSS, Week 17

Virus	Number of Laboratories Reporting	Tests Performed	Total Positive Tests	Percentage of Tests Positive
Adenovirus (respiratory)	4	58	3	5.2%
HMPV	4	58	5	8.6%
Parainfluenza virus	4	58	10	17.2%
Rhinovirus/enterovirus	4	58	13	22.4%
RSV (Antigen tests only)	4	8	0	0.0%

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



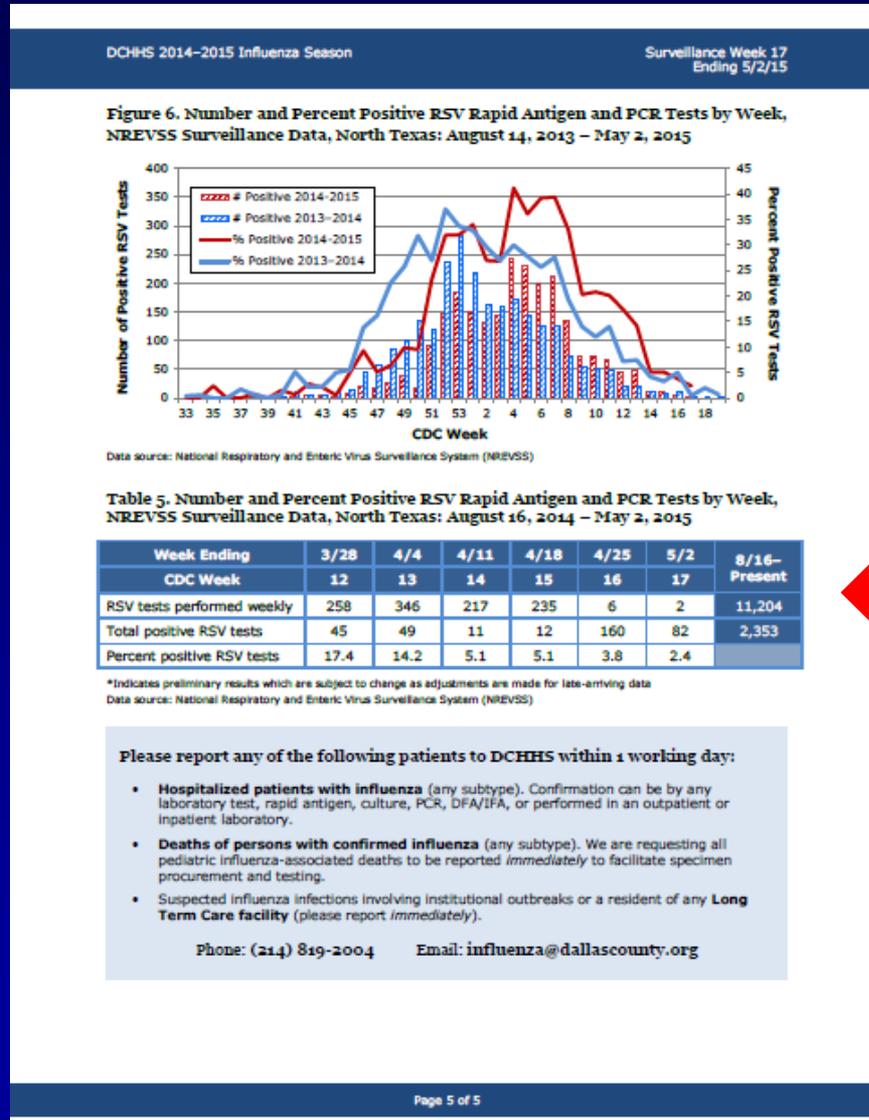
ILI Absentee Data



Other Respiratory

Weekly Influenza Report

RSV →



← Tests and Percentage Positive

Thank you!



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