

Influenza-Associated Adult Mortality Surveillance Project

By

Johnathan Ledbetter, MPH

Background

- **Receive inquiries about the number of influenza-associated deaths that have occurred in Texas for an influenza season**
- **DSHS provides influenza-associated pediatric mortality numbers**

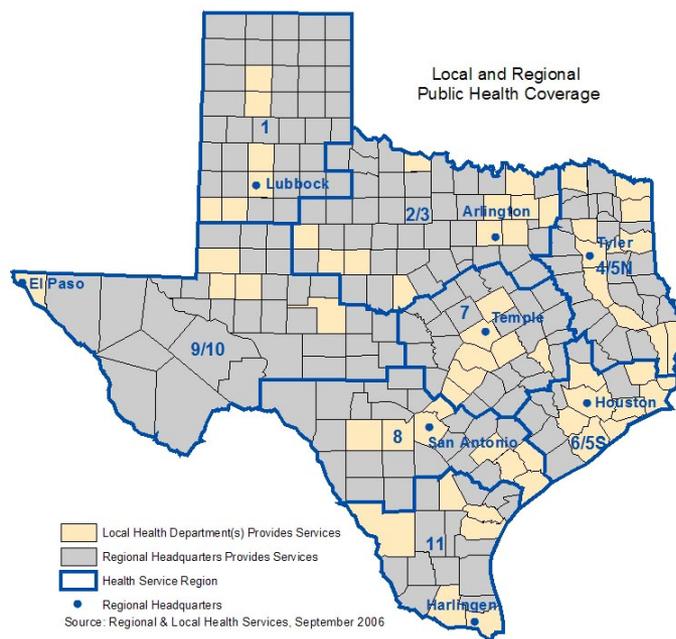
Purpose

- To research the possibility of conducting influenza-associated adult mortality surveillance in the state



Project Activities

- Query other state influenza surveillance coordinators
- Query Regional and Local Health Department Counties in Texas
- Partner with DSHS Vital Statistics Unit



Query of Other State Influenza Surveillance Coordinators

- Email sent to all state influenza surveillance coordinators
- Email contained the following questions
 - Is influenza-associated adult mortality reporting voluntary or mandated by law in your state?
 - How does your state health department inform public health stakeholders about influenza-associated adult mortality surveillance?
 - What are some strategies that your state health department used to get local health departments, healthcare providers and other individuals to participate in influenza-associated adult mortality surveillance?
 - What is the timeframe for reporting an influenza-associated adult mortality case in your state (e.g. immediately, within 1 business day, etc.)?
 - What case definition(s) are used in your state for this type of reporting?

Query of Other State Influenza Surveillance Coordinators

- Email contained the following questions
 - What are the laboratory criteria for diagnosis?
 - What type of case classifications does your state have for this type of reporting (e.g. confirmed, not a case, etc.)?
 - How is the surveillance completed logistically (e.g. search of vital records, passive reporting, sentinel surveillance, etc.)?
 - Where does the influenza-associated adult mortality data come from?
 - Is there a standardized collection form that is used in the state to collect adult deaths associated with influenza?
 - What are the limitations of death data in your state?
 - How did your health department set up your surveillance system?

Query of Other State Influenza Surveillance Coordinators Responses

- 8 state influenza surveillance coordinators responded to the email
- Responses
 - One state does not conduct surveillance for influenza-associated adult deaths



Query of Other State Influenza Surveillance Coordinators Responses

Questions	Summary of Responses
Is influenza-associated adult mortality reporting voluntary or mandated by law in your state?	<ul style="list-style-type: none">• 4 states have laws mandating influenza associated deaths• 3 states have voluntary reporting
How does your state health department inform public health stakeholders about influenza-associated adult mortality surveillance?	<ul style="list-style-type: none">• 5 states include information in weekly flu report• 1 state sends out a health alert• 2 states have local health jurisdictions communicate with healthcare providers and facilities for this type surveillance

Query of Other State Influenza Surveillance Coordinators Responses

Questions	Summary of Responses
What are some strategies that your state health department used to get local health departments, healthcare providers and other individuals to participate in influenza-associated adult mortality surveillance?	<ul style="list-style-type: none">• Add influenza-associated mortality to the reportable list• Ask local jurisdictions to report to them when they heard of anything• Create a strong relationship with infectious disease doctors/nurses at major hospitals
What is the timeframe for reporting an influenza-associated adult mortality case in your state (e.g. immediately, within 1 business day, etc.)?	<ul style="list-style-type: none">• 1 state responded immediately• 2 states responded within 24 hours• 1 states responded not timely

Query of Other State Influenza Surveillance Coordinators Responses

Questions	Summary of Responses
<p>What case definition(s) are used in your state for this type of reporting?</p>	<p>Most states had the following components in their definition of an influenza-associated death:</p> <ul style="list-style-type: none">• An illness clinically compatible with influenza• Confirmed to be influenza by an appropriate laboratory test or rapid diagnostic test.• There should be no complete recovery period between illness and death <p>States also mentioned that a death should not be reported if:</p> <ul style="list-style-type: none">• After review and consultation there is an alternative agreed upon cause of death.• There is no laboratory confirmation of influenza virus infection.

Query of Other State Influenza Surveillance Coordinators Responses

Questions

Summary of Responses

What are the laboratory criteria for diagnosis?

Most states mention one or more of the following laboratory tests used for diagnosis of influenza on respiratory specimens:

- Tissue cell culture
- RT-PCR
- Immunofluorescent antibody staining (direct or indirect)
- Rapid influenza diagnostic testing
- Immunohistochemical (IHC) staining for influenza viral antigens in respiratory tract tissue from autopsy specimens
- Four-fold rise in influenza hemagglutination inhibition (HI) antibody titer in paired acute and convalescent sera.

Query of Other State Influenza Surveillance Coordinators Responses

Questions	Summary of Responses
What type of case classification does your state have for this type of reporting (e.g. confirmed not a case, etc.)?	<ul style="list-style-type: none">• 5 states have confirmed case classification
How is the surveillance completed logistically (e.g. search of vital records, passive reporting, sentinel surveillance, etc.)?	<ul style="list-style-type: none">• All states relied on passive reporting• Most states mention using vital records as well
Where does the influenza-associated adult mortality data come from?	<ul style="list-style-type: none">• All states reported that influenza-associated adult mortality data came from healthcare providers such as hospital IPs or an electronic death reporting system

Query of Other State Influenza Surveillance Coordinators Responses

Questions	Summary of Responses
Is there a standardized collection form that is used in the state to collect adult deaths associated with influenza?	<ul style="list-style-type: none">• 4 states have a standardized collection form
What are the limitations of death data in your state?	<ul style="list-style-type: none">• Having an age restriction on collecting death information• Inconsistencies in the death data• Data Completeness• Passive reporting

North Carolina Department of Health and Human Services
Division of Public Health • Epidemiology Section
Communicable Disease Branch



INFLUENZA, ADULT DEATH (≥18 YEARS OF AGE)
Confidential Communicable Disease Report—Part 2
NC DISEASE CODE: 76

ATTENTION HEALTH CARE PROVIDERS:

Please report relevant clinical findings about this disease event to the local health department.

REMINDER to Local Health Department staff: If sending this form to the Health Care Provider, remember to attach a cover letter from your agency indicating the part(s) of the form the provider should complete.

Form for patient information: Patient's Last Name, First, Middle, Suffix, Maiden/Other, Alias, Birthdate (mm/dd/yyyy), SSN

NC EDSS LAB RESULTS
Verify if lab results for this event are in NC EDSS. If not present, enter results.

Table with 7 columns: Specimen Date, Specimen #, Specimen Source, Type of Test, Test Result(s), Description (comments), Result Date, Lab Name—City/State

NC EDSS PART 2 WIZARD COMMUNICABLE DISEASE

Main clinical assessment section including: Was patient symptomatic for this disease?, Were other respiratory specimens collected for bacterial culture?, Was the patient receiving any of the following therapies prior to illness onset?, Did the patient receive an antiviral for this illness?, Did the patient receive any pandemic H1N1 influenza vaccine during the current season?

(CONTINUED NEXT PAGE)

Continuation of NC EDSS PART 2 WIZARD COMMUNICABLE DISEASE form, including: CLINICAL FINDINGS, CASE INTERVIEWS/INVESTIGATIONS, TREATMENT, and HOSPITALIZATION INFORMATION sections.



Severe Influenza Case Reporting Form Hospitalized and Deaths

Reported By: _____ Contact #: _____

Reporting Jurisdiction: _____

Last name: _____ First name: _____ DOB: ___/___/___

Sex: Female _____ Male _____

City of Residence: _____ County of Residence: _____

Race: White _____ Black _____ Native American _____ Asian/PI _____ Other _____ Unknown _____

Ethnicity: Hispanic _____ Non-Hispanic _____

Date of admit: ___/___/___ Discharge Status: Pending _____ Home _____ Long Term Care _____

If institutional resident please specify facility: _____

Onset Date: ___/___/___ Preexisting Comorbidities: Yes _____ No _____

Death: Yes _____ No _____ Date of Death: ___/___/___

Diagnostic Information:

Laboratory Confirmed: Yes _____ No _____ Clinical Diagnosis of Disease: Yes _____ No _____

Influenza Subtype Information:

Seasonal A (H3) _____ 2009 A (H1N1) _____ Influenza B _____ Unable to Type _____

Vaccination Status:

Vaccinated for seasonal influenza? Yes _____ No _____ Vaccination Date ___/___/___

Comments: _____

REPORT CASES TO LOCAL HEALTH DEPARTMENT: _____

Query of Other State Influenza Surveillance Coordinators Responses

Questions	Summary of Responses
How did your health department set up your surveillance system?	<p>Common themes among the responses were:</p> <ul style="list-style-type: none">• Surveillance already consisted of mandatory reporting of influenza cases so adding hospitalizations and deaths did not require any additional set up• Vital Records sends a weekly report• Flu deaths become reportable during or right after the 2009 H1N1 pandemic

Query of Regional and Local Health Department

- **Email sent to Regional Influenza Surveillance Coordinators**
 - Asked Regional Flu Surveillance Coordinators to forward to LHDs
- **Email contained the following questions**
 - Is influenza-associated adult mortality reporting voluntary or mandatory?
 - How does your local health department inform public health stakeholders about influenza-associated adult mortality surveillance?
 - What are some strategies that your local health department uses to get healthcare providers and other individuals to participate in influenza-associated adult mortality surveillance?

Query of Regional and Local Health Department

- **Email contained the following questions**
 - What case definition(s) are used in your jurisdiction for this type of reporting?
 - How is the surveillance completed logistically (e.g. search of vital records, passive reporting, sentinel surveillance, etc.)?
 - Where does the influenza-associated adult mortality data come from?
 - Is there a standardized collection form that is used in your jurisdiction to collect adult deaths associated with influenza?
 - How did your health department set up your surveillance system?

Query of Regional and Local Health Department Responses

- **Five local health department counties responded to the questions**

Questions	Summary of Responses
Is influenza-associated adult mortality reporting voluntary or mandatory?	<ul style="list-style-type: none">• All respondents said it was voluntary reporting.
How does your local health department inform public health stakeholders about influenza-associated adult mortality surveillance?	Some responses included: <ul style="list-style-type: none">• Using the newspapers and blackboard connect system• Phone and email communications• Providing a weekly report

Query of Regional and Local Health Department Responses

Questions	Summary of Responses
<p>What are some strategies that your local health department uses to get healthcare providers and other individuals to participate in influenza-associated adult mortality surveillance?</p>	<p>Some of the strategies mentioned were:</p> <ul style="list-style-type: none">• Providers are not reporting the data. The data is almost exclusively from death certificate data.• Personally speaking to hospital IP's and other health care providers• Send out a request to healthcare providers via blackboard connect• Sending a follow-up email after making a personal phone call

Query of Regional and Local Health Department Responses

Questions	Summary of Responses
What case definition(s) are used in your jurisdiction for this type of reporting?	Some responses included: <ul style="list-style-type: none"><li data-bbox="958 511 1765 705">• Influenza listed as an immediate or underlying cause on the death certificate.<li data-bbox="958 729 1765 853">• Have to have a positive influenza test
How is the surveillance completed logistically (e.g. search of vital records, passive reporting, sentinel surveillance, etc.)?	<ul style="list-style-type: none"><li data-bbox="958 939 1765 1133">• 3 out of 5 responded that surveillance is conducted passively<li data-bbox="958 1158 1765 1282">• 1 out of 5 completes surveillance using vital records

Query of Regional and Local Health Department Responses

Questions	Summary of Responses
Where does the influenza-associated adult mortality data come from?	<ul style="list-style-type: none">• 3 out of 5 responded with hospitals• 2 out of 5 said medical examiners• 1 out of 5 said vital records
Is there a standardized collection form that is used in your jurisdiction to collect adult deaths associated with influenza?	<ul style="list-style-type: none">• 4 out of 5 said that they had no standardized collection form
How did your health department set up your surveillance system?	<p>Some responses included:</p> <ul style="list-style-type: none">• No system set up• Only keeping track of voluntary reports• Added additional surveillance to existing influenza surveillance program

Working with Vital Statistics Unit (VSU)

- **Spoke with a person in VSU about setting up and sending influenza-associated mortality data from death certificates**
- **In the process of creating an agreement with VSU**
- **Identified ICD-10 codes that will used to search death certificates for influenza associated deaths**

Working with Vital Statistics Unit (VSU)

- **Identified data elements to be included in the report**
 - **Some data elements were**
 - **Name**
 - **Age**
 - **Race**
 - **County of Residence**
 - **Date of Death**
 - **Immediate Cause of Death**

Next Steps in the Project

- **Finalize agreement with VSU**
- **Have VSU influenza-associated mortality reports sent to Flu Team**
- **Analyze the data in the report**
- **Incorporate the data into the weekly state influenza report**

Questions?



Discussion on Influenza-Associated Death Surveillance