

Influenza Surveillance Activities – ILI Activity

ILI Activity Overview

The primary surveillance program for estimating influenza-like illness (ILI) at the state level in Texas is ILINet. However, regional and local health departments may want to supplement ILINet surveillance with additional ILI activity surveillance to better understand and track ILI in their own jurisdictions. Most health departments and regions collect data on test results, emergency room admissions and ILI activity reported by hospitals, clinics, provider offices or even schools as a way to monitor influenza activity. This provides a much more detailed picture of influenza activity in a community, county or region.

One advantage of ILINet is the statewide consistency in data collection. All providers who use ILINet report the total number of patients seen by the provider and the total number of patients seen with ILI by age group. Additionally, a published study conducted by the University of Texas on behalf of DSHS in 2010 demonstrated that Texas ILINet data correlated with hospitalizations and deaths from influenza and pneumonia (1). One disadvantage of ILINet is that the state, regional and local health departments cannot modify what variables are collected in the system. It also reduces local and regional health department interactions with providers, hospitals, infection control professionals and clinics within their own communities.

Many regional and local health departments in Texas have built their own ILI activity surveillance systems using volunteer providers and hospital staff who report data directly to local public health officials. Having reports sent directly to the local or regional health department has the advantage of flexibility, immediacy and the ability to respond quickly to events occurring within a local or regional jurisdiction; these events may include outbreaks or identification of unusual strains or perceived risk factors that may contribute to hospitalizations or deaths. Health departments can use their own criteria for recruiting reporters and can select what information they are interested in receiving. However, since regional offices and local health departments differ in their approaches to influenza surveillance, it can be difficult to compare an influenza report from one community to that from another community.

This section provides recommendations for the types of data that should be collected from influenza reporters that report directly to a health department.

Data Collection

There is a wealth of health and medical information that could potentially be used to assess influenza and ILI activity in a community. Influenza illness can range from mild to severe depending on an individual's health status and the strain of influenza. Increases in hospitalizations and deaths from pneumonia and influenza often correlate with increases in ILI activity among patients seen at private provider offices, clinics and hospitals. Public health professionals and organizations have been exploring other potential data sources to enhance the ability of public health to describe influenza and ILI activity and estimate the impact on the community.

Data may be collected from healthcare providers and from non-healthcare providers. Some health departments only collect the number of people seen with ILI each week or the number of tests that were positive for influenza each week. These data help provide a rough idea of the amount of ILI activity occurring during a reporting week; however, the data will be heavily influenced by the number of people who happen to see a healthcare provider and the number of reporters who actually report each week. Counts cannot be compared with data from another health jurisdiction because they lack information about the underlying population. A perceived peak in activity could be an artifact of adding a new reporter, having a reporter expand his practice or having more reporters participating in one week compared to other weeks. It is also difficult to make comparisons among weeks and influenza seasons since the numbers and types of reporters are so variable.

DSHS recommends that in addition to collecting reports on the number of people seen with ILI each week, the total number of people seen for any reason should also be collected from the healthcare provider. This additional variable allows the calculation of the proportion of people seen with ILI. Using the proportion of people seen with ILI instead of just the total number of people with ILI helps control for variation in the number and types of reporters. It also allows comparisons among other weeks, seasons and jurisdictions since both denominator and numerator data are captured.

If a provider is able to report the number of patients seen with ILI by age group categories and the total number of patients seen, this information could be used in ILINet in addition to local and regional surveillance systems. The provider can report through ILINet and to the health department or the provider can just report to the health department. In the latter case, the health department can then fax the information to DSHS or CDC for data entry into ILINet.

Providers, clinics and hospitals can also enhance the data collected by reporting influenza test results. Physicians may use rapid tests in their offices or submit specimens for influenza testing to commercial or public health laboratories. Obtaining the number of tests that were positive for influenza A, influenza B, undifferentiated influenza A/B or specific subtypes of influenza assists public health in determining which types of influenza are circulating around the state.

Some health departments use non-medical or quasi-medical entities to report ILI activity such as schools, large businesses and nursing homes. The data that can be collected from these entities

will vary slightly depending on the type of reporting facility. Examples of data that may be collected from these entities are included in the table below:

| Entity | Data |
|---|--|
| Grade schools | <ul style="list-style-type: none"> • School closures from ILI-related absenteeism among students/staff • Total number of students and the number of students absent each week • Number of students absent that parents report as ILI • Total number of students seen by the school nurse and the number of those students with ILI |
| Large businesses | <ul style="list-style-type: none"> • Total number of employees and the number of employees who call in sick each week • Number of employees who self-report ILI |
| Nursing homes | <ul style="list-style-type: none"> • Total number of residents and the number with ILI each week • Total number of residents transferred to a hospital with ILI or pneumonia each week • Total number of staff and the number of staff that call in sick each week |
| First responders [may include Emergency Medical Services (EMS) or Fire] | <ul style="list-style-type: none"> • Total number of calls/incidents and the number of those calls/incidents that were ILI related • Total number of employees and the number of employees who call in sick each week |

Deciding how many influenza/ILI reporters to recruit is important. The determination of the number of reporters to recruit for participation varies by jurisdiction and depends upon the types of influenza surveillance questions that the jurisdiction wants to be able to answer. Section IVa includes a table showing the counties that have a population over 100,000 where additional providers/reporters are needed. These recommendations are based upon CDC guidance and DSHS goals for representativeness in Texas. Health jurisdictions may want to have more reporters than recommended to increase awareness of ILI activity within their area. This may include having at least one medical care provider reporting from every major population area in the jurisdiction. If a medical care provider is not available, non-medical reporters such as schools or large businesses can provide information as well.

Example Influenza Surveillance Report Forms

| FACSIMILE TRANSMITTAL SHEET | |
|--|---|
| To: Sandi Henley RN, CIC | FAX NUMBER: 254-899-0405 |
| COMPANY: Texas Department of State Health Services | TOTAL NO. OF PAGES INCLUDING COVER: 1 |
| PHONE NUMBER: 254-778-6744 | INFLUENZA REPORTING |

2010-11
CLINIC WEEKLY ILI/FLU REPORT
 Submit by 3:00 each Monday for the week prior (Sunday – Saturday)

Name (Clinic): _____

Name of Reporter: _____

Phone Number: _____ Email of Reporter: _____

Week Ending : _____

Definitions:

- Flu case confirmed by rapid test, culture, antigen detection, or PCR (Flu A, Flu B, Not Differentiated Flu). and/or,
- Influenza-like illness activity (ILI): ILI is defined as fever over 100°F and cough and/or sore throat in the *absence of another diagnosis*.

Please complete the table listing the number of flu and ILI cases seen in your facility

| TOTAL NUMBER OF PATIENTS SEEN FOR THE WEEK | | | | | | | |
|--|-----|-------------|-------------|---------------|---------------------|---------------------|------------------------|
| County <i>(Residence of patient)</i> | ILI | Rapid flu A | Rapid flu B | Rapid flu ND* | Culture/ PCR+ flu A | Culture/ PCR+ flu B | '09 H1N1 Culture/ PCR+ |
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*ND = Not Differentiated Flu

Please email report to: hsr7.epi@dshs.state.tx.us by 3 p.m. on Mondays. If Monday is a holiday, send ASAP. The report may also be faxed to 254-899-0405 (no cover sheet needed). You may call 254-778-6744 with questions or comments. If sending additional information for a previously submitted report, please highlight the changes being made. Thank you!

| | |
|---------------------|---------------------|
| Reporting for Week: | _____ through _____ |
|---------------------|---------------------|



**Tarrant County Public Health
Division of Epidemiology and Health Information
INFLUENZA SURVEILLANCE WEEKLY REPORT FORM**

I. HOSPITALS / CLINICS / SENTINEL PHYSICIANS

| | |
|----------------------|--|
| Name of Organization | |
|----------------------|--|

| | |
|---------------------|--|
| Total Patients Seen | |
|---------------------|--|

| Number of Patients with ILI* (by age group) | < 1 | 1-4 | 5-14 | 15-24 | 25-44 | 45-64 | ≥65 |
|---|-----|-----|------|-------|-------|-------|-----|
| | | | | | | | |

* Influenza-like illness (ILI). ILI is defined as fever ≥ 100°F PLUS a cough or sore throat, in the absence of another known cause other than influenza.

| | | |
|--------------------------------|--------------------|--|
| Number of Flu Tests Performed | | |
| Number of Positive Flu Results | Type A | |
| | Type B | |
| | Pos, no type given | |

INSTRUCTIONS - INFLUENZA SURVEILLANCE

1. All information requested is weekly, beginning Sunday and ending Saturday.
 - * Please report ALL the Influenza-Like Illness (ILI) seen in your ER and/or facility. ILI is defined as fever ≥ 100°F PLUS a cough or sore throat in the absence of another known cause other than influenza.
 - i. If your facility performs any influenza testing, include all positive and negative patients in determining the number of ILI seen in your facility.
 - ii. If applicable, report the number of influenza tests performed at your facility including influenza type (A or B) detected.
2. Complete Influenza Surveillance Questionnaire for patient presenting with ILI AND recent travel history to avian influenza endemic areas (Asia, Africa or Eastern Europe).
3. Clinical specimens MUST be submitted to TCPH for any patient presenting with ILI AND recent travel history to avian influenza endemic areas (Asia Africa or Eastern Europe). Testing is for surveillance purposes only.
 - * Notify TCPH public health personnel for clinical specimen pick-up and delivery to the North Texas Regional Laboratory.
4. Fax (817) 321-5353 or email (flu@tarrantcounty.com) the completed form by 1:00 PM, Monday of the following week. Information collected will be used to update your facility, other participating facilities, Tarrant County, The Texas Department of State Health Services (DSHS), Centers for Disease Control (CDC), and the World Health Organization (WHO).

If you have any questions regarding this form, please contact the Tarrant County Public Health, Epidemiology and Health Information Division (817) 321-5350.

References

1. Scarpino SV, Dimitrov NB, Meyers LA. (2012). Optimizing provider recruitment for influenza surveillance networks. *PLoS Computational Biology*, 8 (4). Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3325176/>.