



Selecting Providers and Specimens for Influenza Laboratory Surveillance

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Outline

- ◊ General considerations
- ◊ Right Size project
- ◊ Selecting submitters/specimens based on Right Size goals
- ◊ Provider survey

Why Do Influenza Laboratory Surveillance?

- To meet Texas flu surveillance goals:
 - Determine when and where influenza viruses are circulating
 - Determine if circulating influenza viruses match the vaccine strains
 - Detect changes in the influenza viruses
- CDC needs real viruses from real patients to develop the yearly flu vaccine

Basics for Specimen Submitter Recruiting

- Recruited providers must see patients with acute illness (including ILI/flu)
- You may recruit:
 - Providers, clinics, hospital EDs, schools, etc.
 - Providers with whom you work well
- Ideally, your jurisdiction's flu specimen surveillance component should also:
 - Represent the community, demographically & geographically
 - Represent the spectrum of illness
 - Include providers who report ILI data to the HD or ILINet

Specimen Collection: General Considerations

- Target patients with:
 - Symptoms of ILI/flu and no other illness explanation
 - Typical symptoms of influenza infection generally include fever (typically > 100 °F), malaise, muscle aches, cough, runny nose, sore throat, chills, and/or headache.
 - Recent illness onset (≤ 7 days)
- Should also submit flu “specimens of interest”:
 - Unsubtypeables, travel-related, severe or unusual illness, not responding to treatment, outbreak/cluster, recent avian/swine contact, vaccinated

APHL's Right Size Project

- Influenza Virologic Surveillance Right Size Roadmap – released July 2013
- Answers the questions:
 - “How much virologic surveillance is needed?”
 - “What is the most efficient way to achieve needed surveillance objectives?”

Right Size Goals for Texas

SITUATIONAL AWARENESS

(state level, 95% confidence level, 5% error)

| # ILI specimens/week | When does this sample size apply? |
|----------------------|-----------------------------------|
| 138 | Start of the flu season |
| 322 | Peak of flu season |

NOVEL EVENT DETECTION

(national level, prevalence level varies with timing, 95% confidence)

| # flu positives tested by TX PHLs | When does this sample size apply? |
|-----------------------------------|-----------------------------------|
| 172 | Peak flu season |
| 50 | “Shoulders” of flu season |
| 1 | Summer/off-season |

PHL = public health laboratory; includes DSHS Austin and the Laboratory Response Network (LRN) laboratories

Selecting Specimens/Submitters Based on Right Size Goals

- o Number of specimens
- o Timing of specimens
- o Type of specimens
 - o Not pre-screened
 - o Pre-screened

Right Size Situational Awareness (Numeric) Goals for Texas Regions, 2015-2016

| HSR | Minimum <u>weekly</u> specimen submission to a Texas PHL for Right Size objectives |
|-------------|---|
| Region 1 | 4 |
| Region 2/3 | 40 |
| Region 4/5N | 8 |
| Region 6/5S | 36 |
| Region 7 | 17 |
| Region 8 | 14 |
| Region 9/10 | 8 |
| Region 11 | 12 |
| Texas | 138* |

Note: Population-based goals; All submissions to a Texas PHL (DSHS Austin or LRN) count toward goals

*Provides situational awareness for influenza at the state level with a 95% confidence level and 5% margin of error

Specimen Submission - Number

- Considerations:

- How many providers in your area will submit specimens this season?
 - How many specimens can the lab test each week?
- Generally not more than 5-10 specimens per week per provider unless special arrangements have been made
- Regions, try to meet Right Size #s
- Communicate with your testing laboratory!



Specimen Submission - Timing

- Ideally, providers should submit ILI specimens year-round, not just when flu activity is higher
- Texas is currently not meeting Right Size goals for Novel Event Detection for these times of year:
 - Summer
 - Start/end of the flu season

Type of Specimens: Non-pre-screened

- Clinicians choose specimens for submission to the PHL from patients with suspected flu/ILI based on clinical presentation/symptoms
 - Example 1: Dr. Smith collects NP specimens on his first 10 ILI patients seen each week for testing at the PHL. He sends all 10 specimens to the PHL.
 - Example 2: Dr. Ryan collects NP specimens on his first 10 ILI patients seen each week for testing at the PHL. He also performs a rapid flu test on these patients, but submits all 10 specimens to the PHL regardless of the rapid flu test result.
 - Week 40: 3/10 specimens rapid flu (+) → all 10 submitted to PHL
 - Week 41: 0/10 specimens rapid flu (+) → all 10 submitted to PHL
 - To be considered “non-pre-screened”, flu tests, if done by the provider, should not influence submission practices

****Non-pre-screened specimens help achieve Situational Awareness and Novel Event Detection goals****

Type of Specimens: Pre-screened

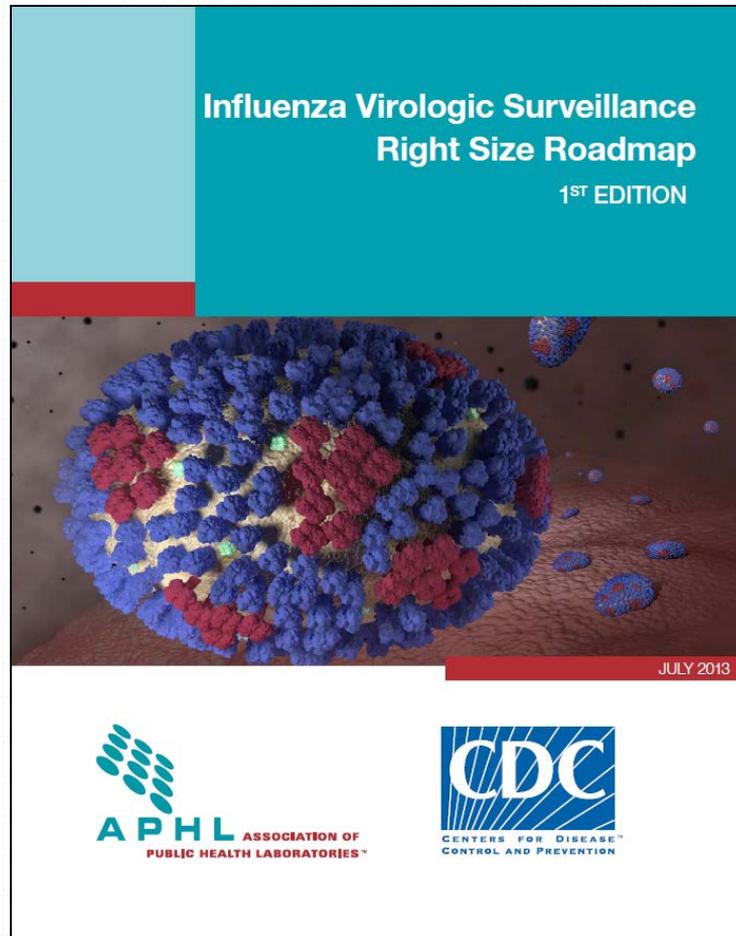
- Clinicians choose specimens for submission to the PHL from flu/ILI patients based on a positive flu test
 - E.g., Dr. Peterson performs POC rapid flu tests on all of his patients with flu-like symptoms. For the patients who are positive via rapid test, Dr. Peterson collects an NP specimen for testing at the PHL.
 - Week 1: 1/11 patients rapid flu positive → 1 (+) specimen submitted to PHL for testing
 - Week 2: 7/26 patients rapid flu positive → 7 (+) specimens submitted to PHL for testing
- Laboratories perform flu testing (e.g., PCR) and submit flu-positive specimens to the PHL

****Pre-screened specimens help achieve Novel Event Detection goals****

Specimen Submitter Survey, 2015-2016

- Web-based survey
- To be written – August 2015
- Objective: Determine specimen submission practices for Texas providers related to Right Size project goals
 - Pre-screened vs. non-pre-screened
- Plan to survey submitters at least twice during the season (Sept/Oct 2015, Jan/Feb 2016)
 - Also want to survey LRN submitters
- Ideas for questions we should ask? Comments? Want to review the survey? – contact flutexas@dshs.state.tx.us

Questions?



<http://www.aphl.org/aphl/programs/infectious/influenza/Pages/Influenza-Virologic-Surveillance-Right-Size-Roadmap.aspx>