

INFLUENZA
INCIDENCE
SURVEILLANCE
PROJECT:
THE TEXAS EXPERIENCE

Lesley Brannan

State Influenza Surveillance Coordinator

Texas Department of State Health Services

Learning Objectives

The participant will be able to...

- Compare the influenza-like illness (ILI), influenza, and respiratory virus data available through the Influenza Incidence Surveillance Project (IISP) and the US Outpatient Influenza-like Illness Surveillance Network (ILINet)
- List two challenges to implementing IISP in Texas

Outline

- ⦿ Program overview
- ⦿ IISP vs. ILINet
 - Reporting
 - ILI data
 - Laboratory data
- ⦿ Texas IISP experience
 - Benefits
 - Challenges
 - Lessons learned
 - Provider feedback example
 - Future

Overview:

What is IISP?

Handbook
section IVb

- CDC/CSTE project
- Started in 2009-2010 season in US
- 12 states participating
- Purpose:
 - To monitor the age-specific incidence of medically attended influenza-like illness (ILI) and influenza-associated ILI
 - To test for influenza and other respiratory viruses among persons seeking medical care for ILI
- Data reporting:
 - ILI and total patients by age group reported weekly
- Specimen collection:
 - Each provider collects specimens from first 10 patients with ILI each week

Overview:

Recruiting, Training, Incentives

● Recruiting

- 5-6 providers / clinics in each state can participate*
- Moderate size (see 100 -150 patients a week)
- Recruiting based on ILINet performance or done by selected LHDs
- 7 sites for 2012-13 (5 returning from 1st season)

● Training

- Webinar developed by EAIDB Flu Team
- IISP-specific materials mailed

● Incentives

- Free specimen submission and testing
- Automatic ILINet participation

IISP vs. ILINet:

Participation, reporting, case definitions

	IISP	ILINet
Program length (TX)	2 years	>10 years
Participating providers	Capped	Unlimited
# of providers	7	141
Agents	ILI, flu, other RVs	ILI
Reporting options	Email, fax, web	Fax, web
ILI case definition	Different for <2yrs vs. ≥2yrs	Same for all patients
Count persons with ILI with a diagnosis other than flu?	Yes	No
Self-report of fever okay?	Yes	No

ILI Case Definitions

- **ILINet**: fever of $\geq 100^{\circ}\text{F}$ plus cough or sore throat in the absence of a known cause of illness other than influenza
- **IISP**:
 - Children < 2 years: Onset in the past 4 days of fever* and at least one of the following: rhinorrhea, nasal congestion, sore throat, or cough.
 - Patients ≥ 2 years old: Onset in the past 4 days of fever* with a cough and/or with a sore throat.

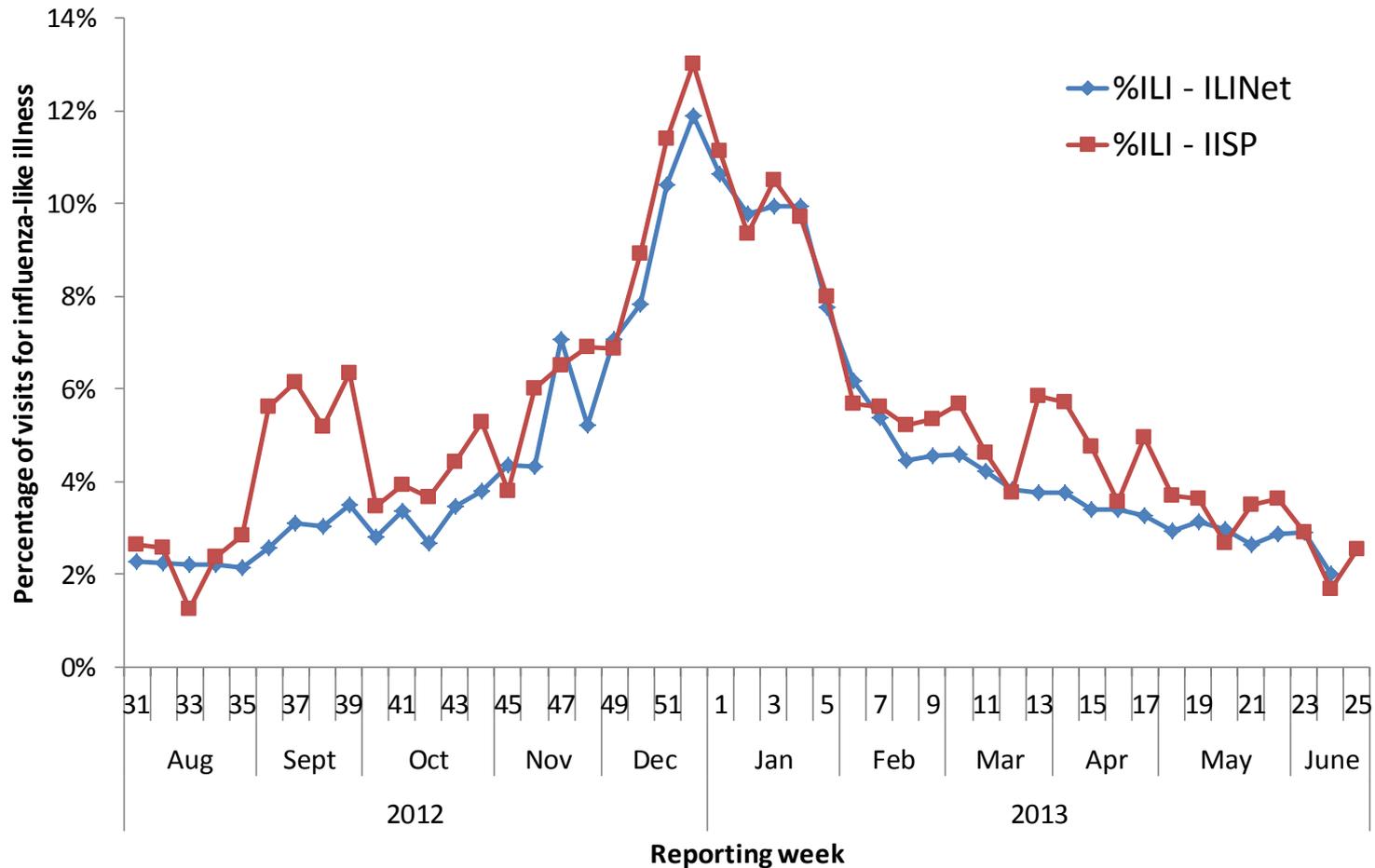
*Fever may be self-reported by patient or recorded in-office

IISP vs. ILINet: ILI Data

	IISP	ILINet
Patients with ILI	By age group	By age group
Total patients seen	By age group	Aggregate
Number of age groups	8	5
Patient panel required?	Yes	No
Incidence calculated?	Yes	No

IISP vs. ILINet: % ILI

Percentage of visits for influenza-like illness (ILI) reported by providers in Texas IISP and ILINet, 2012-2013

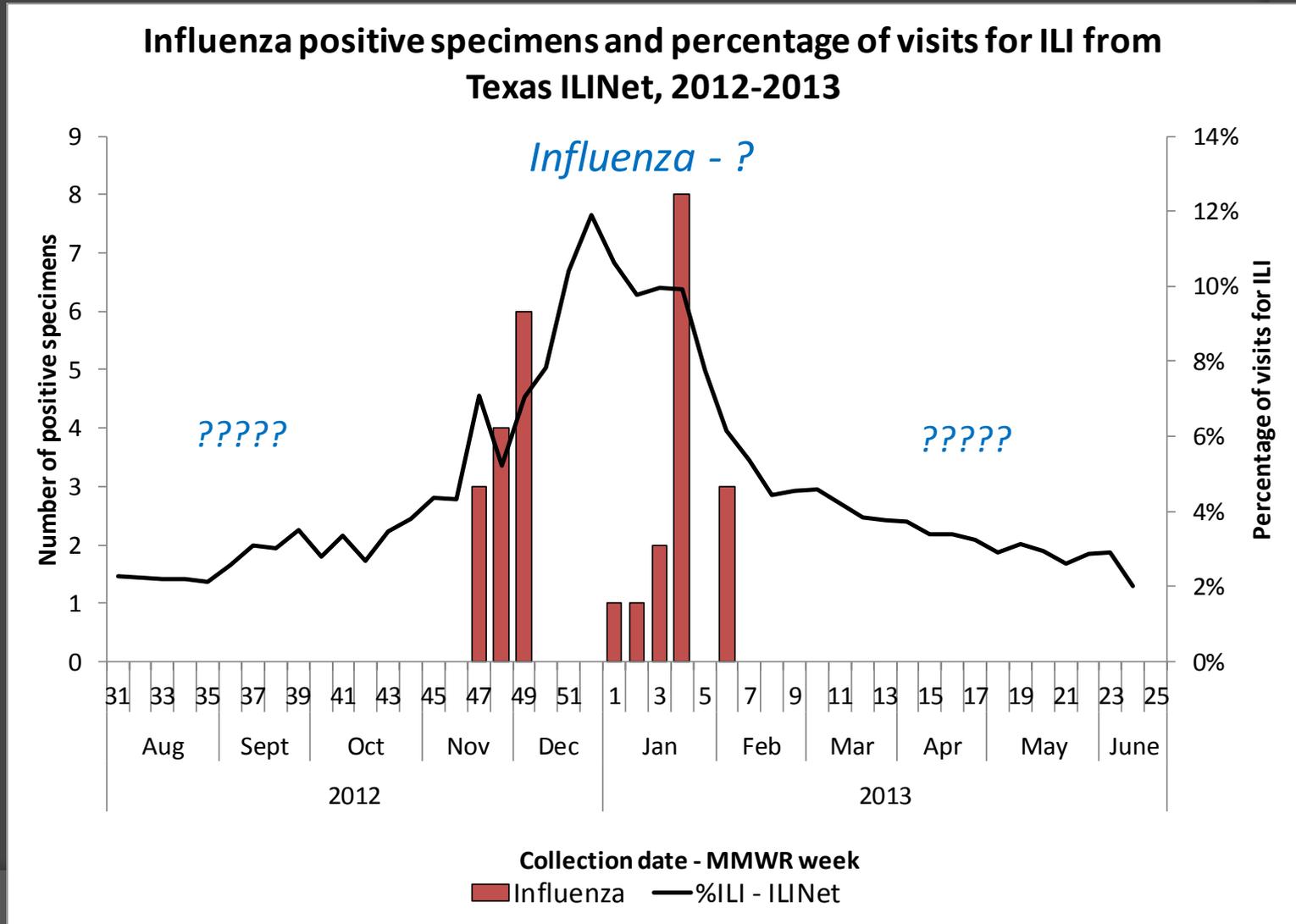


IISP vs. ILINet: Laboratory Data

	IISP	ILINet
Specimens submitted (per provider)	Up to 10 per week (required)	Up to 5 per month (voluntary)
Detailed illness data collected?	Yes*	No
Rapid test results?	Yes* (Flu, strep, RSV, other)	No
Influenza testing?	Yes	Yes
Other RV testing?	Yes (rhinovirus, RSV, parainfluenza 1-3, HMPV, adenovirus)	No

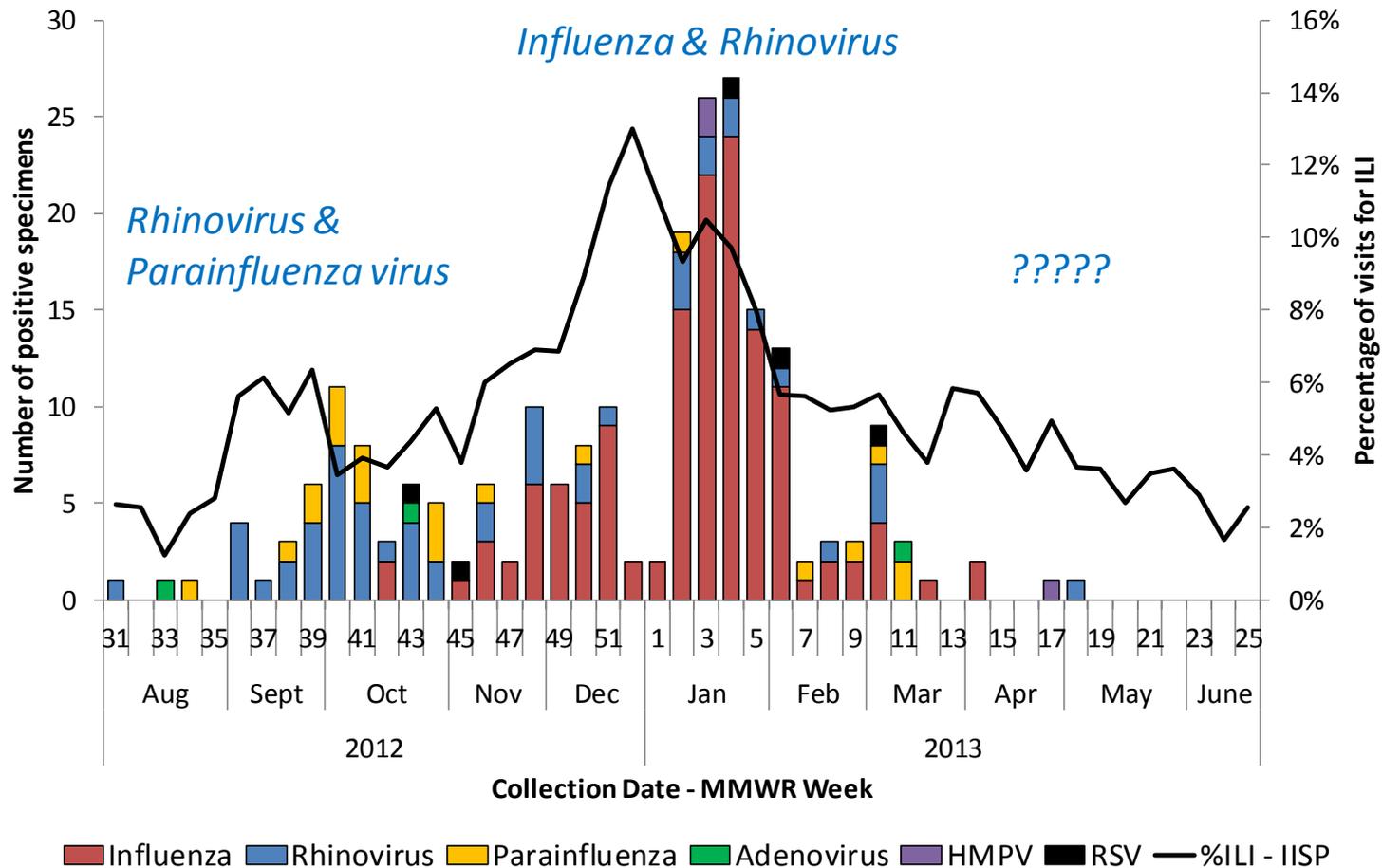
*Data collected on first 10 specimens submitted each week

ILINet: What's driving the ILI peaks?



IISP: What's driving the ILI peaks?

RVP Laboratory Results and Percentage of Visits for ILI,
IISP Texas, 2012-2013



Texas IISP: Program Benefits

- Systematic approach
- Established communication channels and regular follow-up with providers
- Increased specimen volume
- Source of viral respiratory surveillance data
- Identifying viral respiratory pathogens responsible for ILI data peaks

Texas IISP: Challenges - Providers

- Recruiting was initially difficult
- Patient panel interpretation and enumeration was problematic
- No coverage for vacations
- A lot of turnover of IISP leads in clinics
- Unwillingness to collect NP swabs (or perception of parent/patient refusal)

Texas IISP:

Challenges - Reporting

- Follow-up needed year-round to keep providers reporting
- Follow-up for missing information was time consuming
- Some “disconnection” of data and specimens
- Specimen submission targets not achieved in either year
- No specimens collected after week 18 (May)

Texas IISP: Challenges - Laboratory

- ⦿ NP specimens required for RVP
- ⦿ Expensive
 - Estimate: \$82.50 per specimen
- ⦿ Long turnaround time on RVP
 - Batching
- ⦿ Cannot report individual results to providers
 - Test not fully validated

Texas IISP:

Lessons Learned

- ⦿ Routine follow up helps with data completeness and quality
- ⦿ Training providers is beneficial
 - But some retraining is necessary
- ⦿ Reports to providers can serve as reporting reminders
- ⦿ Difficult to get specimens before and after flu season ends

Texas IISP: Provider Feedback

Texas Department of State Health Services

Influenza Incidence Surveillance Project
Weekly Update
Thursday, June 27, 2013
MMWR 201325 June 16 - June 22

Influenza Highlights

Although influenza activity is currently low, adenoviruses, human metapneumoviruses, parainfluenza viruses, and rhinoviruses continue to circulate.

No influenza outbreaks or influenza-associated pediatric deaths were reported.

The full Texas influenza surveillance report is posted on our website each Friday afternoon at www.dshs.state.tx.us/idcu/disease/influenza/surveillance/2013/

Summary of IISP Reporting

Number of sites that submitted reports:	Estimated incidence of ILI in outpatient healthcare populations per 100,000 population: 78.60
7 out of 7	
Number of sites that submitted specimens:	Total number of specimens submitted:
0	0

Percentage of Visits for Influenza-Like Illness in Texas Reported by IISP Participants for Week 25

Category	Age <1	Age 1	Ages 2-4	Ages 5-17	Ages 18-24	Ages 25-49	Ages 50-64	Ages ≥ 65	Total
Total Patients	76	41	96	233	110	633	380	84	1653
Patients with ILI	0	4	6	14	0	14	4	0	42
% with ILI	0.00%	9.76%	6.25%	6.01%	0.00%	2.21%	1.05%	0.00%	2.54%

Respiratory Viruses Week 25

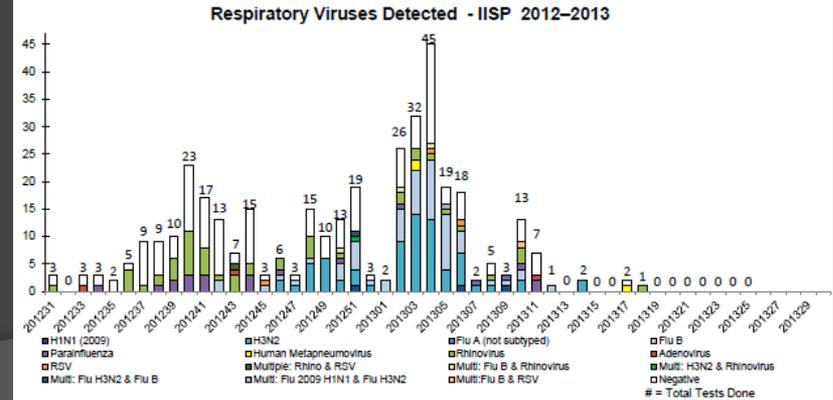
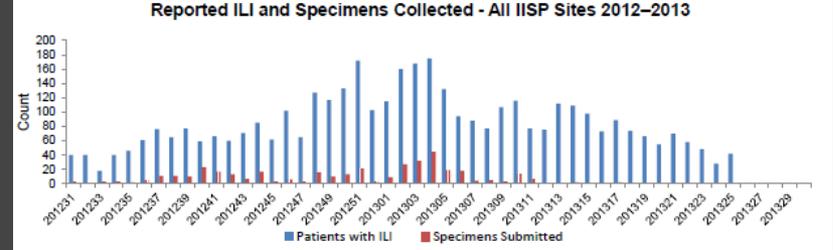
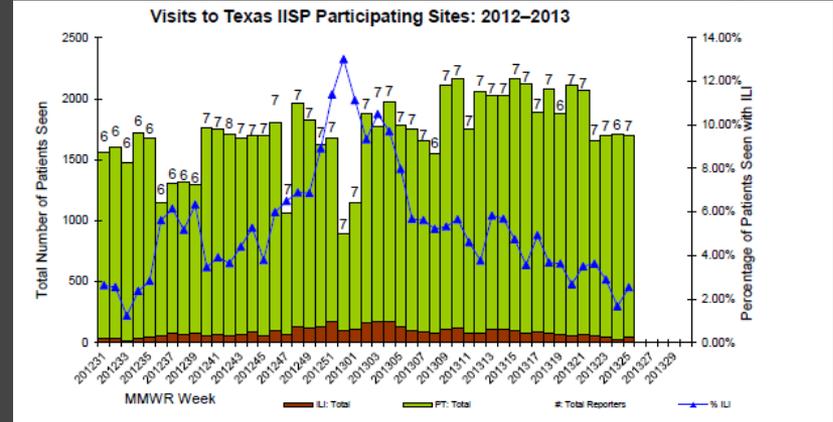
of specimens tested

RV Panel	Flu PCR
0	0
# of specimens positive	
RV Panel	Flu PCR
0	0
% of specimens positive	
RV Panel	Flu PCR
n/a	n/a

Influenza Viruses Week 25

■ H1N1 (2009)	■ H3N2	■ Flu A (not subtyped)	■ Flu B
■ Parainfluenza	■ Human Metapneumovirus	■ Rhinovirus	■ Adenovirus
■ RSV	■ Multiple: Rhino & RSV	■ Multi: Flu B & Rhinovirus	■ Multi: H3N2 & Rhinovirus
■ Multi: Flu H3N2 & Flu B	■ Multi: Flu 2009 H1N1 & Flu H3N2	■ Multi: Flu B & RSV	■ Negative

= Total Tests Done



Future of IISP in Texas

- No federal funding for next season
- An IISP-like program will continue next season
 - Possibly rebrand as respiratory virus surveillance instead of influenza surveillance
 - Recruiting:
 - Current IISP providers
 - Consistent ILINet reporters
 - Other interested providers who will also report ILINet-compatible data, weekly
 - Plan to fully validate RVP assay