A bright yellow sticky note is placed on the left side of the slide, partially overlapping the white title box. It is tilted and has a slightly irregular shape, suggesting it was placed there by hand.

Influenza A H5N1, H7N9 and 2014- 2015 Influenza Surveillance Updates

Johnathan Ledbetter
State Influenza Surveillance Coordinator
Texas Department of State Health Services

Learning Objectives

- Provide updates on Influenza A H5N1 and H7N9
- Describe updates to surveillance procedures for the 2014-2015 influenza season

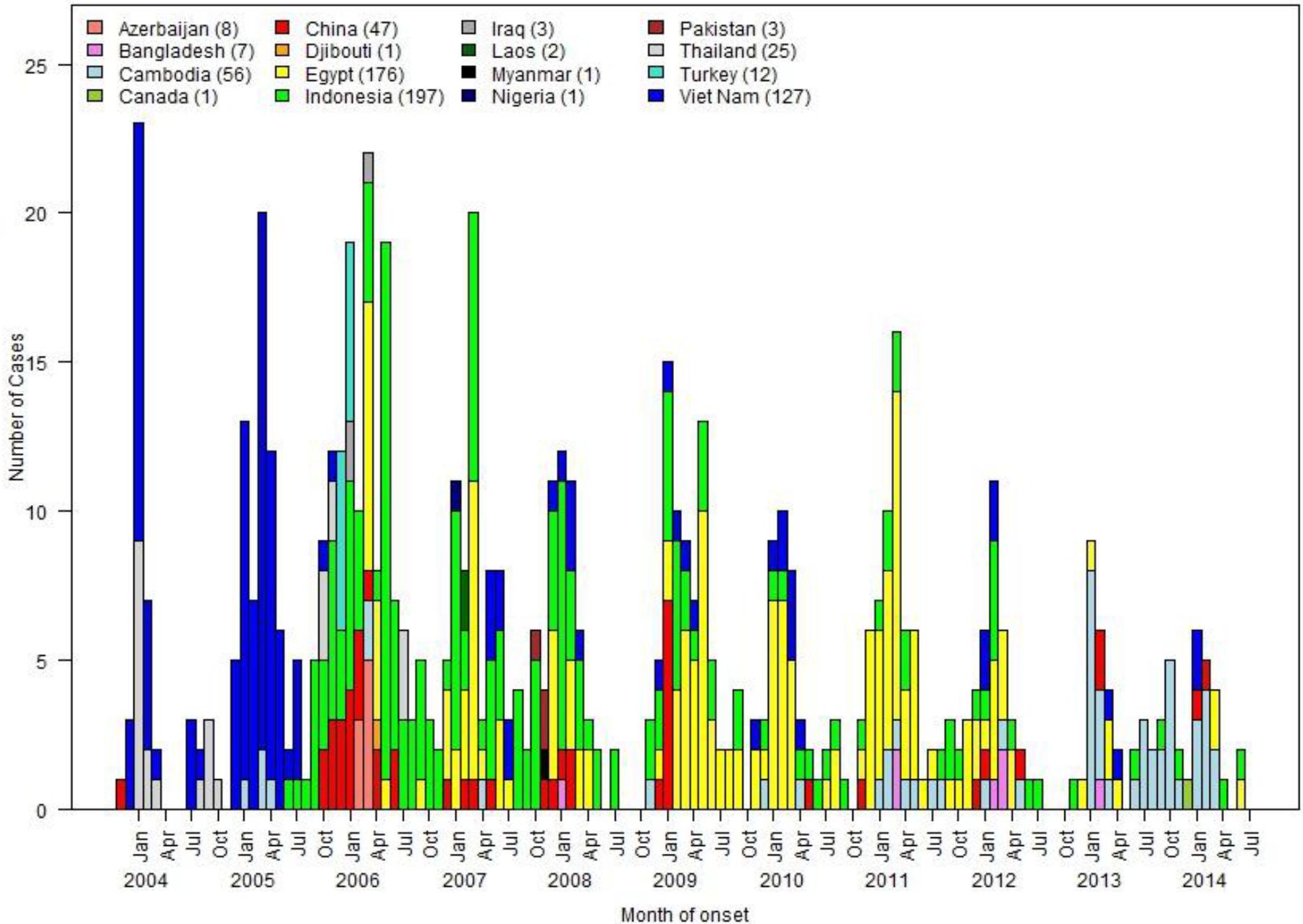
Outline

- Influenza A H5N1 and H7N9 Updates
- Flu Surveillance for 2014-2015
 - Changes
 - Reminders
 - Laboratory flowcharts
 - Activities and timeline
- Other updates

Influenza A (H5N1) Epi Updates

- Since 2003, 667 cases and 393 (59%) deaths in 15 countries
- Cases since July 2013 have been in citizens of Cambodia, Indonesia, Canada, Vietnam, China, Pakistan, Egypt
- Some clusters reported, but virus still not transmitting easily from person-to-person
- Most recent cases had confirmed or plausible contact with poultry prior to onset

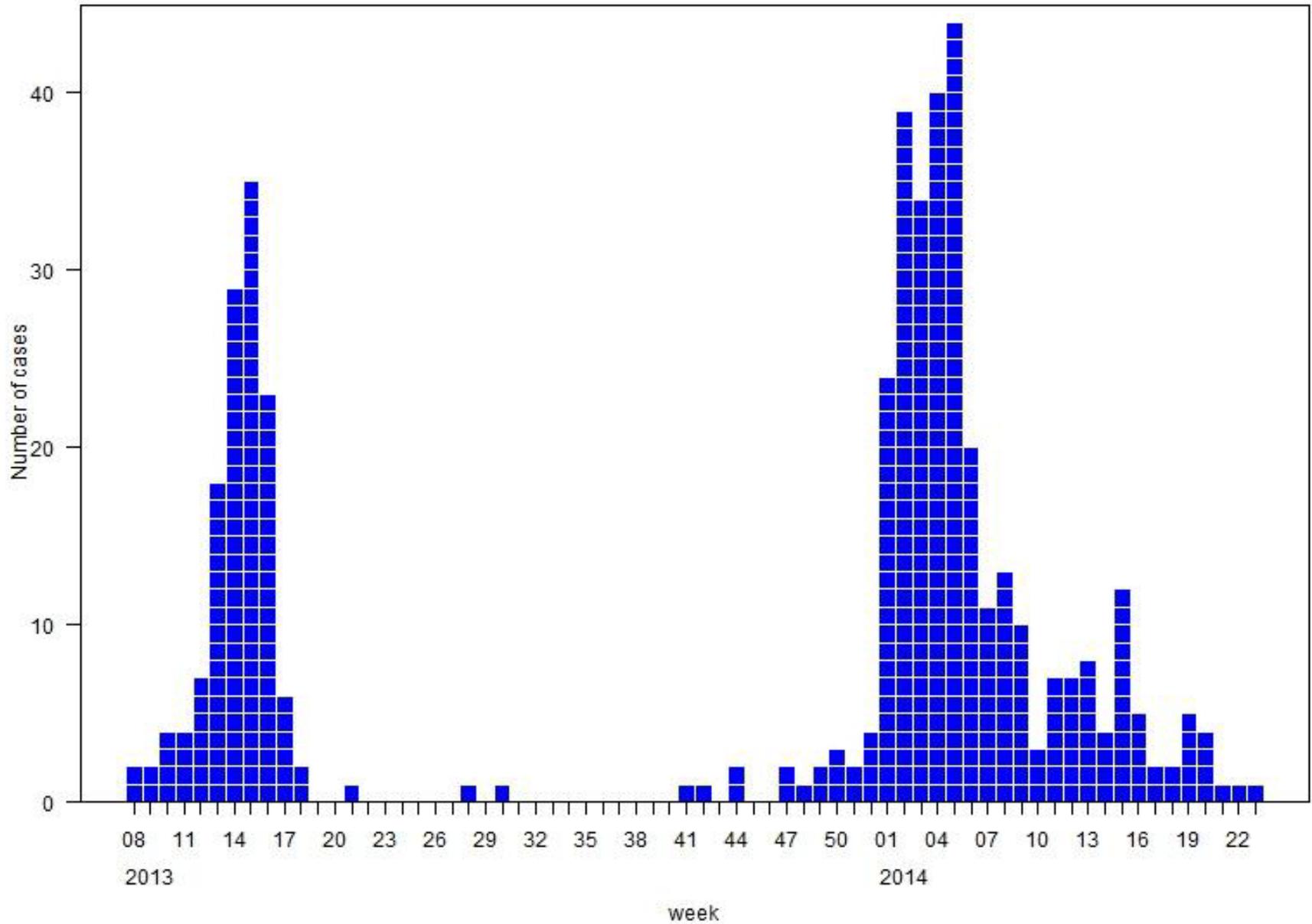
Number of Confirmed Human H5N1 Cases by month of onset as of 2014-07-02



Influenza A (H7N9) Epi Updates

- Since March 2013, 450 cases and 165 (37%) deaths
- Lab-confirmed cases reported from 13 provinces/municipalities in eastern mainland China, Hong Kong, the Taipei CDC, and Malaysia
- Most cases in middle-aged and older men
- Most cases have been considered severe
- Human infection appears to be associated with exposure to infected live poultry or contaminated environments, including live poultry markets
- 14 family clusters reported
- No sustained human-to-human transmission

Number of Confirmed Human H7N9 Cases
by week as of 2014-07-01



Influenza A (H5N1) and (H7N9) Clinical Criteria for Testing

- Clinical Illness Criteria for H5N1 or H7N9 testing
 - I. Patients with **new-onset** severe acute respiratory illness requiring **hospitalization**
 - AND**
 - II. Patients for whom no alternative infectious etiology is identified.
- Patients who meet both the clinical and exposure criteria should be tested for avian influenza A H5N1 and/or H7N9 virus infection
 - <http://www.cdc.gov/flu/avianflu/h5n1/testing.htm>
 - <http://www.cdc.gov/flu/avianflu/h7n9/testing.htm>

(Note: Testing for H5N1 or H7N9, and other respiratory pathogens can be done simultaneously.)

As of 8/18/14

Influenza A (H5N1) and (H7N9) Exposure Criteria for Testing

o Exposure Criteria for H5N1 testing

- I. Patients with recent travel to areas where human cases of avian influenza A (H5N1) virus infection have recently become infected¹ or where avian influenza A (H5N1) viruses are known to be endemic in animals².

OR

- II. Patients who have had recent close contact with suspected³ or confirmed cases of human infection with avian influenza A (H5N1) virus.

OR

- III. Persons with an unprotected exposure to avian influenza A (H5N1) virus in a laboratory setting.

Note: The H5N1 and H7N9 testing criteria are essentially the same except when specifying countries with recent cases and endemic virus circulation in animals. H7N9 may be substituted for H5N1

As of 8/18/14

Footnotes for Exposure Criteria for (H5N1) and (H7N9) Testing

	H5N1	H7N9
1. Areas where human cases of avian flu virus infection have recently (within past 24 months) become infected	Bangladesh, Cambodia, China, Indonesia, Vietnam, Egypt	Mainland China
2. Countries with endemic circulation of the virus among animals	Bangladesh, China, Egypt, India, Indonesia, Vietnam	Mainland China

3. Patients suspected of having infection with avian influenza A (H5N1) virus can include probable cases, cases under investigation for infection with avian influenza A (H5N1) virus, and other patients for whom available clinical and epidemiologic information support a diagnosis of infection with avian influenza A (H5N1) virus.

Note: The H5N1 and H7N9 testing criteria are essentially the same except when specifying countries with recent cases and endemic virus circulation in animals. H7N9 may be substituted for H5N1 in the third footnote.

Influenza A (H5N1) and (H7N9)

Close Contact Definition

- Close contact may be regarded as coming within about 6 feet (2 meters) or within the room/care area of a person with a suspected or confirmed case while the person was ill.
- Close contacts include:
 - Healthcare personnel providing care for a person with a suspected or confirmed case
 - Family members of a person with a suspected or confirmed case
 - Persons who live with or stayed overnight with a person with a suspected or confirmed case and
 - Others who have had similar close physical contact, especially without the use of respiratory protection.

How to Handle (H5N1) or (H7N9) Calls

- Does patient meet clinical and exposure criteria for testing?
- If yes...
 - Ensure infection control measures are in place
 - Standard, contact, and airborne precautions recommended:
<http://www.cdc.gov/flu/avianflu/h7n9-infection-control.htm>
 - Complete short (initial) investigation form and fax to DSHS
 - Contact DSHS EAIDB for current CDC short form or use DSHS General Influenza Investigation Form
 - Coordinate collection and shipping for lab specimens
 - Notify the lab
 - DSHS Austin and all Texas LRN labs can perform H5N1 and H7N9 PCR testing
 - Specimen collection and shipping guidelines:
 - <http://www.cdc.gov/flu/avianflu/h7n9/specimen-collection.htm>
 - Current DSHS Influenza Laboratory Surveillance Protocol
 - Complete other investigation steps as listed in the Novel Flu section of the DSHS *Guidelines for Investigation and Control of Invasive, Respiratory, Foodborne, and Vaccine-Preventable Diseases*

Flu Surveillance 2014-15: Anticipated Changes

- Epidemiology: No major changes
- Laboratory
 - DSHS Austin: No major changes
 - LRNs: None

Flu Surveillance 2014-15: Reminders

- Check expiration dates on media
- Send specimens year-round
- Obtain copies of your HD's G-2V

WANTED

FOR THREATENING THE PUBLIC'S HEALTH



INFLUENZA AND ILI

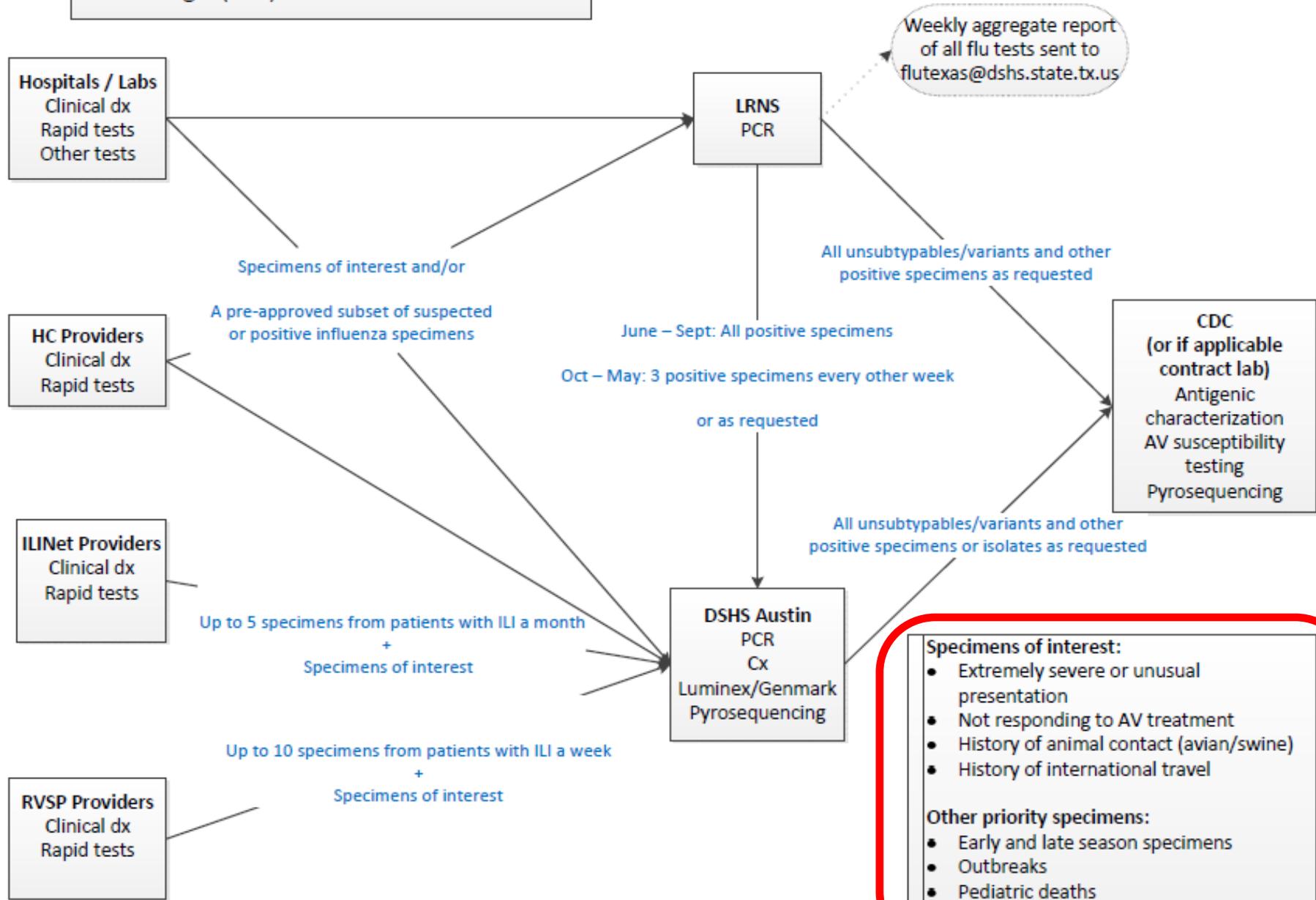
SEND:

OUTBREAK SPECIMENS

OUTBREAK REPORTS

REWARD

Virologic (Lab) Surveillance 2014-2015



Specimens of interest:

- Extremely severe or unusual presentation
- Not responding to AV treatment
- History of animal contact (avian/swine)
- History of international travel

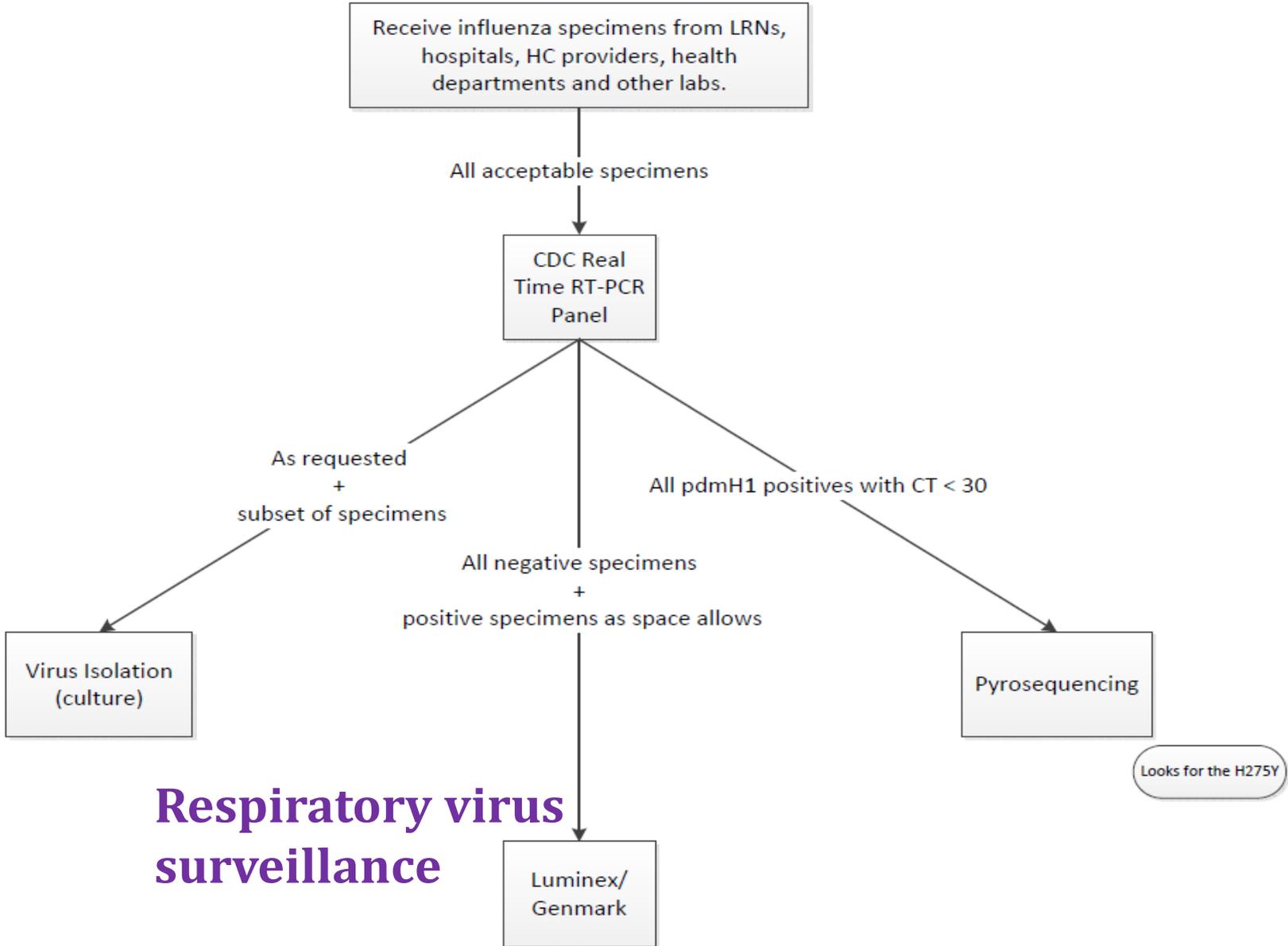
Other priority specimens:

- Early and late season specimens
- Outbreaks
- Pediatric deaths
- Unsubtypables

Priority specimens

- Specimens of interest:
 - Extremely severe or unusual presentation
 - Not responding to AV treatment
 - History of animal contact (avian/swine)
 - History of international travel
- Other priority specimens
 - Early and late season specimens
 - Outbreaks
 - Pediatric deaths
 - Unsubtypeables

DSHS Laboratory Testing Algorithm 2014-2015



DSHS Laboratory Respiratory Virus Outbreak Specimen Testing Algorithm 2014-2015

Receive respiratory virus specimens designated by DSHS or health departments as outbreak associated.

All acceptable specimens

CDC Real Time RT-PCR
Panel for influenza testing

Minimum of 5 NP specimens submitted
&
influenza negative

Enterovirus or Adenovirus
highly suspected
Or
Only non-NP specimens submitted

Test on Luminex/
Genmark as soon as
feasible (usually within 7
business days)

Less than 5 NP specimens submitted
or
influenza positive

Viral Isolation
(Culture)

Results reported
as usual

If <50% of specimens are positive then aggregate reporting of results will be provided to health department (e.g. 3 out of 10 specimens are positive for parainfluenza)

If 50% or more of the specimens are positive then detailed aggregate results will not be provided (e.g. report as "multiple specimens are positive for parainfluenza")

Included on next
scheduled Luminex/
Genmark run

Results may or may
not be provided

Note: Patient level results
can not be shared until
Luminex/Genmark is fully
validated.

Flu Surveillance 2014-15: Activities and Timeline

- Recruiting – Reporters and specimen submitters
- Ordering
- Shipping
- Surveillance
 - National flu season runs from
September 28, 2014 – May 23, 2015

Timeline: Ordering Supplies

August 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22†	23
24	25	26	27	28	29‡	30
31						

†Suggested deadline for LHD and provider orders to RHDs

‡Deadline for Regional HDs to send orders to DSHS Austin

Timeline: Shipping supplies

September 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15*	16	17	18	19	20
21	22*	23	24**	25	26	27
28 	29	30				

*Shipping day

**Backup shipping day

Other Updates: Vaccine

- New for this season:
 - Recommended vaccine viruses were the same as 2013-2014 virus strains
 - Healthy children 2-8 years of age are recommended to get the nasal spray influenza vaccine instead of the shot

Other Updates: Flu Handbook

- Flu Handbook
 - Will be updated by October 1
 - Changes posted to DSHS IDCU website
 - Anticipated changes to include:
 - Minor information changes
 - NREVSS Data Dictionary
 - RVSP information
 - Adult Death Surveillance Section (possible)
 - Updating links within the handbook

Other Updates: Contracts

- Contracts

- LRNs

- Renewed contracts for next season

- RVSP

- No longer contracting with CDC for IISP

- Contracts have been renewed with existing IISP participants

Other Updates: Unaccompanied Children Processing Centers/Shelters

- CDC will conduct respiratory disease surveillance
 - Influenza and RSV testing
 - Rapid tests will be conducted at processing centers
 - rRT-PCR will be conducted at the Naval Health Research Center (NHSC) in San Diego
 - Rapid test results will be directly reported to the CDC
 - rRT-PCR results will be reported by NHSC to the CDC
- CDC will provide information to DSHS

Future Efforts

- Using death certificate data to identify influenza associated deaths
- Incorporating influenza associated death numbers into the state influenza report
- Electronic reporting of influenza reports
- Standardization of influenza reports
- Pursue CE credits for 2015 Flu Surveillance Workshop



Questions ???

