



Houston Department of Health and Human Services  
Office of Surveillance and Public Health Preparedness  
Bureau of Epidemiology & Bureau of Laboratory Services

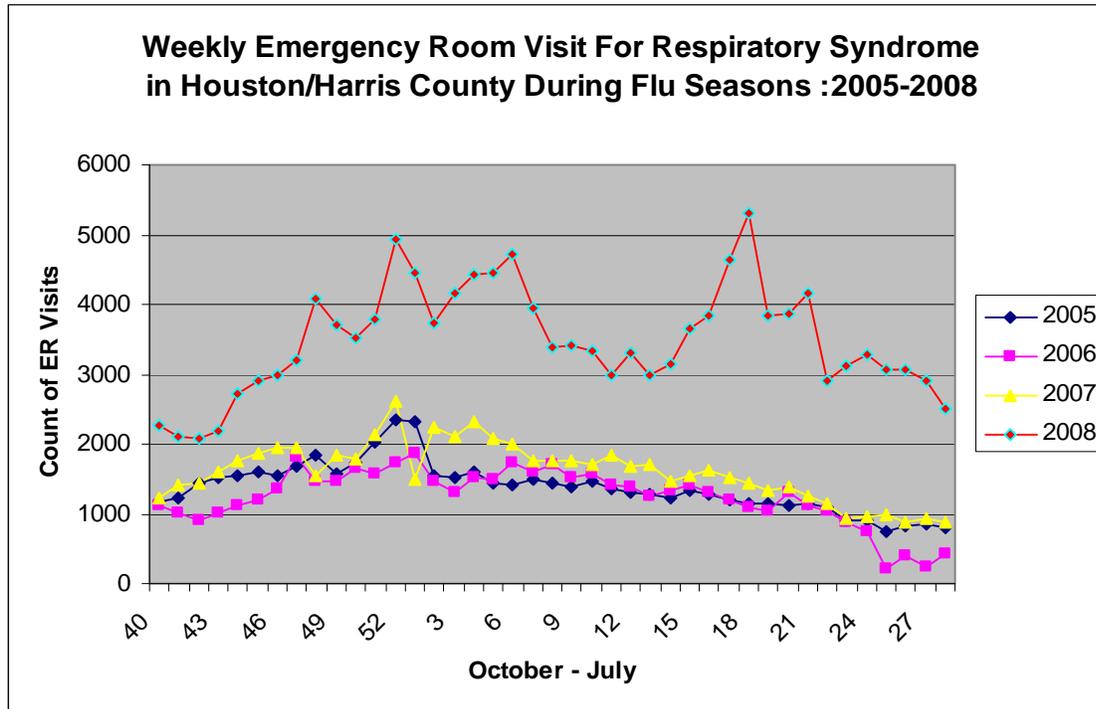
*Influenza Report*

August 6, 2009

**Summary**

- Emergency room visits for respiratory syndrome declined in the second week of February but increased sharply in April. This may be contributed to the H1N1 outbreak and heightened public awareness.
- Houston sentinel culture surveillance results show that both influenza A (54.8%) and B (43.2%) are circulating.
- Influenza A is the most common virus detected in January and Influenza B is prevalent in March and February.
- Influenza A/H1 (75.5%) is the most common influenza A subtype.
- Based on the specimen tested so far, 18.9% of Influenza A cases are identified as Novel Influenza A H1/N1 “swine flu”
- Passive surveillance (Non-sentinel) shows both influenza A and B circulating. Reporting of influenza was highest in February.
- Texas Children’s Hospital data shows that influenza A is the most common circulating virus in January and influenza B is most prevalent in February. However, between April and June, Influenza A was the most common with the number of positive RSV and Influenza B declining.
- Kelsey Seybold data shows that both influenza A & B are circulating with influenza B being more common. Highest number of cases is identified in the first week of February.

## Syndromic Surveillance



**\*There is a huge increase in the number of ER visits for 2008 compared to the previous years, and this may be due to additional hospitals reporting to the RODS system since July 2008. But evidence from other surveillance system supported increased activities in 2008/2009 season compared to previous years, most especially in February. The second peak around week 17 may be due to increase number of ER visits during H1N1 outbreak in United States. A data drop in RODS lasting for 3 weeks in June may have contributed to the sharp decline in ER visits around week 22.**

**\* Flu season: October 1st through May 31<sup>st</sup> of the following year.**

2005 : October 1st - December 31st 2005 and January 1st - May 31st 2006

2006 : October 1st - December 31st 2006 and January 1st - May 31st 2007

2007 : October 1st - December 31st 2007 and January 1st - May 31st 2008

2008 : October 1st - December 31st 2008 and January 1st - May 31st 2009

## Houston Sentinel Culture Surveillance

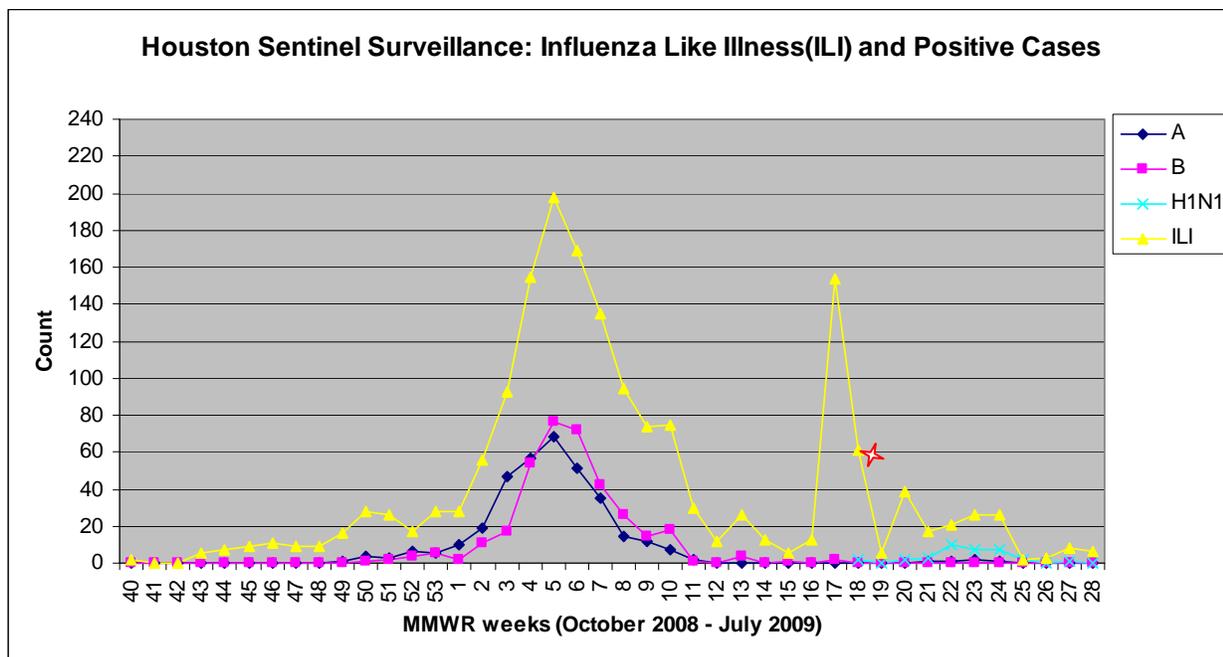
A total of 24 providers including a large private provider network are participating in sentinel culture surveillance.

As of July 23, 2009, \*1759 specimens were submitted.

- 788 are positive for influenza by PCR
  - 54.8% (432) Flu A
    - 75.5% Flu A/H1
    - 2.8% Flu A/H3
    - 5 Flu A subtype pending
    - 18.9% (82)\*\* Novel Influenza A H1/N1 “swine flu”

- 43.2% (356) Flu B
- 2 co-infection (Flu A/H1 and B)
- 571 specimens were positive for influenza by culture
  - 48.6% (278) influenza A
  - 51.3% (293) influenza B
- Other respiratory viruses detected
  - 27 Parainfluenza (11 Parainfluenza 1, 2 Parainfluenza 2, 14 Parainfluenza 3)
  - 5 RSV
  - 16 Adenovirus

\*1759 total specimens have been received; however 464 have not been cultured since mid April. The true number of influenza A, B and other viruses during the H1N1 outbreak is not known because the laboratory stopped testing for these viruses. Culture testing was suspended at that time as well.



\*Flu A & B are positive by PCR.

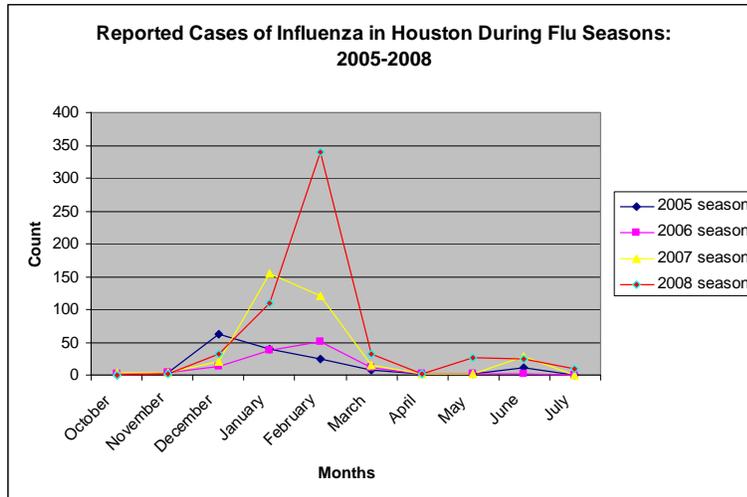
\*Numbers as reported by providers. These numbers may change as results are received from the lab.

\*The reason for a sharp decline in week 18 is that providers were submitting specimens only for H1N1 testing. The number of regular ILI reports submitted by the providers was reduced.

Trend shows the peak for both influenza A & B was in the first week of February. In January, there was a predominance of Influenza A while in February and March, Influenza B was slightly higher. While there was a second peak of ILI cases in mid-April, there was a decrease in the number of Influenza A and Influenza B cases. This time also marked the emergence of H1N1 swine flu cases being reported. At this point, the City laboratory was not testing for any viruses other than H1N1.

## Passive Surveillance (Non-sentinel )

As of July 22, 2009: 577 cases were reported for this season. There are 341 Influenza A cases and 196 Influenza B cases. Influenza reporting for the 2008 season was highest in February.



\*Count is by date reported to HDHHS

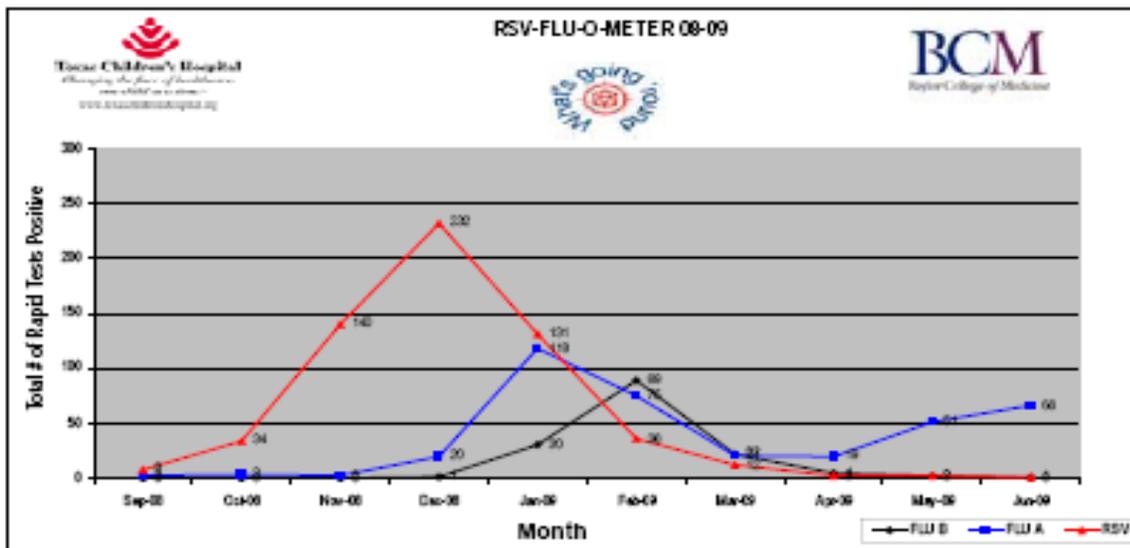
## Influenza Related Pediatric Death

Three influenza-associated pediatric deaths were reported in April and one case was reported in May. A total of eight cases of influenza associated pediatric death have been reported this season. Three cases were Houston residents and five were residents of other jurisdictions. Five of the cases were influenza B positive and two\* were positive for influenza A. A laboratory test result could not be determined for one case.

\*One positive Influenza A result within Houston's jurisdiction tested positive for the H1N1 Influenza and was the first H1N1 death in the USA.

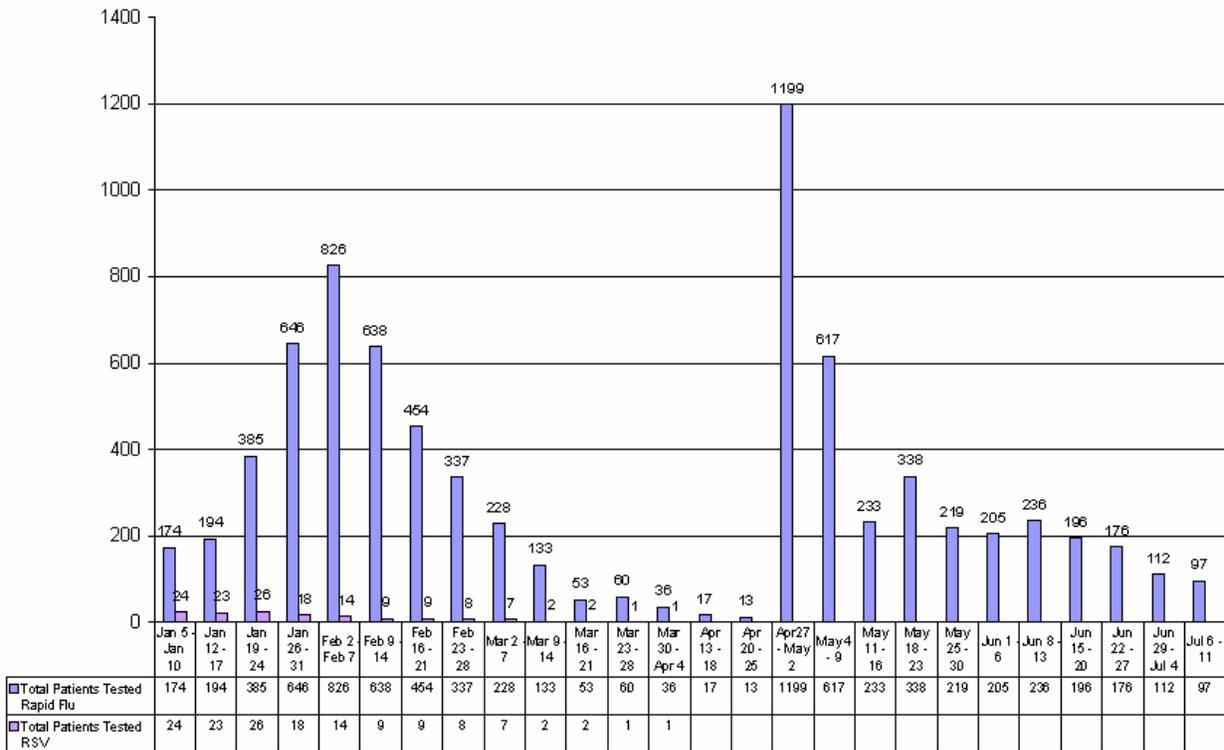
## Texas Children's Hospital

Influenza A was the most common virus in January and influenza B was the most common in February. In March, both influenza A & B are circulating at higher proportions than RSV. However, between April and June, Influenza A was the most common with the number of positive RSV and Influenza B declining.



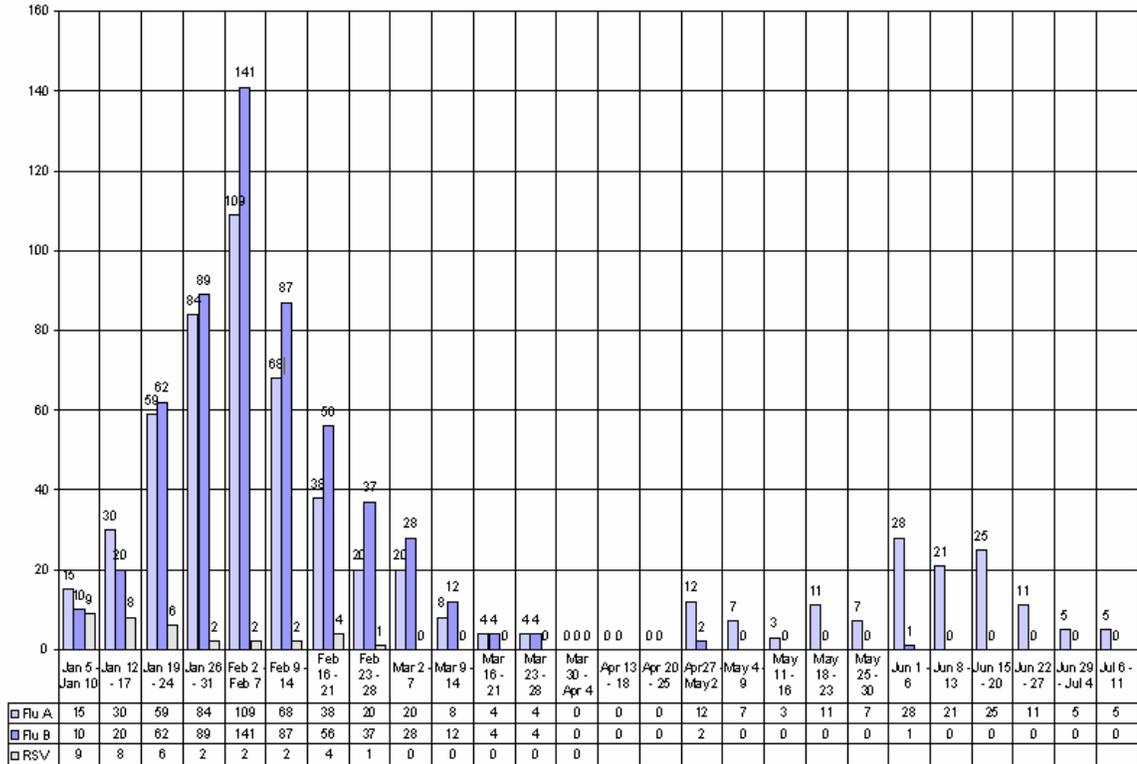
**Kelsey Seybold Report**

**2009 - Total Patients Tested**



Testing for rapid flu peaked during the first week of February and continued to decline until the period between April 27<sup>th</sup> and May 2<sup>nd</sup> which recorded the highest testing. This could be attributed to increase testing during the H1N1 outbreak. There were no RSV testing reported between April 13 and the present period.

2009 Positive Flu / RSV Report



Trend shows the peak for both influenza A & B in the first week of February. This is consistent with the trend shown by Houston sentinel surveillance. Flu B is the most common virus identified. Between March 30 and April 25, there were no positive results reported due to the H1N1 outbreak and delay in testing.