MARYLAND INFLUENZA SURVEILLANCE REPORT - Week 48 (Nov. 23 to Nov. 29, 2008)

Office of Epidemiology and Disease Control Programs | Maryland Department of Health and Mental Hygiene

- Influenza activity in Maryland for week 48 was **SPORADIC**, where visits to providers for flu-like illness were below baseline and there have been reports of positive laboratory tests. (PAGE 1)
- No outbreaks of influenza or influenza-like illness were reported this week. (PAGE 2)
- Participants in the flu tracking survey are now over 400 strong! (Page 3)
- Antiviral resistance is very real, but preventable. (Page 4)

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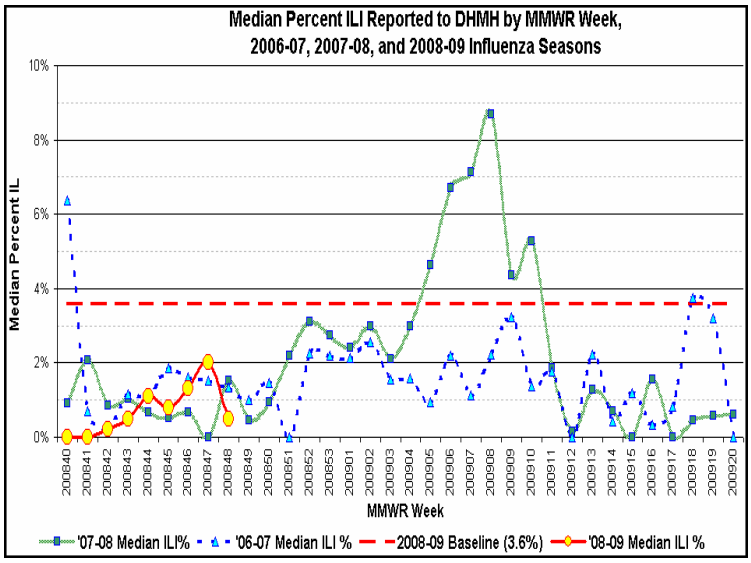
VISITS TO PROVIDERS FOR INFLUENZA-LIKE ILLNESS (ILI)

This week, a total of 121 visits for ILI were reported by 8 providers. The median percent of ILI visits in Maryland was 0.5%. This is **below** the state baseline of 3.6%.

Sentinel providers are health care providers who report to us the proportion of patient visits for influenza like illness. Because of the great variability in reported ILI proportions among providers each week, the median ILI is used instead of the average. Half of the ILI reports were below the median and half were above.

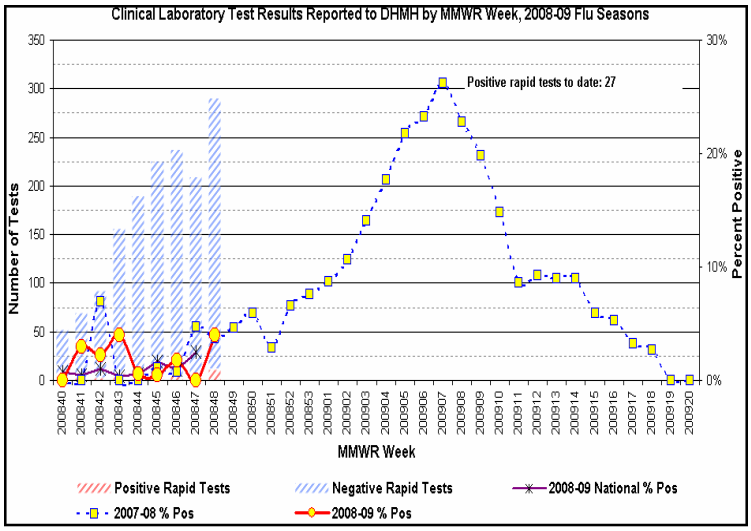
If you are interested in becoming a sentinel provider, please feel free to contact us at flu@dhmh.state.md or by phone at 410-767-6700.



RAPID INFLUENZA TESTS PERFORMED BY SENTINEL CLINICAL LABORATORIES

This week, a total of 289 rapid influenza tests were performed by 15 reporting clinical laboratories. Of these, **11 tests (4%) were positive**.

Because the sensitivity and specificity of rapid flu tests vary with the prevalence of influenza in the population*, rapid flu tests performed before the first DHMH lab-confirmed case are not counted as confirmed cases for the purpose of surveillance. **Now that the DHMH laboratory has confirmed a case by reference methods, all rapid influenza tests will be counted as confirmed cases.**



* "**Rapid Diagnostic Testing for Influenza**", Centers for Disease Control and Prevention. Available at: http://www.cdc.gov/flu/professionals/diagnosis/rapidclin.htm

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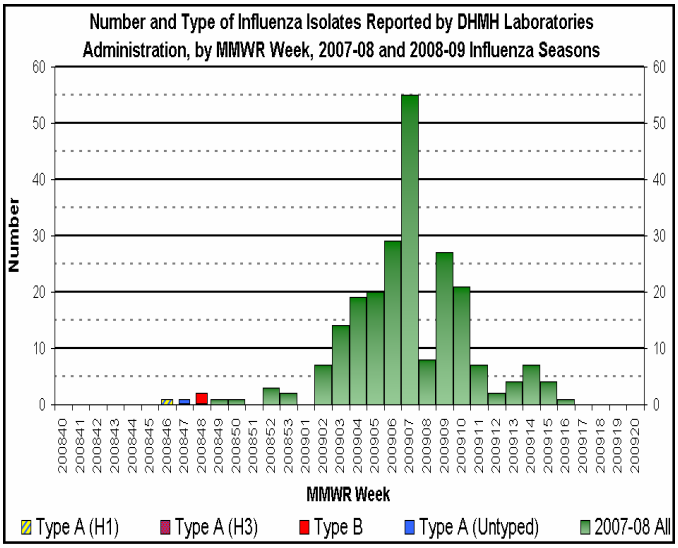
DHMH STATE LABORATORY ISOLATE TYPING AND SUBTYPING

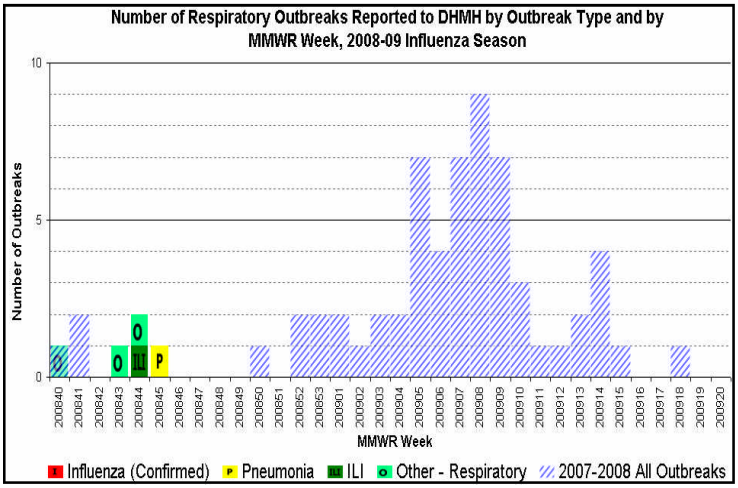
To date this season, there have been four lab-confirmed cases of influenza reported by the DHMH laboratory. During the 2007-2008 influenza season, a total of 232 specimens were positive for influenza by PCR and/or viral culture at the DHMH lab.

The DHMH Laboratories Administration has reported the first lab-confirmed case of influenza of the 2008-2009 season. The case is a child living in the Baltimore Metro Region.

A sample of isolates processed at the DHMH public health lab is sent to CDC for further testing, including the determination of the circulating strains and any resistance to antiviral medications.



INSTITUTIONAL OUTBREAKS REPORTED TO DHMH



No outbreaks of influenza or influenza-like illness were reported to DHMH this week..

Although influenza is not a reportable condition in Maryland, outbreaks of influenza in institutional settings are reportable. Please contact your local health department to report an outbreak.

For more information about outbreak investigations in Maryland, please visit:

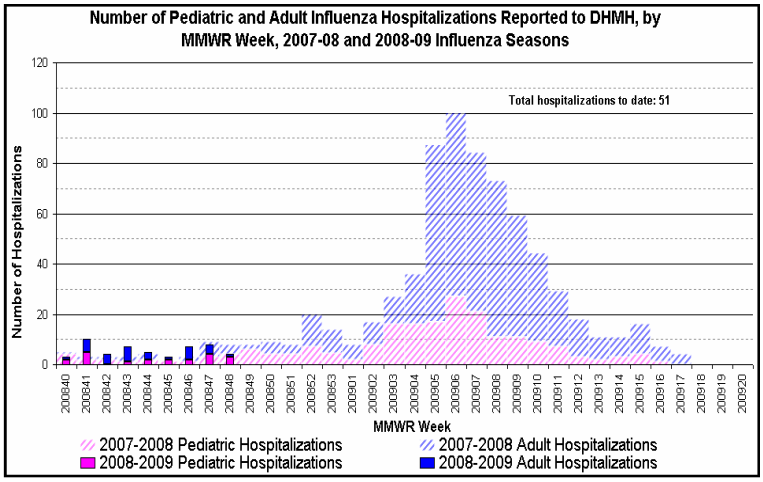
http://tinyurl.com/edcpoutb

INFLUENZA HOSPITALIZATIONS REPORTED TO DHMH

The Emerging Infections Program collects information on a weekly basis from several hospitals in the Baltimore Metro Region on the number of hospitalizations associated with influenza.

This week, a total of 4 hospitalizations were reported to DHMH. Of these, 1 (25%) was an adult (over 18 years of age) and 3 (75%) were children.

To date, there have been 51 hospitalizations for influenza reported to DHMH. Last season, 729 hospitalizations were reported.



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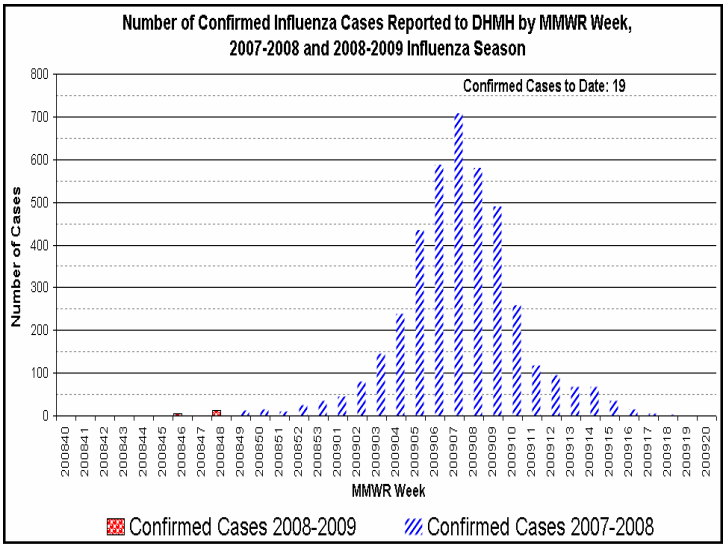
MARYLAND LAB-CONFIRMED CASES OF INFLUENZA



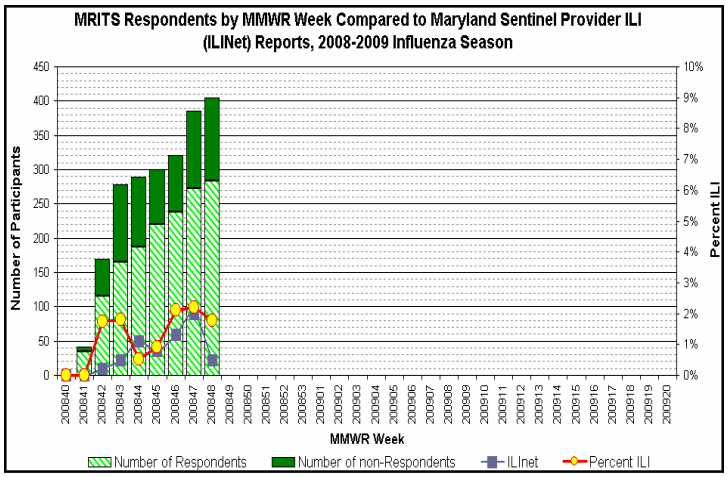
This week, 13 lab-confirmed cases of influenza were reported to DHMH. Our season total is now 19 cases. Last season, we received reports of 4,029 lab-confirmed cases, with the peak number of cases (708) reported for week 7 (February 10-16, 2008).

Cases are not confirmed by rapid flu test until the first influenza isolate is detected at DHMH lab. After that first isolate, all clinical laboratory tests that are positive are counted as confirmed cases of influenza for surveillance purposes.

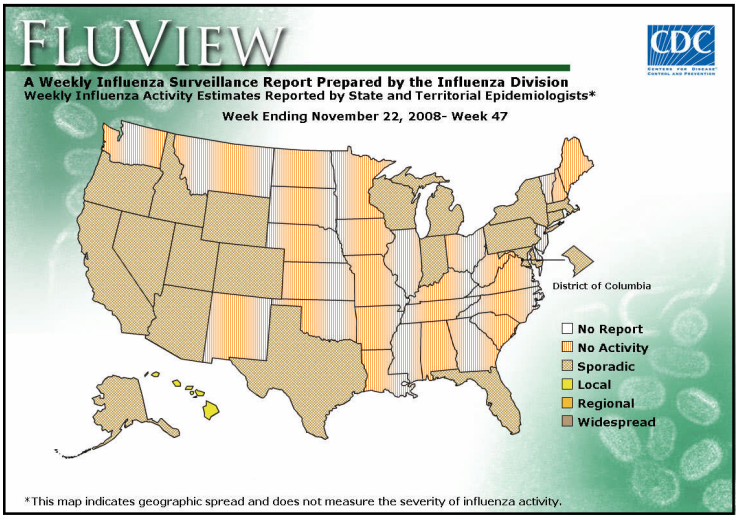
MARYLAND RESIDENT INFLUENZA TRACKING SURVEY (MRITS)

A total of 405 participants signed up at http://tinyurl.com/flu-enroll by the end of week 48. Of the 405 residents who received the weekly survey, 281 (69.4%) responded to it. Among the respondents, 5 (1.8%) reported flu-like symptoms. **A total of 5 (2%) of the respondents reported getting their flu vaccine this week.** Because there is no baseline to compare these results, and the sample size is small (compared to the population), caution must be taken when interpreting the results.

We continue to recruit participants. Please enroll at the link above or pass on the link to anyone interested.



CDC WEEKLY INFLUENZA SURVEILLANCE



According to CDC, "during week 47, a low level of influenza activity was reported in the United States." Visits to sentinel providers are below baseline; One state (Hawaii) reported "local" flu activity; 19 states (including Maryland) and the District of Columbia reported "sporadic" influenza activity (the other states reported "no activity"), and about 2.5% of specimens tested were positive for influenza. Also, no pediatric deaths due to influenza were reported during week 47.

For more information, visit: http://cdc.gov/flu/weekly

Division of Communicable Disease Surveillance | Office of Epidemiology and Disease Control Programs | Maryland Department of Health and Mental Hygiene

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HEALTHY PEOPLE HEALTY COMMUNITIES

All information submitted to DHMH through the surveillance systems is voluntary. This information is used to estimate the geographic extent of flu activity, and not the virulence or pathogenicity of circulating viruses. This information is not intended for individual diagnoses.

ALL INFORMATION IS SUBJECT TO CHANGE AS MORE DATA IS SUBMITTED AFTER THE PUBLICATION OF THIS REPORT

If you have any questions about influenza surveillance in Maryland, or you would like to join our Influenza Sentinel Provider Network, please contact Rene F. Najera, MPH, Epidemiologist at the Division of Communicable Disease Surveillance in the Office of Epidemiology and Disease Control Programs.

WE'RE ON THE WEB!!!

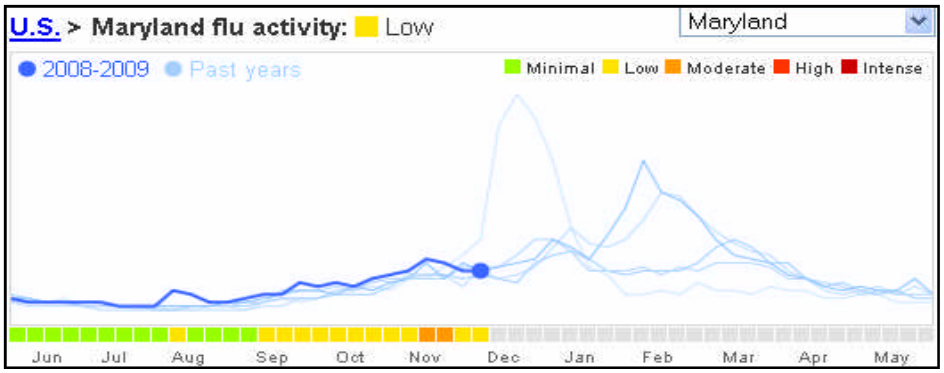
WWW.EDCP.ORG

Antiviral Resistance

In 1947, four years after penicillin began to be mass-produced to treat bacterial infections, penicillin-resistant *Staphylococcus aureus* strains began to be identified (http://tinyurl.com/fda-resist). Because viruses and bacteria multiply very rapidly, mutations in their genetic material occur. These mutations give some strains the ability to survive in certain environments. As more antibiotics and antivirals are used to treat each and every infection (and preventively against any possible infection) the susceptible organisms die, leaving the resistant ones to run rampant.

During the 2007-2008 influenza season, DHMH was notified by CDC of one influenza isolate from Maryland that showed resistance to Oseltamivir (Tamiflu®). That same season, CDC reported that up to 10.9% of all Type A (H1N1) isolates were resistant to Oseltamivir. However, the recommendations for the use of antiviral medication did not change. DHMH, in cooperation with CDC, is carrying out increased surveillance for antiviral resistance through testing of isolates.

So what can you do to prevent resistance to antiviral medications in influenza viruses? Get vaccinated. By being vaccinated, you avoid the need for antivirals because you won't get the flu, and because those you come into contact with will not get the flu from you. Of course, not everyone can get vaccinated, and many are at risk for serious complications from the flu. Your health care provider will always be the best person to decide if you need antiviral medication. For more info:
CDC Q&A: http://tinyurl.com/antiviralqa
BMJ.com: http://tinyurl.com/antiviralbmj



Google Flu Trends (http://www.google.org/flutrends): Maryland is still at "low" activity, according to Google Flu Trends.

A member of the resistance