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Influenza Activity in Michigan

MDCH Influenza Page Navigator:

MDCH Influenza Home Page | Sentinel Surveillance | **Laboratory Surveillance** | Info for the Public | Info for Health Care Providers

Influenza Laboratory Surveillance Data
Bureau of Laboratories
Bureau of Epidemiology

Specimen Collection Guidelines for Influenza-Associated Deaths in Children, click here.

CDC Guidelines for Avian Influenza (H5N1), click here.

2004-2005 Influenza Season Report

Table of Contents

I. General Information
II. Summary of Sentinel Physician Data by Geographic Location
III. Laboratory Surveillance Data
IV. Cumulative Influenza Data (YTD)
V. Serologic Relativity of Isolates to the Current Year's Vaccine Components
VI. Listings of Counties and Their Respective Health Regions

I. General Information

Michigan Department of Community Health specimen submission information can be found here.

Michigan Department of Community Health specimen collection information can be found here.

Further information may be found at:

- Michigan Influenza-Like Illness (ILI) Surveillance Information
- Michigan - Information About Influenza
- Michigan - Influenza Information for Providers

Data from past influenza seasons:
Influenza data from the 2003-2004 season can be found here.
Influenza data from the 2002-2003 season can be found here.

National influenza surveillance summary information for the current week is available at:
CDC Weekly Influenza Surveillance page.

The CDC Influenza page can be accessed at:
CDC Influenza page.

Return to Top

II. Summary of Sentinel Physician Data by Geographic Location

Michigan Influenza Sentinel Physician Surveillance Update

2004-2005 Influenza Season

Data from Michigan's Influenza Sentinel Physician Surveillance sites indicate that significant increases in the proportion of visits due to influenza-like illness (fever = 100º F with cough, sore throat, or both) began in the 3rd week of January, peaked in Mid-February, and returned to low levels by mid-March. In contrast, peak activity during the 2003-2004 season occurred early, in the 3rd week of December.

In addition to data on the rate of visits due to influenza-like illness (ILI), sentinel physicians provide virologic data by collecting nasopharyngeal swabs for respiratory virus culture on a subset of their ILI patients. During the 2004-2005 season, 187 MDCH laboratory-confirmed influenza cases were identified from these viral cultures and from isolates submitted by sentinel laboratories. Of these, 125 (67%) were Influenza A (H3N2) and 62 (33%) were Influenza B. The Influenza B viruses belonged to two antigenically and genetically distinct lineages; 37 were B/Shanghai from the B/Yamagata/16/88 line and 25 were B/HongKong from the B/Victoria/2/87 line. B/HongKong circulated widely in the U.S. between 2001-2003, but was not included in the 2004-2005 vaccine. Six of the Influenza A (H3N2) isolates were sent to the Centers for Disease Control and Prevention (CDC) for strain typing; two were closely related to the vaccine strain, A/Wyoming, and four were related to the newly identified A/California. These results suggest that a variety of influenza viruses were circulating in Michigan during the 2004-2005 season, with varying vaccine relatedness.

Data from the CDC indicate that the United States as a whole had similar experiences to Michigan in the 2004-2005 season. Visits due to Influenza-Like Illness peaked nationally in mid-February and influenza A and B co-circulated, with A types predominating (75% of isolates). Of the 709 influenza A (H3N2) viruses antigenically characterized by CDC, 22% were characterized as antigenically similar to A/Wyoming, which is the A/Fujian-like (H3N2) component of the 2004-2005 vaccine, and 78% were characterized as A/California-like. National pneumonia and influenza mortality data indicate that this season was of moderate severity.

2004 - 2005 was also notable for the ongoing epizootic of highly pathogenic avian influenza (HPAI), subtype H5N1, in several Asian countries. Sporadic cases have been reported in humans after contact with sick or dead poultry and one instance of probable human-to-human transmission was reported in Thailand. This situation has sparked concerns about a pandemic because widespread avian influenza increases the chance of co-infection with avian and human viruses, leading to the formation of a novel virus with the ability for efficient human-to-human transmission.

To access information from MDCH about influenza, go to the MDCH homepage at http://www.michigan.gov/ influenza. Between October and May, the most current U.S. influenza data are available from the CDC at http://www.cdc.gov/flu/weekly/fluactivity.htm

To increase our ability to track influenza, MDCH is always interested in enrolling new sentinel sites for influenza surveillance. MDCH began conducting year-round sentinel influenza surveillance in 2003, in order to gain a more complete influenza surveillance picture. In addition, unusual summertime influenza activity may indicate a coming pandemic. Nearly any health care provider that is likely to see and treat persons with influenza is eligible to volunteer as a sentinel site. Sentinels provide counts of ILI visits and specimens for laboratory analysis. The time commitment is usually less than 30 minutes per week. If you know of a practice that would like to participate, or for more information, please contact Rachel Potter at PotterR1@michigan.gov or 517-335-8159.

To view a map of the sentinel sites and surveillance regions, click here.

Cumulative date to 4/1/2005.

There are medical provider sites from a variety of geographic locations throughout Michigan enrolled in the sentinel surveillance program. These providers represent private practice for adult and pediatric patients, as well as urgent and emergency care facilities, nursing homes and university health services. MDCH requests submission of three specimens for influenza A and B viral antigen detection and viral culture three times during the winter season: early, when influenza virus is beginning to circulate; middle, during the peak of influenza activity; late, as influenza activity diminishes. Participation in this program is voluntary. The data shown here are the results obtained by the MDCH

Viral Isolation Unit from specimens submitted by participating sentinel surveillance sites.

The MDCH Virology Laboratory marks the beginning of influenza season on October 1 each year.

To locate your Health Jurisdiction, see the county listing at the end of this page.

Health Jurisdiction	#A Cum.	#B Cum.	#RSV Cum.	#Para Cum.	#Adeno Cum.
SE	35	26	0	0	0
SW	17	7	0	2	0
Central	43	21	0	1	1
Northern/UP	29	7	0	0	1

Return to Top

III. Laboratory Surveillance Data

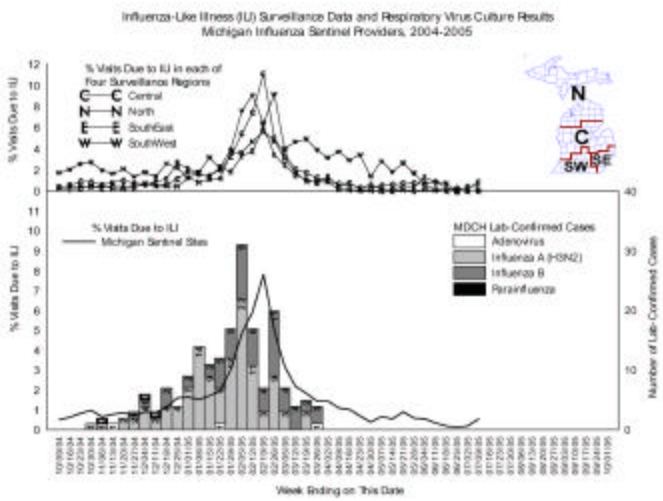
Several clinical hospital laboratories from around the state collect lab-based respiratory virus data on a weekly basis providing MDCH with information on laboratory-confirmed positive specimens. NOTE: Denominator data (# of total submissions to hospital labs) is incomplete.

Cumulative date to 1/1/2005.

Health Jurisdiction	#A Cum.	#B Cum.	#Flu Untyped	#RSV Cum.	#Para Cum.	#Adeno Cum.
SE	165	15	0			
SW	23	1	1			
Central	7	0	0			
Northern/UP	26	1	3			

Return to Top

IV. Cumulative Influenza Data (YTD)



The data shown here is a summary of the combined data from the sentinel physicians and laboratory surveillance.

For a larger view of the graph, click here.

Return to Top

V. Serologic Relativity of Isolates to the Current Year's Vaccine Components

The MDCH Viral Isolation Unit is a WHO-collaborating influenza surveillance laboratory. As such, the laboratory is provided with reagents for sub-typing of influenza virus isolates. Reagents provided by WHO/CDC will determine the relatedness of Michigan influenza isolates to the components of the 2004-2005 vaccine: A/New Caledonia/20/99-like (H1N1), A/Fujian/411/2002-like (H3N2), and B/Shanghai/361/2002-like viruses.

As of 4/1/2005: Analysis indicates that the 2004-2005 influenza vaccine should provide good protection against nearly all of these viruses; 25 of the type B virus isolates have been found to differ from the influenza B component of the vaccine.

Return to Top

VI. Listings of Counties and Their Respective Health Regions - CLICK HERE

MDCH Influenza Page Navigator:

MDCH Influenza Home Page | Sentinel Surveillance | **Laboratory Surveillance** | Info for the Public | Info for Health Care Providers

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