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Release Date: February 22, 2004

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## Influenza Activity in Michigan

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## Influenza Laboratory Surveillance Data

### Bureau of Laboratories

### Bureau of Epidemiology

## 2003-2004 Influenza Season Report

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### 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](#)

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](#).

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### II. Summary of Sentinel Physician Data by Geographic Location

#### Influenza Surveillance Update, August 4, 2004:

According to Michigan's influenza sentinel surveillance sites, levels of influenza-like illness (ILI; fever = 100° F cough, sore throat, or both) began increasing in the 2<sup>nd</sup> week of December, peaked near the end of December, returned to low levels in mid-January. Although there was speculation that a second wave of influenza would occur later in the season, that did not happen.

All 137 influenza viruses subtyped by the Michigan Department of Community Health (MDCH) Bureau of Laboratory during the 2003-2004 season have been the H3N2 subtype of influenza A. The CDC strain-typed 20 of these viruses and found that 16 resembled the new Fujian H3N2 strain, and the remaining 4 resembled the H3N2 vaccine strain. These results suggest that Fujian-like viruses predominated during the 2003-2004 season in Michigan. The Fujian strain incompletely matched the H3N2 strain in the 2003-2004 season's trivalent influenza vaccine. The 2004-2005 season's influenza vaccine will protect against the Fujian strain specifically, as well as an H1N1 strain and an influenza B strain.

Data from the CDC indicate that the United States had similar experiences to Michigan in the 2003-2004 season, although most states saw their ILI levels increase earlier than Michigan's. Of the 7,191 influenza A viruses subtyped by collaborating laboratories in the U.S., all but 2 were subtype H3N2. CDC strain-typed 949 of these H3N2 viruses and found that 89 percent resembled the new Fujian H3N2 strain; the remainder resembled the vaccine H3N2 strain. A few influenza B viruses were detected. National pneumonia and influenza mortality data indicate that this season was of moderate severity.

Early 2004 was also notable for outbreaks in poultry of highly pathogenic avian influenza (HPAI), subtype H5N1, in several Asian countries. This is important because widespread avian influenza increases the chance of avian human viruses exchanging genetic material. That could produce a new strain of influenza that could spread rapidly among humans worldwide, resulting in a pandemic. Although 34 persons in Thailand and Vietnam contracted avian influenza in 2004, and 23 of them died, there is no evidence that it was transmitted person-to-person. In late June and early July of 2004, more outbreaks of avian influenza in poultry were confirmed in China, Thailand, and Viet Nam.

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 Kyle Enger at [engerk@michigan.gov](mailto:engerk@michigan.gov) or 517-335-8159.

Data for the week ending 04/10/2004.

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 has received a total of 288 specimens for respiratory viral culture since October 1, 2003; 133 of which came from these sentinel surveillance sites. Some of these cultures did not grow any virus, others are still in progress.

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

Health Jurisdiction	# A Pos.	# A Cum.	# B Pos.	# B Cum.	# RSV/Para Pos.	# RSV/Para Cum.	# Adeno Pos.	# Adeno Cum.
SE	0	12	0	0	0/0	1/2	0	1
SW	0	1	0	0	0/0	0/0	0	0
Central	0	25	0	0	0/0	0/3	0	2
Northern/UP	0	11	0	0	1/0	2/1	0	0

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### 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.

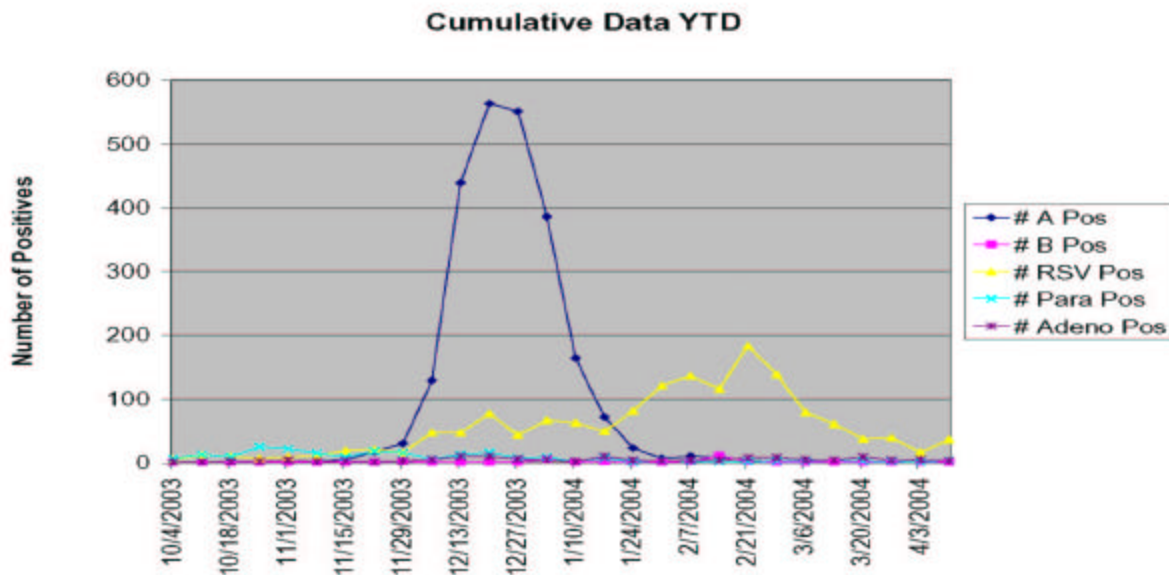
Data for the week ending 04/10/2004.

Health Jurisdiction	# A Pos.	# A Cum.	# B Pos.	# B Cum.	# Flu Untyped	# RSV/Para Pos.	# RSV/Para Cum.	# Adeno Pos.	# Adeno C
SE	0	978	0	5	0	34/2	1000/104	1	78
SW	0	856	0	4	0	0/1	290/55	1	15
Central	0	229	0	0	0	0/0	147/30	0	4
Northern/UP	0	285	0	0	0	0/0	77/0	0	0

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### IV. Cumulative Influenza Data (YTD)

The data shown here is a summary of the combined data from the sentinel physicians and laboratory surveillance each week ending at the indicated date. NOTE: the last week's data may not be accurate because of a delay in reporting time.



For a larger view of the graph, click [here](#).

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**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 2002-2003 vaccine: A/Moscow/10/99-like (H3N2), A/New Caledonia/20/99-like (H1N1), and B/Hong Kong/330/01-like viruses.

As of 04/10/2004:

All influenza specimens subtyped at MDCH this season have been Influenza A, H3N2. Specimens have been submitted to the CDC for antigenic characterization. CDC has strain typed twenty of these specimens: 4 are A/Panama/2007/99-like, 16 are A/Korea/770/2002-like (which is similar to A/Fujian). A/Panama/2007/99-like is antigenically similar to the A/Moscow/10/99-like component of this year's influenza vaccine. The current vaccine is expected to provide at least partial protection against the antigenic variants in circulation.

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**VI. Listings of Counties and Their Respective Health Regions - [CLICK HERE](#)**

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