

**2006-2007 Influenza Mid-Season Report**  
**February 27, 2007**  
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To date, the 2006-2007 influenza season in Michigan has been characterized by a low level of activity. The first MDCH laboratory- confirmed case of influenza was identified on November 17, 2006. This report summarizes data from the following information sources for the time frame of October 1, 2006 to February 8, 2007:

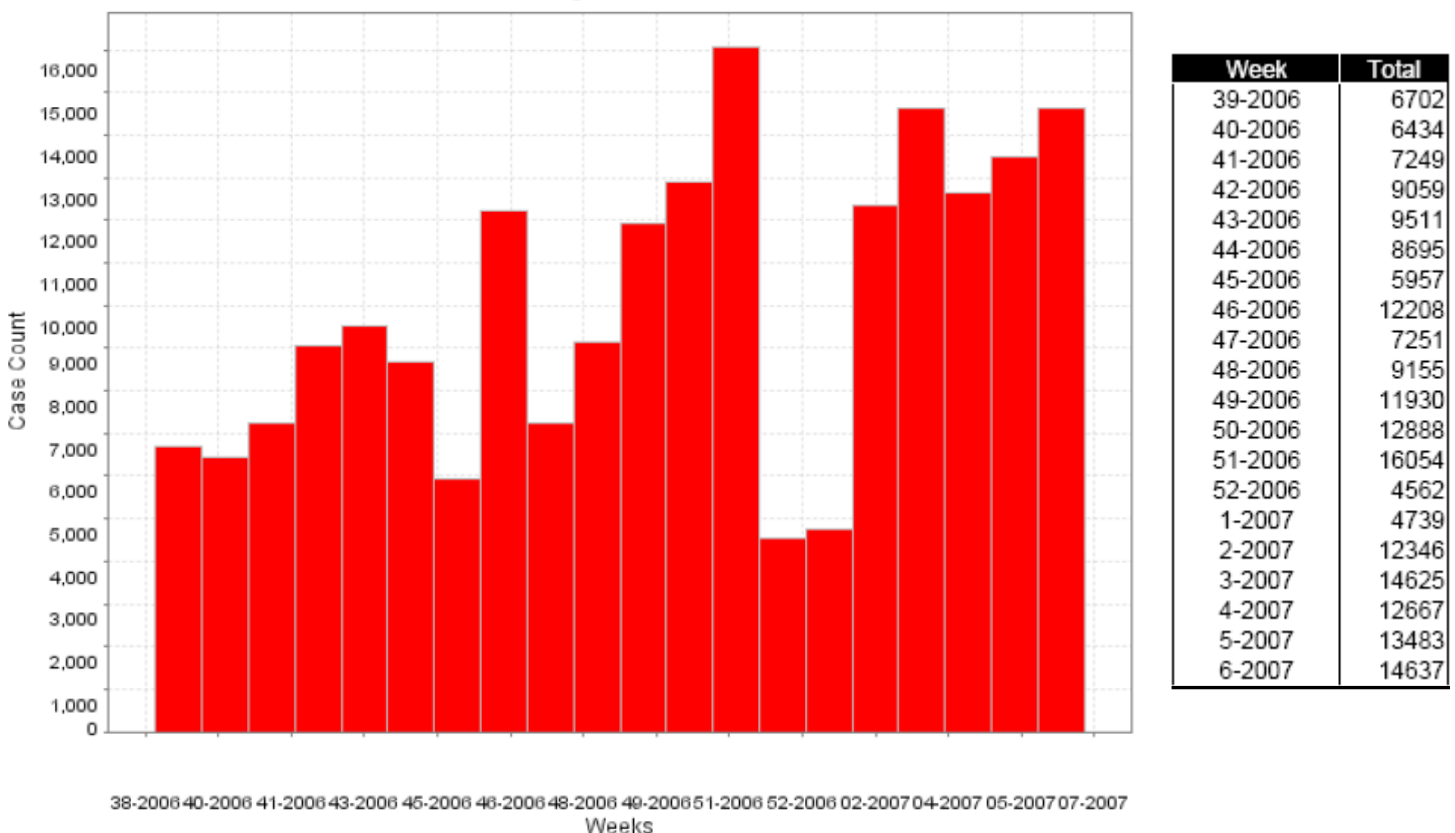
- 1) Aggregate "Flu-like Illness" count entered into the Michigan Disease Surveillance System (MDSS)
- 2) Individual "Flu-like Illness" and "Influenza" cases in MDSS
- 3) Emergency Department Surveillance System
- 4) Michigan component of the CDC U.S. Influenza Sentinel Provider Surveillance Network
- 5) MDCH Bureau of Laboratories

**1) MDSS Aggregate Flu-like Illness reports:**

Aggregate data sources include the IP10 school report form which is based on parental reports of ill children. Cases included in the chart and graph below are probable, confirmed, suspect or unknown status, with an investigation status of completed, active or new.

Through the fall, aggregate reports steadily increased. A sharp decline in weeks 52 and 1 was noted, which coincides with the school holiday. Throughout January, aggregate numbers remained similar to those reported before the holiday and are comparable to levels seen at this time last year.

**Case Counts by Week**



## 2) MDSS Individual Flu-like Illness and Influenza reports:

These reports may not be representative of the statewide impact of influenza as local health departments are not required to individually report influenza.

During this time frame, a total of 488 individual cases were reported; however, only 440 of these cases were used for analysis. 48 cases were excluded due to incomplete or inaccurate serologic testing, out-of-state residency, or being incorrectly reported as influenza when another etiologic agent, such as parainfluenza, respiratory syncytial virus, or *H. influenzae*, was identified. On December 15, 2006, the individual "Flu-like Illness" form was replaced with the individual Influenza form; thus both are included in the following report:

### Demographics

- Mean Age: 19.5 years
- Median Age: 8 years
- Sex: Female – 216 (49.1%), Male – 222 (50.5%)

### Distribution

| Month           | October | November | December | January | February |
|-----------------|---------|----------|----------|---------|----------|
| Number of Cases | 8       | 40       | 116      | 201     | 75       |

| Region          | Southeast | Southwest | Central | North |
|-----------------|-----------|-----------|---------|-------|
| Number of Cases | 243       | 76        | 98      | 21    |
| % of Cases      | 55.4%     | 17.4%     | 22.4%   | 4.8%  |



### Typing

- Influenza A: 339 cases (79.8%)
- Influenza B: 82 cases (19.3%)
- Positive but type unknown: 4 cases (0.9%)

### Testing Method

- Available for 322 cases (73.2%)

| Testing Method  | Rapid Antigen | Culture | DFA  | IFA  | EIA  | PCR  |
|-----------------|---------------|---------|------|------|------|------|
| Number of Cases | 194           | 85      | 31   | 8    | 2    | 2    |
| % of Cases      | 60.2%         | 26.4%   | 9.6% | 2.5% | 0.6% | 0.6% |

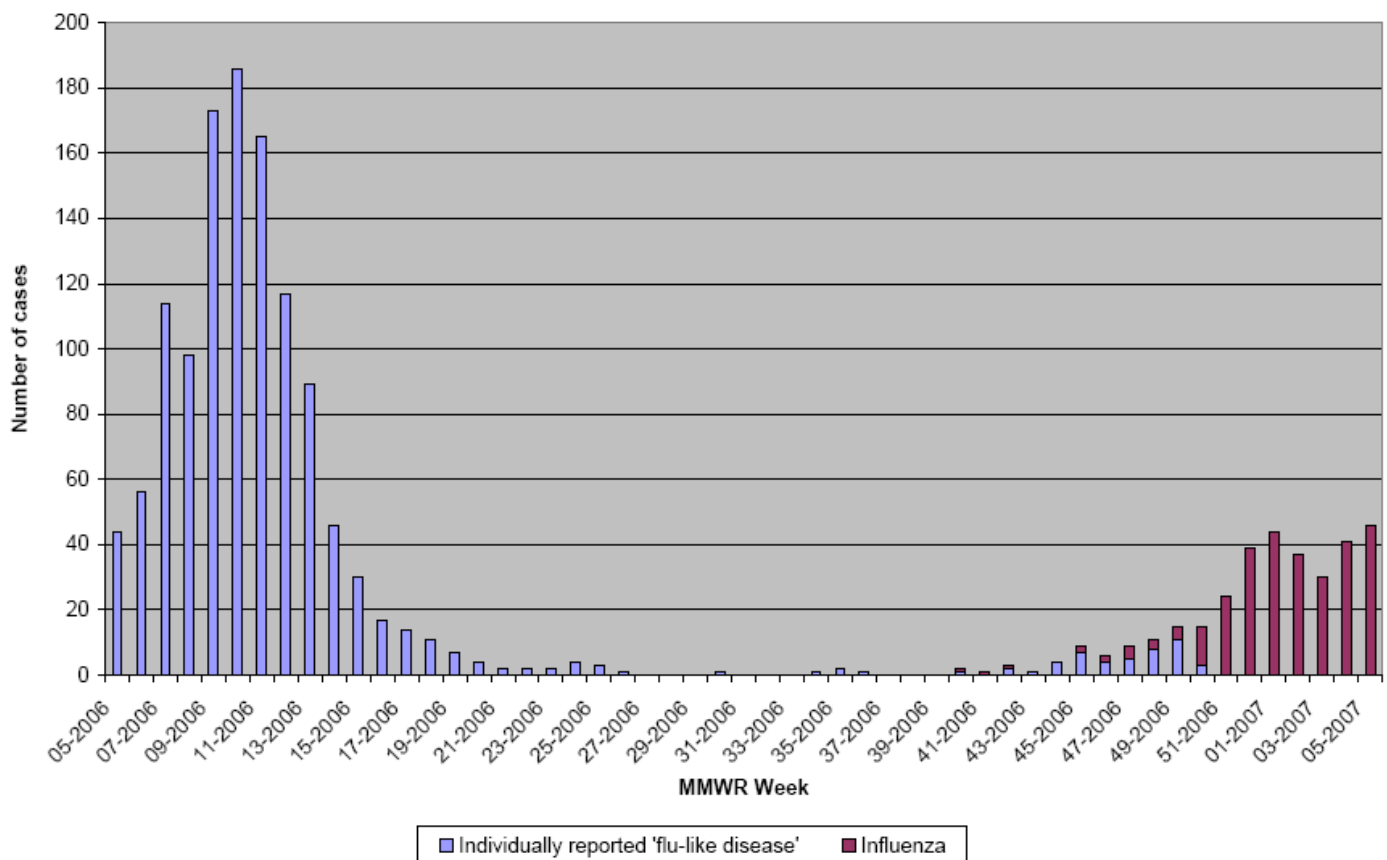
## Hospitalizations

- 57 cases (13.0%) were reported as "Inpatient"
- Sex: Female – 31 (54.4%), Male – 26 (45.6%)
- Mean Age: 30.3 years
- Median Age: 9 years
- Mode Age: 2, 5, and 9 years
- 48 (84.2%) were  $\leq 10$  years or  $\geq 50$  years

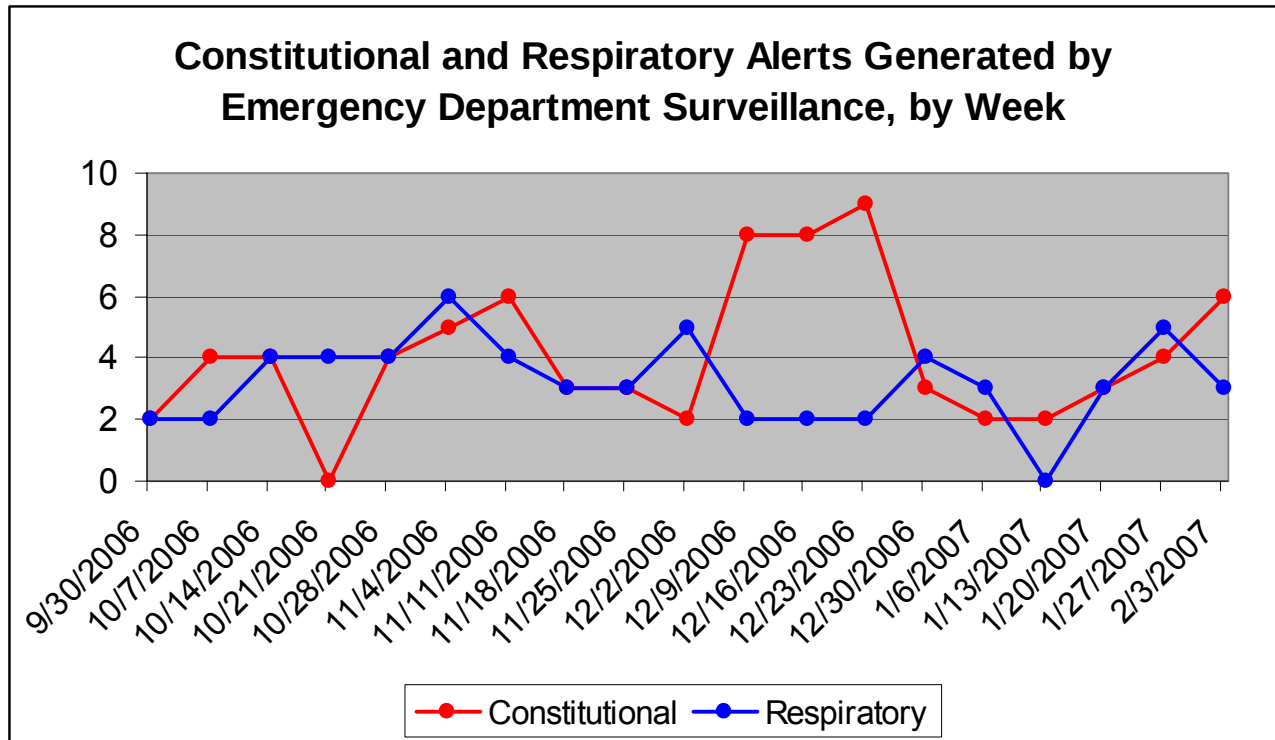
| Age Range (years)   | $\leq 5$ | 6-10 | 11-18 | 19-49 | 50-70 | $> 70$ |
|---------------------|----------|------|-------|-------|-------|--------|
| Number Hospitalized | 21       | 8    | 3     | 6     | 10    | 9      |

| Region                | Southeast | Southwest | Central | North |
|-----------------------|-----------|-----------|---------|-------|
| Number of Cases       | 35        | 11        | 11      | 0     |
| % of Hospitalizations | 61.4%     | 19.3%     | 19.3%   | 0.0%  |

**Individually Reported 'Flu-like Disease' and Influenza,  
Michigan, 2006-2007**

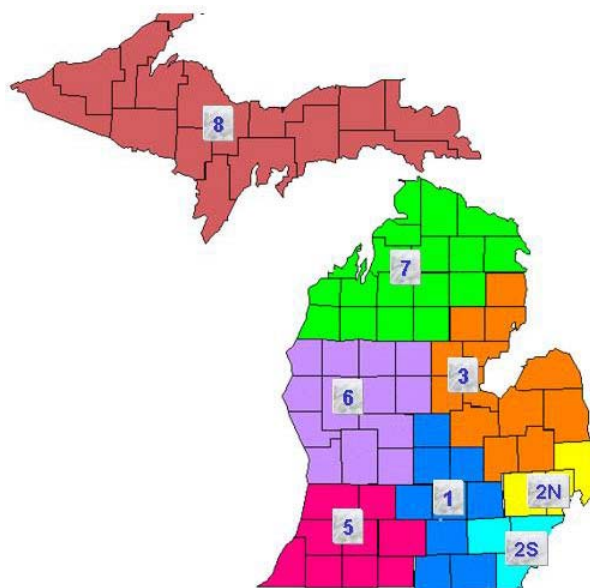


### 3) Emergency Department Surveillance:



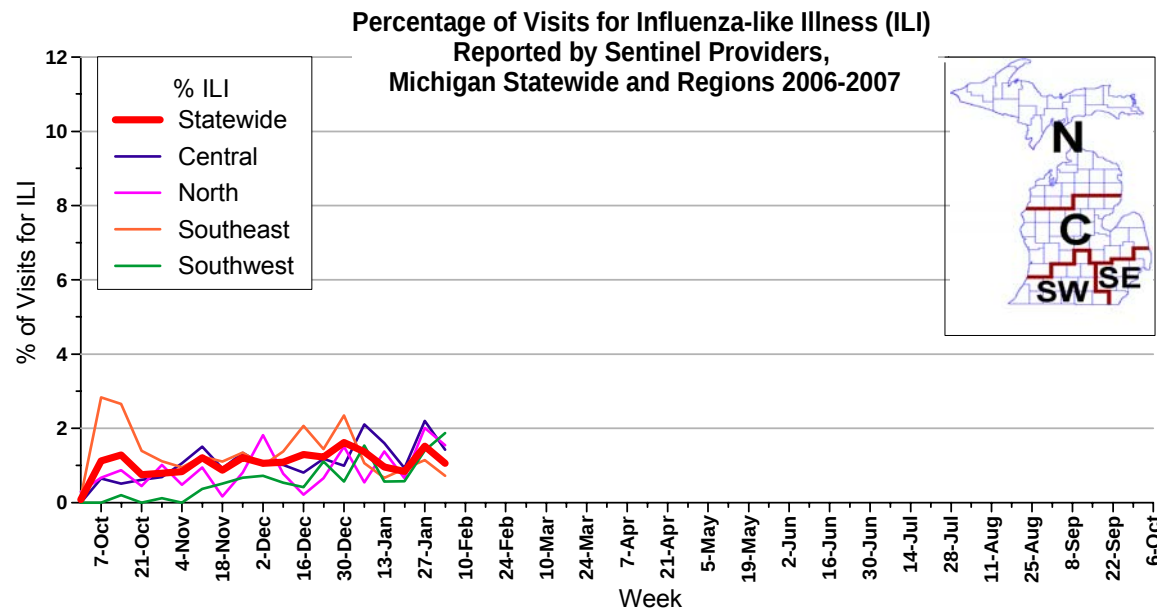
| Region                | 1  | 2S | 2N | 3 | 5  | 6 | 7  | 8 | Statewide | Total |
|-----------------------|----|----|----|---|----|---|----|---|-----------|-------|
| Constitutional Alerts | 11 | 11 | 4  | 7 | 15 | 7 | 14 | 3 | 3         | 75    |
| Respiratory Alerts    | 8  | 6  | 3  | 3 | 16 | 4 | 15 | 3 | 0         | 58    |

Michigan Emergency Department Surveillance Regions:



#### 4) Sentinel Provider Network:

Ninety-four Michigan physicians participate in the CDC U.S. Influenza Sentinel Provider Surveillance Network. During November and December of 2006, the percentage of visits due to influenza-like illness (ILI) rose slowly but steadily. January 2007 showed small fluctuations in ILI rates.



#### 5) MDCH Bureau of Laboratories:

For the 2006-2007 influenza season, there have been 63 culture-confirmed cases from the MDCH Lab:

- 44 A:H1N1 (Southeast (15), Southwest (16), Central (9), North (4))
- 3 A:H1,N pending (Central (2), North (1))
- 2 A:H3N2 (Southeast (1), Southwest (1))
- 1 A:H3,N pending (North (1))
- 13 B (Southeast (4), Southwest (4), Central (3), North (1), Wisconsin (1)).

All influenza B cultures have been B/Malaysia. Overall MDCH submission activity has been light to moderate. Sentinel laboratories in the Southwest and Central regions are reporting increasing numbers of positive results, while the Southeast region labs are continue to report steady positive results. Low levels of parainfluenza, adenovirus and respiratory syncytial virus are being reported as well.