

# Novel H1N1 (nH1N1) Influenza Situation Report

Marion County Health Department, IN 2009-10-23, 3:00pm

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The characteristics of nH1N1 are roughly similar to those of usual seasonal influenza, except for a greater chance of nH1N1 infection among the non-elderly. A cumulative report and prior reports are at [http://www.mchd.com/H1N1/H1N1\\_situational\\_reports.htm](http://www.mchd.com/H1N1/H1N1_situational_reports.htm). This report only includes new or especially timely information.

## **Spread**

Since about Oct. 13, the incidence of influenza in Marion County appears to have ceased its rapid increase. For the two weeks from Sept. 28 to Oct. 13, the incidence appeared to rise very rapidly, but since Oct. 13 it has been roughly flat, though with large variations from day to day. In the 6 weeks before Sept. 28, the percentage of emergency department (ED) visits involving influenza symptoms increased by about 0.3 percentage points per week, and then increased by about 2.8 percentage points per week from Sept. 28 to Oct. 13, to about 10% of ED visits. From then through Thurs. Oct. 22, about 8% to 11% of ED visits have been for influenza-like illness, and there has been no clear trend up or down. The increase in the portion of laboratory tests for influenza has also stopped. While the ED visit and influenza laboratory measures both remain exceptionally high, it is encouraging that the increase has stopped, or at least paused. School absentee rates continue to be slightly elevated overall, and to often vary greatly from day to day for any one school.<sup>1</sup>

During Oct. 11–17, ISDH confirmed two nH1N1 flu-related deaths in Indiana. Among 59 IN hospitals surveyed, the burden from ILI-related hospitalizations was elevated (more than doubled) in 3%, slightly elevated in 24%, and typical in 53%. Four hospitals reported that the burden was difficult to manage. Since September 1, 2009, 96% (179/186) of Indiana specimens that were positive for influenza were nH1N1. Of those 179 for whom age was known, 93% were ages 0 to 24 years. Only one was older than 50.<sup>2</sup>

Nationally, from October 10-3, influenza activity was widespread in all but 9 states, 100% of all subtyped influenza A viruses were nH1N1, and 10 nH1N1 flu-related pediatric deaths were reported to the CDC.<sup>3</sup>

In the northern hemisphere, influenza activity showed no change from last week. The temperate region of the southern hemisphere has no significant pandemic related activity in the past week. Worldwide, nearly 5000 deaths were attributed to nH1N1.<sup>4</sup>

In the 1957 pandemic, influenza became widespread in the US in September, peaked in mid-to-late October, and returned to baseline in December. Deaths peaked in mid-November. But another, 3-month wave of excess influenza and pneumonia deaths began in January 1958. About 25% of the population, mainly school age children through adults up to 35 or 40 years of age were infected. The vaccine had little impact, as only 17% of the population ever received it.<sup>5</sup>

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<sup>1</sup> Data from the Speedway, Warren, Wayne, Perry, Franklin and Decatur Township school corporations.

<sup>2</sup> [http://www.in.gov/flu/files/Weekly\\_Influenza\\_ReportWeek\\_41.pdf](http://www.in.gov/flu/files/Weekly_Influenza_ReportWeek_41.pdf) 2009-10-19

<sup>3</sup> <http://www.cdc.gov/flu/weekly/> 2009-10-16

<sup>4</sup> [http://www.who.int/csr/don/2009\\_10\\_23/en/index.html](http://www.who.int/csr/don/2009_10_23/en/index.html) 2009-10-23

<sup>5</sup> <http://www.liebertonline.com/doi/pdfplus/10.1089/bsp.2009.0729> 2009-10-22

## **Symptoms, Severity, Groups At Elevated Risk**

See [http://www.mchd.com/swine\\_flu/Cumulative\\_H1N1\\_Situation\\_Report.doc](http://www.mchd.com/swine_flu/Cumulative_H1N1_Situation_Report.doc) for more information. We know of no significant changes in nH1N1 characteristics.

In early October, approximately 6.1% of U.S. doctor's visits were for ILI. A total of 86 children under 18 died from nH1N1. Ten of these deaths occurred during October 3-10. Since September 1, about half of the deaths in children occurred in teens between the ages of 12 and 17.<sup>6</sup>

## **Antiviral & Drug Resistance**

No sustained transmission of oseltamivir-resistant nH1N1 has been identified. WHO reports 39 virus isolates of oseltamivir resistant influenza virus worldwide, none resistant to zanamivir. Over 10,000 isolates of nH1N1 have been tested and found to be sensitive to oseltamivir.<sup>7</sup>

On October 19, the CDC strongly recommended that antiviral treatment of hospitalized or high-risk patients with suspected nH1N1 virus infection be initiated as soon as possible. When treatment is indicated it should not be delayed pending confirmatory testing. Negative results of rapid influenza diagnostic tests should not be considered in the decision to treat. Treatment with antiviral medications is most effective when initiated within 48 hours of symptom onset.<sup>8</sup>

## **Vaccine Distribution**

As of October 23, the Marion County Health Department (MCHD) has received 17,700 nasal mist vaccine doses (attenuated nH1N1), 19,300 doses in ten-dose vials (inactivated nH1N1), and 200 doses in single dose syringes (thimerosal-free). This week, MCHD distributed vaccine to some obstetricians, family practitioners, and pediatricians who had requested vaccine, and to fire departments for emergency medical services personnel. In addition, 2800 individuals were vaccinated at MCHD's first public nH1N1 vaccine clinic, and public clinics will occur Saturday at 6 HealthNet sites.<sup>9</sup> Marion County physicians may request nH1N1 vaccine by clicking the "[H1N1 Vaccine Request Form for Healthcare Providers](#)" link at <http://www.mchd.com>.

Some H1N1 vaccine supplies include retractable needle syringes. If needed, see the manufacturers' sites (<http://catalog.bd.com>, <http://vanishpoint.com>) for use instructions.<sup>10</sup>

As of Oct. 22, the US government had 13 million nH1N1 vaccine doses, or one dose per 23 residents.<sup>11</sup> They hope to have one dose per 10 residents at the end of October,<sup>12</sup> per 6 residents in mid-November, and per 2 residents in December.<sup>13</sup> Just over half of US residents are in groups prioritized to first receive the vaccine.<sup>14</sup>

On October 16, 82 million doses of seasonal flu vaccine had been shipped in the U.S., 71% of the 114 million total doses that will be distributed. About 4.4% were distributed last week.<sup>15</sup> Starting October 27, the MCHD will offer **seasonal** (NOT H1N1) vaccine from IPS School 11, located at 42nd and Millersville Road, on Tuesday's 8am-noon and Friday noon-4pm.

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<sup>6</sup> <http://www.cdc.gov/media/transcripts/2009/t091016.htm> 2009-10-16

<sup>7</sup> [http://www.who.int/csr/disease/swineflu/laboratory23\\_10\\_2009/en/index.html](http://www.who.int/csr/disease/swineflu/laboratory23_10_2009/en/index.html) 2009-10-23

<sup>8</sup> <http://www.cdc.gov/H1N1flu/HAN/101909.htm> 2009-10-19

<sup>9</sup> <http://www.indyhealthnet.org/images/pdf/flushotgeneralv3web.pdf> 2009-10-22

<sup>10</sup> Indiana Health Alert Network Advisory Message 2009-10-22

<sup>11</sup> [http://hosted.ap.org/dynamic/stories/U/US\\_MED\\_SWINE\\_FLU\\_CHICKEN\\_EGG](http://hosted.ap.org/dynamic/stories/U/US_MED_SWINE_FLU_CHICKEN_EGG) 2009-10-22

<sup>12</sup> <http://www.washingtonpost.com/wp-dyn/content/article/2009/10/16/AR2009101601384.html> 2009-10-19

<sup>13</sup> [http://hosted.ap.org/dynamic/stories/B/BC\\_MED\\_FLU\\_MORE\\_DOSES](http://hosted.ap.org/dynamic/stories/B/BC_MED_FLU_MORE_DOSES) 2009-10-22

<sup>14</sup> <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr58e0821a1.htm> 2009-10-22

<sup>15</sup> <http://www.cdc.gov/media/transcripts/2009/t091016.htm> 2009-10-16

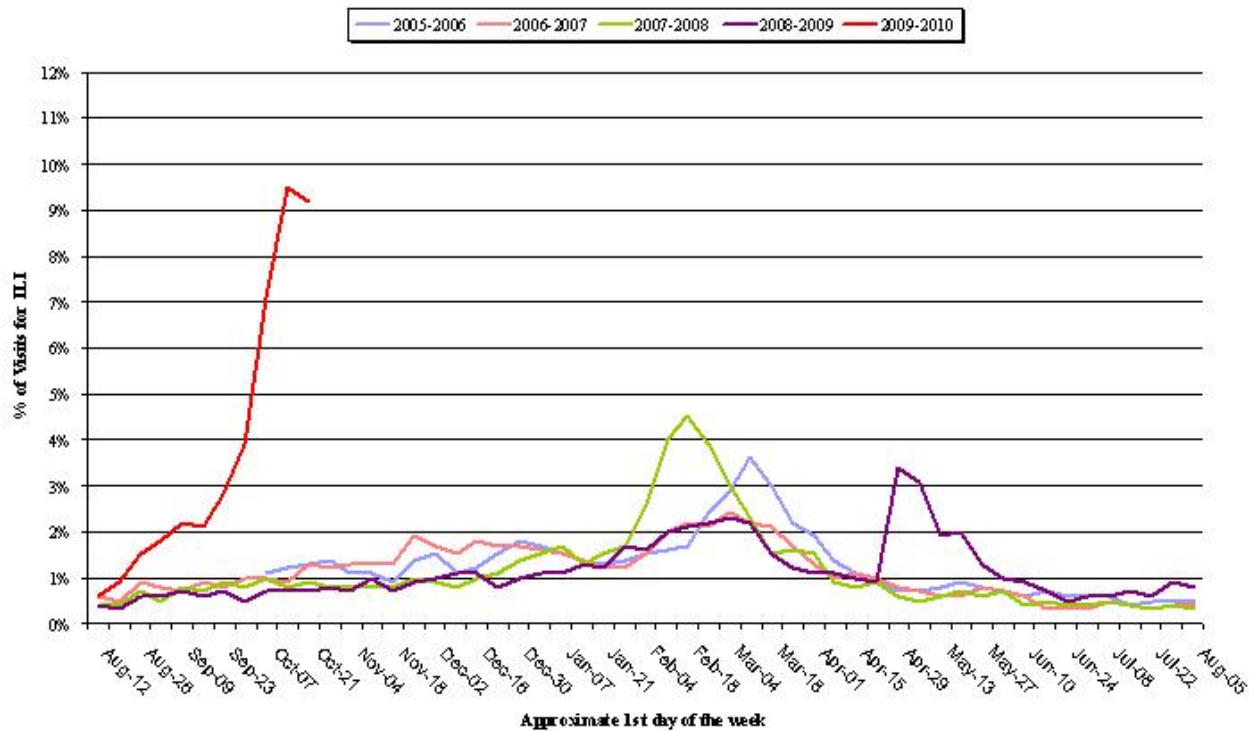
## New or Updated Guidance

An archive of "Clinician updates" from the CDC is at <http://emergency.cdc.gov/coca/updates/>.  
 Subscribe at <http://emergency.cdc.gov/clinregistry/userMaintenance2.asp>.

Community Health Center H1N1 guidance from HRSA ("Frequently Asked Questions" and "Determination of Coverage") is at <http://bphc.hrsa.gov/h1n1/>.

## Appendix: Trends in Influenza Incidence

**Figure 1: Percentage of Emergency Department Visits for Influenza-Like Illness, Marion County Hospitals, 2008-2009 and the Previous four Seasons**



Source: ISDH Public Health Emergency Surveillance System. (DR1144)

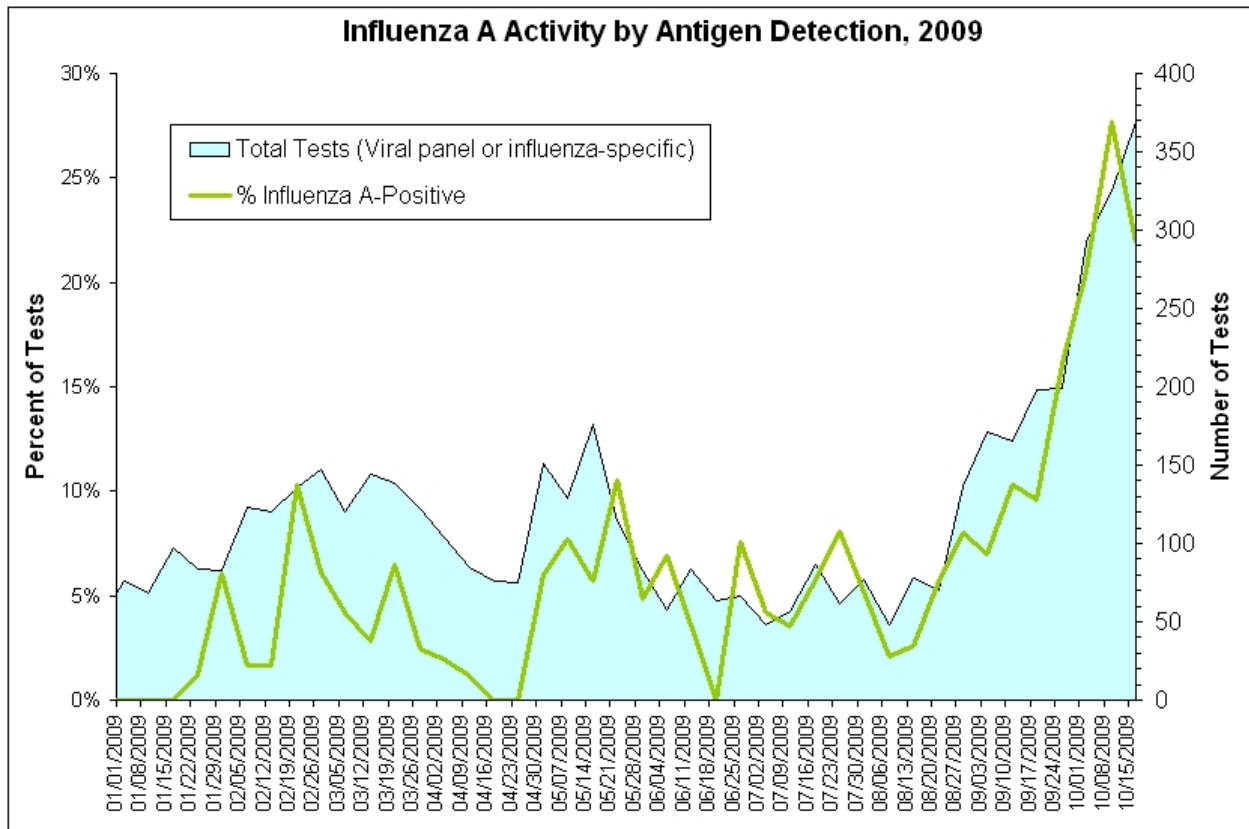
This week, the percent of emergency departments visits that were for influenza-like illness paused in its rapid increase. It is still far above the maximum seen in the past four flu seasons. It is too early to tell whether in will decline or resume it's increase.

**Table 1: Emergency Department Visits for Influenza-like Illness by Age, Marion County, Oct 12 to Oct 19, 2009**

Age Category	Total number with ILI	ILI Visits as % of All Visits by this Age Group
00-04	50	16.0%
05-17	119	21.2%
18-64	61	4.2%
65+	2	0.7%
Grand Total	232	8.9%

Data Source: ISDH Public Health Emergency Surveillance System (MCHD Epidemiology DR1185)

**Figure 2: Influenza A Activity by Antigen Detection, Clarian Pathology Laboratory, 2008-2009**

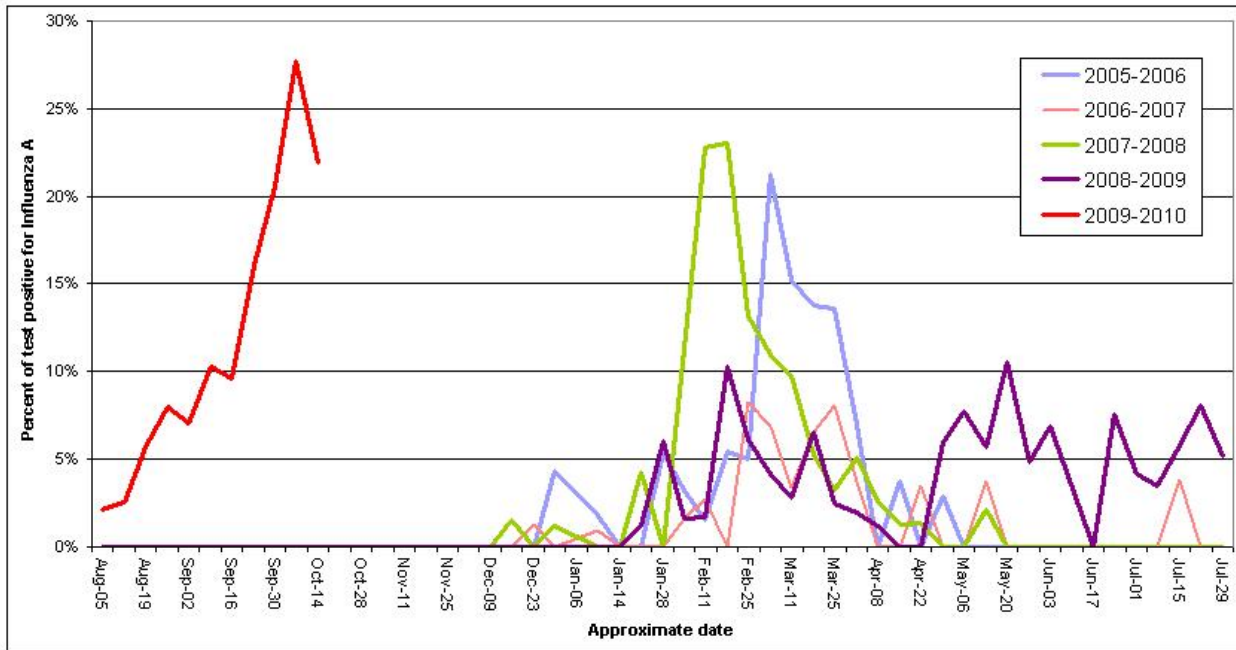


Source: Clinical Virology Laboratory at Clarian Pathology Laboratory. Roughly 55% of the samples were from a children’s hospital, with the remainder being from general hospitals or outpatient settings.

Laboratory tests confirm an increase in influenza A. National surveillance indicates that 99% of influenza cases are nH1N1.

Both the number of ED visits for ILI and % positive Influenza A lab tests are very elevated, indicating a true increase in influenza cases, rather than an increase due to visits by “worried well.”

**Figure 3: Influenza Activity by Antigen Detection, Clarian Pathology Laboratory, 2008-2009 and the Previous Seasons**



Source: Clinical Virology Laboratory at Clarian Pathology Laboratory.

The percent of laboratory tests that was positive for Influenza A had paused or perhaps stopped its rapid increase. It is far higher than usual for this time of year, and still about equal to the maximum from the highest of last four flu seasons. The potential variability is clear from past seasons, so we cannot say with any confidence that we are past the peak.