

# Kentucky Fluview H1N1 Weekly Surveillance Report



## Synopsis

- Over 99% of influenza A viruses tested by KDPH laboratory since August 2009 were 2009 novel influenza A (H1N1) viruses.
- A total of twenty-two influenza-associated deaths that have occurred in Kentucky residents this season have been reported and confirmed. All of these deaths were associated with 2009 influenza A (H1N1) virus infection and none were associated with seasonal influenza virus subtypes.
- Kentucky has been allocated 575,400 doses of H1N1 influenza vaccine to date. New allocations come in several times a week. These doses are being distributed to local health departments and other health care providers. Over 470,300 doses have been shipped to local providers and local health departments. An average of 23,000 doses are in each shipment. Shipment occurs three to four times a week.
- DPH has established a public telephone hotline (877-843-7727) to provide information about H1N1 and seasonal flu. About 200 calls come in each day and over 5,300 calls have been received since the hotline was established on October 5, 2009. Most calls concern general H1N1 questions, vaccine availability, and signs and symptoms of flu.
- Twenty nine clinics have agreed to provide sentinel influenza like illnesses surveillance data to KDPH.

## Overview of Flu Surveillance in Kentucky

The Kentucky Department for Public Health (KDPH) maintains and coordinates a statewide influenza surveillance system that identifies circulating influenza viruses and monitors influenza activity. While the majority of influenza surveillance is conducted October through May each year, recent enhancements to influenza surveillance include performing virologic testing and gathering influenza-like illness reporting from selected sites year round. The state surveillance system is comprised of the following components:

- Laboratory reports to determine what viruses are in circulation
- Influenza-associated mortality
- Influenza-associated pediatric mortality
- School absenteeism rates and school closures
- Influenza-like illness from a sentinel provider network
- Pregnant women and women up to six weeks postpartum who are hospitalized due to influenza—this system is under development

**Publication Date**  
**11/13/09**  
**Issue # 3**

### Inside this issue:

|                             |           |
|-----------------------------|-----------|
| Deaths                      | <b>2</b>  |
| ILI Trends                  | <b>3</b>  |
| Virus Sub-Type Surveillance | <b>4</b>  |
| School Based Surveillance   | <b>5</b>  |
| Vaccine Allocation          | <b>6</b>  |
| Vaccine Distribution        | <b>7</b>  |
| Public Hotline              | <b>10</b> |
| Sentinel ILI Data Providers | <b>11</b> |
| News                        | <b>11</b> |

**When was this data updated?**

| Item      | Current as of: |
|-----------|----------------|
| KY Deaths | 11/10/09       |
| US deaths | 11/6/09        |

**Abbreviations and Acronyms**

KDPH—Kentucky Department for Public Health

LHD—local health departments

CDC—Centers for Disease Control and Prevention

ILI—influenza like illness

KDE—Kentucky Department of Education

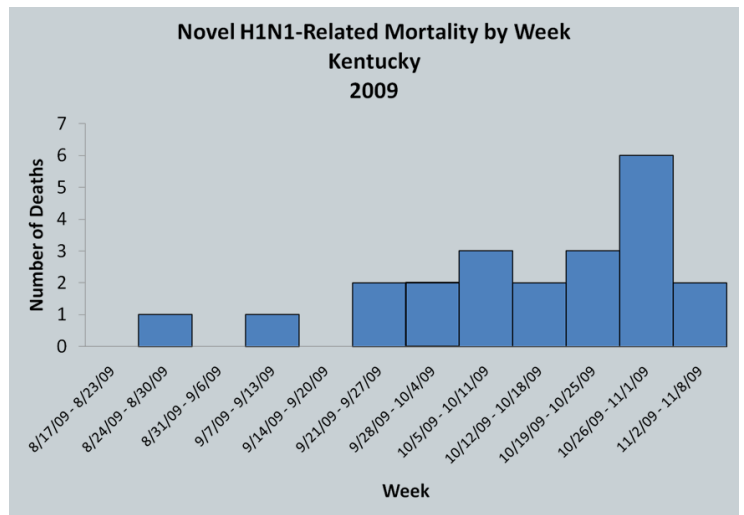
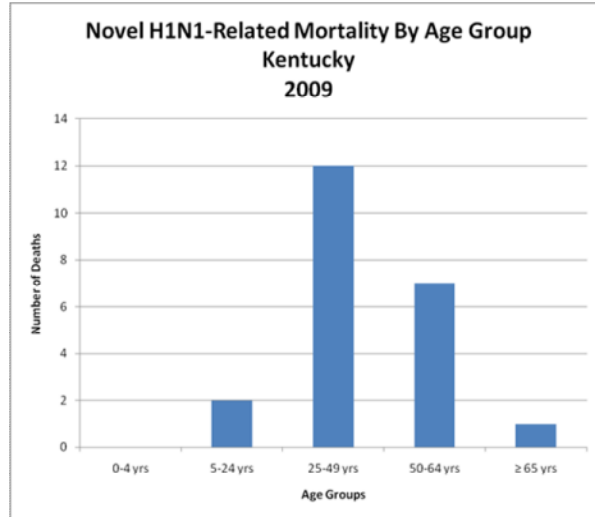
**US Pediatric Deaths with Confirmed H1N1**

| Dates               | Deaths |
|---------------------|--------|
| Oct 25-31, 2009     | 15     |
| Since Aug. 30, 2009 | 73     |

## Laboratory Confirmed Kentucky Deaths

| Month        | County    | Deaths    |
|--------------|-----------|-----------|
| Aug 2009     | Fayette   | 1         |
| Sep 2009     | Caldwell  | 1         |
|              | Jefferson | 1         |
|              | Knox      | 1         |
|              | Boone     | 1         |
| Oct 2009     | Christian | 1         |
|              | Fayette   | 2         |
|              | Floyd     | 1         |
|              | Hardin    | 1         |
|              | Jefferson | 1         |
|              | Kenton    | 1         |
|              | Knox      | 1         |
|              | Madison   | 1         |
|              | McCreary  | 1         |
|              | Oldham    | 1         |
|              | Pulaski   | 1         |
|              | Scott     | 1         |
|              | Nov 2009  | Jefferson |
| Kenton       |           | 1         |
| Nelson       |           | 1         |
|              | Pendleton | 1         |
| <b>Total</b> |           | <b>22</b> |

Twenty-two deaths have occurred involving people with confirmed H1N1 influenza. Of these, fourteen were female, and eight were male. The median age was forty-five, with a range of nine to eighty years. Of the twenty-two, seventeen had underlying medical conditions.



## US Deaths As Reported by Centers for Disease Control

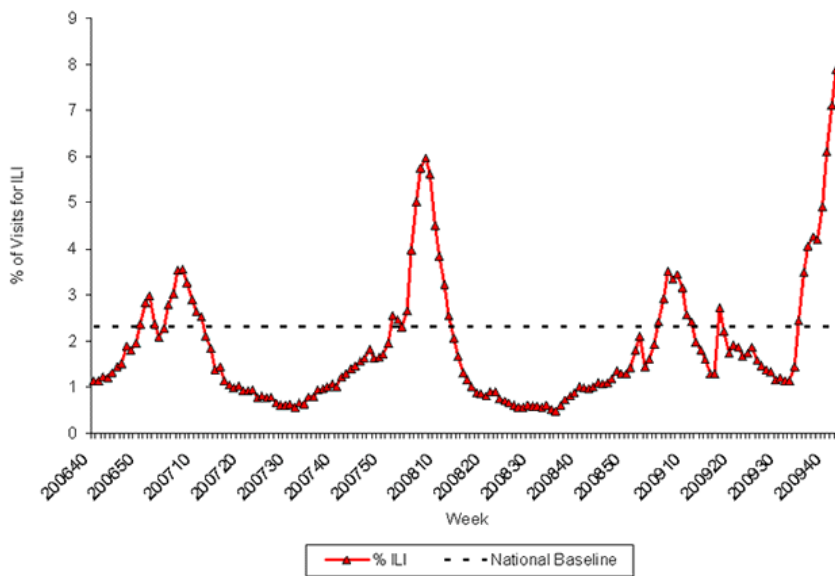
| U.S. Influenza Deaths from August 30 – October 20, 2009 | Hospitalizations | Deaths     |
|---------------------------------------------------------|------------------|------------|
| <b>Influenza Laboratory Test Confirmed</b>              | <b>17,838</b>    | <b>672</b> |

This data was posted on [www.cdc.gov/h1n1flu/updates/us/](http://www.cdc.gov/h1n1flu/updates/us/)

## Flu Like Illness Trends

Influenza-like illness (ILI) is a medical diagnosis of possible influenza or other illness causing a set of common symptoms. Symptoms commonly include fever, shivering, chills, malaise, dry cough, loss of appetite, body aches and nausea, typically in connection with a sudden onset of illness. The Centers for Disease Control and Prevention (CDC) tracks ILI and reports ILI by week of the

**Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), National Summary 2008-2009 and Previous Two Seasons (Reported by Year and Week Sequence Number)**



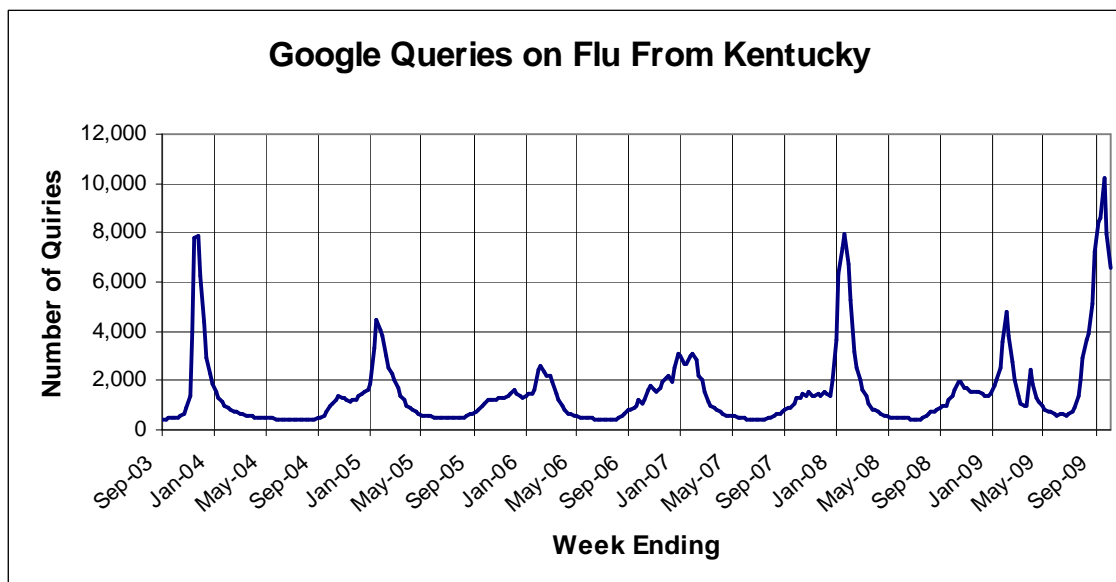
| When was this data updated? |                       |
|-----------------------------|-----------------------|
| <b>Item</b>                 | <b>Current as of:</b> |
| ILI National Trends         | 11/6/09               |
| Google flu trends           | 11/1/09               |
|                             |                       |

News Item

Obesity Puts Swine Flu Sufferers At Greater Risk, Study Suggests [California]: A study in California shows that about a quarter of the people hospitalized for H1N1 complications were morbidly obese, even though less than 5% of the population falls into that category. Obesity appears to be a risk factor on par with pregnancy for developing complications from an infection with pandemic H1N1 influenza, according to the most comprehensive look yet at swine flu hospitalizations. [Date: 4 November 2009; Source: [http://www.latimes.com/features/health/la-sci-swine-flu4-2009nov04\\_0,2242205.story](http://www.latimes.com/features/health/la-sci-swine-flu4-2009nov04_0,2242205.story)]

## Google Flu Trends

Google compiles the number of queries with influenza like terms by week and state. This data has been compiled since September 2003. The chart shows that the number of queries this flu season has exceeded the number in other years and the peak has occurred much earlier in the season. This data serves as a proxy measure for the public's concern and interest in influenza information.



For more information see the Google site [www.google.org/flutrends](http://www.google.org/flutrends)

| When was this data updated? |                |
|-----------------------------|----------------|
| Item                        | Current as of: |
| Lab counts                  | 11/10/09       |

## Surveillance of Virus Subtypes

KDPH works in partnership with clinicians, local health departments, and the federal Centers for Disease Control and Prevention to conduct surveillance for influenza-like illness.

The information collected by Kentucky sentinel providers is combined with other influenza surveillance data on influenza-related hospitalizations, antiviral usage, severe pediatric influenza cases and positive laboratory detections from collaborating hospital, academic and public health laboratories throughout the state to monitor the timing, location, and impact of influenza viruses year-round.

A total of 3,218 specimens were submitted by providers to the state lab for testing between August 1, 2009 and November 10, 2009. Of those that tested positive for influenza, 99.77% were positive for H1N1.

The results of tests performed during the current month are summarized in the table below. Please note that the November data is not for a full month.

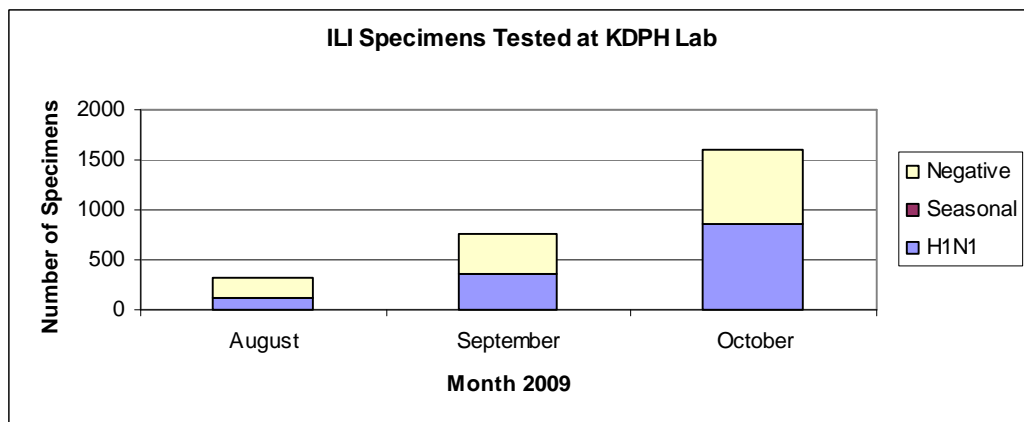
|                                           | August | September | October | November* |
|-------------------------------------------|--------|-----------|---------|-----------|
| <b>Specimens Tested</b>                   | 327    | 769       | 1594    | 528       |
| <b>Specimens positive for Flu</b>         | 116    | 358       | 857     | 175       |
| <b>H1N1</b>                               | 114    | 358       | 855     | 175       |
| <b>Seasonal Flu subtype</b>               | 2      | 0         | 2       | 0         |
| <b>*partial month, through 11/10/2009</b> |        |           |         |           |

### Fast Fact

The KDPH lab uses polymerase chain reaction to detect other viruses and antiviral resistance testing.

Polymerase chain reaction (PCR) is a technique to amplify a single or few copies of a piece of DNA across several orders of magnitude, generating thousands to millions of copies of a particular DNA sequence.

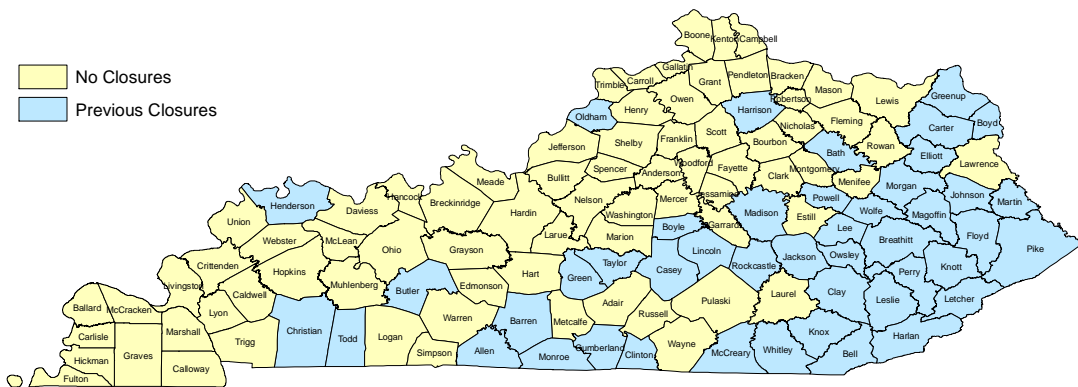
The most important information obtained from virus sub-type testing is strain identification, which is used to judge the match between circulating influenza virus strains and those covered by the current vaccine, and assist the CDC and World Health Organization in determining strains for inclusion in next year's vaccine.



## School Absentee and School Closures

The Kentucky Department for Public Health, with the cooperation of the Kentucky Department of Education, collects self-report data on school absences attributed to ILI from Kentucky public schools. School districts report to the Kentucky Department of Education on school closures due to ILI. School absenteeism data is continuously updated and may change as school census updates are provided. From August 1 to November 9, 299 schools from 53 districts closed one or more days due to influenza like illness.

### Public school closures due to influenza like illness by county, August 1 – November 9, 2009



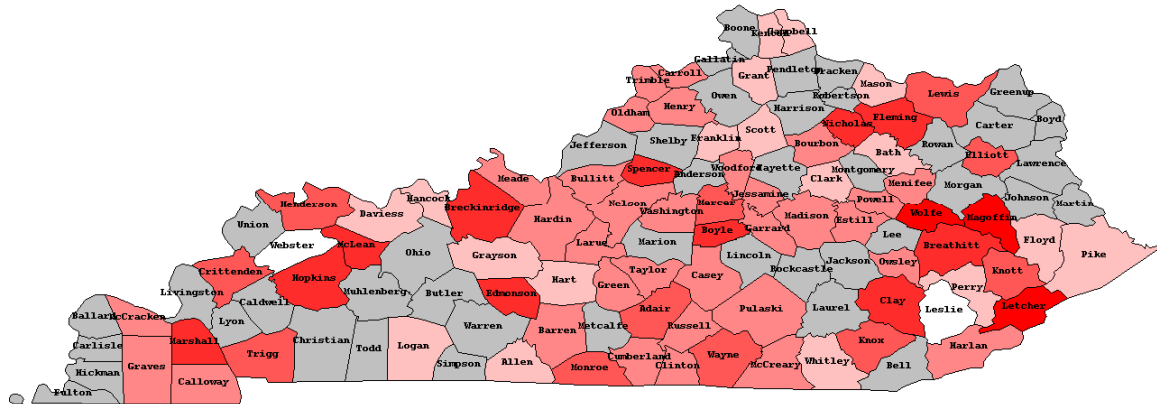
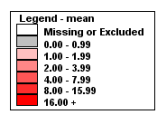
| When was this data updated? |                |
|-----------------------------|----------------|
| Item                        | Current as of: |
| School closings             | 11/9/09        |
| Absences                    | 11/9/09        |

### News Item

#### Nation Is Facing Vaccine Shortage For Seasonal Flu

Even though the regular flu season has yet to start, the nation is facing a severe shortage of seasonal flu vaccine as well as swine flu vaccine. ... The shortage does not mean there will be an increase in seasonal flu deaths, which average about 36,000 a year. The same amount of vaccine was made this year as last, and there is no reason to believe any of the three strains of seasonal flu will be worse this winter. ... In New York, the shortage is so acute that the city health department on Wednesday asked doctors to stop giving seasonal vaccines to healthy adults under 65. [Date: 4 November 2009; Source: [http://www.nytimes.com/2009/11/05/health/05flu.html?\\_r=1&partner=rss&emc=rss](http://www.nytimes.com/2009/11/05/health/05flu.html?_r=1&partner=rss&emc=rss)]

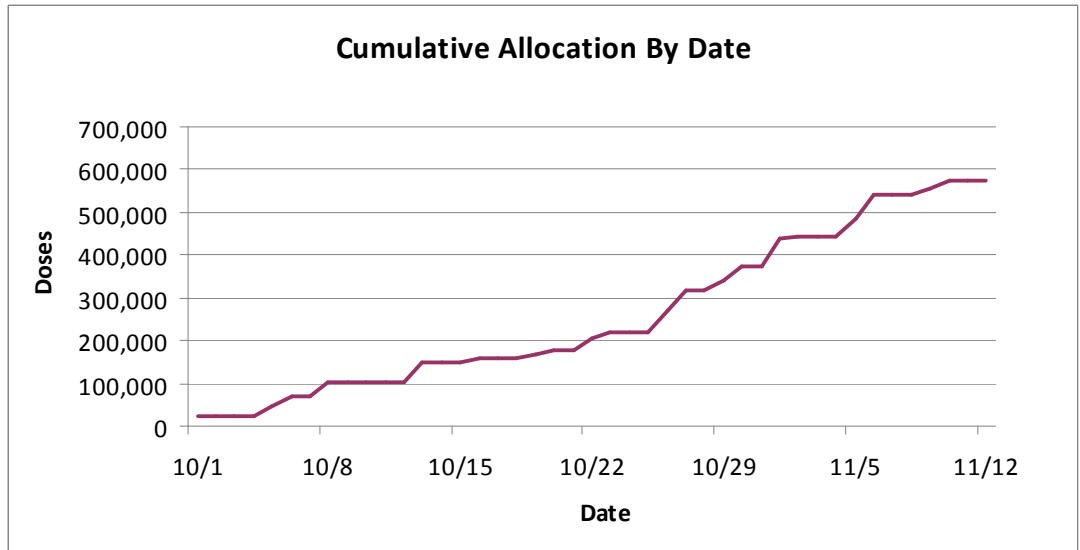
### Percent of School Absences by County Attributed to ILI—Average Rates of Absence Per 1,000 Students In Kentucky Schools For Week of 11/09/2009



| When was this data updated? |                |
|-----------------------------|----------------|
| Item                        | Current as of: |
| Allocation                  | 11/10/09       |
| Ordered / Shipped           | 11/10/09       |
|                             |                |

## Vaccine Allocation

CDC sends states a weekly 2009 H1N1 allocation report which indicates how much of each formulation of 2009 H1N1 influenza vaccine Kentucky can order. CDC allocates vaccine based on the state's population. KDPH then sub-allocates vaccine to counties and health districts by population. CDC's distribution contractor ships vaccine to hospitals, clinics, doctor's offices, health departments, and other providers three or four times per week. The chart below shows the cumulative doses of vaccine allocated to Kentucky from the CDC.



**News Item:**

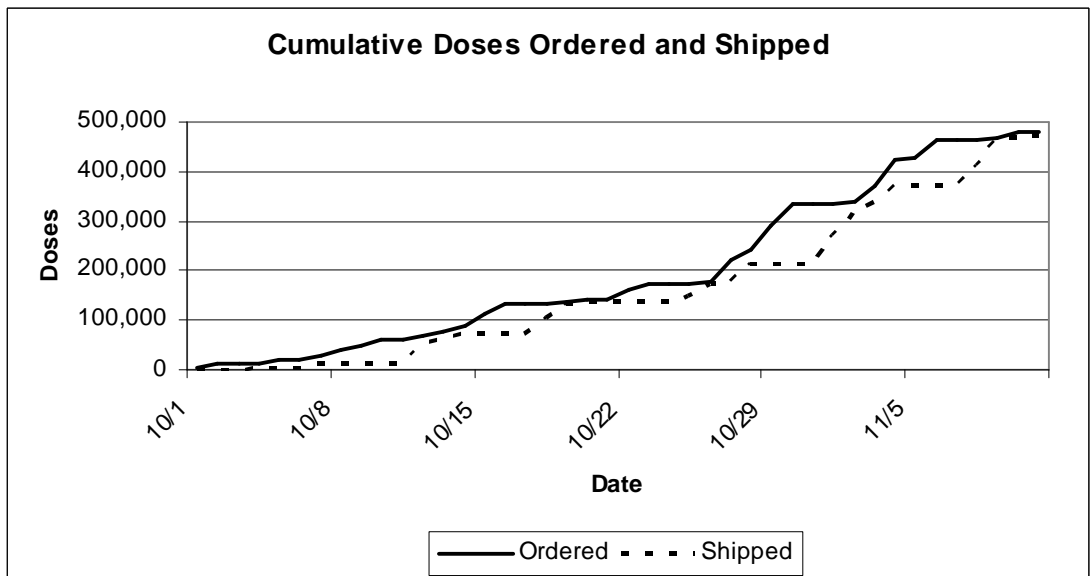
**Swine Flu Virus Is Top Strain Worldwide**

The World Health Organization's flu chief said the swine flu virus has now become the predominant flu strain worldwide. In some countries, swine flu accounts for up to 70 percent of the flu viruses being sampled.

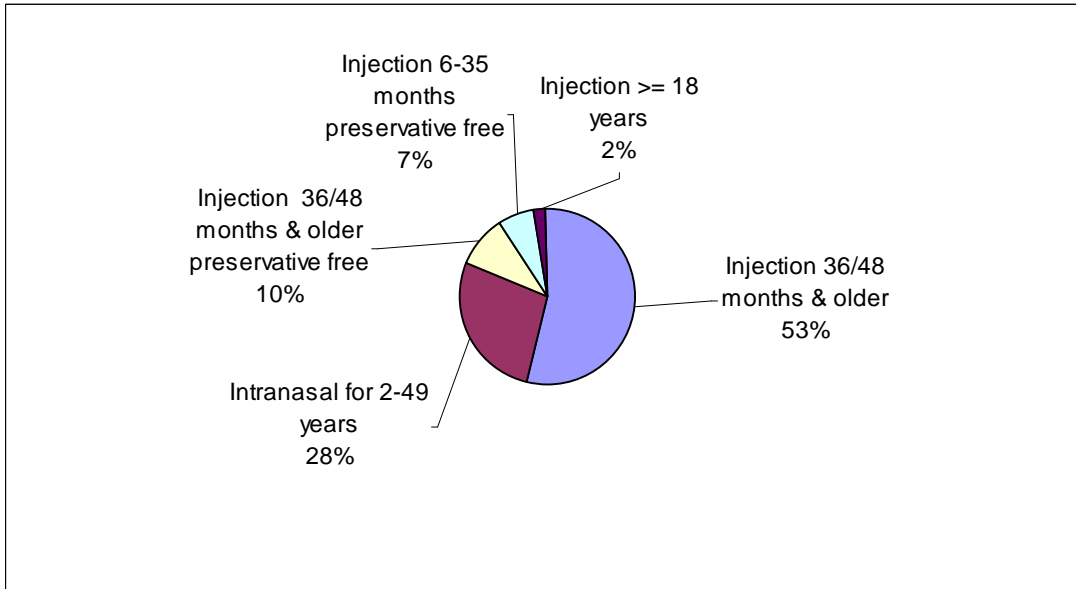
[Date: 5 November 2009; Source:

<http://www.wdsu.com/health/21529121/detail.html>

## Doses Ordered and Shipped



## Doses Shipped by Type



| Type of Vaccine                                      | Ordered | Shipped |
|------------------------------------------------------|---------|---------|
| Injection 36/48 month and older                      | 256,500 | 240,500 |
| Intranasal for 2-49 years                            | 133,100 | 133,100 |
| Injection 36/48 months and older (preservative free) | 46,900  | 46,900  |
| Injection 6-35 months (preservative free)            | 32,600  | 32,600  |
| Injection >= 18 years                                | 10,700  | 9,400   |

## Provider Agreements, Enrollments, and Direct Ship Sites

The vaccine distribution system requires health care providers to sign a provider agreement with their local health department. The health care provider enrollment process collects information needed to ensure rapid shipment of vaccine and maintenance of the cold chain. Some vaccine goes to local health departments and some goes directly to health care providers at a direct ship site at the discretion of the local health department. As of 11/10/2009, there are 1,302 provider agreements, 1,272 provider enrollments, and 241 direct ship sites across Kentucky.

## Surveillance of Pregnant Women Hospitalized with H1N1

KDPH has begun collecting information on women who are pregnant (up to 6 weeks postpartum) and hospitalized with any confirmed type of influenza. We will be collecting this information prospectively as well as going back and gathering the same information on this group of cases since August 2009. This effort is in response to a request by the CDC aimed at a high risk group of women, those receiving care in a hospital, in order to work toward finding ways to prevent serious outcomes for pregnant women and their babies.

Clinicians are encouraged to report any pregnant woman or a woman up to six weeks postpartum who is hospitalized with influenza in Kentucky by calling our H1N1 Call Center at 877-826-7697. For additional support or questions about clinical treatment or CDC guidance and recommendations, clinicians can call CDC's pregnancy support line at 404-368-2133.

| When was this data updated? |                |
|-----------------------------|----------------|
| Item                        | Current as of: |
| Doses by type               | 11/10/09       |
| Agreements, etc.            | 11/10/09       |
| Pregnant Women              | 11.04/09       |

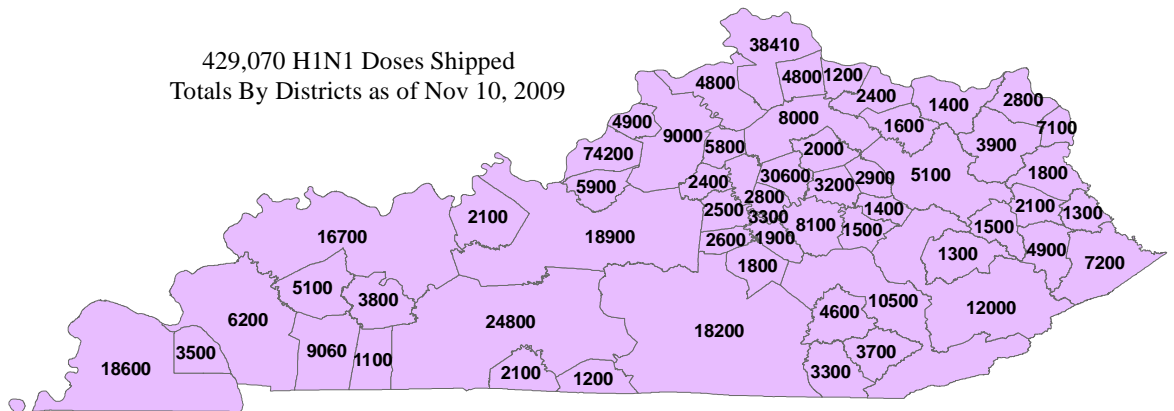
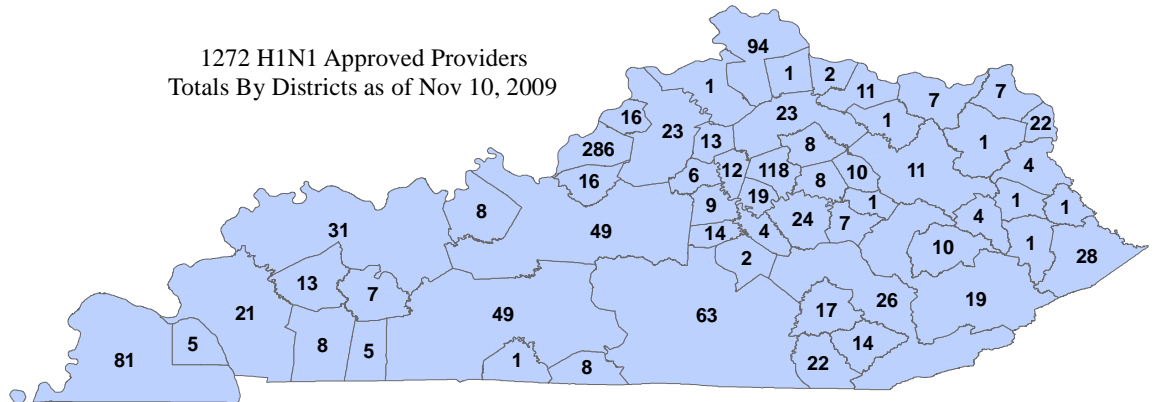
### Fast Fact

**Seasonal Influenza results in 3.1 million patient hospital days each year. Direct medical costs for influenza average \$10.4 billion annually. Projected lost earnings due to sickness and death are an estimated \$16.4 billion annually.**

**When was this data updated?**

| Item      | Current as of: |
|-----------|----------------|
| Providers | 11/10/09       |
| Process   | 11/04/09       |

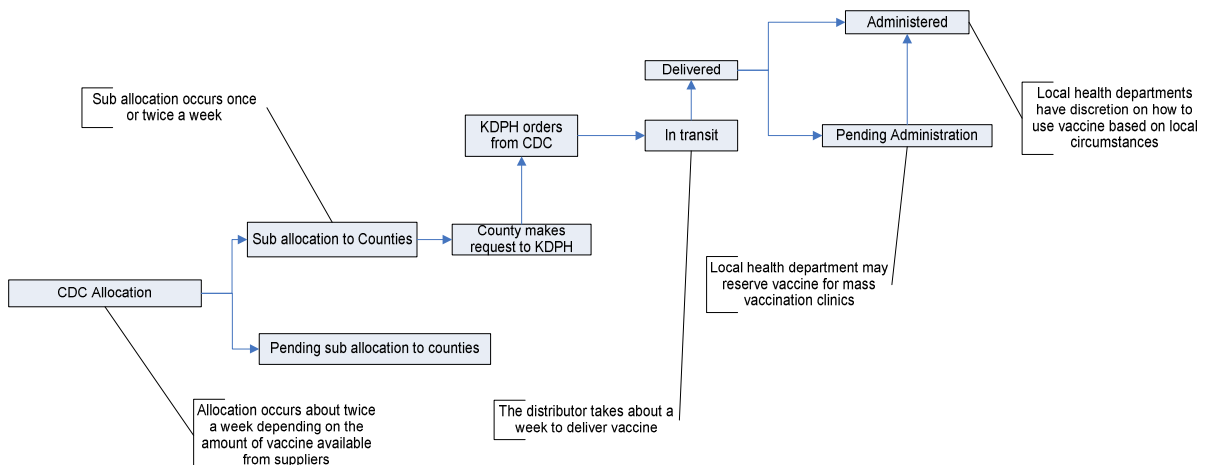
## Vaccine Distribution By Health District



\*Providers must receive greater than 100 doses of a specific formulation to qualify for direct shipping. This is at the discretion of the local health department.

## Vaccine Distribution Process (simplified)

From the manufacturing of vaccine to its delivery to the public takes many steps. This flowchart shows the steps of this distribution process involving KDPH and LHDs.



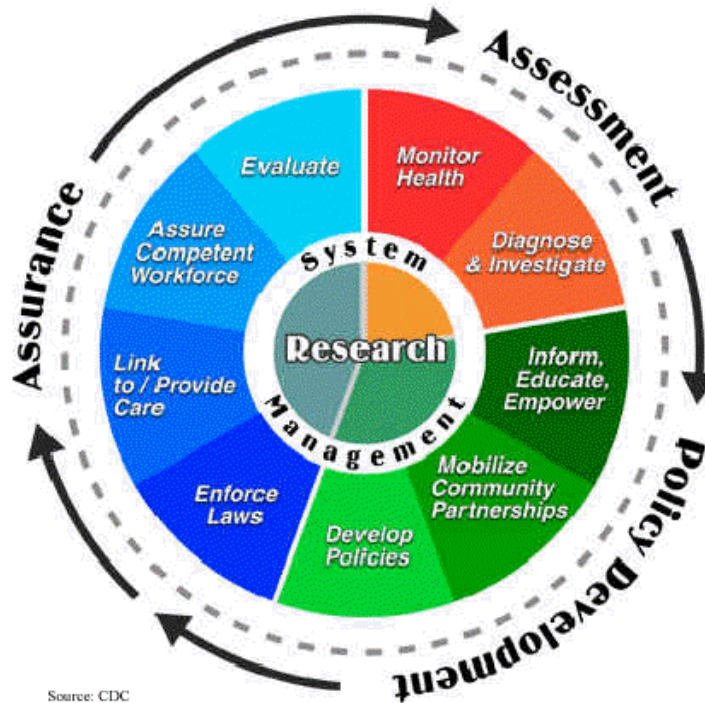


## Public Health Works

The Ten Essential Services provide a working definition of public health and a guiding framework for the responsibilities of the public health system. Every day the state, district and local health departments in Kentucky put the essential services to work in their efforts to prevent, promote and protect. The H1N1 response highlights how public health works; provided each week are examples from Kentucky.

Partnerships Work in Reaching School-Age Children:

Woodford County utilized their school district's one-call notification system to inform parents about an extended hours H1N1 vaccination clinic. After the message went out, it took only two to three hours to reach all of the parents enrolled in the one-call notification system. As a result, Woodford County administered a total of 900 H1N1 vaccinations in one day, of which approximately 700 were given to children age 24 months to 24 years old. The partnership between the school district and the local health department was an excellent way to reach the target population of school age children so quickly.



| When was this data updated? |                |
|-----------------------------|----------------|
| Item                        | Current as of: |
| Antiviral                   | 11/4/09        |

### Fast Fact

Each year 30,000 to 50,000 adults die because of seasonal influenza in the United States.

## Antiviral Availability for Uninsured and Under-Insured Patients

One issue that is important to the clinical management of H1N1 influenza is the use of antiviral medications when indicated. These medications are very expensive: uninsured and under-insured patients who are prescribed antiviral medications may not be able to afford the prescription or even a co-pay for their insurance plan. To address this issue, the Kentucky Department for Public Health has released some of its stockpile of antiviral medications to the Kentucky Pharmacists Association to be used for these uninsured and under-insured patients.

The Kentucky Pharmacists Association has developed partnerships with over 160 community pharmacies (chain and independent pharmacies, federally qualified health centers, and hospitals) and over 30,000 courses have been distributed out into the community through these partnerships. Each county has at least one pharmacy (most have more) that has agreed to supply these antiviral medications to patients when clinicians refer their uninsured and under-insured patients to them.

The list of participating pharmacies, which is accessible to local health departments, continues to grow as KPhA strives to provide access in counties across Kentucky for referral of patients. For more information on how to refer uninsured or underinsured patients to access this process, please contact your local health department.

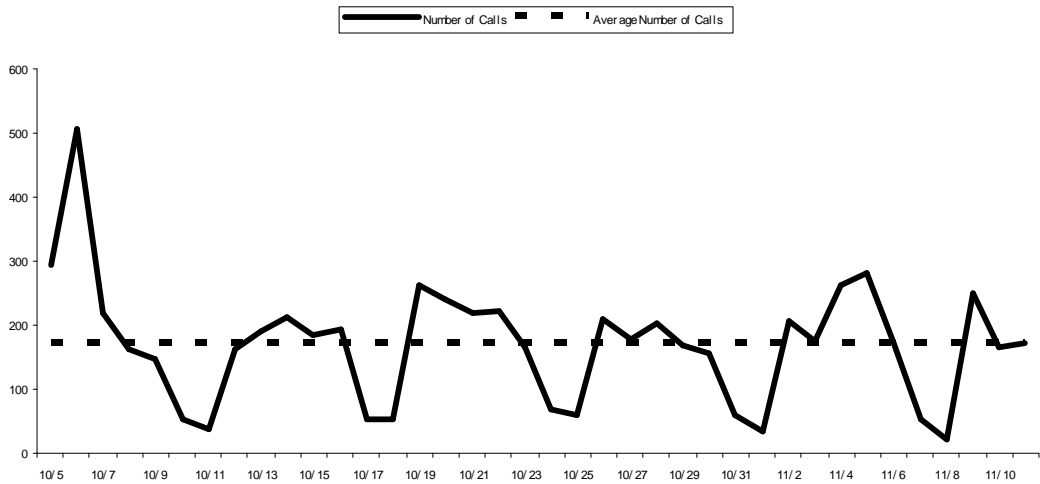
## H1N1 Public Telephone Hotline

On October 5, 2009 KDPH established a telephone hotline to answer questions from the public. The hotline averages about 160 calls a day. As of 11/10/2009, it has received 5,305 calls. The most common questions are noted in the chart below. The flu hotline is staffed by nurses and administered by Kosair Children's Hospital, a part of Norton Healthcare. The flu hotline will be active through at least the end of December.

**Note: data is updated daily.**

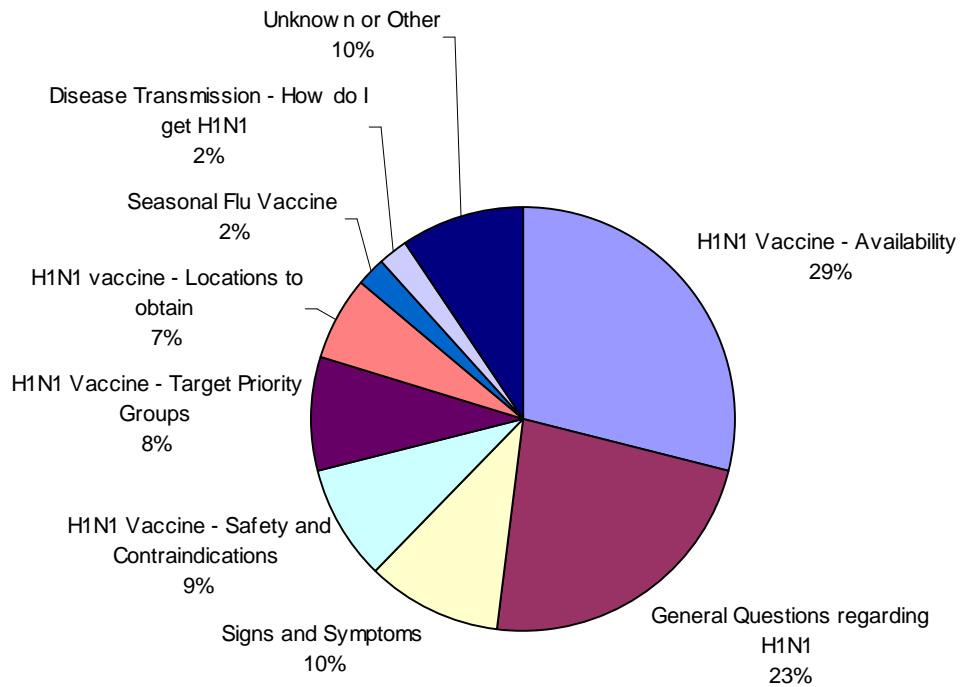
|              |                       |
|--------------|-----------------------|
| <b>Item</b>  | <b>Current as of:</b> |
| <b>Count</b> | 11/10/09              |
| <b>Type</b>  | 11/10/09              |

Count of Calls, per Day



The hotline number is 1 (877) 843-7727. It is available from 8 a.m.-10 p.m. daily

## Frequency of Questions Asked



**Commonwealth of Kentucky  
Cabinet for Health and Family  
Services  
Department of Public Health  
Division of Epidemiology and  
Health Planning**

275 E. Main St.  
HS2GWC  
Frankfort, KY 40621

Phone: (502) 564-7243  
Fax: (502) 564-0542

Dr. Kraig Humbaugh  
Director

Dr. William Hacker  
Commissioner

FOR THE LATEST UPDATES  
ON H1N1, GO TO:  
[HTTP://  
HEALTHALERTS.KY.GOV](http://HEALTHALERTS.KY.GOV)

## The H1N1 Virus



## Announcements and News

### Quantities of Seasonal Flu Vaccine Diminishing in Kentucky

Kentucky Department for Public Health officials announced today that most of the seasonal influenza vaccine manufactured for this season has already been given, due to earlier, increased demand nationwide. Individuals in recommended groups for seasonal flu vaccine—including those over 65, pregnant women and people with chronic health conditions—should check with health care providers in their area to see if seasonal flu vaccine is still available.

"In many cases seasonal flu vaccine was given as soon as the vaccine arrived, in the months of September and October," said William Hacker, M.D., commissioner of DPH. "While vaccine manufacturers produced more seasonal flu vaccine than last year, we have learned that it will ultimately not be enough to meet the increased demand, though some limited quantities should still become available. At this point we are still not seeing seasonal flu circulating, but we do encourage those at highest risk for complications from seasonal flu to check for vaccine availability with health care providers."

The increased demand for the seasonal flu shot is thought to be tied to heightened awareness of flu activity due to the emergence earlier this year of the new 2009 H1N1 flu strain (swine flu), which the seasonal vaccine does not protect against. Seasonal flu vaccine is highly recommended for: children age 6 months to 19 years old; pregnant women; people 50 years old or older; people of any age with chronic health problems; people who live in nursing homes and other long-term care facilities; health care workers; caregivers of or people who live with a person at high risk for complications from the flu; and out-of-home caregivers of or people who live with children less than 6 months old. While seasonal flu is not yet circulating in Kentucky, the virus is expected to make an appearance later this fall or winter.

## Providers Supporting Influenza Surveillance

These providers have agreed to provide KDPH with surveillance data on influenza like illnesses. Each week, influenza sentinel surveillance sites report directly to CDC via the internet the total number of patients seen for any reason (as a reference) and the number of patients seen exhibiting influenza-like illness by age group. The data contributed by our sentinel providers is an important component of our influenza surveillance program.

In acknowledgment of their contributions we will begin to publish the rate of participation of each sentinel provider in two weeks. This will consist of the percent of weekly surveillance reports that we have received over the past five weeks reported by sentinel practice. Thank you to all Sentinel Providers in Kentucky for all of your hard work.

1. All Children Pediatrics, Jefferson
2. All Star Pediatrics, Jefferson
3. Asbury College Student Health Services, Jessamine
4. Children's Health, Jefferson
5. Comprehensive Care, Fayette
6. East Louisville Pediatrics, Jefferson
7. Eastern Kentucky University Student Health Services, Madison
8. Family Medicine Associates of Western Kentucky, McCracken
9. Family Practice Associates of Lexington, Fayette
10. Green County Primary Care, Green
11. Health Plus PSC, Rowan
12. Hometown Family Care, Floyd
13. Jessamine Medical Center, Jessamine
14. Kaplan Barron Pediatrics, Jefferson
15. Kentuckiana Pulmonary Association, Jefferson
16. Kentucky Mountain Health Alliance / Little Flower Clinic, Perry
17. Lebanon Pediatrics, Marion
18. Lexington Clinic, Fayette
19. Lexington Clinic Richmond, Madison
20. Louisville Area Pediatrics, Jefferson
21. Morehead State University Health Services, Rowan
22. Nicholasville Pediatrics, Jessamine
23. Riverview Clinic, Estill
24. Saint Claire Family Medicine – Frenchburg, Menifee
25. UK North Fork Valley Community Health Center, Perry
26. Union College Campus Health Center, Knox
27. University of Kentucky Student Health Service, Fayette
28. University of Louisville Campus Health Services, Jefferson
29. Western Kentucky University Health Services, Warren