

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 eighteen 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 442,900 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 336,800 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 5,100 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

Information Current as
of November 3, 2009
Issue # 2

Inside this issue:

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

Laboratory Confirmed Kentucky Deaths

Abbreviations and Acronyms

KDPH—Kentucky Department for Public Health

LHD—local health departments

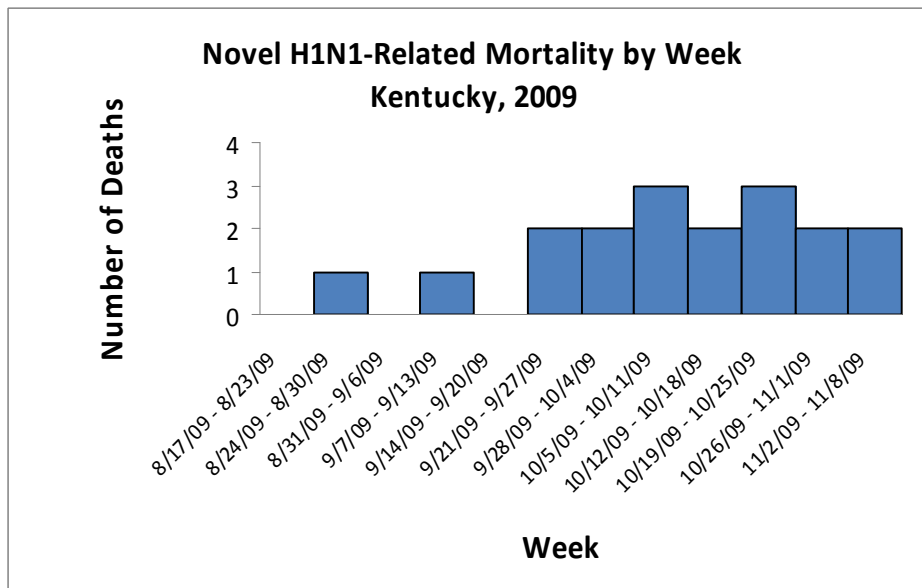
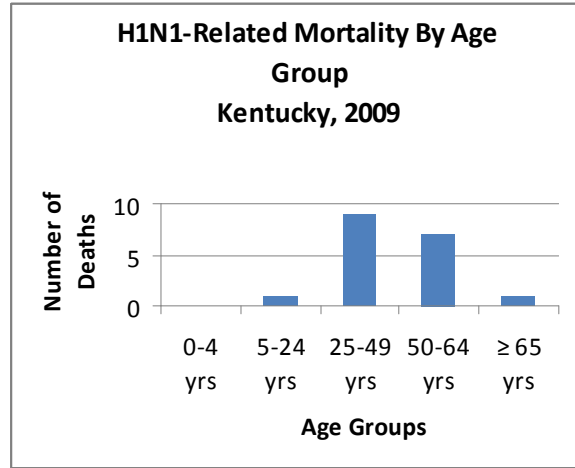
CDC—Centers for Disease Control and Prevention

ILI—influenza like illness

KDE—Kentucky Department of Education

Month	County	Number of Deaths
Aug 2009	Fayette	1
Sep 2009	Caldwell	1
	Jefferson	1
	Knox	1
Oct 2009	Christian	1
	Fayette	2
	Hardin	1
	Jefferson	1
	Kenton	1
	Knox	1
	Madison	1
	McCreary	1
	Oldham	1
	Pulaski	1
Nov 2009	Jefferson	1
	Kenton	1
Total		18

Eighteen deaths have occurred involving people with confirmed H1N1 influenza. Of these, twelve were female, and six were male. The median age was forty-five, with a range of thirteen to eighty years. Of the eighteen, thirteen had underlying medical conditions.



US Pediatric Deaths with Confirmed H1N1

Dates	Deaths
Oct 18-24, 2009	19
Since Aug. 30, 2009	65

US Deaths As Reported by Centers for Disease Control

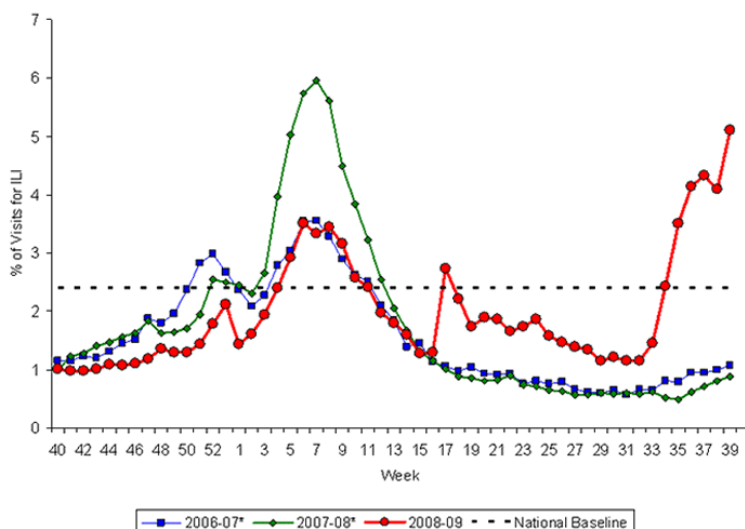
U.S. Influenza and Pneumonia-Associated Hospitalizations and Deaths from August 30 – October 20, 2009	Hospitalizations	Deaths
Influenza and Pneumonia Syndrome	25,985	2,916
Influenza Laboratory Test Confirmed	12,466	530

This data was posted on 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 year.

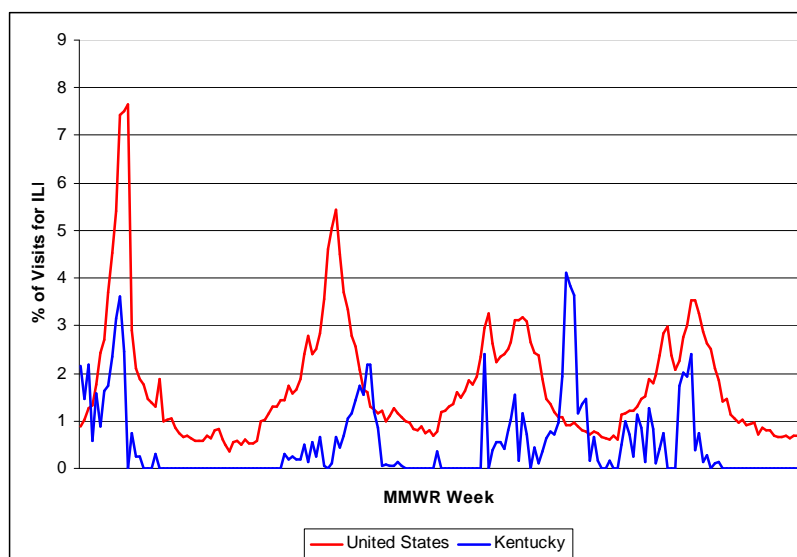
Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), National Summary 2008-2009 and Previous Two Seasons (Posted October 9, 2009, 4:00 PM ET, for Week Ending October 3, 2009)



*There was no week 53 during the 2006-07 and 2007-08 seasons, therefore the week 53 data point for those seasons is an average of weeks 52 and 1.

Kentucky health care providers report to an outpatient Influenza-like Illness (ILI) surveillance system. This chart summarizes weekly reports of ILI encounters by age category and the total number of patients. This data reflects the trend in the U.S. percentage of outpatient encounters designated as having ILI. This chart shows data from 2003 to 2009.

Percentage of Visits for ILI Reported by U.S. Outpatient ILI and Kentucky Outpatient ILI Network from 2003 (MMWR week 40) to 2007 (MMWR week 32)



Fast Fact: The influenza virus appears to be contagious beginning one day before symptoms emerge and lasting at least seven days after symptoms appear. It is most contagious during the first five days.

Surveillance of Virus Subtypes

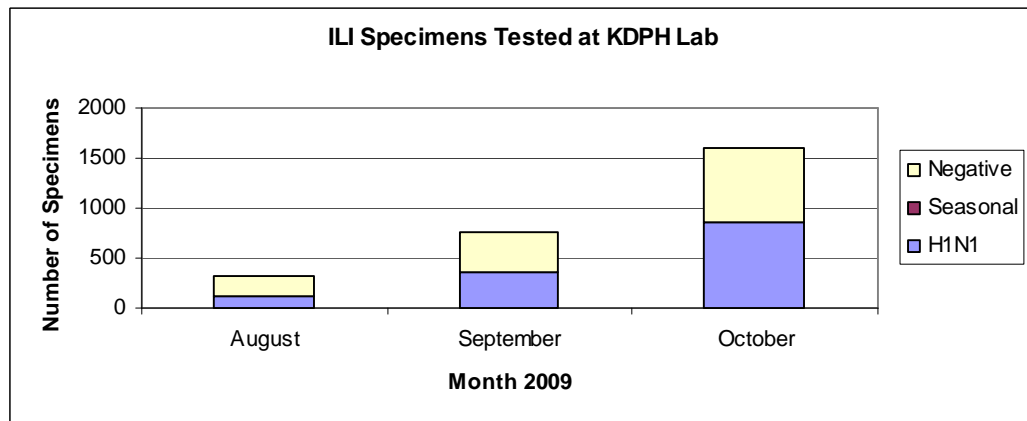
KDPH works in partnership with clinicians, local health departments, and the federal Centers for Disease Control and Prevention to conduct surveillance for influenza-like illness.

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 2,745 specimens were submitted by providers to the state lab for testing between August 1, 2009 and November 3, 2009. Of those that tested positive for influenza, 99.6% 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*
Specimens Tested	327	769	1594	55
Specimens positive for Flu	116	358	857	17
H1N1	114	358	855	17
Seasonal Flu subtype	2	0	2	0
*partial month, through 11/03/2009				



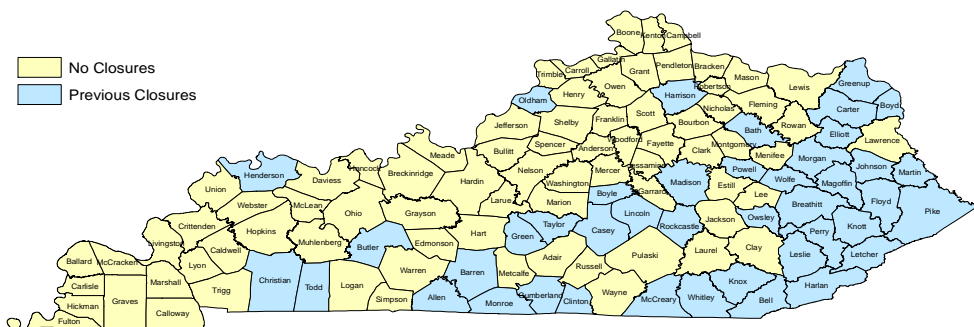
Fast Fact: The KDPH lab uses polymerase chain reaction to detect other viruses and antiviral resistance testing. Polymerase chain reaction (PCR) is a technique to amplify a single or few copies of a piece of DNA across several orders of magnitude, generating thousands to millions of copies of a particular 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.

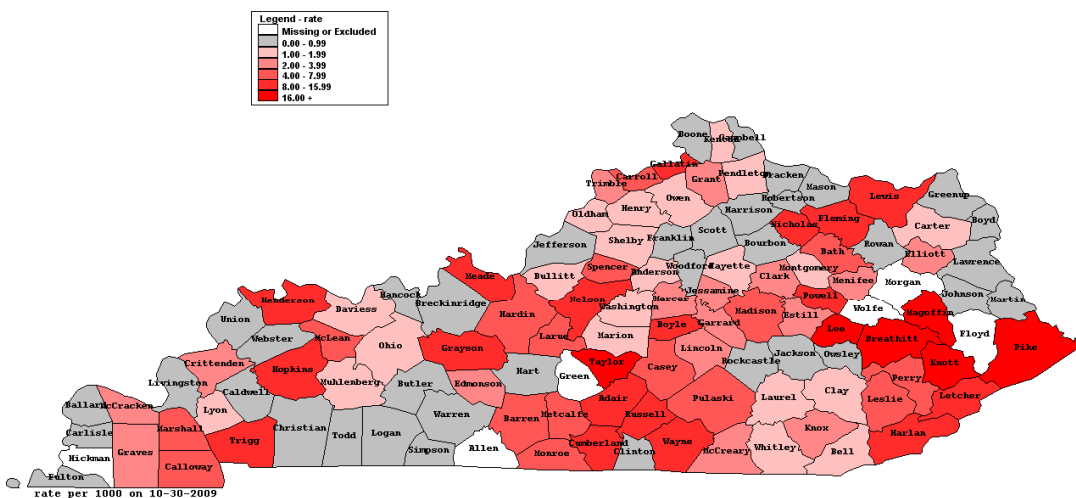
Public school closures due to influenza like illness by county, August 1 – November 4, 2009



Fast Fact: Influenza surveillance by health departments provides information about the presence of the virus in the community and identifies the predominant circulating strains.

Average School Absence Attributed to ILI—Rates of Absence Per 1,000 Students In Kentucky Schools For Week of 10/30/2009

Absences Attributed to ILI in Public Schools

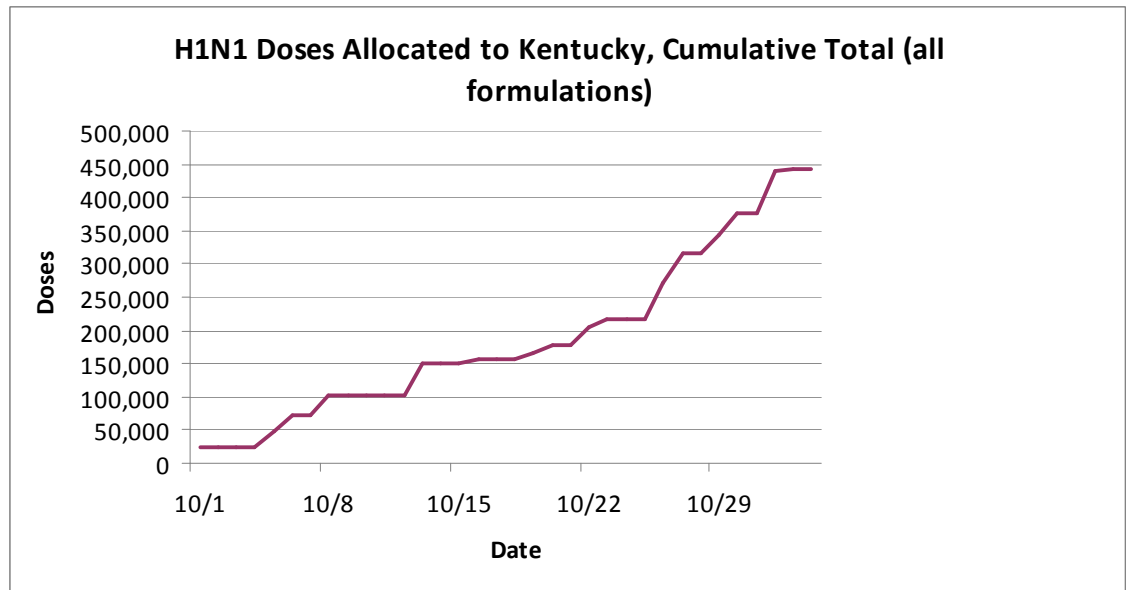


Virus typing surveillance assesses the epidemiological features of the disease and clinical impact of new variants.

Surveillance is critical in preventing epidemics.

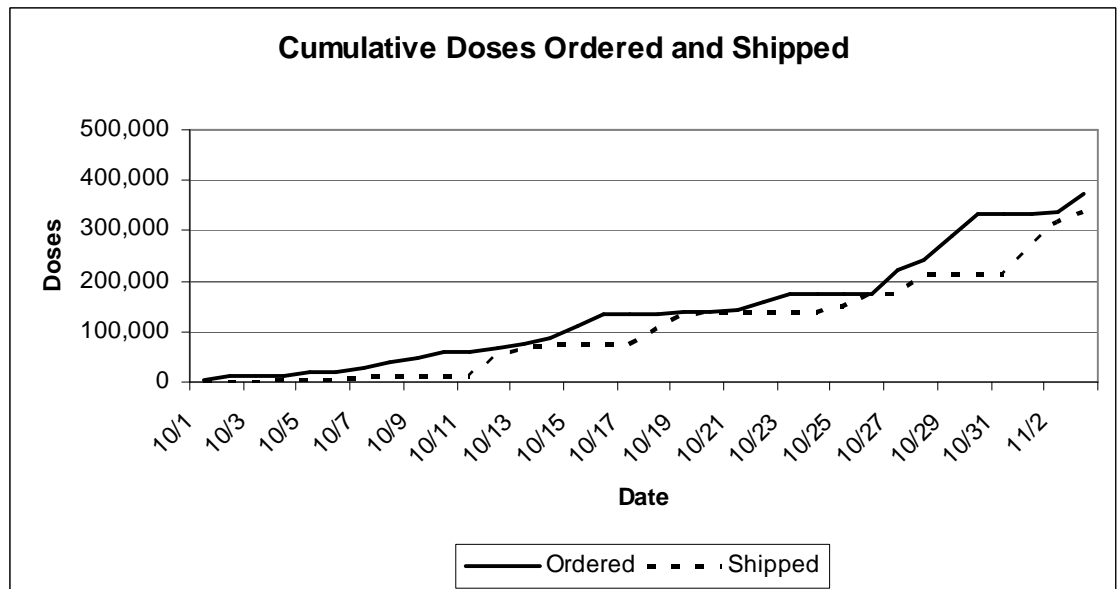
Vaccine Allocation

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.

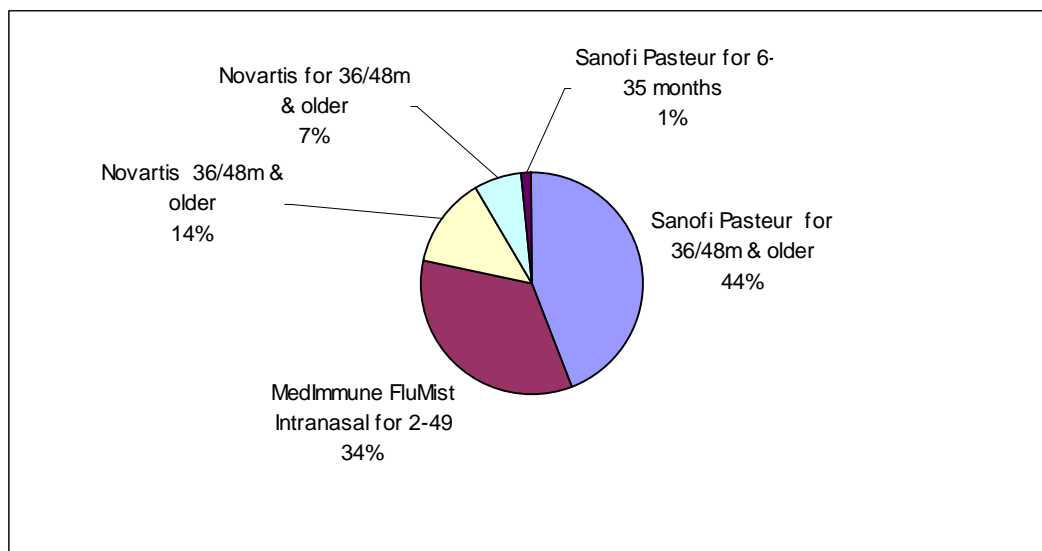


Fast Fact:
The incubation period, or time from exposure to developing symptoms, for influenza is one to four days, with an average of two days.

Doses Ordered and Shipped



Doses Shipped by Type



Type of Vaccine	Ordered	Shipped
Sanofi Pasteur for 36/48 month and older	160,100	148,700
MedImmune intranasal for 2-49 years	117,500	114,700
Novartis for 36/48 months and older (preservative free)	40,500	45,700
Novartis for 36/48 months & older	40,600	22,800
Sanofi Pasteur for 6-35 months (preservative free)	11,400	4,900

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 11/03/2009, there are 1,267 provider agreements, 1,238 provider enrollments, and 236 direct ship sites across Kentucky.

Fast Fact:
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.

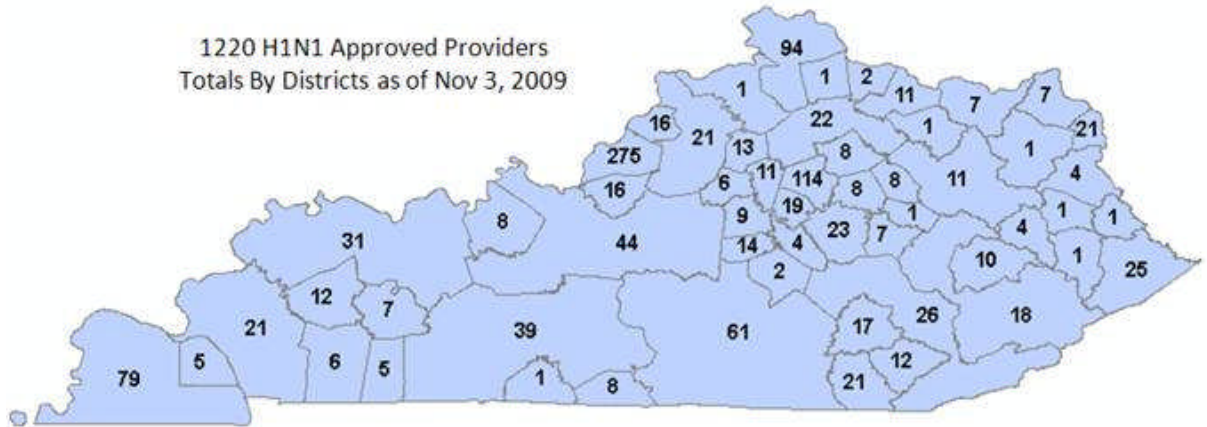
Surveillance of Pregnant Women Hospitalized with H1N1

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.

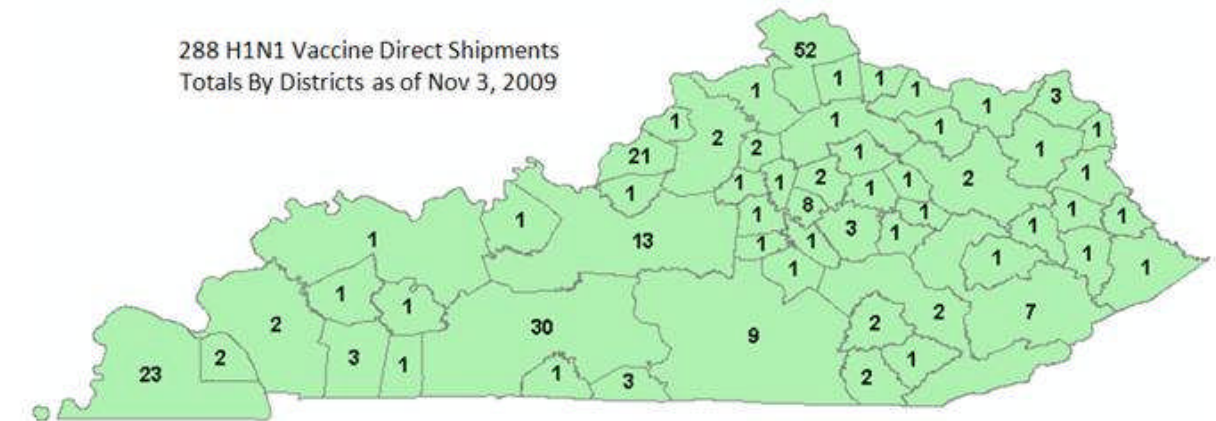
Clinicians are encouraged to report any pregnant woman or a women up to six weeks postpartum who is hospitalized with influenza in Kentucky by calling our H1N1 Call Center at 877-826-7697. For additional support or questions about clinical treatment or CDC guidance and recommendations, clinicians can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

Vaccine Distribution By Health District

Number of providers by health district approved to administer H1N1 vaccinations.



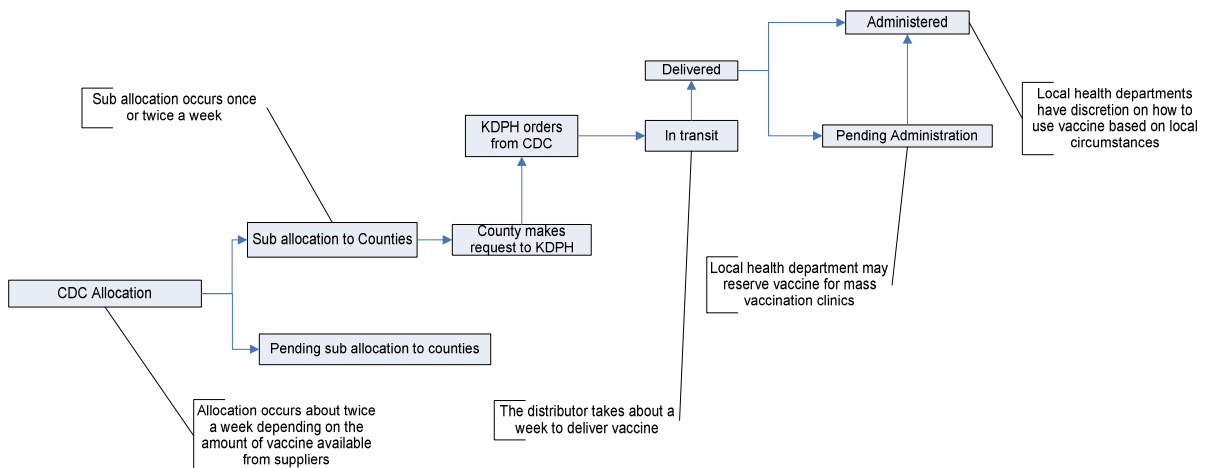
Number of sites enrolled to receive direct shipments of vaccine from distributor*.



*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.

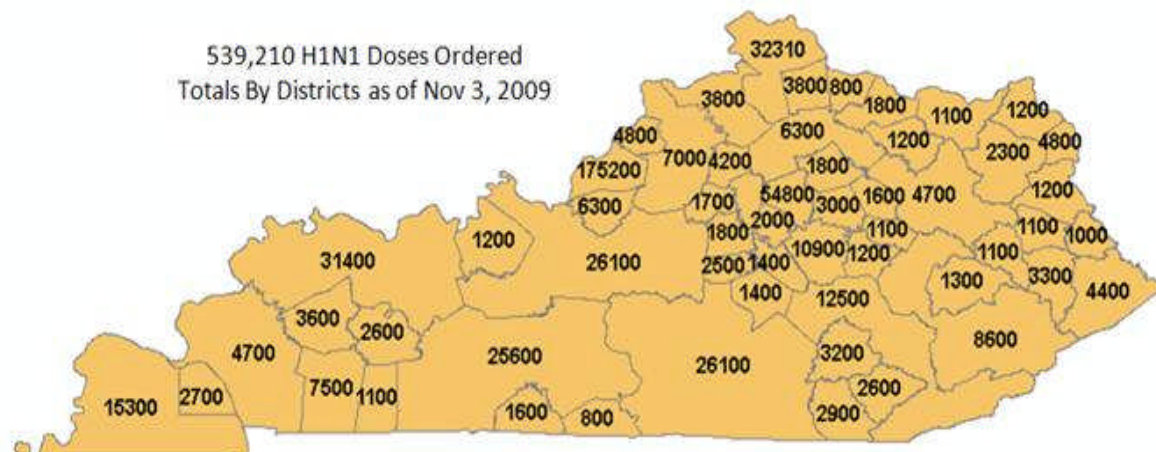
Vaccine Distribution Process (simplified)

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.

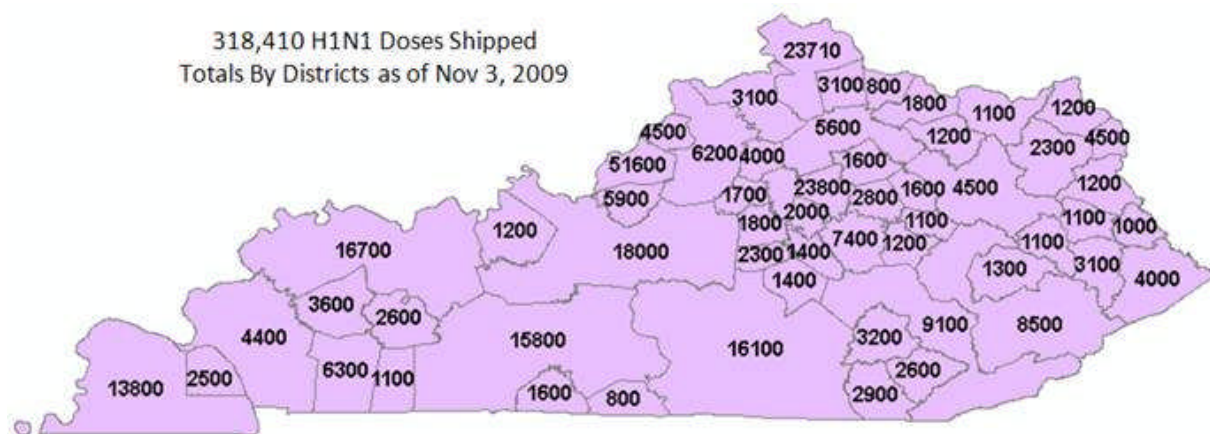


Vaccine Distribution by Health District

Number of doses ordered by each health district.



Number of doses shipped by vaccine distributor to each health district.



Fast Fact: Each year 30,000 to 50,000 adults die because of 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.

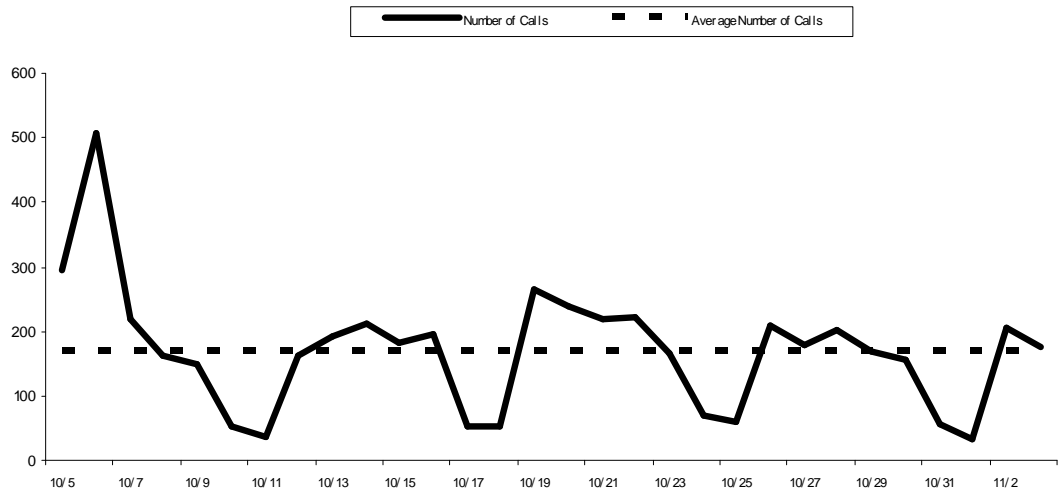
The Kentucky Pharmacists Association has developed partnerships with over 160 community pharmacies (chain and independent pharmacies, federally qualified health centers, and hospitals) and over 30,000 courses have been distributed out into the community through these partnerships. Each county has at 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

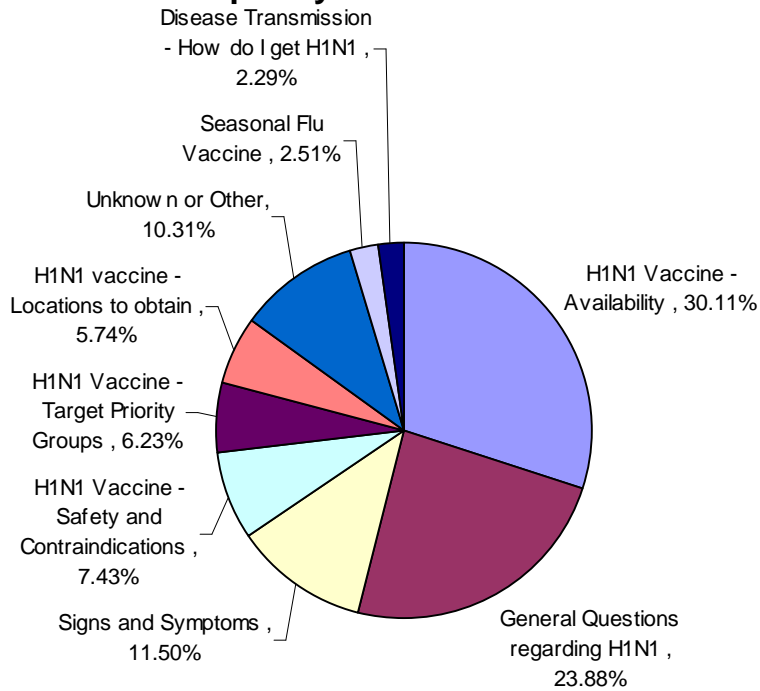
On October 5, 2009 KDPH established a telephone hotline to answer questions from the public. The hotline averages about 160 calls a day. As of 11/03/2009, it has received 5,104 calls. The most common questions are noted in the chart below. The flu hotline is staffed by nurses and administered by Kosair Children's Hospital, a part of Norton Healthcare. The flu hotline will be active through at least the end of December.

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

Information on LAIV (FluMist®) Vaccine

One form of vaccines against H1N1 is LAIV produced by the MedImmune LLC under the name FluMist®. LAIV is approved for use in healthy* people 2-49 years of age who are not pregnant.

Unlike the flu shot, the nasal spray flu vaccine does contain live viruses. However, the viruses are attenuated (weakened) and **cannot cause flu illness**. The vaccine is administered through a spray in each nostril. This vaccine is designed not to cause the flu but to spur your body to develop antibodies to H1N1. The weakened viruses are cold-adapted, which means they are designed to only cause infection at the cooler temperatures found within the nose. The viruses cannot infect the lungs or other areas where warmer temperatures exist. Some children and young adults 2-17 years of age have reported experiencing mild reactions after receiving nasal spray flu vaccine, including runny nose, nasal congestion or cough, chills, tiredness/weakness, sore throat and headache. Some adults 18-49 years of age have reported runny nose or nasal congestion, cough, chills, tiredness/weakness, sore throat and headache. These side effects are mild and short-lasting, especially when compared to symptoms of influenza infection.

LAIV (FluMist®) does not contain thimerosal or any other preservative.

For more information on LAIV vaccines visit the web sites:
WWW.CDC.gov/FLU/protect/keyfacts.htm
WWW.Flumist.com

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. If your practice is interested in participating in this important work as a CDC approved influenza sentinel surveillance site, please contact Emily Adkins, RN by phone at (502) 564-4478 ex. 3516 or by email at Emily.Adkins@ky.gov.

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