

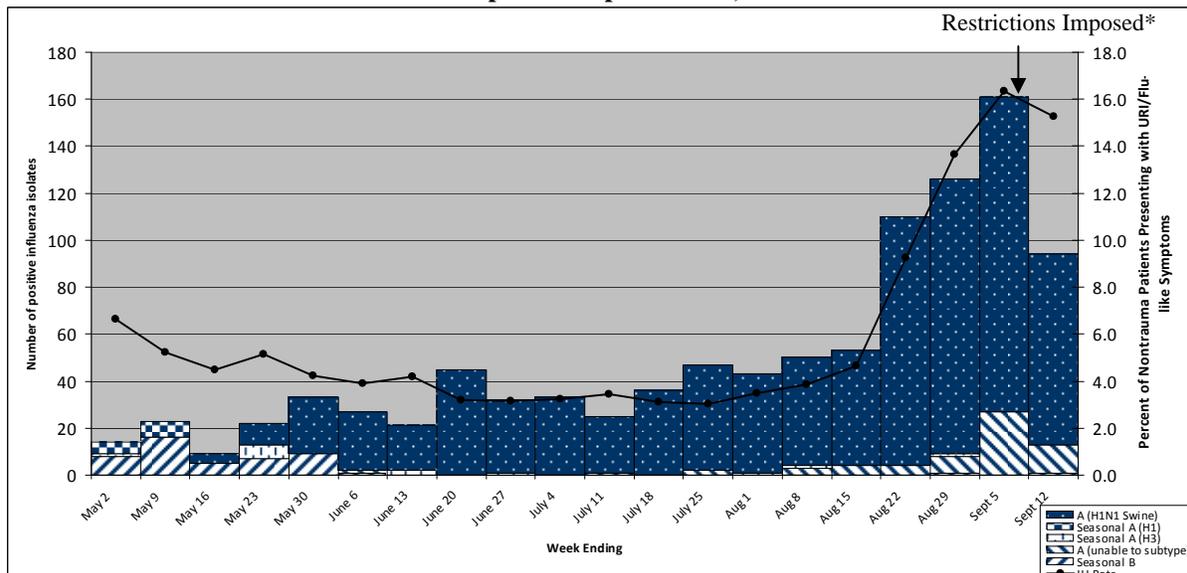


# Mississippi Morbidity Report

## Novel H1N1 Influenza, the Early Season

Novel H1N1 influenza was first confirmed in Mississippi at the end of May, 2009. Since that time, isolates of seasonal influenza have decreased and novel H1N1 has become the predominant strain present in the state. The Mississippi State Department of Health (MSDH) Public Health Laboratory receives and tests specimens for influenza from patients seen by the Influenza-Like Illness (ILI) Sentinel Providers (70 physicians offices and emergency departments across the state) – the same system used during the usual influenza season to monitor the presence of flu in Mississippi. Since the first week of June, 2009, 92% of surveillance specimens that have been PCR positive for influenza have been novel H1N1 (Figure 1). Providers are justified in treating influenza-like illness as such. It is not necessary or even desirable for every person with flu-like illness to be tested for novel H1N1 influenza. The test takes days for results to come back to the care provider, and treatment decisions are best made based on the clinical signs and symptoms of the patient.

**Figure 1 Comparison of Statewide ILI Rate to Positive Influenza Isolates by Type and Subtype, Mississippi, April 27- September 12, 2009**



\*Restrictions imposed on the number of laboratory specimens accepted by the Public Health Laboratory

Among the patients testing positive for novel H1N1 influenza, 67% have been in those 5 to 24 years of age, and only 1% in those 65 or older (Figure 2), which is dramatically different from the age distribution of seasonal influenza. Mississippi sentinel providers also inform MSDH regarding proportion of non-trauma patients seen in their offices each week with influenza-like illness. During the summer and early fall in Mississippi, the usual percent of patients with flu-like illness is three to four percent. During the first two weeks of September, 2009, that proportion rose to 16.3% then 15.3%, indicating a marked increase in the spread of influenza.

**Figure 2**

**Percent of Positive Novel H1N1 Influenza Tests by Age Group**

Age Group	Total	% Positive
0-4	126	14%
5-24	589	67%
25-49	126	14%
50-64	43	4%
65+	11	1%
<b>Total</b>	<b>895</b>	<b>100%</b>

\*Age is missing for three positives.

National data show that this virus is still sensitive to antivirals, although occasional cases of resistance to oseltamivir have been documented. Antiviral treatment should be considered for those patients who are hospitalized with confirmed, probable or suspected novel H1N1 influenza and for persons with flu-like symptoms who are at high risk for complications from the flu, including pregnant women, children younger than 2 years, chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, hematological (including sickle cell disease), neurologic, neuromuscular, or metabolic disorders (including diabetes mellitus), or with immunosuppression, and persons over the age of 65, and those up to age 19 who are on long term aspirin therapy. (More information is available at <http://www.cdc.gov/h1n1flu/recommendations.htm>).

**Prevention:** Prevention continues to include those common sense measures such as thorough and frequent handwashing, cough etiquette (cough in a tissue, throw the tissue away and wash hands), routine cleaning of areas frequently touched by the ill person, and having persons stay home if they are sick. Patients ill with influenza symptoms in health care clinics and offices should be immediately put in patient rooms with the door shut, to prevent further spread in the clinic. Health care providers should follow recommended infection control recommendations (largely standard and contact precautions) as well as maintaining strict adherence to hand hygiene. Specific recommendations from CDC may be found at [http://www.cdc.gov/h1n1flu/guidelines\\_infection\\_control.htm](http://www.cdc.gov/h1n1flu/guidelines_infection_control.htm). CDC and WHO recommendations disagree on the respiratory precautions necessary. CDC continues to recommend fit-tested disposable N95 respirators or better for any health care provider entering patient rooms, as some transmission might be air-borne. WHO recommends use of ordinary procedure masks when entering patient rooms, as transmission is largely through respiratory secretions, with increased precautions for procedures likely to generate aerosols (e.g., bronchoscopy, elective intubation, suctioning, or administering nebulized medications).

**Vaccine:** Vaccine should be available by mid-October through the MSDH immunization program. Vaccine is recommended by the Advisory Committee for Immunization Practices for:

- pregnant women,
- persons who live with or provide care for infants aged <6 months (e.g., parents, siblings, and daycare providers),
- health-care and emergency medical services personnel,
- persons aged 6 months--24 years, and
- persons aged 25--64 years who have medical conditions that put them at higher risk for influenza-related complications.

To obtain and administer this vaccine, providers must complete a provider agreement which is available at [www.healthyMS.com](http://www.healthyMS.com), and may be printed, completed and faxed to the MSDH Immunization program at 601 576-7468. Providers also must complete and submit the Mississippi Immunization Information eXchange (MIIX) Registry user agreement, found at the same web address.

The vaccine itself will be free, however, health care providers may charge/bill an administrative fee at the same rate established for administration of seasonal influenza virus vaccine. Please see our website at [www.HealthyMS.com](http://www.HealthyMS.com), for more information.

**The Future\*:** Predicting future occurrences with regard to influenza viruses is difficult at best. Influenza A viruses mutate frequently and can reassort with other strains of human and animal influenza A viruses. Nevertheless, some insight can be gained by looking at the history of prior pandemics. Most influenza pandemics occur in waves of several months each, separated by a period of decreased activity. The waves of influenza sometimes vary in both duration and severity of illness.

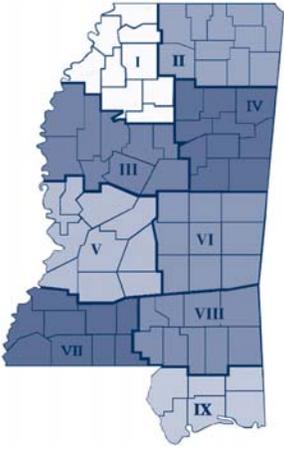
There have been three pandemics during the twentieth century. The infamous 1918-1919 Spanish Flu (H1N1), the 1957-58 Asian Flu (H2N2), and the 1968-69 Hong Kong Flu (H3N2).

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# Mississippi

## Provisional Reportable Disease Statistics

August 2009



		Public Health District									State Totals*			
		I	II	III	IV	V	VI	VII	VIII	IX	Aug 2009	Aug 2008	YTD 2009	YTD 2008
Sexually Transmitted Diseases	Primary & Secondary Syphilis	3	0	4	0	7	3	2	4	6	29	14	150	103
	Total Early Syphilis	5	0	5	1	20	4	3	16	8	62	37	358	238
	Gonorrhea	57	45	90	37	193	59	31	62	48	622	700	4,981	4,882
	Chlamydia	194	146	266	157	525	204	117	167	172	1,948	2,064	15,969	13,391
	HIV Disease	7	2	5	1	20	6	2	2	8	53	47	418	372
Mycobacterial Diseases	Pulmonary Tuberculosis (TB)	0	0	2	3	4	0	0	0	3	12	2	64	52
	Extrapulmonary TB	0	0	0	0	1	1	0	1	0	3	1	13	12
	Mycobacteria Other Than TB	1	1	0	1	8	4	0	2	1	18	32	205	195
Vaccine Preventable Diseases	Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pertussis	1	1	0	0	0	1	0	0	0	3	9	48	78
	Tetanus	0	0	0	0	0	0	0	0	0	0	0	1	0
	Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0	0
	Measles	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mumps	0	0	0	0	0	0	0	0	0	0	0	1	0
	Hepatitis B (acute)	0	0	0	0	0	0	0	0	1	1	8	27	32
	Invasive <i>H. influenzae</i> b disease	0	0	0	0	0	0	0	0	0	0	0	0	2
	Invasive Meningococcal disease	0	0	0	0	0	0	0	0	0	0	0	3	9
Enteric Diseases	Hepatitis A (acute)	0	0	0	0	0	0	0	0	0	0	0	7	4
	Salmonellosis	9	24	5	15	44	14	11	16	14	152	204	587	710
	Shigellosis	1	5	0	0	0	0	0	0	0	6	16	31	266
	Campylobacteriosis	2	2	4	0	0	2	0	2	3	15	15	90	89
	<i>E. coli</i> O157:H7/HUS	0	0	0	0	0	0	0	0	0	0	0	6	4
Zoonotic Diseases	Animal Rabies (bats)	0	0	0	0	0	0	0	0	0	0	0	0	2
	Lyme disease	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rocky Mountain spotted fever	0	0	0	0	0	0	0	0	0	0	2	7	9
	West Nile virus	0	3	1	2	6	1	0	4	3	20	31	36	57

\*Totals include reports from Department of Corrections and those not reported from a specific District.



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The 1968-69 Hong Kong Flu was the mildest of the three. In the United States it occurred in one long wave from September 1968 through March of 1969. It peaked in December and January.

The 1957-58 Asian Flu was a little more severe, causing about twice as many deaths as the Hong Kong Flu. In the United States it occurred in two waves. One from September through November of 1957 and the other in January and February 1958. In the first wave of this pandemic, infection rates were highest among school children, young adults, and pregnant women; while the second wave of illness occurred mainly among the elderly.

The 1918-1919 Spanish Flu (H1N1) has been said to be “the catastrophe against which all modern pandemics are measured.” Between September 1918 and April 1919, approximately 675,000 deaths from the flu occurred in the United States alone. In the United States, there was a mild first wave in the spring of 1918, followed by a summer of relative inactivity. The second wave from approximately September through November 1918 was very severe. A third wave occurred from January through March 1919. The highest mortality rates occurred in pregnant women, otherwise healthy adults 20 to 40 years of age, and in the elderly.

This information provides a view of the many possibilities for the future evolution of our current pandemic. Thus far, we have had a mild wave of disease in the spring and we have entered a larger wave this fall. Up to this time, we have not seen any evidence of any increase in disease severity of the 2009 novel H1N1 (swine) influenza virus during our current “second wave.” What the future holds can not be predicted, but we must be mindful that there is some possibility that the current wave will taper off later this fall and a third wave develop early next year. Whether the disease will continue to hold its current pattern, or change in severity as in 1918, or change the groups most affected as in 1958, remains to be seen.