Mississippi State Department of Health

Mississippi Morbidity Report

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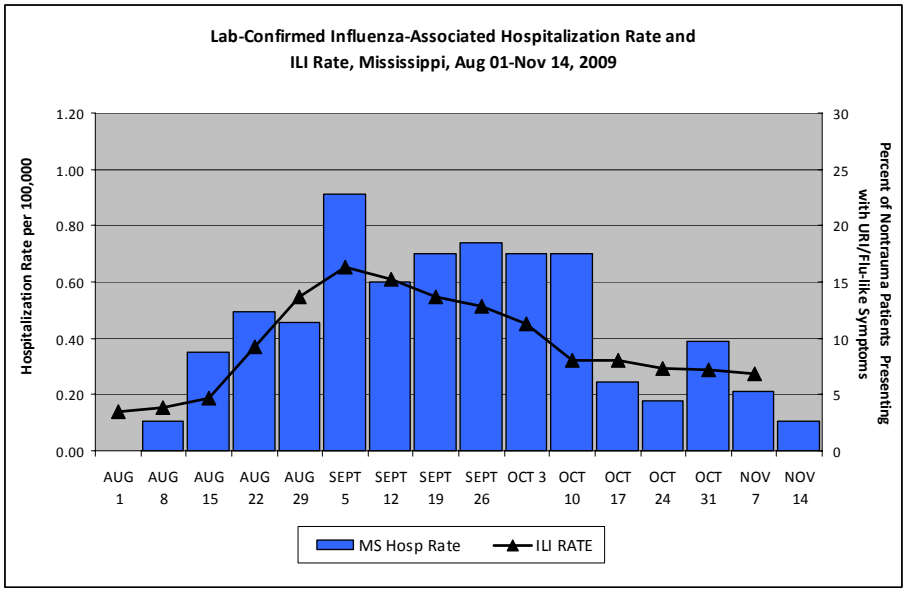
2009 H1N1 Influenza Update

As we enter November, Mississippi continues to see cases of 2009 H1N1 influenza. As the graph depicts, both the number of people hospitalized with influenza and the percentage of non-trauma clinic patients presenting with influenza-like-illness (ILI) seen by our sentinel sites has been decreasing in recent weeks. While this second wave of the pandemic occurred earlier in Mississippi and other southeastern states than in the rest of the country, national data are now also beginning to show some decrease in influenza.



We must be mindful, however, that influenza pandemics often occur in multiple waves and that in Mississippi we have not yet entered our traditional influenza season which usually does not begin in earnest until late December or January and peaks in February or March. While forecasting influenza is always tricky, we must remember that both the 1918 and 1957 pandemics had a wave in the fall followed by another wave in January and the 1968 pandemic persisted from September through March. In light of this historical data, **we need to be prepared for either another wave of the 2009 H1N1 or for a return of seasonal influenza in December or January.** Accordingly, since immunization is the best protection from influenza, we need to continue to administer both 2009 H1N1 vaccine (Box 1.) and seasonal influenza vaccine in preparation for the return of influenza.

The Mississippi State Department of Health (MSDH) has utilized a number of strategies to target the recommended priority groups for 2009 H1N1 vaccination. Vaccine has been made available to primary care providers, rural and community health centers, student health centers and hospitals that have access to populations in the priority groups. MSDH has also worked closely with school districts to provide school based vaccine clinics through an "Adopt-a-School" program, in which schools are adopted by either private healthcare providers or the local health department. 2009 H1N1 vaccine is also available at all county health departments, with preference given to those individuals in the priority groups. It is anticipated that once the priority groups have been vaccinated, the vaccine will be available to the general population.

Box 1. 2009 H1N1 Vaccination Recommendations: (The full document is available at http://www.cdc.gov/h1n1flu/vaccination/acip.htm)

The groups recommended to receive the novel H1N1 influenza vaccine include (in order of priority):

- **Pregnant and post-partum women;**
- **Household contacts and caregivers for children younger than 6 months of age**;
- **Healthcare and emergency medical services personnel**;
- **Children 6 months through 4 years of age;**
- **Children 5 through 18 years of age who have chronic medical conditions;**
- **All other children 5 through 18 years of age**
- **Young adults 19 through 24 years of;**
- **Persons aged 25 through 64 years who have health conditions associated with higher risk of medical complications from influenza.**

Once the demand for vaccine for the prioritized groups has been met at the local level, programs and providers should also begin vaccinating everyone from the ages of 25 through 64 years. Current studies indicate that the risk for infection among persons age 65 or older is less than the risk for younger age groups. However, once vaccine demand among younger age groups has been met, programs and providers should offer vaccination to people 65 or older.

Data from both the current 2009 H1N1 pandemic and from seasonal influenza in prior years indicate that many influenza-related deaths are due to secondary bacterial pneumonia, most often from *S. pneumoniae* (pneumococcus). Therefore, it is important to immunize those most likely to die of pneumococcal infection with pneumococcal polysaccharide vaccine (PPSV) as outlined in Box 2. below:

Box 2. Summary of Pneumococcal Vaccination Recommendations to Help Prevent Secondary Infections

Summary of Recommendations: CDC's Advisory Committee on Immunization Practices (ACIP) recommends a single dose of pneumococcal polysaccharide vaccine (PPSV) for all people 65 years of age and older and for persons 2 through 64 years of age with certain high-risk conditions. Among those with high-risk conditions for pneumococcal disease, most are also at high risk for severe complications from influenza. ***Special emphasis should be placed on vaccinating adults under 65 years of age who have established high-risk conditions for pneumococcal disease; PPSV coverage among this group is low and this group may be more likely to develop secondary bacterial pneumonia after an influenza infection.*** All children younger than 5 years of age should continue to receive pneumococcal conjugate vaccine (PCV7) according to existing recommendations.

For those 19 through 64 years of age, high-risk conditions include: having asthma or smoking cigarettes. For those 2 through 64 years of age, high-risk conditions include: chronic cardiovascular disease (congestive heart failure and cardiomyopathies), chronic pulmonary disease (including chronic obstructive pulmonary disease and emphysema), diabetes mellitus, alcoholism, chronic liver disease (including cirrhosis), cerebrospinal fluid leaks, cochlear implant, functional or anatomic asplenia including sickle cell disease and splenectomy, immunocompromising conditions including HIV infection, leukemia, lymphoma, Hodgkin's disease, multiple myeloma, generalized malignancy, chronic renal failure, nephrotic syndrome; those receiving immunosuppressive chemotherapy (including corticosteroids); and those who have received an organ or bone marrow transplant, and residents of nursing homes or long-term care facilities.

A single pneumococcal revaccination also is recommended for people at highest risk of disease, such as those who have functional and anatomical asplenia, and those who have HIV infection, AIDS or malignancy and have at least five years elapsed from receipt of first vaccination.

According to existing guidelines, the use of a commercially available urine antigen test (Binax NOW®) is recommended for the diagnosis of pneumococcal pneumonia in adults. Such testing, along with blood cultures and testing for influenza infection, can assist clinicians in determining whether secondary pneumococcal pneumonia is occurring.

For More Information:

- For Clinicians: Prevention Of Pneumococcal Infections Secondary To Seasonal And 2009 H1N1 Influenza Viruses Infection (http://www.cdc.gov/h1n1flu/vaccination/provider/provider_pneumococcal.htm)
- Pneumococcal Vaccine Website (http://www.cdc.gov/vaccines/vpd-vac/pneumo/default.htm)
- Interim guidance for use of 23-valent pneumococcal polysaccharide vaccine during novel influenza A (H1N1) outbreak (http://www.cdc.gov/h1n1flu/guidance/ppsv_h1n1.htm)

MSDH has entered into agreements with selected pharmacies to help distribute antivirals (oseltamivir and zanamivir) from state and federal stockpiles to individual patients who are uninsured or underinsured. Eligible patients must bring a prescription and a copy of the therapeutic indications form signed by their physician to a participating pharmacy. The therapeutic indications forms and a list of participating pharmacies are available on the MSDH website at http://msdh.ms.gov/msdhsite/_static/14,0,334,462.html.
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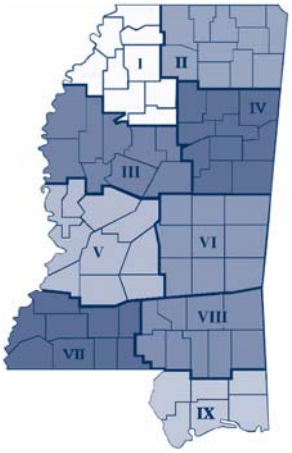

Mississippi
Provisional Reportable Disease Statistics
October 2009

		Public Health District									State Totals*			
		I	II	III	IV	V	VI	VII	VIII	IX	Oct 2009	Oct 2008	YTD 2009	YTD 2008
Sexually Transmitted Diseases	**Primary & Secondary Syphilis**	0	0	1	0	6	2	0	5	5	19	26	185	146
	Total Early Syphilis	4	0	2	0	20	2	1	14	9	52	48	450	322
	Gonorrhea	44	38	68	43	156	55	30	57	55	546	798	6,218	6,211
	Chlamydia	209	158	255	187	464	14	102	174	153	1,848	2,356	19,958	17,317
	HIV Disease	2	2	10	0	13	1	1	6	5	40	72	489	490
Myco-bacterial Diseases	**Pulmonary Tuberculosis (TB)**	1	2	0	0	6	1	0	2	2	14	16	84	74
	Extrapulmonary TB	0	0	0	0	0	1	0	0	0	1	1	18	13
	Mycobacteria Other Than TB	0	1	0	0	5	2	2	2	1	13	26	239	249
Vaccine Preventable Diseases	**Diphtheria**	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pertussis	0	0	0	0	0	0	0	0	0	0	12	55	95
	Tetanus	0	0	0	0	0	0	0	0	0	0	0	0	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	1	0	0	2	1	0	1	1	6	7	27	49
	Invasive *H. influenzae* 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	2	3	11
Enteric Diseases	**Hepatitis A (acute)**	0	0	0	0	0	0	0	0	0	0	0	10	4
	Salmonellosis	3	18	5	9	24	8	7	11	7	92	56	813	964
	Shigellosis	1	3	0	0	0	0	0	0	0	4	6	43	284
	Campylobacteriosis	0	0	0	0	0	0	0	0	0	0	4	91	101
	***E. coli* 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	2	4	7
	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	0	6	11
	West Nile virus	0	0	0	0	1	0	0	0	1	2	2	51	65

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

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Box 3. Key Issues for Clinicians Concerning Antiviral Treatments for 2009 H1N1

It is critical to remember that it is not too late to treat, even if symptoms began more than 48 hours ago. *Although antiviral treatment is most effective when begun within 48 hours of influenza illness onset, studies have shown that hospitalized patients still benefit when treatment with oseltamivir is started more than 48 hours after illness onset.* ***Outpatients, particularly those with risk factors for severe illness who are not improving, might also benefit from treatment initiated more than 48 hours after illness onset.***

Many 2009 H1N1 patients can benefit from antiviral treatment **and all hospitalized patients with suspected or confirmed 2009 H1N1 should receive antiviral treatment with a neuraminidase inhibitor – either oseltamivir or zanamivir – as early as possible** after illness onset. Moderately ill patients, especially those with risk factors for severe illness, and those who appear to be getting worse, can also benefit from treatment with neuraminidase inhibitors. A full listing of risk factors for severe influenza is available at: http://www.cdc.gov/h1n1flu/highrisk.htm

Although antiviral medications are recommended for treatment of 2009 H1N1 in patients with risk factors for severe disease, **some people without risk factors may also benefit from antivirals**. To date, 40% of children and 20% of adults hospitalized with complications of 2009 H1N1 did not have risk factors. Clinical judgment is always an essential part of treatment decisions.

When treatment of persons with suspected 2009 H1N1 influenza is indicated, it **should be started empirically. If a decision is made to test for influenza, treatment should not be delayed while waiting for laboratory confirmation**. The earlier antiviral treatment is given, the more effective it is for the patient. Also, rapid influenza tests often can give false negative results. If you suspect flu and feel antiviral treatment is warranted, treat even if the results of a rapid test are negative. Obtaining more accurate testing results can take more than one day, so treatment should not be delayed while waiting for these test results.

Although commercially produced pediatric oseltamivir suspension is in short supply, **there are ample supplies of children's oseltamivir capsules, which can be mixed with syrup at home. In addition, pharmacies can compound adult oseltamivir capsules into a suspension for treatment of ill infants and children.**

For More Information

Antiviral Drugs: Summary of Side Effects: http://www.cdc.gov/flu/protect/antiviral/sideeffects.htm

For the FDA page on antiviral influenza drugs: http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm100228.htm