



Mississippi Morbidity Report

Hepatitis C in Mississippi and Hepatitis Awareness Month, May 2014

Approximately 3.2 million Americans are living with chronic hepatitis C virus (HCV) infection, with an estimated 17,000 new cases and 12,000 attributable deaths occurring annually. The majority of those living with HCV are unaware of the infection. Following acute infection, 75-85% will develop a chronic infection that is often asymptomatic. Over time, chronic infection leads to liver disease in 60-70%, and 5-20% of those will develop cirrhosis within 20 – 30 years. One to five percent will die from complications of chronic HCV, primarily from liver cancer or cirrhosis. HCV is a blood borne pathogen transmitted primarily through occupational needle sticks, IV drug use, and blood transfusions prior to 1992. It can also be rarely transmitted through sexual exposures and the sharing of personal items such as toothbrushes and razors. Vertical transmission from mother to child occurs in approximately 4% of chronically infected mothers.

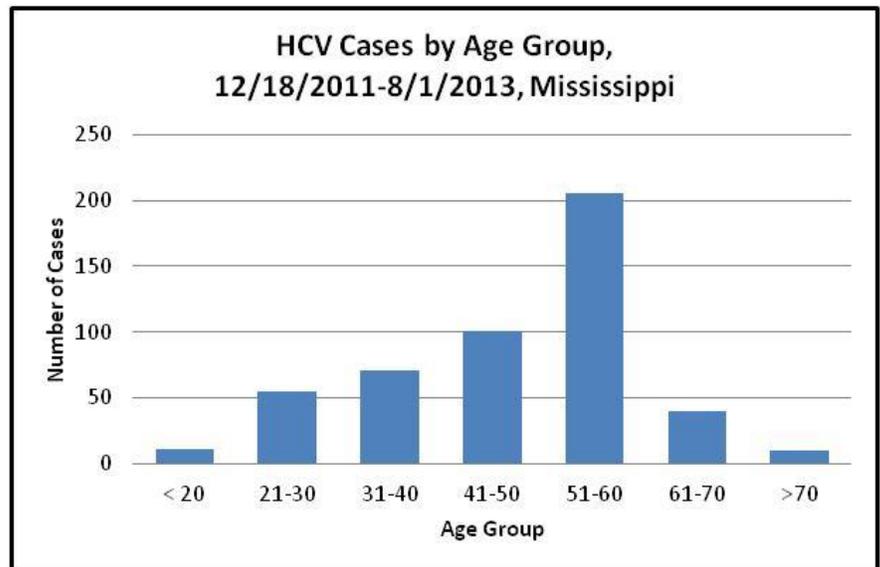
As the majority of those living with HCV were born between 1945 and 1965, CDC currently recommends HCV testing for anyone born in this time frame. Testing is also recommended for anyone with a history of injection drug use, potential healthcare exposure, blood transfusion or organ transplantation prior to 1992, long term hemodialysis, HIV, signs or symptoms of liver disease, or any child born to an HCV positive mother. Hepatitis C antibody testing is the screening method of choice, followed by HCV RNA testing to confirm chronic infection.

Recent advances in Hepatitis C treatment have made the identification of chronically infected patients even more important. Recent FDA approvals (Sofosbuvir and Simeprevir) have brought new drug regimens to market that can lead to cure in 80-95% of patients following 12 to 24 weeks of treatment.

Hepatitis C in Mississippi

Although acute cases of hepatitis C are often asymptomatic and rarely reported in Mississippi, there is limited data available on the burden of chronic Hepatitis C in MS. An analysis of all Hepatitis C notifications made to the MSDH from 12/28/11 to 8/1/13 identified 499 unique reports of HCV. From available data, the majority (60%) were identified as male. Seventy-seven percent were Caucasian, 20% African American, and 3% other (Asian, Native American or Pacific Islander). The highest number of cases were identified in those 51 through 60 years of age (Figure 1), consistent with national data and reinforcing the need to screen individuals in the age cohort born between 1945 and 1965.

Figure 1



May is Hepatitis Awareness Month / Free Testing at County Health Departments

May is Hepatitis Awareness Month and May 19th, 2014 Hepatitis Testing Day. As a part of Hepatitis Awareness Month, the Mississippi State Department of Health (MSDH) will be offering free viral hepatitis testing at all county health departments throughout the month of May, testing for active Hepatitis C and

Hepatitis B infection (Hepatitis C antibody and Hepatitis B surface antigen). With the availability of effective treatments for both chronic hepatitis B and C, identifying infected individuals is critical to preventing the long term complications of cirrhosis and liver cancer. MSDH recommends that all Mississippi primary providers test for Hepatitis C in accordance with CDC guidance (<http://www.cdc.gov/hepatitis/C/cFAQ.htm>).

Submitted by: Tyese Pritchett, MPH and Thomas Dobbs, MD, MPH

Outbreak of Human Metapneumovirus in a Nursing Home, Mississippi March, 2014

Introduction: In March 2014 an outbreak of respiratory illnesses was reported in a number of nursing home residents at a facility in Public Health District VI (Meridian area). The initial report indicated that the ill individuals were negative for influenza by rapid influenza diagnostic tests. An investigation was conducted by the Mississippi State Department of Health (MSDH) to determine the extent and etiology of the outbreak and to make recommendations for the prevention of further illness. Human metapneumovirus (hMPV), a virus that has been previously associated with outbreaks of respiratory illness in institutional settings, was identified as the cause of the respiratory illnesses. This outbreak, the first confirmed due to hMPV in Mississippi, emphasizes the need to consider etiologies other than influenza when evaluating febrile respiratory illnesses in institutional settings. What follows is a description of the outbreak.

Background: Human metapneumovirus was first identified as a cause of respiratory illnesses in 2001 and is estimated to be responsible for up to 15% of hospitalizations for lower respiratory tract infections in children each year. Peak activity for hMPV is late winter and early spring. Clinical presentation is similar to influenza, and can range from asymptomatic to severe disease (including death). The incubation period for hMPV is 5-6 days and transmission likely occurs from direct or indirect contact with respiratory secretions. Infection control recommendations are similar to the standard recommendations for influenza contained in the Centers for Disease Control and Prevention (CDC) long-term care facility influenza control guidelines (<http://www.cdc.gov/flu/professionals/infectioncontrol/ltc-facility-guidance.htm>).

Though seroprevalence of hMPV specific antibody is almost 100% among adults, symptomatic re-infections can occur in immunocompromised individuals or older adults, the typical population in long-term care facilities and nursing homes. Risk factors for severe disease include advanced age and underlying co-morbidities such as cardiopulmonary disease or diabetes. In two hMPV outbreaks reported in a CDC MMWR in November 2013 (http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6246a1.htm?s_cid=mm6246a1_w) there was a high rate of lower respiratory tract illness with 35-75% of cases diagnosed with pneumonia and a case fatality rate of 11%.

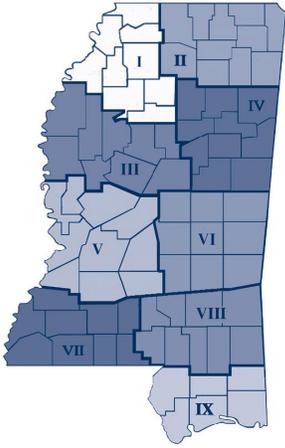
Outbreak: On March 9, 2014 the nursing home, located in East Central Mississippi, notified MSDH that several residents were ill with an influenza-like illness. Rapid influenza testing of a number of the ill residents had been performed by the facility and was reported as negative. Nasopharyngeal swabs were collected on four of the ill residents for RT-PCR testing for influenza A and B and for other respiratory viral pathogens (human metapneumovirus, adenovirus, respiratory syncytial virus, and human parainfluenza viruses type 1-3). The tests were performed at the Mississippi Public Health Laboratory (MPHL). All four specimens were negative for influenza; however two were positive for hMPV.

The nursing home has a total of 120 residents and 135 staff. Cases were defined as any resident or staff with a new onset of respiratory illness (cough or sore throat) and a documented fever $\geq 100^{\circ}$ F. Cases were identified among 11 residents and were distributed throughout the five wings at the facility. No staff members met the case definition. Onsets of illness ranged from March 4 to March 11 (Figure 2); median duration of illness was 6 days (range 2 to 10 days). The median age of the cases was 87 years; 82% were female. Co-morbidities included dementia (82%), diabetes (64%) and chronic heart disease (27%).

Mississippi

Provisional Reportable Disease Statistics

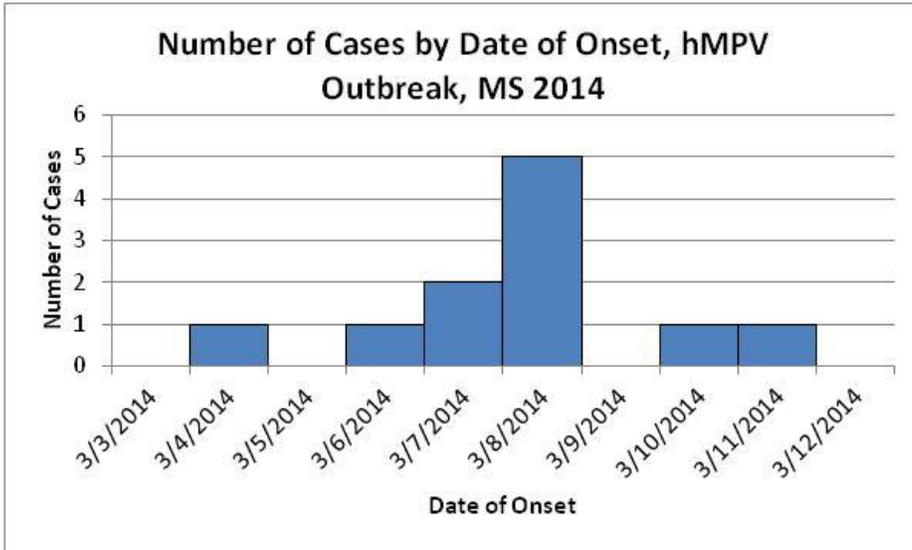
March 2014



		Public Health District									State Totals*			
		I	II	III	IV	V	VI	VII	VIII	IX	Mar 2014	Mar 2013	YTD 2014	YTD 2013
Sexually Transmitted Diseases	Primary & Secondary Syphilis	0	0	0	1	5	0	1	0	2	9	9	20	17
	Early Latent Syphilis	0	0	0	0	3	1	1	1	1	7	16	13	36
	Gonorrhea	33	40	45	26	126	41	17	47	59	434	556	1,124	1,456
	Chlamydia	174	163	182	139	374	157	83	128	172	1572	1,802	4,008	4,778
	HIV Disease	6	1	5	1	21	1	3	3	6	47	40	136	121
Mycobacterial Diseases	Pulmonary Tuberculosis (TB)	1	0	0	0	2	0	0	0	0	3	7	12	18
	Extrapulmonary TB	0	0	0	0	0	0	0	0	0	0	0	2	0
	Mycobacteria Other Than TB	0	4	1	2	12	4	3	7	6	39	25	121	93
Vaccine Preventable Diseases	Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pertussis	0	3	0	0	0	1	1	0	0	5	10	15	20
	Tetanus	0	0	0	0	0	0	0	0	0	0	0	0	0
	Polio	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	0	0
	Hepatitis B (acute)	0	0	0	1	0	0	0	2	1	4	3	8	14
	Invasive <i>H. influenzae</i> disease	0	1	0	0	1	2	0	0	0	4	2	9	9
	Invasive Meningococcal disease	0	0	0	0	0	0	0	0	0	0	0	0	2
Enteric Diseases	Hepatitis A (acute)	0	0	0	0	0	0	0	0	0	0	0	1	1
	Salmonellosis	2	9	1	5	5	4	3	2	3	34	31	89	87
	Shigellosis	1	6	1	4	3	1	3	4	0	24	9	48	37
	Campylobacteriosis	0	2	0	0	2	1	0	0	0	5	8	13	19
	<i>E. coli</i> O157:H7/STEC/HUS	1	0	0	0	0	0	0	0	0	1	2	3	6
Zoonotic Diseases	Animal Rabies (bats)	0	0	0	0	0	0	0	0	0	0	0	0	0
	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	0	0
	West Nile virus	0	0	0	0	0	0	0	0	0	0	1	1	1

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

Figure 2



The most common symptoms were new onset cough (91%), congestion (82%), dyspnea (36%) and sore throat (27%). Radiologically confirmed pneumonia was identified in five (45.5%) of the cases. Two cases required hospitalization and one death occurred. Physician ordered rapid influenza testing was negative in 10 of the cases (four of which were also negative for influenza by RT-PCR testing at MSDH).

Infection control measures implemented included: isolation of the ill patients, droplet and contact

precautions, restricted visitation, educational in-service for hand hygiene and respiratory etiquette, enhanced environmental cleaning, discontinuation of group social and dining activities and a recommendation for the exclusion of ill employees.

Healthcare providers should be aware of the potential of hMPV as a cause of outbreaks of severe respiratory disease, especially in the nursing home population. Immediate reporting of suspected outbreaks to MSDH is encouraged as any suspected outbreak of illness is a Class I Reportable Condition, requiring notification within 24 hours of first knowledge or suspicion (list of Reportable Diseases and Conditions available at: http://msdh.ms.gov/msdhsite/_static/resources/877.pdf).

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