



# Mississippi Morbidity Report

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## Novel Influenza A, H1N1 (Swine Flu)

In Mississippi, four laboratory confirmed cases of novel influenza A, H1N1 (swine flu) have occurred. Three are adults in their 20's and one is an infant. Three of the cases reside in Harrison County and one in Forrest County. All have recovered with no sequelae. The following is excerpted from a CDC MMWR and contains a description of the outbreak in the U.S., Mexico and across the rest of the world.

**Update: Novel Influenza A (H1N1) Virus Infections --- Worldwide, May 6, 2009 (MMWR May 8, 2009. 58(17); 453-458 ([www.cdc.gov/mmwr/preview/mmwrhtml/mm5817a1.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5817a1.htm))**

Since mid-April 2009, CDC, state and local health authorities in the United States, the World Health Organization (WHO), and health ministries in several countries have been responding to an outbreak of influenza caused by a novel influenza A (H1N1) virus ([1](#)). In March and early April 2009, Mexico experienced outbreaks of respiratory illness subsequently confirmed by CDC and Canada to be caused by the novel virus. The influenza strain identified in U.S. patients was genetically similar to viruses isolated from patients in Mexico ([2](#)). Since recognition of the novel influenza A (H1N1) virus in Mexico and the United States, as of May 6, a total of 21 additional countries had reported cases, with a total of 1,882 confirmed cases worldwide. On April 29, WHO raised the level of pandemic alert from phase 4 to phase 5, indicating that human-to-human spread of the virus had occurred in at least two countries in one WHO region. This report provides an update of the initial investigations and spread of novel influenza A (H1N1) virus worldwide.

**Mexico:** Since implementing enhanced surveillance on April 17, the number of suspected cases has increased rapidly, along with hospitalizations for severe acute respiratory illness. As of May 5, using an updated case definition of fever plus cough or sore throat for a suspected case and real-time reverse transcription--polymerase chain reaction (rRT-PCR) or viral culture for a laboratory-confirmed case, Mexico had identified 11,932 suspected cases and 949\* cases of laboratory-confirmed novel influenza A (H1N1) virus infection, including 42 patients who died. Confirmed cases in Mexico and in the United States have a similar age distribution ([Table](#)). Information is available on the clinical course of illness for 22 patients with laboratory-confirmed illness who were hospitalized, including seven patients who died. Five of the 15 surviving patients and one of the seven patients who died had underlying chronic medical conditions. Among patients with confirmed cases for whom information was available, 56 (98%) of 57 reported fever, 49 (94%) of 52 reported cough, 23 (79%) of 29 reported dyspnea, 35 (80%) of 44 reported headache, and 34 of (83%) 41 reported rhinorrhea.

**United States:** After recognition of the first cases of infection with the novel influenza A (H1N1) virus, CDC and state health departments initiated enhanced surveillance measures to identify additional cases. As of May 6, a total of 1,487 confirmed\* and probable cases had been reported from 43 states, including 642 confirmed cases (reported from 41 states) and 845 probable cases (reported from 42 states). States with the most confirmed cases are Illinois (122 cases), New York (97), California (67), Texas (61), and Arizona (48). Dates of illness onset for patients with confirmed or probable illness range from March 28 to May 4, although the most recent case counts do not account for testing and reporting delays. Among persons with laboratory-confirmed illness, 35 hospitalized patients have been reported from 16 states, including two patients from Texas who died, both with underlying medical conditions. The age distribution of persons with laboratory-confirmed disease ranged from 3 months to 81 years ([Table](#)). A total of 18 patients were aged <2 years, and 31 were aged 2--4 years. The age distribution of the 35 laboratory-confirmed hospitalized patients ranged from 6 months to 53 years (median: 15 years). Among patients with confirmed disease for whom data were available, 262 (90%) of 292 reported fever, 249 (84%) of 296 reported cough, 176 (61%) of 290 reported sore throat, 65 (26%) of 249 reported diarrhea, and 54 (24%) of 221 reported vomiting.

**Other Countries:** On April 26, the first cases of novel influenza A (H1N1) virus infection outside of the United States and Mexico were reported in Canada. As of May 6, WHO had reported that 309 persons with laboratory-confirmed disease had been identified in 21 countries other than Mexico and the United States. Confirmed cases

have been reported from Asia (Hong Kong S.A.R. and Korea), the Pacific region (New Zealand), the Middle East (Israel), Europe, and Central and South America (El Salvador, Costa Rica, Colombia, and Guatemala).

Of 178 patients for whom travel history was available, 145 (82%) reported recent travel to Mexico, and four (2%) reported travel to the United States. Among those who had not traveled to Mexico, 17 (52%) reported contact with a returning traveler from Mexico. Canada, Germany, Spain, and the United Kingdom all have reported evidence of in-country, second-generation, human-to-human transmission (e.g., a health-care worker in Germany who had cared for a patient with a confirmed infection). No reports have been made of sustained, community-wide transmission in affected countries. Consistent with cases in North America, most of the cases reported from other countries have been among young adults, with a median age of 27.1 years (range: 2--62 years, N = 45). The majority of cases in other countries have been uncomplicated, and no deaths have been reported; four patients have been hospitalized.<sup>§</sup>

**TABLE. Number and percentage of confirmed cases of novel influenza A (H1N1) virus infection, by patient age group and hospitalization status --- United States and Mexico, March 1--May 5, 2009**

Age (yrs)	United States			Mexico		
	Total	Hospitalized		Total	Hospitalized	
		No.	(%)		No.	(%)
<5	51	7	(14)	115	6	(5)
5--14	204	9	(4)	248	4	(2)
15--29	250	9	(4)	313	13	(4)
30--44	68	9	(13)	154	16	(10)
45--59	36	1	(3)	94	7	(7)
≥60	10	0	(0)	21	2	(10)
Not available	23	0	(0)	4	4	(100)
<b>Total</b>	<b>642</b>	<b>35</b>	<b>(5)</b>	<b>949</b>	<b>52</b>	<b>(6)</b>

**Reported by:** *General Directorate of Epidemiology, Ministry of Health, Mexico; Pan American Health Organization; World Health Organization; Public Health Agency of Canada; Influenza Div, National Center for Immunization and Respiratory Diseases, CDC Influenza Emergency Response Team, CDC.*

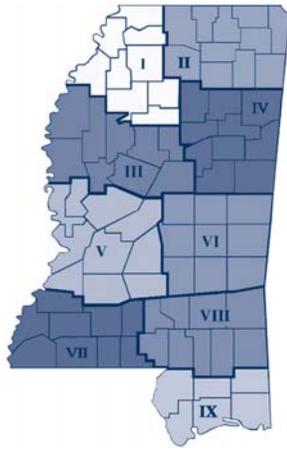
**Editorial Note:** Early surveillance data from this outbreak suggest that the novel influenza A (H1N1) virus has the potential for efficient, rapid spread among countries. Although the illness associated with infection generally seems self-limited and uncomplicated, a substantial number of cases of severe disease and death has been reported in previously healthy young adults and children. Several characteristics of this outbreak appear unusual compared with a typical influenza seasonal outbreak. First, the percentage of patients requiring hospitalization appears to be higher than would be expected during a typical influenza season (3). **(Continued on back flap)**

#### References on request

\* As of May 6, 2009, the number of laboratory-confirmed cases had increased to 1,112.

† Case definition available at <http://www.cdc.gov/h1n1flu/casedef.htm>.

§ Additional information is available at [http://www.who.int/csr/don/2009\\_05\\_06](http://www.who.int/csr/don/2009_05_06).



# Mississippi

## Provisional Reportable Disease Statistics

April 2009

		Public Health District									State Totals*			
		I	II	III	IV	V	VI	VII	VIII	IX	Apr 2009	Apr 2008	YTD 2009	YTD 2008
Sexually Transmitted Diseases	Primary & Secondary Syphilis	0	0	4	2	6	0	1	3	7	23	11	72	34
	Total Early Syphilis	2	1	11	2	22	1	2	8	12	61	24	181	82
	Gonorrhea	56	43	107	36	194	59	35	84	44	658	620	2489	2300
	Chlamydia	236	186	345	174	597	209	137	198	186	2268	1668	8221	6026
	HIV Disease	2	2	8	3	16	3	0	2	10	46	48	216	194
Mycobacterial Diseases	Pulmonary Tuberculosis (TB)	1	1	1	1	6	0	0	0	2	12	12	25	26
	Extrapulmonary TB	0	0	0	0	2	0	1	0	0	3	2	5	5
	Mycobacteria Other Than TB	0	0	1	0	8	2	2	7	11	31	26	117	82
Vaccine Preventable Diseases	Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pertussis	1	0	0	0	0	0	0	0	1	2	10	22	36
	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	0	0
	Hepatitis B (acute)	0	0	1	0	0	0	0	0	0	1	2	15	13
	Invasive <i>H. influenzae</i> b disease	0	0	0	0	0	0	0	0	0	0	0	0	1
	Invasive Meningococcal disease	0	0	0	0	0	1	0	0	0	1	2	2	7
Enteric Diseases	Hepatitis A (acute)	0	0	0	0	0	0	1	0	0	1	0	5	0
	Salmonellosis	1	2	0	2	7	0	1	3	1	17	37	117	122
	Shigellosis	0	1	0	0	0	0	0	0	0	1	33	9	166
	Campylobacteriosis	0	0	0	1	3	0	1	0	2	7	6	33	27
	<i>E. coli</i> O157:H7/HUS	0	0	0	0	1	0	0	0	1	2	0	3	2
Zoonotic Diseases	Animal Rabies (bats)	0	0	0	0	0	0	0	0	0	0	0	0	1
	Lyme disease	0	0	0	0	0	0	0	0	0	0	0	1	0
	Rocky Mountain spotted fever	0	1	0	0	0	0	0	0	0	1	1	3	2
	West Nile virus	0	0	0	0	0	0	0	0	0	0	1	0	2

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



MISSISSIPPI STATE DEPARTMENT OF HEALTH

570 East Woodrow Wilson  
Post Office Box 1700  
Jackson, Mississippi 39215-1700

**(Continued from page 2)**

Second, the age distribution of hospitalizations for novel influenza A (H1N1) virus infection is different than that of hospitalizations for seasonal influenza, which typically occur among children aged <2 years, adults aged  $\geq 65$  years, and persons with chronic health conditions (3). In Mexico and the United States, the percentage of patients requiring hospitalization has been particularly high among persons aged 30--44 years.

Summertime influenza outbreaks in temperate climates have been reported in closed communities such as prisons, nursing homes, cruise ships, and other settings with close contact (4--8). Such outbreaks typically do not result in community-wide transmission, but they can be important indicators of viruses likely to circulate in the upcoming influenza season (8). The novel influenza A (H1N1) virus has been circulating in North America largely after the peak influenza transmission season. For that reason, the epidemiology and severity of the upcoming influenza season in the southern hemisphere or in the northern hemisphere cannot be predicted. The imminent onset of the season for influenza virus transmission in the southern hemisphere, coupled with detection of confirmed cases in several countries in the southern zone, raise concern that spread of novel influenza A (H1N1) virus might result in large-scale outbreaks during upcoming months. Countries in the southern hemisphere that are entering the influenza season should anticipate outbreaks and enhance surveillance accordingly. Influenza virus can circulate year round in tropical regions; therefore, these countries should maintain enhanced surveillance for novel influenza A (H1N1) virus.

Studies in countries affected by the novel influenza A (H1N1) virus should help guide surveillance, case management, and prevention strategies in countries not yet affected. Key concerns that should be addressed in these studies include assessment of the potential impact on public health; clinical progression of disease, including rates and types of complications for different age and risk groups; and information on virus transmissibility. Assessment of potential disease severity associated with this novel virus will help inform decisions on prevention strategies to slow the spread of infection. Effective control measures will depend on the ability of national governments to quickly gather and share virologic, epidemiologic, and clinical information from multiple sources as new cases appear.