

Clinical Details of 2009 H1N1 Influenza Cases Emerge

By Amesh A. Adalja, May 4, 2009

As cases of 2009 H1N1 influenza continue to accrue worldwide, more clinical information has become available and is useful in guiding the medical management of these patients.

Case Details in NYC Reveal Low Burden of Illness

The CDC has [released](#) data from the investigation of 44 cases in a highly effected NYC school. None of these 44 individual cases had traveled to Mexico, California, or Texas; however, other reports have linked cases in the school to travel to Mexico. Onset of illness occurred between April 20-24, 2009. Clinical details reveal no severe cases. The vast majority of cases had influenza-like symptoms, listed in Table 1 below, and a substantial proportion reported gastrointestinal symptoms.¹

Table 1: Reported Symptoms

Cough	98%	Muscle aches	80%
Subjective fever*	96%	Nausea	55%
Fatigue	89%	Stomachache	50%
Headache	82%	Diarrhea	48%
Sore throat	82%	Shortness of breath	48%
Runny nose	82%	Joint pain	46%
Chills	80%		
95% meet ILI criteria			

* mean of measured temperatures: 102.2F

By April 27, 2009, 84% of cases were improving, 7% were worsening (2 later reported improvement), and 9% resolved completely. One case was hospitalized overnight for syncope.

In Mexico, Cases Admitted to ICU Often Progressed to Death

The CDC also has [released](#) limited information on cases in Mexico, where severe disease and death have been reported. The data is incomplete and highly skewed toward severe cases, thus it is not wholly interpretable.² Of 590 confirmed cases, clinical reviews have been completed for 16 patients, noting reports of the following symptoms:

- Fever: 15
- Cough: 13
- Tachypnea: 10
- Dyspnea: 9
- Vomiting or diarrhea: 7
- 12 of 15 patients undergoing chest radiography had pneumonia

ICU admission occurred in 8 of 16 cases, and mechanical ventilation was required in 7; ARDS developed in 6 patients, all of whom succumbed to the infection. Mean time to death was 9 days from onset of illness. Deaths and cases were stratified by age group for 24 cases (see Table 2, below).

Table 2: Deaths in Mexico by Age Group

Age (yrs)	Cases	Deaths
<5	5	0
5 to 19	4	1
20 to 39	9	2
40 to 59	5	2
>60	0	0
Total	24	7

Lack of Clinical Data Will Continue to Hamper Extrapolation to the U.S.

The release of Mexican data is helpful in elucidating the clinical histories of patients who have a clinical course more severe than has been experienced in almost all U.S. patients. However, the data is still too sparse to determine the percentage of total cases with fulminant disease. Still needed for a clear picture of the full spectrum of disease is data on laboratory parameters, microbiologic cultures, and treatment regimens.

References

1. CDC. Swine-Origin Influenza A (H1N1) Virus Infections in a School --- New York City, April 2009. *MMWR Dispatch* 2009. 58: 1-3.
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2. CDC. Outbreak of Swine-Origin Influenza A (H1N1) Virus Infection --- Mexico, March—April 2009. *MMWR Dispatch* 2009. 58: 1-3.
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