



CD Info



Richard M. Daley, Mayor

February 2010

Bechara Choucair, MD, Commissioner

CDInfo is a surveillance newsletter intended to promote prevention of morbidity and mortality by providing useful data and practical recommendations for clinicians, laboratorians, and infection control personnel who diagnose, treat or report infectious diseases in Chicago.

Pandemic Influenza A (H1N1) in Chicago, 2009

In response to the worldwide emergence of a novel strain of influenza in the spring of 2009 and the first influenza pandemic since 1968, the Chicago Department of Public Health (CDPH) enacted an Emergency Reporting Regulation and revised existing influenza case reporting recommendations. The purpose of these actions was to allow CDPH to monitor and characterize local morbidity and mortality associated with influenza, including pandemic influenza A (H1N1). This edition of **CD Info** supplements the weekly [Chicago Flu Updates](#), and provides a preliminary summary of the surveillance and investigation of the 2009 pandemic in Chicago.

For many years, Chicago has participated in the [Centers for Disease Control and Prevention's influenza-like illness \(ILI\) surveillance network](#). Doctor's offices in Chicago voluntarily provide weekly reports of the proportion of patients seen in their practices with ILI (defined as fever of 100°F or greater, with cough or sore throat). In August of 2009, Chicago's [Board of Health](#) enacted an [Emergency Reporting Regulation](#) that required acute care hospitals to report ILI rates among patients seen in their emergency departments each week. In addition, the regulation required that Chicago laboratories that perform influenza testing based on polymerase chain reaction (PCR) technology report aggregate counts of the number of influenza tests performed and the number positive for different subtypes, including pandemic influenza A (H1N1).

Chicago has 46 doctor's offices that have registered to participate in CDC's ILI network, 30 acute care hospitals, and six PCR-equipped laboratories. (An additional laboratory that is located outside the city but serves Chicago hospitals has also provided weekly reports.) Figure 1 displays the number of doctor's offices and hospital emergency departments reporting ILI, and PCR-equipped laboratories reporting weekly test results from the time of regulation enactment through January 2010.

Prior to the pandemic, CDPH required individual case reporting of influenza only for specific scenarios, such as an infection associated with the death of a pediatric patient, admission to an intensive care unit, or a potential outbreak in a residential facility. In the fall of 2009, the [requirement was expanded](#) to include reporting all deaths and all hospitalizations in patients for whom an influenza test was positive. Along with the ILI reports, tracking the number of hospitalizations and deaths provided an additional weekly indicator of the burden of pandemic-associated illnesses in the city (figure 2), and individual case reporting clarified the characteristics of people who had experienced severe outcomes.

Surveillance for influenza subtypes locally, regionally, and nationally have all indicated that the vast majority of influenza disease from the start of the pandemic through the end of last year was due to pandemic 2009 (H1N1) strain. As of this summary, 914 confirmed and presumptive 2009 (H1N1)-associated hospitalizations had been reported among

Figure 1. Number of emergency rooms, doctor's offices, and PCR-equipped laboratories submitting aggregate reports of influenza-like illness or influenza test results, Chicago, Aug. 2009—Jan. 2010

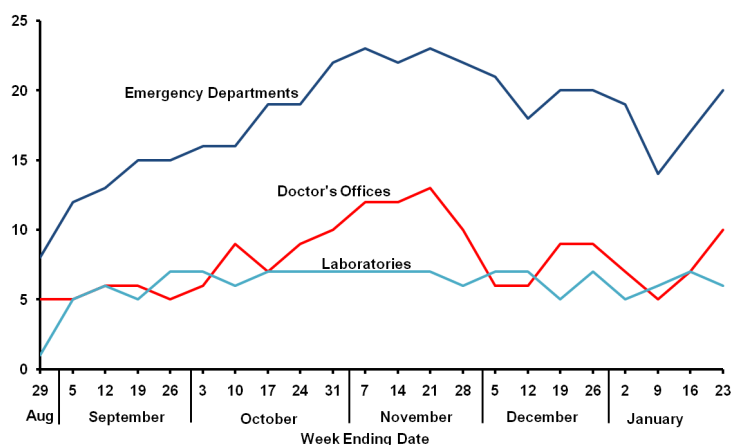


Figure 2. Reported number of hospitalizations associated with pandemic influenza A (H1N1), Chicago, by week of specimen collection, and percent of visits made to Chicago emergency rooms and ILI network doctor's offices due to influenza-like illness, April 2009 - Jan. 2, 2010

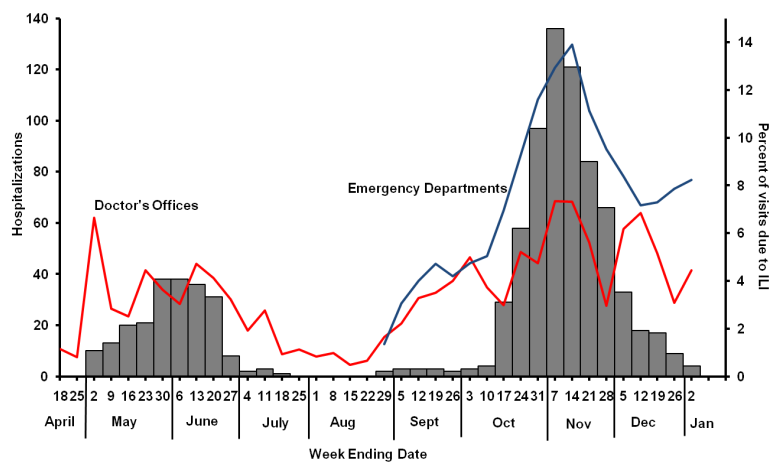


Table 1. Pandemic Influenza A (H1N1)-associated hospitalizations reported in Chicago residents, 2009, by reported age group and race-ethnicity,¹ with approximate rates per 100,000 residents²

Age (years)	Non-Hispanic Asian or Pacific Islander			Non-Hispanic Black			Hispanic			Non-Hispanic White			All race-ethnicities ³		
	No.	Percent	Rate	No.	Percent	Rate	No.	Percent	Rate	No.	Percent	Rate	No.	Percent	Rate
0-4	8	0.9	113	69	8	80	102	11	124	12	1	32	207	23	95
5-18	7	0.8	39	77	8	29	71	8	36	8	0.9	9	172	19	30
19-24	1	0.1	7	40	4	45	28	3	30	12	1	15	89	10	31
25-49	4	0.4	7	92	10	25	71	8	24	46	5	11	230	25	20
50-64	4	0.4	23	70	8	49	38	4	61	29	3	21	152	17	41
≥65	2	0.2	17	22	2	21	21	2	77	13	1	9	64	7	21
All ages	26	3	21	370	41	35	331	36	44	120	13	13	914	100	32

¹All percents shown are the percent of reported hospitalizations for the age and race-ethnicity category, out of 914. Column percent totals do not always add up to the value shown at the bottom of the column due to rounding.

²Age and race-ethnicity category counts are based upon: U.S. Census Bureau. [Census 2000 Summary File 1](#).

³Sixty-six hospitalized patients whose race-ethnicity was not given, or whose race-ethnicity were reported as unknown or a category other than non-Hispanic Asian or Pacific Islander, non-Hispanic Black, or non-Hispanic White, are represented only in this column.

Chicago residents for 2009. Of these, 149 (16%) were reported as having involved admission to an intensive care unit. The underlying medical conditions most frequently reported for intensive care unit patients were asthma or another chronic lung disease (40%), heart disease (13%), neurologic or developmental disorders (10%), and diabetes (10%).

The burden of reported pandemic-associated hospitalizations was not evenly distributed demographically or geographically. The very young (ages 0-4 years) had the highest estimated rates of hospitalization, and non-Hispanic Asian or Pacific Islanders, non-Hispanic Blacks, and Hispanics had estimated rates that were higher than those of non-Hispanic Whites (table 1). Of the 24 pandemic-associated deaths recorded to date for 2009 among Chicago residents, the youngest was 20 years old; 10 (42%) occurred in non-Hispanic Blacks and 9 (38%) were in Hispanics. The areas of the city that experienced the highest estimated age-adjusted rates of pandemic-associated hospitalization were East and West Garfield Park (areas 26 and 27 on figure 3), North Lawndale (29), Near West Side (28), and Lower West Side (31) (figure 3).

CDPH has used these findings to inform and prioritize intervention strategies. CDPH has worked for several years in partnership with the [Chicago Area Immunization Campaign](#), African

American Health Care Council, [Chicago Hispanic Health Coalition](#) and the [Asian Health Coalition](#) to promote childhood and adult immunizations in communities with large populations of racial and ethnic minorities. These organizations received additional funding to expand their activities to promote pandemic influenza vaccination and disease prevention in the populations most affected. The activities include providing community outreach through door-to-door campaigns and distribution of educational materials by social service agencies, providing interpreters to CDPH mass immunization clinics, and working with faith-based organizations to facilitate vaccination clinics in places of worship.

Figure 3. Age-adjusted rates of Pandemic Influenza A (H1N1)-associated hospitalization, by Chicago community area, 2009

