2009 H1N1 Maternal Deaths May Up Overall Rate

VITALS

Major Finding: Of the six pregnant and two postpartum patients who died, six had underlying medical conditions. None had received antiviral medication within 48 hours after symptom onset.

Data Source: Data from 94 pregnant women, 8 postpartum women, and 137 nonpregnant women of reproductive age who were hospitalized with or died of 2009 H1N1 influenza.

Disclosures: None reported.

BY MIRIAM E. TUCKER

Maternal mortality from 2009 influenza H1N1 was estimated at 4.3/100,000 live births in California, based on the results of statewide surveillance.

The maternal mortality ratio—the number of maternal deaths per 100,000 live births—from any cause was 19.3 in California in 2005 and 13.3 in the United States in 2006. More than two-thirds of maternal deaths in the United States are directly related to obstetrical factors, and deaths from influenza had been rare prior to the 2009 influenza H1N1 outbreak, Dr. Janice K. Louie of the California Department of Public Health, Richmond, and her associates wrote (N. Engl. J. Med. 2010;362:27-35).

Now, the high maternal death rate attributed to this flu has the potential to notably increase the overall maternal mortality rate in the United States for 2009, Dr. Louie and her associates said.

From April 23 through Aug. 11, 2009, data were reported for 94 pregnant women, 8 postpartum women, and 137 nonpregnant women of reproductive age who were hospitalized with or died of 2009 H1N1 influenza.

Of the 78 pregnant women whose race/ethnicity was known, 43 were Hispanic, 15 were white, 9 were Asian or Pacific Islander, 6 were non-Hispanic black, and 5 were "other."

About one-third (32) of the 93 pregnant women for whom the data were available had underlying medical conditions that placed them at increased risk for influenza complications, as did a fourth (2) of the 8 postpartum women and two-thirds (82) of the 137 nonpregnant women. The most common condition was asthma, affecting 16% of the pregnant and 28% of the nonpregnant women.

The most commonly reported symptoms among pregnant patients were cough (93%), fever (91%), sore throat (41%), shortness of breath (41%), muscle aches (41%), and nausea or vomiting (33%).

Eighteen (19%) of the pregnant patients were admitted to intensive care, as were 4 of the 8 (50%) postpartum patients and 41 (30%) of the nonpregnant patients.

In some of the cases, reliance on rapid influenza tests appears to have contributed to treatment delays. Rapid influenza tests were falsely negative in 38% of the total 153 who were tested. Of those 58 patients, 28 (48%) were pregnant. Only 7 of the 25 (28%) pregnant women with falsely negative results for whom information was available received antiviral treatment within the recommended 48 hours after symptom onset. Five of the eight patients (63%) who died had false-negative rapid test results, Dr. Louie and her associates noted.

In all, while 81% of both pregnant and nonpregnant women received antiviral treatment, only half of the pregnant women and a third of the nonpregnant women received it within the recommended 48-hour time frame, the investigators reported.

Of the six pregnant and two postpartum patients who died, six had underlying medical conditions, including hypothyroidism in two, gestational diabetes in one, and a history of Hodgkin's disease in one. All eight required intensive care, and none had received antiviral medication within 48 hours after symptom onset.

The maternal mortality ratio was based on an estimated 188,383 births in the state of California from April 3 through Aug. 5. The eight deaths caused by 2009 H1N1 during that time resulted in a cause-specific maternal mortality ratio of 4.3, they said. ■