

# The Burden of Influenza among Kenyan Pregnant and postpartum Women and their Infants, 2015–2020

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## Abstract

**Objective:** To describe the burden of influenza among pregnant women and their young infants. **Design:** Prospective cohort study. **Setting:** Rural western Kenya. **Population:** Pregnant women below 31 weeks of gestation and their infants aged 6 months and below. **Methods:** We conducted weekly follow-up until 6 months postpartum to identify acute respiratory illnesses (ARI). We collected nasal/nasopharyngeal and oropharyngeal swabs from mothers/infants with ARI and tested for influenza A and B using polymerase chain reaction. We calculated incidence of laboratory-confirmed influenza per 1,000 person-months. **Main outcome measure:** Incidence of medically attended influenza illness among pregnant women and its impact on birth outcomes. **Results:** During June 2015–May 2020, we enrolled 3,026 pregnant women at a median gestational age of 16 weeks (interquartile range [IQR], 13, 18) and followed 2,550 infants. Incidence of laboratory-confirmed influenza during pregnancy (10.3 episodes per 1,000 person-months [95% CI 8.6–11.8]) was 2-fold higher than in the postpartum period (4.0 [95% CI 2.6–5.5];  $p < 0.01$ ), and significantly higher among HIV-infected pregnant women (15.6 [95% CI 11.0–20.6] vs. 9.1 [95% CI 7.5–10.8];  $p < 0.01$ ). Incidence among young infants was 4.4 (95% CI 3.0–5.9) and similar among HIV-exposed and HIV-unexposed infants. **Conclusion:** Our findings suggest a substantial burden of influenza illnesses during pregnancy, with a higher burden among HIV-infected mothers. Kenyan authorities should consider the value of vaccinating pregnant women, especially if HIV-infected. **Funding:** This work was supported by funding [Grant number GH002133] from the U.S. CDC, through the Influenza Division. **Keywords:** Burden, influenza, pregnant women, infants

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