
**Abstract:**
Background: Little current information is available for prevalence of vertically-transmitted infections among the Afghan population. The purpose of this study is to determine prevalence and correlates of human immunodeficiency virus (HIV), syphilis, and hepatitis B and C infection among obstetric patients and model hepatitis B vaccination approaches in Kabul, Afghanistan.

Methods: This cross-sectional study was conducted at three government maternity hospitals in Kabul, Afghanistan from June through September, 2006. Consecutively-enrolled participants completed an interviewer-administered survey and whole blood rapid testing with serum confirmation for antibodies to HIV, *T. pallidum*, and HCV, and HBsAg. Descriptive data and prevalence of infection were calculated, with logistic regression used to identify correlates of HBV infection. Modeling was performed to determine impact of current and birth dose vaccination strategies on HBV morbidity and mortality.

Results: Among 4452 women, prevalence of HBsAg was 1.53% (95% CI: 1.18 – 1.94) and anti-HCV was 0.31% (95% CI: 0.17 – 0.53). No cases of HIV or syphilis were detected. In univariate analysis, HBsAg was associated with husband's level of education (OR = 1.13, 95% CI: 1.01 – 1.26). Modeling indicated that introduction of birth dose vaccination would not significantly reduce hepatitis-related morbidity or mortality for the measured HBsAg prevalence.

Conclusion: Intrapartum whole blood rapid testing for HIV, syphilis, HBV, and HCV was acceptable to patients in Afghanistan. Though HBsAg prevalence is relatively low, periodic assessments should be performed to determine birth dose vaccination recommendations for this setting.

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