

## **Prevalence of Sexually Transmitted Infections in Pregnancy, Preterm Birth, Low Birthweight, and the Importance of Prenatal Care: Data from the 2020 United States Birth Certificate**

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**Abstract :** Background: Many pregnancies in the United States are affected each year with the most common sexually transmitted infections (STIs), including Chlamydia trachomatis (CT), Neisseria gonorrhoeae (NG), and Treponema pallidum (TP, syphilis), and the rate of congenital syphilis has reached a 20-year high. We sought to estimate the prevalence of CT, NG, and TP in pregnancy and the risk of preterm birth (PTB) (<37 weeks gestation) and low birthweight (LBW) (<2500g) deliveries according to utilization of prenatal care (PNC) during the COVID-19 pandemic. Methods: This study was based on the 2020 National Center for Health Statistics (NCHS) Natality File restricted to singleton births (N=3,512,858). We estimated the prevalence of CT, NG, TP, PTB and LBW across timing and the number of prenatal care (PNC) visits attended. In multivariable logistic regression models, adjusted odds ratios of PTB and LBW were assessed according to STIs and PNC status. E-values, based on effect size estimates and the lower bound of the 95% confidence intervals (CIs) of the association, examined the potential impact of unmeasured confounding. Results: CT (1.8%) was most prevalent in pregnancy, followed by NG (0.3%) and TP (0.1%). The strongest predictors of PTB and LBW were maternal NG (12.2% and 12.1%, respectively), late initiation/no PNC (8.5% and 7.6%, respectively), and  $\leq 10$  prenatal visits (13.1% and 10.3%, respectively). The odds of PTB and LBW were 2.5- to 3-fold greater for each STI in women who received  $\leq 10$  compared to  $> 10$  prenatal visits. E-values demonstrated the minimum strength of potential unmeasured confounding necessary to explain away observed associations. Conclusions: Timely initiation and receipt of recommended number of prenatal visits benefits screening and treatment of all women for STIs, including NG to substantially reduce infant morbidity and mortality related to PTB and LBW among infants born during the COVID-19 pandemic.

**Keywords :** COVID-19 pandemic, sexually transmitted infections, preterm birth, low birthweight, prenatal care

**Conference Title :** ICFRH 2022 : International Conference on Fertility and Reproductive Health

**Conference Location :** Toronto, Canada

**Conference Dates :** July 19-20, 2022