# ABSTRACT


## Prevalence of Asymptomatic Infection with *Chlamydia trachomatis* among Antenatal Women in North Trinidad

*Chlamydia trachomatis* (CT) infection is one of the most common sexually transmitted infection worldwide resulting in adverse pregnancy outcomes. A cross-sectional study was carried out in North Trinidad to assess the prevalence of CT infection in antenatal women and to examine the risk factors associated with CT. Pregnant women (n=280) presenting to both public and private antenatal clinics were enrolled. Subsequent to informed consent, demographic and sexual behavioural data were collected using interviewer-administered questionnaires. A multistage sampling technique was used to calculate the amount of women to be sampled at the various health facilities, but consecutive sampling selected women at each institution. Vulval swabs (VS) and first void urine (FVU) samples were tested using an in-house PCR assay.

Overall prevalence of genital chlamydial infection was 9.3% [95% CI 6.3-13.5], with the highest age-specific prevalence occurring among women <25 years (14.5 %). The mean age of the pregnant women studied was 26.1 years (SD=6.2 yrs). Age, ethnicity, education, marital status, family income and the woman's occupation were significantly associated with chlamydial positivity ($p < 0.05$). Logistic regression analysis found age (<25 years), ever having had an STI and drinking alcohol significant predictors for chlamydial infection. A higher number of positive cases was found in public institutions (11.1%) compared to private health facilities (3.2%). Of the 26 positive women, 18 women (69%) were positive by both FVU and VS specimens, 6 (23%) by FVU only and 2

(8%) by VS only. Using the Digene system as a gold standard, both FVU and VS had similar sensitivity (100%) but VS had better specificity (100% and 85.7%).

The estimated prevalence in this study was high, even though it was lower than previous estimates in Trinidad based on serological assays. In view of the considerable morbidity in pregnant women and neonates, a screening-intervention plan should be instituted for high risk groups in Trinidad; considering young, single, black, poor and uneducated women. Our results suggest that non-invasive screening in antenatal women is feasible in the community using FVU and VS and a highly sensitive test such as PCR.

**Keywords:** *Chlamydia trachomatis*; asymptomatic; pregnant; polymerase chain reaction; first void urine; vulval swab; Trinidad.