

417. Cytomegalovirus (CMV) and Sexually Transmitted Infections (STIs) During Pregnancy

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Background. Congenital cytomegalovirus infection (cCMV) is a leading cause of hearing loss and neurodevelopmental disabilities. Although higher rates of CMV acquisition and reinfections with new virus strains are seen in women with STIs, the significance of CMV-STI co-infections during pregnancy and whether co-infections increase intra-uterine transmission of CMV remains unclear. Higher rates of CMV genital shedding were seen in mothers of infants with cCMV compared with those with uninfected infants. The objective of this study was to determine the association between CMV seroprevalence and STIs and whether STIs during pregnancy influences CMV genital shedding.

Methods. Vaginal swabs from a cohort of CMV seropositive women in labor from a multi-center study were analyzed. After DNA extraction from vaginal swabs, PCR was performed for detection of CMV, *Neisseria gonorrhoeae* (GC), *Chlamydia trachomatis* (CT), *Trichomonas vaginalis* (TV) and *Mycoplasma genitalium* (MG). The prevalence of STIs in CMV seropositive pregnant women was determined in this cohort and CMV genital shedding rates were compared between groups with and without STIs.

Results. In this cohort, CMV genital shedding in late pregnancy was detectable in 13% (21/160) of women while rates of detection for MG, GC, CT and TV were 3%, 0.6%, 1.2% and 8%, respectively. CMV-STI co-infections were noted in 2.5% (4/160) of women. CMV genital shedding was documented in only one woman with STIs, compared with 12.5% (20/160) without STIs. Among women shedding CMV in the genital tract, CMV viral load levels ranged from 1.1×10^2 IU/mL to 2.2×10^4 IU/mL.

Conclusion. In a cohort of CMV seropositive women, the presence of STIs in late pregnancy did not increase CMV genital shedding. Our preliminary findings suggest CMV shedding is not associated with STIs detected late in pregnancy.

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418. Testing and Positivity Rates for Gonorrhea and Chlamydia in a Large Federally Qualified Health Center System

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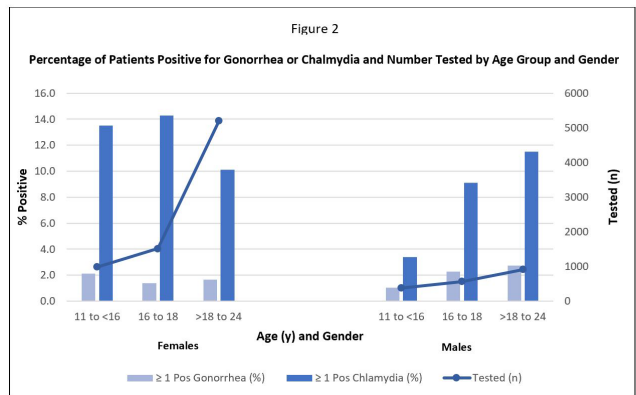
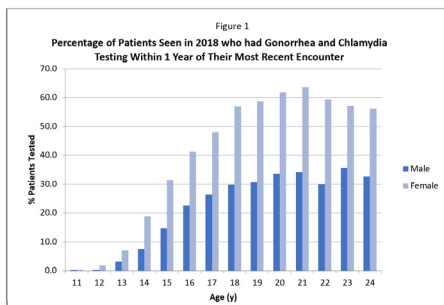
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Background. Gonorrhea (GC) and Chlamydia (CT) are the most reported sexually transmitted infections in the United States. Little is known about testing and positivity rates for GC/CT in clinical practice, particularly for male patients. In this study, we analyzed rates of GC/CT testing and positivity among 11–24 years old patients presenting to a system of federally qualified health centers (FQHC).

Methods. This retrospective data review was conducted at Denver Health (DH) in Denver, CO. Data were abstracted for 11–24 years old who were seen at least once at a DH FQHC in 2018. Abstracted data included patient age, gender, clinic location, and testing for GC/CT. The percentage of patients tested ≥ 1 time within the preceding year and the percentage of tested patients that were positive for GC and/or CT ≥ 1 time were calculated along with Wald 95% confidence intervals.

Results. In total, 34,416 unique patients were included. GC/CT testing was completed for 7.3% (95% CI: 6.8%, 7.6%) of 11–15 years old, 30.6% (95% CI: 29.5%, 31.6%) of 16–18 years old, and 45.6% (95% CI: 44.8%, 46.4%) of 19–24 years old. Rates of testing varied by gender and age and were lowest among males and younger patients (Figure 1). Of patients tested, 11.4% (95% CI: 10.7%, 12.1%) of females and 9.1% (95% CI: 7.8%, 10.4%) of males were positive for CT and 1.7% (95% CI: 1.4%, 2.0%) of females and 2.3% (95% CI: 1.6%, 2.9%) of males were positive for GC (Figure 2). Though less likely to be tested than older patients, females 11–15 years old had the highest rates of GC (2.1%; 95% CI: 1.2%, 3.0%) and the second highest rate of CT (13.5%; 95% CI: 11.3%, 15.6%) among females tested.

Conclusion. Despite efforts to improve GC/CT screening, less than 50% of 11–24 years old patients were tested within the prior year. Rates of GC/CT were higher than previously reported, particularly for females less than 16 years old. Male patients were less likely to be tested; however, the males who were tested had higher GC positivity rates and only slightly lower rates of CT than females who were tested. Future studies evaluating the effectiveness of interventions to reduce GC/CT among 11–24 years old are critically needed.



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419. Initial Evaluation of Engagement and Utilization of the National Sexually Transmitted Diseases Curriculum

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Background. The National Sexually Transmitted Diseases Curriculum (NSTDC) is an online, guideline-based, interactive curriculum developed at the University of Washington in Seattle with funding from the Centers for Disease Control and Prevention (CDC) National Network of STD Clinical Prevention Training Centers (NNPTC). The NSTDC has dual-functionality to provide users with the option of engaging in (1) sequential, longitudinal learning and/or (2) quick access to specific content. We describe the first evaluation of the reach, utilization and effectiveness of the NSTDC.

Methods. We evaluated user data collected from survey completion, Google Analytics, and the Health Professional Application for Training (HPAT) between the launch of NSTDC in February 1, 2017 through August 31, 2018. Chi-square and ANOVA tests were used to determine significant differences between prescribers, nurses, and non-clinicians.

Results. month period and 54,910 hours of CE awarded. Registered users were mostly women (16,133, 84%), and 8,476 (44%) were registered nurses, with an additional 6,052 (34%) prescribing providers (physicians, nurse practitioners, physician assistants, and dentists). The most common programmatic focus was primary care (4,886, 25%). While 18,175 (95%) of users were in the United States, users were located around the world (Figure 1). Referral patterns differed significantly by occupation (Figure 2). Users engaged deeply with the curriculum. Average site session time was 28 minutes for registered users and 14 minutes for all users. Registered users completed an average of 4.37 out of 7 total modules. Nurses were more likely to complete all modules, (48% vs. 34% of prescribers and 30% of non-clinicians, $P < 0.0001$). Over 15,000 users answered at least one optional check-on-learning (COL) question. On average, 77% of COL questions were answered in modules where COL questions were initiated. Over 60% of the users found the content and experience highly satisfying. Overall 39% of users intended to change practice following completion of the modules.

Conclusion. The NSTDC has a broad reach, leads to high user engagement and satisfaction, and fosters intent to change practice. This web-based curriculum is a novel and effective strategy to disseminate recommendations from CDC Guidelines.

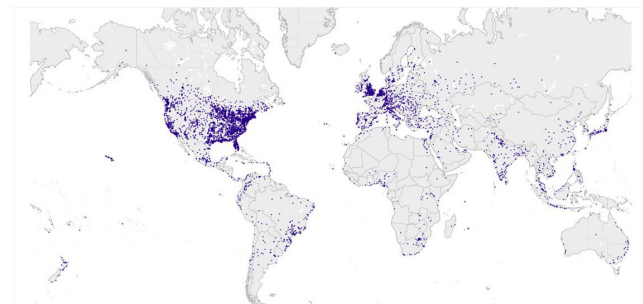


Figure 1. Geographic distribution of registered users from 2/1/2017 to 8/31/2018. Each dot represents ≥ 1 user.