

961. Prevalence and Macrolide Resistance of *Mycoplasma genitalium* After Initiation of HIV Preexposure Prophylaxis

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Background. Recent evidence shows that patients using HIV preexposure prophylaxis (PrEP) have an increased rate of bacterial sexually transmitted infections (STIs), including syphilis, chlamydia, and gonorrhea. The rate of *Mycoplasma genitalium* infections and the susceptibility of *M. genitalium* in patients on PrEP have been less well described.

Methods. We studied all patients who started on PrEP in the AZ Sint-Jan Hospital Bruges from January 6, 2017 to January 4, 2019. Patients were screened for *M. genitalium* and other bacterial STIs with rectal swabs, pharyngeal swabs, first-voided urine and blood collections at baseline and quarterly intervals after initiating PrEP. TaqMan array card technology was used to detect *M. genitalium* and determine macrolide-resistance mediating mutations in the region V of the 23S rRNA gene (A2058G, A2059G, A2058C, and others). Patients with an STI were treated based on a national guideline. Proportions were estimated using a Generalized Estimating Equations model with independent correlation structure.

Results. A total of 136 males and 1 female (median age, 40 years (interquartile range (IQR), 20–79)) were included in the study. All men were gay or bisexual. The median follow-up time was 11.3 months (IQR, 4.7–15.3). In total, 117 patients (85%) used PrEP daily at their last visit. The estimated proportion of patients with *M. genitalium* at baseline, 3 months, 6 months, 9 months, and 12 months was 7% (95% CI 4–13), 12% (95% CI 7–20), 7% (95% CI 4–15), 6% (3–15), and 6% (2–15). Thirty-two patients (23%) tested at least once positive for *M. genitalium* during the study period. The estimated percentage of macrolide resistance increased from 40% (95% CI 16–70) at baseline to 71% (95% CI 44–89), 67% (95% CI 27–92), 80% (95% CI 31–97), and 75% (95% CI 24–97) at 3 months, 6 months, 9 months, and 12 months, respectively.

Conclusion. After initiation of PrEP, the prevalence of *M. genitalium* in our cohort at quarterly screening was not increased compared with baseline. However, a nonsignificant trend of an increased percentage of macrolide-resistant strains was observed.

Disclosures. All Authors: No reported Disclosures.

962. Trends in Cervical Pre-cancers by Race and Ethnicity During the Human Papillomavirus Vaccine Era, HPV Vaccine Impact Monitoring Project (HPV-IMPACT), United States, 2008–2016

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Background. Since human papillomavirus (HPV) vaccine introduction in the United States in 2006, cervical pre-cancer incidence has declined in young women, but pre-cancer trends have not been reported by race/ethnicity. We evaluated trends in cervical pre-cancers from 2008 to 2016 in non-Hispanic (NH) white, NH black, NH Asian, and Hispanic women identified through active population-based surveillance in the 5-site Human Papillomavirus Vaccine Impact Monitoring Project (HPV-IMPACT).

Methods. We analyzed data on cervical intraepithelial neoplasia (CIN) grades 2–3 and adenocarcinoma *in situ* (CIN2+) cases aged 20–39 years. Annual CIN2+ rates per 100,000 women were calculated stratified by race/ethnicity in 5-year age groups, using multiple imputation to account for 10% missing race/ethnicity data. Rates were also calculated using estimated numbers screened for cervical cancer to control for known declines in screening. Trends, evaluated using JoinPoint software, are presented as average annual percentage changes (AAPC) with 95% confidence intervals (CI).

Results. A total of 18,222 CIN2+ cases (62% NH white, 16% NH black, 16% Hispanic, 6% Asian) were reported from 2008 to 2016. CIN2+ rates among 20–24 year-olds declined significantly in all groups: NH white, AAPC: –14.2 (95% CI: –16.3, –12.1);

NH black, AAPC: –15.5 (–19.5, –11.4); Asian, AAPC: –14.8 (–20.5, –8.8); Hispanic, AAPC: –14.3 (–17.9, –10.5). In 25–29 year olds, a significant decline was observed for NH whites only (AAPC: –2.4, [–4.0, –0.8]). No declines were seen in 30–34 or 35–39 year olds. Among screened 20–24 year-olds, significant but smaller declines were observed (AAPC: –9.8 to –8.4); no declines were observed in screened 25–29 year olds or older groups.

Conclusion. In this evaluation of CIN2+ trends by race/ethnicity during the HPV vaccine era, the significant declines in 20–24 year olds across all groups, including among screened women, is consistent with equitable vaccine impact on CIN2+.

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963. Extragenital Chlamydia and Gonorrhea Among Females Visiting an STD Clinic

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Background. Rates of chlamydia (CT) and gonorrhea (GC) are increasing in the United States. Annual screening for urogenital infection is recommended for sexually active females less than 25 years and older females at risk. CT and GC can be detected at pharyngeal and rectal sites and are commonly asymptomatic. Currently, extragenital screening is only recommended in men who have sex with men (MSM). Data among females on extragenital CT and GC are limited.

Methods. We reviewed all females presenting to a sexually transmitted diseases (STD) clinic in Providence, Rhode Island from May 2014 to December 2018. During this time, urogenital, pharyngeal, and rectal screenings were offered to all females presenting for care. We evaluated demographics, behaviors, and laboratory data on urogenital, pharyngeal and rectal CT/GC. Univariate and bivariate analyses were performed to determine the characteristics of demographic and behavioral variables associated with extragenital infection.

Results. During the study period, 2,672 females presented for STD screening. Median age was 26 years (interquartile range [IQR]: 33–22). Most patients (95%) reported engaging in sex with male partners. More than half (59%) had at least one extragenital (pharyngeal or rectal) test performed (77% pharyngeal only, 0.4% rectal only, 23% both). During the study period, there were 334 CT and 66 GC infections identified across all three anatomical sites. Of individuals with a positive CT result ($N = 273$), 85% ($N = 233$) had a positive urogenital, 19% ($N = 53$) a positive pharyngeal, and 18% ($N = 48$) a positive rectal specimen. Of individuals with a positive GC result ($N = 50$), 62% ($N = 31$) had a positive urogenital, 54% ($N = 27$) a positive pharyngeal, and 16% ($N = 8$) a positive rectal specimen. Among individuals with a positive CT or GC result, ($N = 315$), 17% ($N = 55$) had an extragenital infection in the absence of a positive urogenital result. No single risk factor was statistically associated with an extragenital CT or GC infection. Most individuals (82%) were asymptomatic at presentation.

Conclusion. In an STD clinic setting, a significant number of pharyngeal and rectal CT/GC infections may be missed in the absence of extragenital screening. Settings which engage at-risk females should consider implementation of routine CT/GC extragenital screening.

Figure 1: Chlamydia (CT) Infections by Site

