11 isolates. The 189 N. gonorrhoeae isolates were assigned to 112 different NG-MASTs; seven sequence types (STs) were novel. The most common ST was ST10, 6,688 (16.1%), followed by ST1, 5,124 (7.1%). Two ST1407 strains have been isolated in 2015. Although ST1407 was known to display decreased susceptibility to ESSG or full resistance, they were susceptible for CRO (MIC = 0.06 μg/mL) and cefixime (MIC = 0.12 μg/mL).

**Conclusion.** The recent emergence of ESC-resistant N. gonorrhoeae strains which was often associated with mutations in the penA gene is a major concern and enhanced AMR surveillance is necessary to prevent transmission of these strains.

**Disclosures.** All authors: No reported disclosures.

### 1490. Lymphogranuloma Venereum: Correct Diagnosis Makes All the Differences

**Background.** Lymphogranuloma venereum (LGV) is a sexually transmitted infection that is rare in the United States. There is no FDA approved test to differentiate Chlamydia trachomatis (CT) infections caused by LGV serovars making diagnosis challenging. This study characterizes the difficulties of diagnosing LGV during an outbreak in Southeast Michigan.

**Methods.** We performed a retrospective chart review of patients who met CDC criteria for confirmed and probable LGV at one of the Wayne State University ID Clinics between August 2015 and March 2018. Presenting symptoms, initial diagnoses, diagnostic testing, interval between onset of symptoms and LGV diagnosis, and treatment were reviewed. IRB exemption was obtained.

**Results.** Of 39 patients with LGV, eight (20%) were PCR confirmed at CDC. All patients were men having sex with men (MSM) and 38 were HIV infected. In 22 patients (56%), LGV was considered likely at presentation whereas in 17 (44%) patients LGV was not initially considered. 11 (66%) patients with LGV were indicative of MG infection, and no demographic, behavioral or biologic factors were statistically associated with MG concordance.

**Conclusion.** The prevalence of MG was substantial. Concordance in partnerships was 26%, less than observed with CT (~70%) in this study. Our study is limited due to small numbers of subjects with MG infection.

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### 1492. Chlamydia, Gonorrhea, Syphilis and HIV Screening among Men Presenting with STI-Related Complaints at a Community-Based Emergency Department in Columbus, Ohio: A 5-Year Retrospective Study

**Background.** Sexually transmitted infections (STIs) disproportionately affect individuals living in poor and underserved areas of the United States. Emergency Departments (ED) are often the only point of healthcare access for these at-risk individuals. In this study, the ED often serves a key role in STI screening. The purpose of this study was to review STI screening practices for men at an urban and community-based ED affiliated with a large academic medical center in Columbus, Ohio.

**Methods.** Retrospective review of all ED visits from January 2012 to December 2017. A total of 277,929 patient visits were analyzed for male patients by (1) exposure to an STI (2) STI-related symptoms (penile discharge/pain, scrotal/testicular pain/swelling). We analyzed the demographic characteristics of men who presented to the ED with an STI-related complaint and compared those who underwent STI screening (chlamydia, gonorrhea, syphilis or HIV) to those that did not.

**Results.**

**Table 1.**

| Men with STI-Related Chief Complaints (n = 3,281) | Any STI Testing Done | No STI Testing Done |
|-----------------------------------------------|-------------------|-------------------|
| Race                                          |                   |                   |
| Black                                         | 2,112 (92.8%)     | 809 (80.6%)       |
| White                                         | 109 (4.7%)        | 138 (13.7%)       |
| Other                                         | 53 (2.3%)         | 58 (5.5%)         |
| Median age (IQR)                              | 30 [23–44]        | 27 [23–36]        |
| Presenting Complaint                          |                   |                   |
| Males exposed to STI 1,459                    | 1,120 (78.8%)     | 339 (23.2%)       |
| Males with symptoms 1,809                     | 1,154 (83.8%)     | 665 (36.2%)       |

**Conclusion.** Over a 5-year period, screening for chlamydia, gonorrhea for men presenting with STI-related complaints was adequate. However, syphilis and HIV screening was very low among men presenting to an urban and community-based ED with an STI-related complaint. A separate analysis for women is being done. There is an urgent need to identify and eliminate barriers to syphilis and HIV screening in EDs that serve at-risk populations.
1493. Effect of HIV Status on Early Syphilis Treatment Response in the Era of Combination Antiretroviral Therapy
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Background. Rates of incident early syphilis are increasing and HIV-co-infection is common. Syphilis treatment for HIV-positive individuals does not differ from that of the general population, although data published prior to combination antiretroviral therapy (cART) suggest that HIV-infected persons may be less likely to achieve expected serologic responses to treatment (SRT).

Methods. We conducted a cohort study of early syphilis diagnosed in a large HIV clinic and a public sexually transmitted diseases (STD) clinic in San Diego. SRT was defined as a fourfold or greater decline in rapid plasma reagin (RPR) titer following syphilis treatment. We compared SRT at 6 and 12 months post-treatment between HIV-infected and HIV-uninfected persons.

Results. Of 1,239 early syphilis cases reviewed, 742 (61%) were included in the analysis. Reasons for exclusion included lack of follow-up RPR (n = 454), nonreactive RPR at syphilis diagnosis (n = 33), and incomplete data (n = 10). Of those analyzed, 533 (72%) were HIV-positive; 168 (23%) HIV-negative; HIV status was unknown for 41 (5%). Overall, 449 (60%) and 657 (89%) of analyzed cases achieved SRT 6 and 12 months after treatment, respectively. HIV-positive cases were less likely to achieve SRT at 12 months than HIV-negative cases (464/533 [87%] vs. 160/168 [95%], P = .0003, Figure 1), as were early latent syphilis cases (285/348 [82%] vs. primary (102/117 [92%]) and secondary syphilis (264/277 [94%]) (Table 1).

Conclusion. In this cohort of early syphilis cases, most achieved SRT within 12 months of treatment, but only 60% achieved SRT within 6 months. Significantly lower 12-month SRT responses were seen in HIV-positive compared with HIV-negative persons and in early latent compared with primary and secondary syphilis. The impact of cART use, viral suppression, and treatment choice on outcomes is being analyzed.

Table 1. Serologic Response to Treatment by Syphilis Clinical Stage

| RPR Titer Response | Primary N = 117 | Secondary N = 277 | Early Latent N = 348 | PValue |
|--------------------|----------------|------------------|----------------------|--------|
| 6 months post-treatment |               |                  |                      |        |
| ≥4-fold decline 70 (60%) | 177 (64%)   | 202 (58%)   | 0.323                |
| <4-fold decline 47 (40%) | 100 (38%)   | 146 (42%)   |                      |
| 12 months post-treatment |               |                  |                      |        |
| ≥4-fold decline 108 (92%) | 264 (95%)   | 285 (82%)   | <0.001               |
| <4-fold decline 9 (8%)  | 13 (5%)     | 63 (18%)    |                      |

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1494. Vaginal pH: Associations with Neisseria gonorrhoeae, Chlamydia trachomatis, and Trichomonas vaginalis
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Background. Bacterial vaginosis (BV), a low-Lactobacillus state characterized by elevated vaginal pH, has been associated with incident sexually transmitted infections (STIs). Elevated pH may also be associated with certain Lactobacillus species (L. iners). Increased pH may serve as a cheap, easily accessible biomarker for underlying STI, vaginal dysbiosis and risk of STI acquisition. In this study we examine the relationship between vaginal pH and infection with Neisseria gonorrhoeae (GC), Chlamydia trachomatis (CT) and Trichomonas vaginalis (TV).

Methods. This study used data from women attending Baltimore City STI clinics from 2005 to 2016. Those with a vaginal pH determination and testing for GC, CT or TV were included. Most GC and CT testing was conducted using nucleic acid amplification tests, while TV was diagnosed via microscopy. Generalized estimating equations with a logit link were used to explore relationships between vaginal pH and STI, accounting for confounders and repeated within patient measures.

Results. A total of 28,333 individual women contributed 63,032 visits. Mean age was 28.9 (SD 9.8), 4.5% were Caucasian and 91.5% were Black. 42.5% had BV via Amse’s criteria. Of 11,577 total STI cases 2056 (17.8%) had a pH <4.5. 22.2% of GC cases, 28.2% of CT cases, and 7.4% of TV cases had a pH <4.5. After adjustment for age, race, number of sexual partners in the past 6 months, and HIV sero-status, a pH <4.5 was associated an increased odds of GC (OR: 1.86 (CI 1.66–2.09)), CT (OR: 1.44 (CI 1.34–1.53)), and TV (OR: 0.65 (CI 0.59 –0.71)) infection as compared with a pH >4.5. These relationships remained significant in subjects without symptomatic BV and when each analysis was repeated separately, to the women who reported exposure to a partner with GC, CT or nongonococcal urethritis, or TV.

Conclusion. Elevated vaginal pH is associated with unregonitual STI and may serve as a useful biomarker for underlying infection. This analysis was not able to assess causality through pH remained predictive when restricted to those reporting STI exposure, perhaps suggesting that high pH increases risk of STI acquisition. Further prospective studies are required to confirm these findings and to mecanically define relationships between vaginal pH, resident microbiota, and STI.

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1495. Incidence of Sexually Transmitted Infections (STIs) in Patients on Pre-exposure Prophylaxis (PrEP)
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Background. Pre-exposure prophylaxis (PrEP) is a highly effective method for preventing HIV transmission among at-risk patients. There is limited and conflicting data regarding the risk of other STIs following PrEP initiation. The objective of this study was to compare the incidence of STIs before and during PrEP therapy.

Methods. A retrospective observational study of patients seeking PrEP therapy at an inner-city clinic in Newark, New Jersey, between May 1, 2016 and March 30, 2018. Patients who were MSM, intravenous drug users, or heterosexual with multiple sex partners were considered at risk for HIV and offered PrEP. Patients were initially screened and tested every 3 months for HIV, Chlamydia trachomatis, Neisseria gonorrhoeae, syphilis, hepatitis B virus (HBV), hepatitis C virus (HCV), herpes simplex virus (HSV), medication adherence and continued high-risk behavior. Patients were also counseled on risk-reduction behaviors. STI incidence before and during PrEP was compared.

Results. Between May 1, 2016 to March 30, 2018, 125 patients were considered at risk. Fifty-one (41%) patients were lost to follow-up after the initial visit and were excluded. Seventy-four (59%) patients completed screening and were included in the study. The mean age was 35.0 ± 11.6 years. The majority of the patients were males 74% (54), 29 (40%) were MSM, and 33 (45%) had HIV-positive partners. The mean duration of PrEP was 386 ± 183 days. Upon initial screening 14 (19%) patients were positive for at least one STI; 3 (21%) patients had HCV, 3 (21%) had chlamydia, 2 (14.3%) had HBV, 2 (14.3%) had gonorrhea, 2 (14.3%) had syphilis, one had HAV II and one was found to have HIV. Two patients acquired new STI on PrEP. One tested positive for chlamydia and gonorrhea 1 month after initiating prep and another contracted syphilis after 6 months. No patient had recurrent STIs nor acquired HIV while on PrEP therapy.

Conclusion. Use of PrEP not only reduces the transmission of HIV but also appears to reduce the incidence of other STIs. Frequent STI screenings and behavioral counseling on risk reduction likely contributed toward lower STI incidence. Larger studies examining similar data over longer durations are needed to confirm these findings.

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1496. Anorectal Mycoplasma genitalium Is Common Among Nigerian MSM and Associated with HIV
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