Conclusion Based on our E-test results, all of the baseline GC isolates appear to be susceptible to gentamicin. However, at one-week follow-up, ~11% continued to be infected with GC. Determining if these are treatment failures, re-infections or new infections is a challenge. Laboratory comparisons of matched isolates are planned to help categorize these concerning results. Study enrollment continues.

Disclosure No significant relationships.

P693   **NEISSERIA GONORRHOEAE IN-VITRO SUSCEPTIBILITIES TO CEFTRIAXONE, CEFIXIME AND AZITHROMYCIN IN GISP ISOLATES, 1987–2017**

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Background *In-vitro* susceptibility distributions to antibiotics can evolve over time because of emerging resistance determinants. This can affect clinical drug efficacy and interpretation of laboratory susceptibility tests. In January 2019, the Clinical Laboratory Standards Institute (CLSI) analyzed *Neisseria gonorrhoeae* (Ng) susceptibility parameters for ceftriaxone (CRO), cefixime (CFX) and azithromycin (AZI) to review interpretive criteria for laboratory tests.

Methods GISP (Gonococcal Isolate Surveillance Project) is a United States national surveillance project at approximately 25 sentinel STD clinics, collecting about 5,000 yearly urethral isolates from symptomatic men. From 1987–2017, minimal inhibitory drug concentrations (MIC) of 164,506 isolates were determined by agar dilution using CLSI-recommended protocols. Susceptibility parameters were calculated with R software, and included mean MIC, 98.5% MIC indicating end of wild-type distribution, and percent isolates meeting 2019 CLSI susceptibility (S) criteria (CRO, CFX, AZI $\leq$ 0.25, 0.25, 1 µg/mL, respectively) or current GISP alert definitions (CRO, CFX, AZI $\geq$ =0.125, 0.25, 2 µg/mL, respectively).

Results Since 1987, only 5 isolates did not meet CRO S criteria. CRO alerts peaked at 1.05% in 1991. Mean MICs were highest in 2016 (0.013 µg/mL; 95% CI: 0.013–0.013), but compared to the mean MIC when GISP began (0.011 µg/mL; 95% CI: 0.010–0.011) the difference was less than a full drug dilution. Isolates not meeting CFX S criteria, 76 since 1987, were at a 0.17% peak in 1992, as were mean MICs. Isolates not meeting AZI S criteria were highest at 3.6% and 4.4% in 2016 and 2017, respectively, as were mean MICs.

Conclusion Ng CRO and CFX *in-vitro* susceptibilities have not uniformly decreased since GISP began, while most indicators suggest declining AZI *in-vitro* susceptibility. CLSI reviewed these data in conjunction with clinical, pharmacokinetic/-dynamic and other international susceptibility data and kept steady (CRO, CFX) or established new (AZI) 2019 laboratory testing susceptibility criteria.

Disclosure No significant relationships.

P694   **CASE-BASED ENHANCED GONORRHEA SURVEILLANCE, CHICAGO, IL, 2018**

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Background In 2017, 11,730 gonorrhea (GC) cases were reported to Chicago Department of Public Health (CDPH), a 33% increase from 2015 (8,786 cases). CDPH conducted enhanced GC surveillance to identify factors that may inform interventions.

Methods A 33% random sample was selected for further investigation from lab-confirmed GC cases reported August - December 2018 (N=3,337), through Illinois National Electronic Disease Surveillance System. Enhanced surveillance data came from: (1) case telephone interviews, (2) provider case reports, and (3) web-based provider survey.

Results From October 2018 - February 2019, enhanced surveillance data was obtained from 459 cases (171 interviews, 399 provider reports; 111 with both), representing 68% of 672 cases with attempted contact, and 14% of all GC cases during the period. Survey respondents were representative of all reported cases: 68% male, median age 27 years, 53% Non-Hispanic Black, 22% Non-Hispanic White, 22% Hispanic. Prior GC infection was documented in 30% of cases, and was more prevalent among males (adjusted prevalence rate ratio [aPRR]= 1.90) and HIV infected persons (aPRR = 1.64). Adolescents and young adults (AYA; aged 13–24 years) comprised 47% of all reported GC cases. Compared to adults, AYA were less likely male (47% vs 80%, p<0.01), reported fewer sex partners, and less likely to have had syphilis testing (34% vs 46%, p=0.01), adequate GC treatment (78% vs 85%, p=0.09; 66% for female AYA), or PrEP awareness (52% vs 74%, p=0.02). Half (54%) of male AYA reported same sex partners. Provider case reports documented Expedited Partner Therapy in 2% of cases and 8% with referral to partner notification.

Conclusion Prior GC infection and HIV co-infection were prevalent, without discriminative factors, indicating innovative measures are needed. AYA differ substantially from adults in risk profile, and may have less complete case management. Age-specific and risk-targeted interventions are needed to optimally manage GC and interrupt transmission.

Disclosure No significant relationships.

P695   **EPIDEMIOLOGY OF KEY STIS AMONG FEMALE SEX WORKERS IN THE MIDDLE EAST AND NORTH AFRICA: SYSTEMATIC REVIEW AND META-ANALYTICS**

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Background This study characterizes the epidemiology of *Treponema pallidum* (syphilis), *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, *Trichomonas vaginalis*, and herpes simplex virus

type 2 (HSV-2) among female sex workers (FSWs) in the Middle East and North Africa (MENA), a neglected research area.

Methods Literature was systematically reviewed, with findings reported following PRISMA guidelines. Pooled prevalences of current and/or lifetime infection for each STI were estimated using random-effects meta-analyses. Sources of between-study heterogeneity were determined through meta-regressions.

Results One *T. pallidum* incidence study and 144 STI prevalence studies were identified for 45,812 FSWs in 13 MENA countries. Pooled prevalence of current infection was 12.7% (95% confidence interval-CI: 8.5–17.7%) for *T. pallidum*, 14.4% (95% CI: 8.2–22.0%) for *C. trachomatis*, 5.7% (95% CI: 3.5–8.4%) for *N. gonorrhoeae*, and 7.1% (95% CI: 4.3–10.5%) for *T. vaginalis*. Pooled prevalence of lifetime infection was 12.8% (95% CI: 9.4–16.6%) for *T. pallidum*, 80.3% (95% CI: 53.2–97.6%) for *C. trachomatis*, and 23.7% (95% CI: 10.2–40.4%) for HSV-2. The multivariable meta-regression for *T. pallidum* prevalence demonstrated strong subregional differences, with the Horn of Africa and North Africa showing, respectively, six-fold (adjusted odds ratio (AOR): 6.4; 95% CI: 2.5–16.8) and five-fold (AOR: 5.0; 95% CI: 2.4–10.6) higher odds for prevalence than Eastern MENA. There was also strong evidence for a declining *T. pallidum* prevalence at a rate of 7% per year (AOR: 0.93; 95% CI: 0.88–0.98). Study-specific factors including diagnostic method, sample size, sampling methodology, and response rate, were not associated with syphilis prevalence.

Conclusion STI infection levels among FSWs in MENA are considerable, supporting a key role for commercial heterosexual sex networks in transmission dynamics, and highlighting the health needs of this neglected and vulnerable population. Syphilis prevalence in FSWs appears to be declining for at least three decades. Gaps in evidence persist for multiple countries.

Disclosure No significant relationships.

P696   HIV AMONG FEMALE SEX WORKERS AND CLIENTS IN THE MIDDLE EAST AND NORTH AFRICA: SUBREGIONAL DIFFERENCES AND EPIDEMIC POTENTIAL

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Background This study addresses the gap in our understanding of HIV epidemiology among female sex workers (FSWs) and clients in the Middle East and North Africa (MENA) region.

Methods An exhaustive systematic review of population-size estimation and of HIV prevalence studies was conducted. Findings were reported following PRISMA guidelines. The pooled mean HIV prevalence was estimated using random-effects meta-analyses. Associations with prevalence, sources of heterogeneity, and temporal trends were investigated using meta-regressions.

Results We identified 270 size-estimation studies in FSWs and 42 in clients, as well as 485 HIV prevalence studies on 287,719 FSWs, and 69 on 29,531 clients/proxy populations (male sexually transmitted infections clinic attendees). The median proportion of reproductive-age women reporting current/recent sex work was 0.7% (range=0.2–2.4%), and of men reporting currently/recently buying sex was 5.7% (range=0.3–13.8%). HIV prevalence ranged from 0-70% in FSWs (median=0.1%), and 0–34.6% in clients (median=0.4%). The regional pooled mean HIV prevalence was 1.4% (95% CI=1.1–1.8%) in FSWs and 0.4% (95% CI=0.1–0.7%) in clients. Country-specific pooled HIV prevalence in FSWs was <1% in most countries, 1–5% in North Africa and Somalia, 17.3% in South Sudan, and 17.9% in Djibouti. Meta-regressions identified strong subregional variations in prevalence, where compared to Eastern MENA, the adjusted odds ratios (AORs) ranged from 0.2 (95% CI=0.1–0.4) in Fertile Crescent to 46.3 (95% CI=25.9–82.6) in Horn of Africa. There was also strong evidence for increasing prevalence post-2003, at a rate of 14% per year (AOR=1.14, 95% CI=1.08–1.20).

Conclusion HIV epidemics among FSWs are emerging in MENA, with some already in an established phase, though still some countries have limited epidemic dynamics. The epidemic has been growing for over a decade, with strong regionalization and heterogeneity.

Disclosure No significant relationships.

P697   FEASIBILITY OF HPV SELF-COLLECTION FOR CERVIX SCREENING IN UNDER-SCREENED STREET ENTRENCHED WOMEN

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Background HPV self-collection is a promising approach to improve uptake of cervical screening in under-screened women. The aim of this feasibility study was to measure uptake of HPV self-collection, HPV positivity, and screening history of street entrenched women in a rural region centre.

Methods Women 30–69 years of age, attending drop-in community-based primary care and integrative reproductive health clinics in Northern British Columbia (BC), Canada and self-reported not having received cervix screening in the last 3 years, were offered self-collection for HPV testing. A convenience sample of all comers was administered a questionnaire and underwent a medical chart review, including the provincial cervix screening registry. Demographics, HIV status, and cervix screening history were collected. All women who tested HPV16/18 positive were referred for colposcopy.

Results A total of 66 eligible women were analyzed (mean age 43.3 years), with population saturation reached after 3 months recruitment. An additional 11 women were deemed ineligible due to age or prior hysterectomy. 83% self-reported as Indigenous. Based on the provincial cervix screening registry, 48% of women were up-to-date on cervix screening based on