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TRENDS IN RECREATIONAL DRUG USE AND ASSOCIATIONS WITH CAS, HIV AND STI AMONG HIV-NEGATIVE MSM IN AMSTERDAM BETWEEN 2008–2017

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Background Recreational drug use (RDU), particularly during sex, may contribute to human immunodeficiency virus (HIV) and sexually transmitted infections (STI) transmission by increasing sexual risk behaviour. We studied changes in RDU, including chemsex, and associations with condomless anal sex (CAS), HIV and STI among HIV-negative men who have sex with men (MSM).

Methods MSM enrolled in the Amsterdam Cohort Studies with ≥ 1 study visit between 2008–2017 ($n=887$) were asked questions on behaviors in the preceding 6 months and underwent HIV/STI testing (chlamydia, gonorrhea, syphilis) biannually. Changes in RDU (overall/during sex) and chemsex (GHB/GBL, mephedrone, methamphetamine, ketamine, amphetamine, cocaine and/or XTC during sex), and their associations with CAS, HIV and any STI (<6 months), were tested across calendar years using logistic regression with generalized estimating equations, while adjusting for age, calendar year, country of birth and education level.

Results Of 884 included MSM, 83.5% were born in the Netherlands and 75.3% had a college degree. Median age on 1-January-2008 was 32.4 (IQR=24.9–38.9) years. Median number of visits with RDU data was 11 (IQR=5–18). RDU increased from 66.8% in 2008 to 70.0% in 2017 (2017 vs 2008: aOR=1.23, 95%CI=1.03–1.48). RDU during sex increased from 52.4% in 2008 to 58.7% in 2013 (2013 vs 2008: aOR=1.22, 95%CI=1.05–1.42) and remained stable afterwards. Chemsex increased from 19.3% in 2008 to 23.6% in 2017 (2017 vs 2008: aOR=1.52, 95%CI=1.21–1.90). Among those with a reported sex partner, RDU during sex was associated with CAS (aOR=1.33, 95%CI=1.17–1.52), HIV (aOR=7.92, 95%CI=2.75–22.8), and STI (aOR=2.31, 95%CI=1.92–2.77). Chemsex was associated with CAS (aOR=1.54, 95%CI=1.32–1.79), HIV (aOR=6.46, 95%CI=3.48–12.0), and STI (aOR=2.29, 95%CI=1.88–2.76).

Conclusion Slight increases in RDU and chemsex were found over time among HIV-negative MSM in Amsterdam and were strongly associated with CAS, HIV and STI. Effective interventions to reverse these trends in RDU are needed.

Disclosure No significant relationships.

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TRENDS IN HIV INFECTION AND AIDS IN MEN WHO HAVE SEX WITH MEN (MSM): ADULTS COMPARED TO YOUNG PEOPLE IN SAO PAULO, BRAZIL

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Background The objective was to analyze the trends of AIDS cases and HIV infection cases among man who have sex with man (MSM) adults versus young people (15–24 years old) in the period from 2007 and 2017.

Methods A trend study using polynomial regression models carried out with AIDS cases and HIV+ cases compared among MSM adults and young people (15–24 years old) in the period from 2007 to 2017. The annual number of AIDS cases and HIV+ cases was considered as the dependent variable (Y), regarding the studied categories, and time was the independent variable (X), represented by calendar years. The goodness of fit via r^2 and $p < 0.05$ were used to determine which models and data were most appropriate.

Results 88,025 AIDS cases were analyzed versus 70,753 HIV+ cases in adult men. For AIDS cases a decreasing trend was observed with first-order modeling [$Y = -205x + 9,235$; $r^2 = 0.83$; $p = 0.039$]; however for HIV+ the trend was increasing [$Y = 547x + 3,147$; $r^2 = 0.95$; $p < 0.001$]. Adult MSM with AIDS ($n = 20,837$) versus HIV+ ($N = 30,594$) were selected. For MSM-AIDS, a significant difference with increasing tendency was observed [$Y = 47x + 1,614$; $r^2 = 0.58$; $p = 0.050$] and for MSM-HIV+ the trend was increasing, but with higher growth rate [$391x + 430$; $r^2 = 0.97$; $p < 0.001$]. Young MSM (15–24yo) with AIDS ($N = 3,734$) versus HIV+ ($N = 10,185$) were selected. For young MSM-AIDS, there was an increasing tendency [$Y = 28x + 172$; $r^2 = 0.81$; $p = 0.036$] and for young MSM-HIV+ the tendency was increasing and with a higher rate [$155x - 8$; $r^2 = 0.96$; $p < 0.001$].

Conclusion The total number of cases of HIV+ men exceeded AIDS cases in 2014. However, among MSM-HIV+, the overcoming point was earlier in 2010, and among young people the overcoming point was earlier, before 2007. Among the MSM the trends of HIV and AIDS infection are markedly increasing among young people, highlighting the greater vulnerability of young MSM in Brazil in need of early HIV testing and timely treatment.

Disclosure No significant relationships.

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"STIS ARE EVERYONE'S RESPONSIBILITY": A NEW CONCEPTUAL MODEL OF SEXUAL HEALTH AMONG GAY AND BISEXUAL MEN

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Background Around the world, rates of sexually transmissible infections (STIs) continue to rise among gay and bisexual men. To respond to these increases, information is needed on the sociocultural realities underpinning prevention and management among at-risk populations, including gay and bisexual men.

Methods In mid-2018, qualitative data were collected from an Australian sample of gay men via a moderated online discussion forum ($n=35$) and in-depth interviews with forum participants ($n=5$) and sexual health physicians ($n=4$). An inductive thematic analysis was undertaken.

Results First, gay men and sexual health physicians mostly agreed that STIs should be a **normalised**, de-stigmatised aspect of sexuality. Second, many participants felt that STI prevention and management should be **individualised**, tailored to individual need and preference. Third, participants desired a **holistic**

approach to sexual health that encompassed multiple, complementary strategies for managing sexual health. Participants characterised this conceptual model as the 'ideal', acknowledging that in reality and within each domain this vision is not always realised. For example, participants described stigmatising reactions to partner notification and condom use (or non-use). Physicians, on the other hand, reflected on the real-life limitations of providing individualised patient care, particularly the strain frequent testing and treatment places on resource-limited health settings. Finally, many participants felt that some strategies (notably HIV pre-exposure prophylaxis) were disproportionately valued by individuals and health organisations, undermining a holistic approach by focusing on one dominant strategy.

Conclusion The conceptual model defined by this research provides a framework for future efforts to promote sexual health while acknowledging enduring challenges to normalised, individualised and holistic approaches. Gay and bisexual men and sexual health physicians value a multifaceted and choice-driven approach to sexual health, reinforcing the need for a menu of prevention options that reflect the realities of STI transmission balanced against the resources required to deliver sexual health care.

Disclosure No significant relationships.

P547 RELATIONSHIP LENGTH OF GAY MALE COUPLES AND SEXUALLY TRANSMITTED INFECTIONS

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Background Bacterial sexually transmitted infections (STIs) are preventable, treatable, and have been increasing among men who have sex with men due to limited STIs/HIV screening and high-risk sexual behaviors, including partner concurrency and condomless anal sex. Within stable relationships, sexual behavior patterns may change over time. This analysis was conducted to estimate if relationship length is associated with STIs prevalence among gay men couples.

Methods Gay men who reported having a primary relationship answered a survey and were tested for bacterial STIs (syphilis, chlamydia or gonorrhea) during 2015 in Lima, Peru. Among couples, discordant STI status (only one partner had an STI) and concordant status (both partners had the STI) were compared by STI. Generalized linear models, controlling for correlation between couple members, were used to estimate adjusted prevalence ratios (aPRs).

Results Overall, 254 individuals were included (98 couples and 58 one partner only). Median age was 26 years (IQR: 22–30), 62 individuals (24.4%) reported sex outside their relationship and 76 (29.9%) were diagnosed with at least one bacterial STI. Regarding relationship length, 86 (33.9%) had been in their current relationship <6 months, 86 (33.9%) between 6–18 months, and 78 (30.7%) for 18+ months. Among the 98 couples, more couples had discordant STI status than concordant status for syphilis (12.8% vs 4.3%,

$p=0.001$), chlamydia (25.0% vs 7.6%, $p<0.001$) and gonorrhea (20.7% vs 2.2%, $p<0.001$). Having a relationship for 18+ months was negatively associated with STI prevalence (aPR: 0.55, 95% CI: 0.30–0.98) after adjusting for age, HIV status, use of condom, and anal intercourse outside primary relationship.

Conclusion Our data suggest STIs prevalence is lower among gay men in longer term relationships. Future studies on gay male couples should consider the effect of relationship length on sexual behavior patterns to implement interventions for reducing STIs occurrence based on findings in a gay couple context.

Disclosure No significant relationships.

P548 ACUTE GASTROENTERITIS IN MEN-WHO-HAVE-SEX-WITH-MEN IN SEATTLE, WASHINGTON, 2017–2018

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Background Men-who-have-sex-with-men (MSM) are at increased risk for infection with enteric pathogens such as *Shigella* through sexual transmission. The etiology of acute gastroenteritis in this population has not been examined since the advent of molecular diagnostics. This study describes the causes of acute gastroenteritis in MSM in Seattle, Washington.

Methods Clinical and laboratory data were obtained for 226 MSM individuals seen in University of Washington-affiliated hospitals and clinics who underwent multiplex stool PCR testing (FilmArray GI Panel, BioFire Diagnostics, Salt Lake City, UT) from January 1, 2017 to June 1, 2018. Student's t-test and chi-square were used to determine significant differences between HIV-positive and HIV-negative men.

Results Of 226 individuals tested, 130 (57.5%) had at least one positive stool test. Of individuals with a positive test result, 70% were HIV-positive. Sixty-one percent of HIV-negative patients were using PrEP. Of the positive samples, 88.7% detected a bacterial etiology, 26% detected a virus, and 40% a protozoal pathogen. *Shigella*, *Campylobacter* and diarrhea-genic *E. coli* were the most commonly-detected bacteria (30.5%, 17.2% and 33.1% of positive samples, respectively), while norovirus was the most commonly-detected virus (15.2%), and *Giardia* was the most common parasite (20.5%). The etiologies of gastroenteritis were similar between HIV-positive and HIV-negative men. Cultured *Shigella* and *Campylobacter* isolates were frequently resistant to multiple antibiotics.

Conclusion MSM present with acute gastroenteritis caused by a range of pathogens, including some not detected by conventional stool culture, as well as sexually-transmitted pathogens such as *Shigella*, *Campylobacter* and *Giardia*. PrEP may be a risk factor for sexually-transmitted enteric infections as well as other STIs due to risk compensation. High levels of resistance to antibiotics used to treat gastroenteritis is consistent with a high rate of antibiotic exposure in this population and/or transmission of multi-resistant strains. New approaches may be needed to detect, treat and prevent enteric infections in MSM.

Disclosure No significant relationships.