P539 PREVALENCE OF *CHLAMYDIA TRACHOMATIS* AND *NEISSERIA GONORRHOEAE* AMONG MSM IN MOROCCO

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Background *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (NG) are the most common pathogens causing genital tract infections. They cause a significant global morbidity and mortality and have been associated with increased risk of HIV transmission, mainly among key populations fueling STIs and HIV. Men who have sex with men (MSM) had been classified by the Moroccan National AIDS Program (NAP) as a vulnerable risky group with higher burden of STIs. The aim of the present study is to assess the prevalence of CT and NG among MSM in Marrakech.
Methods From October to December 2017, a total of 238 MSM were enrolled in the study using Respondent-Driven Sampling (RDS). Access to this population was facilitated by an NGO evolving in the field of HIV and STIs, with extensive experience with hard- to- reach population. Eligible recruits were aged of 18 years and older and having lived in Marrakech for the previous six months. Socio-demographic and behavioral factors were collected using a structured questionnaire. CT and NG investigations were performed using the molecular test the Xpert CT/NG tests (Cepheid, USA) on anal swab samples.
Results The findings showed a prevalence of CT and NG of 9.24% (22/238) and 8.40 (20/238) respectively. A CT/NG co-infection was found in 3.36% (8/238) of cases. Fifty percent of MSM reported having passive anal sex with a male partner in the past six months and 44.1% have used Condom at the last passive anal sex.
Conclusion The prevalence of CT and NG among MSM in Marrakech has increased significantly compared to the results obtained in the first study conducted in 2010, which was 6.3% for CT and 2.4% for NG. These findings confirmed the need for the establishment and the expansion of programs targeting MSM in Morocco to strengthen the prevention and control the STIs among risky groups.
Disclosure No significant relationships.

P540 HPV (SERO) PREVALENCE AMONG YOUNG MSM VISITING THE STI CLINIC: OPPORTUNITIES FOR TARGETED HPV VACCINATION

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Background Because men who have sex with men (MSM) are disproportionally affected by human papillomavirus (HPV) related cancers, countries might consider targeted HPV vaccination for MSM. We assessed the prevalence of vaccine-preventable HPV types among young MSM visiting sexually transmitted infection (STI) clinics in the Netherlands.
Methods We used data from MSM included in the PASSYON study, a biennial cross-sectional study among STI clinic visitors aged 16–24 years that started in 2009 when girls-only HPV vaccination was introduced. MSM were asked to provide a penile and anal swab for HPV DNA testing (including the vaccine-preventable types HPV6/11/16/18/31/33/45/52/58) and blood for HPV antibody testing (HPV16/18/31/33/45/52/58).
Results We included 575 MSM with a median age of 22 years and a median of 15 lifetime partners. No trends in penile or anal HPV prevalence over time were seen. Of the 455 MSM with both swabs available, 79%, 62% and 53% were HPV DNA negative at both anatomic sites for HPV16/18, HPV6/11/16/18 and HPV6/11/16/18/31/33/45/52/58 respectively. Most of these MSM who were HPV DNA negative, were also seronegative (80% for HPV16/18 and 70% for HPV16/18/31/33/45/52/58).
Conclusion The HPV prevalence among MSM did not decline since girls-only vaccination was introduced indicating that MSM are unlikely to benefit from herd effects from girls-only vaccination. Because the majority of young MSM visiting the STI clinic were (sero)negative for HPV16/18, the most important oncogenic types in males, targeting this group for HPV vaccination could still be beneficial.
Disclosure No significant relationships.

P541 TO POOL OR NOT TO POOL STI SAMPLES IN MSM USING PREP? RESULTS OF THE COHMSM-PREP STUDY (ANRS 12369 – EXPERTISE FRANCE)

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Background Syndromic diagnosis of sexually transmitted infections (STIs) has shown its limits among MSM using PrEP due to the many asymptomatic infections. However, testing three biological sites (urethra, pharynx and anorectum) is expensive. Our objective was to implement and to evaluate a pooling method using the locally available GeneXpert instrument to test for *Chlamydia trachomatis (CT)* and *Neisseria gonorrhoeae (NG)* in the framework of the West-African CohMSM-PrEP study (Togo and Burkina Faso).
Methods Duplicate pharyngeal (P) and anorectal (A) e-swabs and first-void urine (U) samples were taken from every participant (n=192 in total). A specimen pool per participant (400 µL of each sample) was made and tested using the Xpert CT/NG kit. If positive, the individual samples were tested to confirm the site of infection. Duplicate individual samples were also tested for evaluation purposes using the Abbott CT/NG molecular technique and in-house qPCR.
Results A total of 32 CT infections (10U-20A-2P) and 34 NG infections (5U-19A-10P) were found. Twelve results obtained by testing of the pools were discordant from the individual

testing using Abbott CT/NG. When unpooling the samples, one discordant result was solved. Three CT infections (1 in each samplingsite) and four NG infections (2A and 2P) were missed; one CT (P) and three NG (A) infection were found to be false positive (one in each sampling site). This converts into a respective sensitivity and specificity of 91.2% (95%CI: 76.3–98.1%) and 99.8% (95%CI: 99.0–100.0%) for CT and 88.6% (95%CI: 73.3–96.8%) and 99.4% (95%: 98.3–99.9%) for NG of the pooling strategy. Cohen's Kappa agreement was 0.94 for CT and 0.89 for NG which is an almost perfect agreement.

Conclusion We showed that this pooling strategy performs well using the FDA approved point-of-care assay GeneXpert. This may be a very cost-effective strategy and also feasible, as the assay is widespread throughout the African continent for tuberculosis testing.

Disclosure No significant relationships.

P542 PREVALENCE OF STIS AMONG MSM INITIATING PREP IN WEST-AFRICA (COHMSM-PREP ANRS 12369 – EXPERTISE FRANCE)

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Background Men who have sex with men (MSM) coming forward for Pre-Exposure Prophylaxis (PrEP) are at high risk for HIV and other Sexually Transmitted Infections (STIs). However, little is known about the prevalence of STIs among MSM in West-Africa. Yet, understanding the STI epidemic among MSM will improve STI management. In the framework of a PrEP demonstration study in West-Africa (CohMSM-PrEP), we tested all participants for STIs at enrollment.

Methods The study was conducted in Abidjan-Côte d'Ivoire, Bamako-Mali, Lomé-Togo and Ouagadougou-Burkina Faso. Participants (n=507) were tested for the following STIs using the GeneXpert instrument: *Chlamydia trachomatis* (CT)/*Neisseria gonorrhoeae* (NG) in Anorectum (A), Urine (U) and Pharynx (P), and *Trichomonas vaginalis* (TV) in urine. *Mycoplasma genitalium* (MG) was tested using the S-DiagMGTV multiplex assay in A-U-P samples.

Results The overall prevalence of CT was 17.9% (19.4%, 22.0% 16.4%, and 13.6% in Lomé, Abidjan, Bamako and Ouagadougou, respectively). Most CT infections were anorectal (12.3%, followed by urethral (5.7%). In Bamako, the second most infected sample type was pharyngeal (6.0%) instead of urine (5.0%). Overall prevalence of NG was 15.8% (9.7%; 25.0%; 6.0%, 22.3% in Lomé, Abidjan, Bamako and Burkina, respectively). Most NG infections were found in the anorectum (10.7%), followed by the pharynx (5.7%). In Mali, no pharyngeal NG infections were detected. MG infection was 26.0% for Lomé and 27.6% for Ouagadougou (results for other sites not yet available). The majority of MG infections were found in the anorectum (15.4%). Among all participants, only one urine sample with TV has been found in Bamako.

Conclusion We showed a very high prevalence of extra-genital STIs among PrEP users in West-Africa. We also detected infections which would not have been treated if a syndromic management approach would have been applied (87.9%). In order to limit transmission of infections we recommend to test also extra-genital sites for STIs in this population.

Disclosure No significant relationships.

P543 COST-EFFECTIVENESS OF PRE-EXPOSURE PROPHYLAXIS IN MSM WITH EVENT-DRIVEN AND DAILY REGIMENS

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Background Pre-exposure prophylaxis (PrEP) is highly effective in reducing HIV transmission among men who have sex with men (MSM). We investigated the impact of daily and event-driven PrEP on the transmission of HIV and *N. gonorrhoeae* (NG) and its cost-effectiveness in the Netherlands.

Methods We developed a stochastic agent-based transmission model of HIV and NG among MSM. We simulated three scenarios: (1) No PrEP; (2) Offering daily and event-driven PrEP; (3) Offering only daily PrEP. Three-monthly PrEP monitoring included testing for HIV, gonorrhoea, and other infections. From the Amsterdam PrEP Demonstration Project (AMPrEP) data, it was estimated that 27% of PrEP users prefer event-driven PrEP and they use half the amount of PrEP pills used by daily users. We assumed PrEP effectiveness was 86% regardless of regimen. Simulated outcomes of the transmission model were used in an economic model to calculate costs, quality-adjusted life-years (QALY), and incremental cost-effectiveness ratios (ICER), over 2018–2027, taking a healthcare payer perspective. An ICER less than € 20,000 per QALY gained was considered cost-effective.

Results PrEP resulted in 3,486 HIV infections averted and 1,482 QALYs gained over 2018–2027. Gonorrhoea prevalence dropped from 0.782% in 2017 to 0.023% in 2027. When offering both daily and event-driven PrEP, the costs for PrEP medication were € 19 million over 2018–2027. This resulted in less total costs than when no PrEP is offered, making this programme cost-saving. With only daily PrEP, the costs for PrEP medication were € 22 million over 2018–2027, making this programme cost-effective with a mean ICER of € 217.40 per QALY gained.

Conclusion The PrEP programme (including STI monitoring) can be effective in reducing HIV incidence and gonorrhoea prevalence among MSM and can be cost-effective, even if all PrEP users prefer the daily regime. Monitoring of PrEP users can result in reductions in prevalence of STIs being monitored. Acknowledgements: AIDSfonds (2014037), ZonMw (522002003).

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