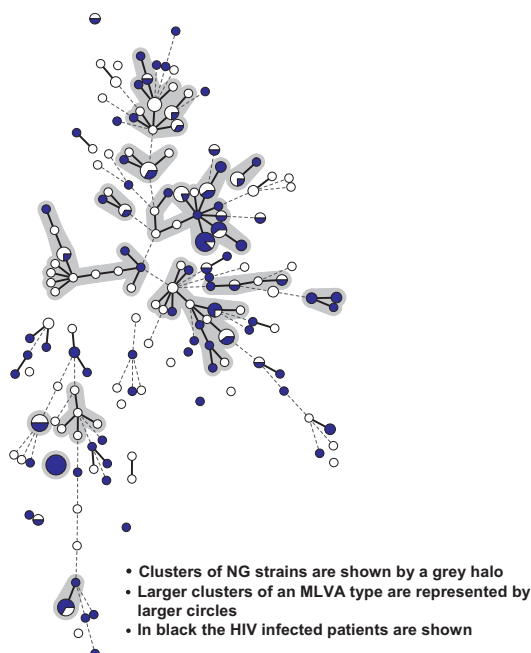


mid-90s the gonorrhoea transmission was raised posing a serious public health problem especially among men who have sex with men (MSM). We examined if separate sexual networks exist of HIV-infected and of HIV-negative MSM in relation to transmission of gonorrhoea. Using molecular typing of *Neisseria gonorrhoeae* (NG) we aimed to identify clusters of patients with specific NG strains and examined possible linkage to HIV infection and other characteristics.

**Methods** From July 2008 to August 2009, MSM visiting the Amsterdam outpatient clinic were recruited for a network study concerning sexually transmitted infections (STI). Inclusion criteria were age  $\geq 18$  years, homosexual contact in the preceding 6 months, and giving informed consent. After screening for STI the participants answered questions regarding sexual behaviour, meeting places, and characteristics of sexual partners (up to 4 sex partners). Only patients with an anal or genital NG infection (n=246) were included in the current analysis. NG cultures were amplified and genotyped using a published NG-MLVA typing method.

**Results** Included patients (median age 36 years, IQR 30–42) were predominantly Dutch (83%). Coinfections with chlamydia (28%) and HIV (48%) were common. Hierarchical cluster analysis of 246 MLVA profiles classified 152/246 MSM in 13 large clusters (5 to 36 patients) indicating the circulation and ongoing transmission of different NG strains in this population. In three clusters a significantly ( $p < 0.001$ ) higher proportion of NG isolates had decreased susceptibility to cefotaxime. HIV infected MSM were older than HIV negative MSM and were evenly distributed over the NG clusters (see Abstract P1-S2.45 figure 1). There were no significant differences in age, nationality, nor in other coinfections between the various NG clusters.



Abstract P1-S2.45 Figure 1 GGD.

**Conclusions** NG-MLVA revealed clusters of MSM reflecting distinct NG transmission networks in the Amsterdam population. As no NG clusters were identified that consisted predominantly of HIV infected or HIV negative MSM, it appears that there are no separate HIV infected and HIV negative sexual networks in the Amsterdam MSM population connected to gonorrhoea transmission.

# P1-S2.46

## IS GROUP SEX A SETTING FOR INCREASED RISK FOR HIV AND OTHER STI AMONG HIV-NEGATIVE MEN WHO HAVE SEX WITH MEN?

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**Background** Transmission of HIV and other Sexually Transmitted Infections (STI) is ongoing in Western populations of Men who have Sex with Men (MSM). The main indicator of sexual risk is unprotected anal intercourse (UAI) with casual sex partners. It was suggested that group sex might be a high risk setting for HIV and STI transmission. Aim of the present study is to identify differences in sexual risk behaviour and STI-rates among MSM engaging in group sex compared to one-on-one casual sex.

**Methods** We used cross-sectional data derived through 6-monthly questionnaires and STI screening (infectious syphilis, gonorrhoea or Chlamydia) from the Amsterdam Cohort Studies (ACS) between December 2008 and December 2009. The study population (n=310) consisted of HIV-negative MSM who reported having engaged in both group sex and one-on-one sex (n=119) and MSM reporting one-on-one sex only (n=191). To identify differences in sexual risk behaviour and STI-rates between MSM engaging in group sex and one-on-one sex, we used  $\chi^2$  tests, Mann-Whitney U tests and logistic regression analyses, corrected for repeated measures.

**Results** MSM engaging in both group sex and one-on-one sex had less anal intercourse (AI) during group sex (79/119; 66.4%) compared to during one-on-one sex (106/119; 89.1%). Moreover, they were less likely to have UAI during group sex compared to one-on-one sex (OR adj 0.44; 95% CI 0.26 to 0.74). Men engaging in one-on-one sex only reported less AI (129/191; 67.5%), while UAI-levels were similar (OR adj 1.47; 95% CI 0.82 to 2.62) compared to one-on-one sex of men who also engage in group sex. Drug use during sex was associated with UAI (OR adj 1.78; 95% CI 1.03 to 3.09), independent of whether sex took place in a group sex or one-on-one sex setting. Finally, men engaging in group sex were more likely to be diagnosed with any STI (13.4% vs 5.1%;  $p=0.013$ ) compared to men engaging in one-on-one sex only. For men engaging in one-on-one sex only, but not for men engaging in group sex, UAI was associated with being diagnosed with any STI (OR 8.44; 95% CI 2.0 to 35.2).

**Conclusions** The group sex setting might not pose a threat for HIV-infection in MSM, as UAI-rates were lower during group sex compared to one-on-one sex. However, although they did not report more UAI, men engaging in group sex had higher STI-rates than men engaging in one-on-one sex only. This indicates that men engaging in group sex practice other sexual techniques than AI that contribute to acquiring STI.

# P1-S2.47

## SEROSORTING AND SEXUAL RISK BEHAVIOUR DURING CASUAL SEX AMONG MSM - FROM ONE-NIGHT STANDS TO SEX BUDDIES

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**Background** Among HIV-negative men who have sex with men (MSM), any incident of unprotected anal intercourse (UAI) between casual partners is usually regarded as risky for HIV. However, men are increasingly using knowledge of their casual partner's HIV-status to reduce the risk for HIV during UAI (serosorting). Since familiarity between casual partners may lead to higher levels of UAI