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Influence of HIV and PrEP Use on High STI Prevalences in MSM in Germany, 2018

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Background

- Men who have sex with men (MSM) are disproportionally affected by sexually transmitted infections (STI). HIV-positive (HIV+) MSM often show higher prevalence.
- Asymptomatic STI can delay diagnosis and treatment.
- Approval of HIV pre-exposure prophylaxis (PrEP) in Germany in 2016 might have influenced sexual behavior and STI prevalence of HIV-negative (HIV-) MSM.
- **Study aim:** to estimate STI prevalence and risk factors amongst HIV+ and HIV- MSM in Germany and compare it systematically by HIV status and localization.

Methods

- Nationwide, cross-sectional study between February and July 2018.
- 13 MSM-friendly STI-clinics screened HIV+ and HIV- MSM for *Chlamydia trachomatis*, *Mycoplasma genitalium*, *Neisseria gonorrhoea*, and *Trichomonas vaginalis*.
- Material: self-collected rectal/pharyngeal swabs, and urine samples; APTIMA® STI-assays
- Questionnaire on sociodemographics, clinical status, sexual behavior and PrEP use
- Combining HIV status and PrEP use to define risk profiles (HIV+, HIV-/PreP-, HIV-/PrEP+).
- Multivariate logistic regression to identify risk factors for STI.

Results

Study Population

- 2,303 MSM recruited, 50.5% HIV+, median age: 39 years (range: 18-71 years).
- Median number of male sex partners: 5 (range 0-820); unprotected receptive anal intercourse (UAI, active or passive): 71.7%; use of party drugs✦ while last sexual encounter: 43.0%.
- 78.9% with STI history; 32.1% of STI+ MSM reported STI related symptoms.
- 27.6% (283) of HIV- MSM used PrEP. (✦Chrystal Meth, Cocaine, Ecstasy, GBL/GHB, Mephedrone/Spice, Speed)

STI Prevalences

- **Any STI: 30.1%** of all MSM (only 2 cases (0.1%) of *Trichomonas vaginalis*).
- All STI predominantly rectal; gonorrhoea also frequently pharyngeal (fig. 2).
- Coinfection with two or more agents: 16.7% MSM.
- No significant difference in STI prevalence between HIV- (30.7%) and HIV+ MSM (29.4%).
- Distinct differences between risk profiles (fig. 1).

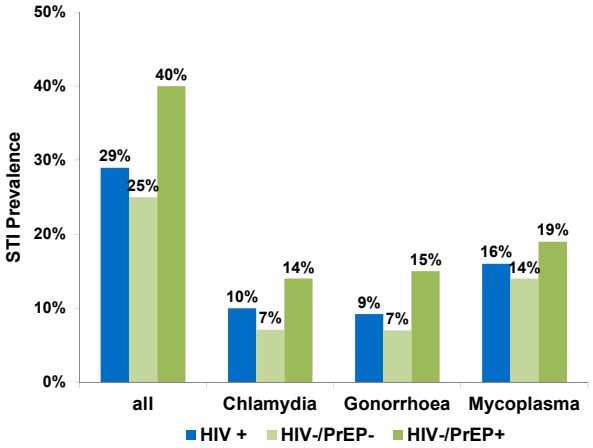

Figure 1: STI prevalence, by risk profile

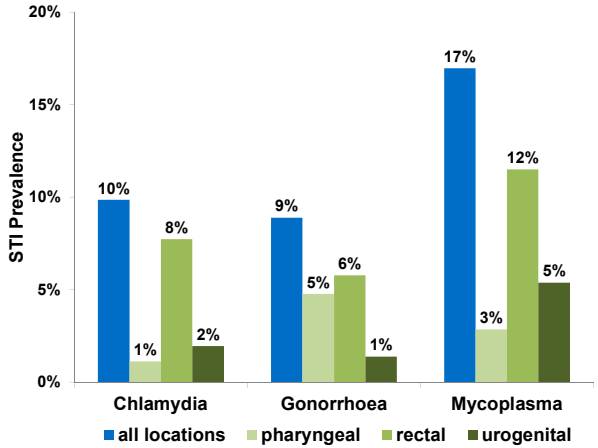

Figure 2: STI prevalence, by localization

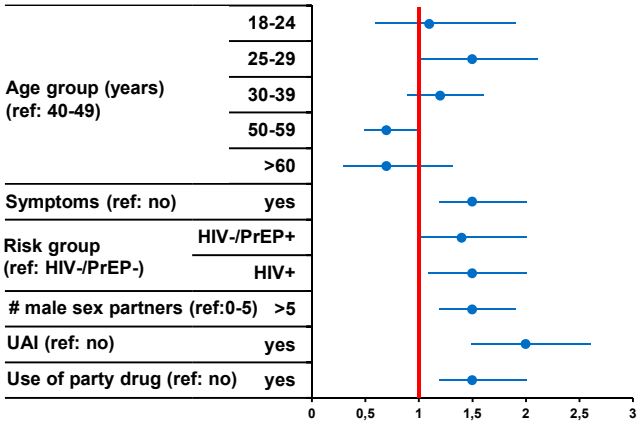

Figure 3: Risk factors associated with diagnosis of any STI (adjusted for city and anamnestic STI, n=1,711)

Conclusions

- High sexual risk behaviour and STI prevalence in MSM in Germany, especially Mycoplasma.
- High proportion of asymptomatic STI.
- Urogenital screening would have only found 27.7% of all STI.
- PrEP use combined with HIV status important independent risk factor for diagnosis of STI.
- Main behavioral risk factors: UAI, >5 male sex partners, use of party drugs.

Recommendations

1. Comprehensive, multi-localisation and highly frequent STI screening seems essential and should be available free of cost for PrEP users to facilitate early treatment and reduce further spread.
2. Counselling of PrEP users should address condom use and use of party drugs.
3. Antibiotic stewardship important to avoid antibiotic resistance in coinfected patients.

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