

High Prevalence of genital infections with *Mycoplasma genitalium* in female sex workers reached at their working place in Germany: the STI-Outreach Study

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Background & Objectives

- KABP-Survey on STI in female sex workers (FSW) in Germany (2010-2011): FSW without regular contact to local public health authorities (LPHA) could be at higher risk for STI
- Data on *Mycoplasma genitalium* (MG) in FSW is scarce
- MG could cause urethritis, cervicitis, pelvic inflammatory disease, and possibly female infertility

Objectives

- To measure prevalence of MG among "hard-to-reach" FSW in Germany
- To describe sociodemographic characteristics
- To analyse risk factors for acquiring MG
- To obtain access to gynaecological/ urological health services and LPHA

Methods

Low threshold multicenter approach in Berlin, Hamburg, and North Rhine-Westphalia

- Sample and data collection directly at workplace of SW by LPHA
- Voluntary and anonymous participation
- Extensive cultural and language mediation
- Easy self-collection of vaginal swabs by FSW
- Personal information of test results for chlamydia (CT) and gonorrhoea (GO)
- Free treatment for SW testing positive for CT or GO, no treatment for MG and Trichomonas vaginalis (TV) because tests for those after end of study
- Inclusion criteria: sex work, ≥ 18 years, no pregnancy, no recent use of tampons, no breast feeding, no prior study participation

- TMA based STI testing

- MG: Aptima[®] Mycoplasma genitalium assay (RUO, tested after end of study)
- CT and GO: Aptima Combo 2[®]
- TV: Trichomonas vaginalis Assay

- Participants questionnaire (filled in by outreach worker): age, sex, country of birth, German language skills, duration of sex work, ever visited a German LPHA
- Sex work-setting questionnaire: place of sex work, number of co-workers, distribution of origin, ever attended by LPHA
- Statistics: Descriptive analyses; multivariate logistic regression model to identify risk factors for acquiring MG

Results

- **Recruitment period:** 23.11.2012 - 30.9.2013
- **Participants:** 1,445 FSW enrolled by 20 LPHA at 292 working places
- 87.6% of FSW not born in Germany (Fig. 1)

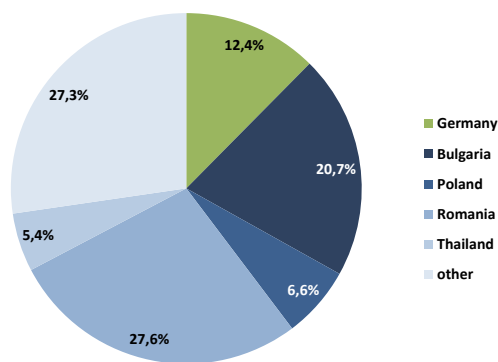


Figure 1. Country of birth of the female sex workers (n = 1,439)

- Significant differences in central sociodemographic and behavioural characteristics between FSW born in Germany or abroad (Tab. 1)

Table 1. Sociodemographic characteristics of FSW, by country of birth

	German FSW	Non-German FSW	p-value
Age (median; n= 1,439)	30 years	28 years	< .001
Duration of sex work (median; n=1,335)	4 years	3 years	< .001
No German skills (n= 1,261)	---	41.4%	---
Health insurance valid for Germany (n= 1,363)	89.3%	21.2%	< .001
Ever visited LPHA (n= 1,439)	69.5%	43.0%	< .001

- **MG prevalence: 18.4%**

- **Coinfections in MG positive FSW:** 18.4% coinfecting with CT or TV, 9.0% with GO
- **Working place:** brothels (25.9%), clubs/bars (20.2%), rented rooms inside brothels (18.1%), apartments (13.6%), sauna clubs (9.0%) and on the street (7.4%)
- positive diagnosis of MG was associated with younger age, being born in Bulgaria or Romania, having no German skills, and having no health insurance (Tab. 2)

Table 2. Multivariate logistic regression model for outcome „testing MG positive“ (n= 1.253)*

	Odds Ratio	95%-confidence interval	p-value
Age (per year increasing)	0.97	0.95 - 0.99	0.02
Country of birth			
Germany (reference)	1		
Bulgaria	2.92	1.20 – 7.16	0.02
Romania	3.44	1.42 – 8.33	0.01
Other Central Europe	2.49	0.90 – 6.88	0.08
Other countries	1.78	0.74 – 4.26	0.20
German language skills			
Fluent/basic German language skills (reference)	1		
No German language skills	3.08	1.19 – 7.98	0.02
Health insurance valid for Germany			
Yes (reference)	1		
No/do not know	1.78	1.00 – 3.17	0.05
Interaction term of German language skills and health insurance status			
None#no/do not know	0.36	0.13 – 0.97	0.04

* model adjusted for duration of sex work, prior contact to LPHA, typ of working place, size of working place

Conclusions

- Prevalences of MG and STI-coinfections were high in the study population. This cannot be assumed as being representative for German FSW population
- Lacking German language skills, no health insurance, rare contact to LPHA, and mostly foreign origin characterised a large proportion of study population
 → representing important barriers for accessing health services, partly associated with testing positive for MG
- High prevalences of CT, NG, and TV demonstrate need to foster prevention and health service for "hard to reach"-SW in terms of a comprehensive sexual health approach
- LPHA should consider offering tests for MG, and if testing positive for CT, GO, and TV, for FSW, in combination with cultural mediation