PrEP roll-out and COVID-19 are impacting community-based testing for HIV and other STI

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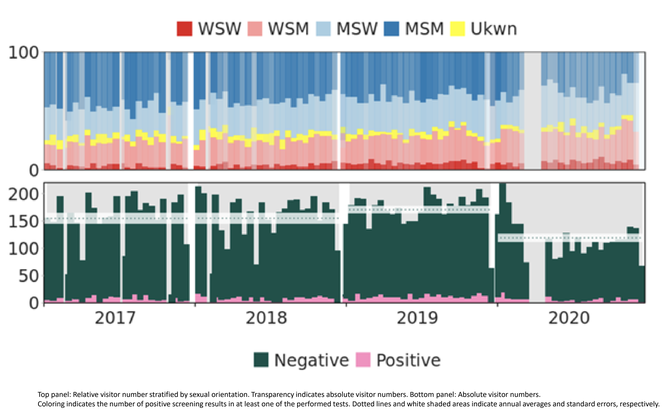
BACKGROUND

Published clinical and epidemiological data on individuals undergoing anonymous testing for sexually transmitted diseases (STI) in Germany are sparse. Here we report annual results of STI screenings and survey data from a large community based STI testing Checkpoint in Cologne, Germany in light of increased PrEP roll-out and the COVID-19 pandemic.

METHODS

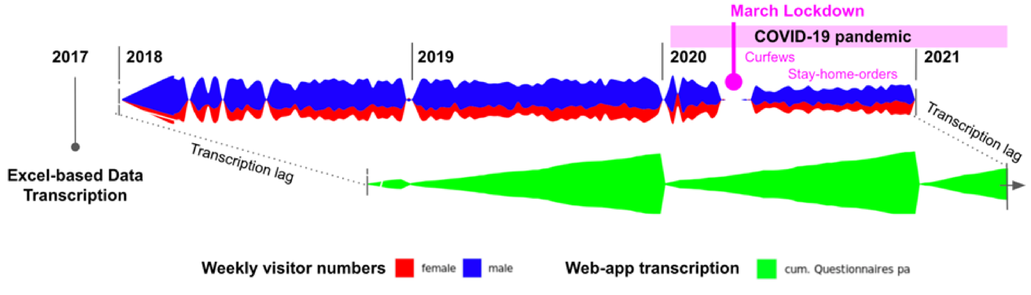
From January 2017 to December 2020, data on STI screening, clinical, demographic, sexual information was anonymously recorded for individuals attending the Checkpoint in Cologne. Visitors were screened for HIV, syphilis, chlamydia, gonorrhea and hepatitis C using point of care testing kits. Positive tests were validated.

Figure 1: Bi-weekly visitor numbers from 2017 to 2020.



Top panel: Relative visitor number stratified by sexual orientation. Transparency indicates absolute visitor numbers. Bottom panel: Absolute visitor numbers.
Coloring indicates the number of positive screening results in at least one of the performed tests. Dotted lines and white shaded areas indicate annual averages and standard errors, respectively.

Figure 2: Gantt chart of the Checkpoint survey project



In 5% of all visitors STIs were detected.
Despite increased PrEP roll-out MSM remain at highest risk for HIV infection.

RESULTS

Overall, screening was performed on 15,153 visitors aged 16 to 85 years. Three main reasons were identified: recent HIV risk situation (40%), routine testing (23%), new relationship (21%). The largest visitor group represented MSM with a mean frequency of 40% across all years, followed by MSW (28%) and WSM (22%).

Annual visitor numbers increased from 3,838 in 2017 by +3% and +6% for years 2018 and 2019, respectively. However, these figures declined by 40% in 2020 (COVID-19 lockdown). Frequency of MSM visitors declined from 46% in 2017 to 42%, 38%, and 35% in 2018 to 2020, respectively. In contrast, visitor numbers increased for all other groups from 2017 to 2020, with the highest relative change observed for WSW (+94%), followed by MSW (+25%) and MSW (+16%).

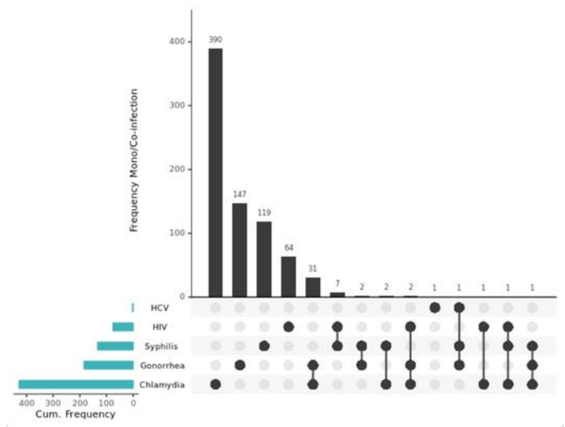
Table 1: Disease frequencies grouped by year 2017 to 2020

	Chlamydia				Gonorrhea				HCV		HIV				Syphilis			
	2017	2018	2019	2020	2017	2018	2019	2020	2019	2020	2017	2018	2019	2020	2017	2018	2019	2020
MSM	29 (41%)	46 (42%)	81 (49%)	33 (42%)	20 (74%)	39 (81%)	71 (89%)	26 (90%)	1 (100%)	1 (100%)	19 (90%)	22 (76%)	13 (93%)	11 (100%)	34 (65%)	20 (91%)	34 (92%)	18 (100%)
Unklar	16 (23%)	23 (21%)	5 (3%)	5 (6%)	6 (22%)	5 (10%)	2 (2%)	2 (7%)	0	0	1 (5%)	3 (10%)	1 (7%)	0	16 (31%)	1 (5%)	3 (8%)	0
MSW	14 (20%)	17 (16%)	36 (22%)	24 (30%)	1 (4%)	2 (4%)	4 (5%)	1 (3%)	0	0	1 (5%)	0	0	0	2 (4%)	1 (5%)	0	0
WSM	9 (13%)	17 (16%)	32 (19%)	17 (22%)	0	1 (2%)	1 (1%)	0	0	0	0	4 (14%)	0	0	0	0	0	0
WSW	3 (4%)	6 (6%)	13 (8%)	0	0	1 (2%)	2 (2%)	0	0	0	0	0	0	0	0	0	0	0

Annual number of visitors screened for HIV declined from 55% in 2017 to 42% in 2020, with increasing test frequencies for chlamydia and gonorrhoea (17% in 2017 to 29% in 2020) and for HCV (4% in 2017 to 9% in 2020). Syphilis screening frequency remained constant at approximately 19% annually. MSM had the highest disease frequency but MSW and WSM showed a continuous increase in chlamydia infections from 2017 to 2020 (from 20% to 30% and 13% to 22%, respectively).

Number of MSM visitors on PrEP increased from 2017 onwards, with +46% and +52% for years 2018 and 2019, and 7% for 2020 (COVID-19 lockdown).

Figure 3: Disease frequency distribution of mono and co-infections for years 2017 to 2020



CONCLUSIONS

Checkpoint was able to detect relevant STIs in 5% of all visitors thereby underling the importance of community-based testing sites particularly with increased PrEP roll-out and despite COVID-19 lockdown restrictions. Still, MSM remain at highest risk for contracting HIV highlighting the continuous need for educational activities as well as low-threshold and cost-free STI screening capacities.

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