

# **Appendix: Analysis of potential barriers for non-PrEP users among MSM in Germany**

## **Overview**

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## Appendix S1: Excerpt of survey questions from PrApp survey

Question	Answer options
<b>PrEP usage</b>	
Are you currently taking or have you ever taken preexposure prophylaxis (PrEP) against HIV?	<ul style="list-style-type: none"> <li>• Yes, I am taking PrEP on a daily basis.</li> <li>• Yes, I take it intermittently when I think I need it</li> <li>• Yes, I used to take PrEP, but I permanently stopped</li> <li>• No</li> </ul>
<b>General information</b>	
Have you participated in this survey before? (e.g. July – October 2018, April/May 2019 or March-May 2020 (only in last survey wave))	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> <li>• I don't remember</li> </ul>
How old are you?	
What gender do you identify with?	<ul style="list-style-type: none"> <li>• Male</li> <li>• Female</li> <li>• Inter</li> <li>• Trans male</li> <li>• Trans female</li> <li>• Non-binary</li> </ul>
What gender were you assigned at birth?	<ul style="list-style-type: none"> <li>• Male</li> <li>• Female</li> <li>• Intersexual</li> </ul>
In which country were you born?	List of countries with translations
What are the first three digits of the postal code of your residence in Germany? If you are not living in Germany, please indicate the first three digits of the postal code of the place where you are predominantly staying (e.g. hotel).	
What is the overall net income of the household you live in?	<ul style="list-style-type: none"> <li>• 1 to less than 1000 €</li> <li>• 1000 to less than 2000 €</li> <li>• 2000 to less than 3000 €</li> <li>• 3000 to less than 4000 €</li> <li>• 4000 to less than 5000 €</li> <li>• 5000 € and more</li> </ul>
With income we mean: salaries/wages, non-wage incomes, retirement pension, unemployment benefits, housing benefits, family allowances, etc. From this income, please subtract all taxes, operating expenses, and social security contributions	
How many people are living in your household?	<ul style="list-style-type: none"> <li>• I am living alone</li> <li>• xxx persons</li> </ul>
Did you graduate from school?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> <li>• Prefer not to say</li> </ul>
What school leaving qualification do you have?	<ul style="list-style-type: none"> <li>• Secondary school qualification (“Hauptschulabschluss” / “Volksschulabschluss”), class 8 to 9</li> <li>• Secondary school qualification (“Realschulabschluss”) O-Levels (“Mittlere Reife”), class 10</li> <li>• Grammar school qualification (“Gymnasium” or “EOS”), A-Levels (“Abitur”), class 12 or 13, Technical college qualification (“Fachhochschulreife”)</li> </ul>
<b>Sexual behaviour and risk behaviour</b>	
Are you having sex with... Select all that apply:	<ul style="list-style-type: none"> <li>• Men</li> <li>• Women</li> <li>• Non-binary people</li> </ul>

Question	Answer options
With how many different partners have you had anal and/or vaginal sex within the last 6 months?	<ul style="list-style-type: none"> <li>• 0</li> <li>• 1</li> <li>• 2-3</li> <li>• 4-5</li> <li>• 6-10</li> <li>• 11-20</li> <li>• more than 20</li> <li>• I don't know</li> </ul>
How often have you had anal and/or vaginal sex in the last month?	<ul style="list-style-type: none"> <li>• Not at all</li> <li>• 1-4 times</li> <li>• 5-8 times</li> <li>• 9-12 times</li> <li>• More than 12 times</li> <li>• I don't know</li> </ul>
Have you taken any substances in the last 6 months to have more intense or longer sex? e.g. GHB/GBL, crystal meth, ketamine, cocaine, speed, bath salts, mephedrone, ecstasy/MDMA	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> <li>• Prefer not to say</li> </ul>
Did you inject these substances?	<ul style="list-style-type: none"> <li>• Yes, but not within the last 6 months</li> <li>• Yes, 1-3 times within the last 6 months</li> <li>• Yes, more often than 3 times within the last 6 months</li> <li>• No</li> <li>• Prefer not to say</li> </ul>
Were you paid for sex within the last 6 months? By payment we mean the exchange of money, gifts, or favors for sex.	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> <li>• Prefer not to say</li> </ul>
How often do you use condoms for anal / vaginal sex in periods when you are taking PrEP?	<ul style="list-style-type: none"> <li>• Always (in more than 95% of the times)</li> <li>• Often (about 75% of the times)</li> <li>• About half of the times (50%)</li> <li>• Sometimes (about 25% of the times)</li> <li>• Never</li> <li>• I don't know</li> </ul>
How happy are you with your sex life at the moment?	<ul style="list-style-type: none"> <li>• Very happy</li> <li>• Happy</li> <li>• I'm not sure</li> <li>• Unhappy</li> <li>• Very unhappy</li> <li>• Sex is not important for me at the moment</li> </ul>
<b>Sexually transmitted infections</b>	
Have you had symptoms of a sexually transmitted infection in the last 12 months, e.g. pain when urinating, discharge, itching/pain in the anal area?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> <li>• Prefer not to say</li> </ul>
For which of the following STIs have you tested positive? / Which STIs have you ever been diagnosed with? Select all that apply:	<ul style="list-style-type: none"> <li>• Syphilis</li> <li>• Gonorrhea</li> <li>• Chlamydia</li> <li>• Hepatitis C</li> <li>• None</li> <li>• I don't remember</li> </ul>
How often have you been diagnosed with syphilis in the last 12 months?	<ul style="list-style-type: none"> <li>• 1-10</li> <li>• More than 10 times</li> </ul>
How often have you been diagnosed with gonorrhea in the last 12 months?	<ul style="list-style-type: none"> <li>• 1-10</li> <li>• More than 10 times</li> </ul>
How often have you been diagnosed with chlamydia in the last 12 months?	<ul style="list-style-type: none"> <li>• 1-10</li> <li>• More than 10 times</li> </ul>
How often have you been diagnosed with hepatitis C in the last 12 months?	<ul style="list-style-type: none"> <li>• 1-10</li> <li>• More than 10 times</li> </ul>
<b>Reasons for non-PrEP use</b>	

Question	Answer options
Why are you not using PrEP? (multiple answers)	<ul style="list-style-type: none"> <li>• My HIV risk is not high enough.</li> <li>• I am HIV-positive.</li> <li>• I cannot take PrEP due to medical reasons.</li> <li>• I can't find a doctor to prescribe PrEP to me.</li> <li>• I don't want to talk about my sexual life with my doctor.</li> <li>• The effort of regularly visiting a doctor for refills and medical tests is too high for me.</li> <li>• Taking a pill every day is too demanding for me.</li> <li>• I am afraid of negative reactions from others / sexual partners.</li> <li>• I am afraid of side effects.</li> </ul>
The survey waves were conducted 24.02.2020 - 19.05.2020 and 02.11.2020 - 07.01.2021.	

## Appendix S2: Grouping of variables

Variable	Grouping
age	18–29 30–39 (R) 40–49 50–80
country of origin	Germany / Outside Germany (R)
urban vs. rural area	urban area (R) / rural area
HIV-specialists density in federal state of residence	0 1–2 3–5 6–9 (R) 10–13
school leaving certificate	no school leaving certificate secondary school qualification (class 8 to 9) secondary school qualification (class 10) A-Levels (class 12 or 13) (R)
monthly net-equivalent income	<1000€ 1000 – <2000€ 2000 – <3000€ (R) 3000 – <4000€ 4000 – <5000€ ≥5000€
satisfaction with sex life	content (R) discontent sex doesn't matter right now
sex with men	yes / no
sex with women	yes / no
sex with non-binary people	yes / no
sex partners in the last 6 months	0 1 2–3 4–5 6–10 11–20 >20 (R)
sex frequency last month	0x 1–4x (R) 5–8x 9–12x >12x
sexualized substance use in the last 6 months	yes / no
injective sexualized substance use	yes, but not in the last 6 months yes, 1–3x in the last 6 months yes, more than 3x in the last 6 months no (R)
payment for sex in the last 6 months	yes / no
condom use	0% 25% (R) 50% 75% >95%
STI symptoms in the last 12 months	yes / no
syphilis diagnosis in the past	yes / no
gonorrhea diagnosis in the past	yes / no
chlamydia diagnosis in the past	yes / no
hepatitis C diagnosis in the past	yes / no
no STI diagnoses in the past	yes / no
syphilis diagnoses in the last 12 months	0 / 1 (R) / ≥2
gonorrhea diagnoses in the last 12 months	0 / 1 (R) / ≥2
chlamydia diagnoses in the last 12 months	0 / 1 (R) / ≥2
hepatitis C diagnoses in the last 12 months	0 / 1

(R) indicates the reference category

### Appendix S3: Comparison of PrEP and non-PrEP users with a PrEP indication

	PrEP users, n (%)	Non-PrEP users, n (%)	$\beta$ (95% CI) <sup>a</sup>	P-value <sup>b</sup>
<b>Total (n)</b>	1027	431		
<b>Age (years)</b>				
Median (IQR)	38 (31 - 45)	35 (28 - 43.5)	-	
18-29, n (%)	201 (19.6%)	136 (31.6%)	-0.24 (-0.46 - -0.03)	0.013
30-39, n (%)	358 (34.9%)	132 (30.6%)	0	
40-49, n (%)	306 (29.8%)	97 (22.5%)	0.07 (0.00 - 0.27)	0.308
50-80, n (%)	162 (15.8%)	66 (15.3%)	-0.01 (-0.23 - 0.00)	0.502
Missing, n (%)	0 (0%)	0 (0%)	-	
<b>Country of origin, n (%)</b>				
Germany	847 (82.5%)	337 (78.2%)	0.00 (0.00 - 0.18)	0.617
Outside Germany	180 (17.5%)	94 (21.8%)		
Missing	0 (0%)	0 (0%)	-	
<b>Urban-rural area (based on plz), n (%)</b>				
Urban area	900 (87.6%)	352 (81.7%)	0	
Rural area	105 (10.2%)	61 (14.2%)	0.00 (-0.21 - 0.00)	0.575
Missing	22 (2.1%)	18 (4.2%)	-	
<b>Density of HIV-specialists in federal state of residence, n (%)</b>				
0	12 (1.2%)	4 (0.9%)	0.00 (0.00 - 0.00)	1.000
1-2	81 (7.9%)	42 (9.7%)	0.00 (0.00 - 0.00)	0.976
3-5	255 (24.8%)	105 (24.4%)	0.00 (0.00 - 0.21)	0.518
6-9	369 (35.9%)	181 (42.0%)	0	
10-13	288 (28.0%)	81 (18.8%)	0.29 (0.09 - 0.51)	0.004
Missing	22 (2.1%)	18 (4.2%)	-	
<b>Type of school qualification, n (%)</b>				
No school leaving qualification	7 (0.7%)	9 (2.1%)	0.00 (0.00 - 0.00)	0.985
class 8/9	49 (4.8%)	20 (4.6%)	0.00 (0.00 - 0.00)	0.994
class 10	190 (18.5%)	104 (24.1%)	-0.11 (-0.33 - 0.00)	0.159
A-Levels (class 12 or 13)	776 (75.6%)	288 (66.8%)	0	
Missing	5 (0.5%)	10 (2.3%)	-	
<b>Monthly net equivalent income, n (%)</b>				
<1000€	79 (7.7%)	74 (17.2%)	-0.30 (-0.52 - -0.03)	0.014
1000 - <2000€	234 (22.8%)	126 (29.2%)	-0.09 (-0.28 - 0.00)	0.225
2000 - <3000€	294 (28.6%)	120 (27.8%)	0	
3000 - <4000€	189 (18.4%)	49 (11.4%)	0.15 (0.00 - 0.39)	0.103
4000 - <5000€	143 (13.9%)	33 (7.7%)	0.09 (0.00 - 0.33)	0.232
≥5000€	44 (4.3%)	10 (2.3%)	0.00 (0.00 - 0.09)	0.885
Missing	44 (4.3%)	19 (4.4%)	-	
<b>Sex life, n (%)</b>				
Content	717 (69.8%)	206 (47.8%)	0	
Discontent	148 (14.4%)	108 (25.1%)	-0.25 (-0.47 - -0.02)	0.018
Sex doesn't matter right now	12 (1.2%)	14 (3.2%)	0.00 (0.00 - 0.00)	0.993
Missing	150 (14.6%)	103 (23.9%)	-	
<b>Number of sex partners within the last 6 months, n (%)</b>				
0	2 (0.2%)	8 (1.9%)	0.00 (0.00 - 0.00)	0.996
1	3 (0.3%)	21 (4.9%)	-0.27 (-0.52 - 0.00)	0.042
2-3	123 (12.0%)	134 (31.1%)	-0.78 (-0.99 - -0.55)	0.000
4-5	164 (16.0%)	101 (23.4%)	-0.32 (-0.53 - -0.08)	0.004
6-10	242 (23.6%)	83 (19.3%)	0.00 (0.00 - 0.11)	0.831
11-20	193 (18.8%)	35 (8.1%)	0.27 (0.04 - 0.50)	0.011
>20	286 (27.8%)	47 (10.9%)	0	
Missing	14 (1.4%)	2 (0.5%)	-	
<b>Condom use, n (%)</b>				
0%	322 (31.4%)	62 (14.4%)	0.50 (0.29 - 0.71)	0.000
25%	339 (33.0%)	113 (26.2%)	0	
50%	154 (15.0%)	101 (23.4%)	-0.29 (-0.51 - -0.07)	0.006
75%	106 (10.3%)	55 (12.8%)	0.00 (-0.19 - 0.00)	0.695
>95%	86 (8.4%)	97 (22.5%)	-0.59 (-0.83 - -0.35)	0.000
Missing	20 (1.9%)	3 (0.7%)	-	
<b>Number of sexual intercours in the last month, n (%)</b>				
0	69 (6.7%)	63 (14.6%)	-0.08 (-0.32 - 0.00)	0.293
1-4	442 (43.0%)	217 (50.3%)	0	
5-8	232 (22.6%)	68 (15.8%)	0.03 (0.00 - 0.25)	0.427
9-12	104 (10.1%)	40 (9.3%)	0.00 (-0.09 - 0.00)	0.892

	PrEP users, n (%)	Non-PrEP users, n (%)	$\beta$ (95% CI) <sup>a</sup>	P-value <sup>b</sup>
>12	168 (16.4%)	38 (8.8%)	0.14 (0.00 - 0.38)	0.110
Missing	12 (1.2%)	5 (1.2%)	-	
<b>Drugs during sex in the last 6 months, n (%)</b>				
Yes	201 (19.6%)	130 (30.2%)	-0.38 (-0.58 - -0.17)	0.000
No	808 (78.7%)	289 (67.1%)		
Missing	18 (1.8%)	12 (2.8%)	-	
<b>Injecting drugs during sex, n (%)</b>				
Yes, but 0x in the last 6 months	2 (0.2%)	5 (1.2%)	0.00 (0.00 - 0.00)	1.000
Yes, 1-3x in the last 6 months	10 (1.0%)	4 (0.9%)	0.00 (0.00 - 0.00)	1.000
Yes, >3x in the last 6 months	17 (1.7%)	6 (1.4%)	0.00 (0.00 - 0.00)	1.000
No	171 (16.7%)	114 (26.5%)	0	
Missing	827 (80.5%)	302 (70.1%)	-	
<b>Payment for sex in the last 6 months, n (%)</b>				
Yes	58 (5.6%)	37 (8.6%)	0.00 (-0.20 - 0.00)	0.653
No	964 (93.9%)	381 (88.4%)		
Missing	5 (0.5%)	13 (3.0%)	-	
<b>Number of syphilis diagnosis in the last 12 months, n (%)</b>				
0	166 (16.2%)	52 (12.1%)	0	
1	107 (10.4%)	42 (9.7%)	0.00 (-0.06 - 0.00)	0.935
≥2	11 (1.1%)	2 (0.5%)	0.00 (0.00 - 0.00)	1.000
Missing	743 (72.3%)	335 (77.7%)	-	
<b>Number of gonorrhoea diagnosis in the last 12 months, n (%)</b>				
0	173 (16.8%)	65 (15.1%)	0.00 (-0.18 - 0.00)	0.663
1	200 (19.5%)	56 (13.0%)	0	
≥2	68 (6.6%)	10 (2.3%)	0.00 (0.00 - 0.13)	0.800
Missing	586 (57.1%)	300 (69.6%)	-	
<b>Number of chlamydia diagnosis in the last 12 months, n (%)</b>				
0	132 (12.9%)	40 (9.3%)	0.00 (-0.03 - 0.00)	0.956
1	221 (21.5%)	59 (13.7%)	0	
≥2	59 (5.7%)	2 (0.5%)	0.10 (0.00 - 0.28)	0.180
Missing	615 (59.9%)	330 (76.6%)	-	
<b>Number of hepatitis C diagnosis in the last 12 months, n (%)</b>				
0	20 (1.9%)	17 (3.9%)		
1	5 (0.5%)	1 (0.2%)	0.00 (0.00 - 0.00)	1.000
Missing	1002 (97.6%)	413 (95.8%)	-	
<b>Gender of sexual partners, n (%) (multiple responses possible)</b>				
Male	1027 (100.0%)	430 (99.8%)	0.00 (0.00 - 0.00)	1.000
Female	44 (4.3%)	46 (10.7%)	-0.23 (-0.48 - 0.00)	0.056
Non-binary	33 (3.2%)	13 (3.0%)	0.00 (0.00 - 0.00)	0.999
Missing	0 (0%)	0 (0%)	-	
<b>STI symptoms in the last 12 months, n (%)</b>				
Yes	352 (34.3%)	135 (31.3%)	0.00 (-0.14 - 0.01)	0.726
No	673 (65.5%)	294 (68.2%)		
Missing	2 (0.2%)	2 (0.5%)	-	
<b>Positive STI test in your life, n (%)</b>				
Syphilis	288 (28.0%)	99 (23.0%)	0.00 (-0.03 - 0.12)	0.813
Gonorrhoea	444 (43.2%)	131 (30.4%)	0.11 (0.00 - 0.32)	0.100
Chlamydia	420 (40.9%)	101 (23.4%)	0.41 (0.20 - 0.62)	0.000
Hepatitis C	25 (2.4%)	18 (4.2%)	0.00 (-0.21 - 0.00)	0.680
Never	322 (31.4%)	177 (41.1%)	0.00 (0.00 - 0.08)	0.883

<sup>a</sup>multivariable logistic regression coefficients and bootstrap-based 95% percentile confidence interval,

<sup>b</sup>single sided bootstrap-based P-values. CI confidence interval, PrEP pre-exposure prophylaxis, STI sexually transmitted infection

**Appendix S4:** Sensitivity analysis of multivariable logistic regression model including missing values as a separate category

	<b>PrEP users, n (%)</b>	<b>Non-PrEP users, n (%)</b>	<b><math>\beta</math> (95% CI)<sup>a</sup></b>	<b>P-value<sup>b</sup></b>
<b>Total (n)</b>	1027	431		
<b>Age (years)</b>				
Median (IQR)	38 (31 - 45)	35 (28 - 43.5)	-	
18-29, n (%)	201 (19.6%)	136 (31.6%)	-0.24 (-0.46 - -0.03)	0.013
30-39, n (%)	358 (34.9%)	132 (30.6%)	0	
40-49, n (%)	306 (29.8%)	97 (22.5%)	0.06 (0.00 - 0.26)	0.320
50-80, n (%)	162 (15.8%)	66 (15.3%)	-0.03 (-0.25 - 0.00)	0.466
Missing, n (%)	0 (0%)	0 (0%)	0.00 (0.00 - 0.00)	1.000
<b>Country of origin, n (%)</b>				
Germany	847 (82.5%)	337 (78.2%)	0.00 (0.00 - 0.17)	0.662
Outside Germany	180 (17.5%)	94 (21.8%)		
Missing	0 (0%)	0 (0%)	-	
<b>Urban-rural area (based on plz), n (%)</b>				
Urban area	900 (87.6%)	352 (81.7%)	0	
Rural area	105 (10.2%)	61 (14.2%)	0.00 (-0.25 - 0.00)	0.550
Missing	22 (2.1%)	18 (4.2%)	0.00 (-0.19 - 0.00)	0.598
<b>Density of HIV-specialists in federal state of residence, n (%)</b>				
0	12 (1.2%)	4 (0.9%)	0.00 (0.00 - 0.00)	1.000
1-2	81 (7.9%)	42 (9.7%)	0.00 (0.00 - 0.00)	0.979
3-5	255 (24.8%)	105 (24.4%)	0.00 (0.00 - 0.20)	0.551
6-9	369 (35.9%)	181 (42.0%)	0	
10-13	288 (28.0%)	81 (18.8%)	0.29 (0.09 - 0.51)	0.003
Missing	22 (2.1%)	18 (4.2%)	0.00 (-0.16 - 0.00)	0.616
<b>Type of school qualification, n (%)</b>				
No school leaving qualification	7 (0.7%)	9 (2.1%)	0.00 (0.00 - 0.00)	0.984
class 8/9	49 (4.8%)	20 (4.6%)	0.00 (0.00 - 0.00)	0.996
class 10	190 (18.5%)	104 (24.1%)	-0.10 (-0.31 - 0.00)	0.187
A-Levels (class 12 or 13)	776 (75.6%)	288 (66.8%)	0	
Missing	5 (0.5%)	10 (2.3%)	0.00 (-0.01 - 0.00)	0.970
<b>Monthly net equivalent income, n (%)</b>				
<1000€	79 (7.7%)	74 (17.2%)	-0.27 (-0.50 - -0.01)	0.022
1000 - <2000€	234 (22.8%)	126 (29.2%)	-0.08 (-0.28 - 0.00)	0.243
2000 - <3000€	294 (28.6%)	120 (27.8%)	0	
3000 - <4000€	189 (18.4%)	49 (11.4%)	0.16 (0.00 - 0.39)	0.098
4000 - <5000€	143 (13.9%)	33 (7.7%)	0.09 (0.00 - 0.33)	0.238
≥5000€	44 (4.3%)	10 (2.3%)	0.00 (0.00 - 0.09)	0.896
Missing	44 (4.3%)	19 (4.4%)	0.00 (-0.04 - 0.00)	0.958
<b>Sex life, n (%)</b>				
Content	717 (69.8%)	206 (47.8%)	0	
Discontent	148 (14.4%)	108 (25.1%)	-0.31 (-0.52 - -0.07)	0.006
Sex doesn't matter right now	12 (1.2%)	14 (3.2%)	0.00 (0.00 - 0.00)	0.990
Missing	150 (14.6%)	103 (23.9%)	-0.26 (-0.48 - -0.02)	0.014
<b>Number of sex partners within the last 6 months, n (%)</b>				
0	2 (0.2%)	8 (1.9%)	0.00 (0.00 - 0.00)	0.995
1	3 (0.3%)	21 (4.9%)	-0.26 (-0.50 - 0.00)	0.047
2-3	123 (12.0%)	134 (31.1%)	-0.76 (-0.98 - -0.54)	0.000
4-5	164 (16.0%)	101 (23.4%)	-0.31 (-0.52 - -0.07)	0.005
6-10	242 (23.6%)	83 (19.3%)	0.00 (0.00 - 0.12)	0.810
11-20	193 (18.8%)	35 (8.1%)	0.26 (0.04 - 0.50)	0.012
>20	286 (27.8%)	47 (10.9%)	0	
Missing	14 (1.4%)	2 (0.5%)	0.00 (0.00 - 0.00)	1.000
<b>Condom use, n (%)</b>				
0%	322 (31.4%)	62 (14.4%)	0.49 (0.28 - 0.70)	0.000
25%	339 (33.0%)	113 (26.2%)	0	
50%	154 (15.0%)	101 (23.4%)	-0.29 (-0.51 - -0.06)	0.006
75%	106 (10.3%)	55 (12.8%)	0.00 (-0.18 - 0.00)	0.702
>95%	86 (8.4%)	97 (22.5%)	-0.59 (-0.83 - -0.35)	0.000
Missing	20 (1.9%)	3 (0.7%)	0.00 (0.00 - 0.00)	0.975
<b>Number of sexual intercours in the last month, n (%)</b>				
0	69 (6.7%)	63 (14.6%)	-0.07 (-0.31 - 0.00)	0.310
1-4	442 (43.0%)	217 (50.3%)	0	
5-8	232 (22.6%)	68 (15.8%)	0.01 (0.00 - 0.23)	0.472



	<b>PrEP users, n (%)</b>	<b>Non-PrEP users, n (%)</b>	<b><math>\beta</math> (95% CI)<sup>a</sup></b>	<b>P-value<sup>b</sup></b>
9-12	104 (10.1%)	40 (9.3%)	0.00 (-0.10 - 0.00)	0.873
>12	168 (16.4%)	38 (8.8%)	0.12 (0.00 - 0.36)	0.152
Missing	12 (1.2%)	5 (1.2%)	0.00 (0.00 - 0.00)	1.000
<b>Drugs during sex in the last 6 months, n (%)</b>				
Yes	201 (19.6%)	130 (30.2%)	-0.32 (-0.51 - -0.10)	0.002
No	808 (78.7%)	289 (67.1%)	0	
Missing	18 (1.8%)	12 (2.8%)	0.00 (-0.03 - 0.00)	0.964
<b>Injecting Drugs during sex, n (%)</b>				
Yes, 0x in the last 6 months	2 (0.2%)	5 (1.2%)	0.00 (0.00 - 0.00)	1.000
Yes, 1-3x in the last 6 months	10 (1.0%)	4 (0.9%)	0.00 (0.00 - 0.00)	1.000
Yes, >3x in the last 6 months	17 (1.7%)	6 (1.4%)	0.00 (0.00 - 0.00)	1.000
No	171 (16.7%)	114 (26.5%)	-0.09 (-0.30 - 0.00)	0.191
Missing	827 (80.5%)	302 (70.1%)	0	
<b>Payment for sex in the last 6 months, n (%)</b>				
Yes	58 (5.6%)	37 (8.6%)	0.00 (-0.19 - 0.00)	0.667
No	964 (93.9%)	381 (88.4%)	0	
Missing	5 (0.5%)	13 (3.0%)	0.00 (-0.07 - 0.00)	0.920
<b>Number of syphilis diagnosis in the last 12 months, n (%)</b>				
0	166 (16.2%)	52 (12.1%)	0.00 (0.00 - 0.12)	0.849
1	107 (10.4%)	42 (9.7%)	0.00 (-0.06 - 0.00)	0.939
$\geq 2$	11 (1.1%)	2 (0.5%)	0.00 (0.00 - 0.00)	1.000
Missing	743 (72.3%)	335 (77.7%)	0	
<b>Number of gonorrhoea diagnosis in the last 12 months, n (%)</b>				
0	173 (16.8%)	65 (15.1%)	0.00 (-0.14 - 0.00)	0.747
1	200 (19.5%)	56 (13.0%)	0.03 (0.00 - 0.24)	0.398
$\geq 2$	68 (6.6%)	10 (2.3%)	0.00 (0.00 - 0.14)	0.770
Missing	586 (57.1%)	300 (69.6%)	0	
<b>Number of chlamydia diagnosis in the last 12 months, n (%)</b>				
0	132 (12.9%)	40 (9.3%)	0.00 (0.00 - 0.00)	0.975
1	221 (21.5%)	59 (13.7%)	0.00 (0.00 - 0.08)	0.896
$\geq 2$	59 (5.7%)	2 (0.5%)	0.10 (0.00 - 0.28)	0.174
Missing	615 (59.9%)	330 (76.6%)	0	
<b>Number of hepatitis C diagnosis in the last 12 months, n (%)</b>				
0	20 (1.9%)	17 (3.9%)	0.00 (-0.21 - 0.00)	0.564
1	5 (0.5%)	1 (0.2%)	0.00 (0.00 - 0.00)	1.000
Missing	1002 (97.6%)	413 (95.8%)	0	
<b>Gender of sexual partners, n (%) (multiple responses possible)</b>				
Male	1027 (100.0%)	430 (99.8%)	0.00 (0.00 - 0.00)	1.000
Female	44 (4.3%)	46 (10.7%)	-0.24 (-0.49 - 0.00)	0.053
Non-binary	33 (3.2%)	13 (3.0%)	0.00 (0.00 - 0.00)	0.999
Missing	0 (0%)	0 (0%)	-	
<b>STI symptoms in the last 12 months, n (%)</b>				
Yes	352 (34.3%)	135 (31.3%)	0.00 (-0.14 - 0.00)	0.741
No	673 (65.5%)	294 (68.2%)	0	
Missing	2 (0.2%)	2 (0.5%)	0.00 (0.00 - 0.00)	1.000
<b>Positive STI test in your life, n (%)</b>				
Syphilis	288 (28.0%)	99 (23.0%)	0.00 (-0.02 - 0.10)	0.835
Gonorrhoea	444 (43.2%)	131 (30.4%)	0.10 (0.00 - 0.29)	0.168
Chlamydia	420 (40.9%)	101 (23.4%)	0.39 (0.19 - 0.60)	0.000
Hepatitis C	25 (2.4%)	18 (4.2%)	0.00 (-0.13 - 0.00)	0.754
Never	322 (31.4%)	177 (41.1%)	0.00 (0.00 - 0.09)	0.865

<sup>a</sup> multivariable logistic regression coefficients and bootstrap-based 95% percentile confidence interval,

<sup>b</sup> single sided bootstrap-based P-values. CI confidence interval, PrEP pre-exposure prophylaxis, STI sexually transmitted infection