

DoxyPEP among MSM and TGW in Belgium:
awareness, use, and antimicrobial resistance
concerns in a cross-sectional online survey

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Thank you!

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Background

- Three RCTs demonstrated the efficacy of doxyPEP in reducing the incidence of Chlamydia, Syphilis, and in some instances Gonorrhoea in MSM and TGW
- The main concerns are the induction or selection of AMR, and microbiome/resistome alterations
- Some guidelines do not recommend implementing doxyPEP until more data on AMR is available
- There are reports of informal use of doxyPEP in countries where it is not recommended yet
- No such data was available for MSM and TGW in Belgium



Objectives & methods

- **Study design:** cross-sectional online survey among adult MSM and TGW in Belgium in April 2024
- **Objectives:** to assess
 - The awareness, willingness to use, and use of doxyPEP among MSM and TGW in Belgium
 - Socio-demographic factors and sexual behaviours associated with doxyPEP use
 - Concerns regarding the effect of doxyPEP on AMR/side-effects
- **Recruitment:**
 - Sexual networking applications
 - Community based organizations

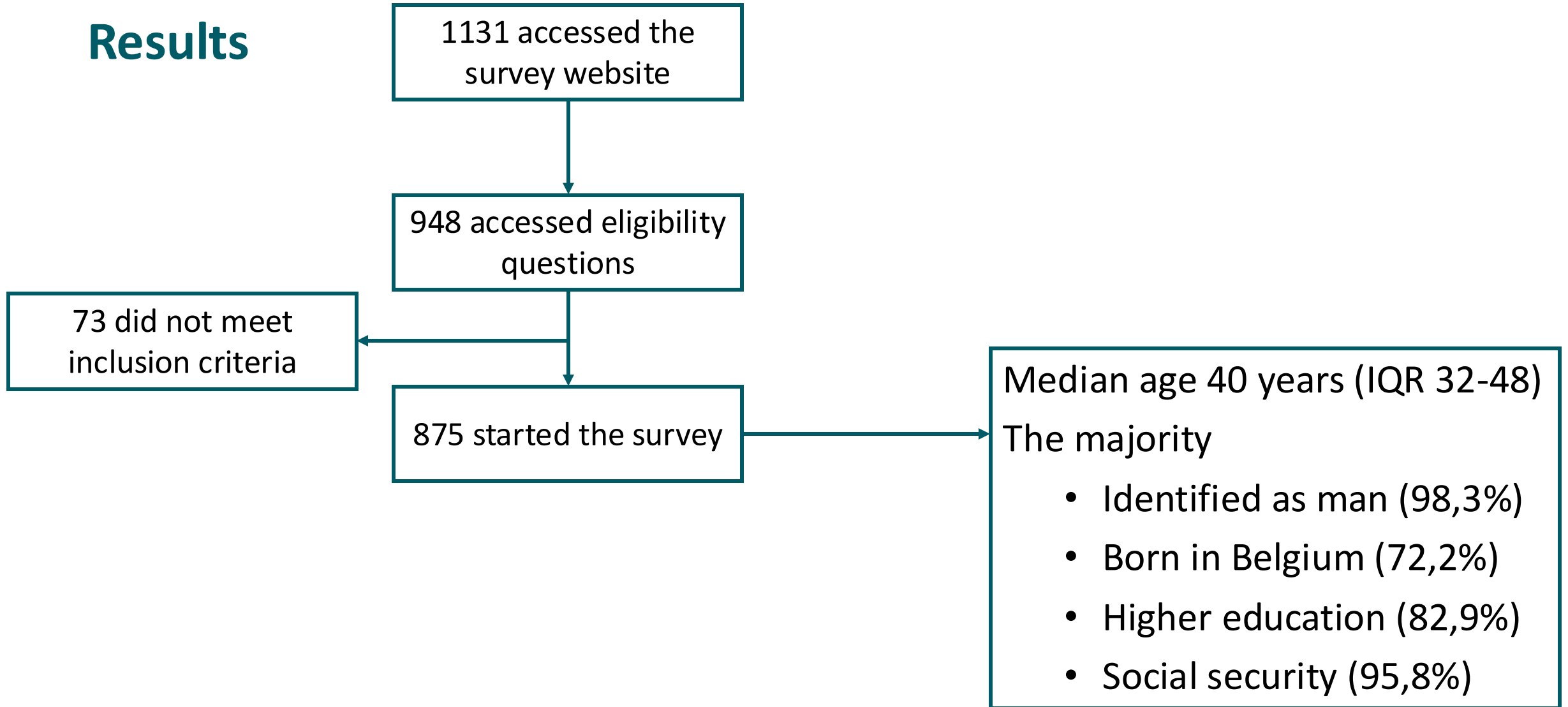


Methods

- **Questionnaire:** socio-demographic characteristics, awareness, current and past use of doxyPEP, sexual behaviours, HIV status and PrEP use, and history of STI diagnoses
- Willingness to use doxyPEP and concerns of AMR/side-effects were assessed before **and** after presenting a short paragraph on AMR (Likert scales)
- Socio-demographic characteristics and sexual behaviours associated with doxyPEP assessed using uni- and multivariable logistic regression
- Participation was anonymous



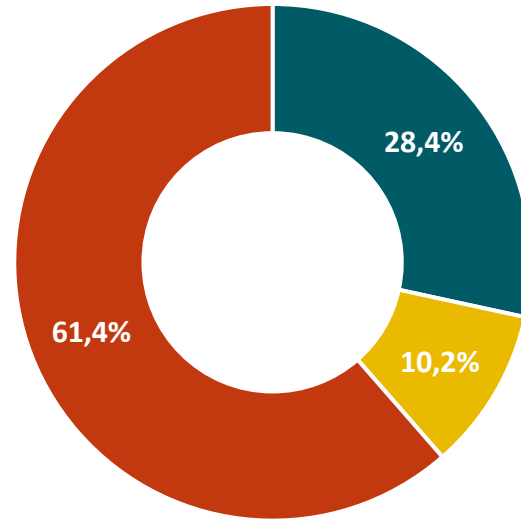
Results



Results

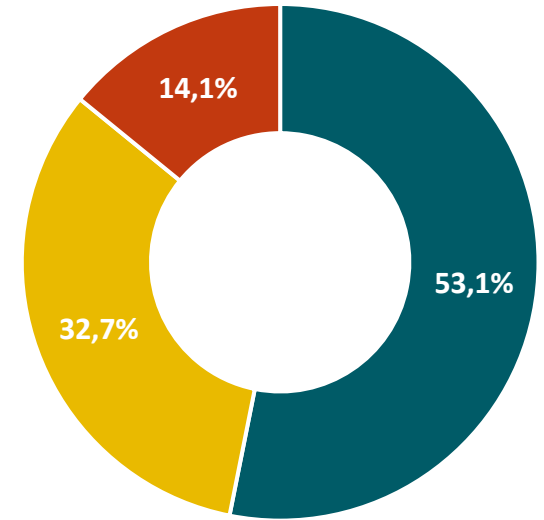
HIV/PrEP status & STI history

HIV/PrEP status



■ HIV negative or unknown & no PrEP ■ Living with HIV ■ HIV negative on PrEP

N of STIs in the previous 12 months



■ 0 ■ 1-2 ■ >2

Sexual behavior

8

Sex partners in the previous 6m (anal sex)

30,9%

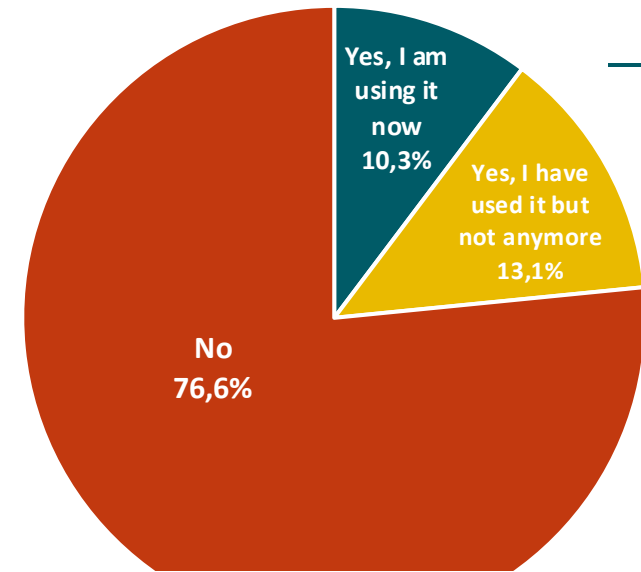
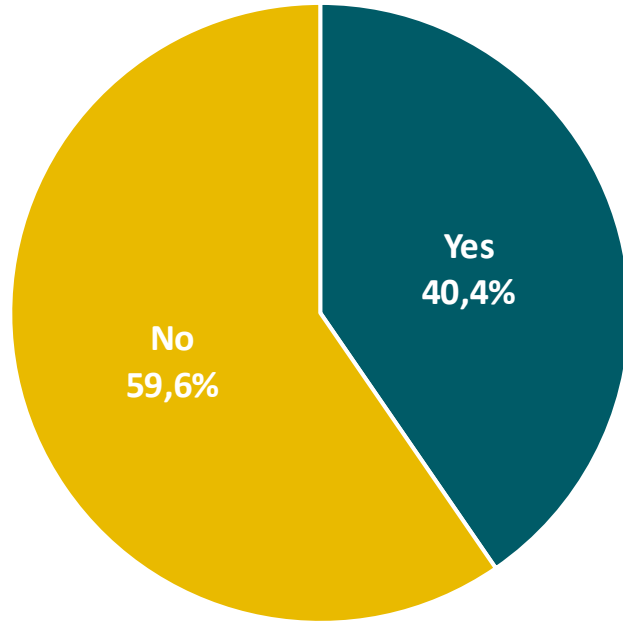
Chemsex in the previous 6m



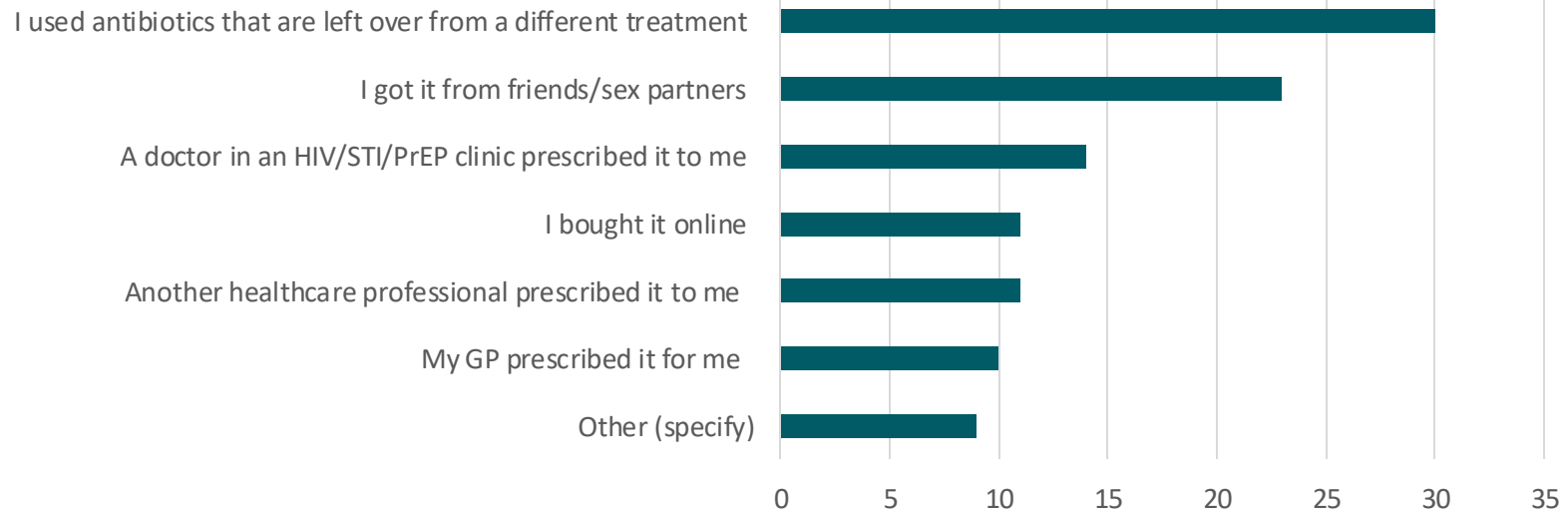
DoxyPEP

Have you ever used or are you currently using doxyPEP? (N=350)

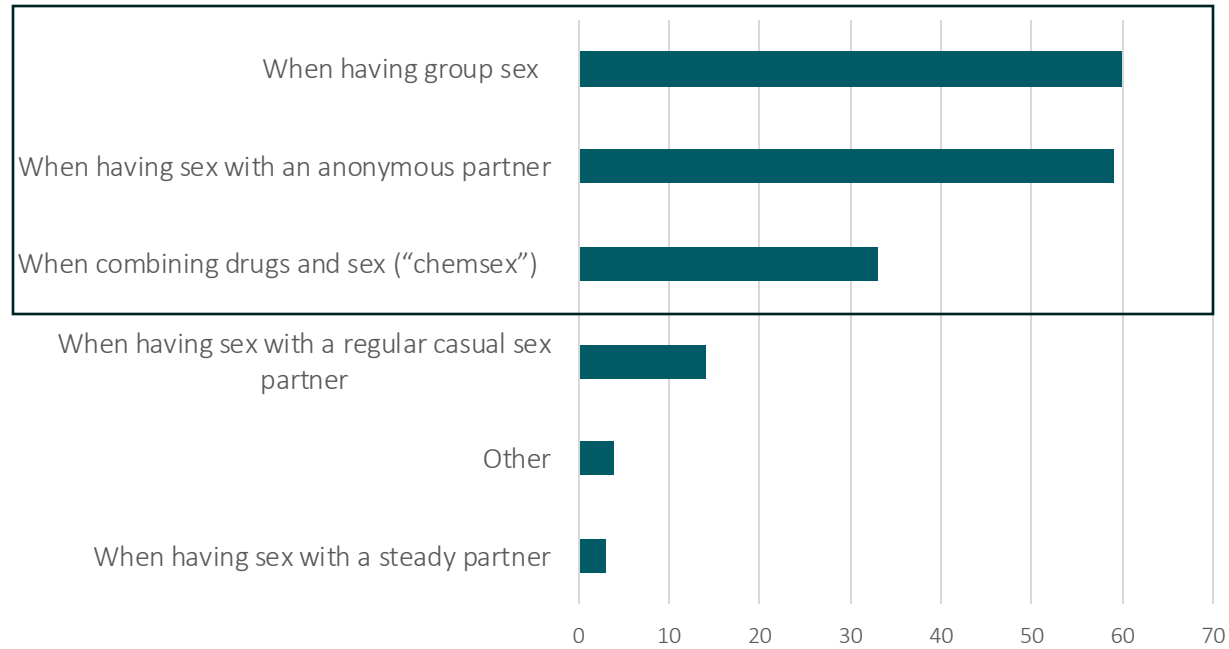
Before today, had you ever heard of doxyPEP as a way to prevent bacterial STIs?



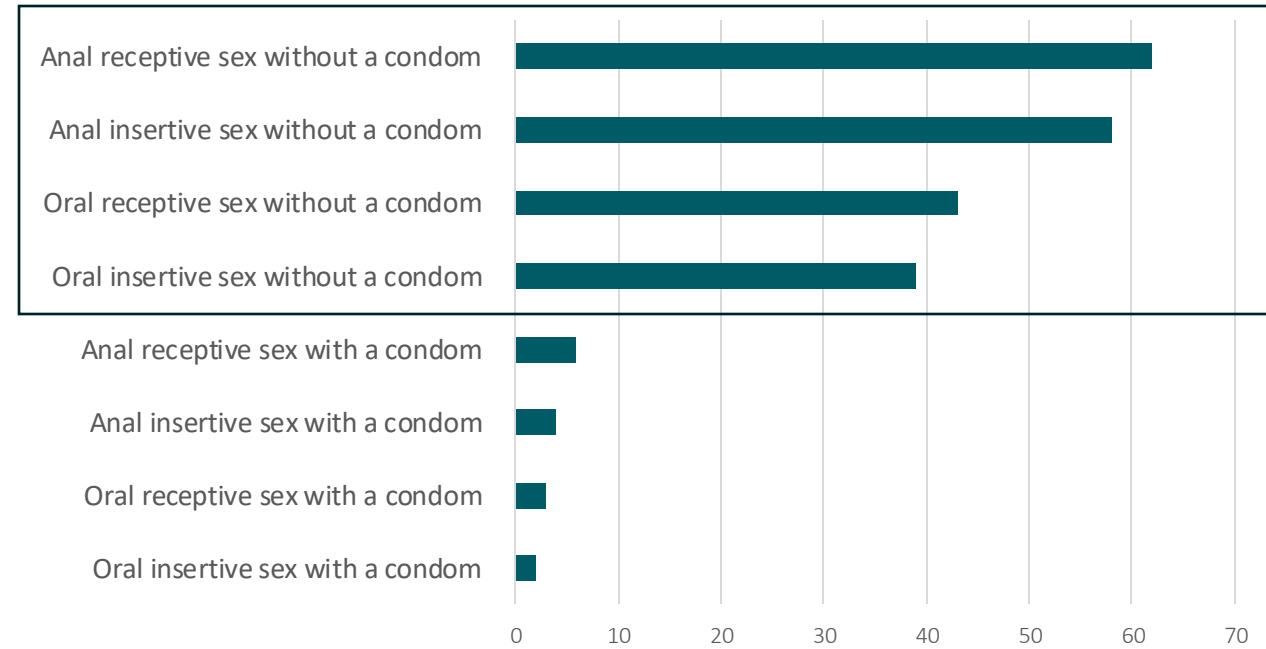
How did you obtain doxyPEP?* (N=80)



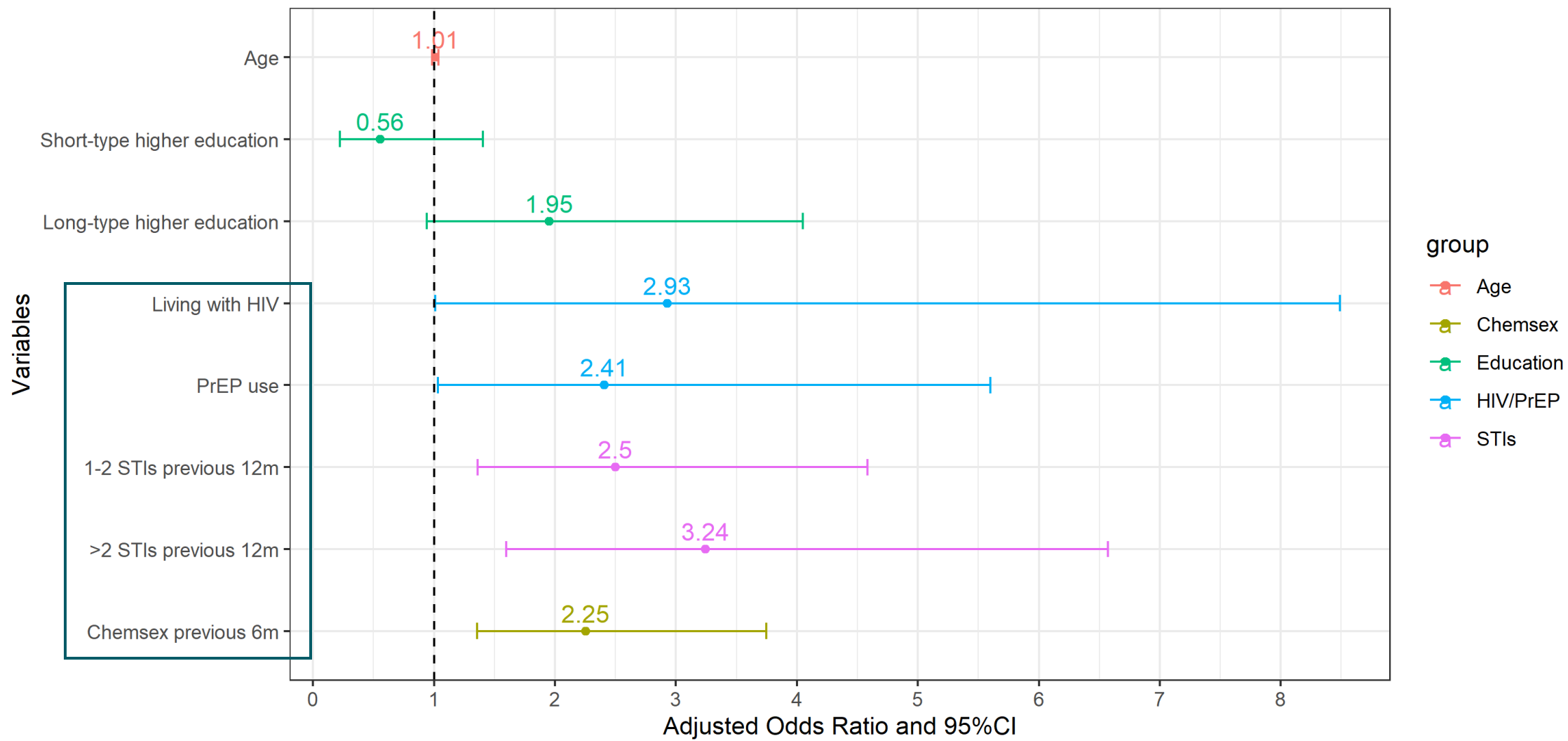
In which of the following situations did you use doxyPEP?* (N=80)

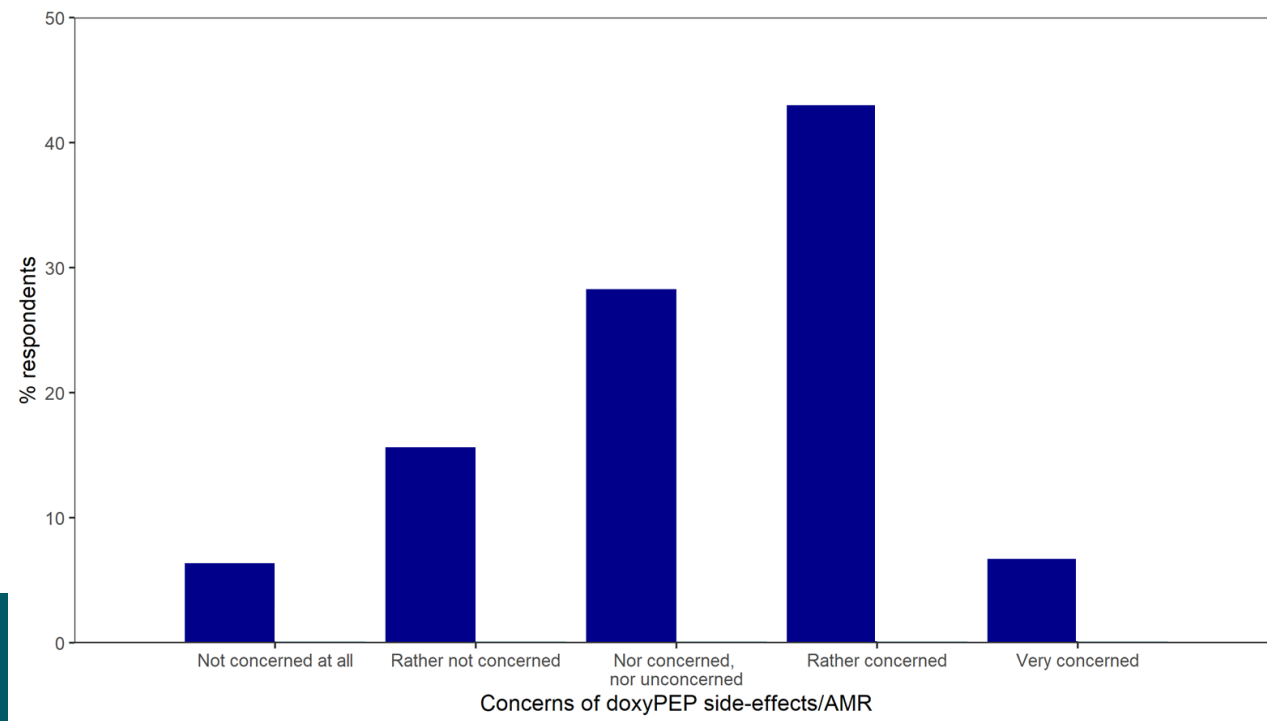
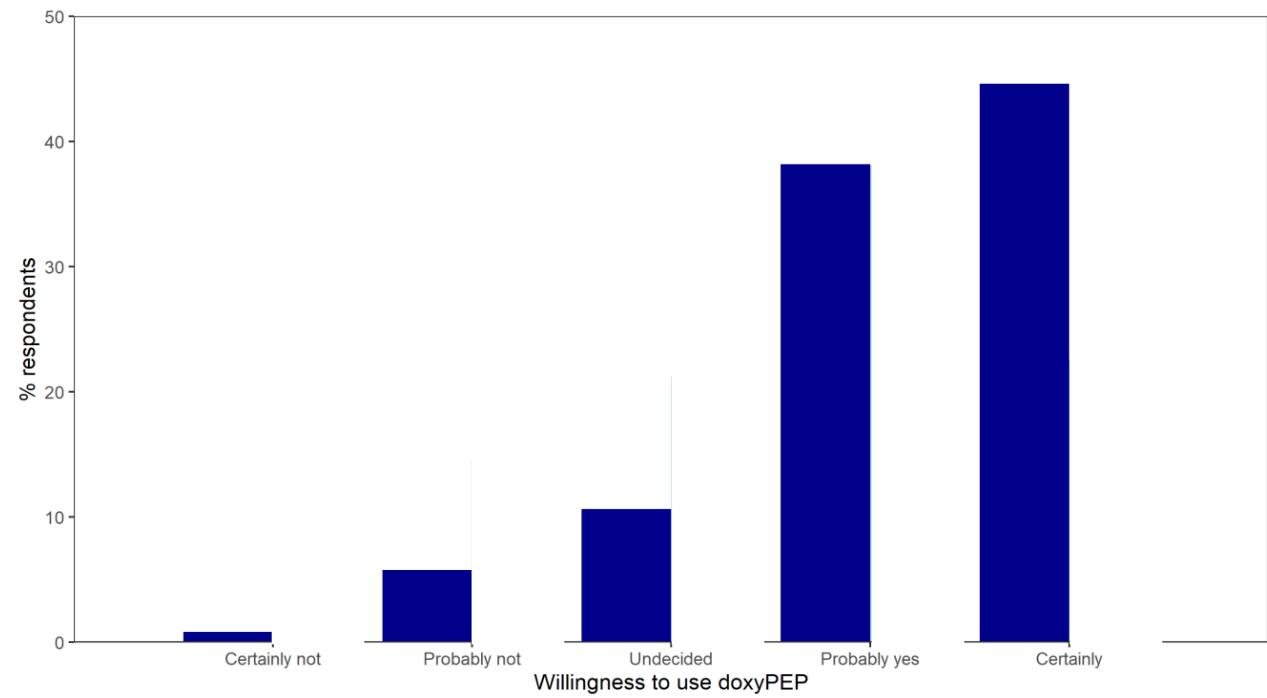


In which of the following situations did you use doxyPEP?* (N=80)



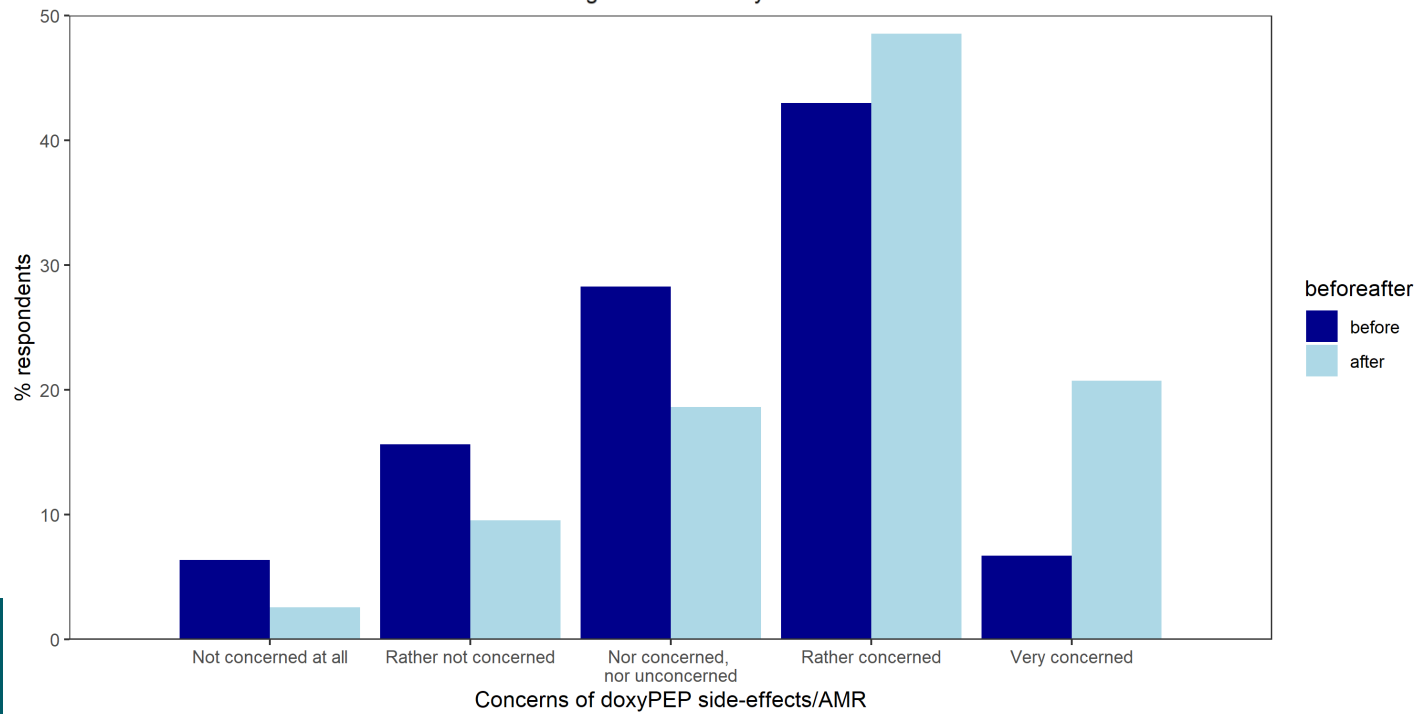
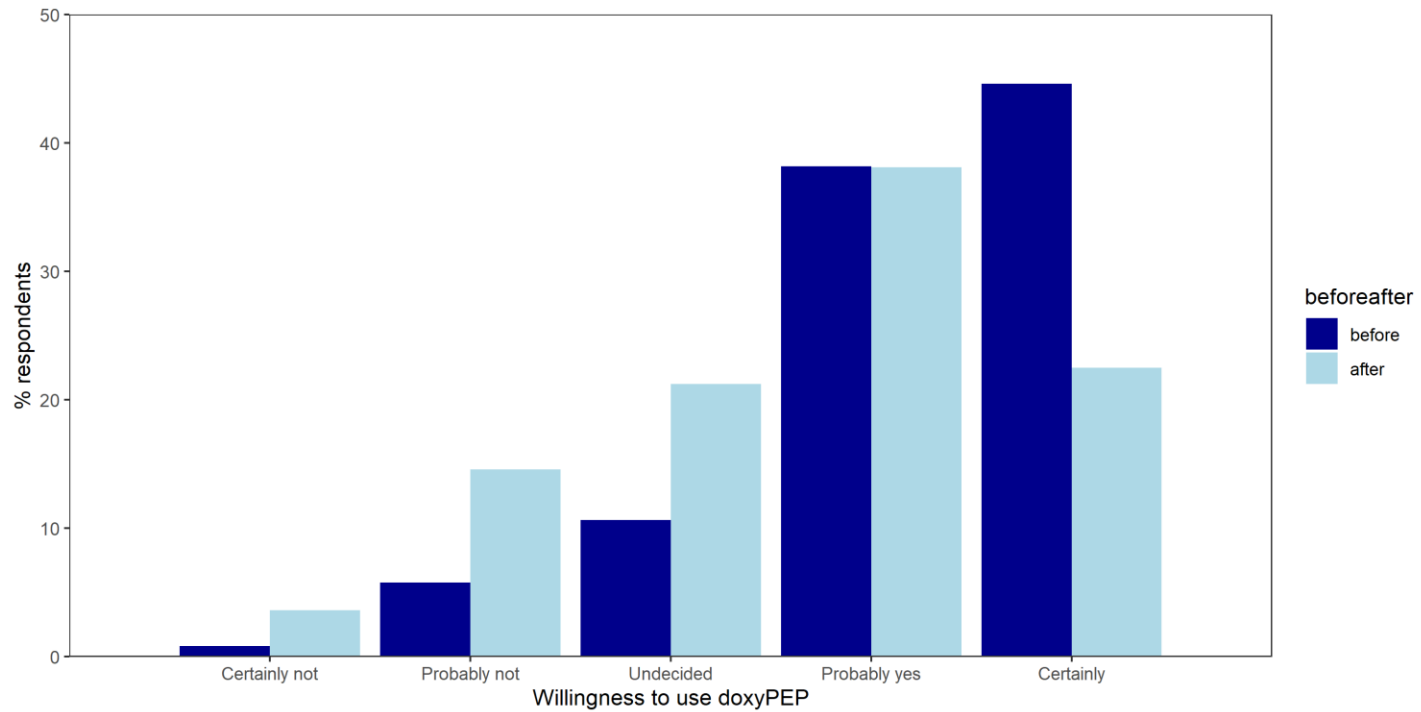
Factors associated with doxyPEP use





“The main concern related to doxyPEP use is that it might make bacteria resistant to antibiotics (i.e. induce antimicrobial resistance). This means infections could become harder to treat with antibiotics. Other studies have also shown that doxyPEP may not prevent gonorrhea as this infection is already resistant to doxycycline.”





Conclusions

- Informal doxyPEP use is reported by +/-10% of MSM in Belgium
- DoxyPEP use was associated with typical risk factors/situations for STIs and a recent history of STIs
- Importantly, concerns of AMR and side-effects could influence willingness to use doxyPEP.
- If doxyPEP is introduced, informing patients about the benefits and risks of doxyPEP will be crucial to enable informed decision-making.



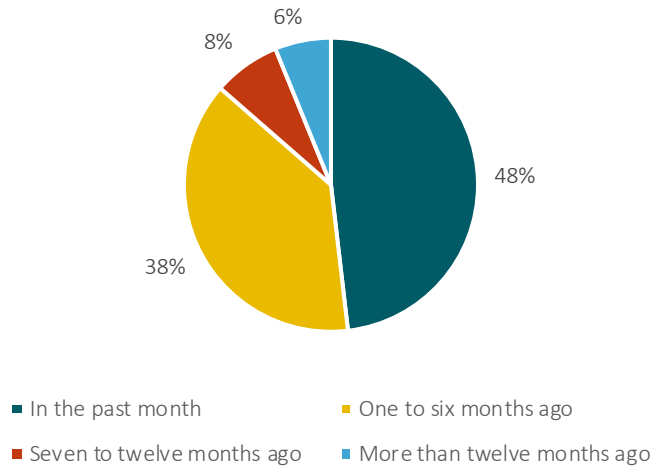
Thank you!

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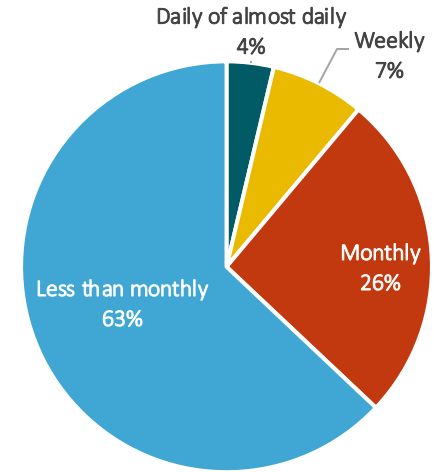
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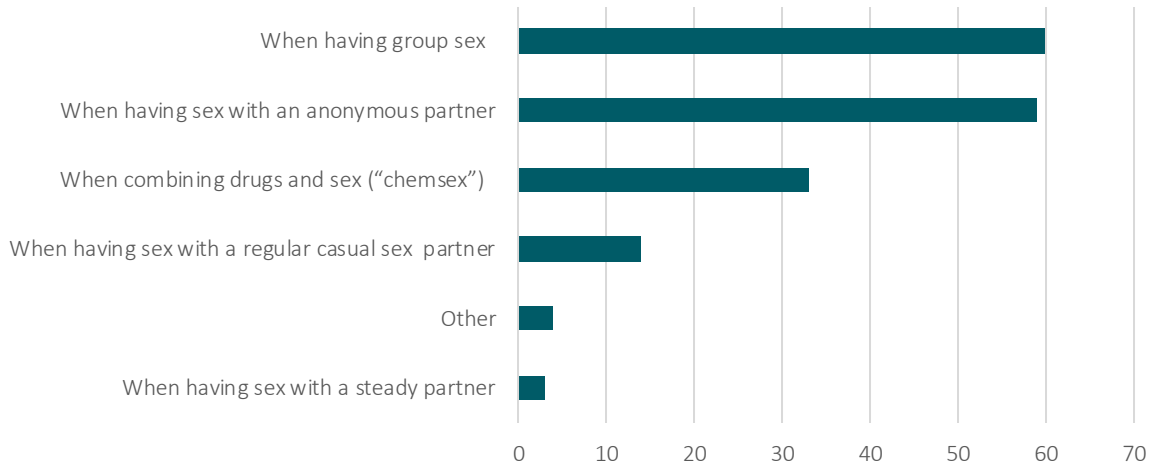
When did you last use doxyPEP? (N=81)



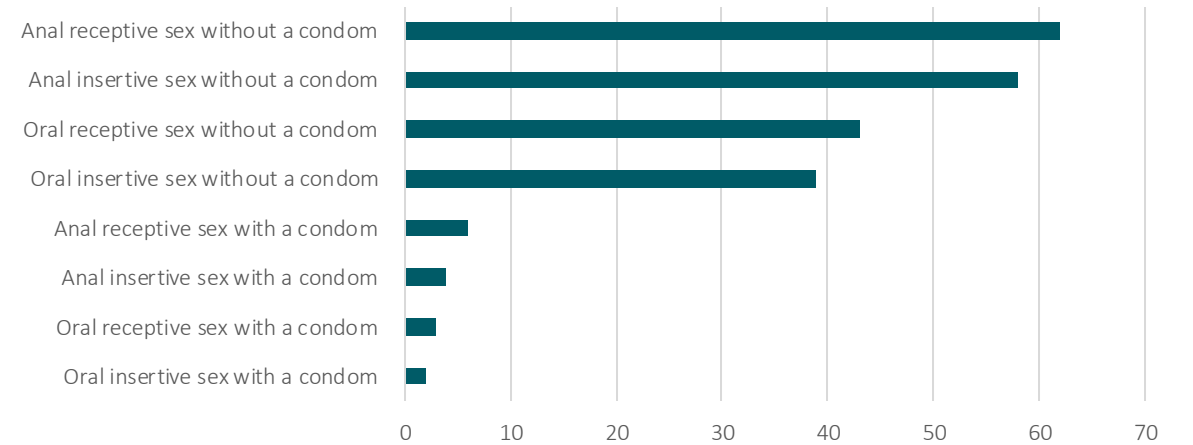
In the past 12 months, how often did you take doxyPEP? (N=81)



In which of the following situations did you use doxyPEP?* (N=80)

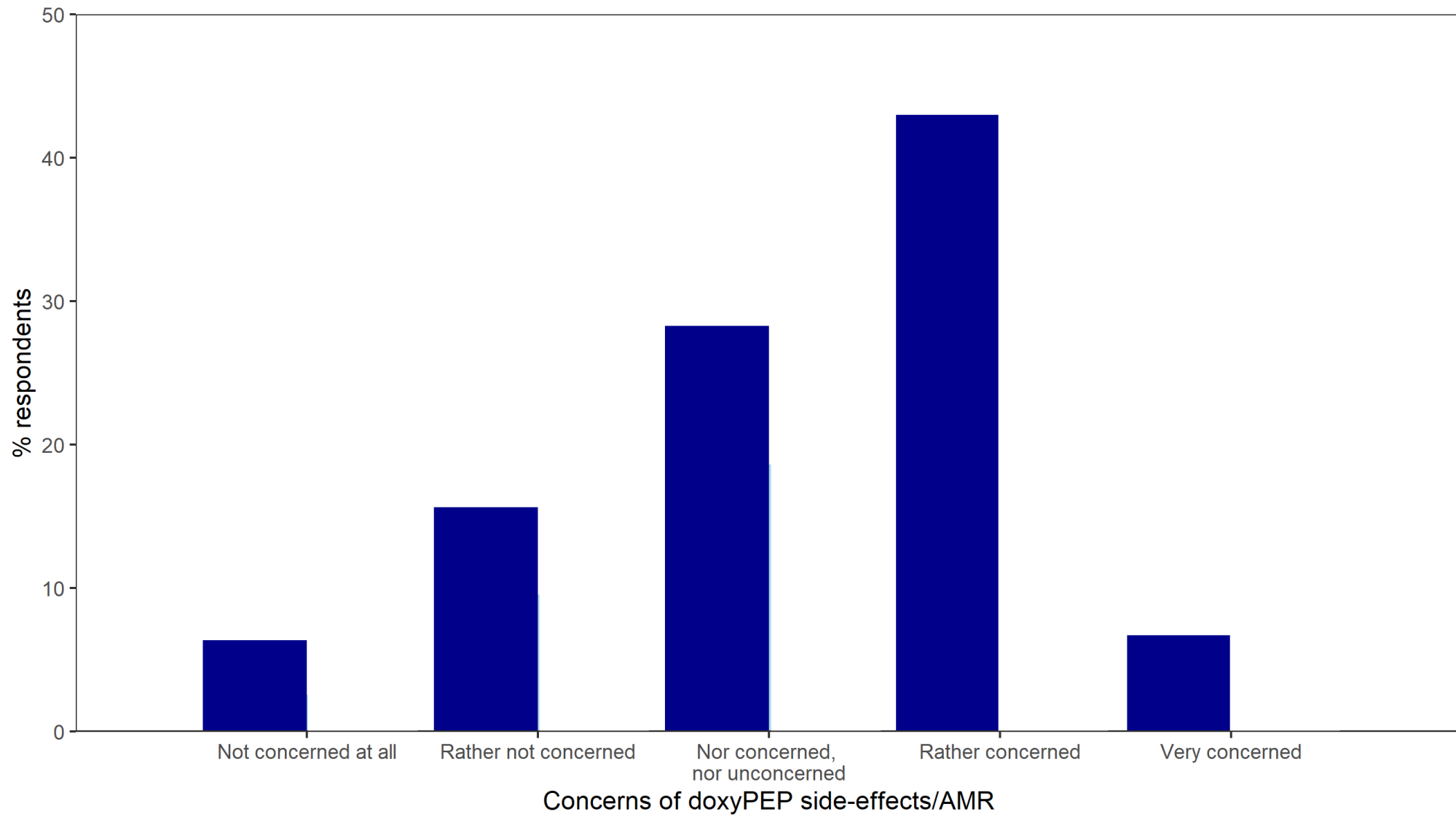


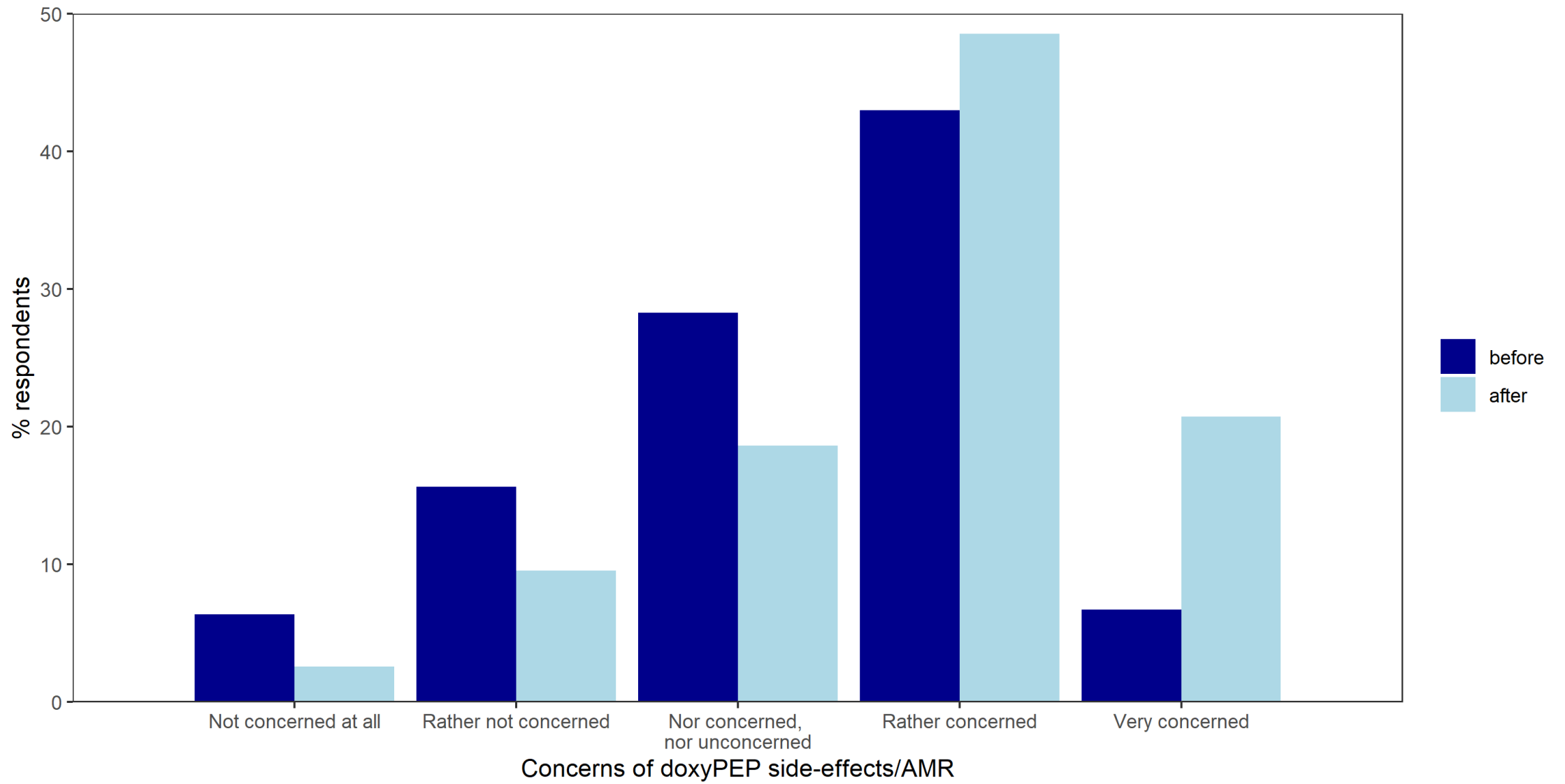
In which of the following situations did you use doxyPEP?* (N=80)



	OR (95%CI)	p-value	aOR (95%CI)	p-value
Age [median (IQR)]	1 (0.98–1)	0.7672	1.01 (0.98–1.03)	0.5604
Born in Belgium (N=875)*				
No	Ref.	0.0022		
Yes	0.48 (0.30–0.76)			
Region of residence (N=874)*				
Wallonia	Ref.	<0.001		
Flanders	1.35 (0.59–3.64)			
Brussels	3.38 (1.49–9.10)			
Education level (N=873)*				
No higher education	Ref.	<0.001	Ref.	0.0012
Higher education short (≤ 3 years)	0.55 (0.23–1.35)		0.56 (0.22–1.41)	
Higher education long (> 3 years)	1.77 (0.94–3.64)		1.95 (0.94–4.05)	
HIV status & PrEP use (N=845)*				
HIV negative or unknown & no PrEP	Ref.	<0.001	Ref.	<0.001
Living with HIV	5.39 (2.09–14.98)		2.93 (1.01–8.49)	
HIV negative on PrEP	4.43 (2.13–10.78)		2.41 (1.03–5.60)	
N of STIs in the previous 12 months (N=843)*				
0	Ref.	<0.001	Ref.	<0.001
1–2	3.72 (2.13–6.70)		2.49 (1.36–4.58)	
>2	5.12 (2.67–9.92)		3.24 (1.59–6.57)	
Self-perceived STI risk [median (IQR)] †	1.24 (1.10–1.42)	<0.001		
Rather important	0.40 (0.06–8.03)			
Very important	0.42 (0.06–8.34)			
N non-steady partners with whom having had anal sex in the previous 6 months [median (IQR)] (N=830)* ‡	1.002(1–1.005)	0.0499		
Chemsex in the previous 6 months (N=836)*				
No	Ref.	<0.001	Ref.	0.0017
Yes	2.92 (1.83–4.68)		2.25 (1.35–3.75)	







Inclusion criteria

- **Inclusion criteria:**
 - 18 years old or older
 - assigned male sex at birth
 - identify as MSM or as a TGW
 - living in Belgium
 - had sex with at least one non-steady partner in the previous 12 months
 - being able to read and understand Dutch, French, or English
 - and willing and be able to provide informed consent



Statistical analysis

- Numerical variables described using medians and interquartile ranges (IQR), and compared with Wilcoxon rank-sum test
- Categorical variables described using absolute numbers and proportions and compared with chi-square test
- Willingness to use doxyPEP and concerns of side-effects/AMR before and after the short paragraph about AMR compared with McNemar-Bowker test.
- Socio-demographic characteristics and sexual behaviours associated with doxyPEP assessed using logistic regression



Ethical approval

- We obtained ethical approval from the Institutional Review Board of the Institute of Tropical Medicine (IRB 1753/24).

