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AMSTERDAM

FAST-TRACK CITIES 2023

Are bacterial STIs concentrated in subpopulations of men who have sex with men using HIV PrEP?

Vita Jongen

Public Health Service Amsterdam, the Netherlands

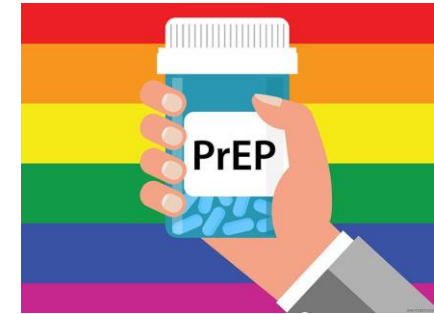
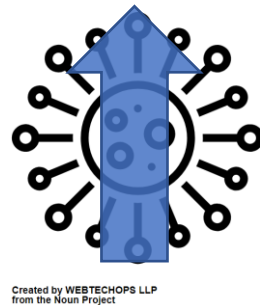
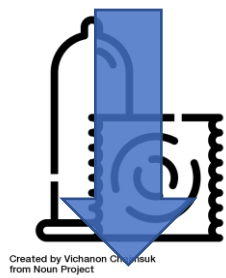
✉ vjongen@ggd.amsterdam.nl

Disclosures

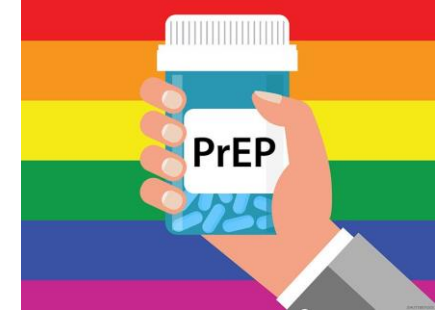
- Vita Jongen
 - Nothing to disclose
- AMPrEP (Public Health Service of Amsterdam)
 - ZonMW
 - RIVM
 - GGD research fund
 - Gilead Sciences: incl. study medication
- H-TEAM
 - Aidsfonds
 - Stichting Amsterdam Dinner Foundation
 - Gilead Sciences Europe Ltd
 - Gilead Sciences

Background

- PrEP is highly effective against HIV^{1,2}
- Does not protect against other STIs
- Among PrEP users^{3,4}



Background



- Current PrEP guidelines advice 3-6 monthly STI screening
- 3-monthly screening leads to earlier diagnosis^{1,2}

But do all PrEP users need this testing frequency?

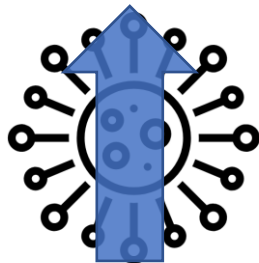
1. Tang et al. 2020 AIDS

2. Jongen, Zimmermann et al. 2022 STI

Background

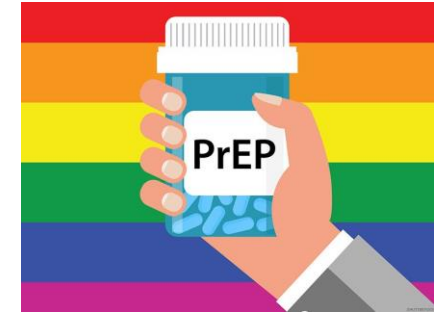


- In Australia, 50% of participant had no STI <1 year^{1,2}
- STIs were concentrated in a small subpopulation^{1,2}
- Younger age, chemsex and condomless anal sex^{1,3}



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Background

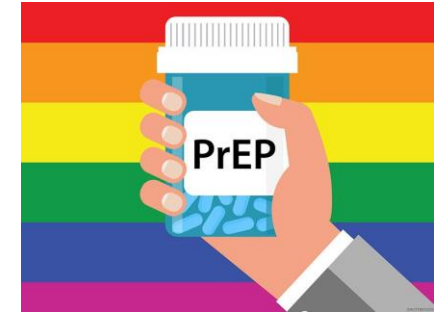


Further characterization of those at risk for STI could lead to more targeted screening

AIM

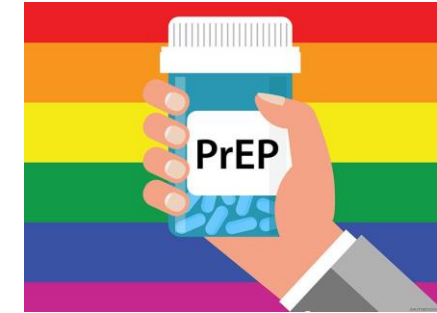
To assess whether incident STIs were concentrated within subpopulations within AMPrEP

Methods

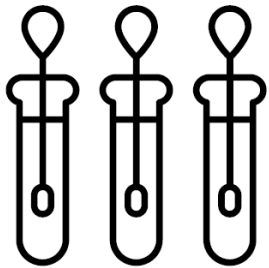


- AMPrEP participants: HIV-negative MSM & transgender persons
- Study period: August 2015 – March 2020
- Data up to 45 months of participation

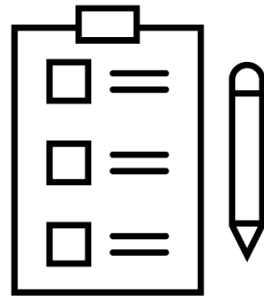
Methods



- At baseline and 3-monthly visits



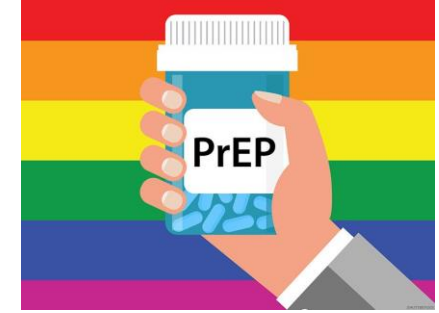
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- Additional STI testing between study visits was possible

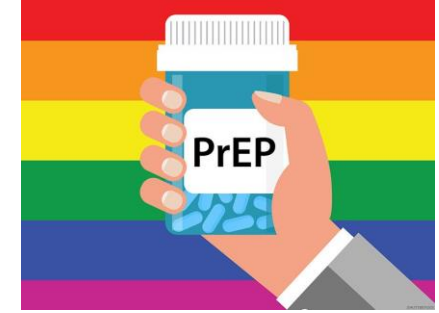
Statistical analysis



- **Group based trajectory model:**
 - Social, behavioural and biological processes change over time
 - Subgroups within a population can follow different trajectories of behaviour
 - GBTM assesses whether and which different trajectories are present in a dataset

- **Outcome:** Incident cumulative number of Ct, Ng, or syphilis

Statistical analysis



- **Cumulative proportion of STIs within each group-based trajectory**

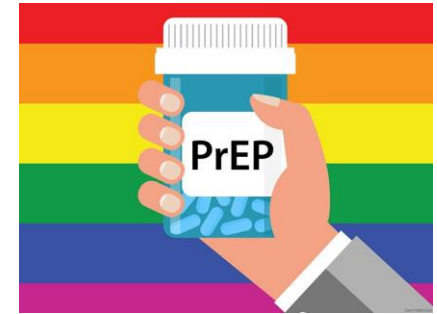
Results

- 366 participants included
 - 99% male
- Median age 40 years
- 73% chose daily PrEP at baseline
- 20% had a bacterial STI detected at baseline

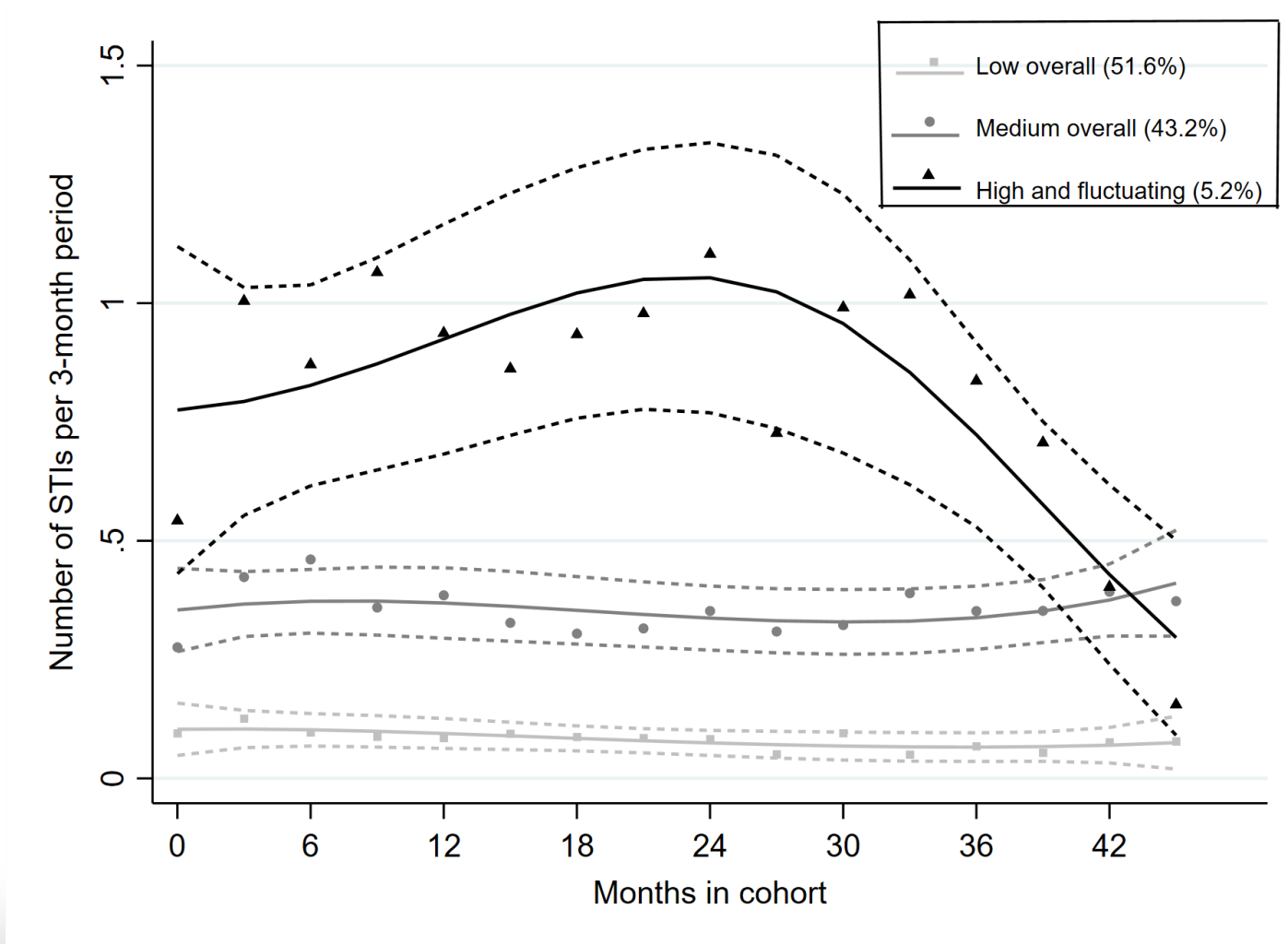


Results

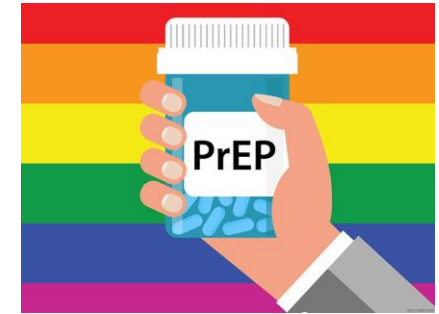
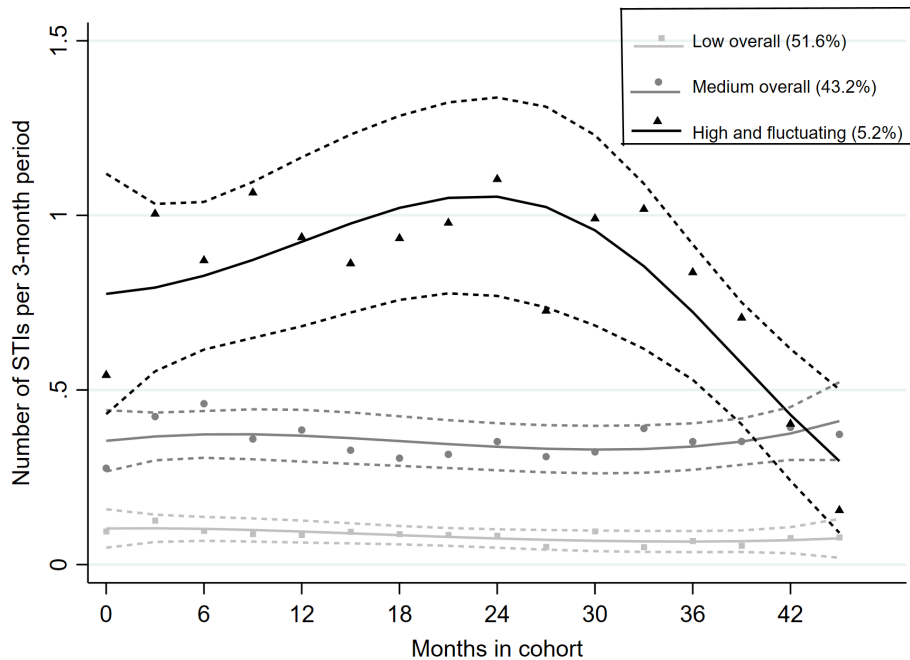
- Median follow-up time: 3.7 years
- Median 16 study visits
- Median 1 additional STI screening visit



Results



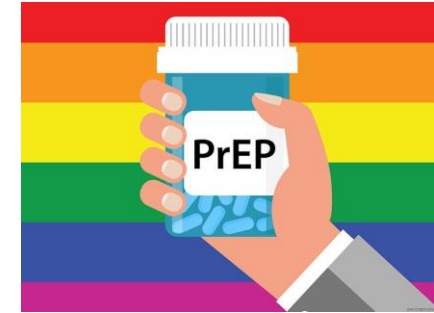
Results



- Low overall: 0.1 STIs
- Medium overall: 0.4 STIs
- High and fluctuating: 1 → 0.3 STIs

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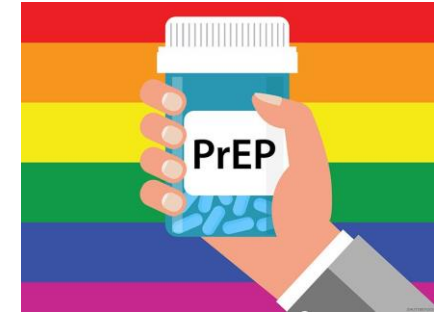
- Low overall: 0.1 STIs
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- High and fluctuating: 1 → 0.3 STIs



	Profile			
	Medium vs. Low		High vs. Low	
	<i>aOR (95% CI)</i>	<i>p-value</i>	<i>aOR (95% CI)</i>	<i>p-value</i>
Age, per 10 years	0.44 (0.29-0.66)	<0.001		
Ever reported chemsex				
No	REF	<0.001		
Yes	4.96 (2.28-10.76)			
CAS acts with casual partner	1.38 (1.19-1.60)	<0.001		

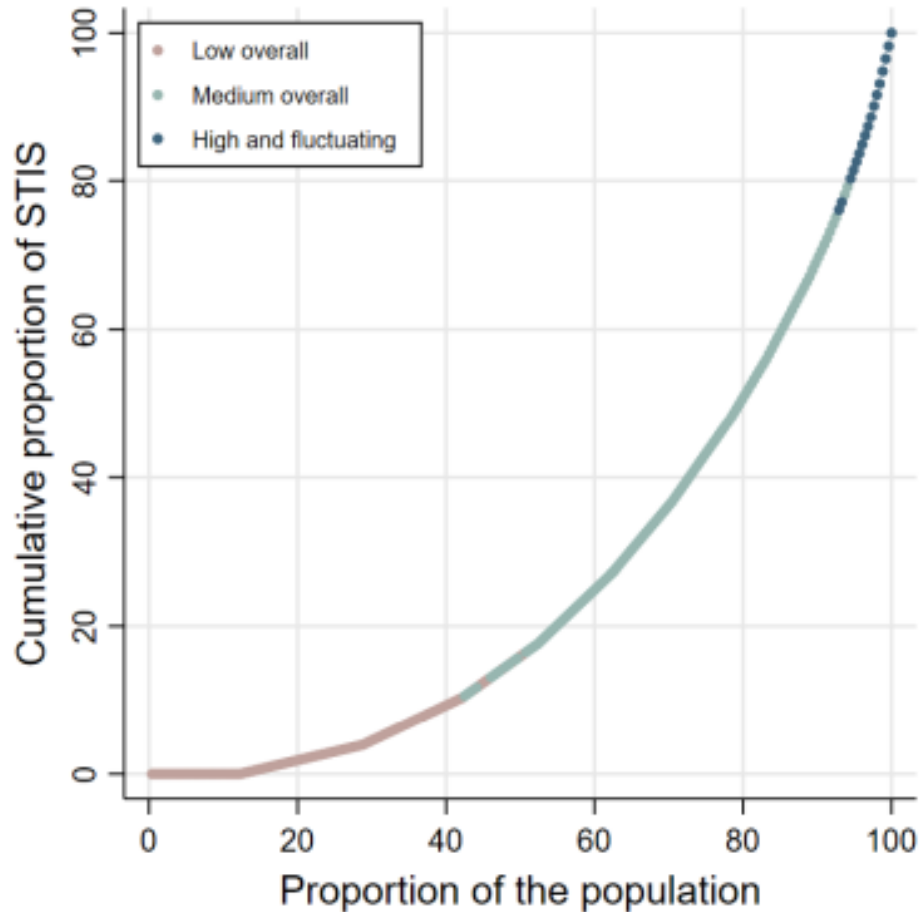
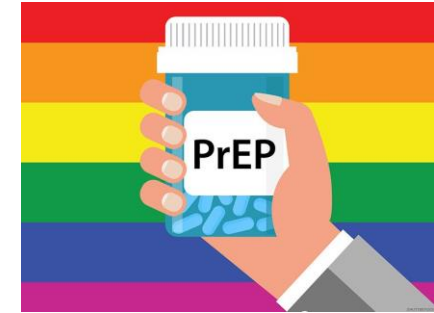
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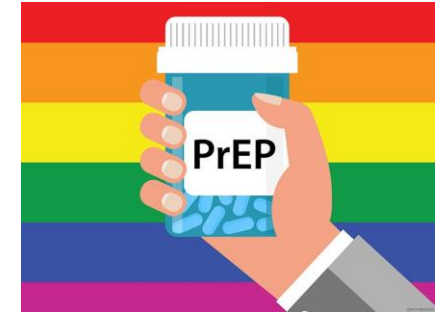
	Profile			
	Medium vs. Low		High vs. Low	
	<i>aOR (95% CI)</i>	<i>p-value</i>	<i>aOR (95% CI)</i>	<i>p-value</i>
Age, per 10 years	0.44 (0.29-0.66)	<0.001	0.18 (0.08-0.44)	<0.001
Ever reported chemsex				
No	REF	<0.001	REF	0.038
Yes	4.96 (2.28-10.76)		5.32 (1.10-25.73)	
CAS acts with casual partner	1.38 (1.19-1.60)	<0.001	1.59 (1.31-1.94)	<0.001

Results



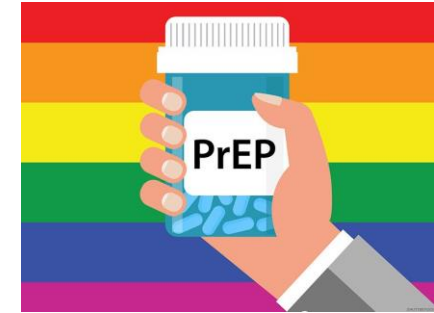
- Participants in the high and fluctuating group (n=17) accounted for 23% of STIs
- Participants in the medium overall group (n=120) for 64% of STIs

Discussion



- We found 3 distinct trajectories of STI incidence over time
- Trajectories were associated with younger age, chemsex and more condomless anal sex acts
- $\pm 90\%$ of STIs were diagnosed in 53% of the population
 - 5% of the population accounted for 23% of STIs

Discussion



Is 3-monthly screening for STI too much?

- Costly for Ct and Ng
- Ct and Ng can clear spontaneously
- AMR is on the rise
- Risk of serious complications is low



- Delayed diagnoses
- Onward transmission

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Discussion



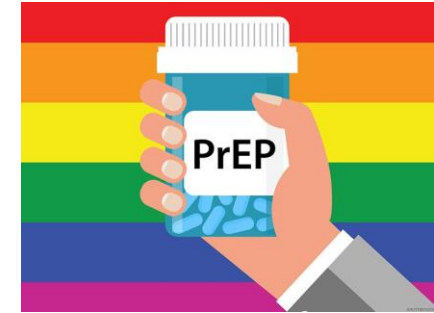
Is 3-monthly screening for STI too much?

- EZIPrEP study may give us answers

Other options?

- Targeted screening, doxyPEP/PrEP, vaccines

Conclusion



Almost all STIs were found in about half of the AMPrEP population.

A relatively large proportion of PrEP users may be over screened

Acknowledgments

All AMPrEP participants

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- All analysts

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- Maria Xiridou
- Silke David



Images from:
<https://thenounproject.com/>

