

Sexual Health of PrEP Users

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PrEP is an effective HIV prevention tool

Data from numerous trials:

- 2010 - iPREX
- 2014 - PROUD
- 2014 - iPERGAY

- Data now shows up to 99% effectiveness

- 2012 – FDA approved use of PrEP in USA

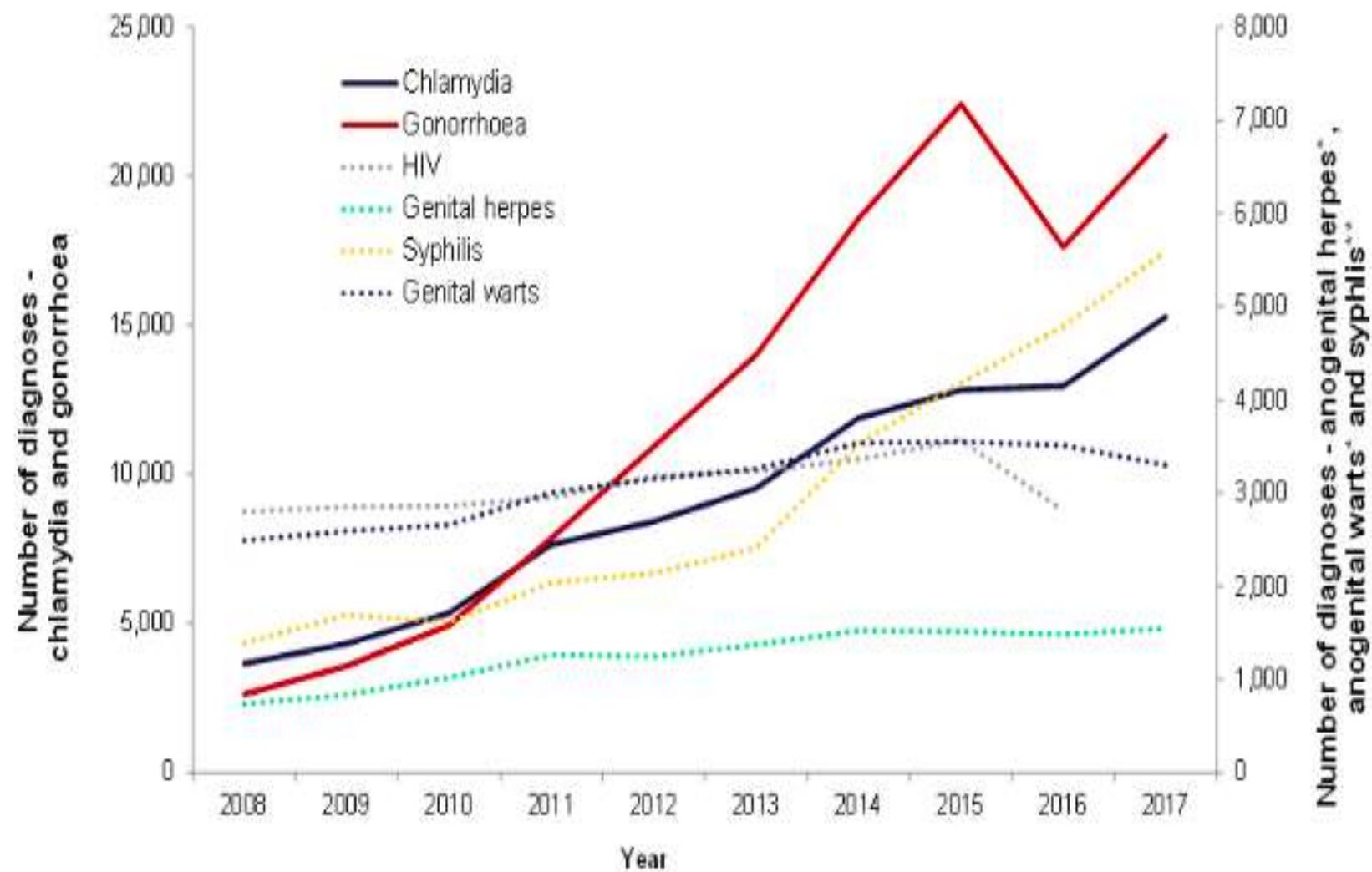
Response in England

- Launch of IMPACT trial in England October 2017
 - MSM
 - Heterosexuals
 - Trans populations
- 13,000 places delivered through sexual health services
- Increased to 26,000 places in 2019

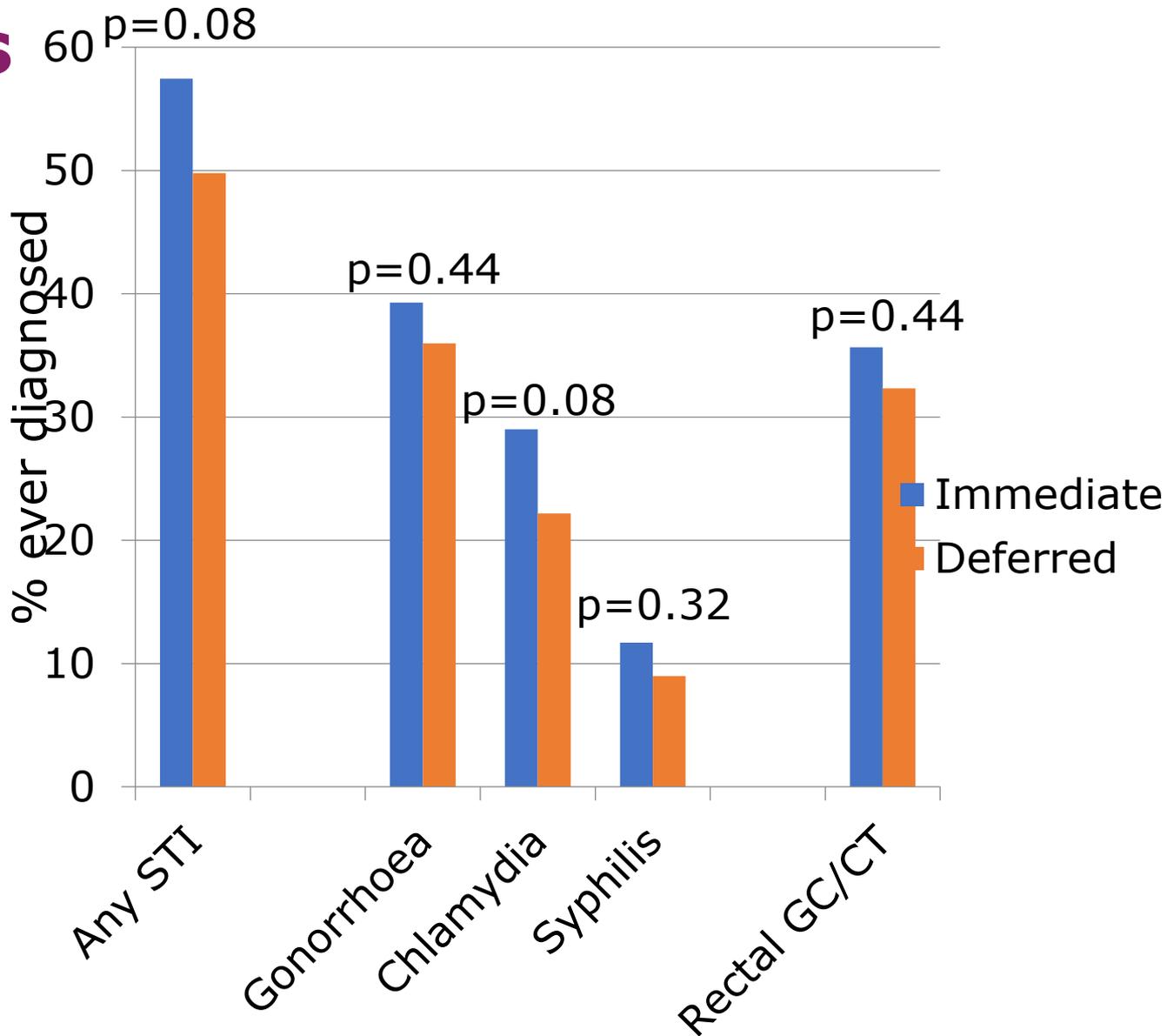
HIV and STI prevention

- PrEP is a highly effective HIV prevention tool
- ‘Concerns’ exist around the impact on other STIs
- PrEP should be seen as part of a combination approach to HIV *and* STI prevention
- PrEP is an *opportunity* for us to engage with those who are already at high risk for poor sexual health

Number of STI diagnoses among MSM: England, 2008-2017



STIs



McCormack *et al* Pre-exposure prophylaxis to prevent the acquisition of HIV-1 infection (PROUD): effectiveness results from the pilot phase of a pragmatic open-label randomised trial. *Lancet* 2016; **387**: 53–60.

Risk compensation

- iPrEx study: no evidence of risk compensation.
- iPrEx-OLE study: both groups reported decreases in condomless receptive anal intercourse
- PROUD study: no difference in the total number of sexual partners at 1 year or in the frequency of bacterial STIs
- However, a greater proportion of the immediate group reported condomless receptive anal sex with 10+ partners at 1 year compared to the deferred group (21% vs 12%, $p=0.03$).
- In IPERGAY, there were no significant differences between groups in the proportion of condomless receptive anal sex and incident STIs

Condom use and STI's in PrEP users

Very conflicting data in global trials



6 trials show no change in condom use or sexual behaviour



4 trials show decrease in condom use and number of partners



2 trials show increase in STI's

1. Journal of Acquired Immune Deficiency Syndromes. 201; 62(4):[447–56
2. New England Journal of Medicine. 2015; 373(23):2237–46
3. JAMA Intern Med. 2016; 176(1):75–84
4. The lancet HIV. 2018; 5(3):e136–e45
5. Jama, Pediatr. 2017; 05:0
6. JAIDS 79(2):173-178, Oct 2018
1. New England Journal of Medicine. 2010; 363 (27):2587–9
2. Lancet. 2017. 4(8)
3. Topics in Antiviral Medicine. 2016; 24 (E-1):368.
4. AIDS. 2018. 32(15):2161
1. Aids. 2017; 31 (12):1709–14
2. J Acquir Immune Defic Syndr. 2016; 73(5):540–6.

Meta-analysis in 2016 – PrEP vs no PrEP

- MSM not on PrEP versus those on PrEP
- Chlamydia 11 x
- Gonorrhoea 25 x
- Syphilis 44 x
- However, serious misgivings about the methodology
- Results for non PrEP users taken from 1998-2015 when rates of STI's were lower

Readjusted risk ratios

Not on PrEP 22.8 /100py

On PrEP 63.4 /100py

Risk x 2.8

Harawa. Aids. 2017; 31(5):739– 40

Hepatitis C

- Average annual rate of 1.3% (CI 0-1.9)
- Annual hepatitis C incidence in HIV-positive gay men is only 0.78%
- HIV-negative men in general is only 0.04%
- Incidentally, no reported cases of Hepatitis B

Role of testing and rates of STI's

- Difficult to assess clearly rates of STI's of those who are by definition 'high risk' versus MSM whose behaviour is not high risk
- SPARK Study (Golub, CROI 2016) in New York, USA
 - 3 monthly screens (rather than 6 monthly)
 - If they had followed 6 monthly screens and only when symptomatic, would have missed 24% of STI's
 - Vast majority STI's picked up on routine screens (i.e. no symptoms)

Cross over study (Beymer 2017)

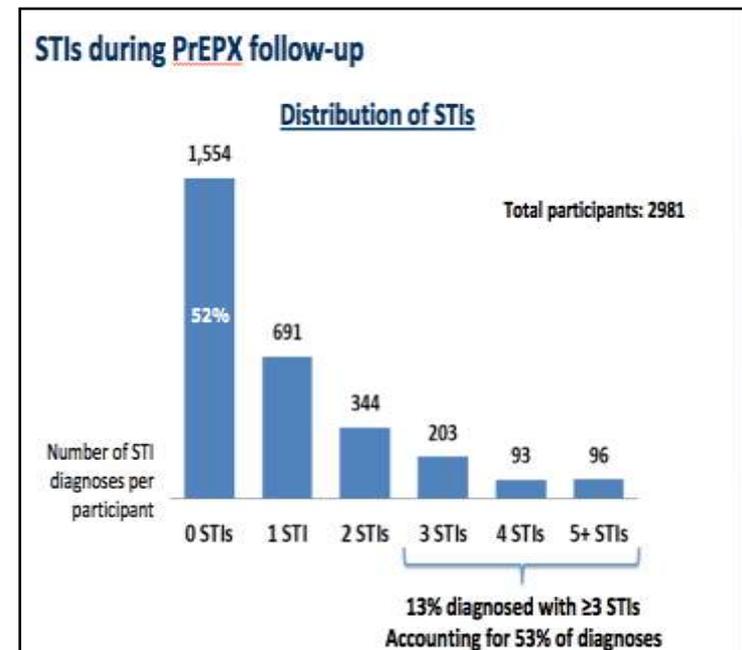
- Used the same patients as controls, i.e. STI rates were compared 'before PrEP' and 'after PrEP'
- No change:
 - Gonorrhoea – all sites
 - Chlamydia – urethral
- Rectal Chlamydia - 29% increase
- Syphilis - 164% increase

Cross over study (Beymer 2017)

- Increase in STI's in only 28% of participants
- No change or a decrease in the other MSM in the study
- Reflects what we see in clinic
- No association to age, ethnicity or recreational drug use

PrEPX (Australia)

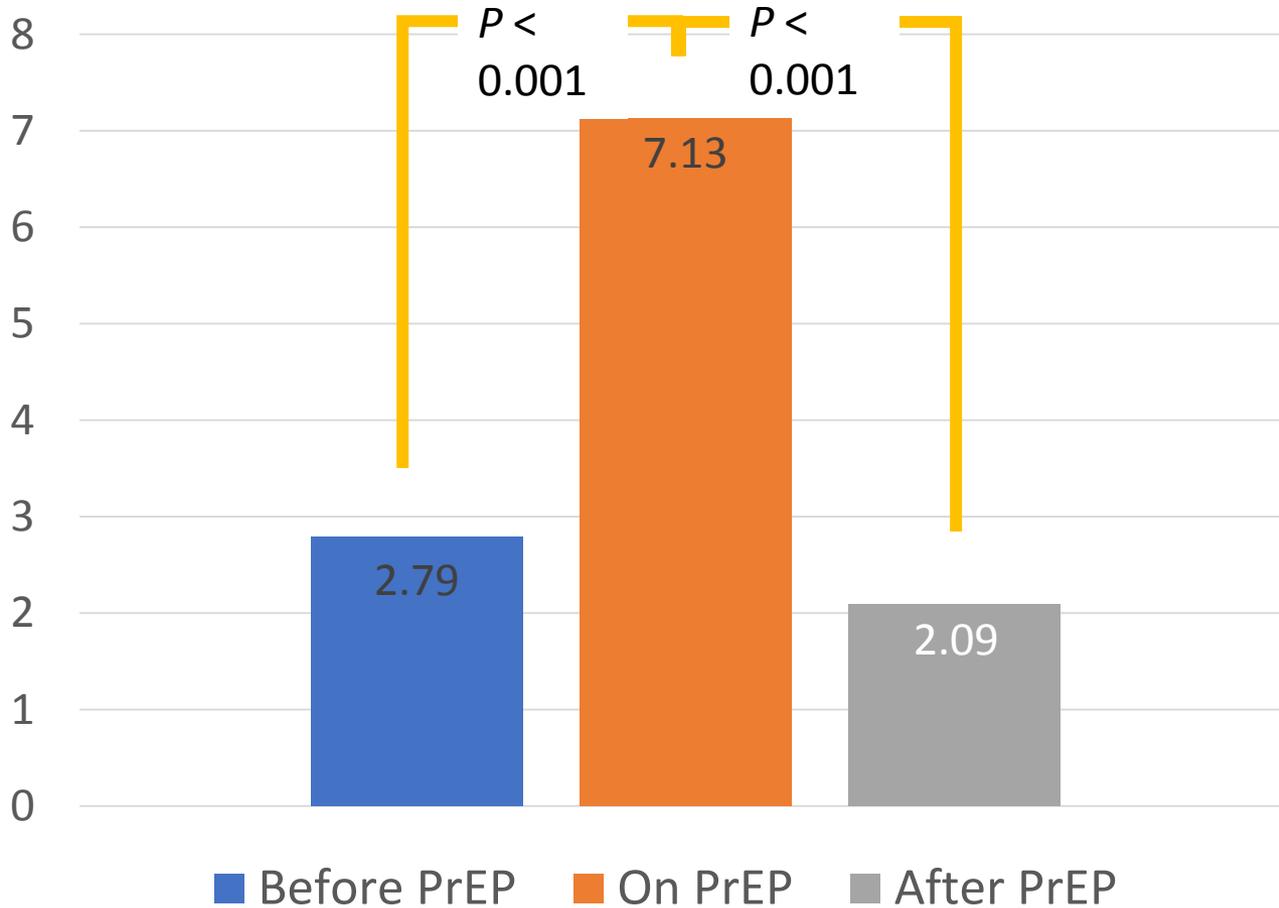
- N=3000
- 52% of all PrEP users did not have an STI at any point
- 25% of MSM had 2 or more STI's = 76% of all STI's
- 13% of MSM had 3 or more STI's = 53% of all STI's
- 'Detection bias' – 48% more screens in PrEP users than non-PrEP users
- Overall a 21% increase in all STI's



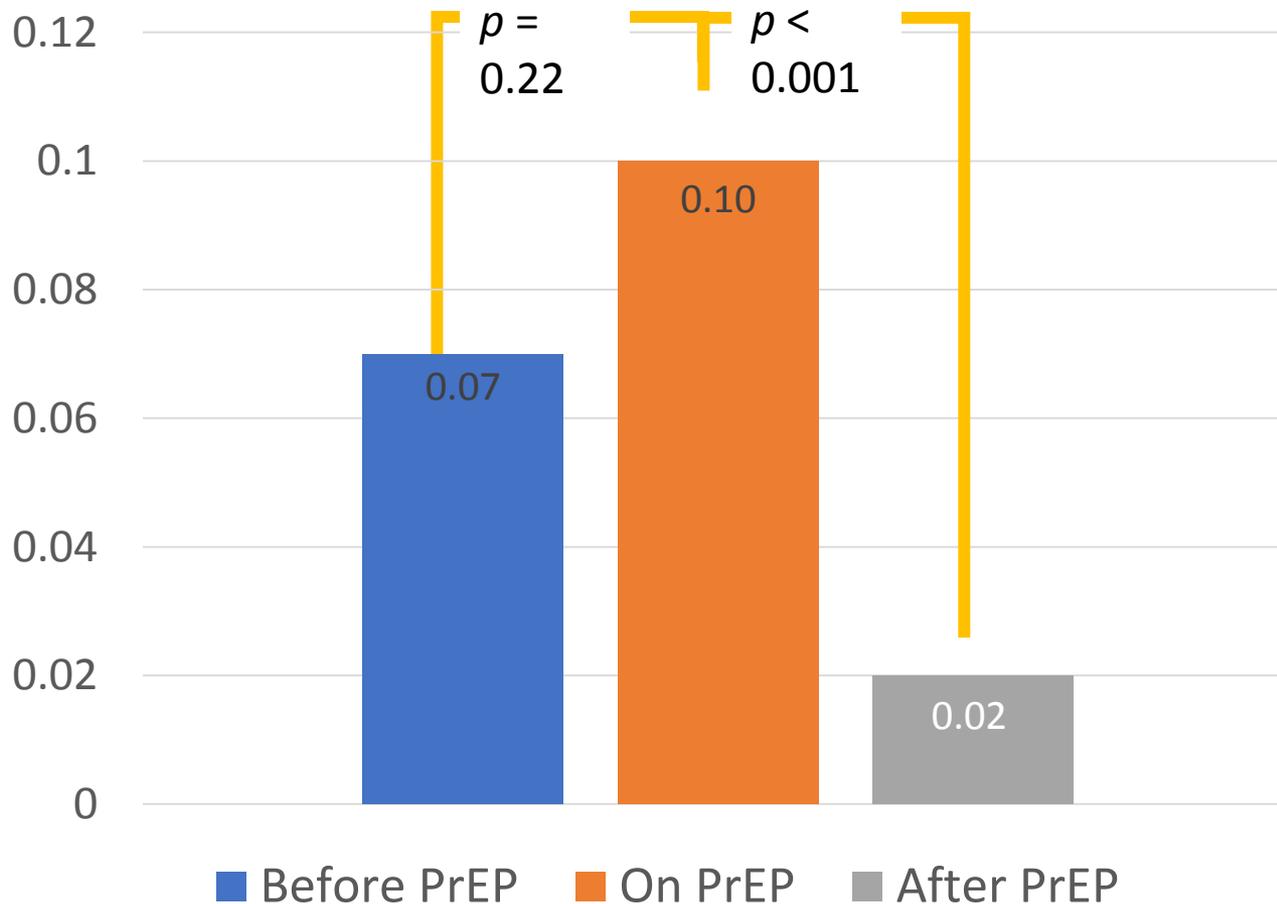
Changes in behaviour pre and post PrEP

- 1012 patient visits in New York, USA
- STI tests for pre, during and post PrEP
- Rectal STI's were 7% (pre), 10% (during) and 2% (post)

PrEP status and number of CAS acts



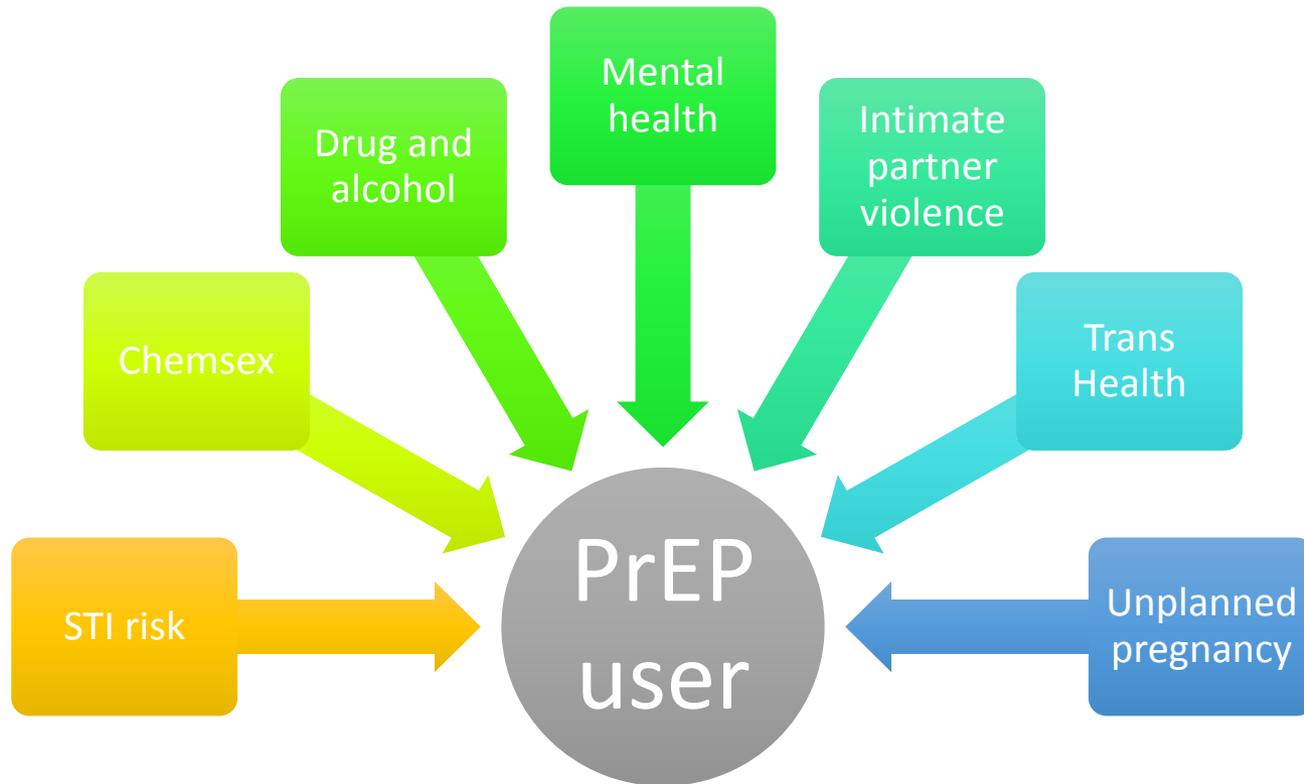
PrEP status and probability of rectal STI diagnosis (GC/CT)



The potential of PrEP for wider STI prevention

- PrEP (by definition) is an intervention for those who ***already*** have higher rates of STIs
- PrEP is an ***opportunity*** for better STI testing
 - PrEP engages those at high STI risk in testing and prevention services
 - STIs may be diagnosed and treated sooner
 - Shorter periods of transmissibility
 - Better partner notification
 - Risk reduction advice and intervention
 - Condoms
 - Behaviour change intervention
 - Chemsex support

Integrated support services with PrEP



Thank you