



HPTN

HIV Prevention
Trials Network

STIs in the Context of HIV Prevention

**Session 3: Concurrent Discussion on State of
Prevention Research**

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Introduction

- PrEP prevents HIV acquisition among HIV negative people who engage in risk behavior
- Is it possible that the protective effect of PrEP is offset by risk compensation?
- The observed increase in STI incidence is higher among men than women, which raises concern about risk compensation among PrEP users

What may explain the perceived increase in STI incidence

1- Increased diagnosis

- Improved screening, new and more sensitive tests, testing new body sites

2- Increased transmission

- Increase in condomless sex and on number of sexual partners, persistence of untreated STIs due to lack of health care access

CDC Recommendations for PrEP

1- Offer to HIV negative people who are at risk of acquiring HIV due to:

- Sexual risk behaviors

- Substance use

- Recent bacterial STI (<6 months)

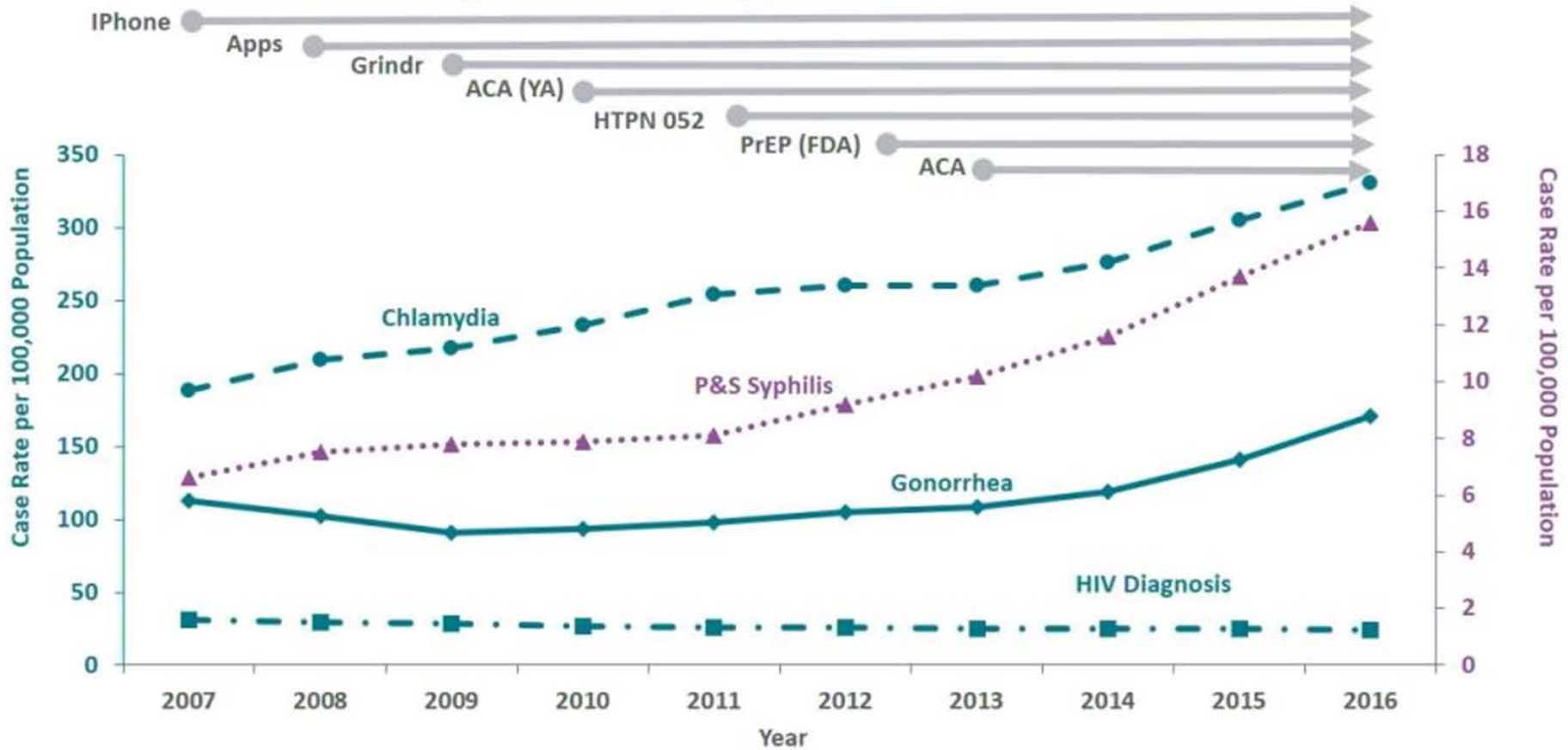
2- Recommendations that are part of PrEP:

- Consistent use of condom

- HIV testing every 3 months

- Bacterial STI screening (C/G/syphilis) at least every 6 months

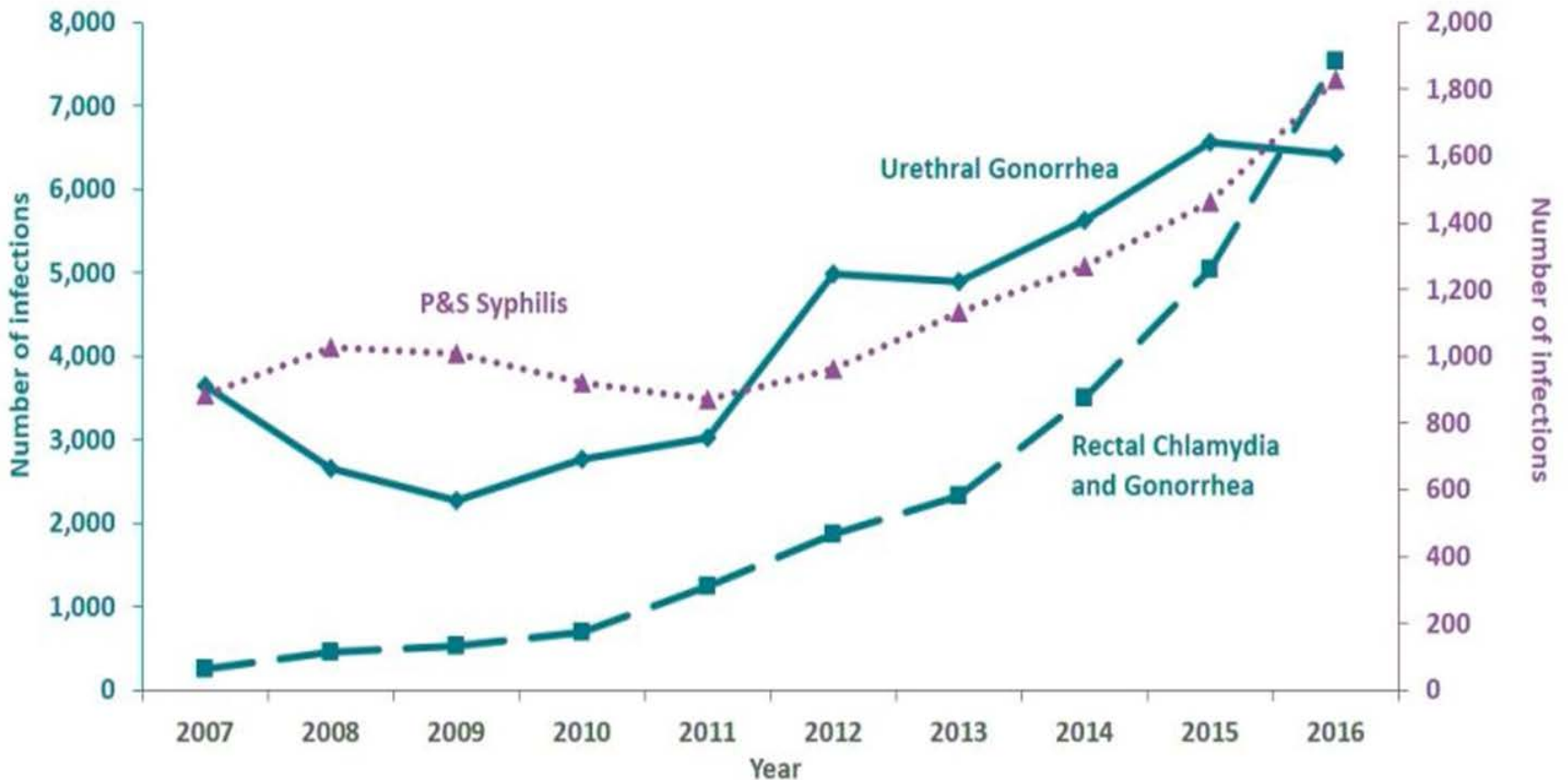
Male Ct, GC, P&S syphilis, and HIV diagnoses, case rates (per 100,000), United States, 2007-2016



Source: Julia Schillinger, MD CDC, presented at CROI 2018, March 6th, Symposium S-7

Evidence of increases in transmission of bacterial STI

Male rectal Ct/GC, urethral GC, and P&S syphilis, New York City, 2007-2016



Source: Julia Schillinger, MD CDC, presented at CROI 2018, March 6th, Symposium S-7

Factors involved in the PrEP/STI scene

- 1- Increases in STI diagnosis were identified before PrEP and HPTN 052 but a steep increase is evident afterwards
- 2- Increase in sexual risk behaviors predates PrEP
- 3- Increased detection is a likely explanation as well

Factors involved in the PrEP/STI scene

- 4- It is unlikely that the increase in STI diagnosis is entirely due to PrEP given the number of PrEP users,
- 5- There is also evidence for true increases in transmission
- 6- Community and individual-level of risk compensation likely contribute to the observed increases in STI diagnosis among MSM

What aspects play a role in the increased STI detection?

- 1- STI screening is an important aspect of PrEP (active search for cases, leading to increased diagnosis including asymptomatic)
- 2- Increase in condomless sex
- 3- Increase in number of sex partners
- 4- More laboratories able to perform new diagnostic methods (NAAT)

Effects of Pre-exposure Prophylaxis for the prevention of HIV Infection on Sexual Risk Behavior in Men Who Have sex with Men: A Systematic Review and meta-analysis.

**Traeger MW et al. *Clinical Infectious Diseases*- doi.org/10.1093/cid/ciy182
March 2, 2018**

- Systematic review of 16 observational studies and 1 open label trial: eight (4388 participants reported STI prevalence and 13 (5008 participants) reported change in condom use.
- PrEP use was associated with a significant increase in rectal chlamydia and no increase in any STI diagnosis

Effects of Pre-exposure Prophylaxis for the prevention of HIV Infection on Sexual Risk Behavior in Men Who Have sex with Men: A Systematic Review and meta-analysis.

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- The association of PrEP use and STI diagnosis was stronger in later studies
- Most studies showed evidence of an increase in condomless sex after PrEP initiation

Discussion

- 1- Interventions on STI are needed
 - Regular STI screening
 - Promote condom use
- 2- STI have always been a valuable marker of HIV risk, which is changing with PrEP
- 3- Clearly, more data is needed
- 4- Need to measure risk compensation on the community and individual level

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