



***Neisseria gonorrhoeae* and *Chlamydia trachomatis*
screening in MSM taking PrEP: the Gonoscreen study**

Thibaut Vanbaelen

Thank you!



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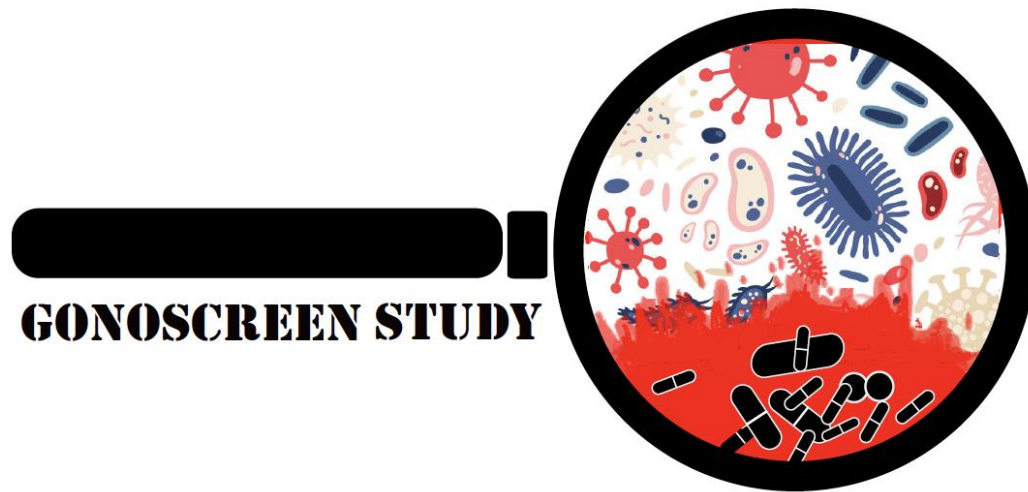


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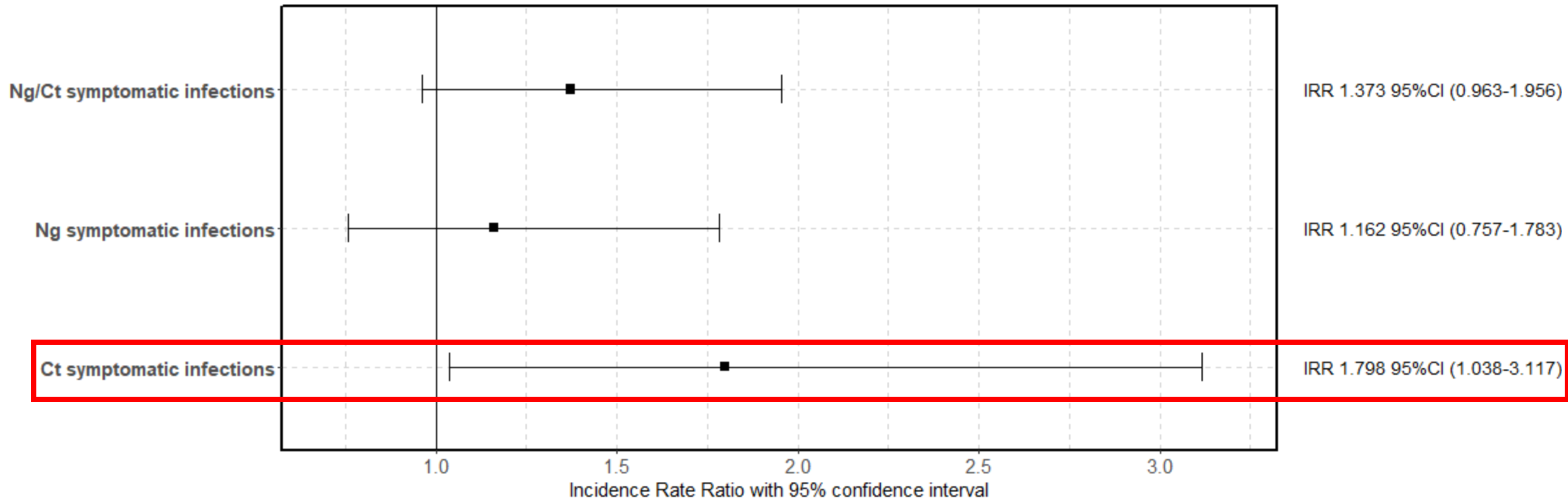
Background



- First RCT to assess the efficacy of 3X3 screening for Ng/Ct in MSM taking PrEP
- No effect on (symptomatic) Ng infections
- Possible effect on all Ct infections
- **Effect on symptomatic Ct infections**
- Substantial increase in AB consumption in 3x3 screening arm



Incidence rate ratios non-screening vs screening





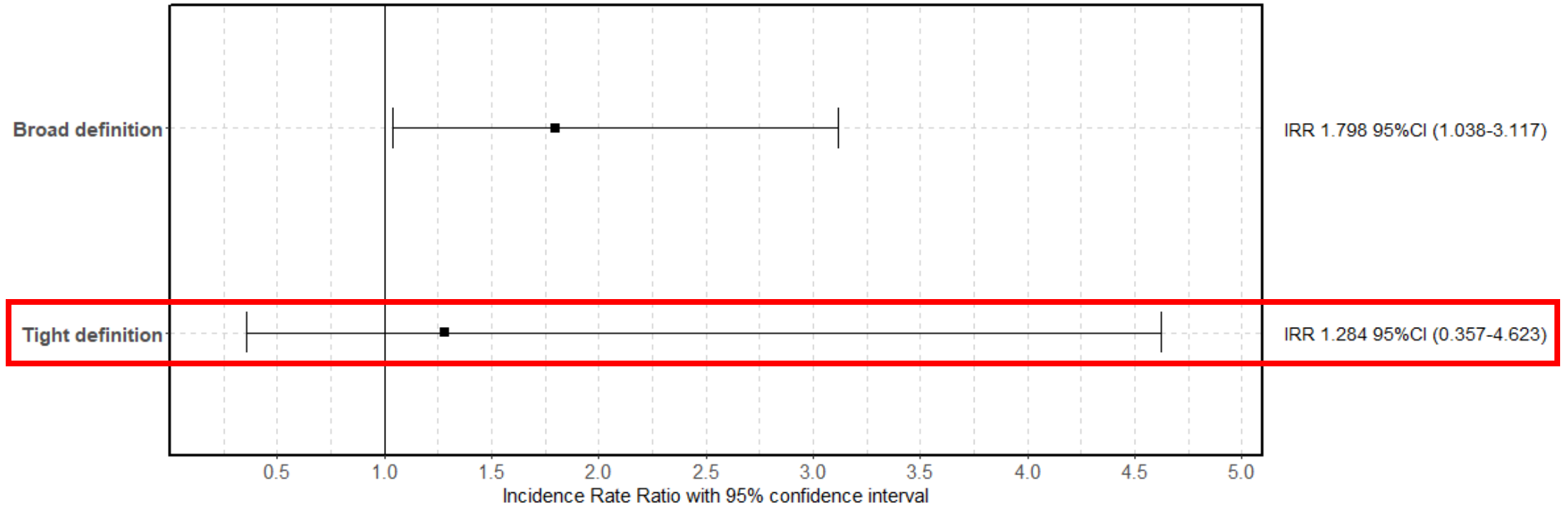
Symptomatic Ct infections

- **Broad** definition of symptoms: e.g., pharyngitis and genital ulcer
- Repeat analysis with **tighter** definition of symptoms:
 - Urethritis
 - Epididymitis
 - Proctitis





Incidence rate ratios non-screening vs screening





Conclusions

- Non-screening was not associated with a higher incidence of *Chlamydia* infections with symptoms of urethritis, epididymitis, or proctitis
- The results of the Gonoscreen study, combined with other evidence, informed the 2024 Belgian PrEP guidelines, which do not recommend systematic screening for Ng/Ct in MSM using PrEP
- What is the real-world effect of decreasing screening frequency for Ng/Ct in MSM taking PrEP?

Stay tuned at 16:50!



Thank you!

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Effect of screening for *Neisseria gonorrhoeae* and *Chlamydia trachomatis* on incidence of these infections in men who have sex with men and transgender women taking HIV pre-exposure prophylaxis (the Gonoscreen study): results from a randomised, multicentre, controlled trial



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Summary

Background Guidelines recommend screening for *Neisseria gonorrhoeae* and *Chlamydia trachomatis* at three anatomical sites (urethra, anus, and pharynx) every 3 months (3×3) in men who have sex with men (MSM) and transgender women taking HIV pre-exposure prophylaxis (PrEP). We present the first randomised controlled trial to compare the effect of screening versus non-screening for *N gonorrhoeae* and *C trachomatis* on the incidence of these infections in MSM and transgender women taking PrEP.

Methods A multicentre, randomised, controlled trial of 3×3 screening for *N gonorrhoeae* and *C trachomatis* versus non-screening was done among MSM and transgender women taking PrEP in five HIV reference centers in Belgium. Participants attended the PrEP clinics quarterly for 12 months. *N gonorrhoeae* and *C trachomatis* was tested at each visit in both arms, but results were not provided to the non-screening arm, if asymptomatic. The primary outcome was incidence rate of *N gonorrhoeae* and *C trachomatis* infections in each arm, assessed in the per-protocol population. Non-inferiority of the non-screening arm was proven if the upper limit of the 95% CI of the incidence rate ratio (IRR) was lower than 1.25. This trial is registered with ClinicalTrials.gov, NCT04269434, and is completed.

Findings Between Sept 21, 2020, and June 4, 2021, 506 participants were randomly assigned to the 3×3 screening arm and 508 to the non-screening arm. The overall incidence rate of *N gonorrhoeae* and *C trachomatis* was 0.155 cases per 100 person-days (95% CI 0.128–0.186) in the 3×3 screening arm and 0.205 (95% CI 0.171–0.246) in the non-screening arm. The incidence rate was significantly higher in the non-screening arm (IRR 1.318, 95% CI 1.068–1.627). Participants in the non-screening arm had a higher incidence of *C trachomatis* infections and symptomatic *C trachomatis* infections. There were no significant differences in *N gonorrhoeae* infections. Participants in the non-screening arm consumed significantly fewer antimicrobial drugs. No serious adverse events were reported.

Interpretation We failed to show that non-screening for *N gonorrhoeae* and *C trachomatis* is non-inferior to 3×3 screening in MSM and transgender women taking PrEP in Belgium. However, screening was associated with higher antibiotic consumption and had no effect on the incidence of *N gonorrhoeae*. Further research is needed to assess the benefits and harms of *N gonorrhoeae* and *C trachomatis* screening in this population.

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Introduction

International guidelines stipulate that screening programmes should only be introduced once they have met a set of criteria: the benefits should outweigh the harms, screening should be cost-effective, and there should be scientific evidence of screening programme effectiveness.¹ No randomised controlled trial (RCT) has evaluated the efficacy of screening for *Neisseria gonorrhoeae* or *Chlamydia trachomatis* in men who have sex with men (MSM) and transgender women.² Two large cluster RCTs have evaluated the effect of screening for

C trachomatis in general populations.^{3,4} Both found no significant effect of screening on the prevalence of *C trachomatis*. No RCTs have evaluated the efficacy of screening for *N gonorrhoeae*.⁵

Ecological analyses have found that countries where MSM are more intensively screened for *N gonorrhoeae* and *C trachomatis* do not have lower incidence and prevalence of asymptomatic or symptomatic *N gonorrhoeae* and *C trachomatis* infection than countries that screen less.⁶ One study that used self-reported data from two surveys in 2010 and 2017

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