# Belgian 2024 Guidance on the use of Pre-Exposure Prophylaxis

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**Summary of the evidence on screening of asymptomatic MSM for NG/CT**

There are eleven types of evidence which we evaluated to come to our conclusion. These are reviewed more in detail elsewhere [1,2]:

(1) The only randomized controlled trial in men who have sex with men (MSM) taking pre-exposure prophylaxis (PrEP) found that screening for *Neisseria gonorrhoeae* (NG)/Chlamydia trachomatis (CT) had a small or no effect on reducing NG and CT incidence but resulted in a large increase in antimicrobial consumption [3].

(2) Two large CT screening trials in general populations found that screening had no effect on CT prevalence [4,5].

(3) A systematic review of observational studies of NG/CT screening in MSM found that screening had no impact on prevalence [6].

(4) Ecological studies have revealed that European countries employing more intensive screening protocols for NG/CT in MSM do not exhibit a decreased incidence or prevalence of asymptomatic or symptomatic NG/CT cases [7,8]. Rather a recent multilevel analysis of data from 46 countries in Europe found that heightened screening intensity was positively correlated with the number of symptomatic NG/CT cases [8]. One explanation for this finding could be that intensive screening results in 'arrested' development of immunity to CT [8].

(5) Whilst some modelling studies have found that NG/CT screening could have a large effect on NG/CT prevalence in PrEP cohorts, a Belgian study found that intensified screening would have only a small effect on prevalence but a large effect on antimicrobial consumption [9].

(6) A systematic review of mass treatment interventions to reduce the prevalence of NG/CT in high prevalence populations revealed that the interventions resulted in a small temporary decline in prevalence at the expense of a large increase in antimicrobial resistance (AMR) [10].

(7) One study found an ecological association between the intensity of screening MSM for NG/CT and reduced gonococcal susceptibilities to cephalosporins [11].

(8) Screening MSM for NG/CT leads to substantial consumption of macrolides, cephalosporins, and tetracyclines. For example, a study from Belgium found that three-site, three-monthly NG/CT screenings resulted in macrolide consumption levels that exceeded approximate thresholds for the induction of AMR in various species by 5- to 9-fold [12]. Previous studies in Belgium have found that reducing the intensity of NG/CT screening intensity in a PrEP cohort from three-monthly, three-site to one-site, six-monthly screenings reduced macrolide consumption four-fold without discernible adverse clinical effects [13].

(9) The high rate of partner change in our PrEP cohorts generates an equilibrium prevalence for NG and CT of around 10%. Reducing the prevalence below this prevalence will likely place a selection pressure for the emergence of AMR [14].

(10) The prevalence of various types of antimicrobial resistance in Belgian MSM PrEP cohorts is very high [15,16].

(11) Guidelines for the introduction of screening programmes specify a number of criteria that should be met before a screening programme can be introduced [17]. These include that data from RCTs should show a clear benefit greater than the risks [18]. In our appraisal, the available evidence does not show this benefit.

**References**


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