Journées Thématiques
Santé Sexuelle - IST, PrEP, vaccination ...
28-29 mai 2024 Paris (France)
2024

Faut-il dépister le portage asymptomatique du gonoc[illegible] u chlamydia ?

J Krygier – MD
CHU Saint-Pierre/CHU Brugmann Bruxelles

CHU Saint-Pierre
UMC Sint-Pieter

MIA
MALADIES INFECTIEU·SES·ZE AANDOENINGEN

GR/IDIST
GROUPE INFECTIOLOGIE DERMATOLOGIQUE ET INFECTIONS SEXUELLEMENT TRANSMISSIBLES

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Conflits d'intérêt

Aucun

Does screening for Neisseria gonorrhoeae and Chlamydia trachomatis affect the incidence of these infections in MSM taking HIV-PrEP?

Results from a randomized, multicenter, controlled trial

Thibaut Vanbaelen, MD

GONOSCREEN STUDY

Presenté ce jour par J. Krygier –MD - CHU Saint-Pierre/Bruxelles

INSTITUTE OF TROPICAL MEDICINE ANTWERP

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Vanbaelen T, *et al*. Lancet HIV.

Introduction

-Les HSH prenant la PrEP contre le VIH sont touchés de manière disproportionnée par les IST bactériennes telles que Neisseria gonorrhoeae (Ng) et Chlamydia trachomatis (Ct)

-La plupart des infections sont extragénitales et asymptomatiques

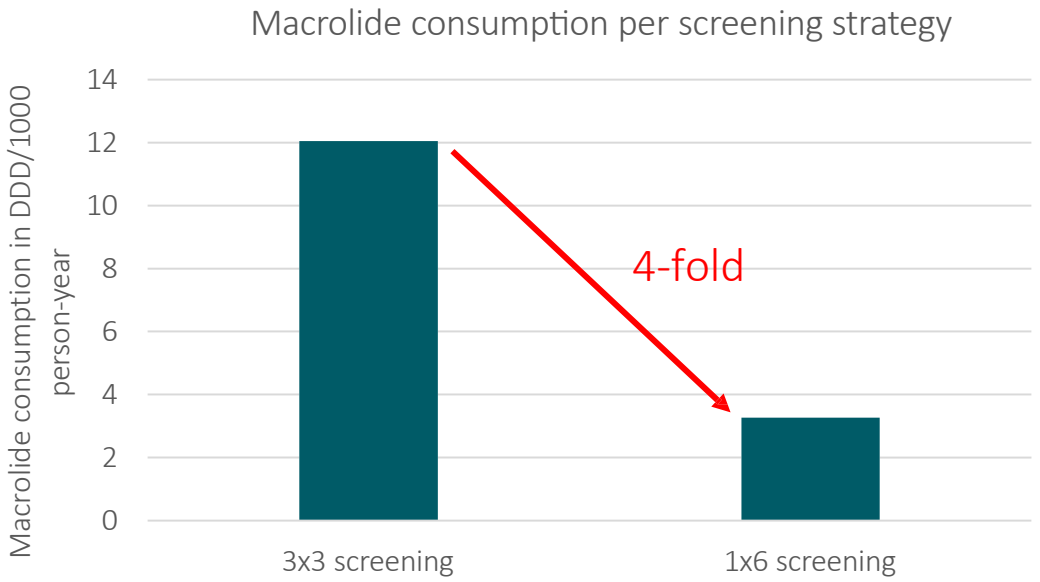
-Dans le cadre de la PrEP, un dépistage du Ng/Ct sur 3 sites, tous les 3 mois (3x3) est recommandé

-Aucun RCT n'a été réalisé pour évaluer si le dépistage du Ng/Ct est efficace pour réduire l'incidence de ces infections chez les HSH prenant la PrEP contre le VIH.

Introduction

Le dépistage du Ng/Ct entraîne une consommation élevée d'antibiotiques

Ce qui pourrait à son tour conduire à l'émergence d'une résistance aux antibiotiques



Vanbaelen T, *et al*. Int J STD AIDS. 2021;32:1183-1184.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Women	1.2	3.9	0.7	5.0	1.6	4.1	6.3	11.8	11.2	24.4
MSM	0	0	1.0	4.0	1.7	9.0	10.8	20.3	28.4	49.0
MSW	0	0	1.1	4.1	3.9	3.6	12.2	15.0	20.7	28.8

Figure 6: Resistance to azithromycin of N. gonorrhoeae stratified by gender and sexual transmission. MSM: Men who have sex with men. MSW: Men who have sex with women

De Baetselier I, *et al*. NRC-STI 2022.

L'étude Gonoscreen

- **Design:**
  - Essai clinique randomisé, multicentrique, contrôlé de screening trimestriel sur 3 sites (oro-pharyngé, ano-rectal, urétral) pour Ng/Ct versus pas de screening chez des HSH prenant la PrEP contre le VIH

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INSTITUTE OF TROPICAL MEDICINE ANTWERP

CHU Saint-Pierre
UMC Sint-Pieter

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- **Septembre 2020 – Août 2022**

Objectifs

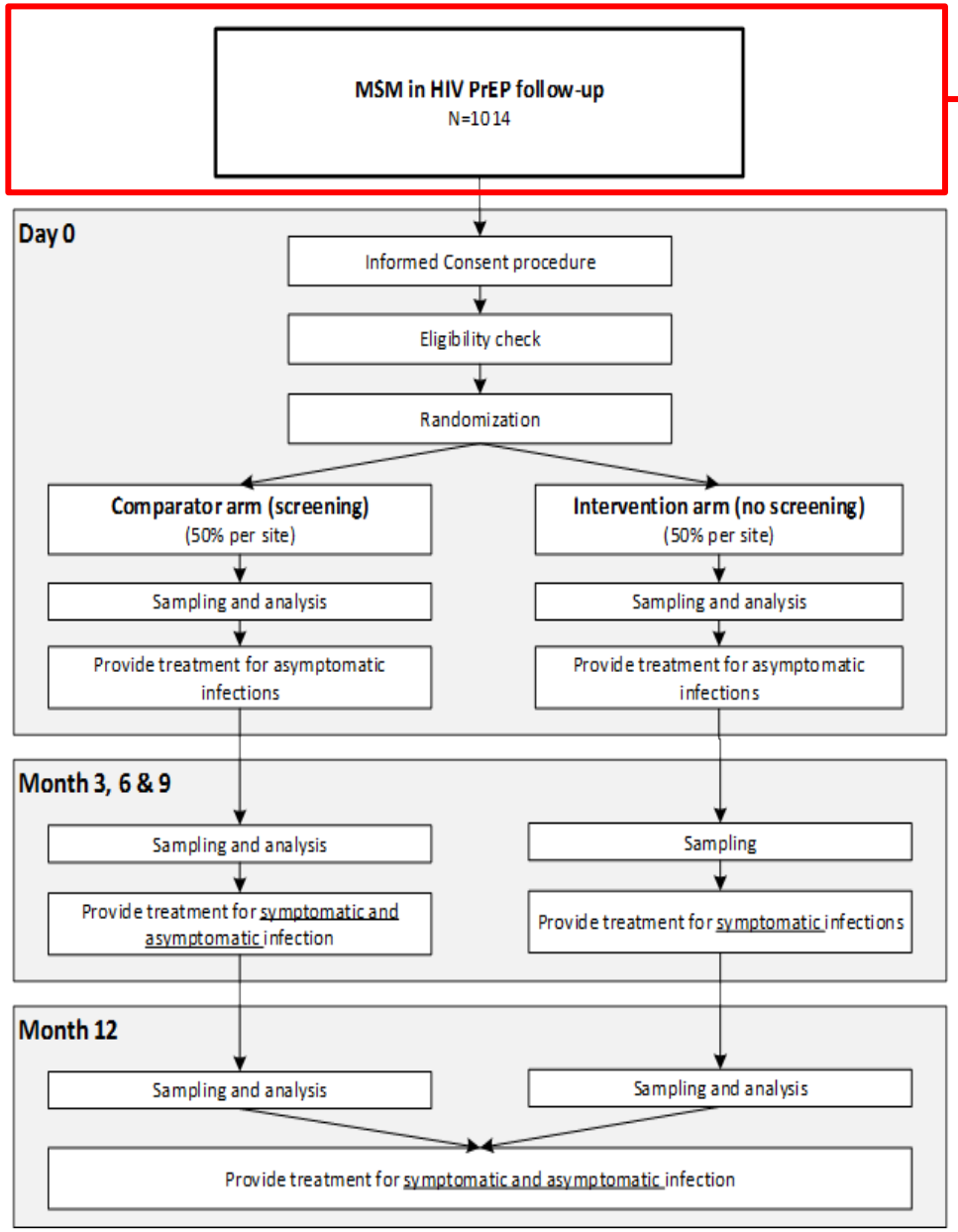
Objectif primaire

- Evaluer si le taux d'incidence du Ng/Ct des HSH sous PrEP **n'effectuant pas de dépistage** pour ces infections est non inférieur au taux chez ceux effectuant un dépistage, sur une période de 12 mois

Objectif secondaire

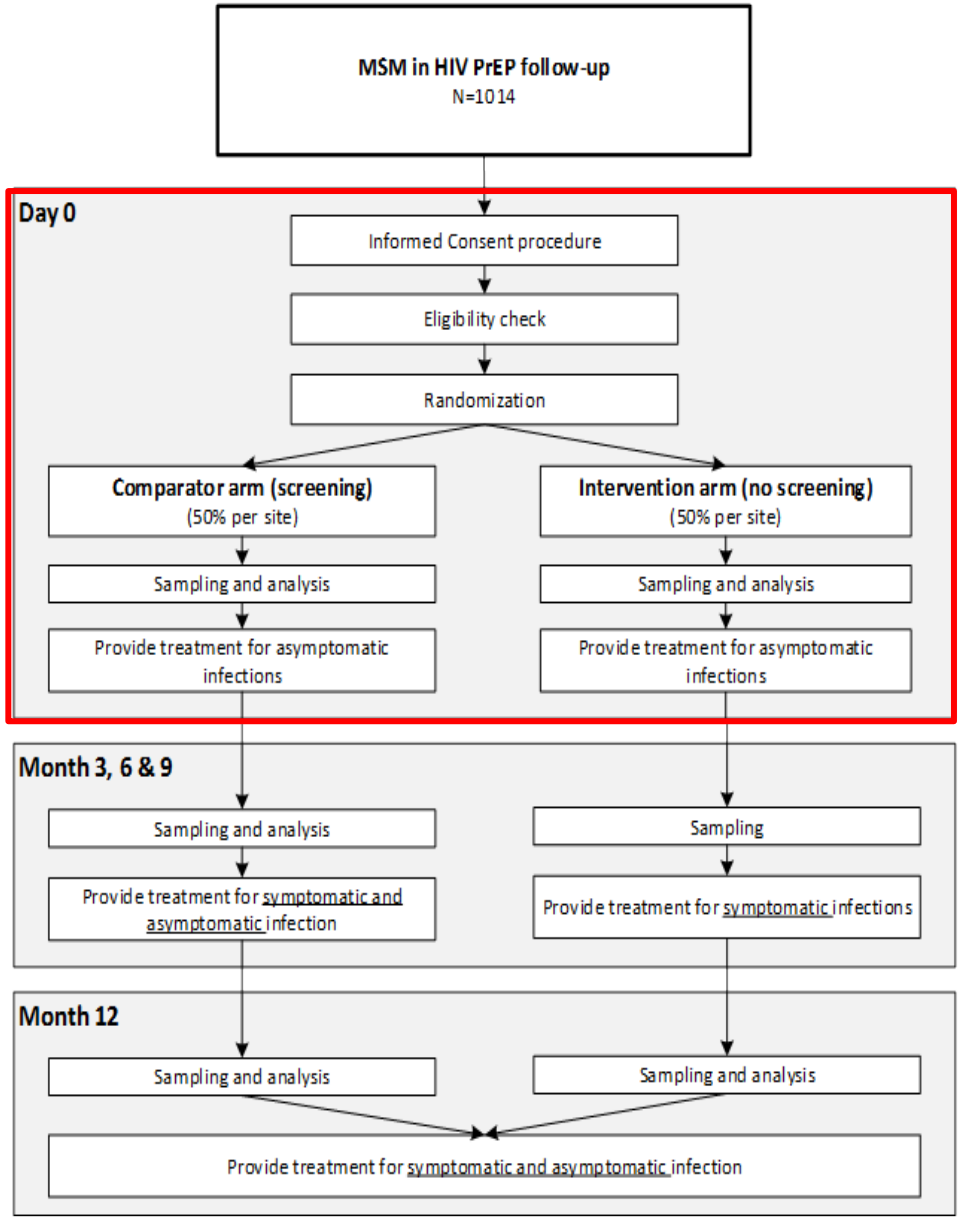
- Evaluer si le taux d'incidence d'infections **symptomatiques** à Ng/Ct des HSH sous PrEP n'effectuant pas de dépistage pour ces infections est non inférieur au taux chez ceux effectuant un dépistage, sur une période de 12 mois
- Evaluer l'exposition aux antibiotiques (ceftriaxone/azithromycin/doxycycline) dans les 2 bras

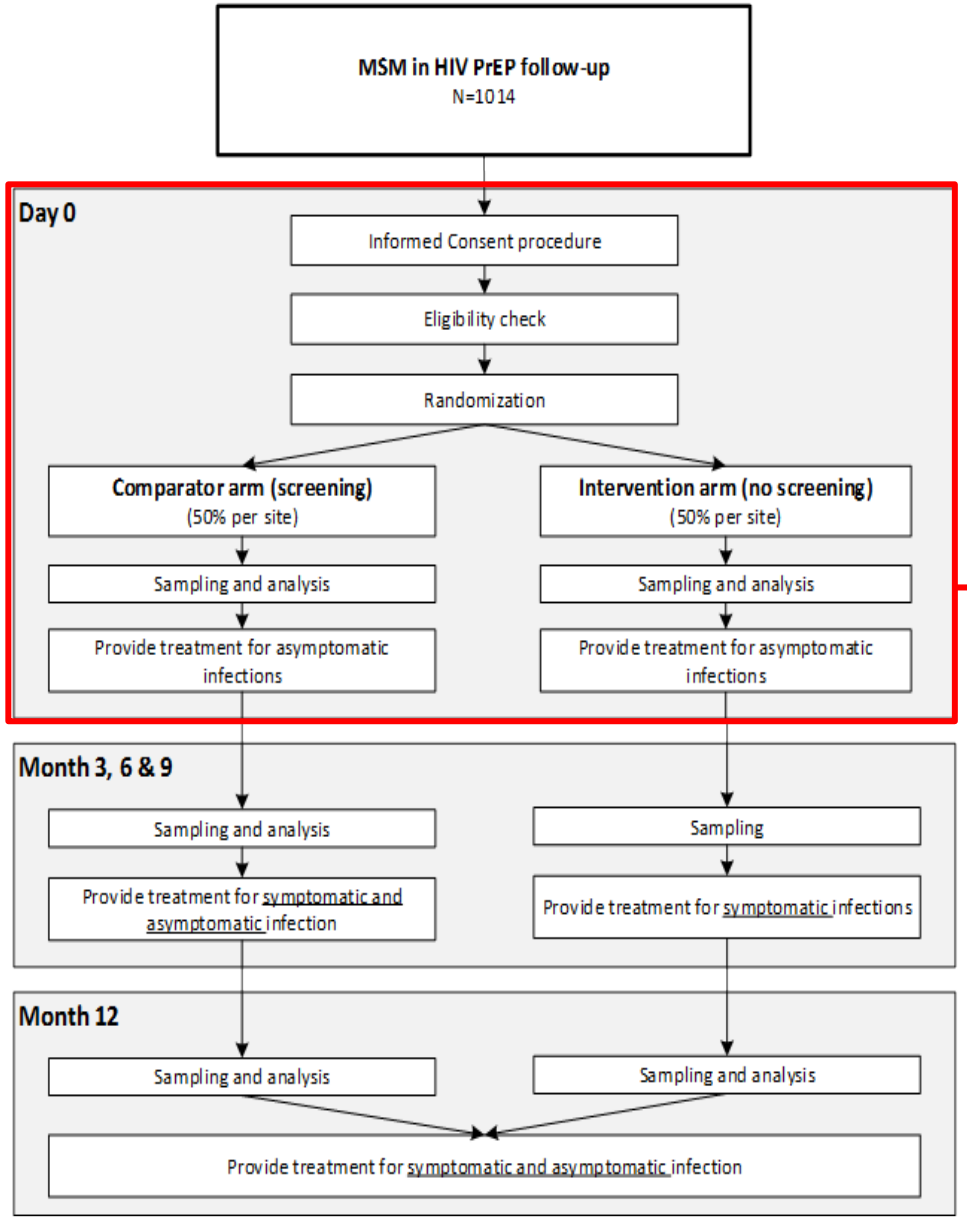
- Bras sans dépistage prouvé non inférieur si la limite supérieure de l'IC à 95 % du ratio de taux d'incidence (pas de dépistage vs. dépistage) est inférieure à 1,25



- **- Critères d'inclusion**
  - Capable de délivrer un consentement éclairé
  - Hommes (né hommes) et femmes trans > 18 ans
  - Avoir eu un RS avec un autre homme dans les 12 derniers mois
  - Etre suivi dans le cadre d'une convention PrEP en Belgique
  - Accord de compliance aux procedures de l'étude

  - Critères d'exclusion:
  - Participation concomitante à un autre essai interventionnel
  - Séropositivité au VIH
  - Symptômes de proctite ou d'urétrhite

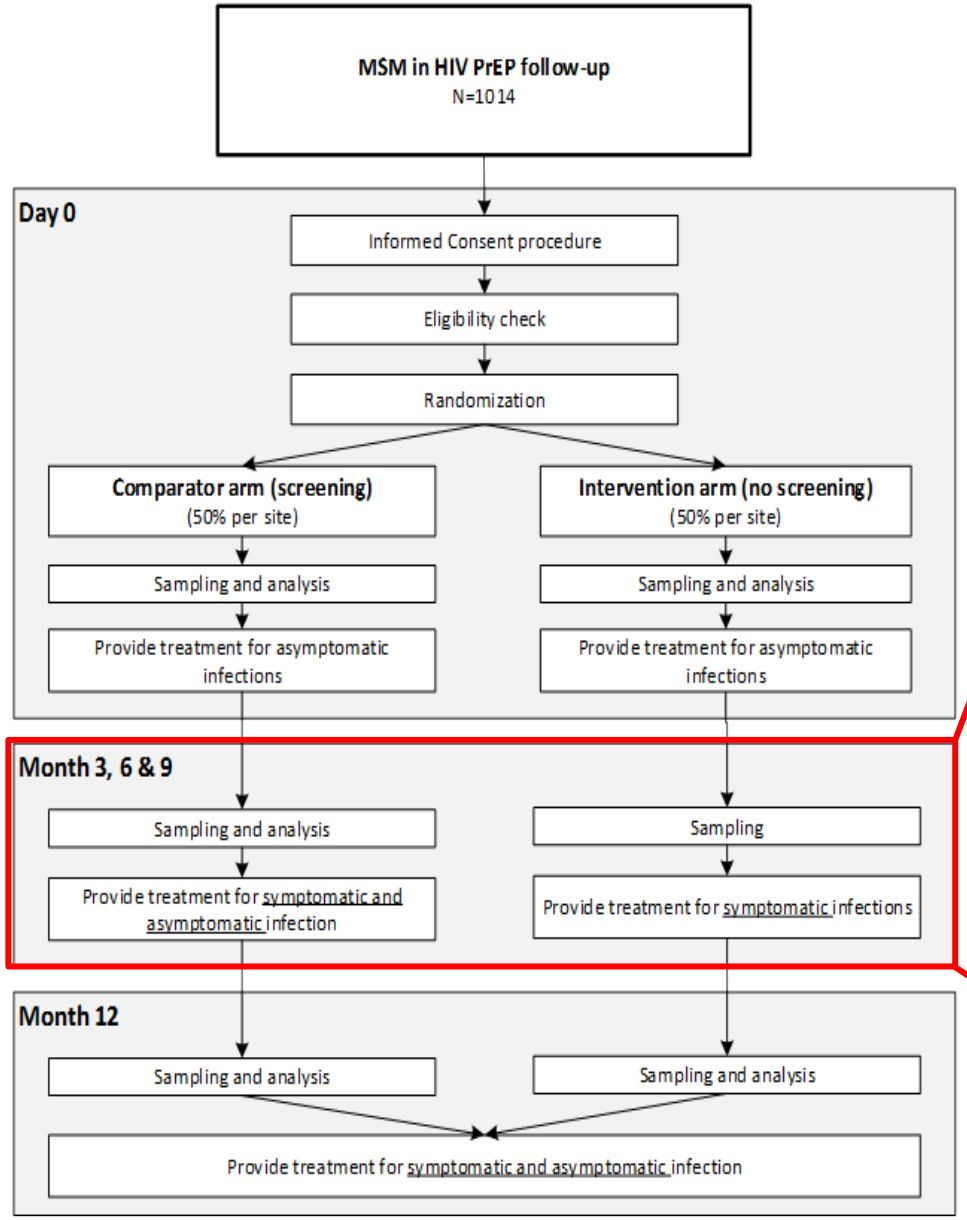

MSM in HIV PrEP follow-up
N=1014
Day 0
Informed Consent procedure
Eligibility check
Randomization
Comparator arm (screening)
(50% per site)
Intervention arm (no screening)
(50% per site)
Sampling and analysis
Sampling and analysis
Provide treatment for asymptomatic infections
Provide treatment for asymptomatic infections
Month 3, 6 & 9
Sampling and analysis
Sampling
Provide treatment for symptomatic and asymptomatic infection
Provide treatment for symptomatic infections
Month 12
Sampling and analysis
Sampling and analysis
Provide treatment for symptomatic and asymptomatic infection



Dépistage aux 3 sites
Ct/Ng (PCR)
- Frottis oro-pharyngé
- Frottis ano-rectal
- Urine

=> poolé

R/ si positif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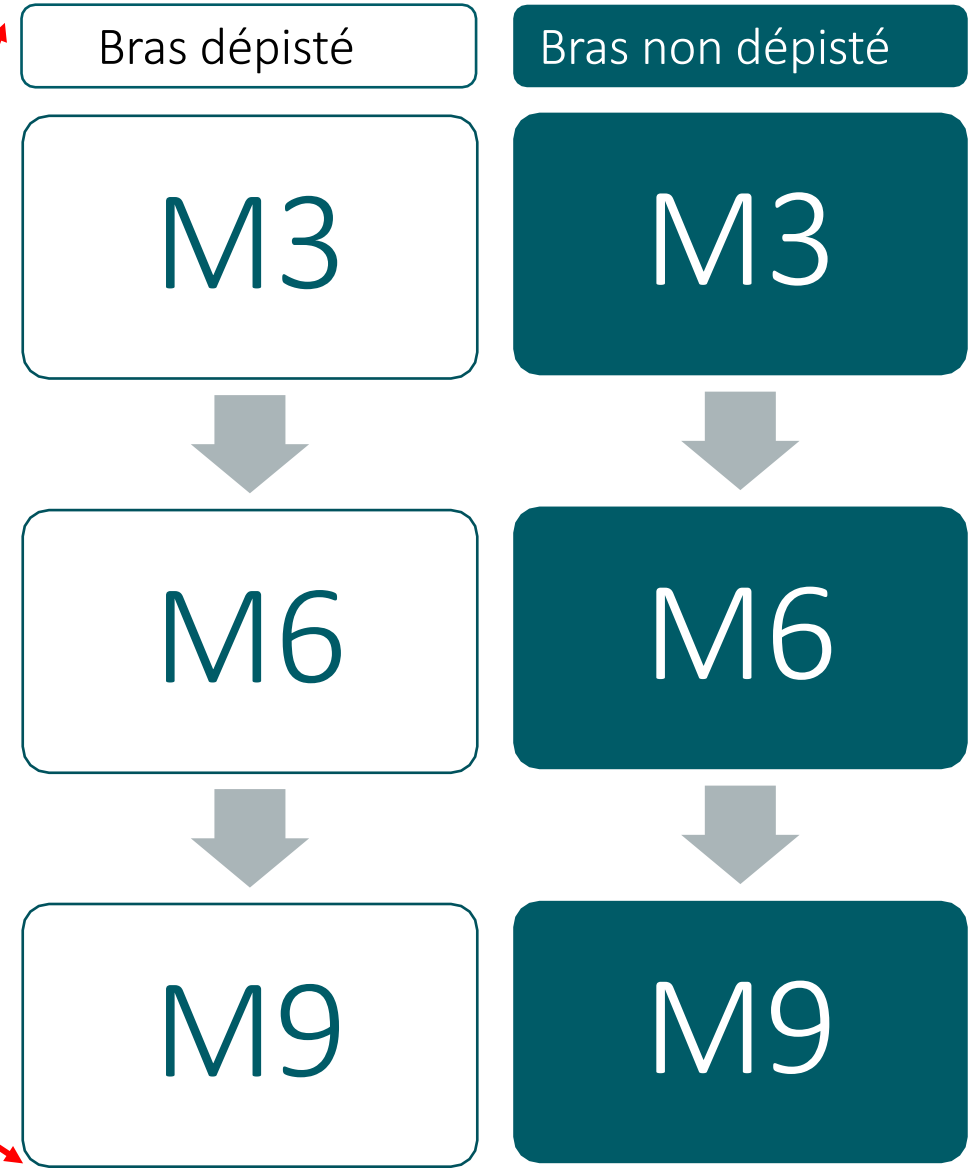
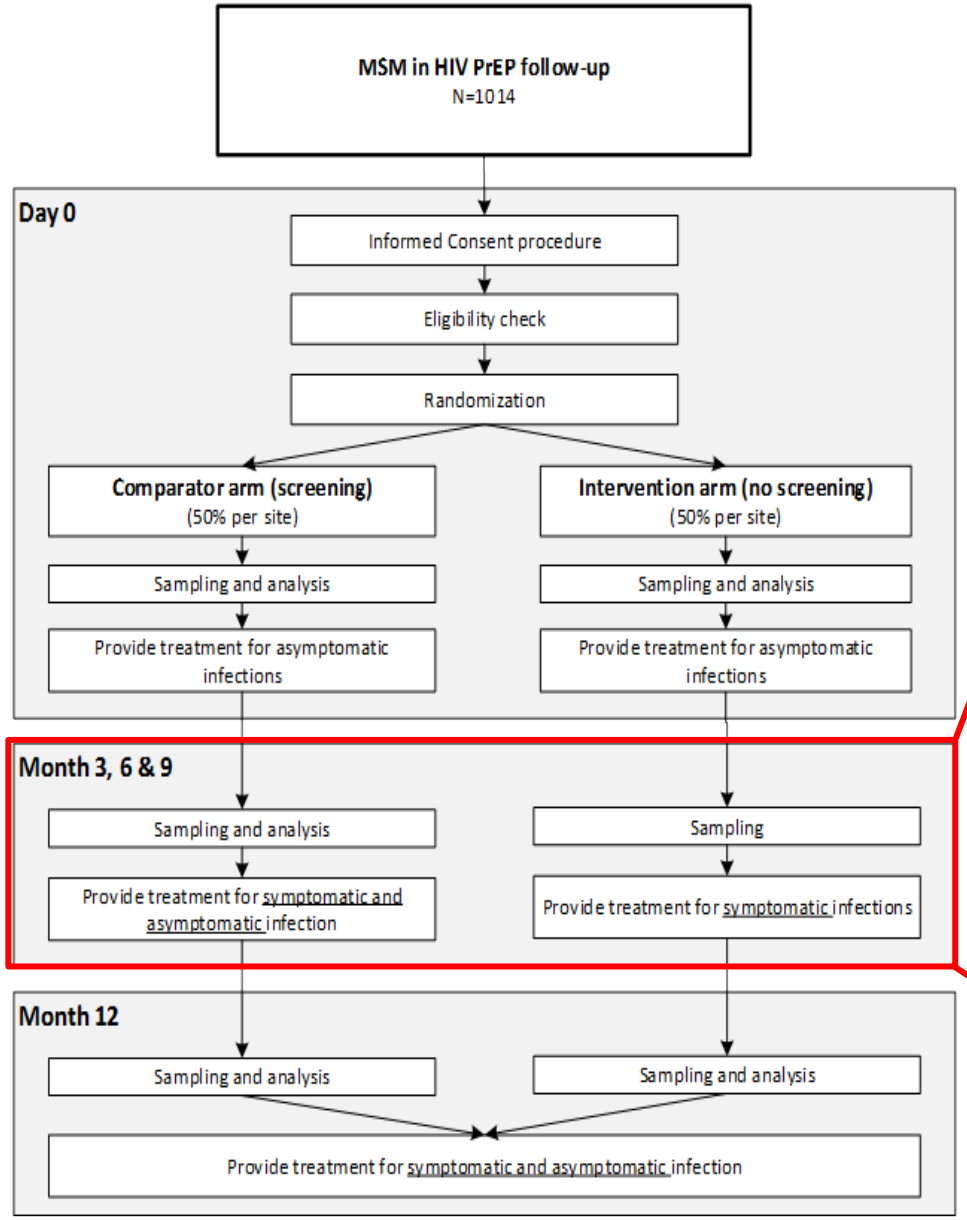

Bras dépisté
Bras non dépisté
M3
M3
M6
M6
M9
M9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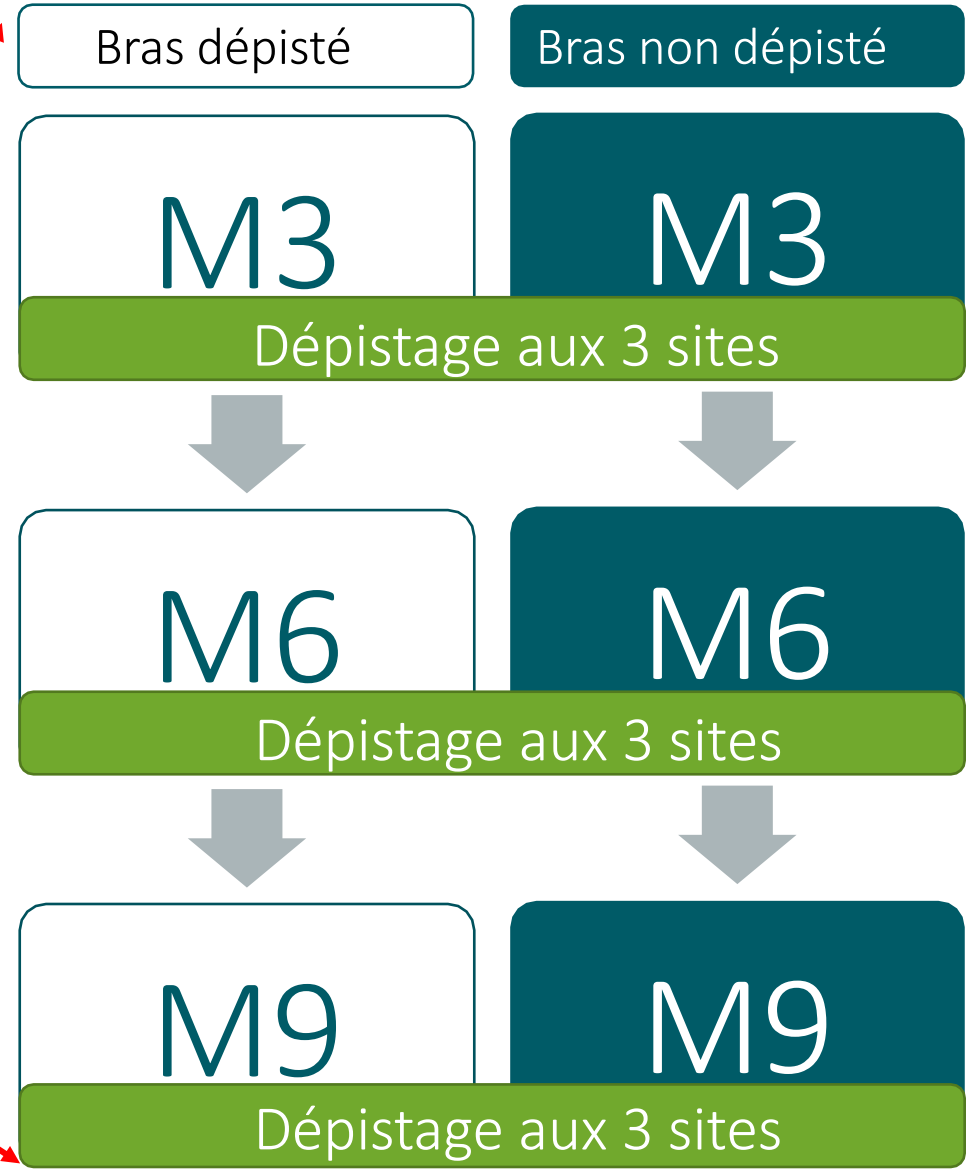
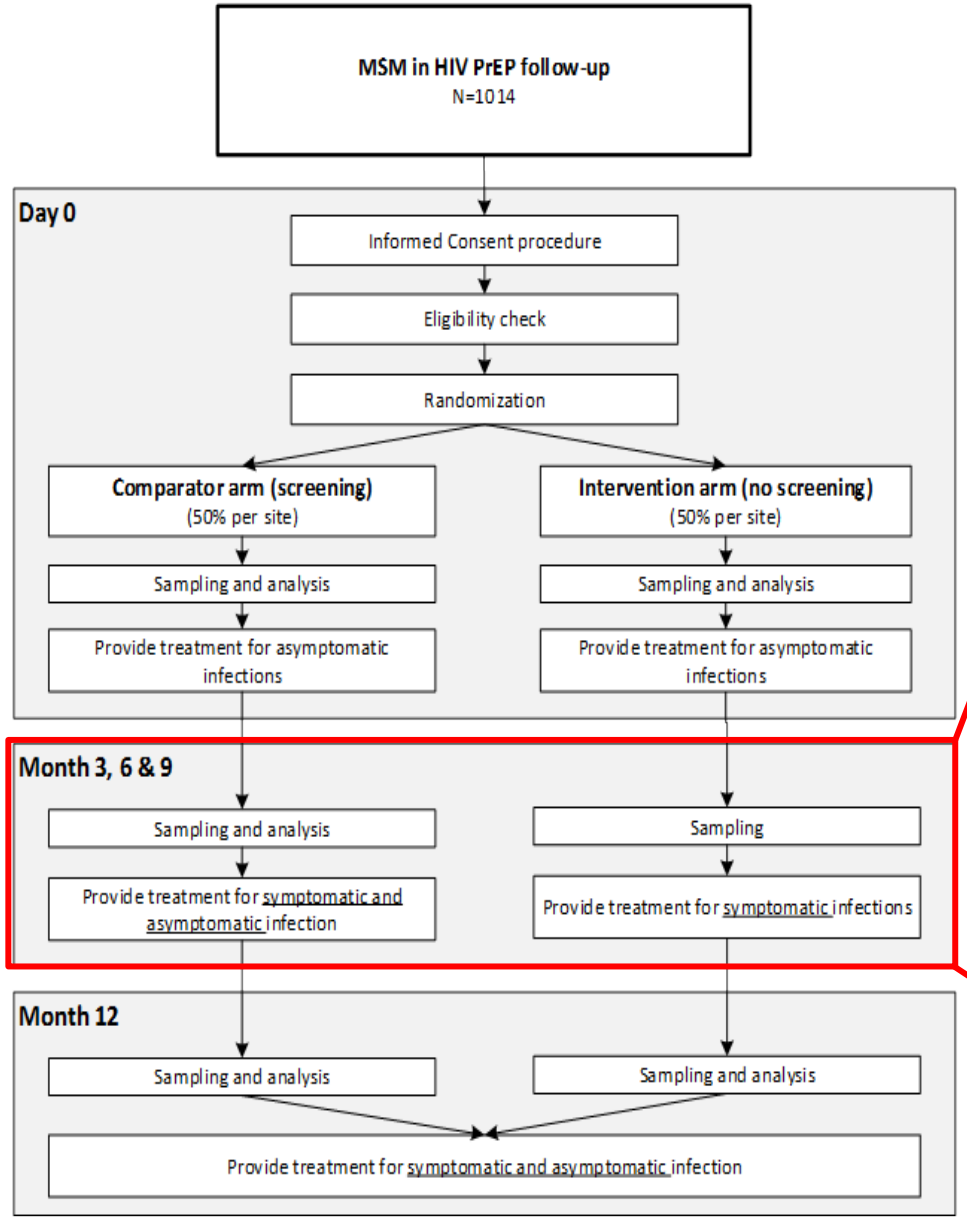

Bras dépisté
Bras non dépisté
M3
M3
Dépistage aux 3 sites
M6
M6
Dépistage aux 3 sites
M9
M9
Dépistage aux 3 sites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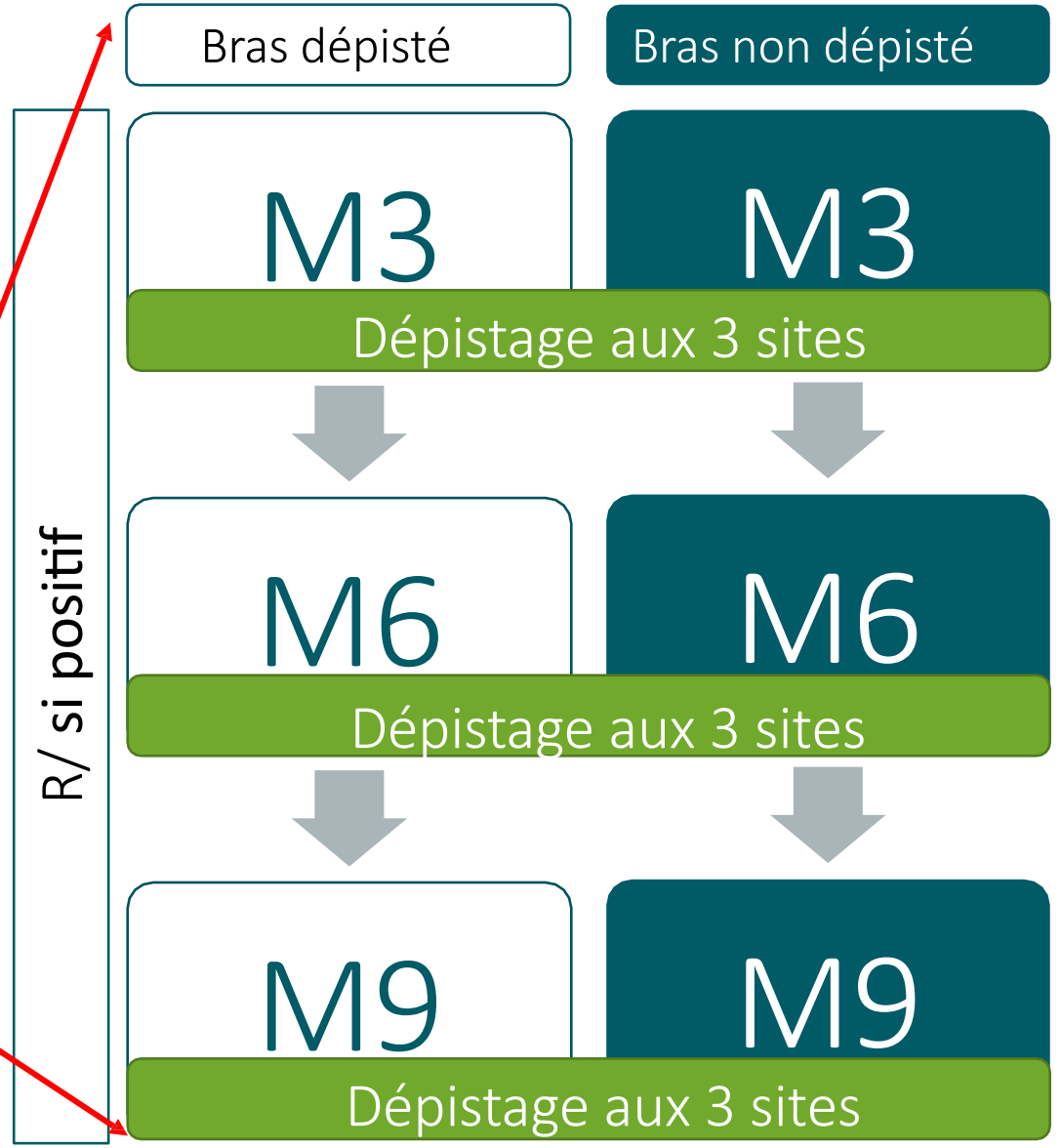
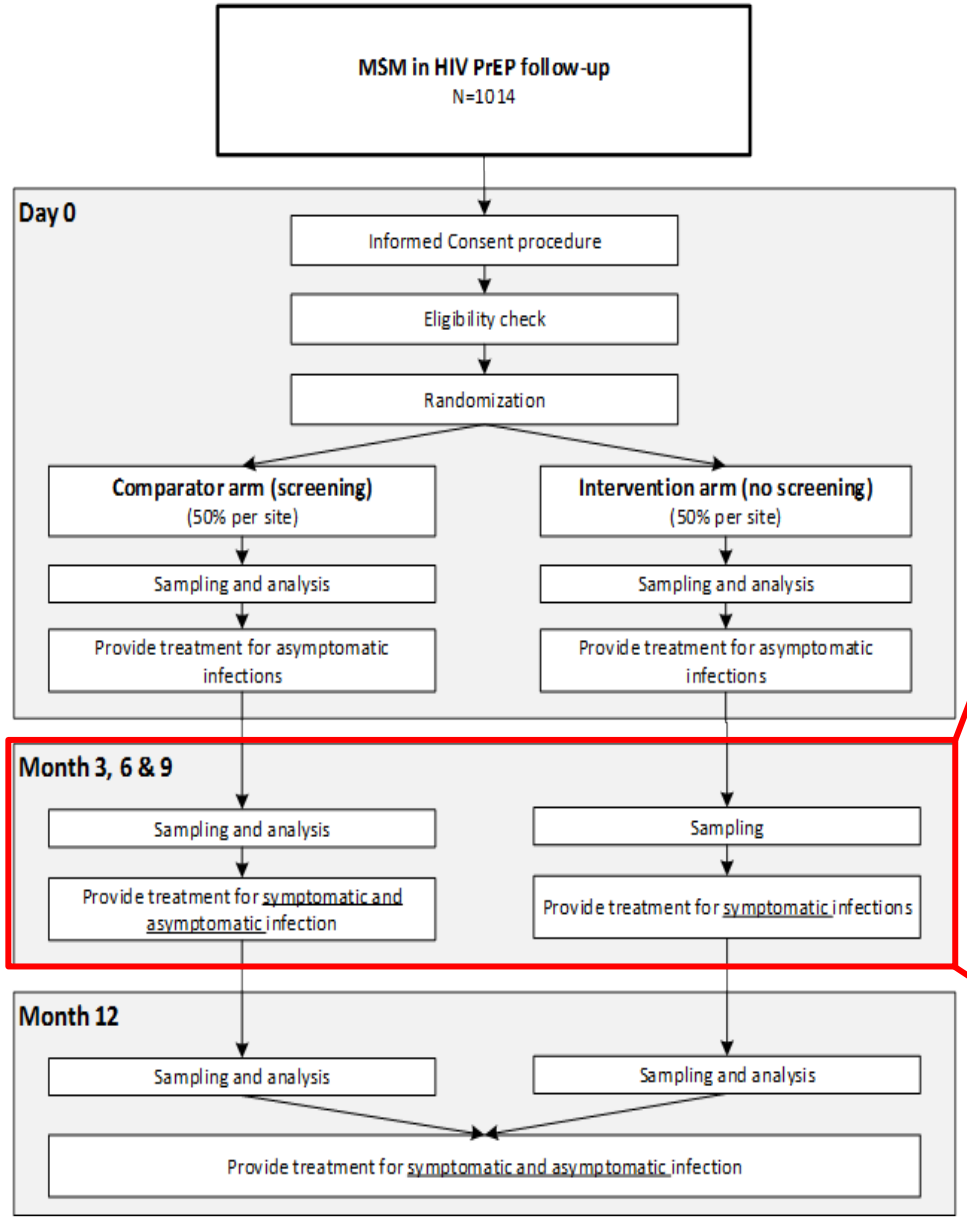

Bras dépisté
Bras non dépisté
R/ si positif
M3
M3
Dépistage aux 3 sites
M6
M6
Dépistage aux 3 sites
M9
M9
Dépistage aux 3 sites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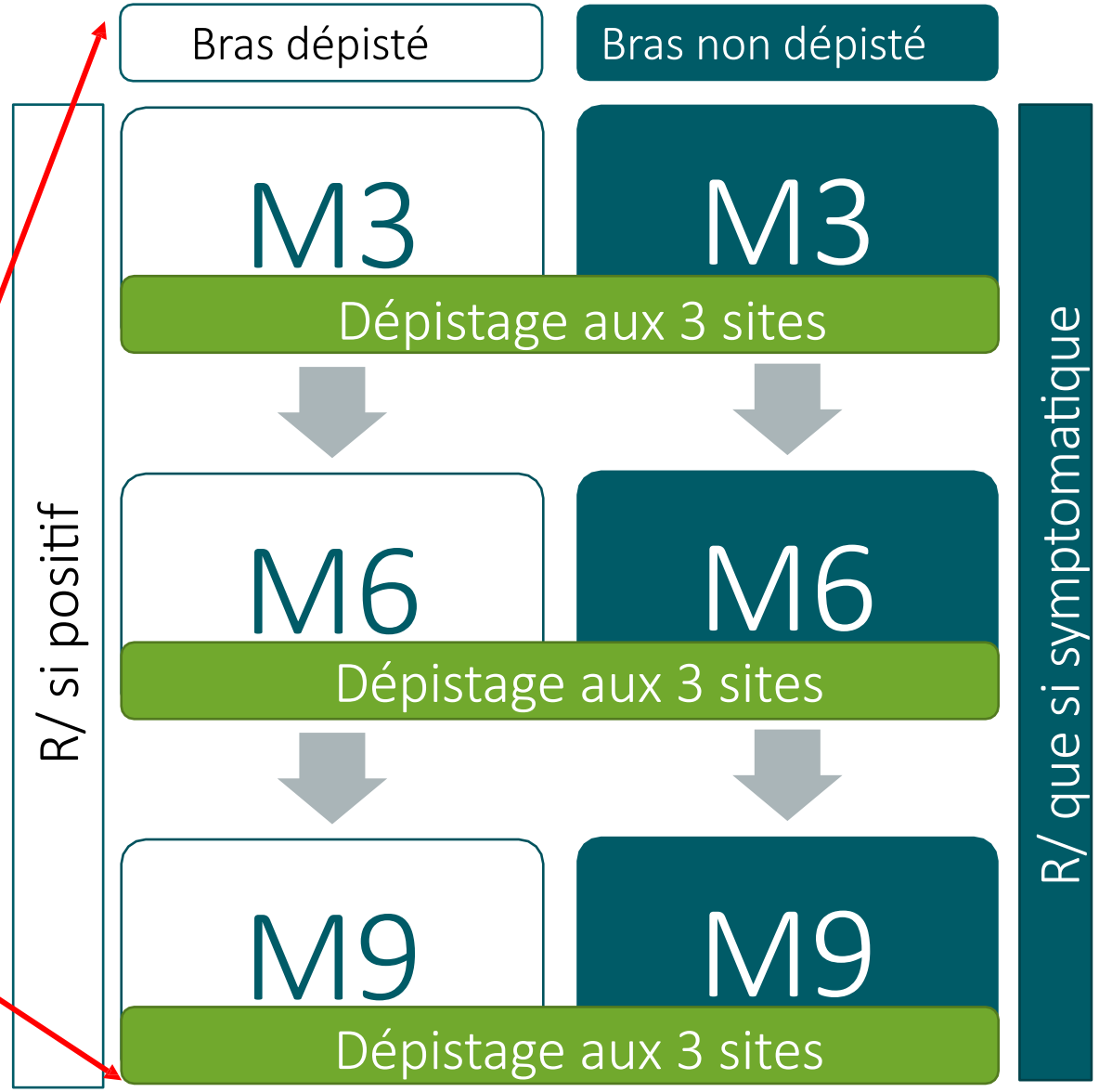
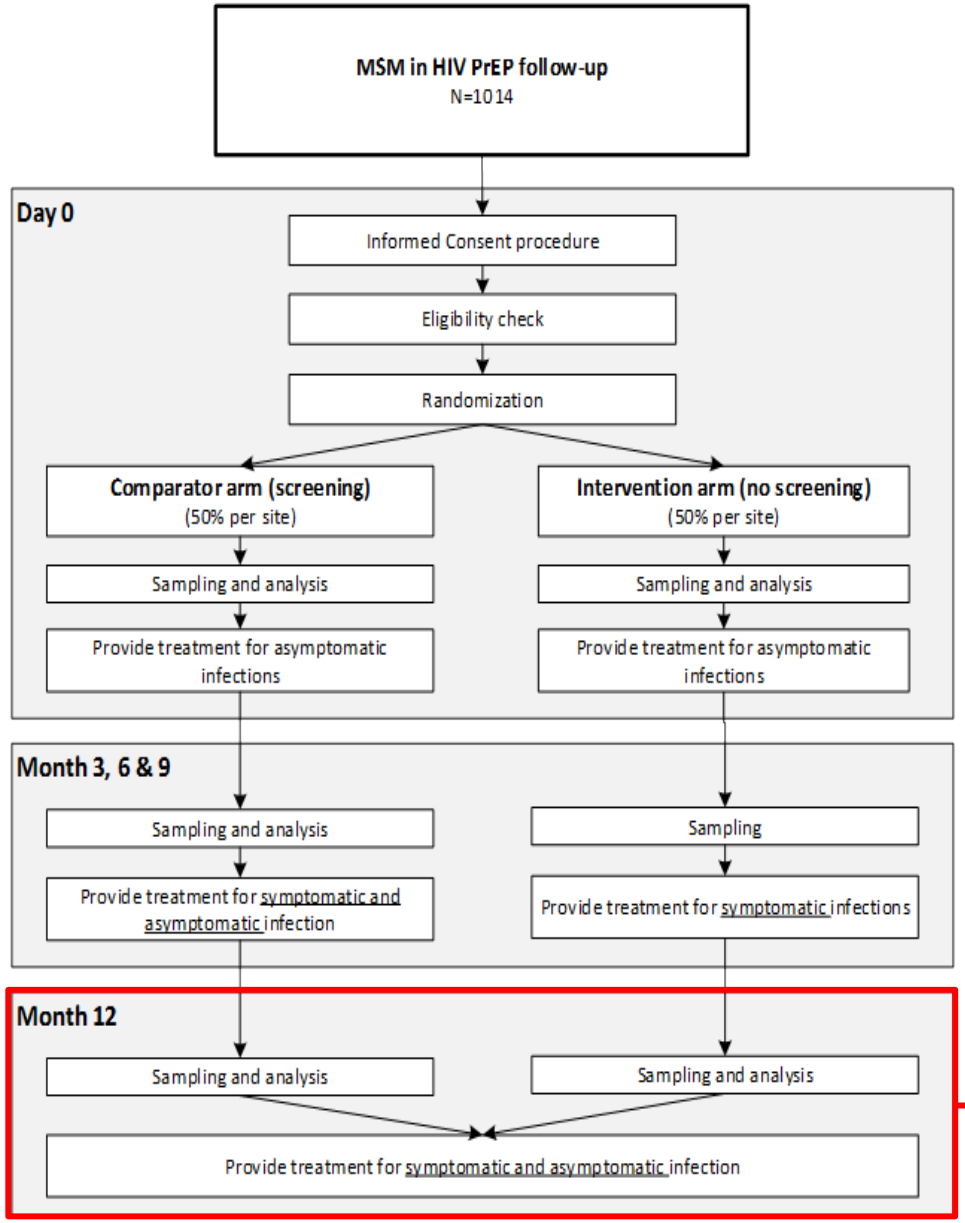

Bras dépisté
Bras non dépisté
R/ si positif
M3
M3
Dépistage aux 3 sites
M6
M6
Dépistage aux 3 sites
M9
M9
Dépistage aux 3 sites
R/ que si symptomatique



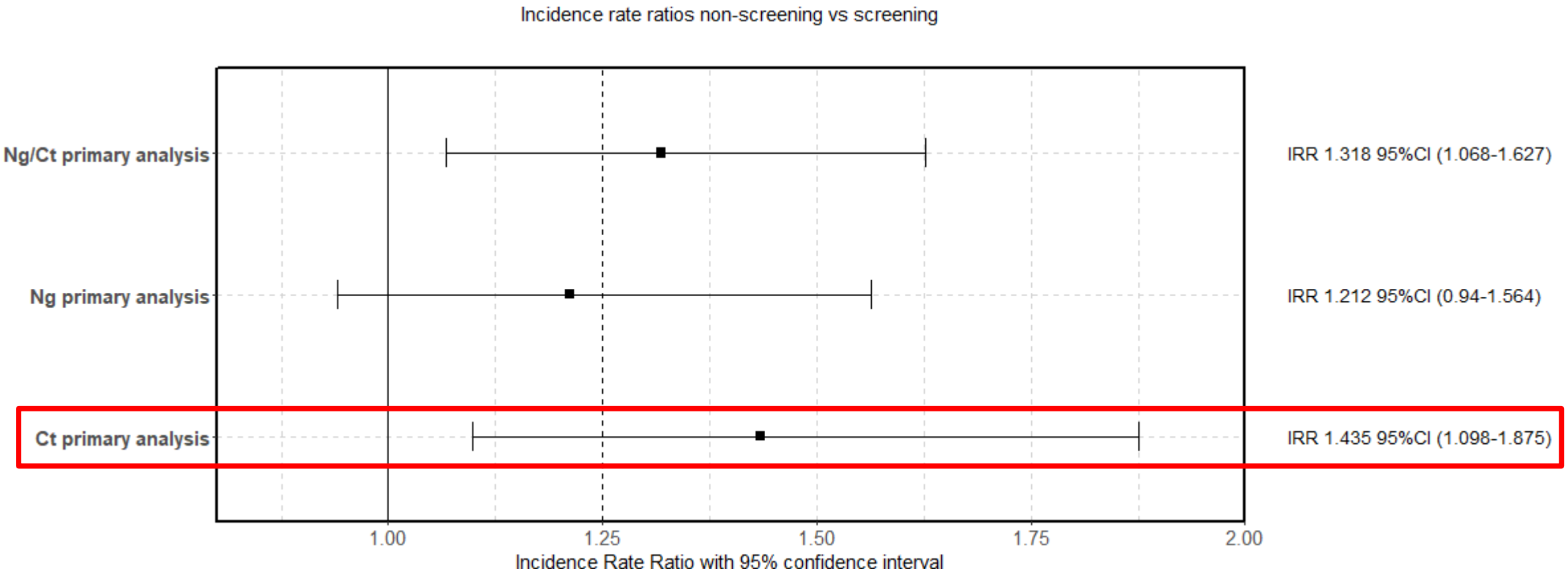
Dépistage aux 3 sites

R/ si positif

Caractéristiques de baseline

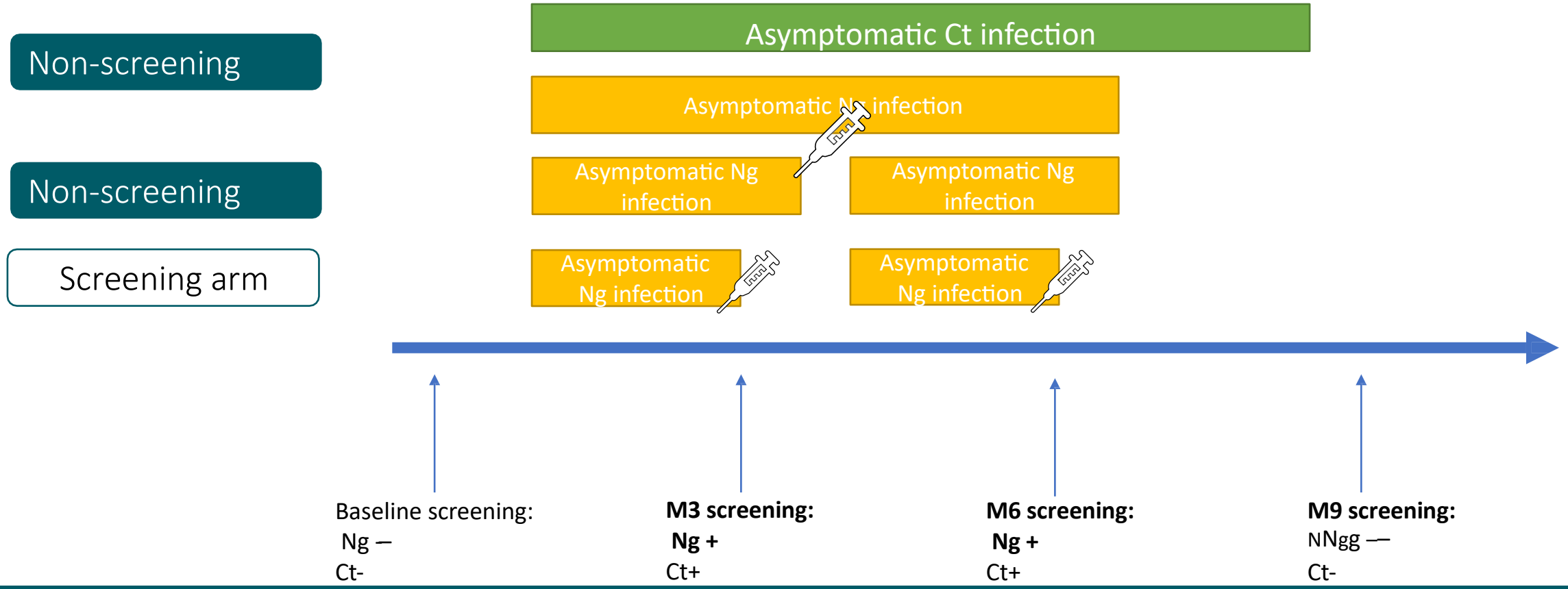
	3 x 3 Screening (N=506) n (%)/Median (IQR)	Non-screening (N=508) n (%)/Median (IQR)	Total population (N=1014) n (%)/Median (IQR)
Age	39 (33 - 47)	39 (32·5 - 48)	39 (33 - 47)
Sex: Man	506 (100%)	505 (99·4%)	1011 (99·7%)
Sex: Transwoman	0 (0%)	3 (0·6%)	3 (0·3%)
Number of sex partners (past 3 months)	4 (2 - 8)	4 (2 - 8)	4 (2 - 8)
Number of unprotected sex partners (past 3 months)	2 (1 - 5)	2 (1 - 5)	2 (1 - 5)
Any antibiotic (past 6 months)	192 (37·9%)	173 (34·1%)	365 (36·0%)
Cephalosporins	67 (13·2%)	77 (15·2%)	144 (14·2%)
Macrolides	81 (16·0%)	94 (18·5%)	175 (17·3%)
Penicillins	63 (12·5%)	47 (9·3%)	110 (10·8%)
Quinolones	11 (2·2%)	5 (1·0%)	16 (1·6%)
Tetracyclines	57 (11·3%)	54 (10·6%)	111 (10·9%)

Analyse primaire

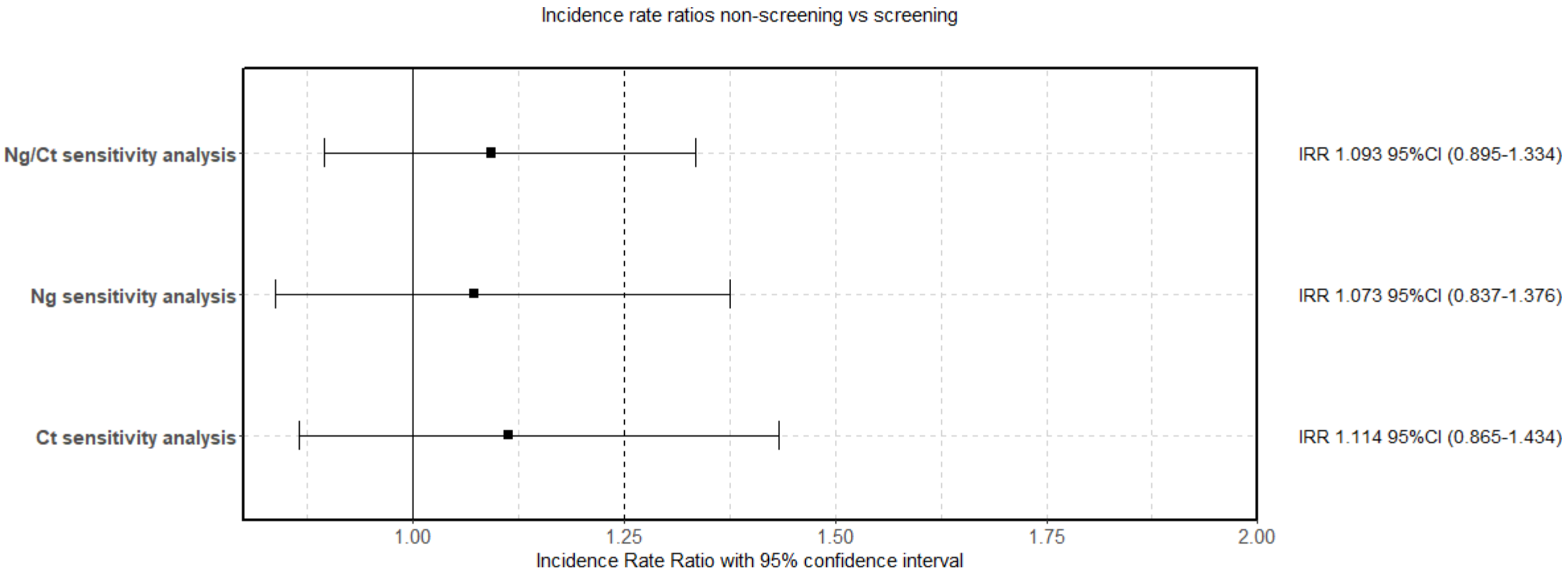


Biais d'infection non traitée dans le bras non dépisté

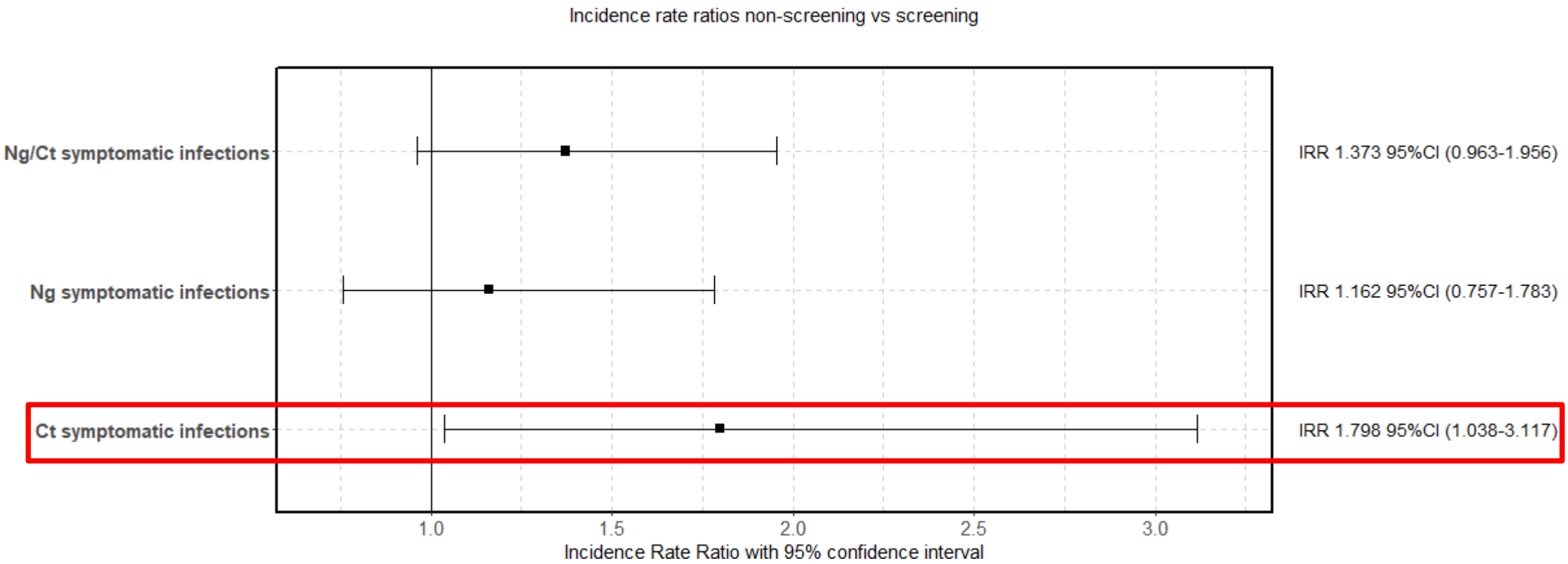
Analyse primaire = 2 infections
Analyse de sensibilité = 1 infection … sauf si preuve d'utilisation d'un antibiotique efficace contre le pathogène



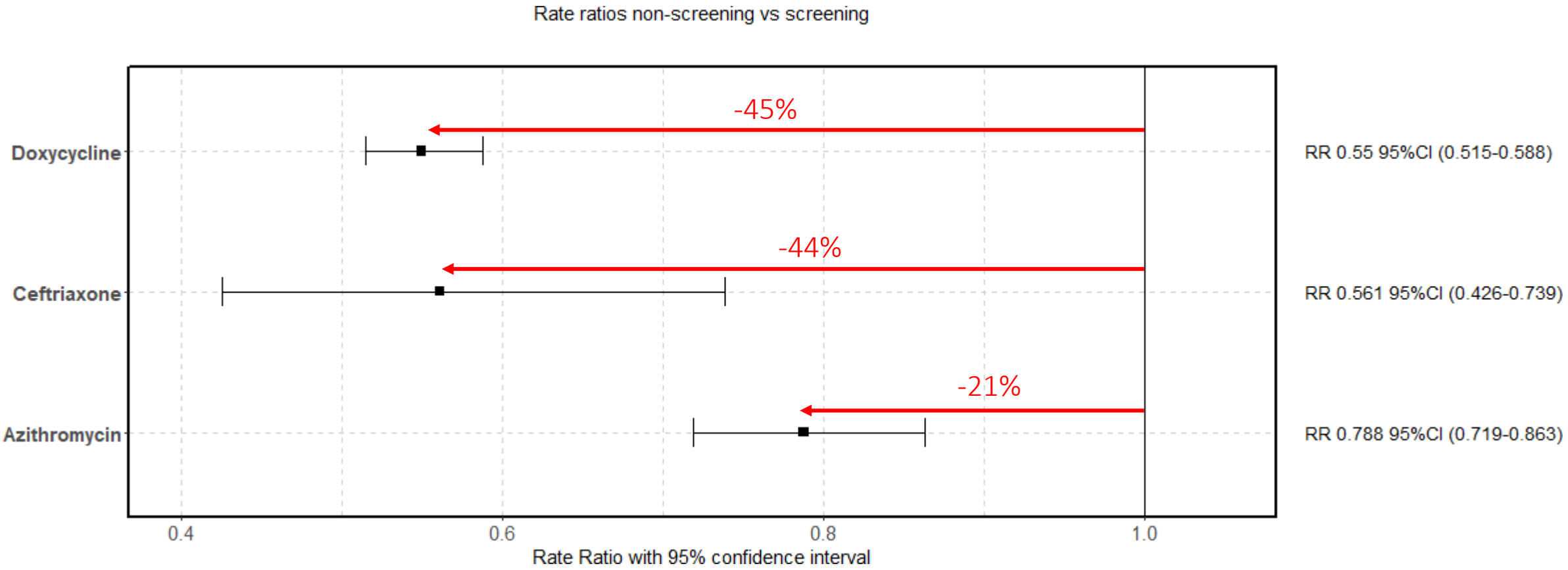
Analyse de sensibilité



Infections symptomatiques



Consommation d’antibiotiques



Conclusion

- Ne pas dépister Ng/Ct chez les HSH prenant la PrEP contre le VIH est associé à une
incidence plus élevée d'infections par Ct, mais pas d'infections par Ng.

- Lorsqu’on contrôle pour le biais d'infection non traitée dans le groupe sans dépistage, aucune différence n'a été constatée entre les groupes.

- Le dépistage du Ng/Ct entraîne une augmentation substantielle de la consommation d’antibiotique.

- D’après nos résultats, les avantages du dépistage du Ng/Ct dans les cohortes PrEP ne semblent pas contrebalancer les inconvénients.

RESEARCH

Randomised controlled trial of screening for *Chlamydia trachomatis* to prevent pelvic inflammatory disease: the POPI (prevention of pelvic infection) trial

Pippa Oakeshott,[1] Sally Kerry,[1] Adamma Aghaizu,[1] Helen Atherton,[2] Sima Hay,[3] David Taylor-Robinson,[4] Ian Simms,[5] Phillip Hay[6]

BMJ | 24 april 2010 | Volume 340

INCIDENCE OF PELVIC INFLAMMATORY DISEASE (PID) IN 2377 SEXUALLY ACTIVE FEMALE STUDENTS FOLLOWED UP OVER 12 MONTHS

	% (No) of women			
Incidence of PID	Screened group	Deferred screening	Relative risk (95% CI)	P value
Overall	1.3 (15/1191)	1.9 (23/1186)	0.65 (0.34 to 1.22)	0.19
Chlamydia positive women at baseline	1.6 (1/63)	9.5 (7/74)	0.17 (0.03 to 1.01)	0.07

However, most disease (79%, 30/38) occurred in women who tested negative at baseline

The effectiveness of a single chlamydia test in preventing pelvic inflammatory disease over 12 months may have been overestimated.

REVIEW Open Access

Controversies and evidence on Chlamydia testing and treatment in asymptomatic women and men who have sex with men: a narrative review

Nicole H. T. M. Dukers-Muijrers[1,2*], Ymke J. Evers[1,3], Christian J. P. A. Hoebe[1,3,4], Petra F. G. Wolffs[4], Henry J. C. de Vries[5,6,7], Bernice Hoenderboom[5,8], Marianne A. B. van der Sande[9,10], Janneke Heijne[5], Jeffrey D. Klausner[11], Jane S. Hocking[12] and Jan van Bergen[5,13,14]

BMC Infectious Diseases (2022) 22:255

Methods: **A literature search** was performed using PubMed for relevant publications between 2018 and September 2021, and iterative retrieval of additional relevant publications.

Women: *Urogenital testing*: In real life, fail to realize reductions in prevalence and in PID and TFI at the population level. There is low to moderate evidence that testing can reduce PID risk at the individual level. Benefits ? Lack of evidence (widespread testing of asymptomatic people).

Rectal testing: CT largely asymptomatic and without later rectal complications; rectal CT may possibly contribute, via migration to the vaginal site, to reproductive complications, but this is speculative and unquantified.

Pharyngeal testing: Clinical impact of pharyngeal CT nearly absent, no known benefits of pharyngeal testing.

Management of asymptomatic sexually transmitted infections in Europe: towards a differentiated, evidence-based approach

Chris Kenyon,[a,*] Björn Herrmann,[b] Gwenda Hughes,[c] and Henry J. C. de Vries[d,e,f,g]

[a]Department of Clinical Sciences, Institute of Tropical Medicine, Antwerp, Belgium
[b]Section of Clinical Microbiology, Department of Medical Sciences, Uppsala University, Uppsala, Sweden
[c]Department of Infectious Disease Epidemiology, London School of Hygiene & Tropical Medicine, UK
[d]Department of Dermatology, Amsterdam UMC Location University of Amsterdam, Meibergdreef 9, Amsterdam, the Netherlands
[e]Amsterdam Institute for Infection and Immunity, Infectious Diseases, Amsterdam, the Netherlands
[f]Center for Sexual Health, Department of Infectious Diseases, Public Health Service Amsterdam, the Netherlands
[g]Amsterdam Institute for Global Health and Development, Amsterdam, the Netherlands

Search strategy and selection criteria

References for this review were identified through searches of PubMed and GoogleScholar with the search terms "asymptomatic", "STI", "chlamydia", "gonorr*", "syphilis", and "screening" from 1980 until May, 2023. Articles were also identified through searches of the authors' own files. Only papers published in English were reviewed.

« In 2021, a group of Dutch experts concluded that evidence supported reducing rather than expanding chlamydia testing. PID can be easily treated once symptoms develop. They were unable to find evidence that screening prevents tubal infertility »

	N. gonorrhoeae	*C. trachomatis*	*M. genitalium*	*T. pallidum*	HIV
Are host-pathogen interactions amenable to screening?					
1. Undetected infection typically associated with serious adverse clinical outcomes	+	+	–	+++	+++++
2. Long period between infection and disease onset	–	–	–	++	+++
3. Not spontaneously cleared by immune system	–	–	–	+++	+++++
4. Natural immunity from recovered infection	+++	+	+++	+	++++
High risk of inducing AMR?					
1. High risk of inducing AMR in pathogen itself given standard therapy	++++	+	++++	+	–
2. High risk of inducing AMR in microbiome given standard therapy	+++	++	+++	+	

Example 1. For the first criterion, there is little or no evidence that MG is associated with serious adverse clinical outcomes and MG is thus scored '–', whereas there is plenty of evidence that HIV is associated with severe outcomes and HIV is thus scored '+++++'. Example 2. In the case of HIV for the fourth criterion, an HIV infection is not eradicated by the immune system and thus there is no immunity. HIV thus gets a favourable score for being amenable to screening on this criterion. [a]This scoring is not based on a systematic review but on a subjective assessment of the authors' evaluation of the scientific literature. Each infection is rated from '–' to '+++++' according to the evidence base underpinning the criterion and the clinical significance.

Table 1: **Non-exclusive list of possible criteria for evaluating net utility of screening six specific STIs in MSM PrEP cohort**[a,23].

Widespread screening for STIs is assumed to be an effective way to reduce their prevalence and associated disease. Here, we provide evidence this is the case for HIV and syphilis. However, for Ng and Ct , evidence that screening reduces infection prevalence and associated disease is weak.

There is some evidence that Ct screening may reduce the incidence of PID in general populations but the possible benefit this will extend to preventing tubal infertility is unclear.

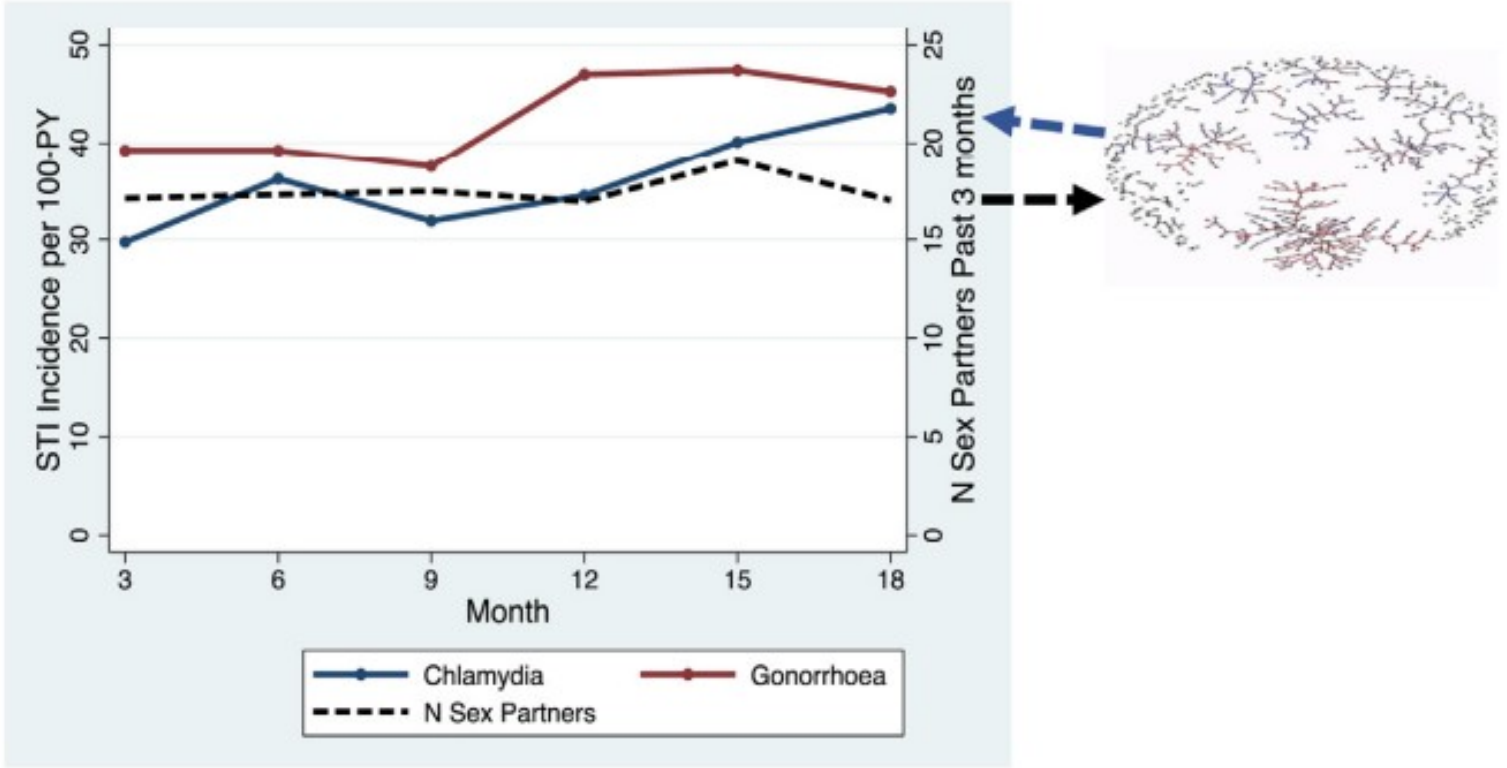


Fig. 3: An illustration of the connection between sexual network connectivity and equilibrium prevalence of *N. gonorrhoeae* and *C. trachomatis* using data from the ANRS-Prevenir study of PrEP in France.[51] The relatively high rate of partner turnover (15–20 partners per 3 months) generates a dense sexual network (black arrows), which in turn, sustains a high equilibrium prevalence/incidence (blue arrows) of both *N. gonorrhoeae* and *C. trachomatis* (between 30 and 50 infections per 100 person years).

Merci !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