

# PhD defence Irith De Baetselier

## Improving Sexually Transmitted Infection diagnosis and control among men who have sex with men in Belgium

13 sept. 2021 16:00

Institute of Tropical Medicine - Antwerpen

Aangeraden



Dit is de omschrijving

### Hybrid PhD defence

Join Zoom Meeting:

<https://tg.zoom.us/j/87465327759?pwd=QU9EcEp6OVR6LzJCSjhOL0s0Z0dYUT09>

Meeting ID: 874 6532 7759

Passcode: 808971

Confirm your physical attendance at Aula Janssens via [this form](#) (in Dutch).

Start defence: 16h

Start reception in the garden or in the Forum: 18h

### Supervisor

- Prof. Dr. Chris Kenyon (ITM)
- Dr. Bea Vuylsteke (ITM)
- Dr. Tania Crucitti (ITM)
- Prof. Dr. Guido Vanham (University of Antwerp)

### Abstract

The number of bacterial sexually transmitted infections (STIs) among Men who have Sex with Men (MSM) is dramatically increasing over the last decade. The increase in STIs (gonorrhoea, chlamydia or syphilis) may be particularly fuelled by PrEP users who are repeatedly infected with STIs (recurrent STIs). PrEP or pre-exposure prophylaxis is a biomedical prevention method to prevent HIV and may lead to riskier sexual behaviour such as an increase in condomless anal intercourse, more sexual mixing between HIV negative and positive MSM and/or an increase in concurrent sexual partners. Individuals with recurrent STIs may occupy crucial positions in dense sexual networks. Therefore, identifying these individuals may be of public health importance to interrupt the chain of transmission. In this thesis, we scrutinized the STI epidemic among Belgian MSM PrEP users and we identified the behavioural factors that are associated with recurrent STIs such as sexualized drug use: it was reported in almost 90% of individuals with recurrent STIs. Furthermore, almost all Lymphogranuloma venereum (LGV) infections, an emerging STI, were confined to the group with recurrent STIs.

Currently, Belgian PrEP guidelines recommend quarterly STI detection in MSM. Yet, due to current budget constraints and the heavy burden of frequent sampling on healthcare workers, laboratory professionals and PrEP users, we explored novel, cost-effective STI screening strategies such as home-based self-sampling and pooling strategies. Finally, a novel STI screening strategy was developed targeting individuals who experience recurrent STIs instead of all PrEP users.

Besides the increase in STIs, *Neisseria gonorrhoeae* and *Mycoplasma genitalium* (MG) may evolve into “superbugs”. In this thesis, we explored the prevalence of resistance to the first-and second line treatment of MG among PrEP users and found a remarkable high prevalence of macrolide (88%) and fluoroquinolone resistance (26%). In-depth analysis showed that these high numbers of resistance were driven by the MG cases identified among MSM with recurrent STIs.

To conclude, this thesis uncovers the central role individuals with recurrent STIs have in the STI epidemic among MSM. Therefore, frequent STI testing, except for MG, is still recommended, but focusing on this group. As such, the novel STI testing algorithms developed in this thesis will help to lower the burden of the frequent STI testing among PrEP users without lowering quality of care.