

A. Sasse
BREACH symposium
24th November 2017



Epidemiology of HIV infection

Situation in Belgium, December 2016

Aknowledgements:

AIDS Ref. Laboratories

AIDS Ref. Centers

IPH Team

Dominique Van Beckhoven

Jessika Deblonde

David Jamine

Cloë Ost

Wim Vanden Berghe

**Epidemiology of
HIV infection**

**Situation in
Belgium, December
2016**

Updated data

Up to 2016:

- HIV diagnoses
- HIV testing

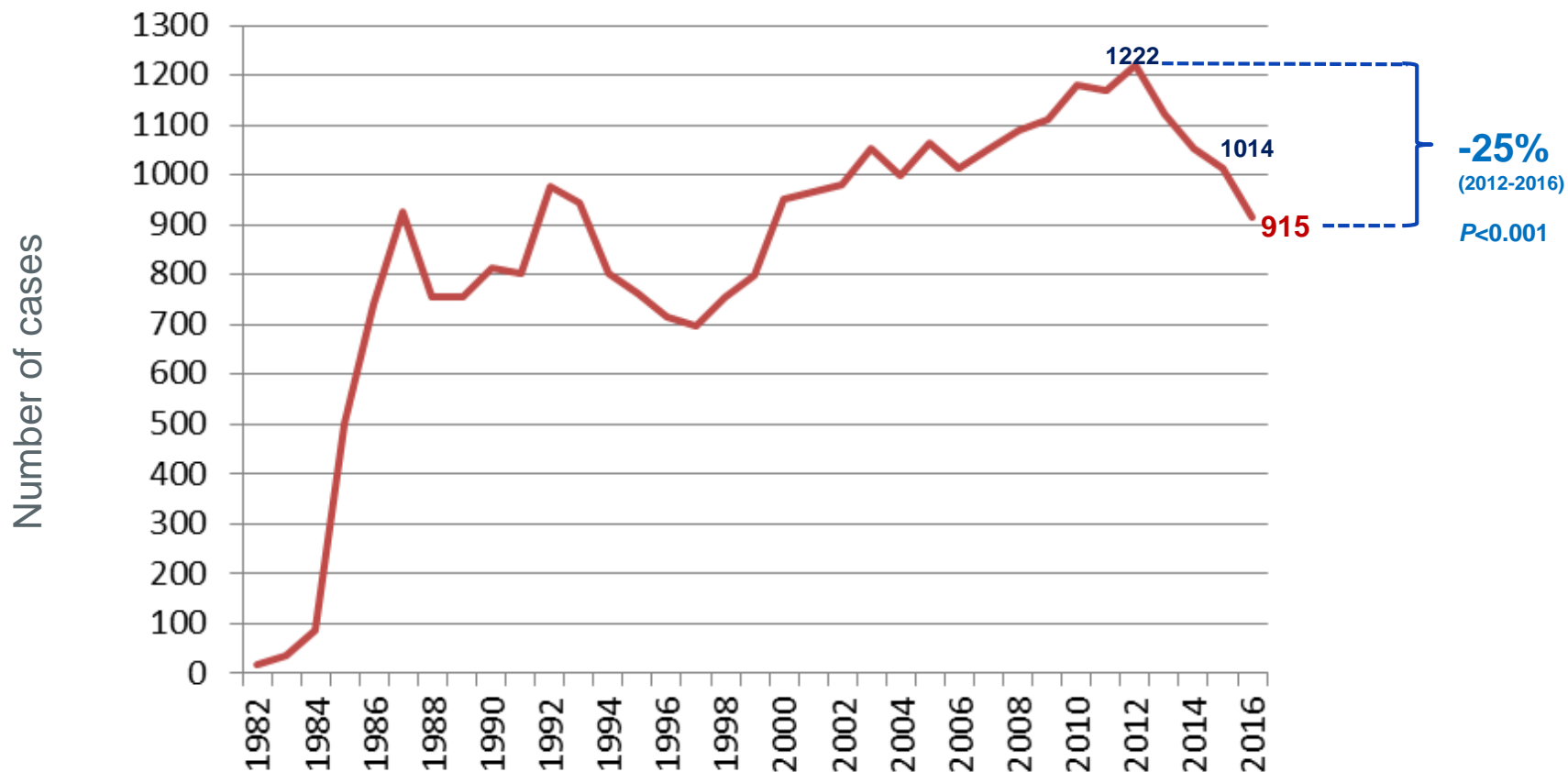
Up to 2015:

- AIDS diagnoses
- Estimation of people living with HIV
- Patients in medical follow-up
- Continuum of care of PLHIV

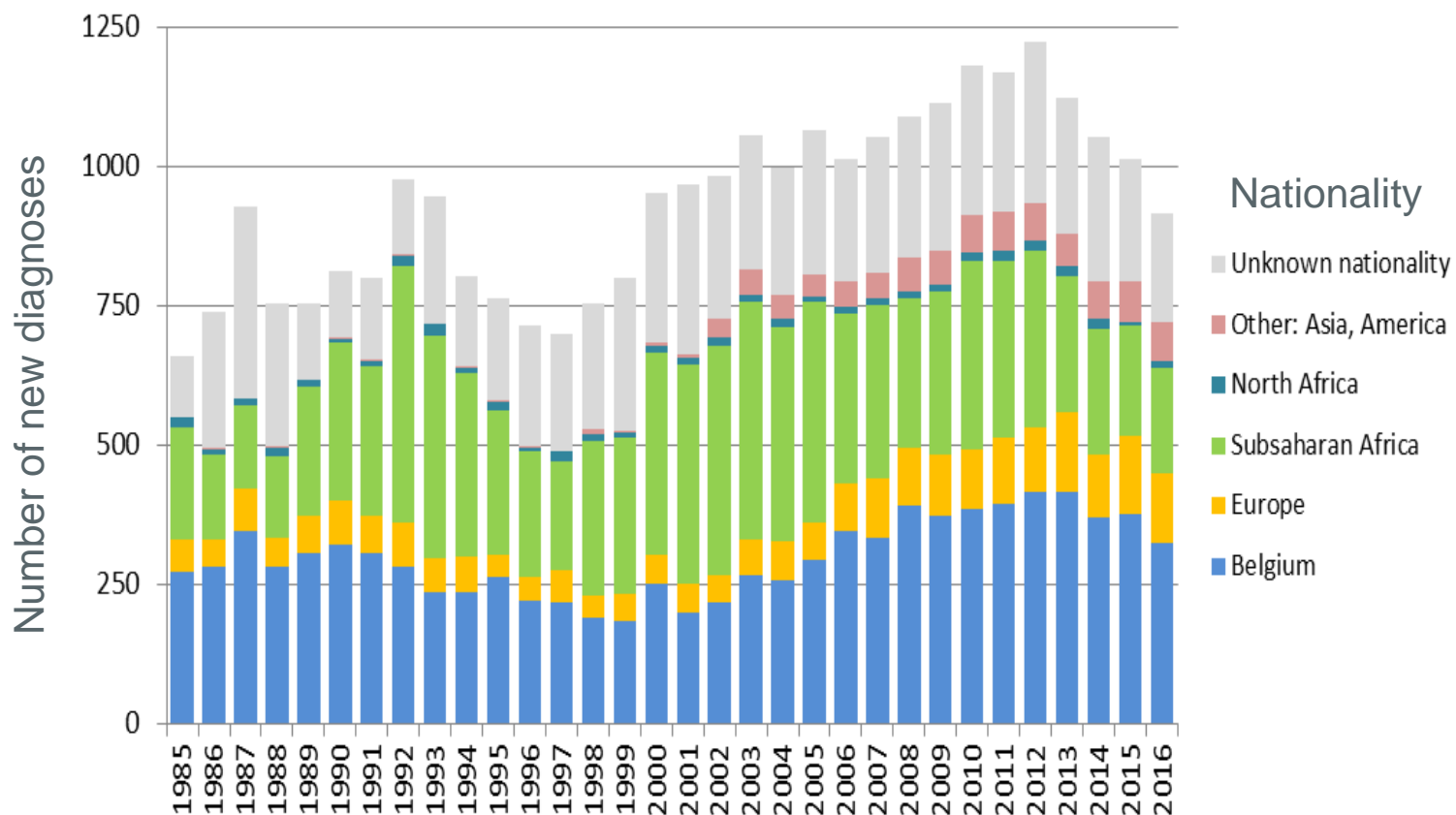


- **HIV diagnoses**
- Undiagnosed PLHIV
- HIV testing
- Continuum of care
- Other STIs
- Conclusions

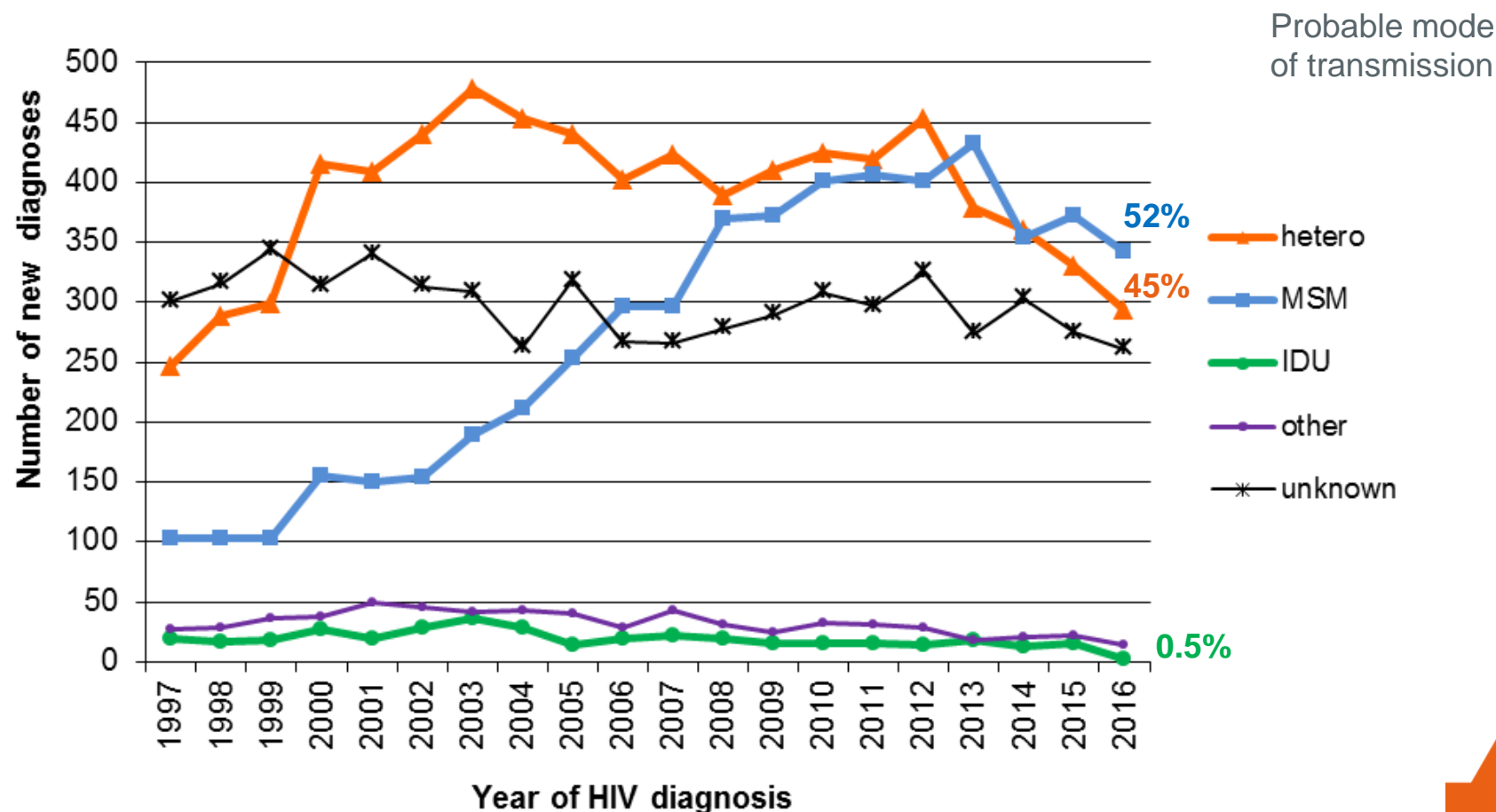
Number of new HIV diagnoses per year, Belgium, 1982 - 2016



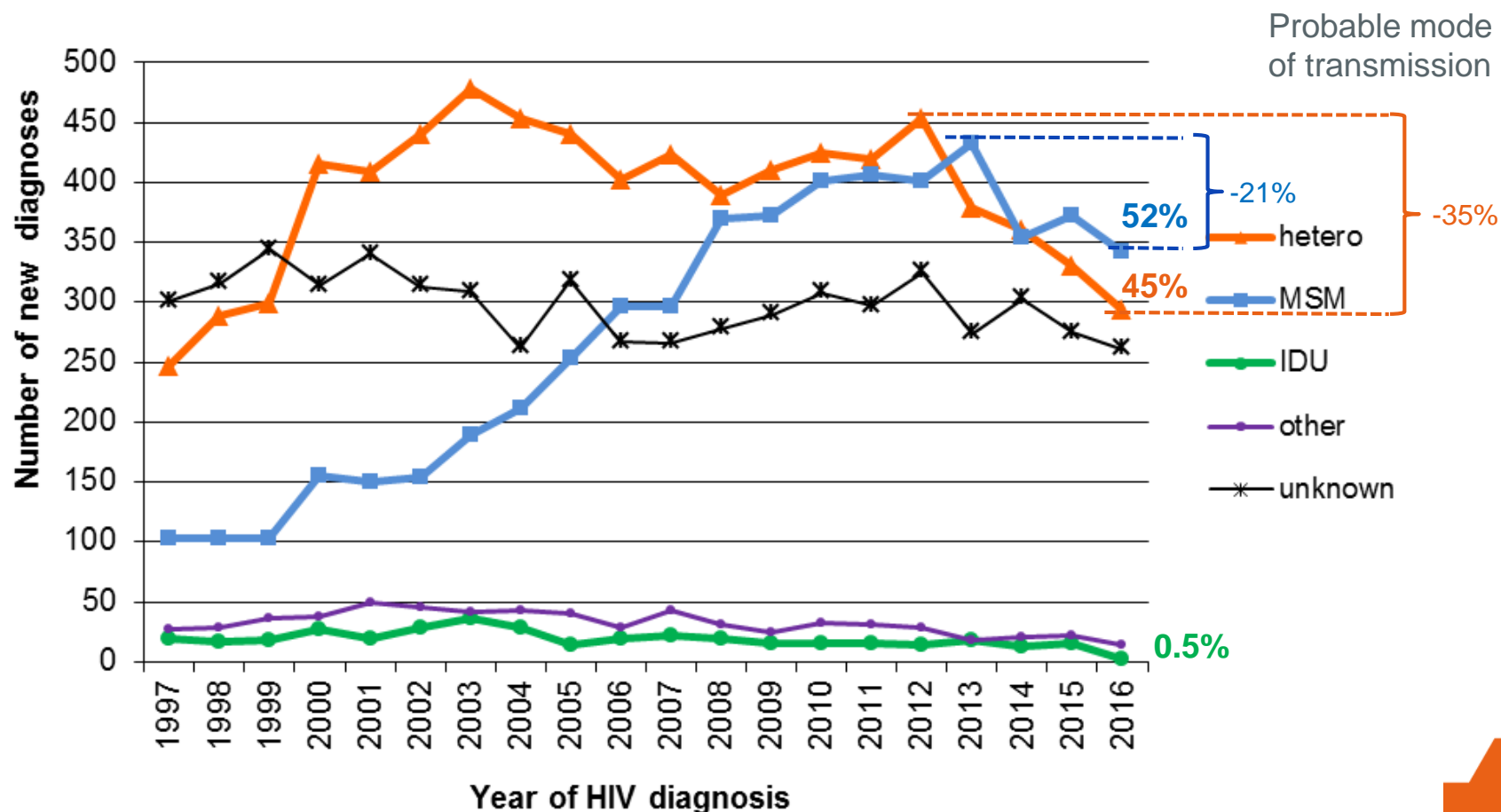
New HIV diagnoses by nationalities (regions), 1985 - 2016



New HIV diagnoses by mode of transmission, Belgium, 1997 – 2016

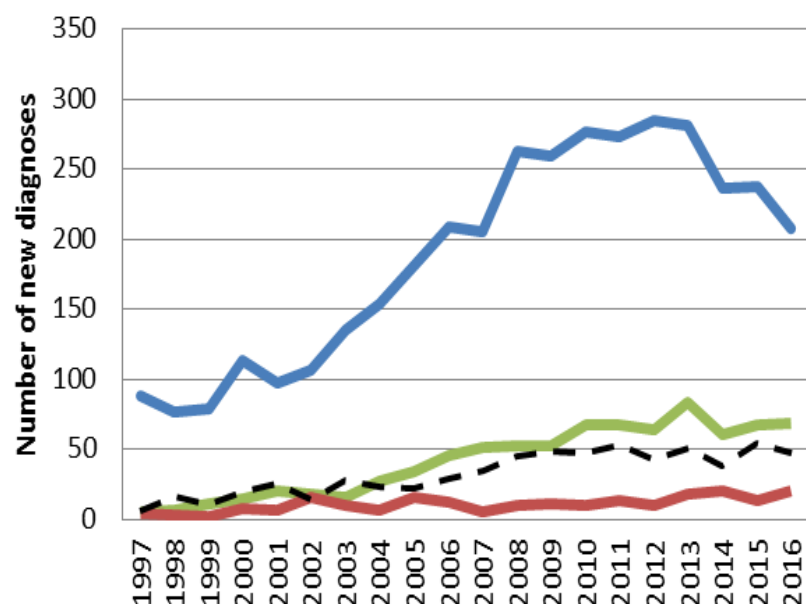


New HIV diagnoses by mode of transmission, Belgium, 1997 – 2016

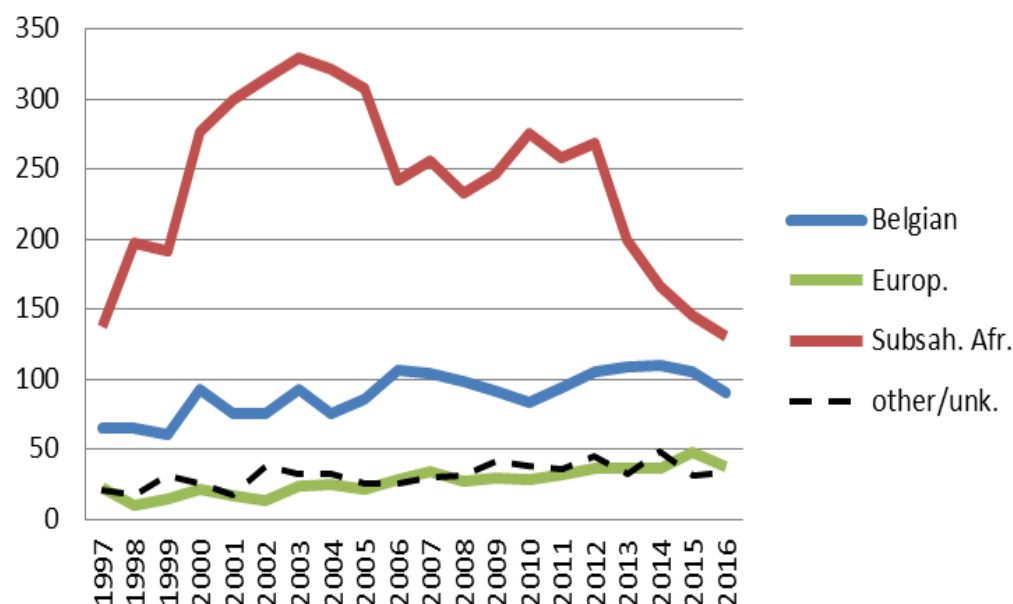


Evolution of HIV diagnoses by probable mode of transmission and nationality (1997-2016)

a. MSM transmission



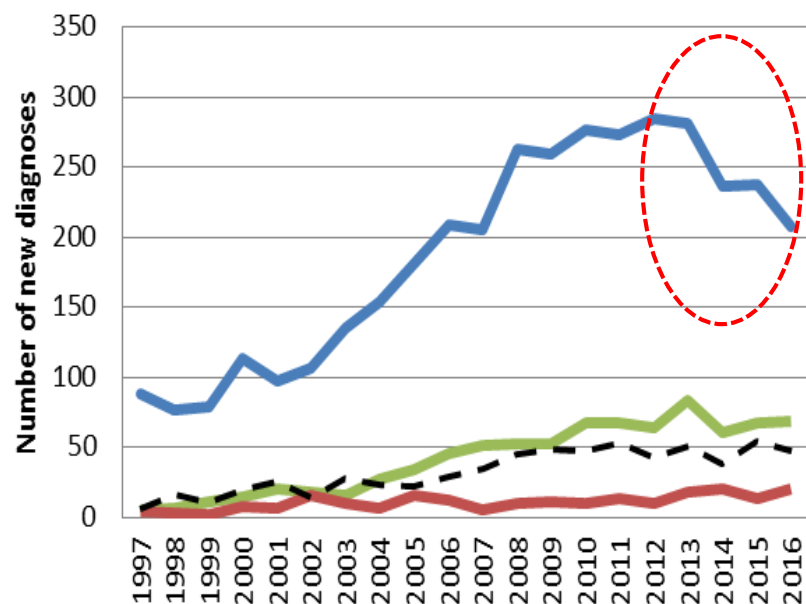
b. Heterosexual transmission



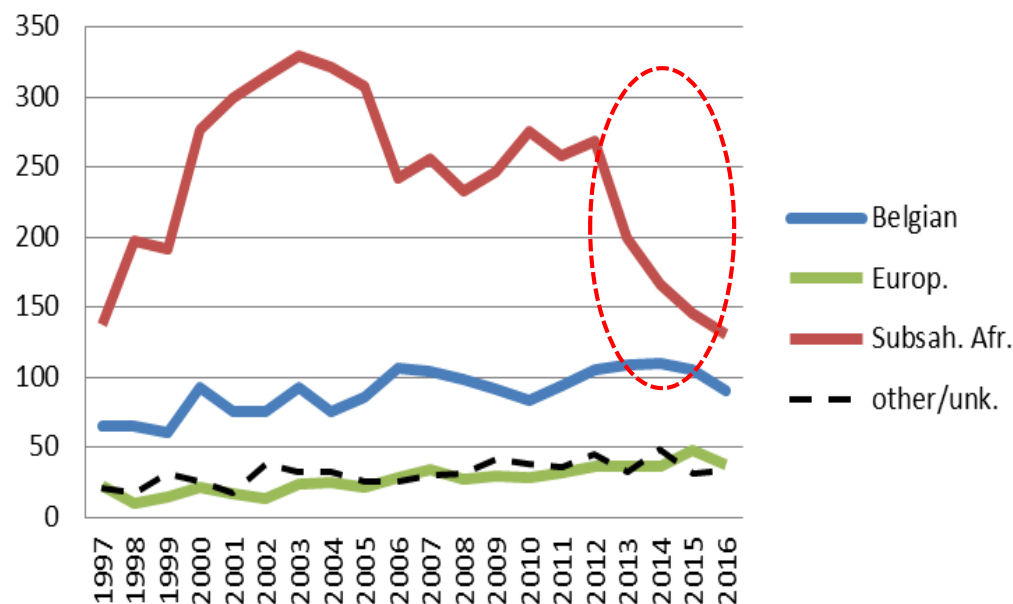
Year of HIV diagnosis

Evolution of HIV diagnoses by probable mode of transmission and nationality (1997-2016)

a. MSM transmission

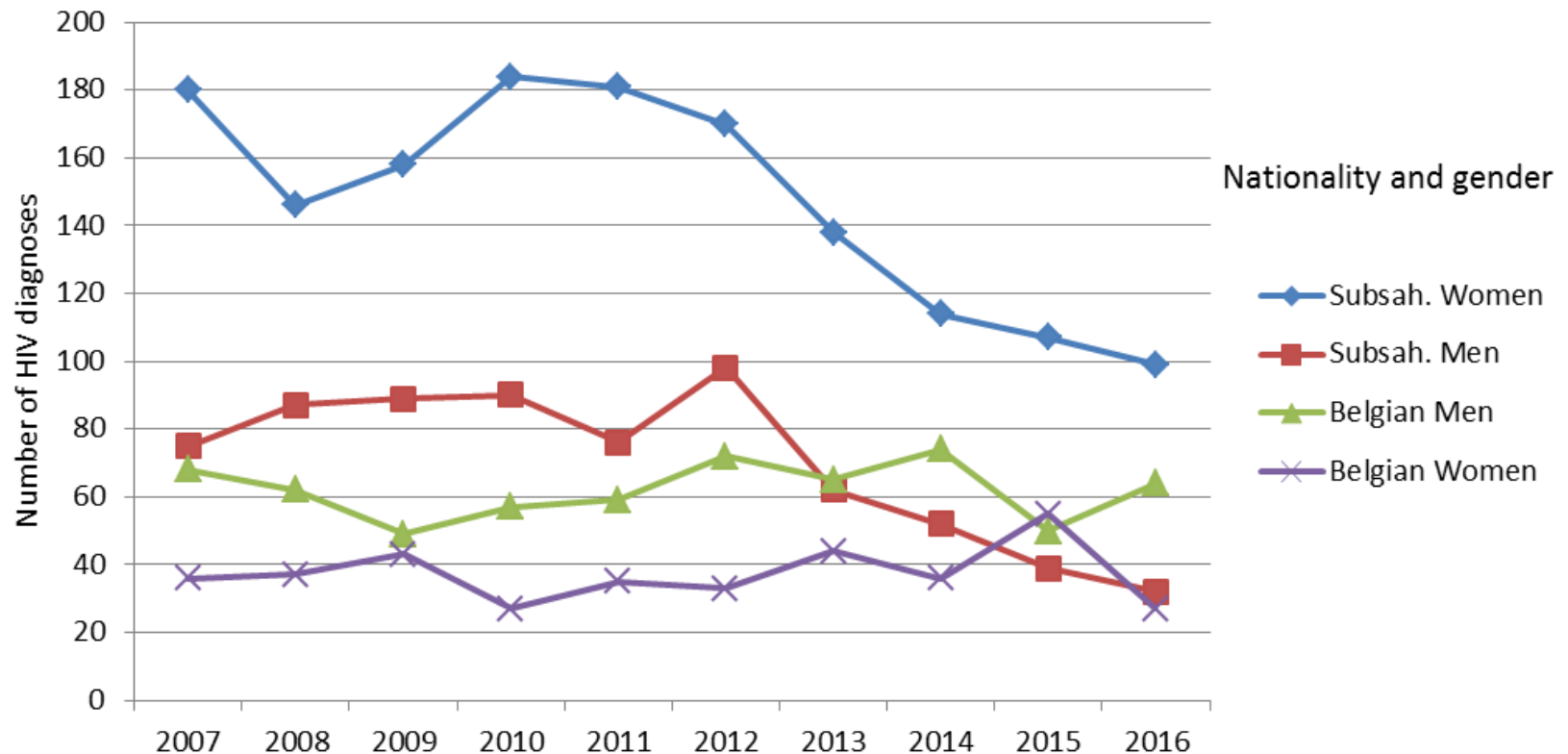


b. Heterosexual transmission



Year of HIV diagnosis

New HIV diagnoses among heterosexuals, per nationality and gender, Belgium, 2007-2016



Estimates* of the proportion of migrants who probably acquired HIV after arrival in their country of diagnosis (postmigration).

Methods:

Analysis of new HIV diagnosis among migrants diagnosed in 2011.

Estimated probable period of HIV seroconversion using modelled CD4 cell count distribution and decline speed after seroconversion.

Results: 2,351 migrants recruited.

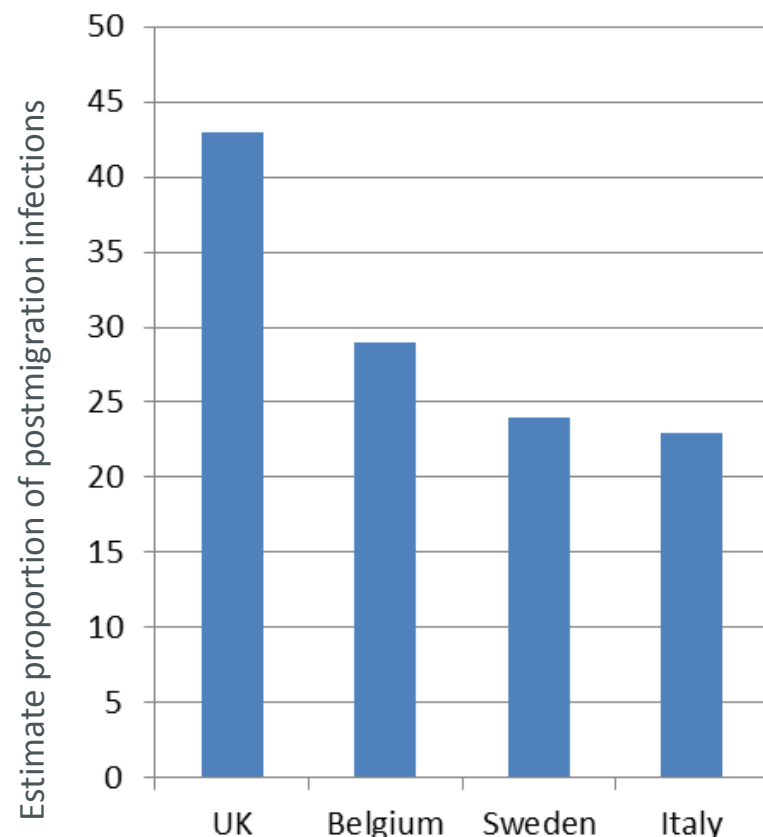
Overall: estimated 38% (range: 32-46%) of diagnosed migrants had probably acquired HIV postmigration;

UK : 43% (range: 36-52%)

Belgium : 29% (26-34%)

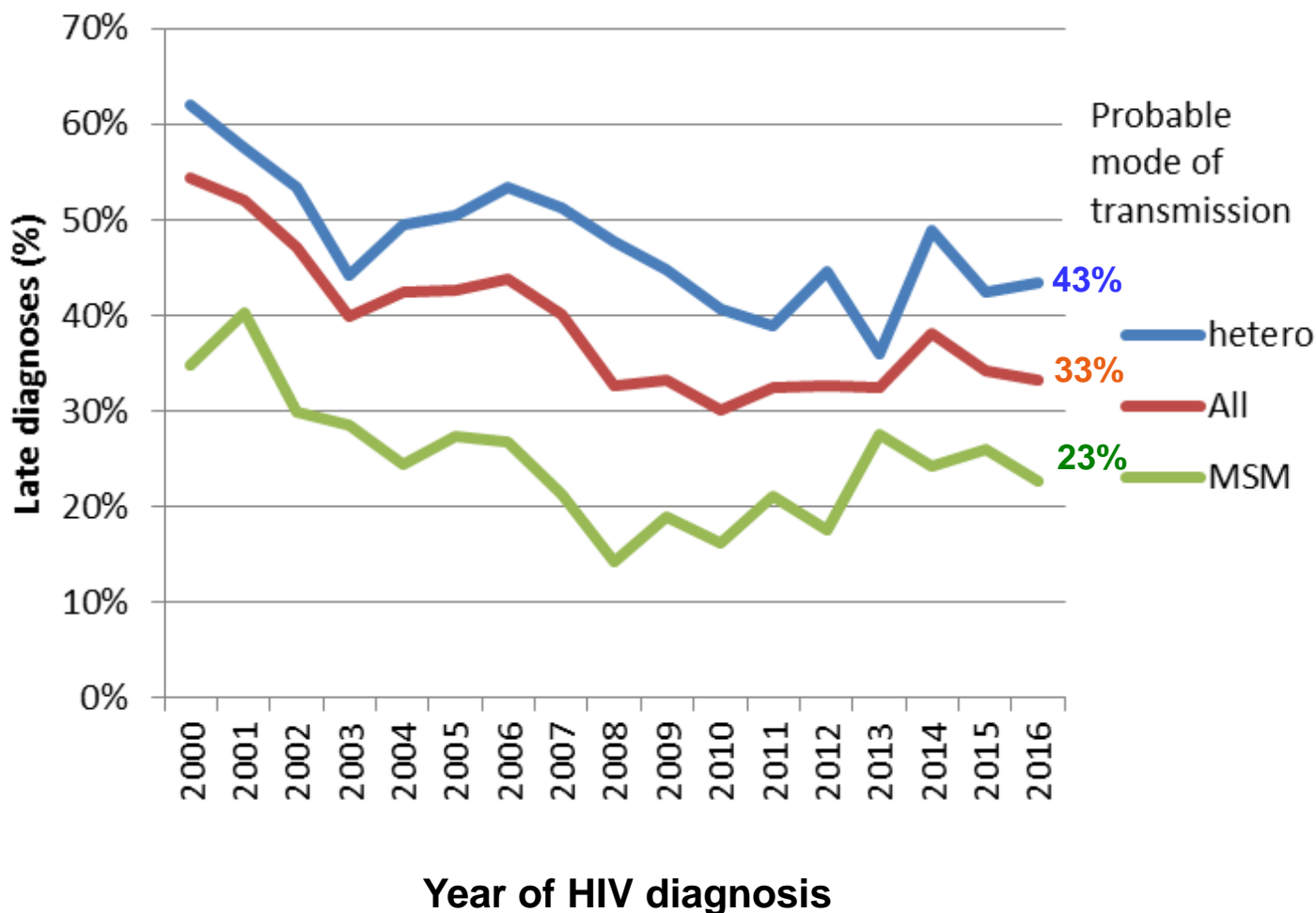
Sweden : 24% (21- 30%)

Italy : 23% (20- 27%)



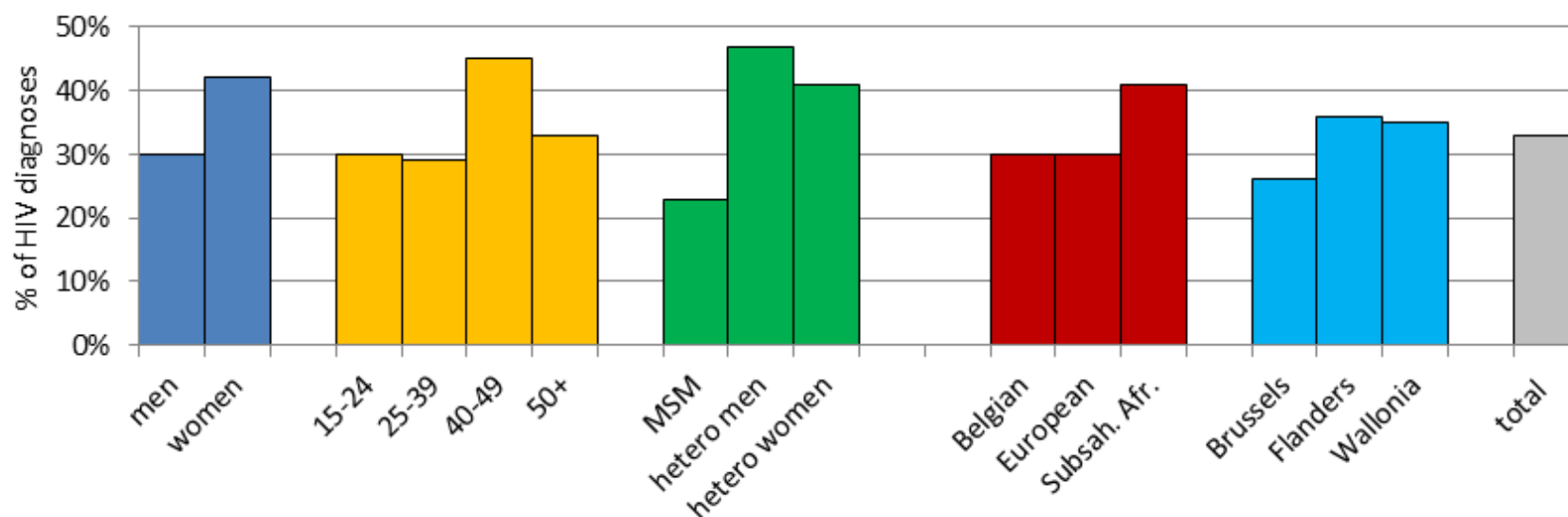
*Z. Yin Z, Rice B, Marrone G, Sönnernborg A, Suligoi B, Camoni L, Sasse A, Van Beekhoven D, Skingsley A, Noori T, Delpech V. HIV acquisition postmigration: Evidence from four European countries. Abstract. 21st International AIDS Conference.

Percentage of late presenters for testing* per mode of transmission



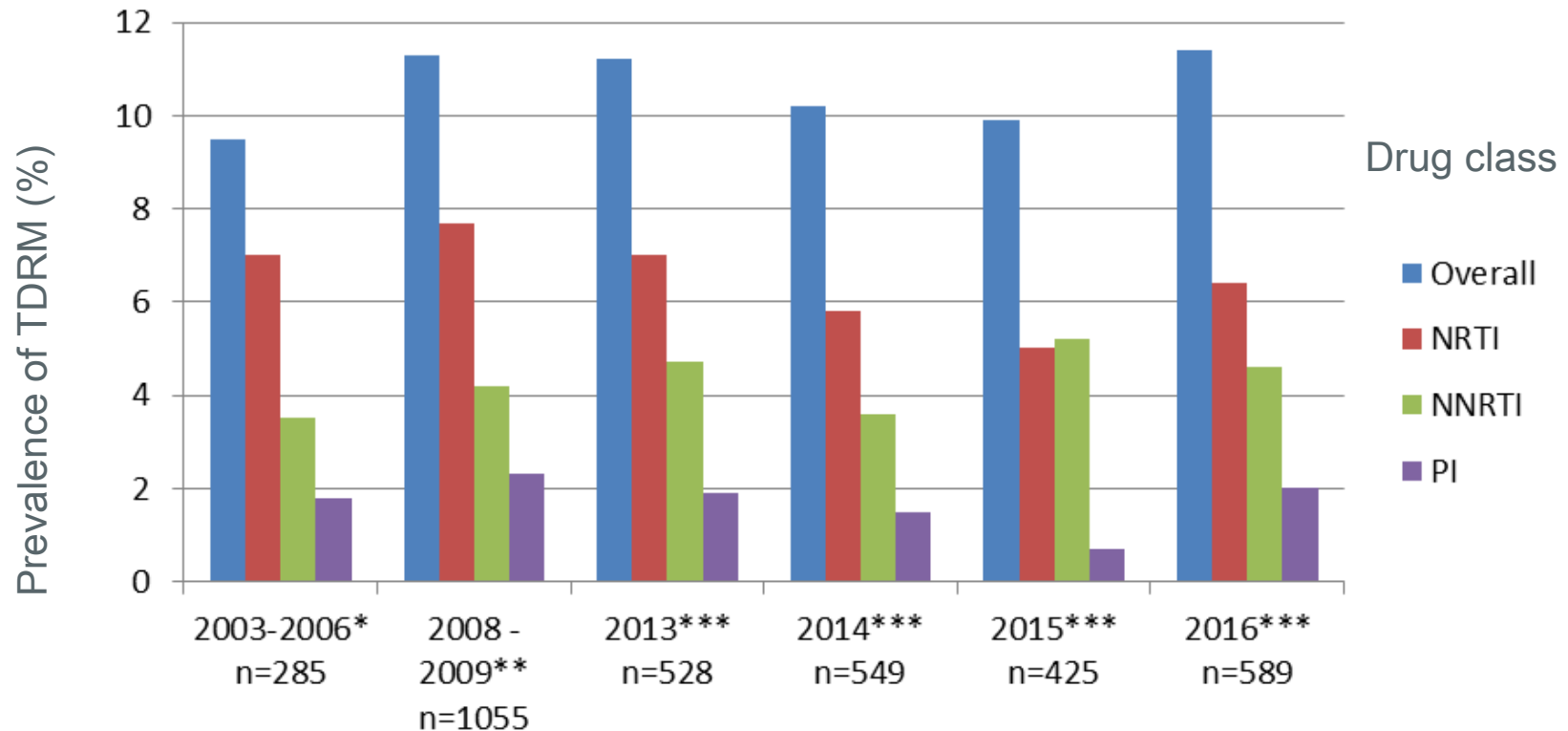
*: <350 CD4/mm³|AIDS + correction according to clinical stage at HIV diagnosis

Percentage of late presenters for testing* per sex, age, mode of transmission, nationality and residence



*: <350 CD4/mm³|AIDS + correction according to clinical stage at HIV diagnosis

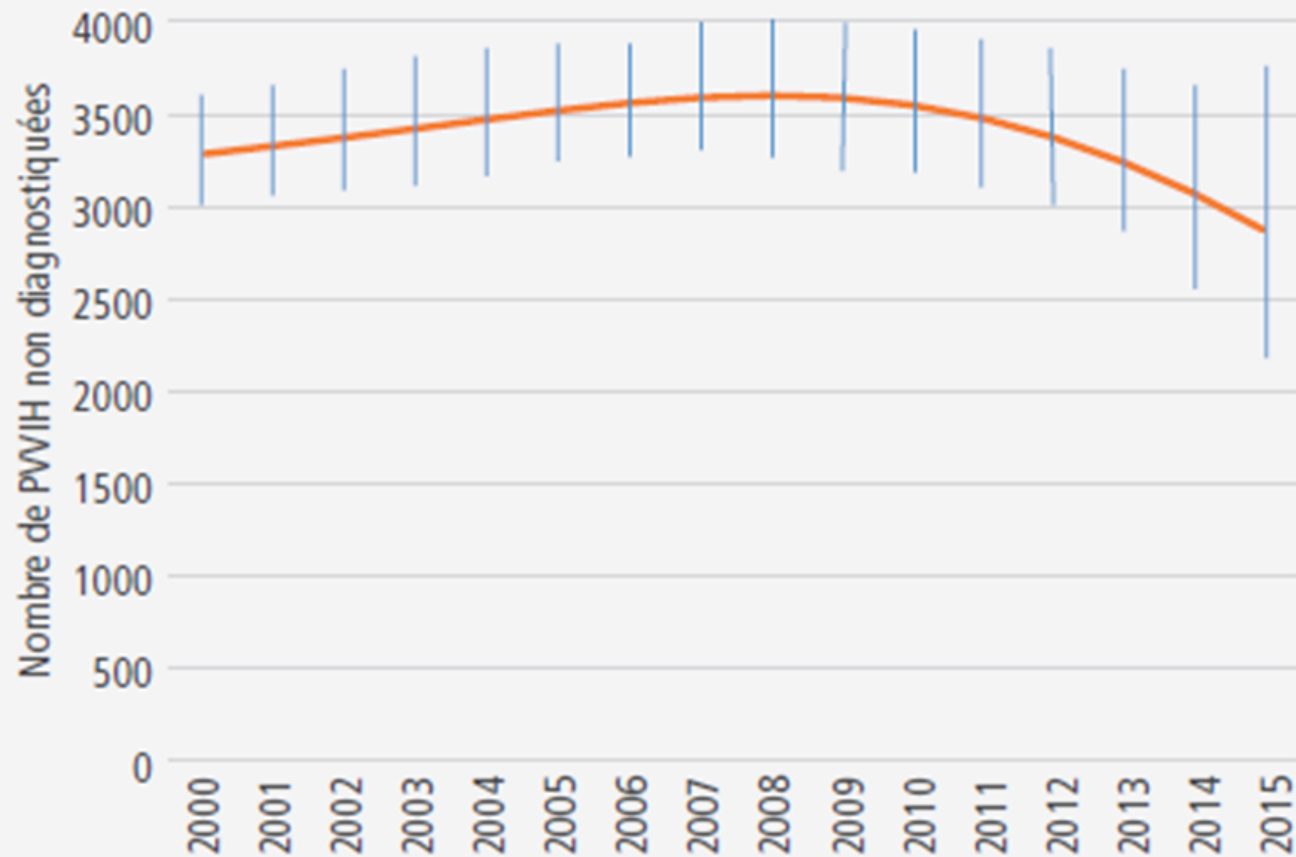
Evolution of base resistance, Belgium, 2003 - 2016



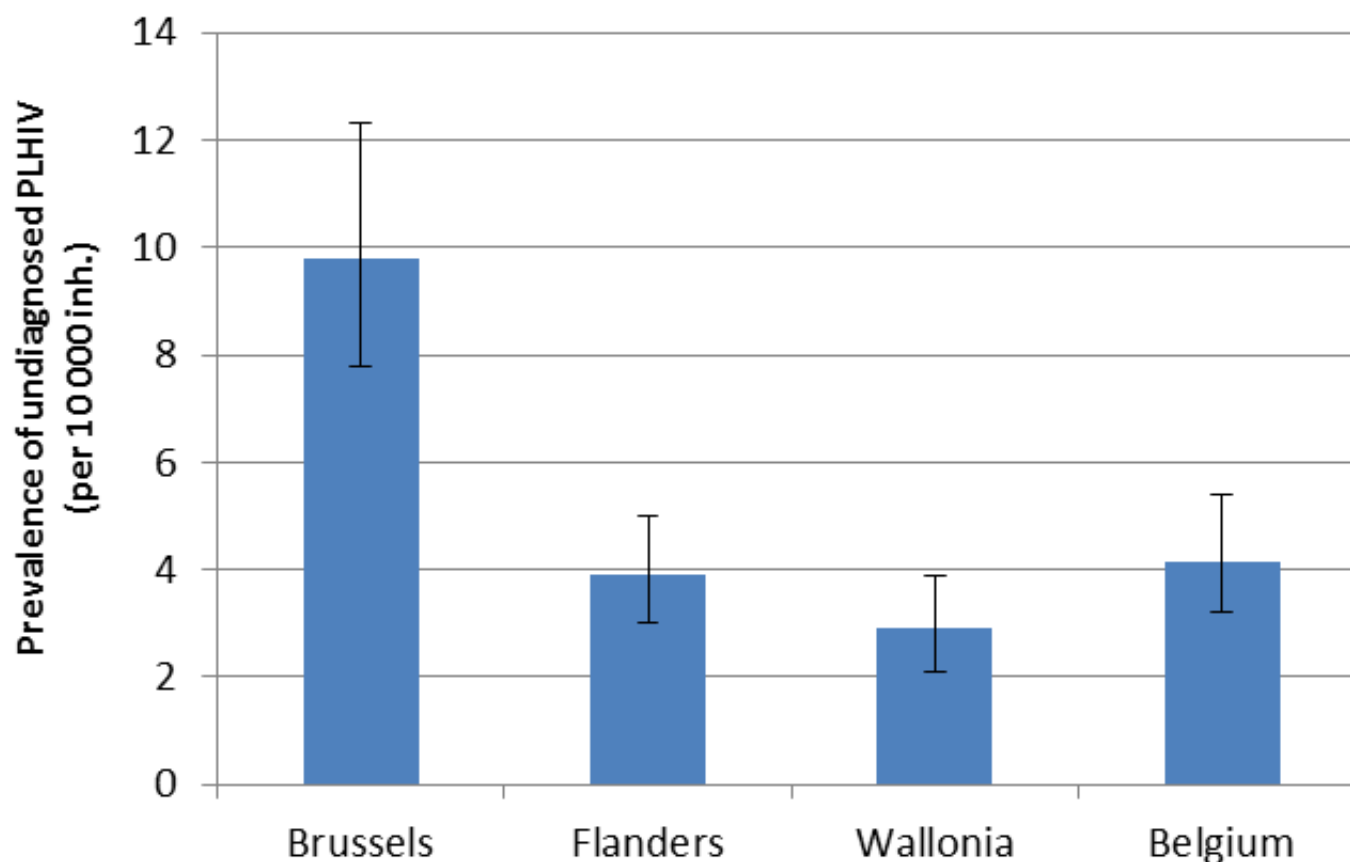


- HIV diagnoses
- **Undiagnosed PLHIV**
- HIV testing
- Continuum of care
- Other STIs
- Conclusions

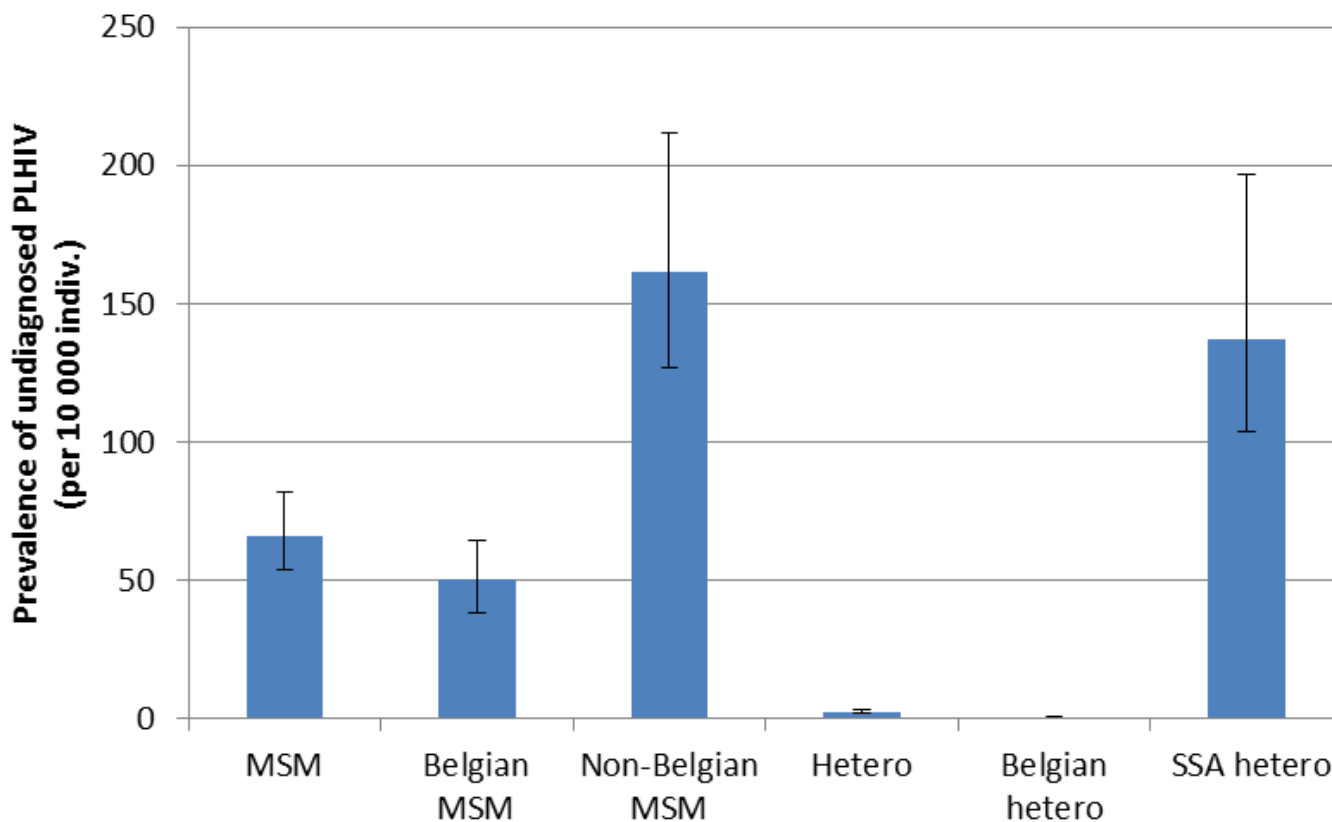
Modelling: Estimated number of undiagnosed PLHIV (CI 95 %), 2000-2015



Estimated prevalence of undiagnosed PLHIV in regions per 10 000 inhabitants



Estimated prevalence of undiagnosed PLHIV in risk categories (per 10 000 individuals)



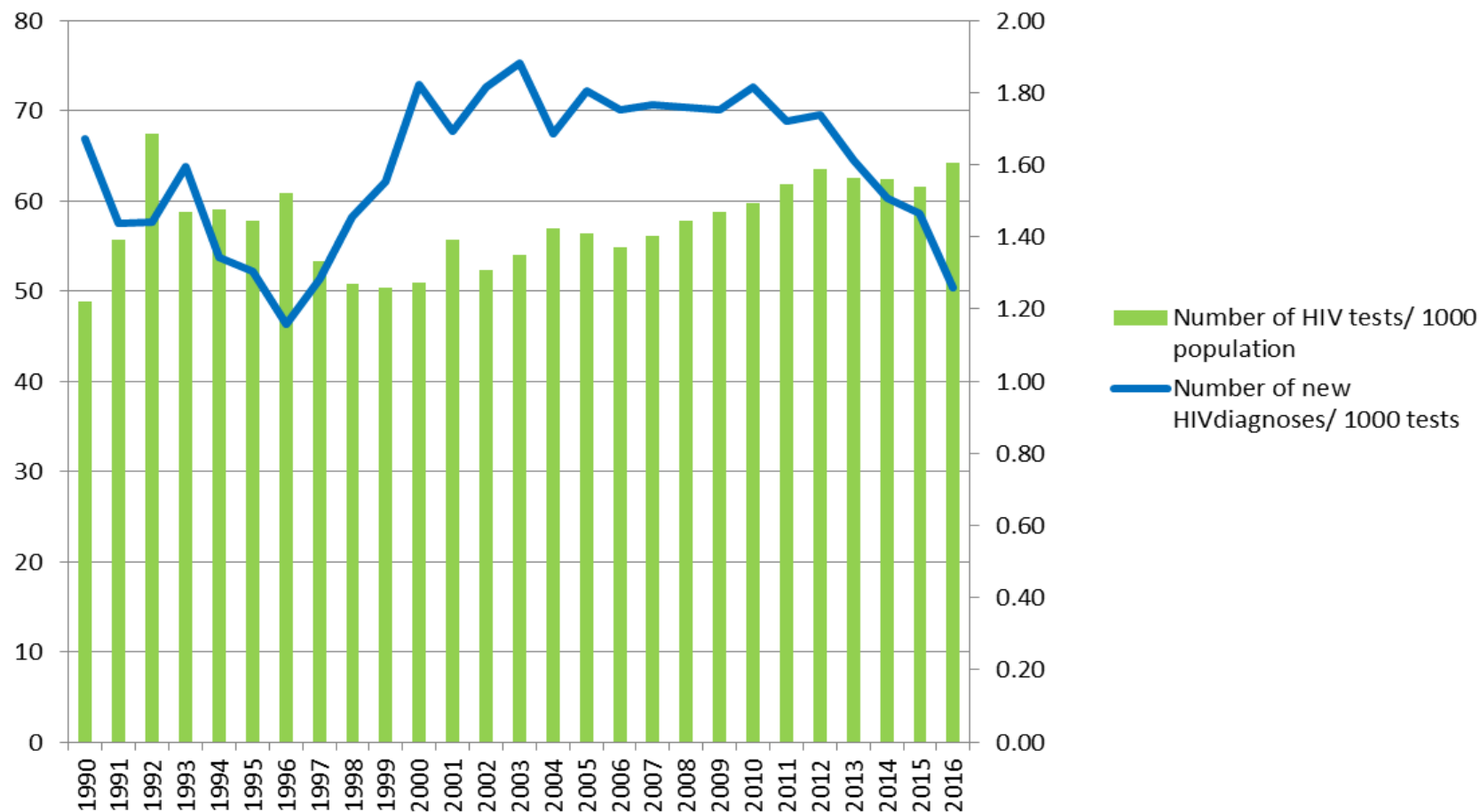


- HIV diagnoses
- Undiagnosed PLHIV
- **HIV testing**
- Continuum of care
- Other STIs
- Conclusions

Rates of HIV testing* and new diagnoses, Belgium, 1990 – 2016

tests/1000 pop.

new diagnoses /1000 tests

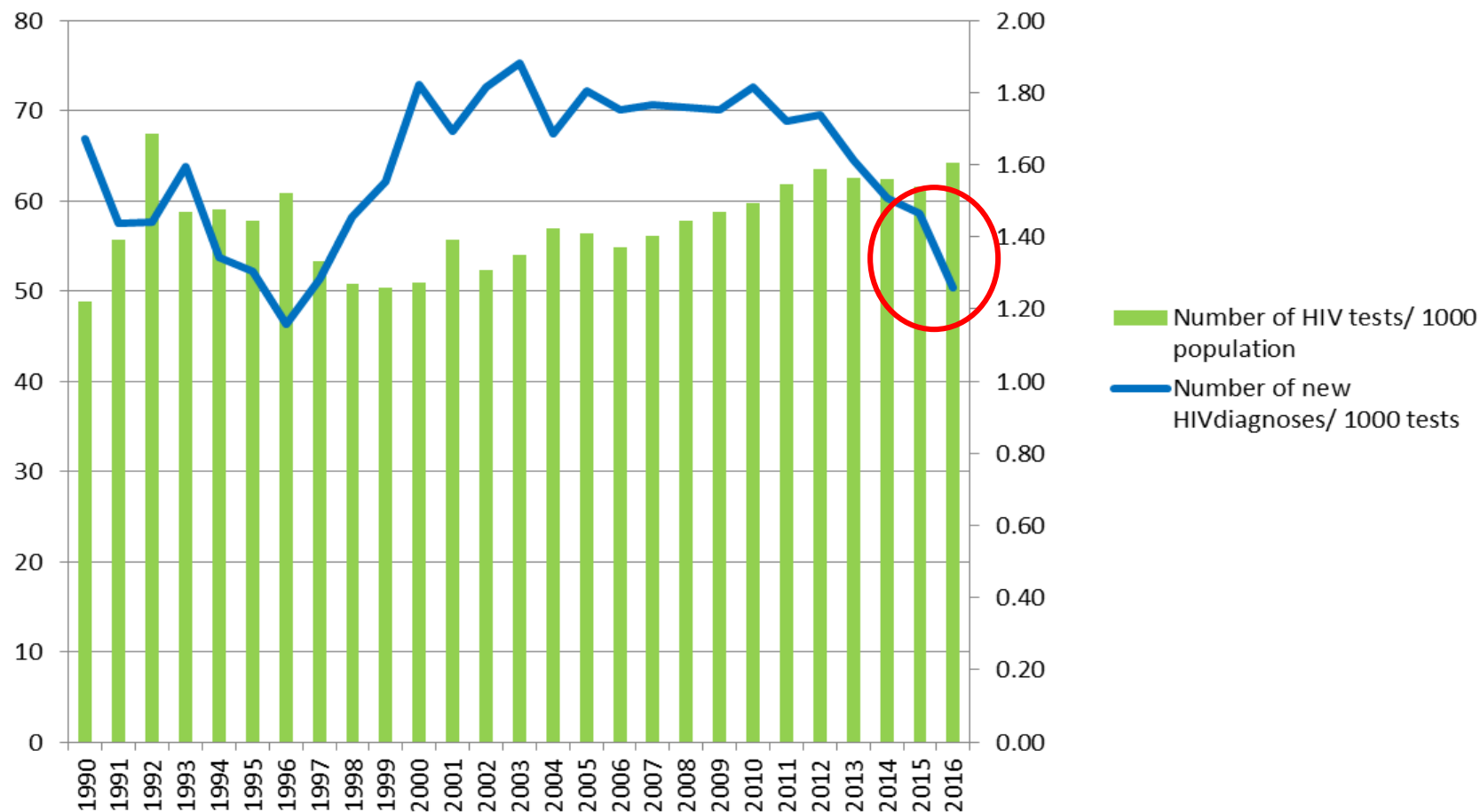


*HIV screening tests reimbursed by INAMI-RIZIV

Rates of HIV testing* and new diagnoses, Belgium, 1990 – 2016

tests/1000 pop.

new diagnoses /1000 tests



*HIV screening tests reimbursed by INAMI-RIZIV

Yearly diagnosed fraction (YDF)

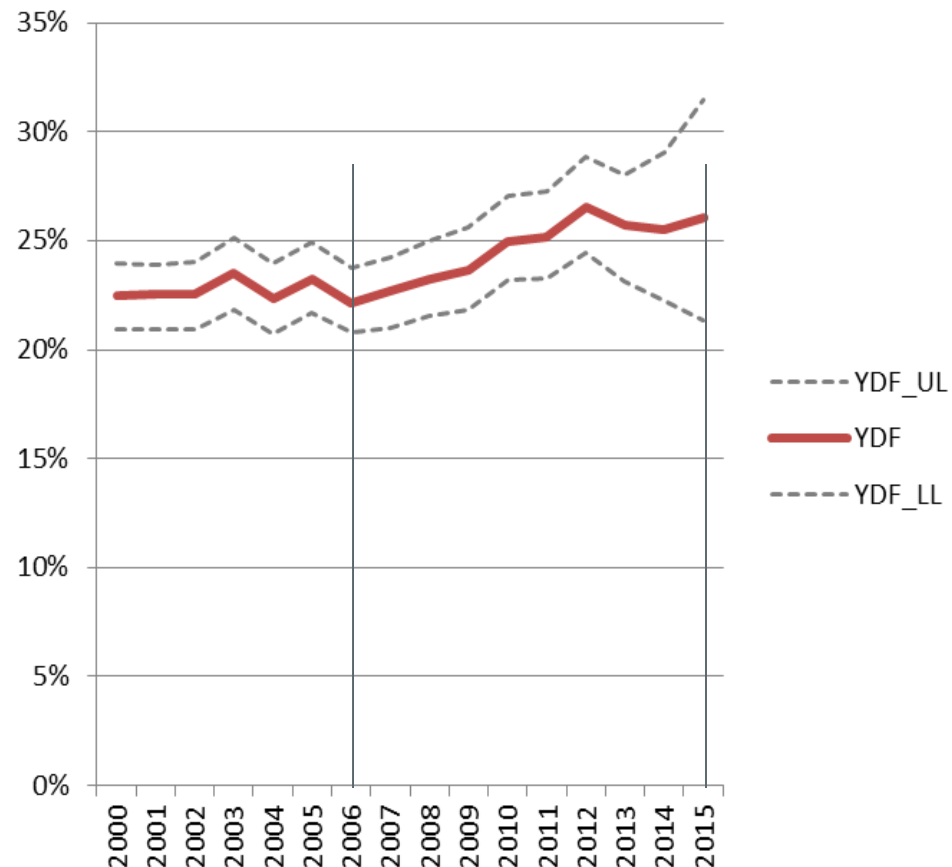
new diagnoses

$$= \frac{\text{new diagnoses}}{\text{new diag.} + \text{estim. undiag.}}$$

YDF 2006: 22%

YDF 2015: 26%

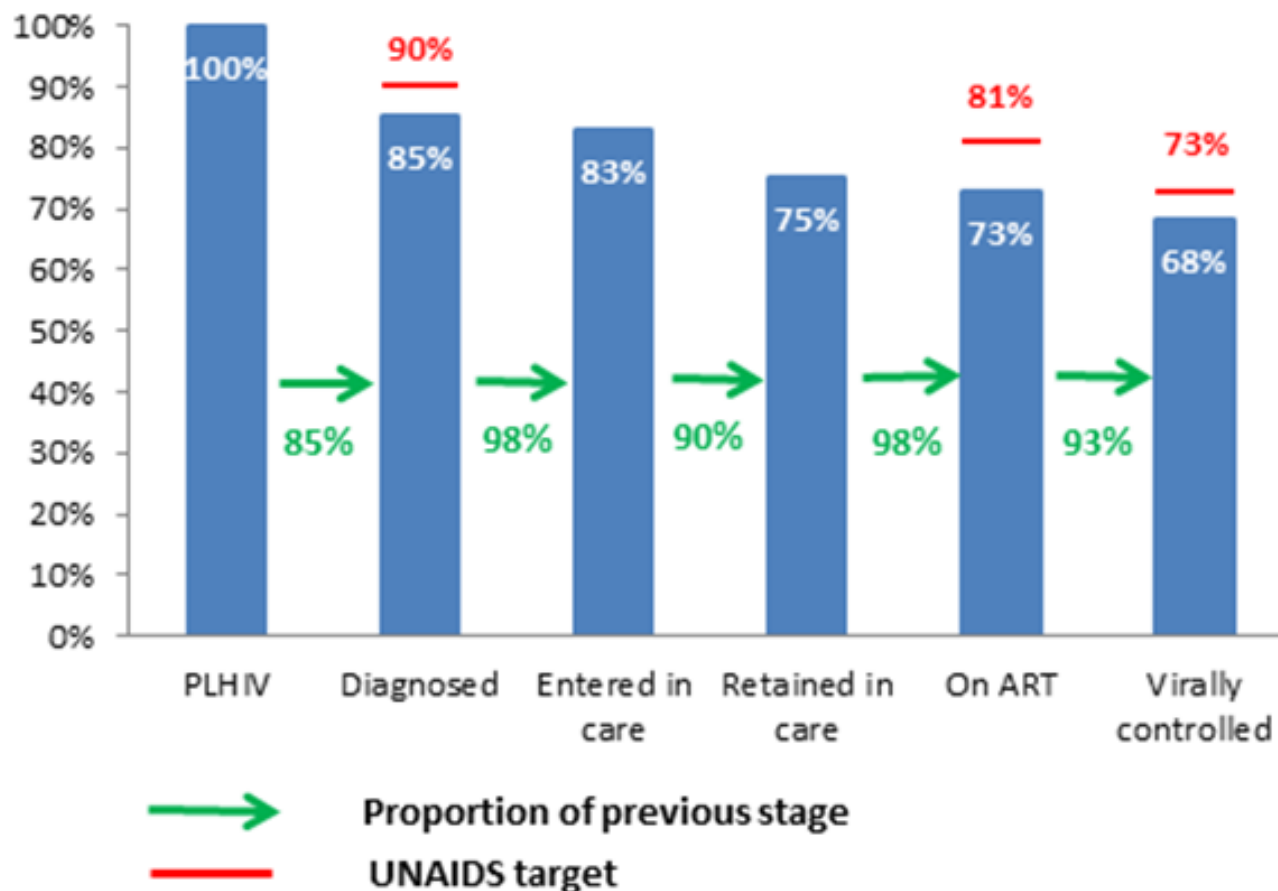
Testing --- > --- hidden epidemic



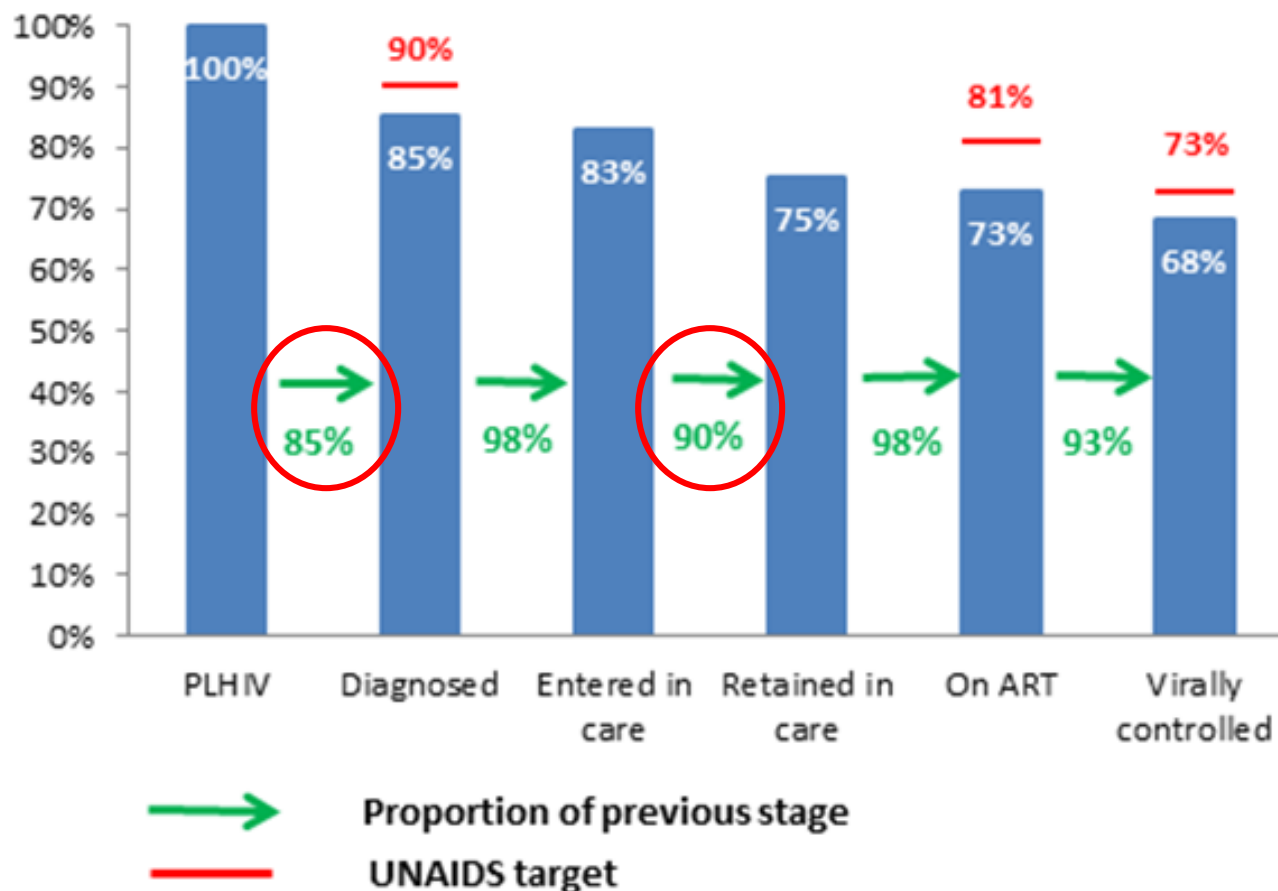


- HIV diagnoses
- Undiagnosed PLHIV
- HIV testing
- **Continuum of care**
- Other STIs
- Conclusions

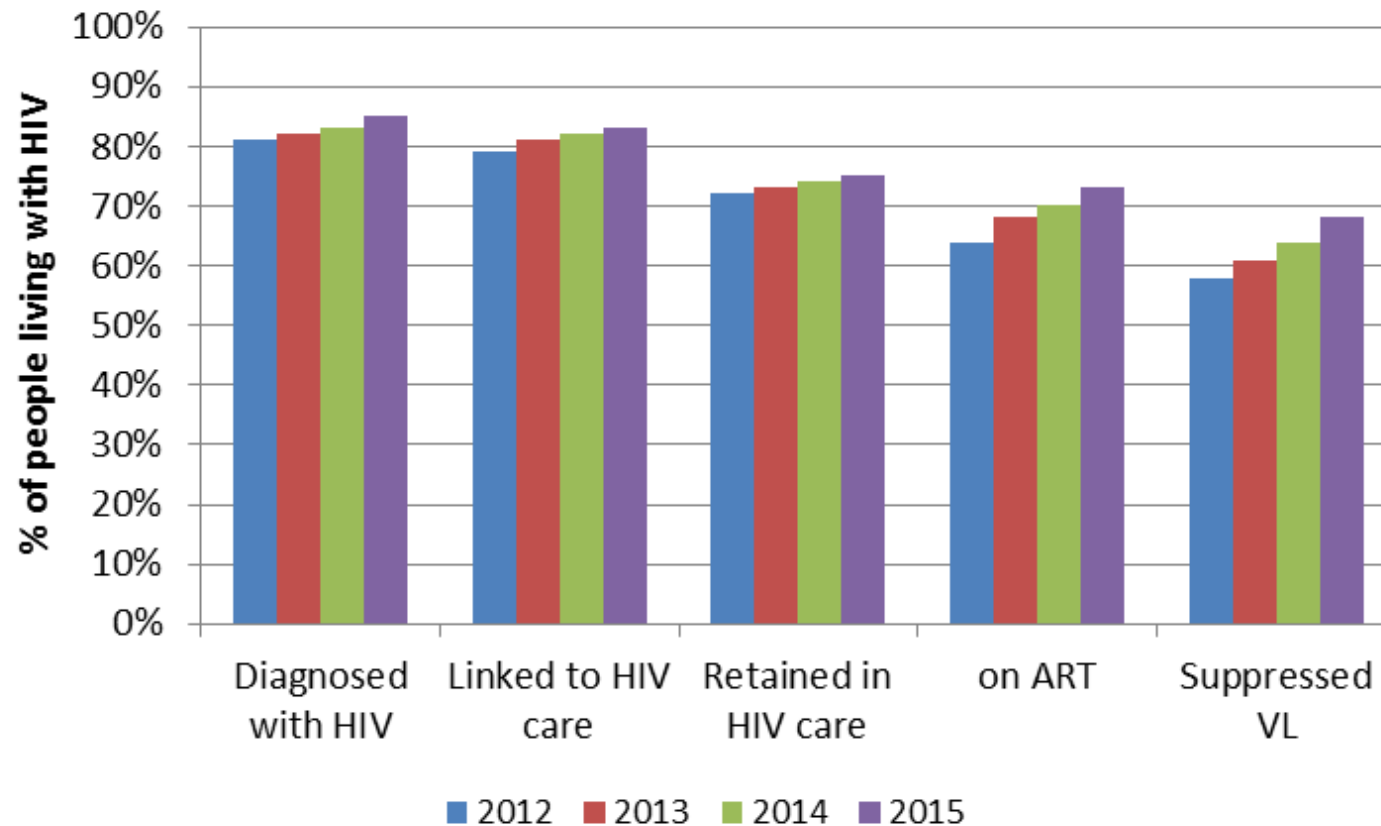
Continuum of care for people living with HIV in Belgium in relation to the objectives of UNAIDS, 2015



Continuum of care for people living with HIV in Belgium in relation to the objectives of UNAIDS, 2015



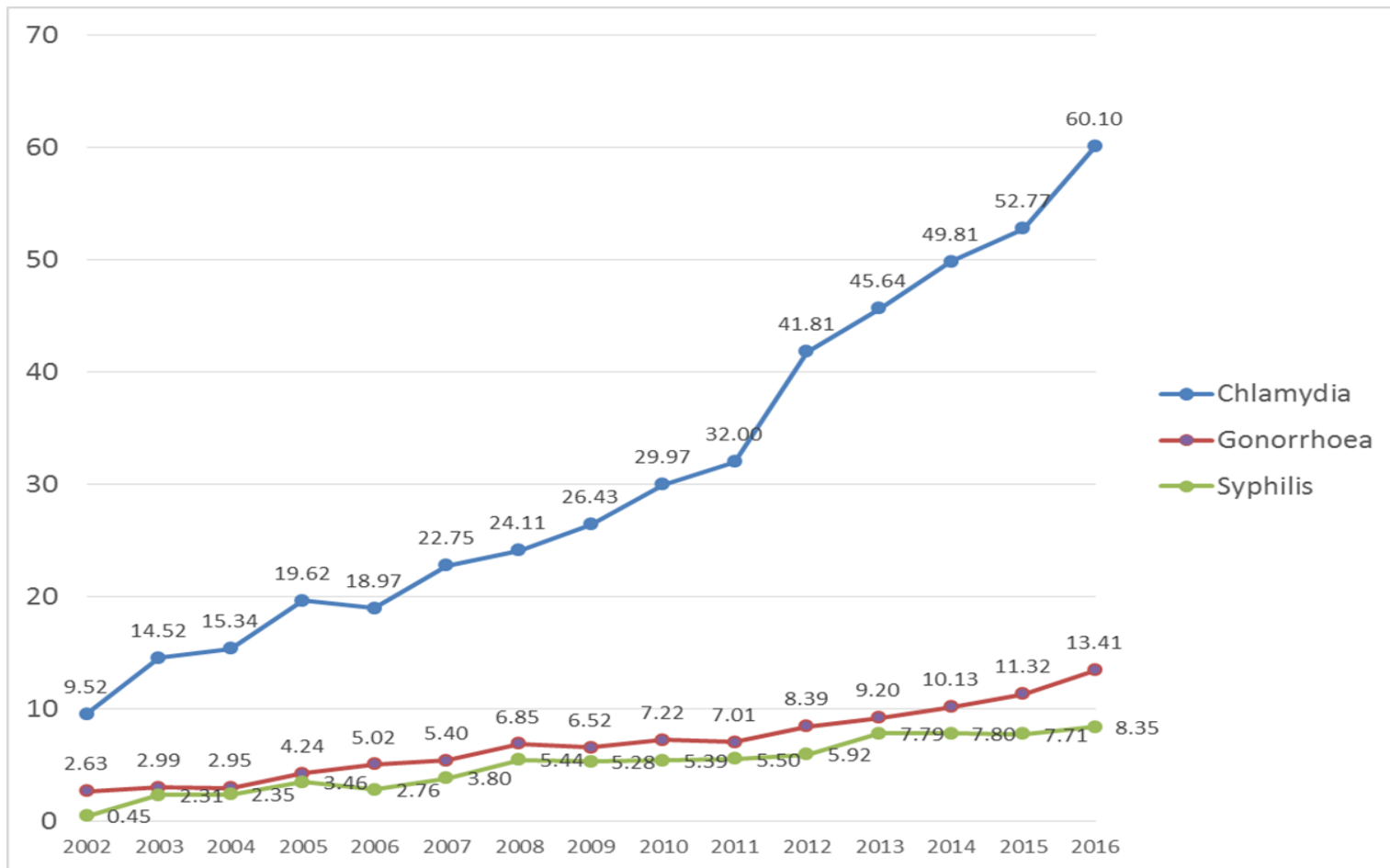
Evolution of the stages of the continuum of care, Belgium, 2012-2015



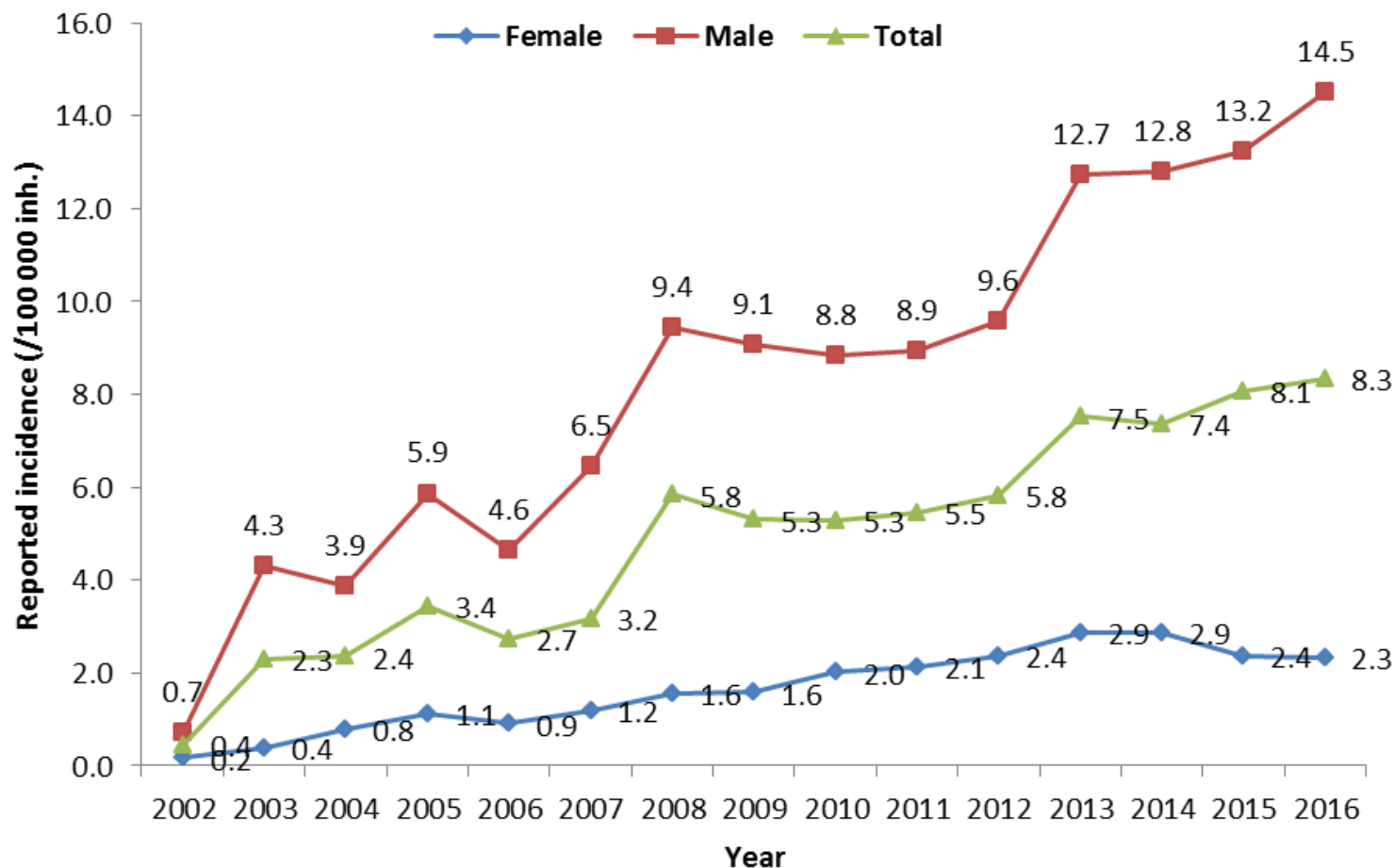


- HIV diagnoses
- Undiagnosed PLHIV
- HIV testing
- Continuum of care
- **Other STIs**
- Conclusions

Trend in reported incidence (/100 000 inh.) of Chlamydia, Gonorrhea and Syphilis, Belgium 2002-2016



Incidence trend (/100 000 inh.) of Syphilis by sex, Belgium, 2002-2016



Conclusions (I)

Real 4-years downward trend in HIV diagnoses

- First time since 20 years
- Statistically significant
- Although testing increased
- Reduction of the hidden epidemic

However: - Still high values:

- New diagnoses: 915 cases (= 8.1/10 000 pop)
- Hidden epidemic: 2875 undiagnosed PLHIV
- STI trends

Conclusions (II)

Impact of combined prevention activities:

- Early ARV treatment irrespective of CD4 count,
- Early testing, new testing strategies, selftests
- Condom use, information, education
- PrEP and PEP
- STI control
- Fight against stigma

All means used combined → can curve the HIV epidemic