

# Estimating the HIV epidemic on a local level: the HIV care continuum in Amsterdam

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# Disclosure of speaker's interests

<b>Potentially relevant company relationships in connection with event</b>	<b>Company name</b>
<ul style="list-style-type: none"><li>• <i>Sponsoring or research grants</i></li><li>• <i>Honorarium or other (financial) compensation</i></li><li>• <i>Shareholder</i></li><li>• <i>Other relationship, namely..</i></li></ul>	<p><i>European Centre for Disease Prevention and Control</i></p> <p><i>Gilead Sciences</i> <i>ViiV Healthcare</i> <i>Janssen-Cilag</i> <i>World Health Organisation</i> <i>Joint United Nations Programme on HIV/AIDS</i></p> <p><i>The ATHENA database is maintained by Stichting HIV Monitoring and supported by a grant from the Dutch Ministry of Health, Welfare and Sport through the Centre for Infectious Disease Control of the National Institute for Public Health and the Environment</i></p>

# Introduction

- Amsterdam aims to halt the ongoing HIV epidemic in the city through the HIV Transmission Elimination Amsterdam (H-TEAM) initiative.
- H-TEAM was launched in 2014 and is a unique collaboration between all relevant stakeholders involved in the prevention and care concerning HIV.
- To monitor progress towards achieving this aim, accurate and easily updatable estimates of the HIV care continuum at city level are essential.

# 5-step continuum of HIV care

<input type="checkbox"/>	1	Living with HIV	Step 2 - number still undiagnosed
<input checked="" type="checkbox"/>	2	Diagnosed and linked to care	diagnosed by the end of 2015 and registered by SHM
<input checked="" type="checkbox"/>	3	Retained in care	clinic visit or CD4 or RNA measurement in 2015
<input checked="" type="checkbox"/>	4	cART	ever started a combination of 3 or more drugs from at least 2 classes
<input checked="" type="checkbox"/>	5	Viral suppression	latest RNA measurement in 2015 <100 copies/ml, irrespective of treatment

# Data

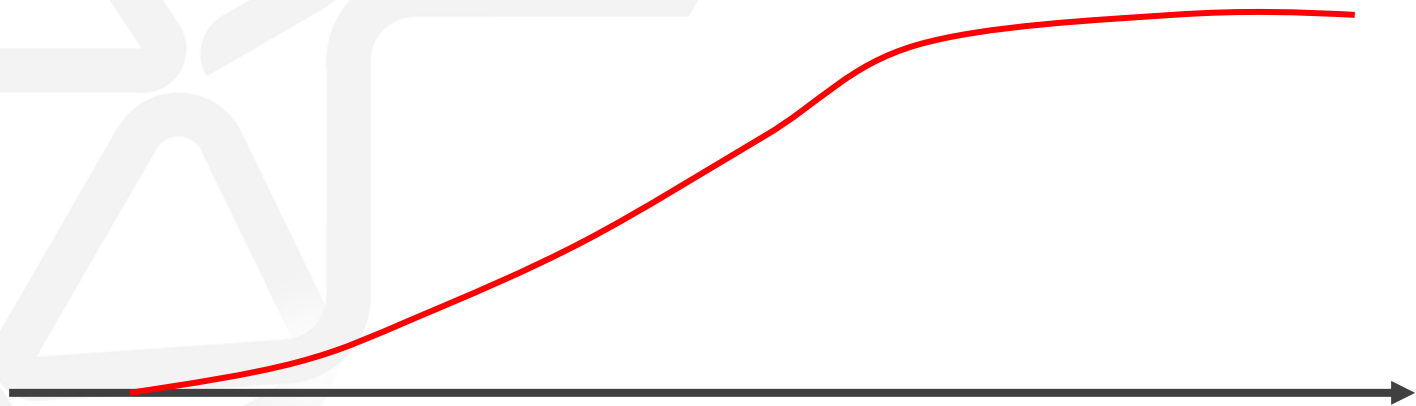
## ATHENA national observational HIV cohort

- annual data on new HIV diagnoses
  - CD4 count
  - concurrent AIDS diagnosis
- longitudinal data on antiretroviral treatment and HIV RNA
- death and emigration
- Amsterdam-specific data available from 2002 onwards, based on postal code

# Back-calculation



Observed HIV diagnoses



Calendar year

# Back-calculation



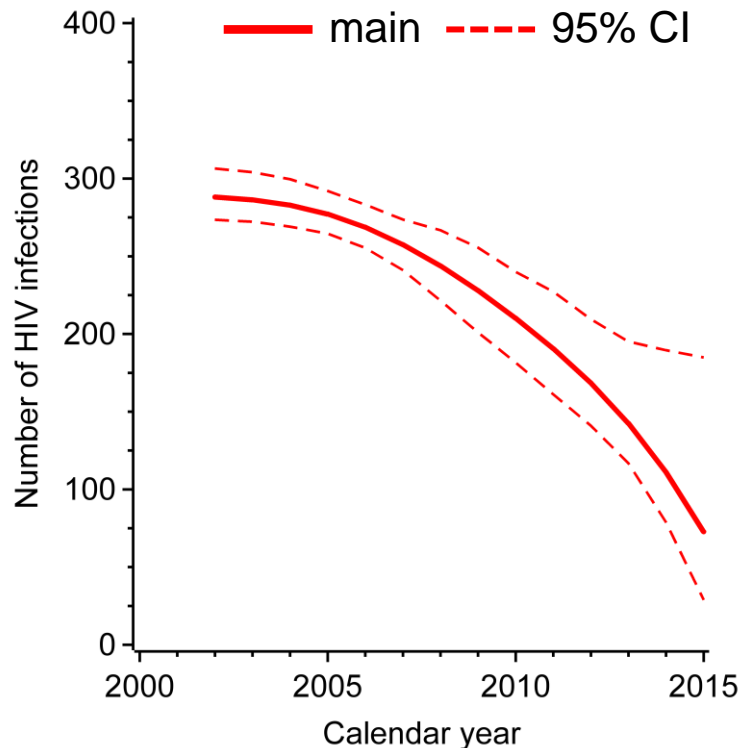
## HIV infections

- Need to know the time between infection and diagnosis, which
- is *a priori* unknown
  - may change over calendar time
  - longer when CD4 counts are lower

/ diagnoses

Calendar year

# Newly acquired HIV infections

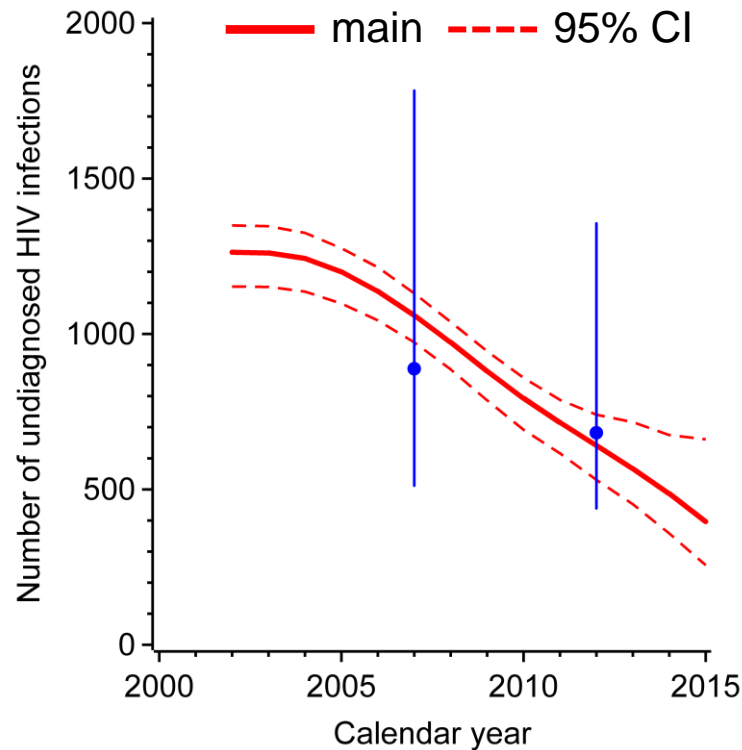


- 70 (95% CI, 30 – 180) new HIV infections in 2015.
- Average time from infection to diagnosis: 2.9 (2.3 – 3.7) years.

including corrections for reporting delay in 2014 (+3%) and 2015 (+11%)



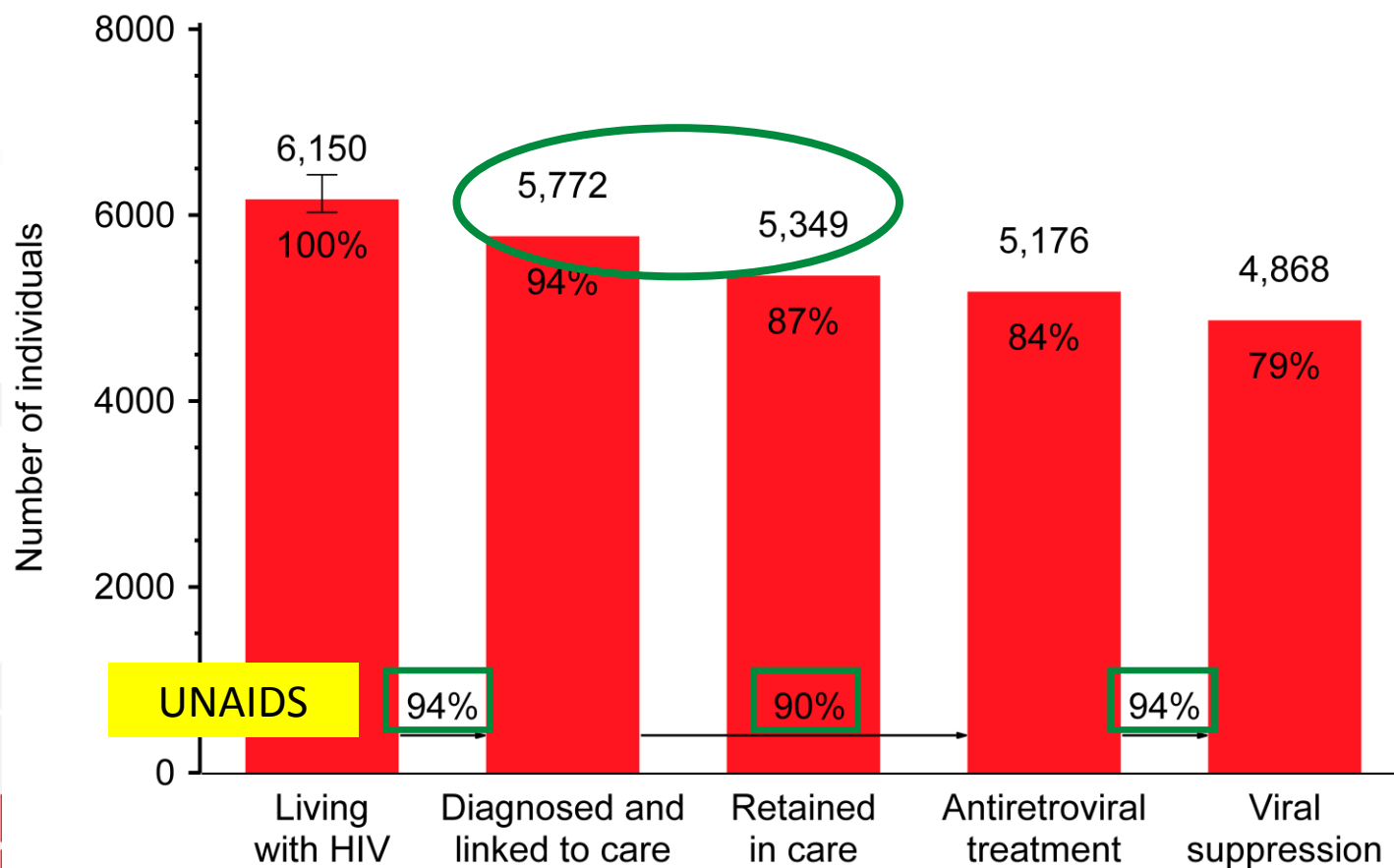
# Undiagnosed HIV infections



- 400 (95% CI, 260 – 660) people living with HIV were still undiagnosed by the end of 2015.
- Number undiagnosed consistent with earlier estimates (Op de Coul *et al*, PLoS One 2015).

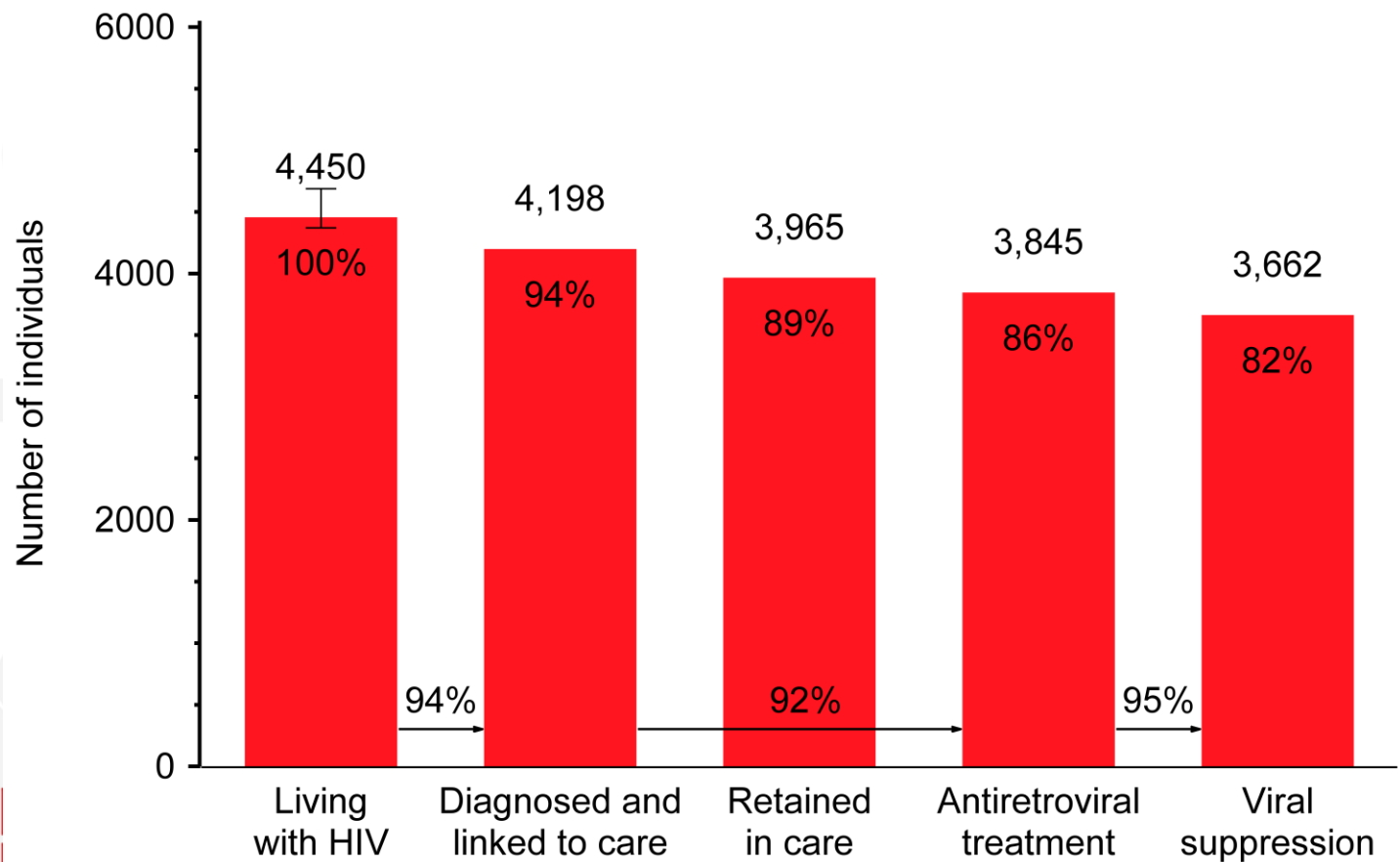
# HIV care continuum in 2015

Total population



# HIV care continuum in 2015

MSM



# Discussion – strengths

- Only routine surveillance data on HIV diagnoses.
- No need for extensive historical data.
- Estimates are easily updated.

# Discussion – limitations

- Underreporting may affect estimates:
  - some diagnosed individuals are not in care
  - 2% opt out of registration in SHM
  - patients no longer in care may have emigrated or died
- Backlog in collecting information on start of treatment and on viral load measurements:
  - need to extend automated import of laboratory measurements to all HIV treatment centres.

# Conclusions

- Amsterdam attains high levels of engagement in various stages of the HIV care continuum.
- As our method only uses routinely available data, changes in the care continuum can easily be monitored annually.
- Increased efforts are necessary to reduce the undiagnosed population and the number of individuals not retained in care.

**SOAIDS**

*slotervaartziekenhuis*

**olvg**

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Monitoring**

  
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