



Public Health  
England

# HIV diagnoses and trends among key populations

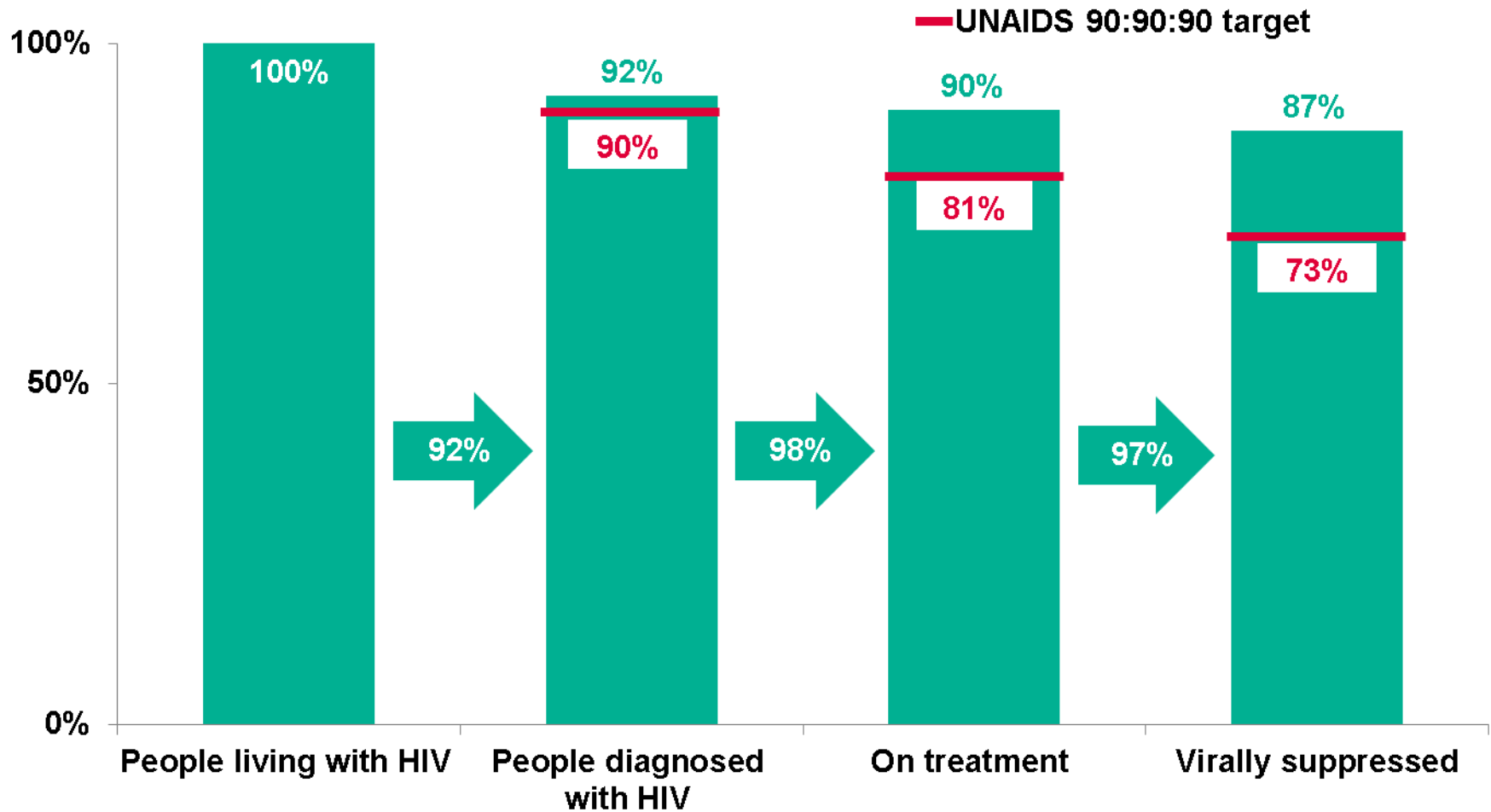
Sophie Nash *on behalf of the HARS team*  
National Infection Service  
Public Health England

# Outline

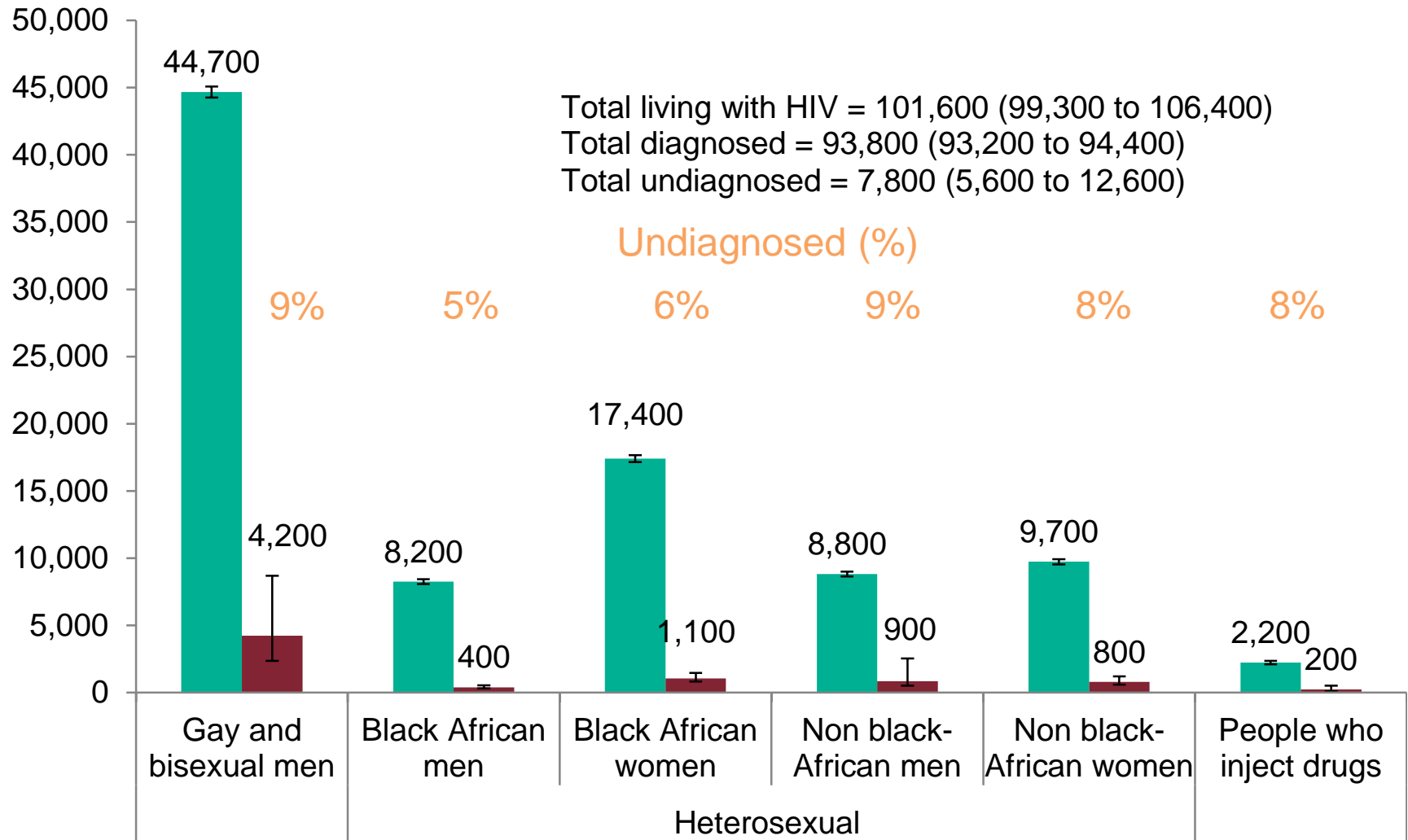
- UNAIDS 90:90:90 targets
- New diagnoses - who and where?
- Late diagnoses
- Using “Numbers needed to test” metric
- HIV prevention dashboard

# UNAIDS 90:90:90 targets

## Continuum of HIV care: UK, 2017



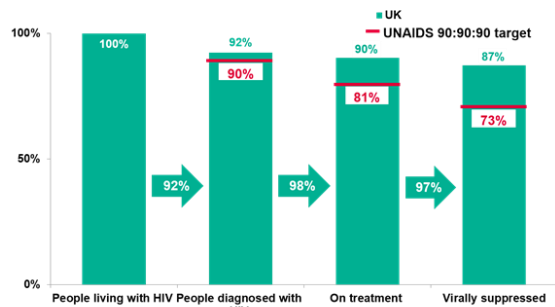
# Estimated\* number of people living with HIV (diagnosed and undiagnosed) all ages: UK, 2017



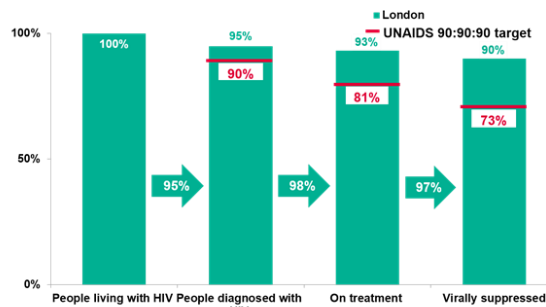
# Continuum of HIV care by exposure groups and region: UK, 2017

All

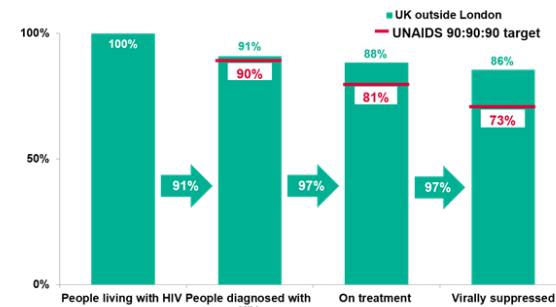
UK



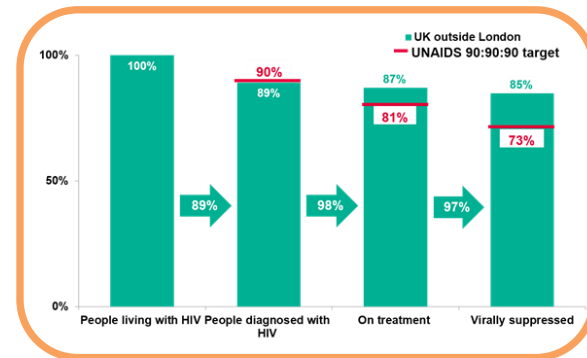
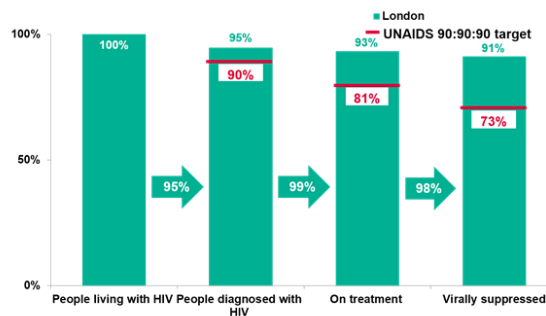
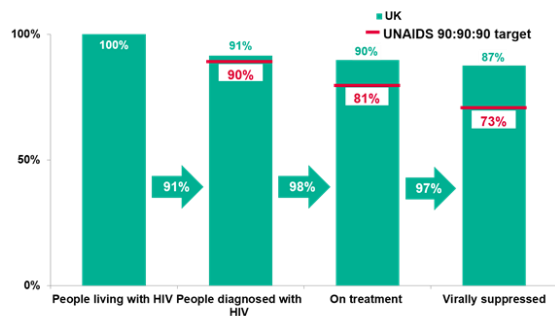
London



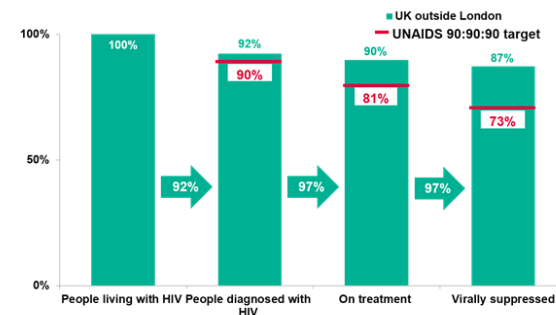
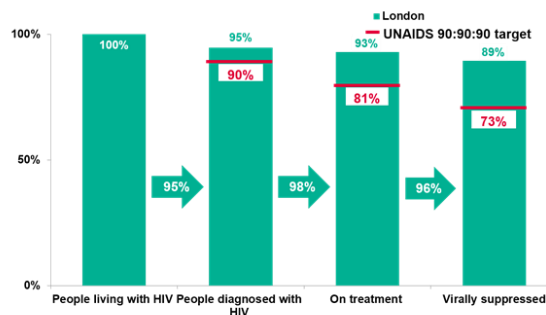
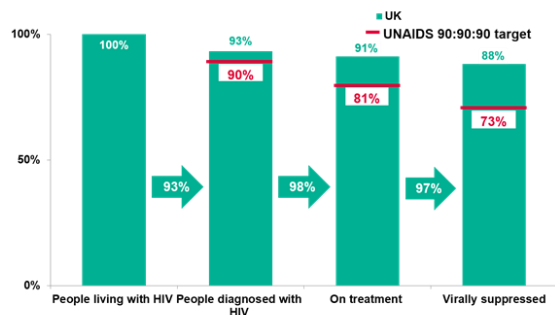
UK outside London



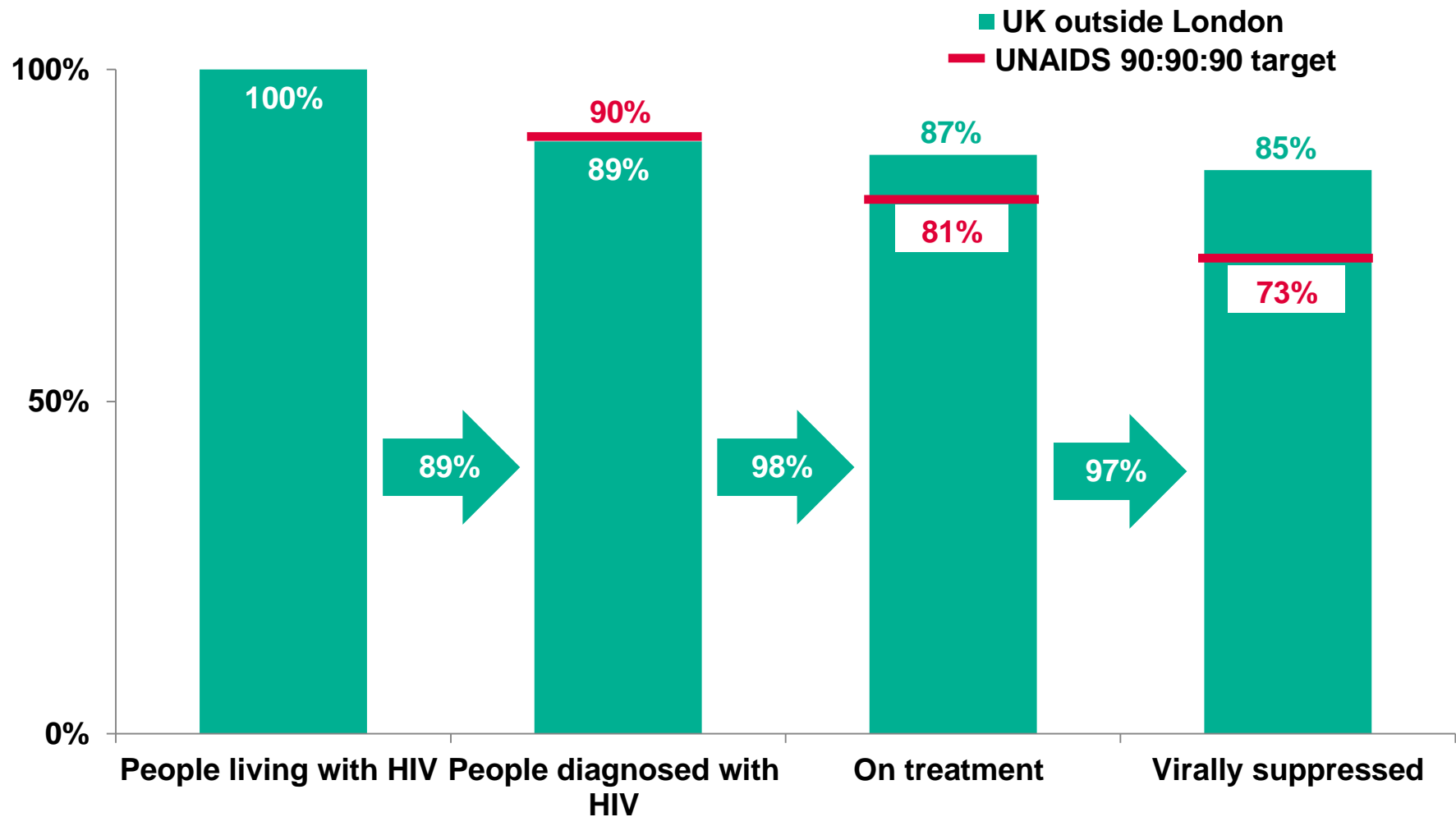
Gay and  
bisexual men



Heterosexual  
men and women



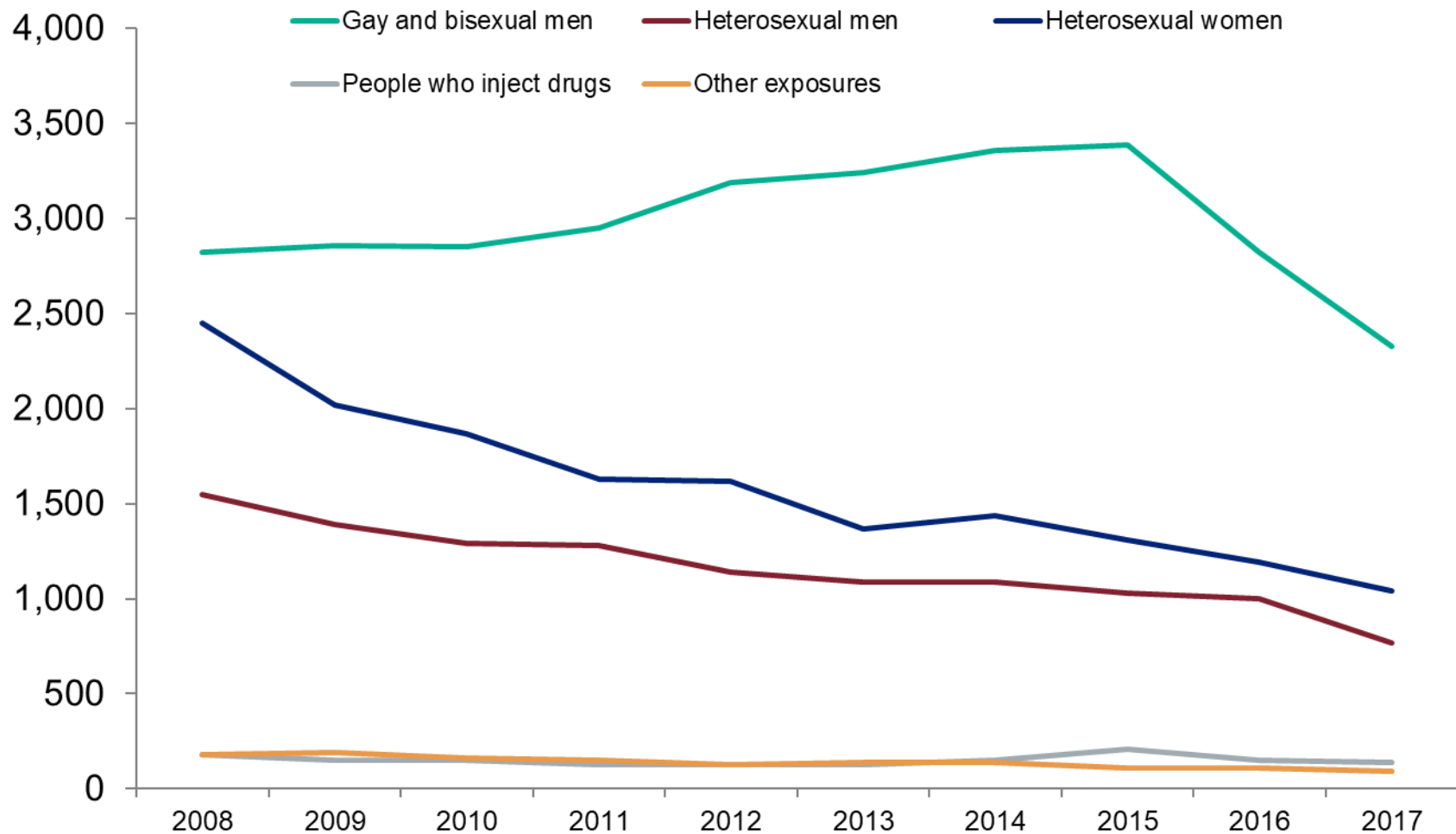
# Continuum of HIV care in gay and bisexual men: UK outside London, 2017



# New HIV Diagnoses

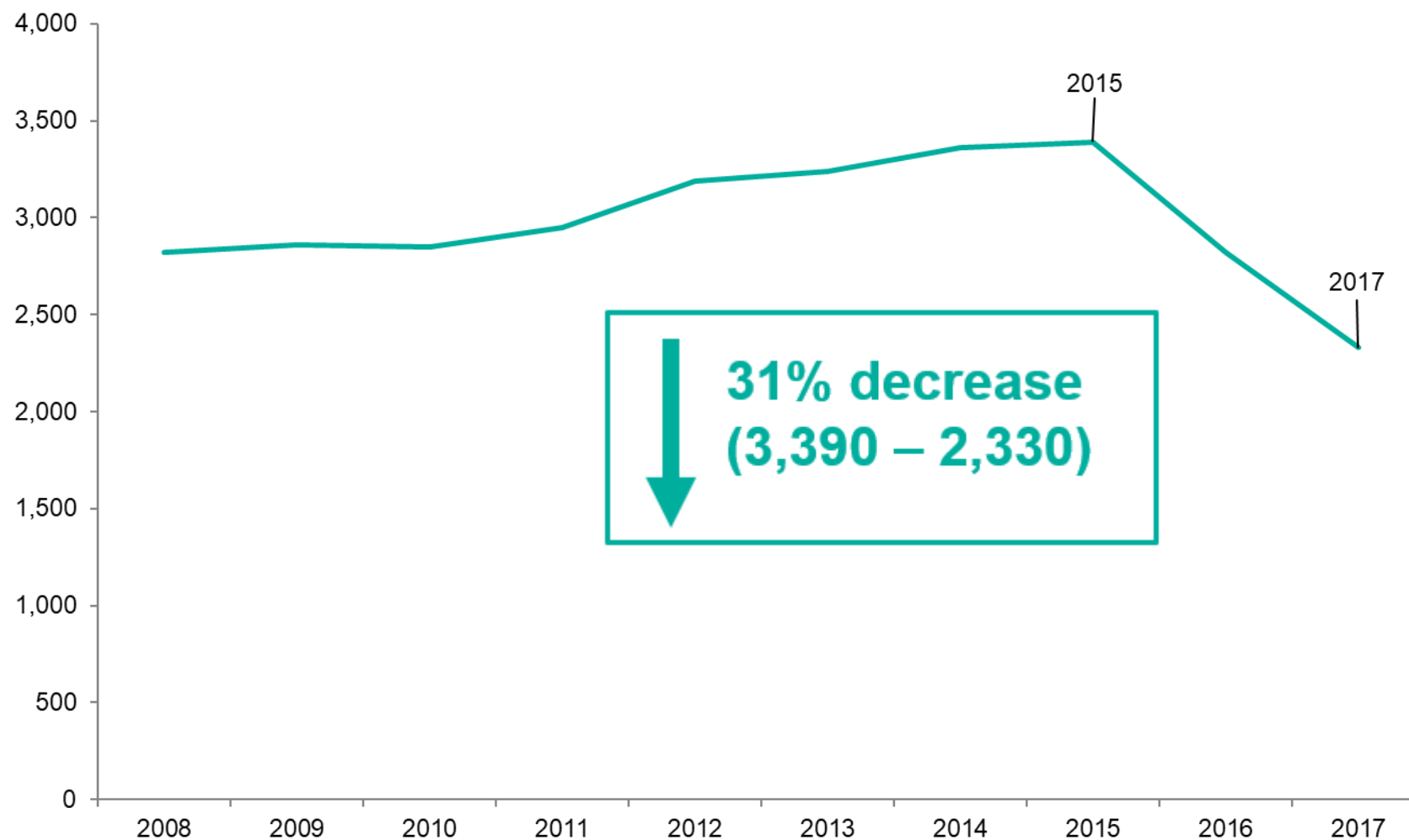


# New HIV diagnoses\* by exposure group: UK, 2008-2017



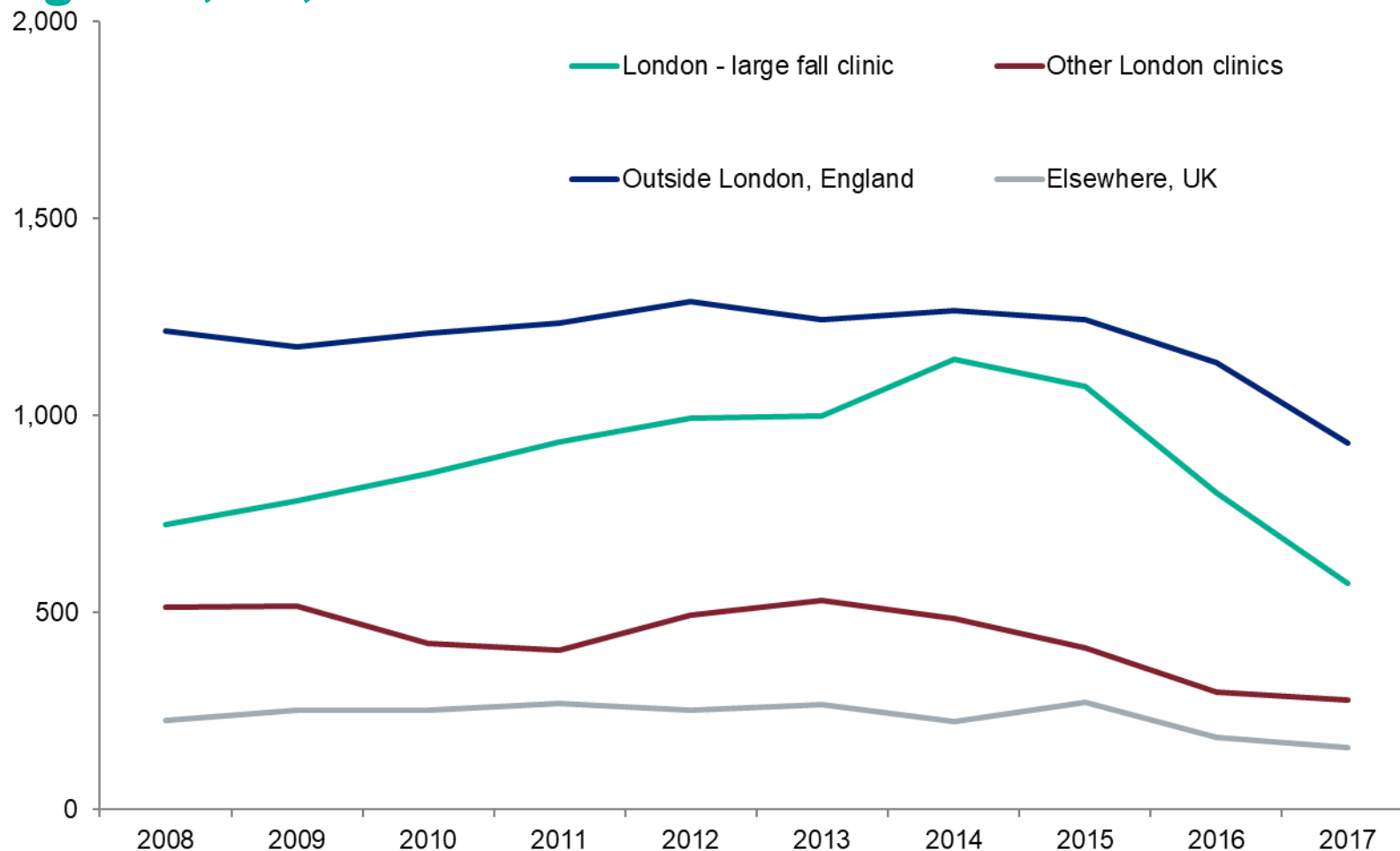
\*Adjusted for missing exposure information

## New HIV diagnoses\* in gay and bisexual men: UK, 2008-2017



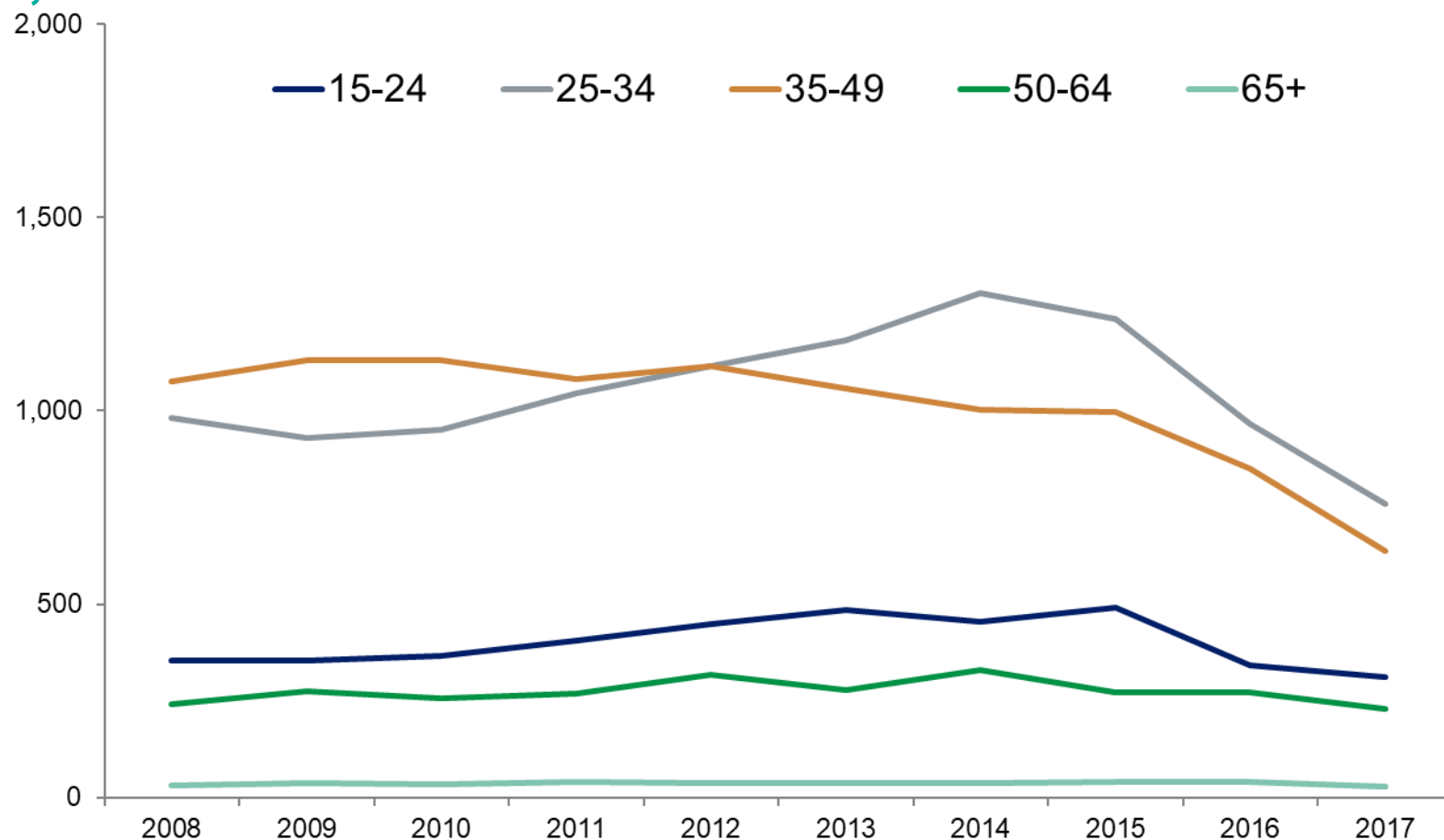
\*Adjusted for missing exposure information

# HIV diagnoses\* among gay and bisexual men, by clinic of diagnosis, UK, 2008-2017



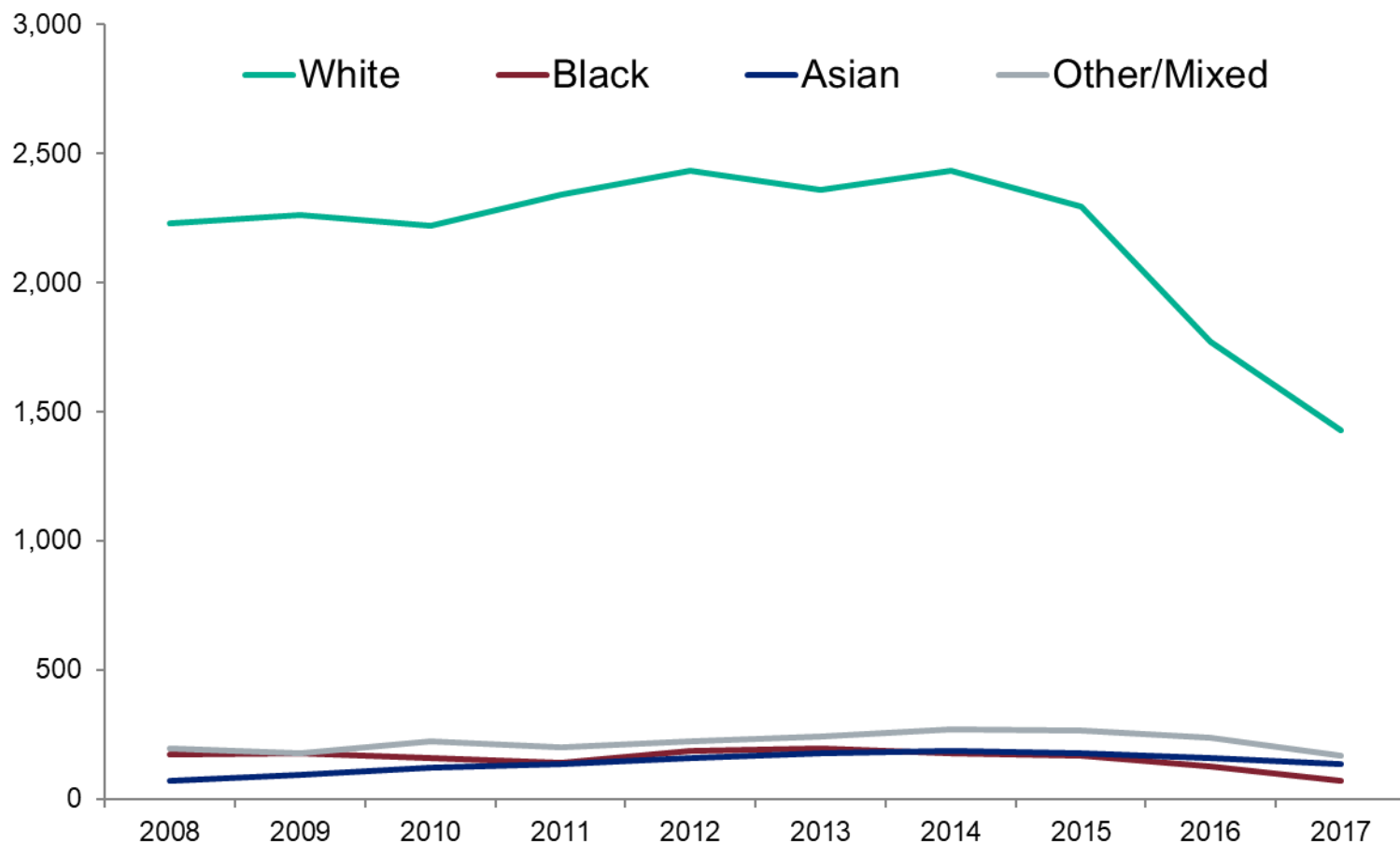
\*Observed data, not adjusted for missing information.

## HIV diagnoses\* among gay and bisexual men, by age group, UK, 2008-2017



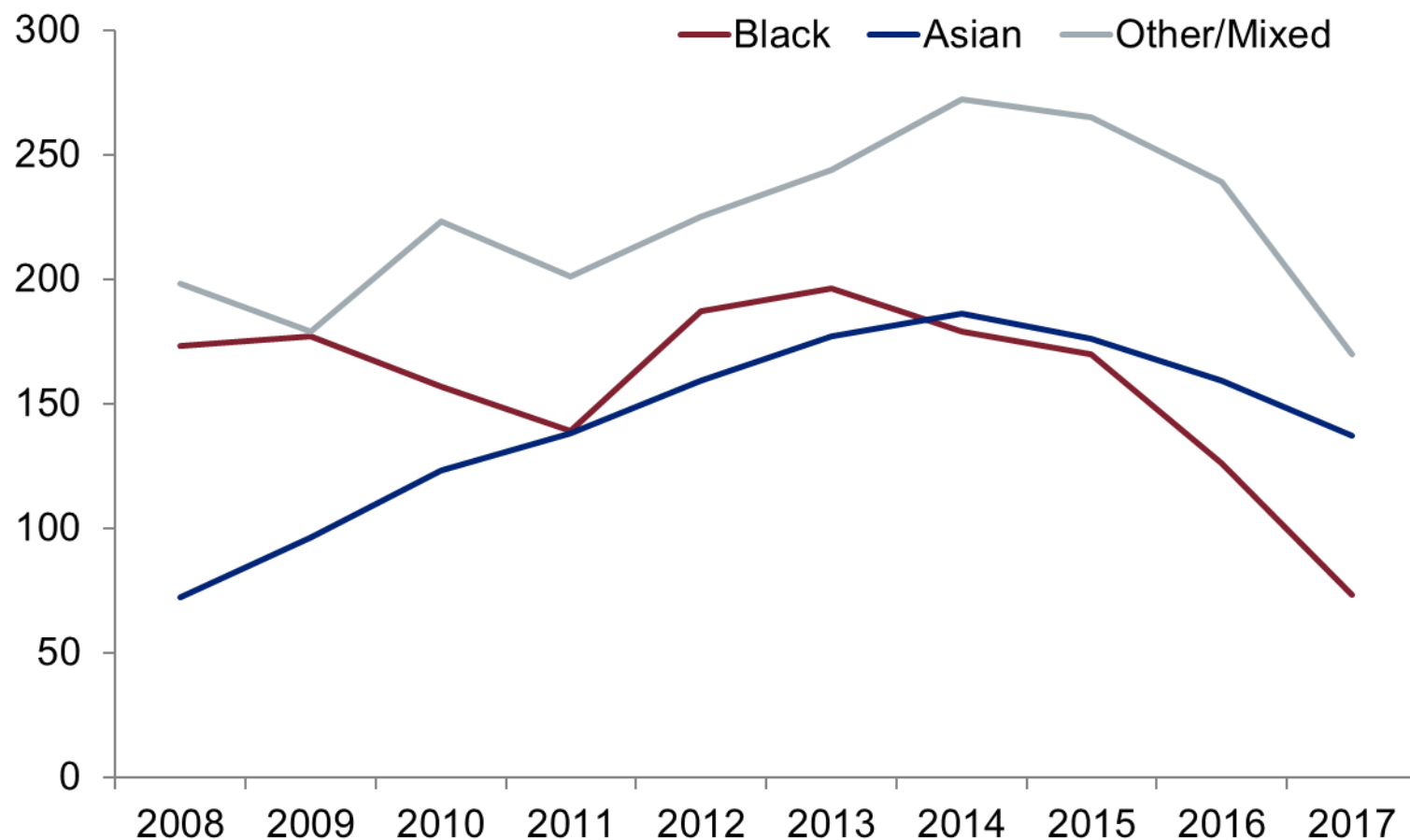
\*Observed data, not adjusted for missing information.

# HIV diagnoses\* among gay and bisexual men, by ethnic group (1), UK, 2008-2017



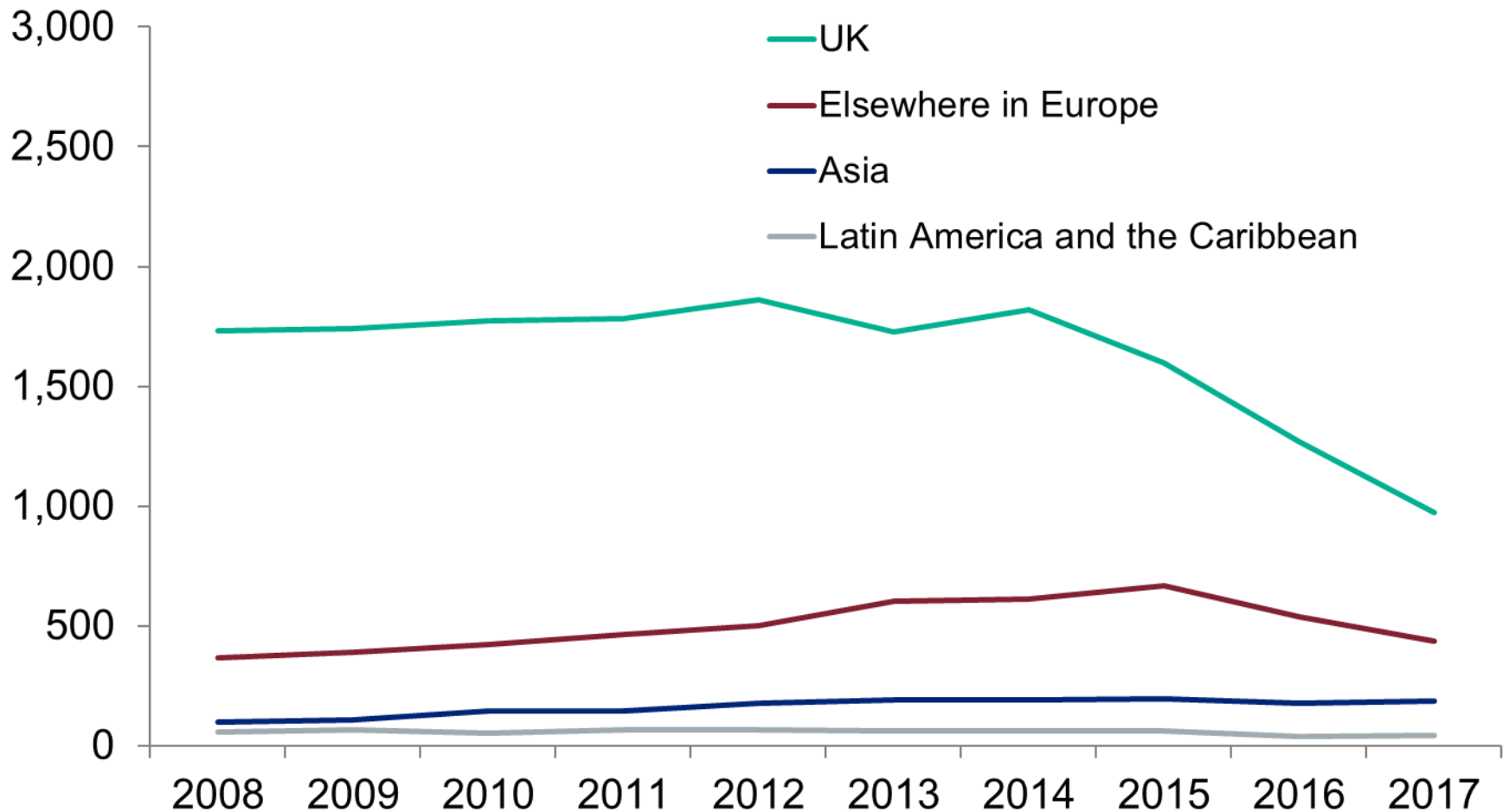
\*Observed data, not adjusted for missing information.

## HIV diagnoses\* among gay and bisexual men, by ethnic group (2), UK, 2008-2017



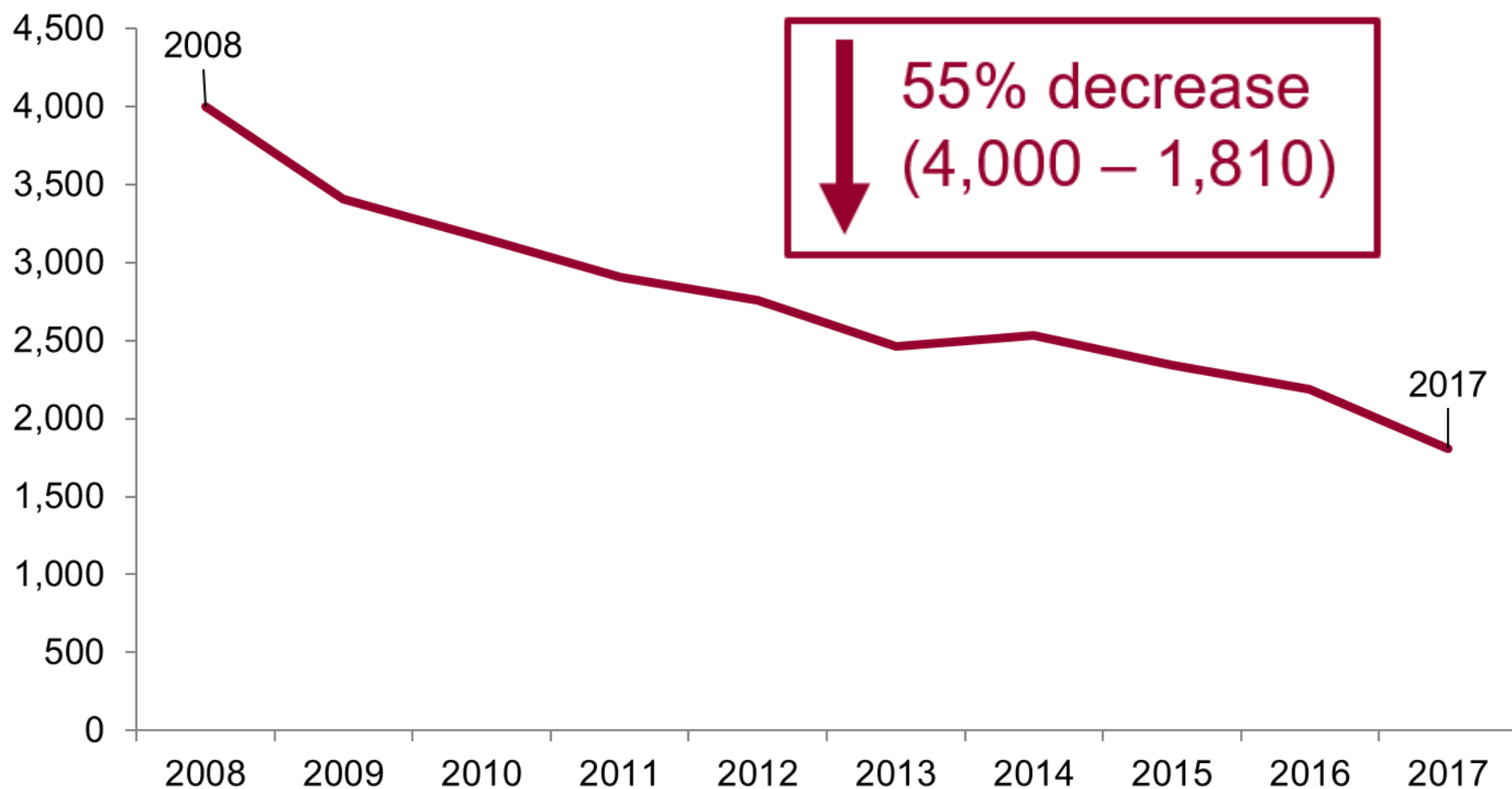
\*Observed data, not adjusted for missing information.

# HIV diagnoses\* among gay and bisexual men, by country of birth, 2008-2017



\*Observed data, not adjusted for missing information.

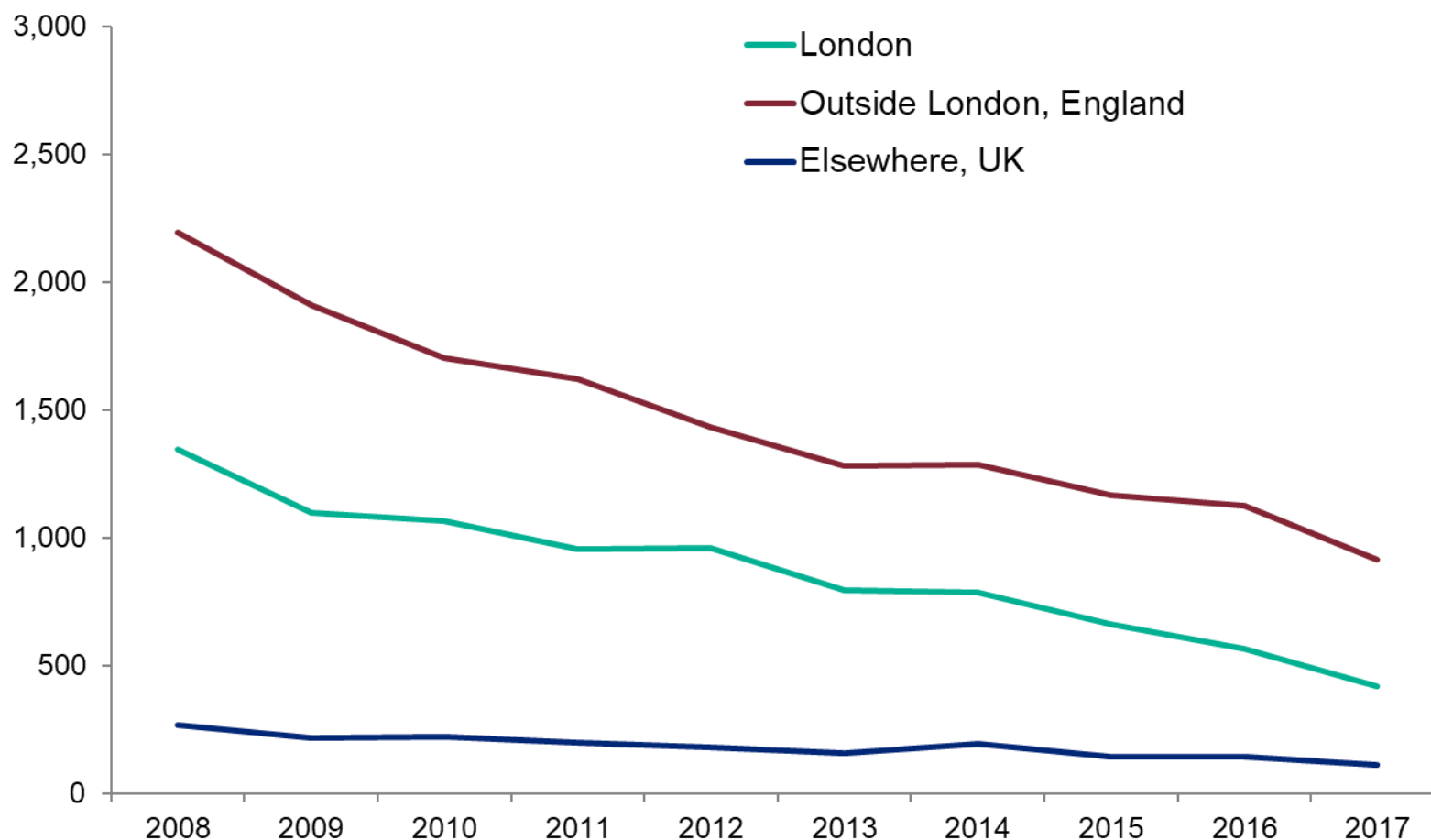
## New HIV diagnoses\* in Heterosexual men and women: UK, 2008-2017



\*Adjusted for missing exposure information

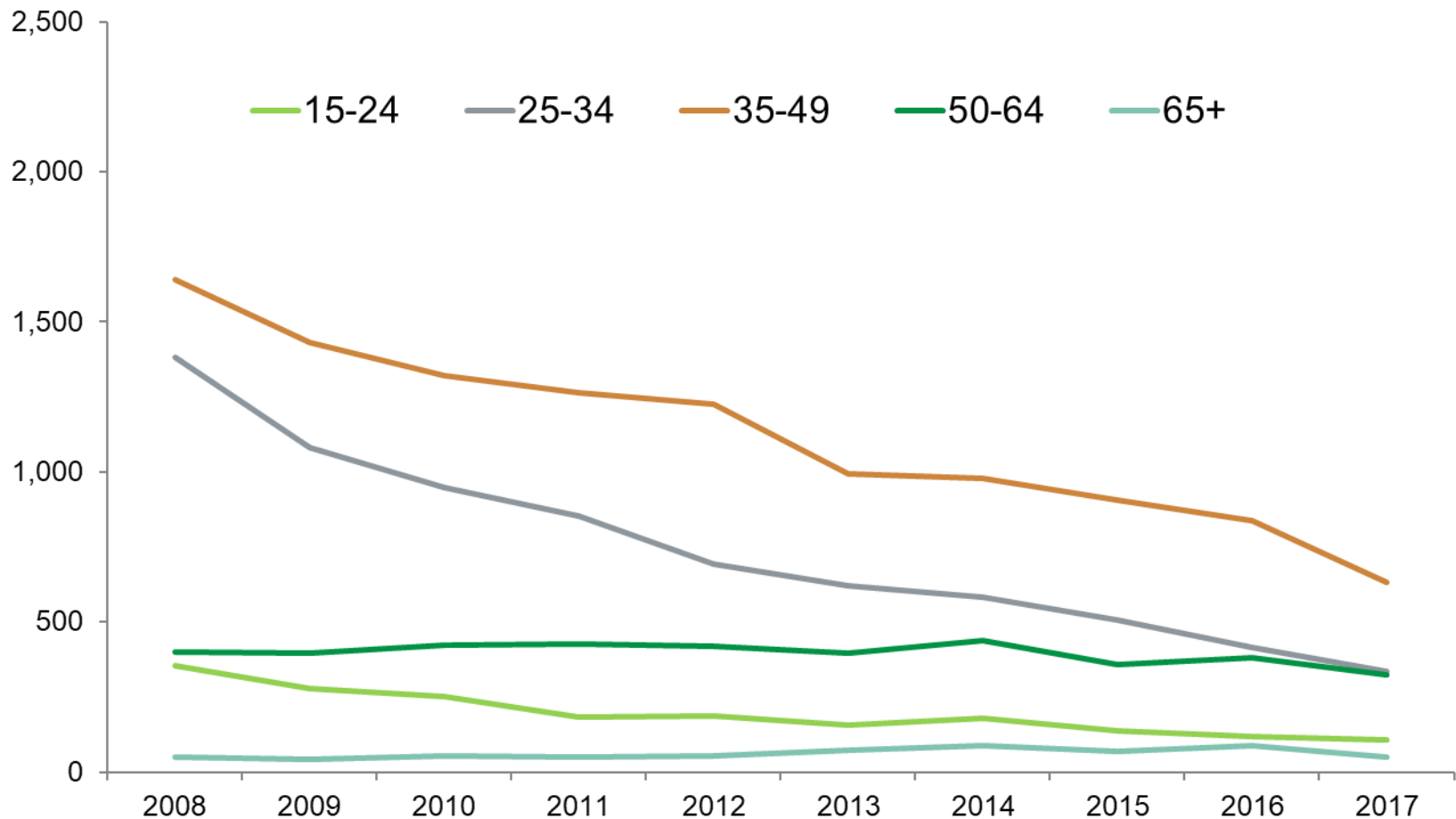


# HIV diagnoses\* among heterosexual men and women, by Residence: UK, 2008-2017



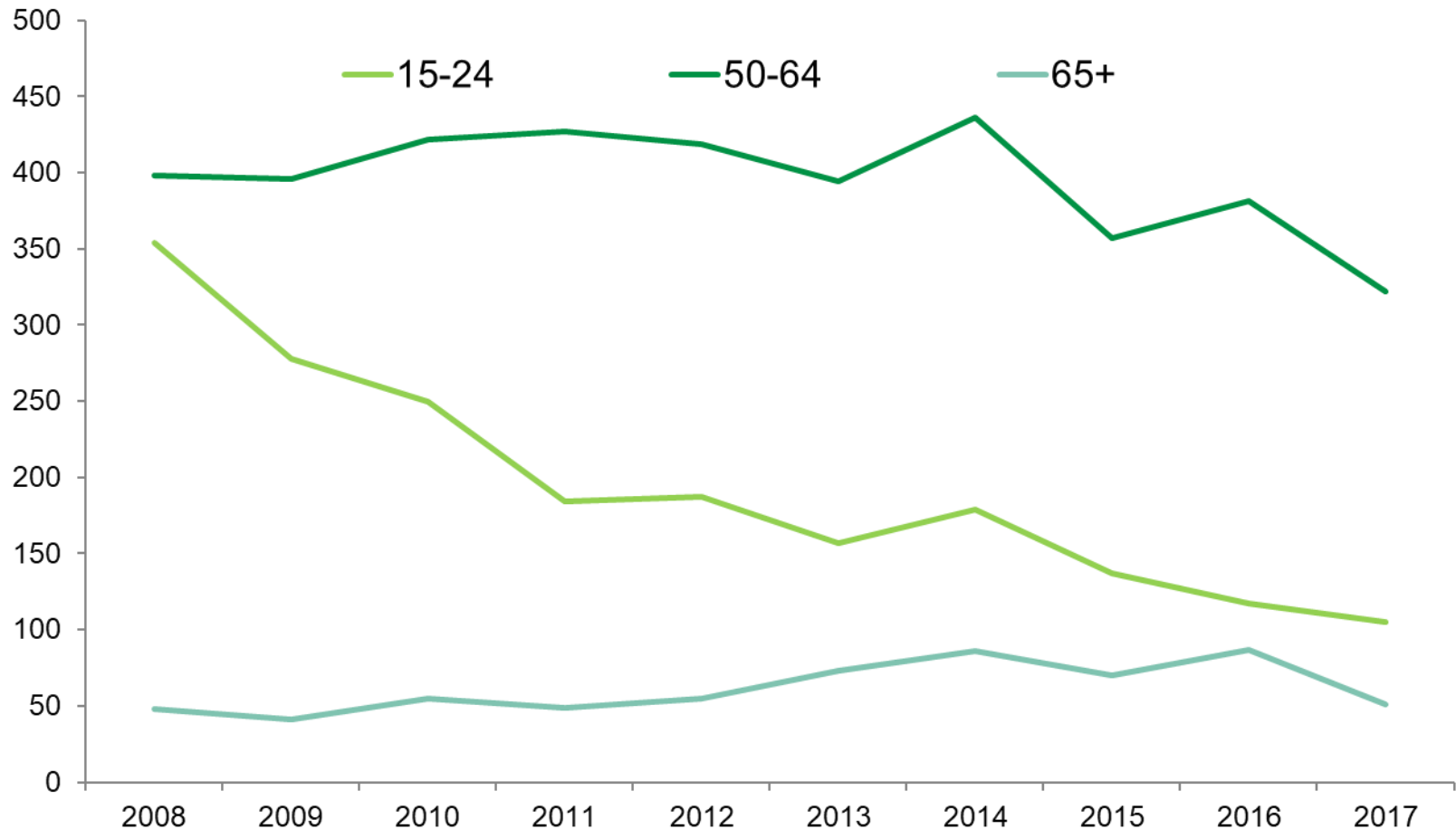
\*Observed data, not adjusted for missing information.

# HIV diagnoses\* among heterosexual men and women, by age group (1) : UK, 2008-2017



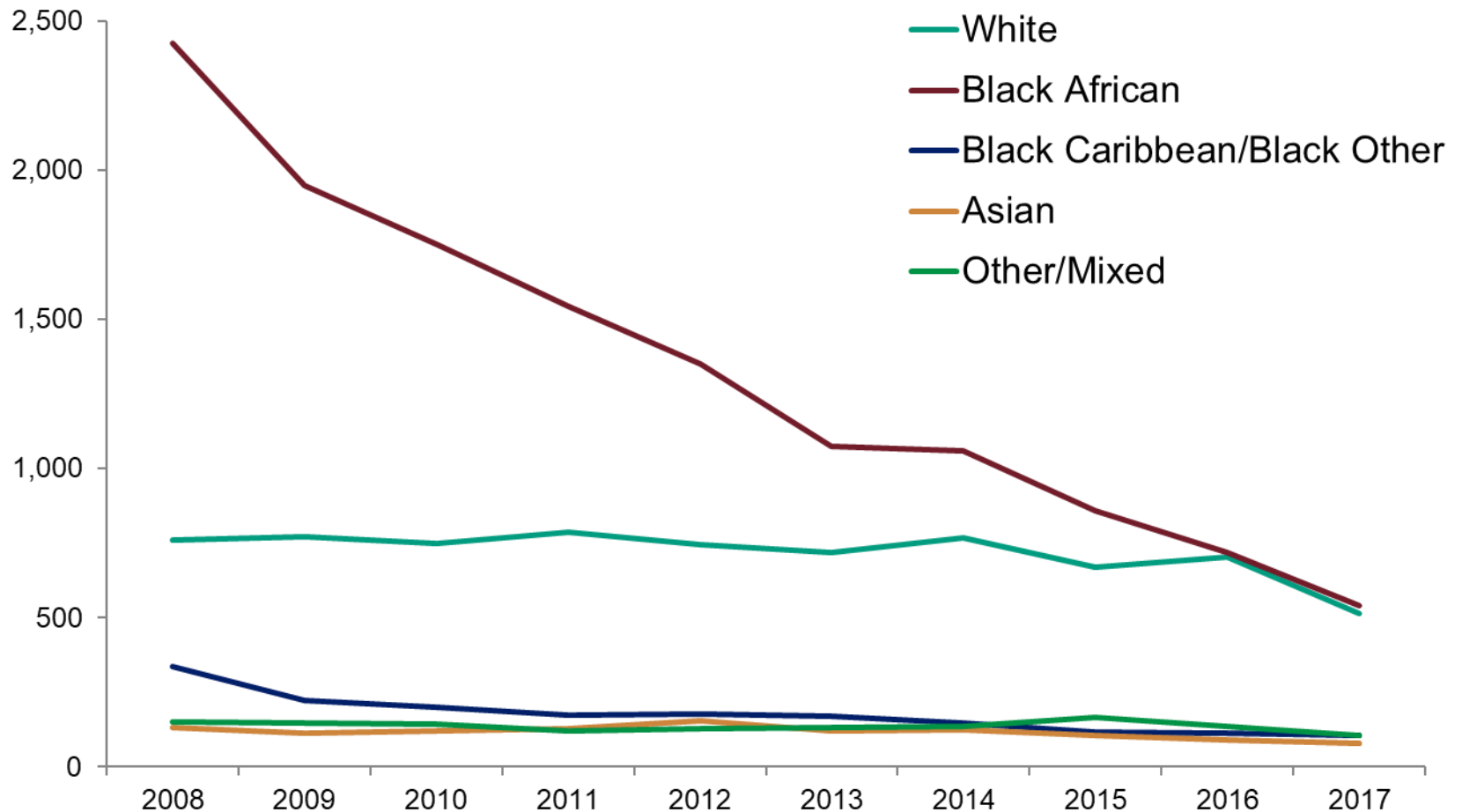
\*Observed data, not adjusted for missing information.

## HIV diagnoses\* among heterosexual men and women, by age group (2) : UK, 2008-2017



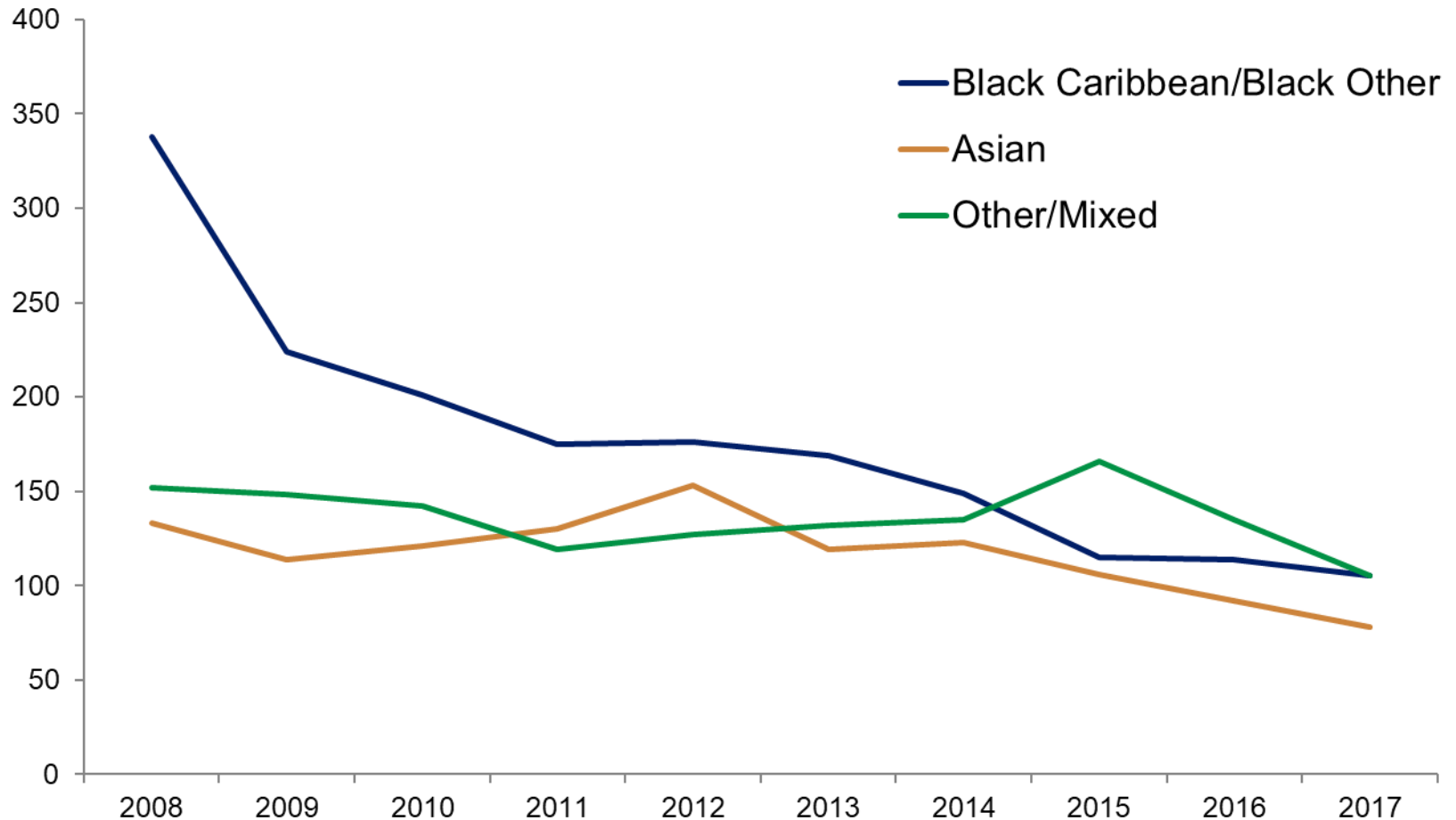
\*Observed data, not adjusted for missing information.

## HIV diagnoses\* among heterosexual men and women, by ethnicity (1) : UK, 2008-2017



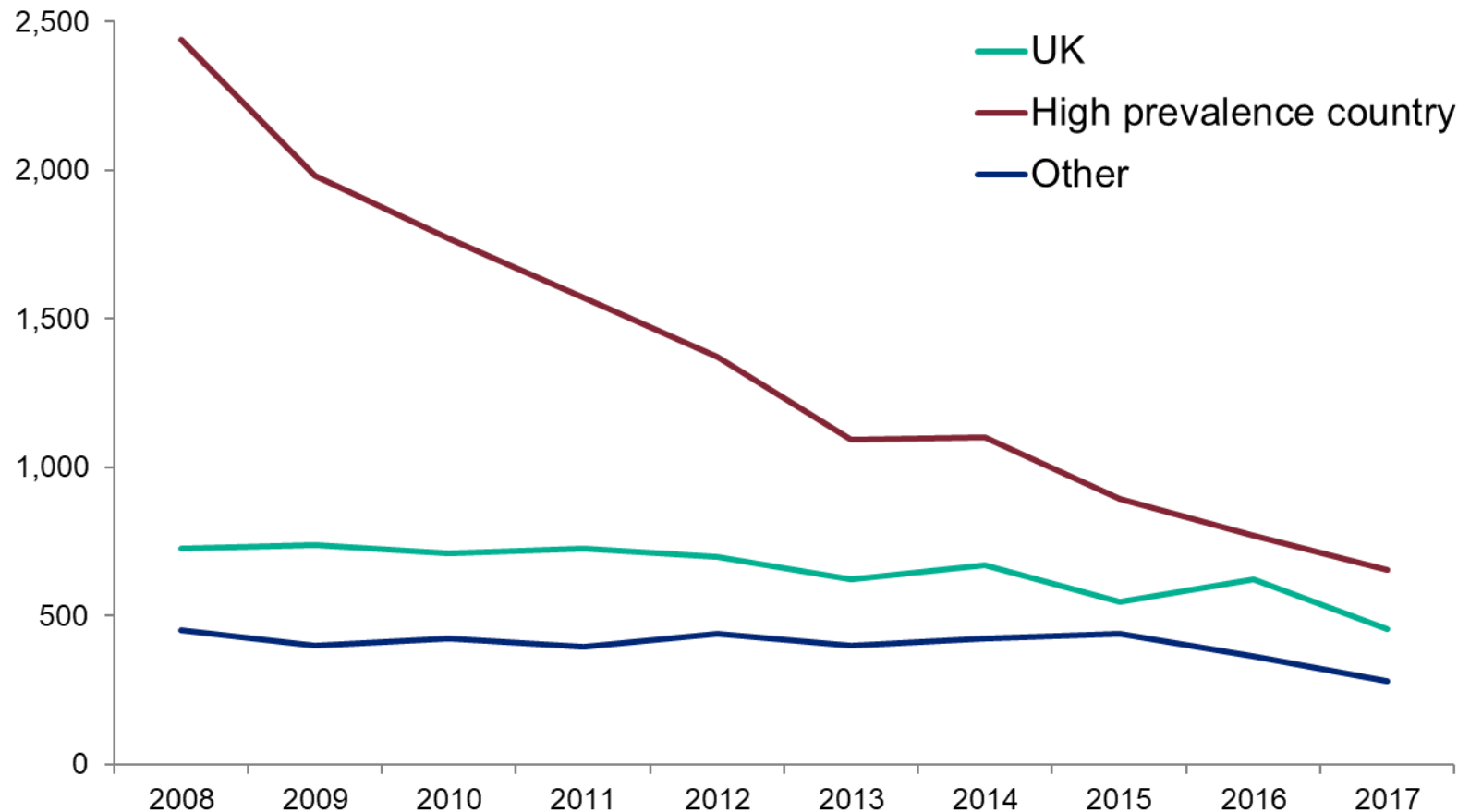
\*Observed data, not adjusted for missing information.

## HIV diagnoses\* among heterosexual men and women, by ethnicity (2) : UK, 2008-2017



\*Observed data, not adjusted for missing information.

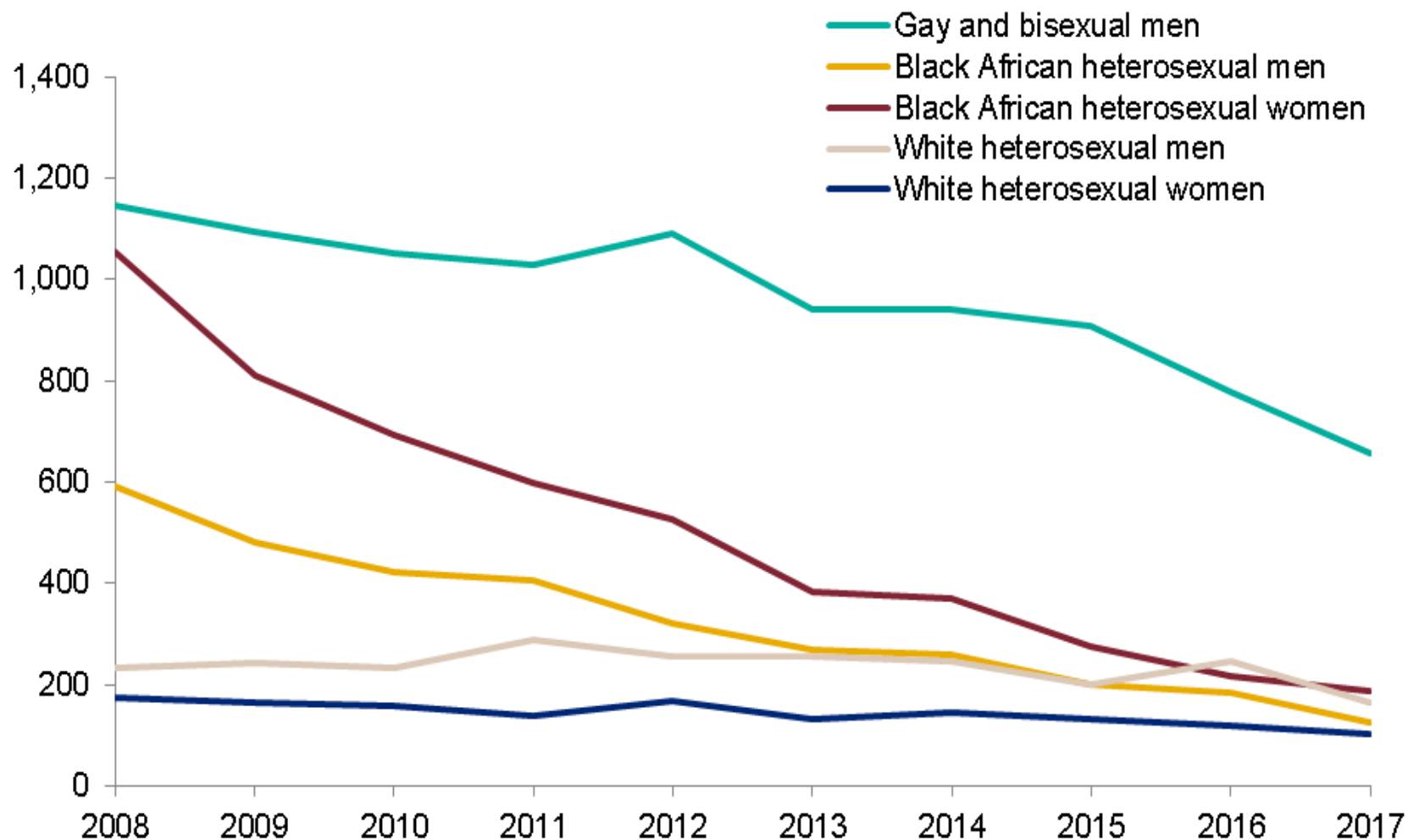
## HIV diagnoses\* among heterosexual men and women, by country of birth: UK, 2008-2017



\*Observed data, not adjusted for missing information.

# Late diagnosis

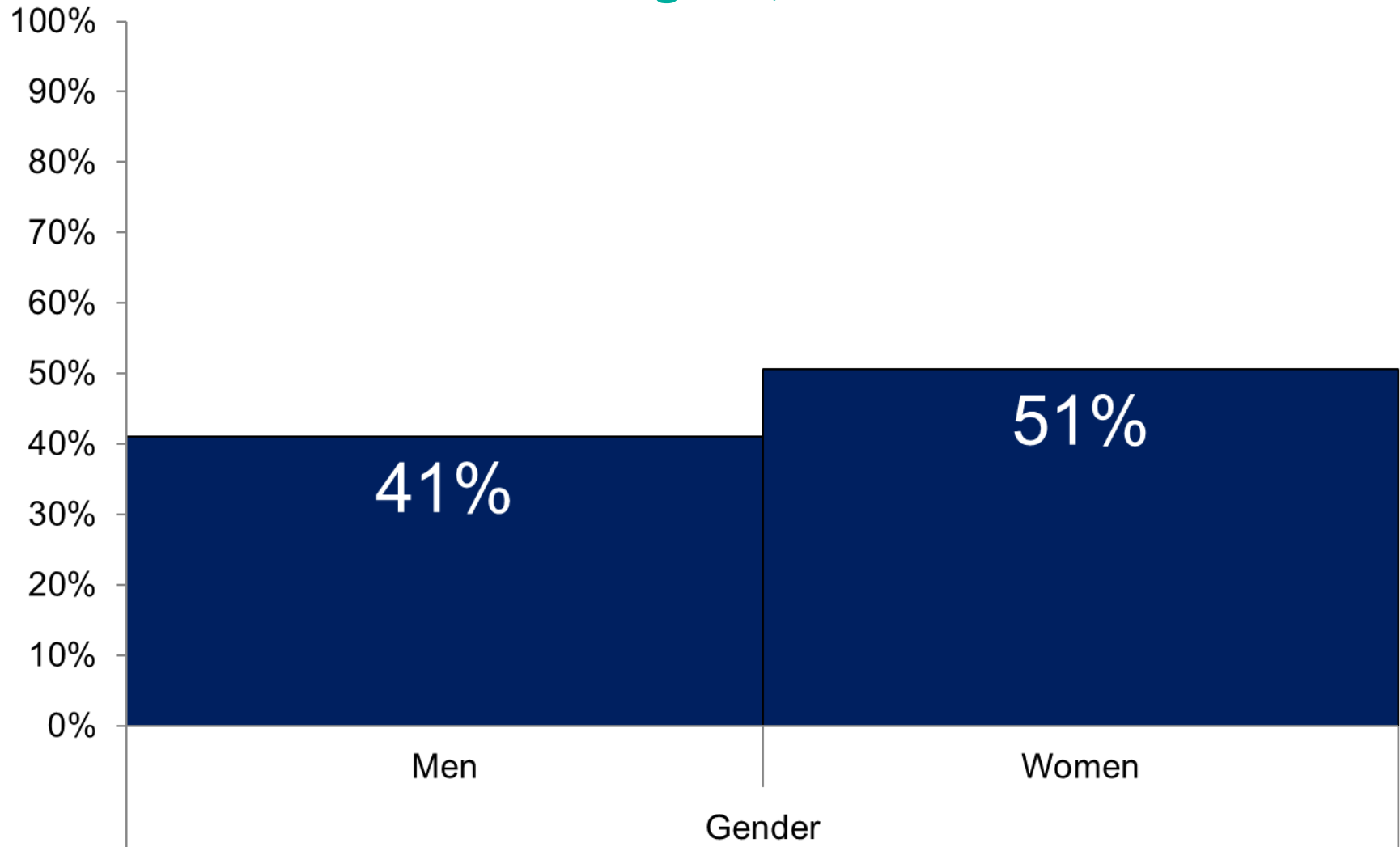
## Adjusted\* number of people diagnosed late by risk group: UK, 2008-2017



\*Adjusted for missing CD4 count at diagnosis

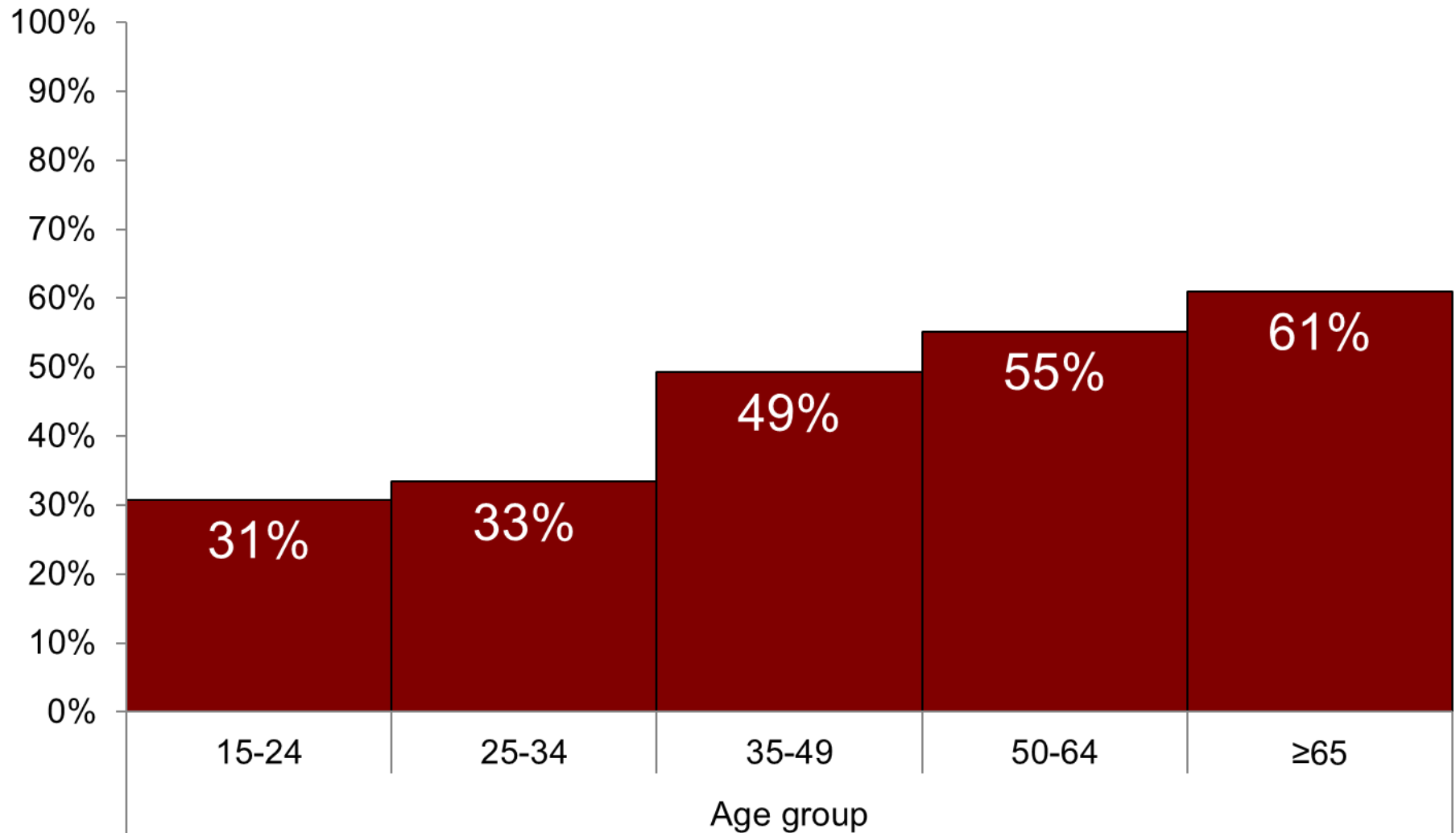


## Proportion of people diagnosed late with HIV by gender: United Kingdom, 2017



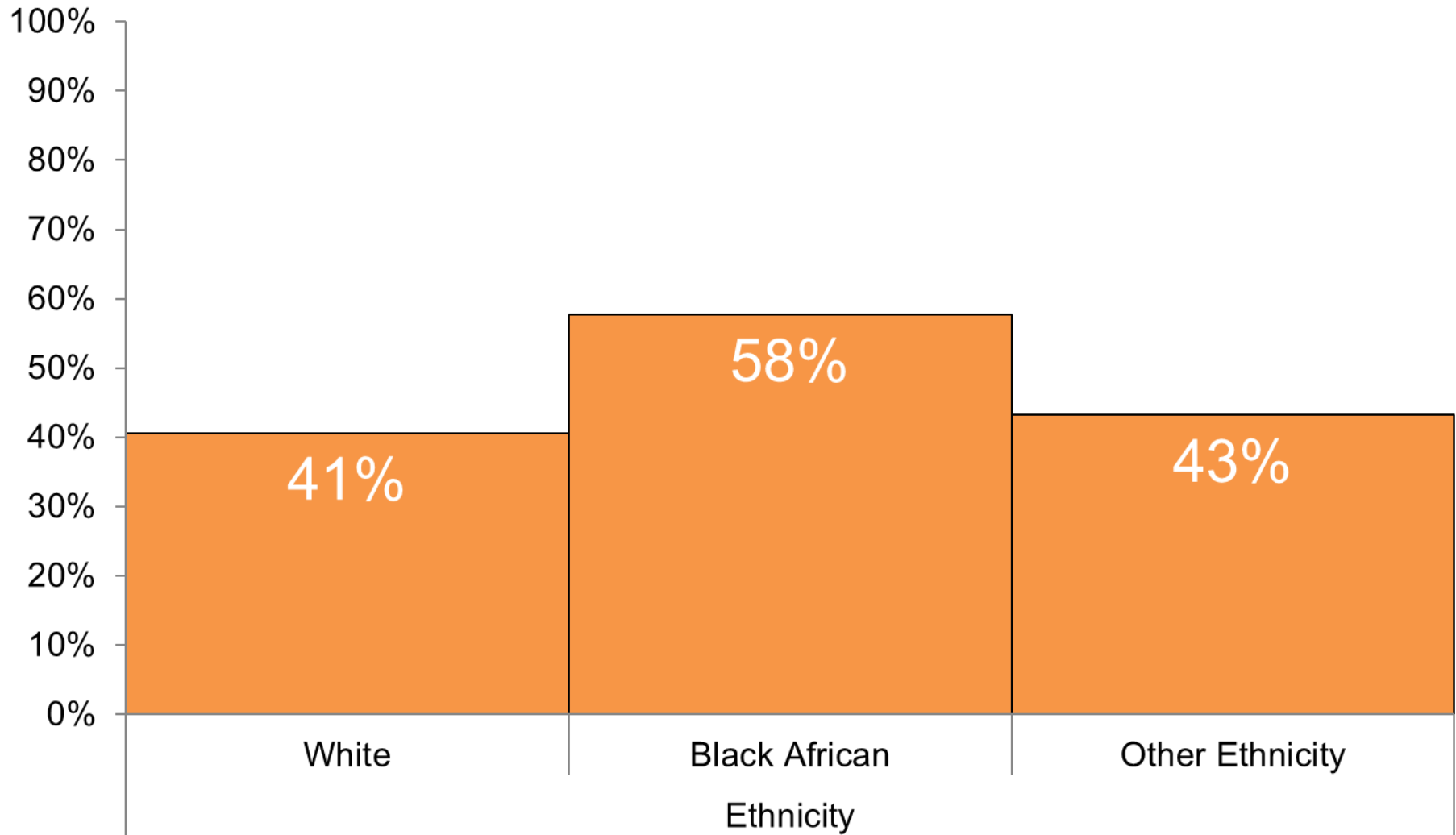
Late diagnosis: CD4 <350 cells/mm<sup>3</sup> within three months of diagnosis  
PWID: people who inject drugs

## Proportion of people diagnosed late with HIV by age group: United Kingdom, 2017



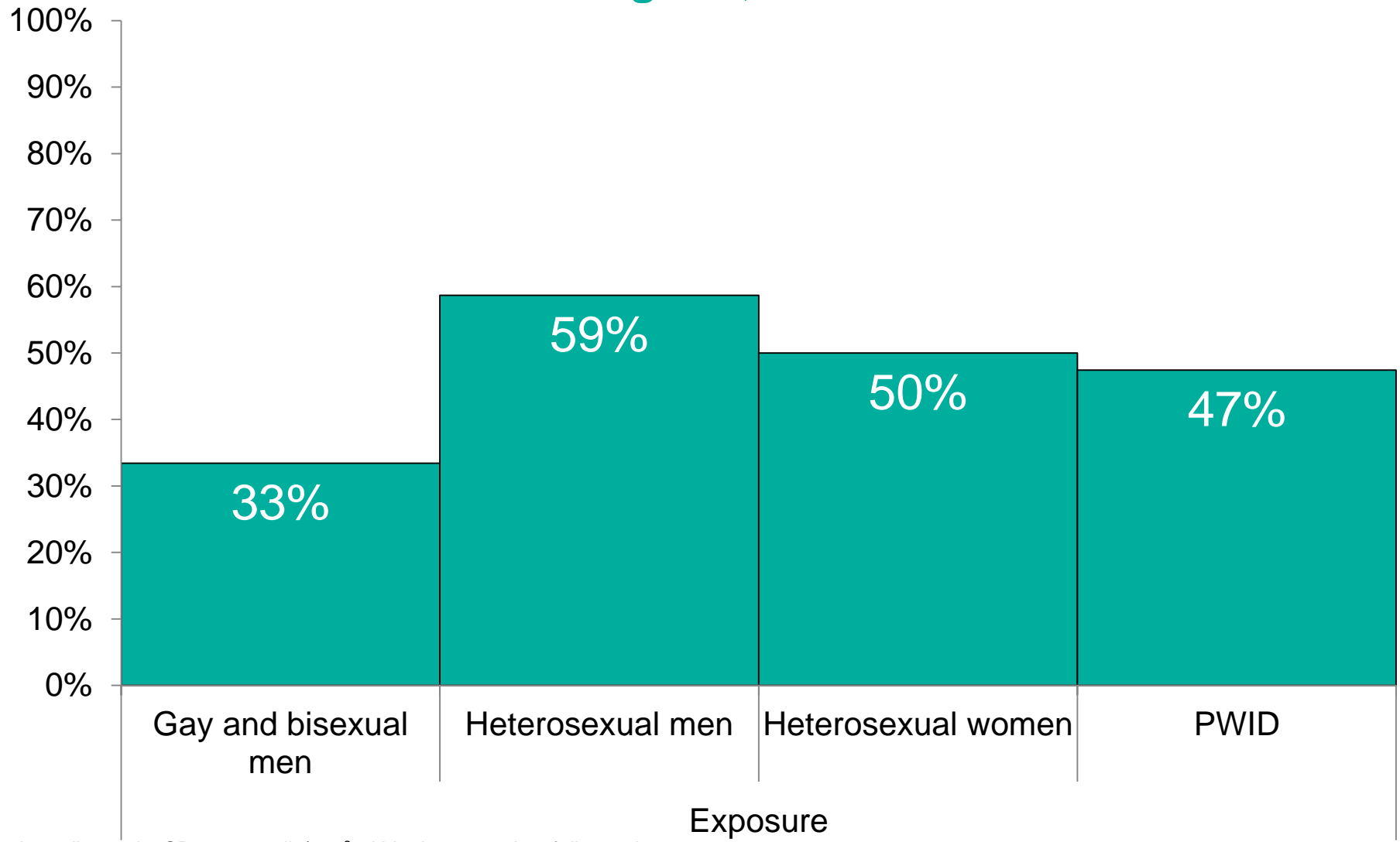
Late diagnosis: CD4 <350 cells/mm<sup>3</sup> within three months of diagnosis  
PWID: people who inject drugs

## Proportion of people diagnosed late with HIV by ethnicity: United Kingdom, 2017



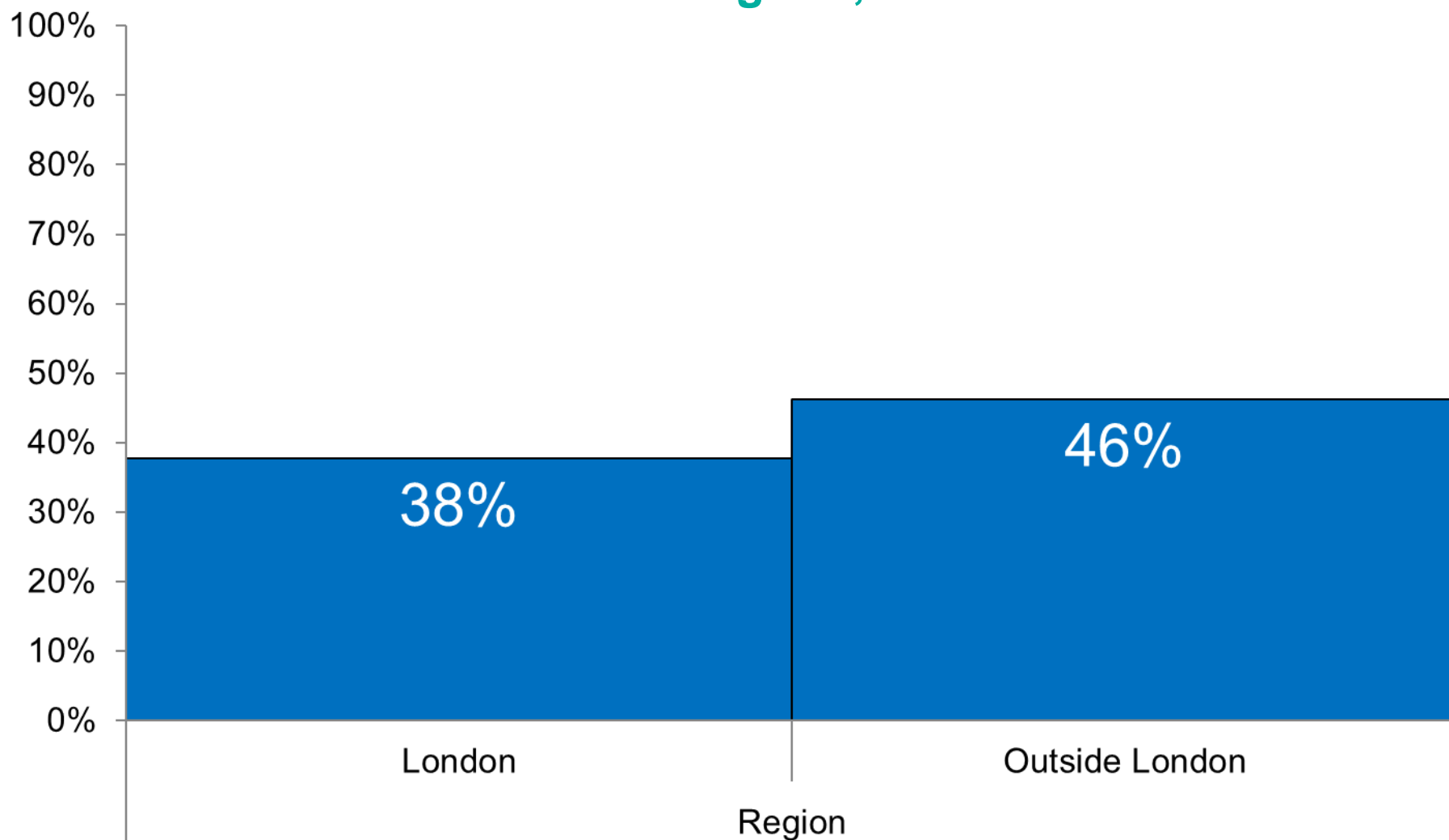
Late diagnosis: CD4 <350 cells/mm<sup>3</sup> within three months of diagnosis  
PWID: people who inject drugs

## Proportion of people diagnosed late with HIV by Exposure: United Kingdom, 2017



Late diagnosis: CD4 <350 cells/mm<sup>3</sup> within three months of diagnosis  
PWID: people who inject drugs

## Proportion of people diagnosed late with HIV by region of residence: United Kingdom, 2017



Late diagnosis: CD4 <350 cells/mm<sup>3</sup> within three months of diagnosis  
PWID: people who inject drugs

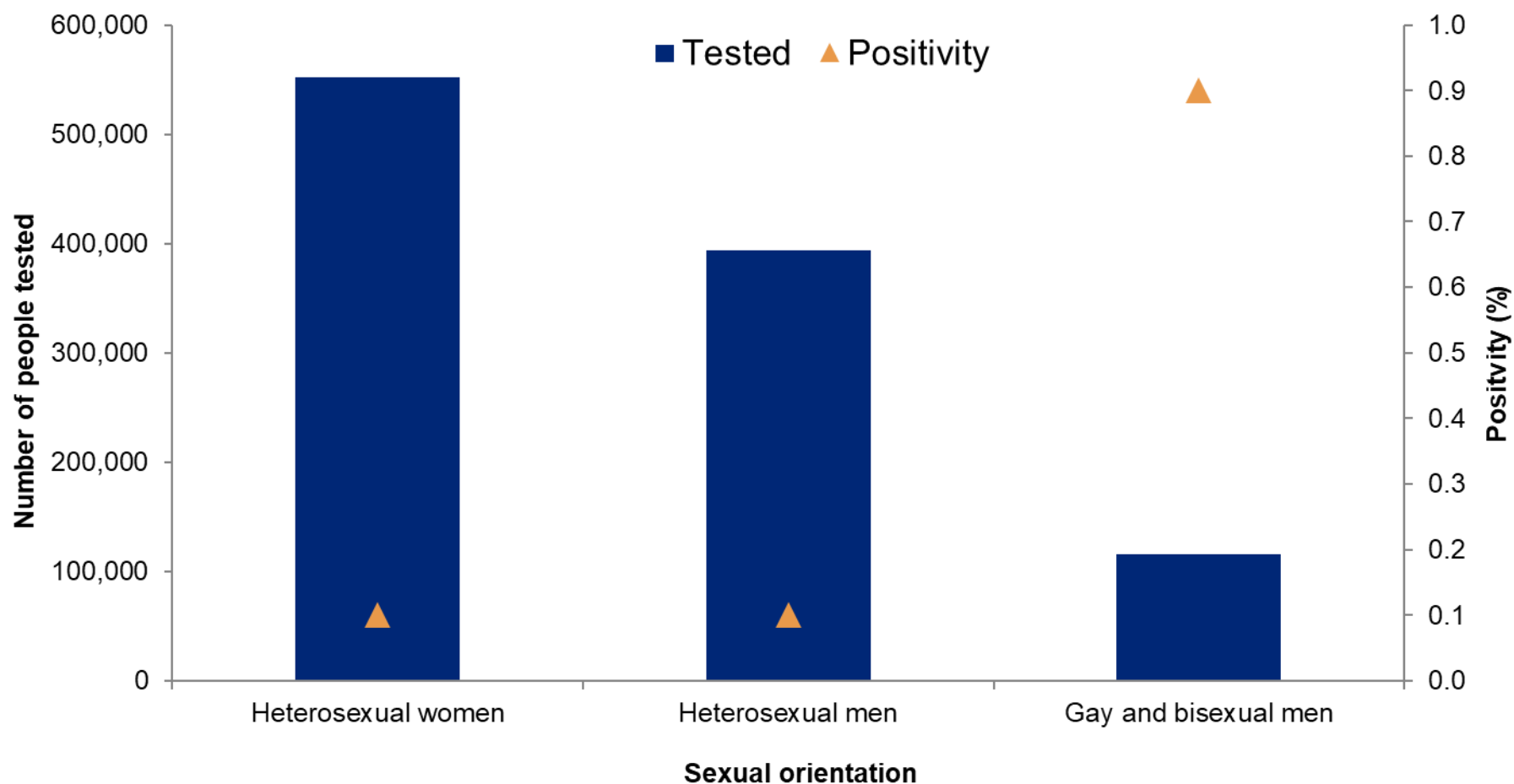
# Proportion of people diagnosed late with HIV in London and outside London: United Kingdom, 2008 to 2017



Late HIV diagnosis: CD4 <350 cells/mm<sup>3</sup> within three months of diagnosis

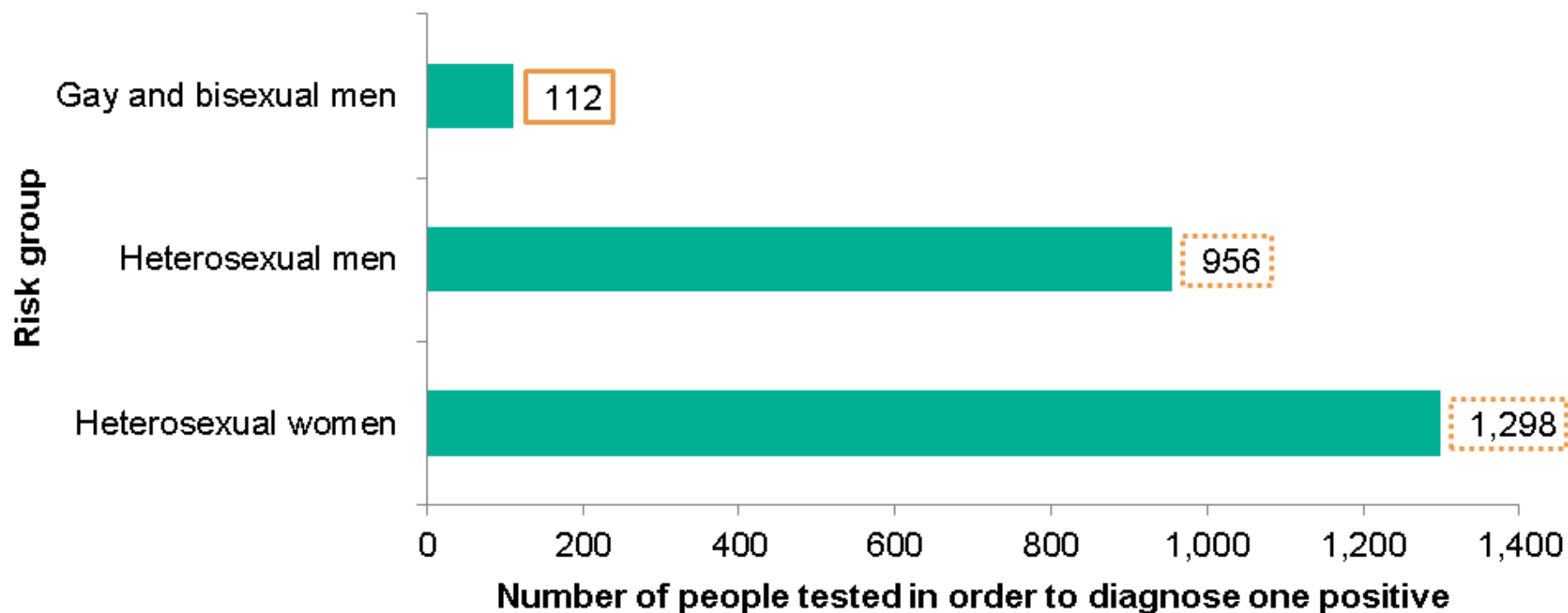
Using “Number needed to test”  
to understand HIV testing data

# HIV testing and positivity in attendees at all SHS by sexual orientation: England, 2013-2017

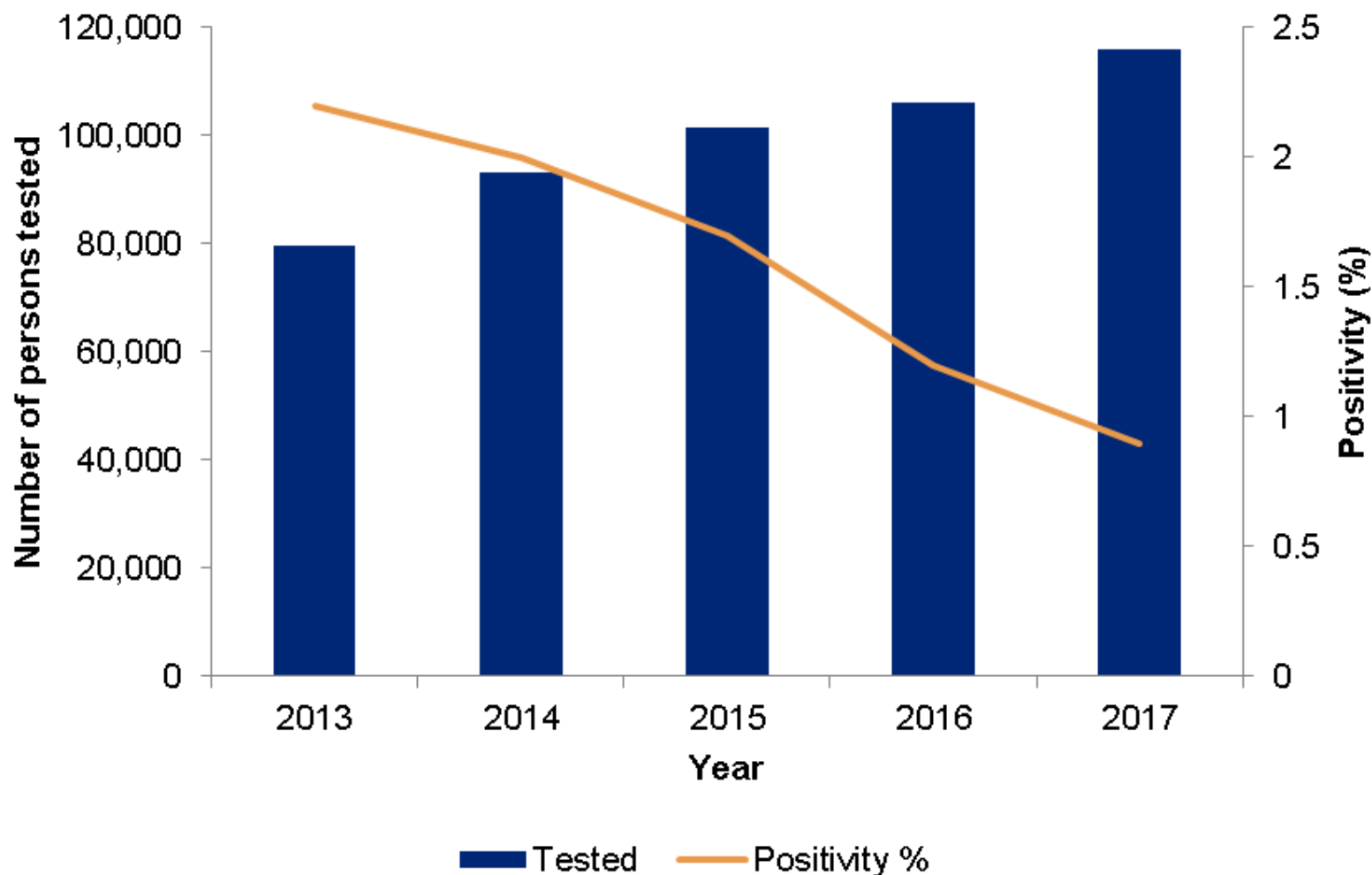




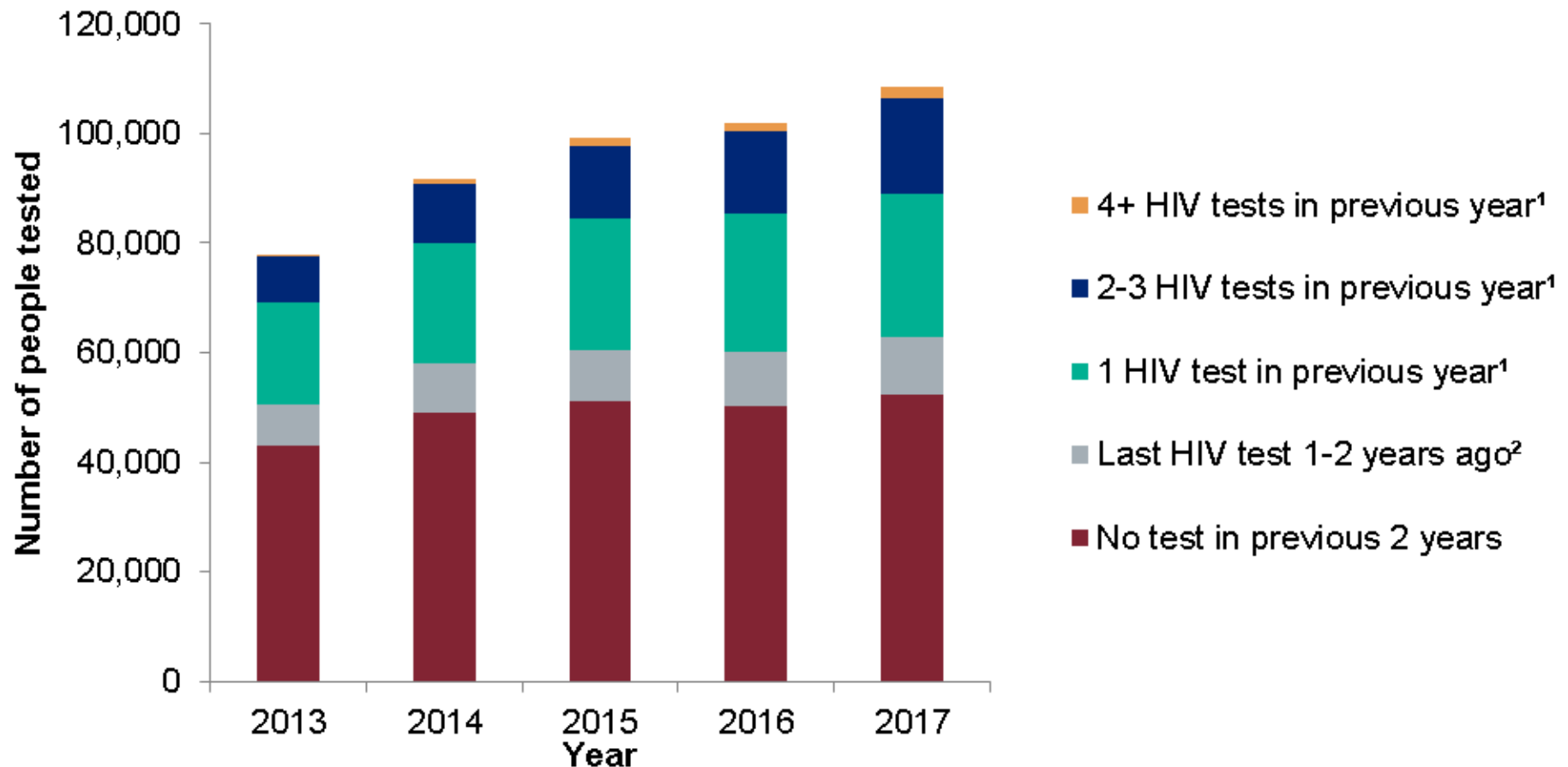
## Number needed to test in order to diagnose one person with HIV, all SHS attendees by sexual orientation: England, 2017



## Trends in HIV testing and positivity for gay and bisexual male attendees at all SHS: England, 2013-2017



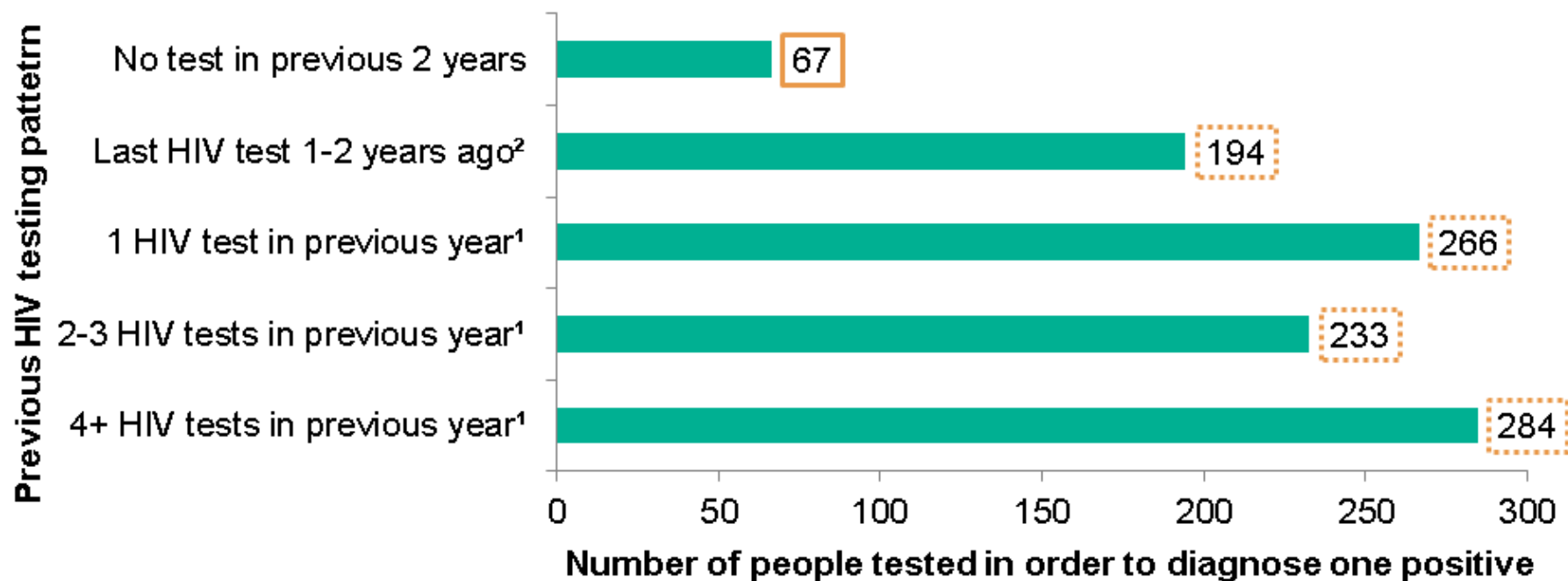
# Gay and bisexual men testing for HIV at specialist SHS: previous HIV tests at the same clinic: England, 2013-2017



<sup>1</sup> previous year – 43 - 365 days previous to the last test in a calendar year or date of new diagnosis

<sup>2</sup> 1-2 years ago – at least one test in the 366 - 730 days and no tests in the 43 - 365 days previous to the last test in a calendar year or date of new diagnosis

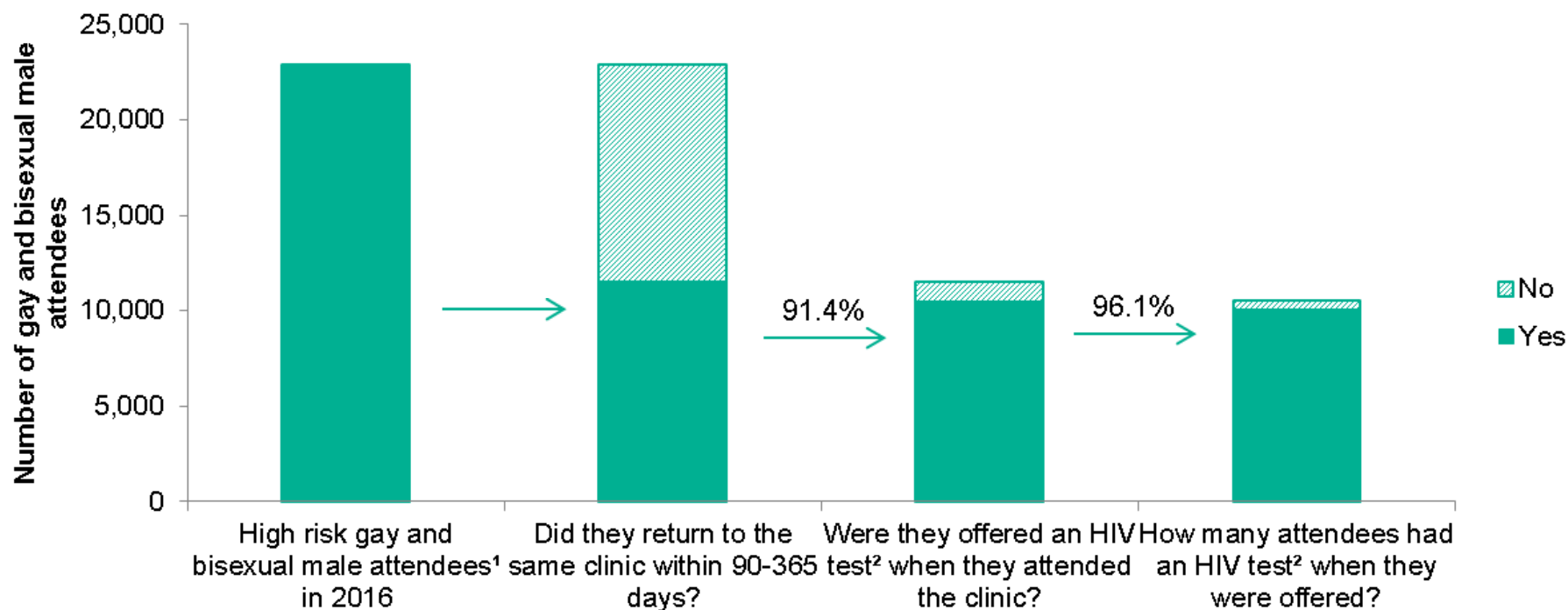
# Number needed to test, gay and bisexual men at specialist SHS: previous HIV test: England, 2017



<sup>1</sup> previous year – 43 - 365 days previous to the last test in a calendar year or date of new diagnosis

<sup>2</sup> 1-2 years ago – at least one test in the 366 - 730 days and no tests in the 43 - 365 days previous to the last test in a calendar year or date of new diagnosis

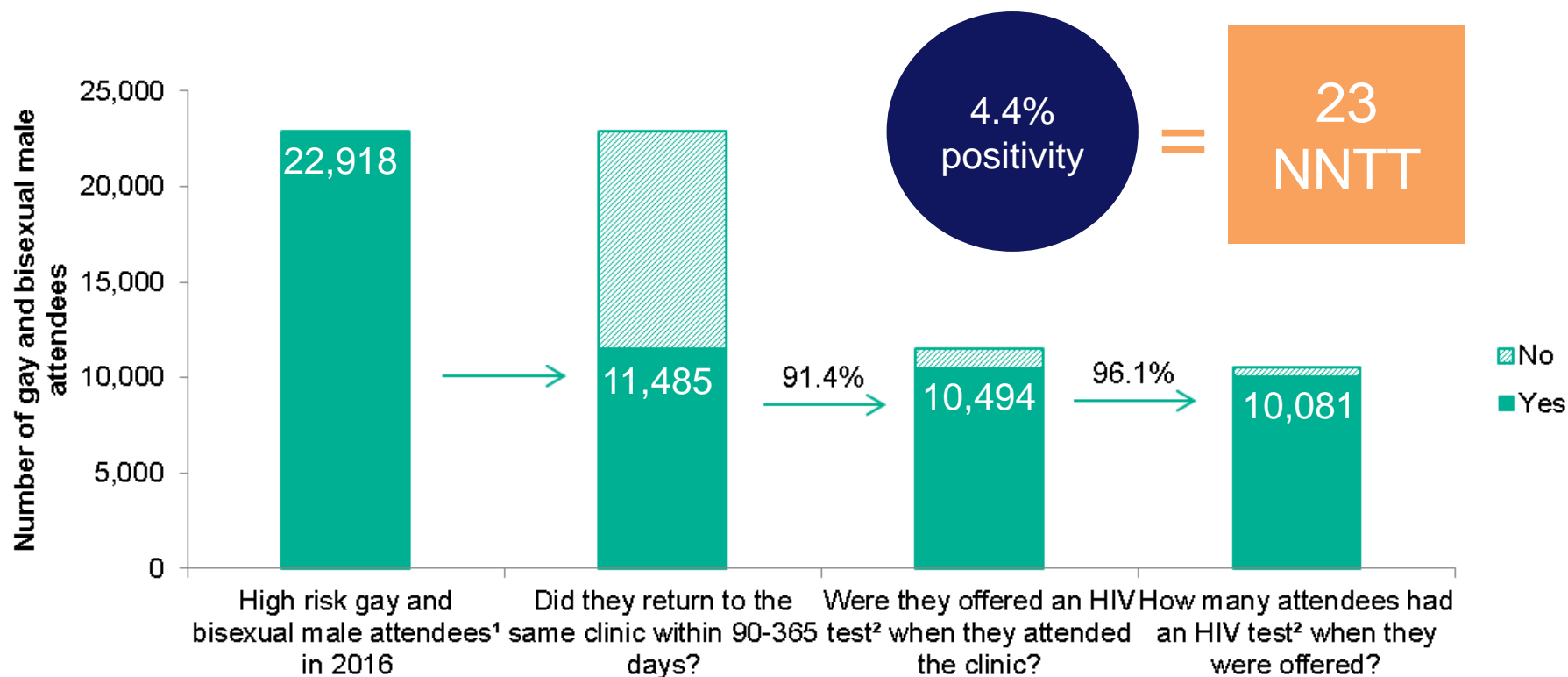
# HIV testing cascade among gay and bisexual men who have a high HIV risk<sup>1</sup> who attended specialist SHS: England, 2016-2017



<sup>1</sup> Includes gay and bisexual men with an anogenital STI diagnoses in 2016

<sup>2</sup> Offered an HIV test at least once in the 90 - 365 days after their STI diagnosis

# HIV testing cascade among gay and bisexual men who have a high HIV risk<sup>1</sup> who attended specialist SHS: England, 2016-2017



<sup>1</sup> Includes gay and bisexual men with an anogenital STI diagnoses in 2016

<sup>2</sup> Offered an HIV test at least once in the 90 - 365 days after their STI diagnosis

# Gay & bisexual men: key messages

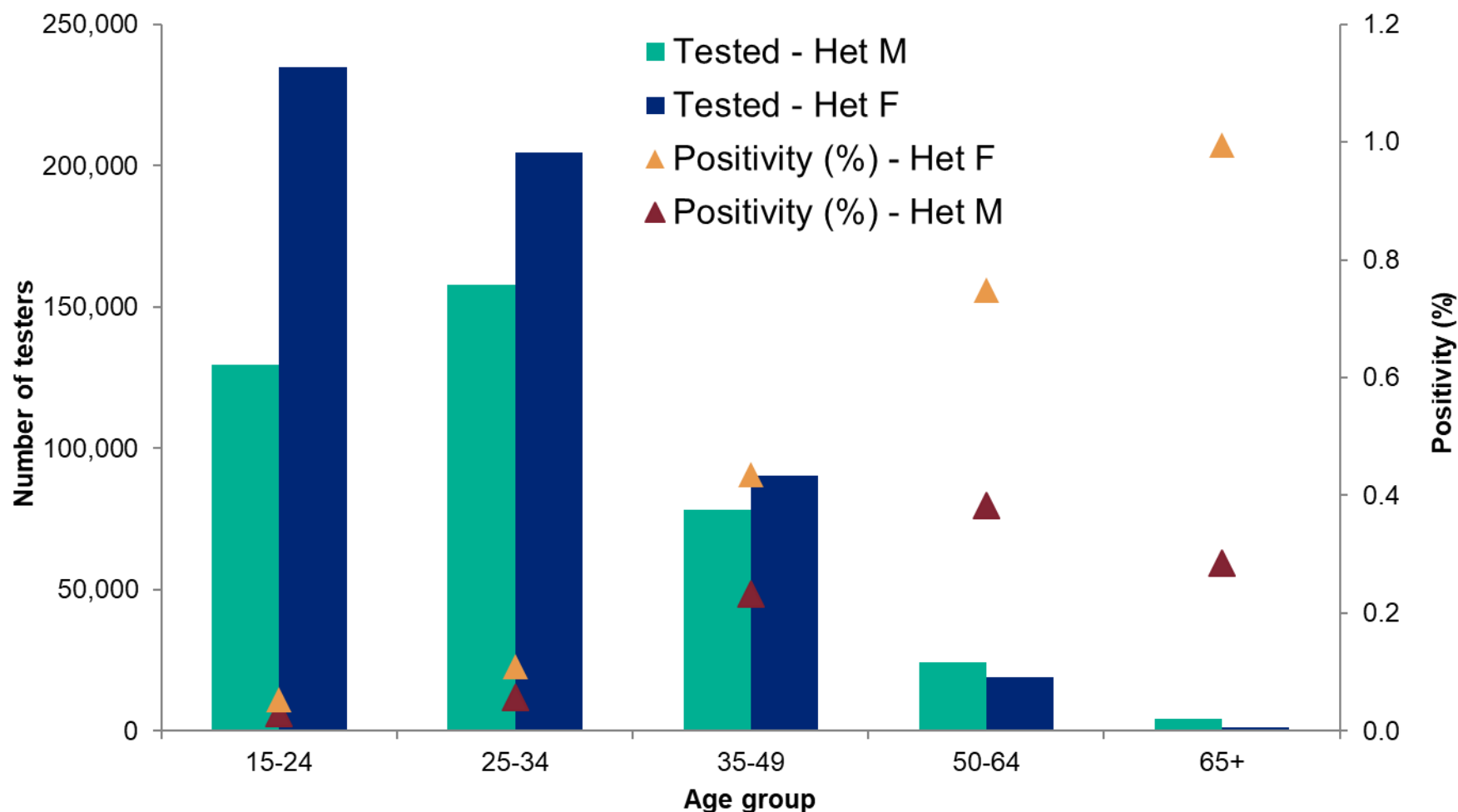
## Services

- Increase HIV test coverage among gay, bisexual and other men who have sex with men, particularly those who have not tested recently or who have recently had a bacterial STI
- Increase quarterly testing, including an STI screen, in gay, bisexual and other men who have sex with men if they are having unprotected sex with new or casual partners

## Public

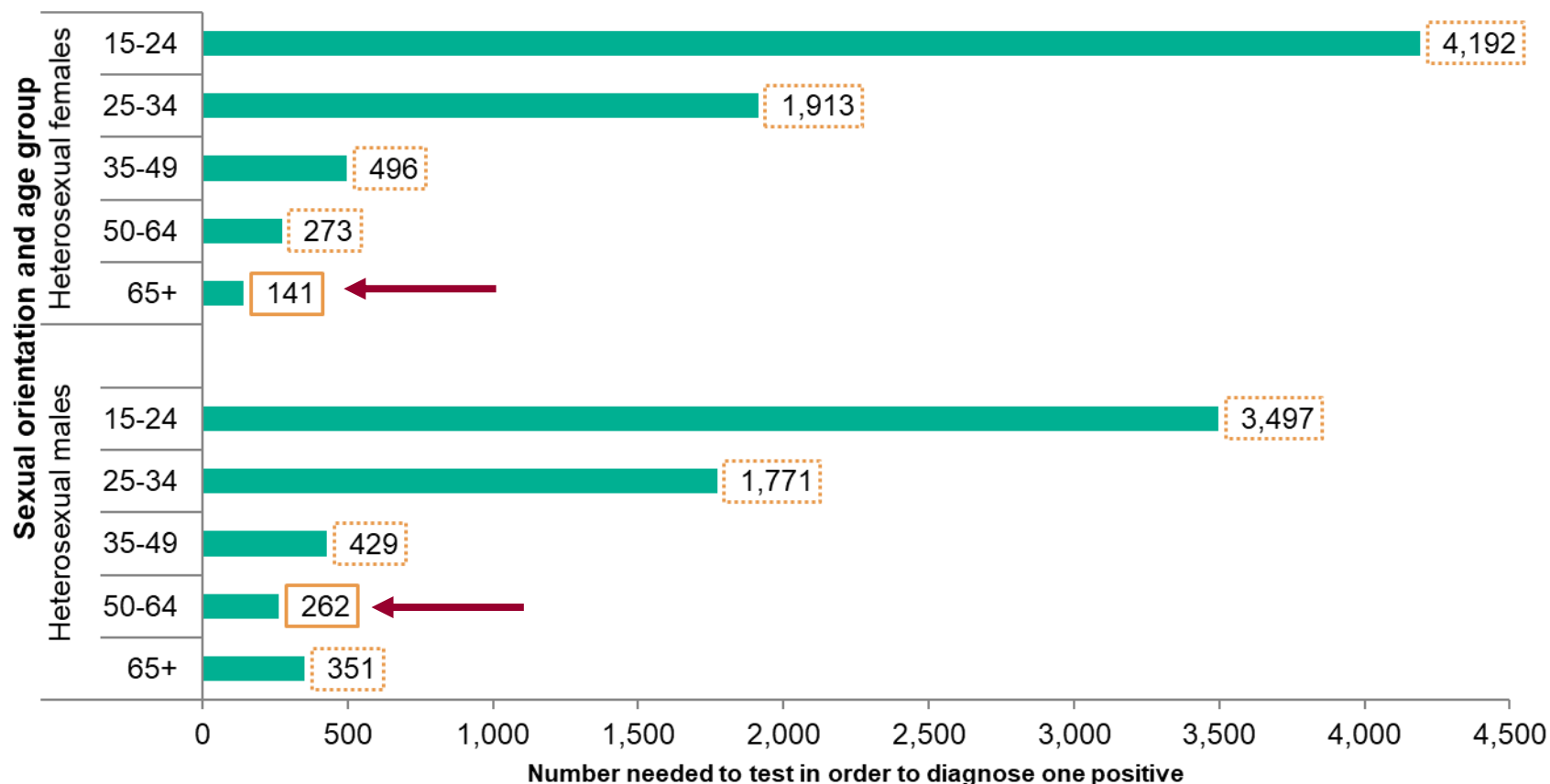
- All men who have ever had sex with another man should have an HIV test even if they consider themselves to be heterosexual.
- Gay, bisexual and other men who have sex with men should have an HIV test at least annually.
- Gay, bisexual and other men who have sex with men should test for HIV and have an STI screen every 3 months if they are having unprotected sex with new or casual partners.

# Number of heterosexual attendees tested in order to diagnose one positive by gender and age group at all SHS: England, 2017



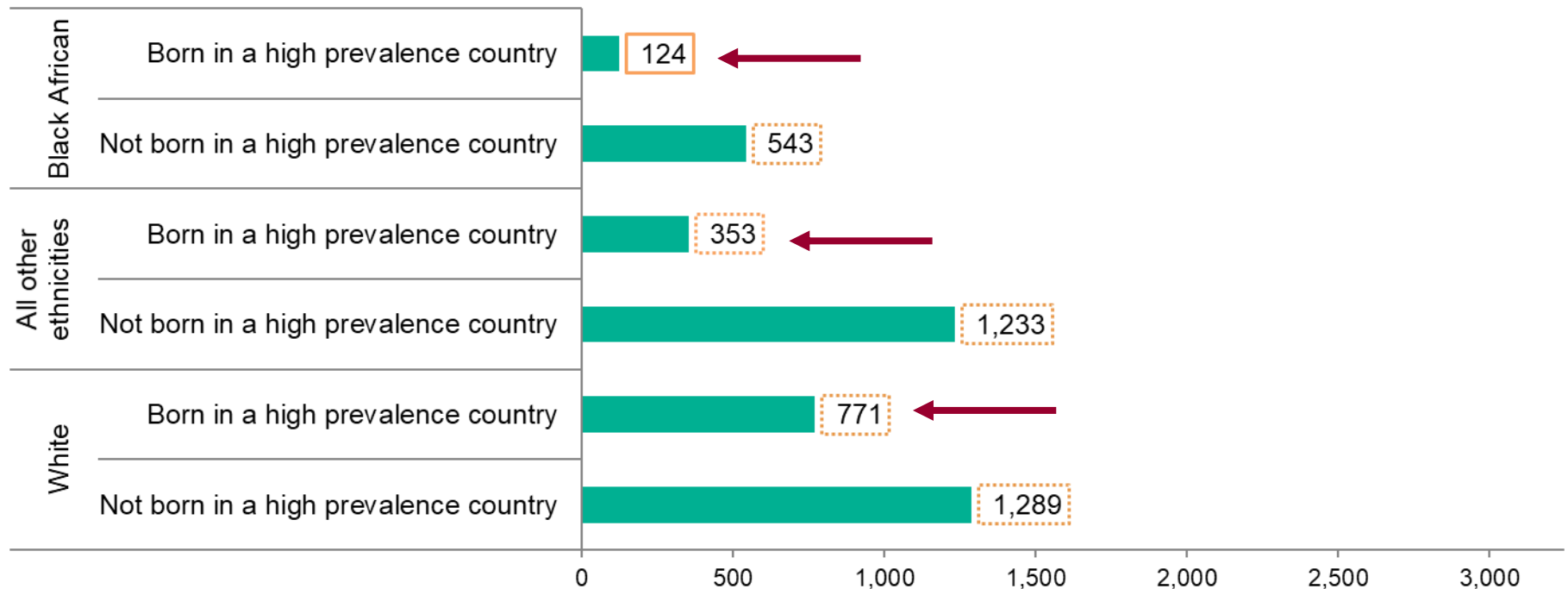


# Number of heterosexual attendees tested in order to diagnose one positive by gender and age group at all SHS: England, 2017



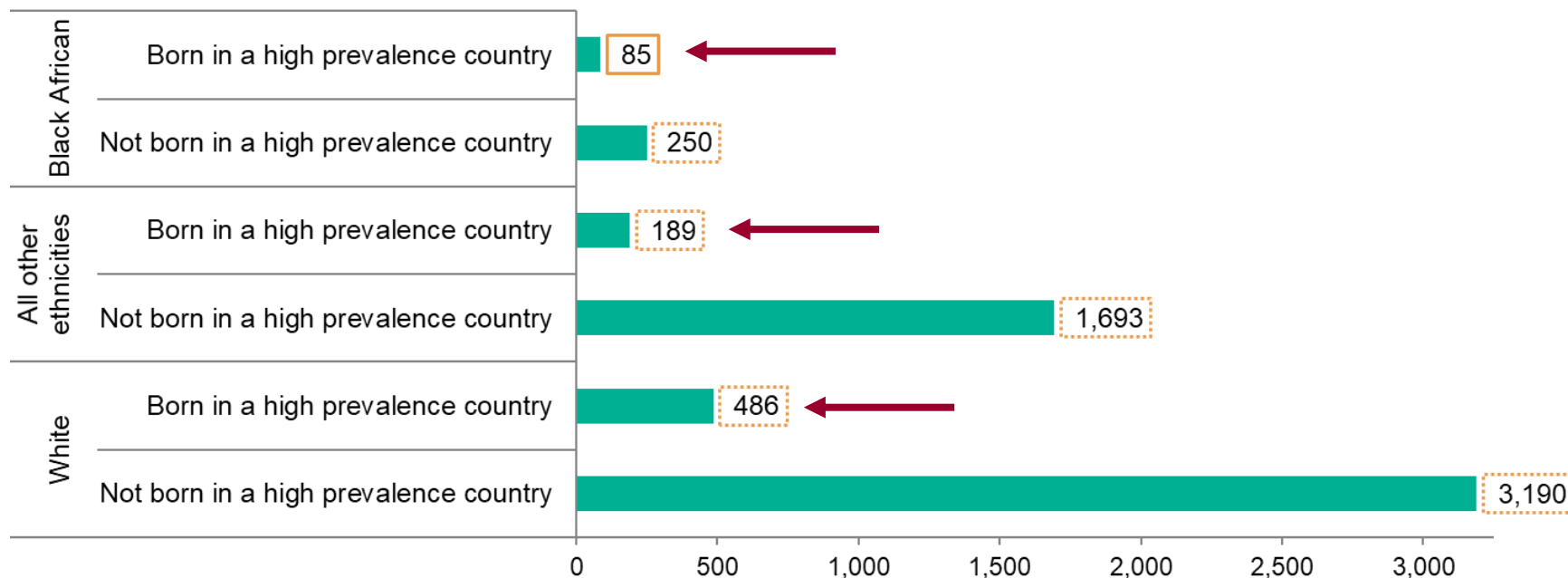
# Number of heterosexual attendees tested in order to diagnose one positive in heterosexual men by country of birth and ethnicity at all SHS: England, 2017

## a) Heterosexual men



# Number of heterosexual attendees tested in order to diagnose one positive by gender, country of birth and ethnicity at all SHS: England, 2017

## b) Heterosexual women



<sup>1</sup> All other ethnicities includes all ethnicities that are not White or black African

# Black Africans and people born in countries with high HIV prevalence: key messages

## Services

- Increase HIV test coverage among heterosexual attendees with an STI related need, including black Africans and people born in countries with high HIV prevalence

## Public

- Black African heterosexual men and women, and people born in countries where HIV is common, should have an HIV test, and repeat this every year if having unprotected sex with new or casual partners from countries where HIV is common.

# Prevention dashboard

# Public Health Profiles

Indicator keywords

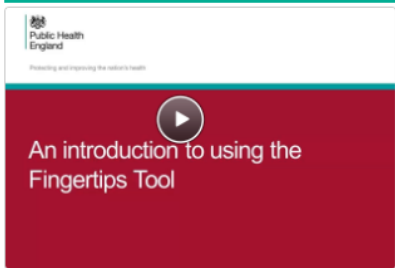
## Highlighted Profiles

- Cardiovascular disease, diabetes and kidney disease
- Child and Maternal Health
- Local Authority Health Profiles
- Mental Health, Dementia and Neurology
- National General Practice Profiles
- Public Health Dashboard
- Public Health Outcomes Framework

## National Public Health Profiles

- Adult Social Care
- AMR local indicators
- Atlas of Variation
- Cancer Services
- Cardiovascular disease, diabetes and kidney disease
- Child and Maternal Health
- End of Life Care Profiles
- Health Protection
- Inhale - Interactive Health Atlas of Lung conditions in England
- Learning Disability Profiles
- Liver Disease Profiles
- Local Alcohol Profiles for England
- Local Authority Health Profiles
- Local Tobacco Control Profiles
- Mental Health, Dementia and Neurology
- Modelled prevalence estimates
- Mortality Profile
- Musculoskeletal Diseases
- National General Practice Profiles
- NCMP and Child Obesity Profile
- NHS Health Check
- Older People's Health and Wellbeing
- Physical Activity
- Public Health Dashboard
- Public Health Outcomes Framework
- Segment Tool
- Sexual and Reproductive Health Profiles
- TB Strategy Monitoring Indicators
- Technical Guidance

## User Guide



## Latest News

- January 2019  
Personalise what you see - create your own area lists using 'Your data' (top right)
- December 2018  
Mortality Profile launched
- June 2018  
Overview of Child Health updated

Child Health Profile June 2018

	Local	Region	England
Live births (2015)	2,000	40,000	664,137
Children aged 0 to 4 years (2015)	15,000	442,000	5,625,000
Children aged 5 to 14 years (2015)	6,000	174,000	2,137,000
Children aged 15 to 19 years (2015)	20,000	575,000	7,188,000
Children aged 20 to 24 years (2015)	10,000	287,000	3,588,000
Children aged 25 to 29 years (2015)	5,000	143,000	1,794,000
Children aged 30 to 34 years (2015)	3,000	86,000	1,077,000
Children aged 35 to 39 years (2015)	2,000	57,000	718,000
Children aged 40 to 44 years (2015)	1,000	29,000	359,000
Children aged 45 to 49 years (2015)	1,000	29,000	359,000
Children aged 50 to 54 years (2015)	1,000	29,000	359,000
Children aged 55 to 59 years (2015)	1,000	29,000	359,000
Children aged 60 to 64 years (2015)	1,000	29,000	359,000
Children aged 65 to 69 years (2015)	1,000	29,000	359,000
Children aged 70 to 74 years (2015)	1,000	29,000	359,000
Children aged 75 to 79 years (2015)	1,000	29,000	359,000
Children aged 80 to 84 years (2015)	1,000	29,000	359,000
Children aged 85 to 89 years (2015)	1,000	29,000	359,000
Children aged 90 to 94 years (2015)	1,000	29,000	359,000
Children aged 95 to 99 years (2015)	1,000	29,000	359,000
Children aged 100 years (2015)	1,000	29,000	359,000

# Sexual and Reproductive Health Profiles

Indicator keywords



Key Indicators

HIV &amp; STI

Reproductive Health

Teenage Pregnancy

Wider Determinants  
of Health

All Indicators

Overview
 Compare indicators
 Map
 Trends
 Compare areas
 Area profiles
 Inequalities
 England
 Population
 Box Plots
 Definitions
 Download

Area type District & UA
 Areas grouped by Region
 Benchmark England

Area ◀▶ Horsham
 Region South East
☒ Benchmark against goal where applicable

[Search for an area](#)
[CIPFA nearest neighbours to Horsham](#)
[Filter indicators](#)

Compared with benchmark:

Better

Similar

Worse

Lower

Similar

Higher

Not compared

\* a note is attached to the value, hover over to see more details

Display

Values

Trends

Values &amp; Trends



Export table as image

Indicator	Period	England	South East region	Adur	Arun	Ashford	Aylesbury Vale	Basingstoke and Deane	Bracknell Forest	Brighton and Hove	Canterbury	Cherwell	Chichester	Chiltern	Crawley	Dartford	Dover	East Hampshire	Eastbourne	Eastleigh	Elmbridge	Epsom and Ewell	Fareham	Folkstone & Hythe	Gosport	Gravesham	Guildford	Hart	Hastings	Havant	Horsham
Syphilis diagnostic rate / 100,000	2017	12.5	9.5	4.7	6.4	3.2	4.2	10.8	4.2	62.7	3.7	2.7	1.7	2.1	23.3	11.4	3.5	4.2	5.8	10.0	11.0	12.7	12.1	2.7	11.7	10.4	6.8	2.1	2.2	19.4	8.7
Gonorrhoea diagnostic rate / 100,000	2017	78.8	45.9	47.2	25.4	18.3	28.0	24.5	30.9	214.9	40.0	21.8	37.8	24.2	113.0	54.2	28.8	37.1	68.0	29.3	38.2	31.6	29.4	27.9	40.9	33.9	50.4	37.9	62.4	39.6	38.3
Chlamydia detection rate / 100,000 aged 15-24 (PHOF indicator 3.02)	2017	1882	1510	1966	1239	1730	1128	1658	1060	2250	1631	1279	1762	987	1903	960	889	1237	2131	1778	762	930	1791	1664	1908	1043	1062	1306	2188	1740	1102
<1,900 1,900 to 2,300 ≥2,300																															
Chlamydia detection rate / 100,000 aged 15-24 (PHOF indicator 3.02) (Male)	2017	1264	1018	1072	765	1207	851	1137	734	1597	966	774	1296	528	1432	638	533	822	1444	1230	551	576	1227	987	1239	587	548	938	1534	1229	744

# HIV & STI indicators

Chlamydia detection rate / 100,000 aged 15-24

Chlamydia detection rate / 100,000 aged 15-24 (Male)

Chlamydia detection rate / 100,000 aged 15-24  
(Female)

Chlamydia proportion aged 15-24 screened

Syphilis diagnosis rate / 100,000

Gonorrhoea diagnosis rate / 100,000

CT diagnostic rate / 100,000

CT diagnostic rate / 100,000 (25+)

Genital warts diagnosis rate / 100,000

Genital herpes diagnosis rate / 100,000

All new STI diagnosis rate / 100,000

New STI diagnoses (exc Chlamydia aged <25) /  
100,000\*

STI testing rate (exc Chlamydia aged < 25) / 100,000

STI testing positivity (exc Chlamydia aged <25) %

HIV testing uptake, total (%)

HIV testing uptake, MSM (%)

HIV testing uptake, women (%)

HIV testing uptake, men (%)

HIV testing coverage, total (%)

HIV testing coverage, MSM (%)

HIV testing coverage, women (%)

HIV testing coverage, men (%)

HIV late diagnosis (%) (PHOF indicator 3.04)

New HIV diagnosis rate / 100,000 aged 15+

HIV diagnosed prevalence rate / 1,000 aged 15-59



# HIV & STI indicators

Chlamydia detection rate / 100,000 aged 15-24

Chlamydia detection rate / 100,000 aged 15-24 (Male)

Chlamydia detection rate / 100,000 aged 15-24  
(Female)

Chlamydia proportion aged 15-24 screened

Syphilis diagnosis rate / 100,000

Gonorrhoea diagnosis rate / 100,000

CT diagnostic rate / 100,000

CT diagnostic rate / 100,000 (25+)

Genital warts diagnosis rate / 100,000

Genital herpes diagnosis rate / 100,000

All new STI diagnosis rate / 100,000

New STI diagnoses (exc Chlamydia aged <25) /  
100,000\*

STI testing rate (exc Chlamydia aged < 25) / 100,000

STI testing positivity (exc Chlamydia aged <25) %

**HIV testing uptake, total (%)**

**HIV testing uptake, MSM (%)**

**HIV testing uptake, women (%)**

**HIV testing uptake, men (%)**

**HIV testing coverage, total (%)**

**HIV testing coverage, MSM (%)**

**HIV testing coverage, women (%)**

**HIV testing coverage, men (%)**

**HIV late diagnosis (%) (PHOF indicator 3.04)**

**New HIV diagnosis rate / 100,000 aged 15+**

**HIV diagnosed prevalence rate / 1,000 aged 15-59**

# Sexual and Reproductive Health Profiles

Key Indicators

**HIV & STI**

Reproductive Health

Teenage Pregnancy

**HIV Prevention**

Wider Determinants  
of Health

All Indicators

Overview

Compare indicators

Map

Trends

Compare areas

Area profiles

Inequalities

England

Population

Box Plots

Definitions

Download

Area type: District & UA  
Area: ◀ ▶ Horsham [Search for an area](#)  
Areas grouped by: Region  
Region: South East [CIPFA nearest neighbours to Horsham](#)  
Benchmark: England  
☒ Benchmark against goal where applicable  
[Filter indicators](#)

Compared with benchmark:

Better

Similar

Worse

Lower

Similar

Higher

Not compared

\* a note is attached to the value, hover over to see more details

Display

**Values**

Trends

Values & Trends



Export table as image

Indicator	Period	England	South East region	Adur	Arun	Ashford	Aylesbury Vale	Basingstoke and Deane	Bracknell Forest	Brighton and Hove	Canterbury	Cherwell	Chichester	Chiltern	Crawley	Dartford	Dover	East Hampshire	Eastbourne	Eastleigh	Elmbridge	Epsom and Ewell	Fareham	Folkstone & Hythe	Gosport	Gravesham	Guildford	Hart	Hastings	Havant	Horsham
Syphilis diagnostic rate / 100,000	2017	12.5	9.5	4.7	6.4	3.2	4.2	10.8	4.2	62.7	3.7	2.7	1.7	2.1	23.3	11.4	3.5	4.2	5.8	10.0	11.0	12.7	12.1	2.7	11.7	10.4	6.8	2.1	2.2	19.4	8.7
Gonorrhoea diagnostic rate / 100,000	2017	78.8	45.9	47.2	25.4	18.3	28.0	24.5	30.9	214.9	40.0	21.8	37.8	24.2	113.0	54.2	28.8	37.1	68.0	29.3	38.2	31.6	29.4	27.9	40.9	33.9	50.4	37.9	62.4	39.6	38.3
Chlamydia detection rate / 100,000 aged 15-24 (PHOF indicator 3.02)	2017	1882	1510	1966	1239	1730	1128	1658	1060	2250	1631	1279	1762	987	1903	960	889	1237	2131	1778	762	930	1791	1664	1908	1043	1062	1306	2188	1740	1102
<1,900 1,900 to 2,300 ≥2,300																															
Chlamydia detection rate / 100,000 aged 15-24 (PHOF indicator 3.02) (Male)	2017	1264	1018	1072	765	1207	851	1137	734	1597	966	774	1296	528	1432	638	533	822	1444	1230	551	576	1227	987	1239	587	548	938	1534	1229	744

# Proposed Indicators

## Testing

HIV testing coverage (%)
HIV testing coverage (%) – MSM
HIV testing coverage (%) – Heterosexual men
HIV testing coverage (%) – Heterosexual women
Repeat HIV testing in MSM: proportion of MSM with >1 test in the previous year (%)*

## Treatment & care

Prompt ART initiation in people newly diagnosed with HIV: treatment initiation within 91 days (%)*
Virological success in people newly starting ART: proportion with undetectable viral load (%)*
Diagnosed prevalence rate/ 1,000 aged 15-59

## HIV diagnoses

New HIV diagnosis rate / 100,000 aged 15+
HIV late diagnosis (%)
HIV late diagnosis (%) – MSM*
HIV late diagnosis (%) – Heterosexual men*
HIV late diagnosis (%) – Heterosexual women*
HIV late diagnosis (%) – PWID*

\*New proposed indicators are currently undergoing IMRG review and approval process

# Acknowledgements

Sarika Desai, Sara Croxford, Luis Guerra, Catherine Lowndes, Nicky Connor, Noel Gill, Cuong Chau, Nicholas Cooper, Daniela De Angelis, Qudsia Hosseini, Meaghan Kall, Carole Kelly, Jameel Khawam, Peter Kirwan, Mark McCall, Hamish Mohammed, Dana Ogaz, Anne Presanis, Sonia Rafeeq, Rajani Raghu, Natasha Ratna, Ammi Shah, Flora Stevens, Ann Sullivan, George Thickett

We gratefully acknowledge the continuing collaboration of clinicians, microbiologists, immunologists, public health practitioners, occupational health doctors and nurses and other colleagues who contribute to the surveillance of HIV and STIs in the UK.