



Public Health
England

HIV in the United Kingdom: *Focus on the undiagnosed*

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Conclusions

- The Clinical outcomes of people living with HIV accessing their care through the National Health Service (NHS) are excellent and improving.
- In 2014 the population as a whole and subgroups of people living with HIV in the UK has reached the UNAIDS targets of
 - ❑ 90% diagnosed on ART and
 - ❑ 90% virally suppression for those on ART
- Some minor differences by demographics and exposure groups exist however, with a need to increase undetectability among young people.
- Clinical care indicators improved over the past 5 years. This is due to
 - ❑ Earlier prescribing and uptake of ART as per British HIV Association guidelines and
 - ❑ An 'artificial' improvement due to an 'open cohort' effect
- People unaware of their infection remains high and we need to beware of an artificial % drop as more people are diagnosed with HIV.

Epidemiology

Who, what, where, when & how?

HIV Key markers

New diagnoses

% diagnosed late

- (low CD4 &/or AIDS)

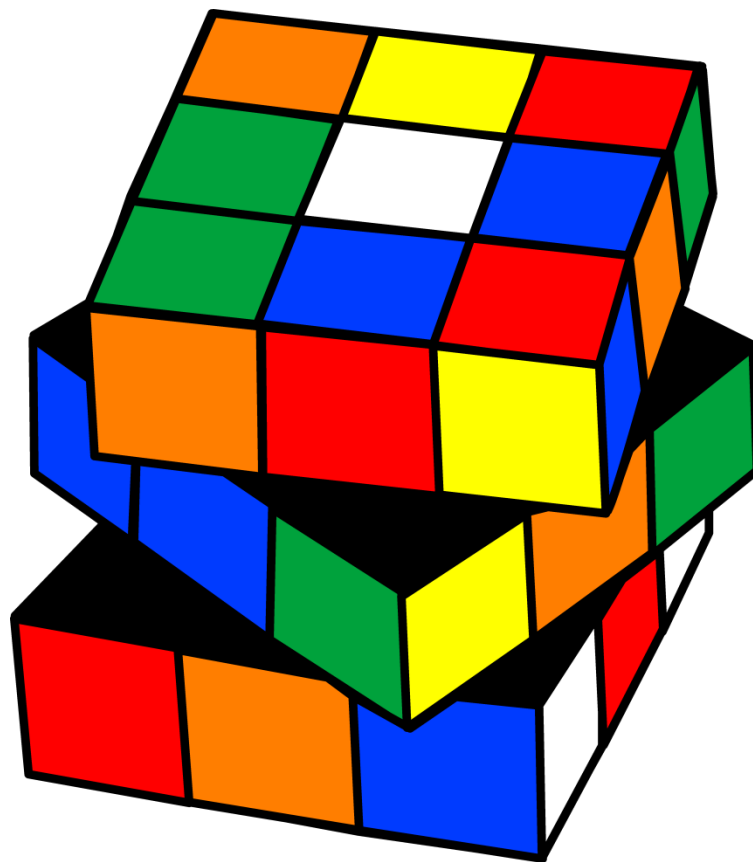
Prevalence

- Total
- Diagnosed
- Undiagnosed

Most affected groups

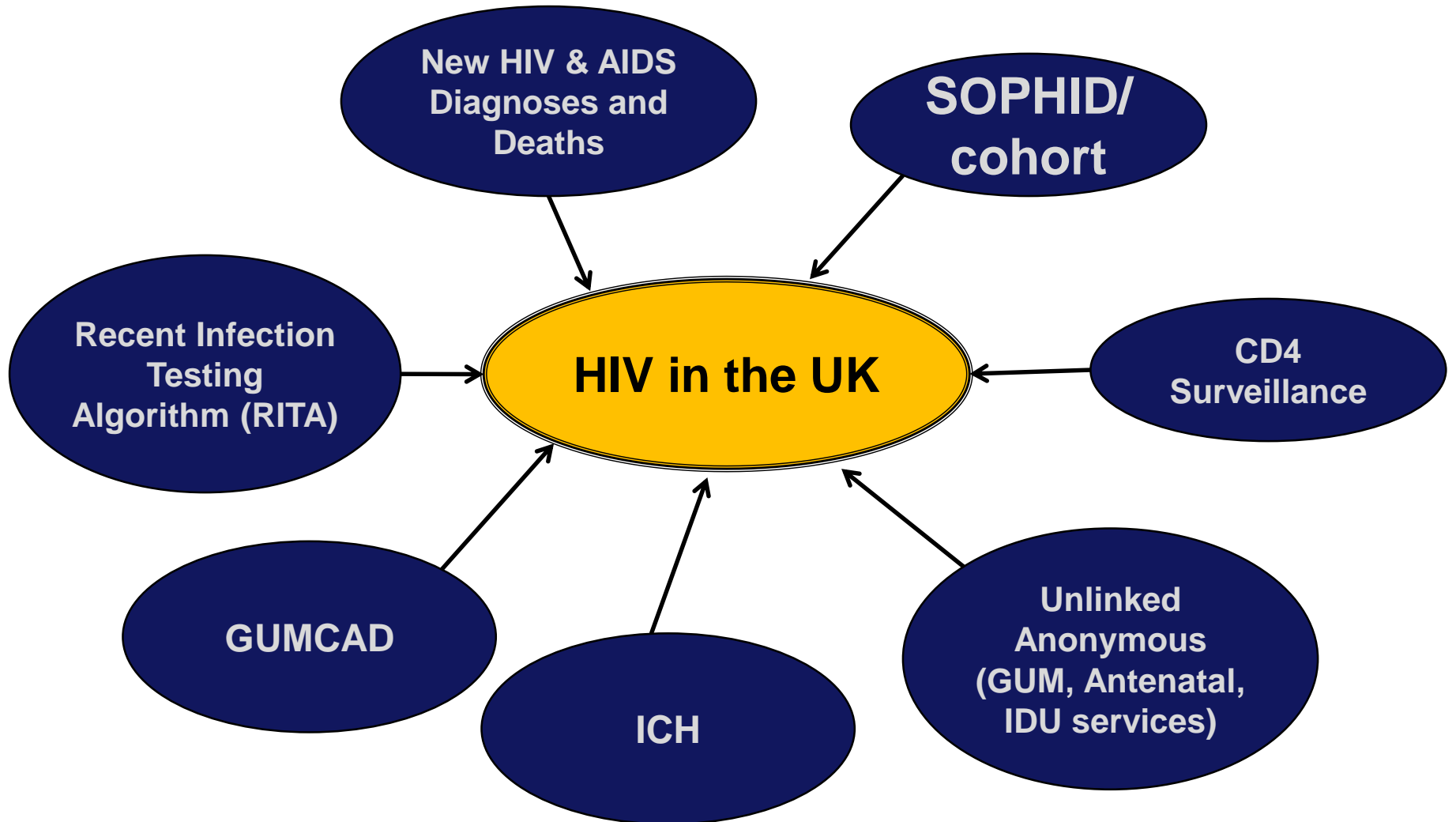
Geographical spread

Time trends

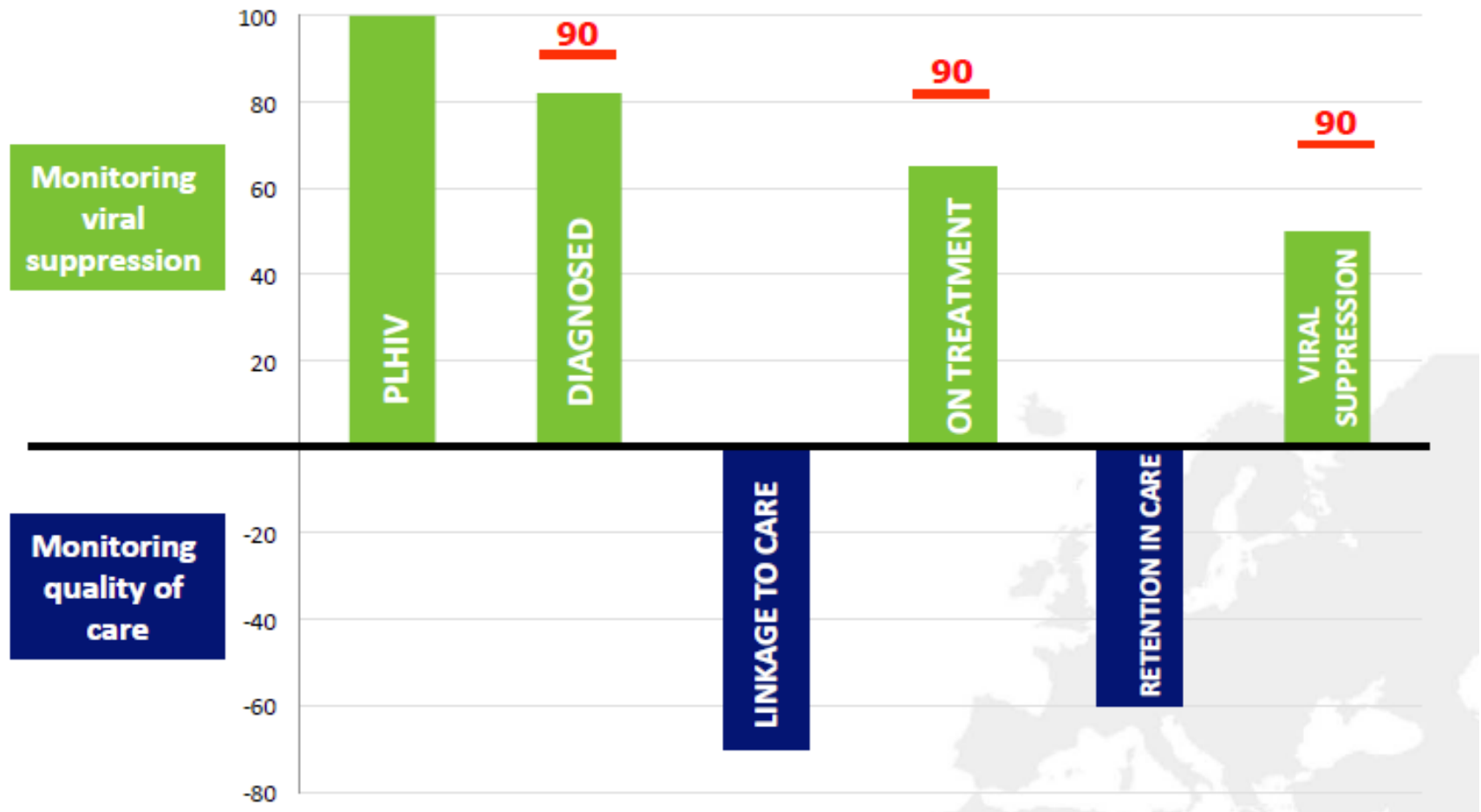


Know your epidemic

HIV National Surveillance Systems, UK

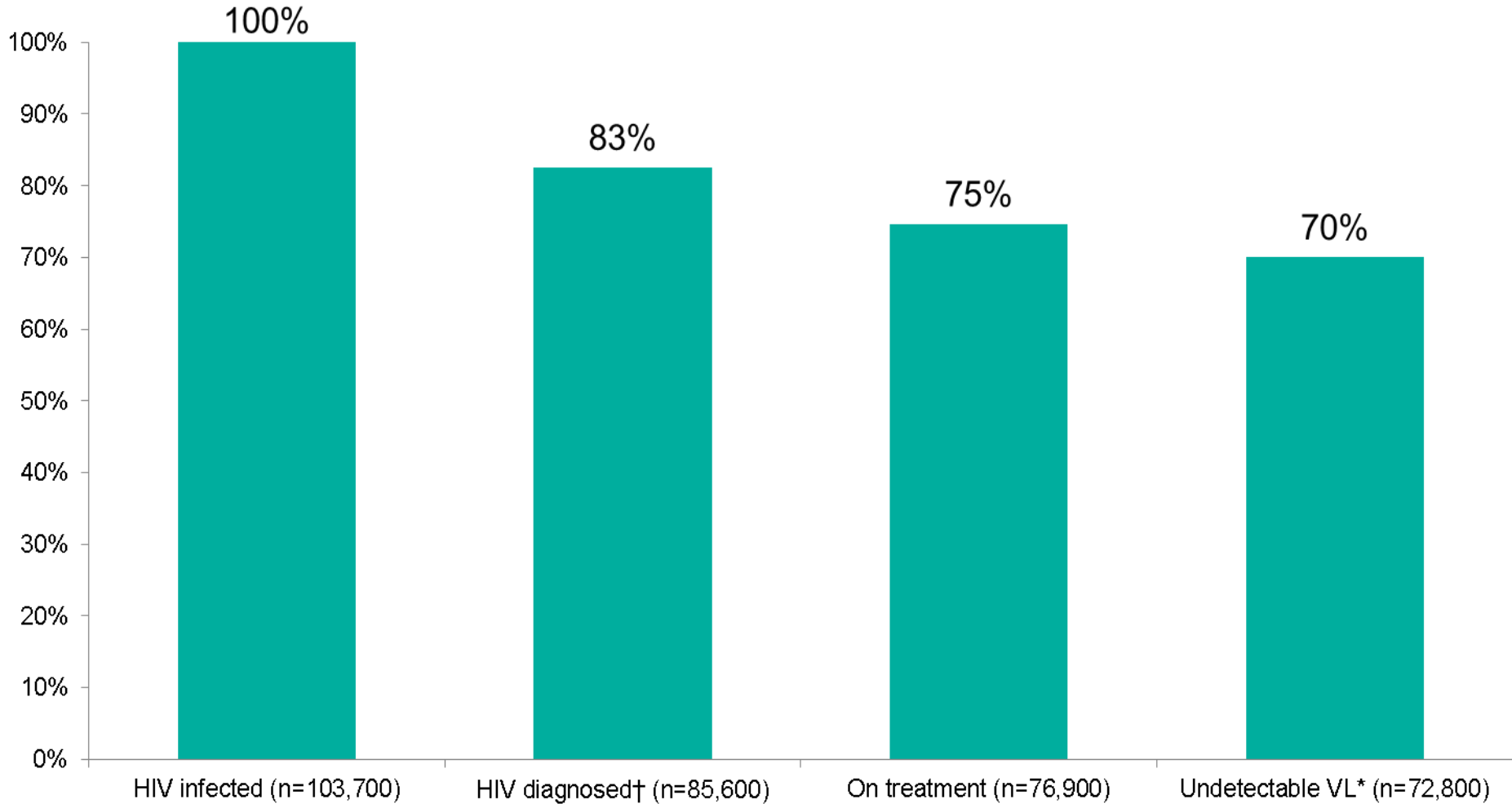


Monitoring a four-stage continuum





Continuum of HIV care: United Kingdom, 2014



* Viral load (VL) < 200 copies/ml

† Number diagnosed estimated from MPES



People living with HIV infection in the United Kingdom

- In 2014, an estimated **103,700** (95%CrI 97,500-112,700) people were living with HIV (PLWH)
- **18,100 (12,100 – 26,900)** or 17% (95% CrI 12-26%) were unaware of their infection.
- A total of **6151** people were newly diagnosed during 2014, of which 40% were diagnosed late with a CD4<350 cells/mm³ at HIV diagnosis
- **85,489** people were living with diagnosed HIV and had accessed care (57,347 men and 28,142 women), and almost half were aged 45 and over (48%, 40,834).
- Treatment success in the UK remains excellent with 91% (76,462) of people diagnosed with HIV on ART, and 95% of all people on ART are virally suppressed (VL<200 particles/mL).



Key findings: HIV in the United Kingdom, 2014

Gay, bisexual and other men who have sex with men (MSM)

- In 2014, an estimated 45,000 MSM (95%CrI 41,900-49,500) were living with HIV in the UK, of which 14% (95%CrI 8-21%) were unaware of their infection.
- New diagnoses among MSM have continued to rise, and now account for more than half of new HIV diagnoses, with 3,360 newly diagnosed in 2014, 29% of which were diagnosed late.
- In 2014, 38,432 MSM were seen for care, accounting for 45% of all people accessing care and 67% of all men.
- PHE's MSM Action Plan 2015-16 highlights the importance of considering sexual health as an area of health that influences and is influenced by other areas, including mental health, alcohol and drug use. One of its objectives is to decrease the proportion of MSM reporting use of harmful illicit substances, including reduction in 'chemsex' or steroid abuse.

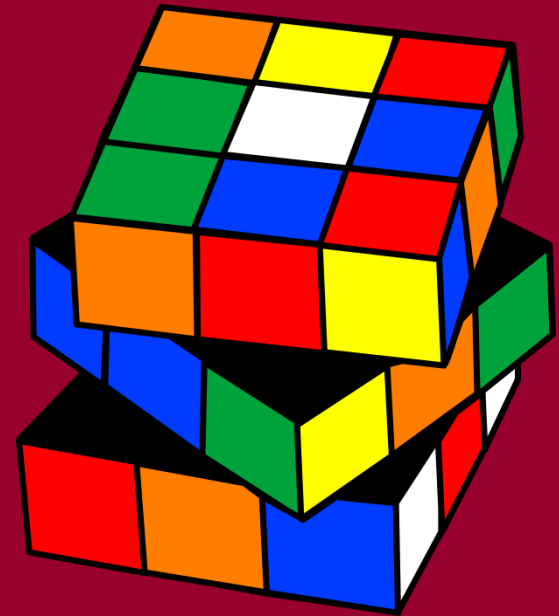


Key findings: HIV in the United Kingdom, 2014

Heterosexual men and women

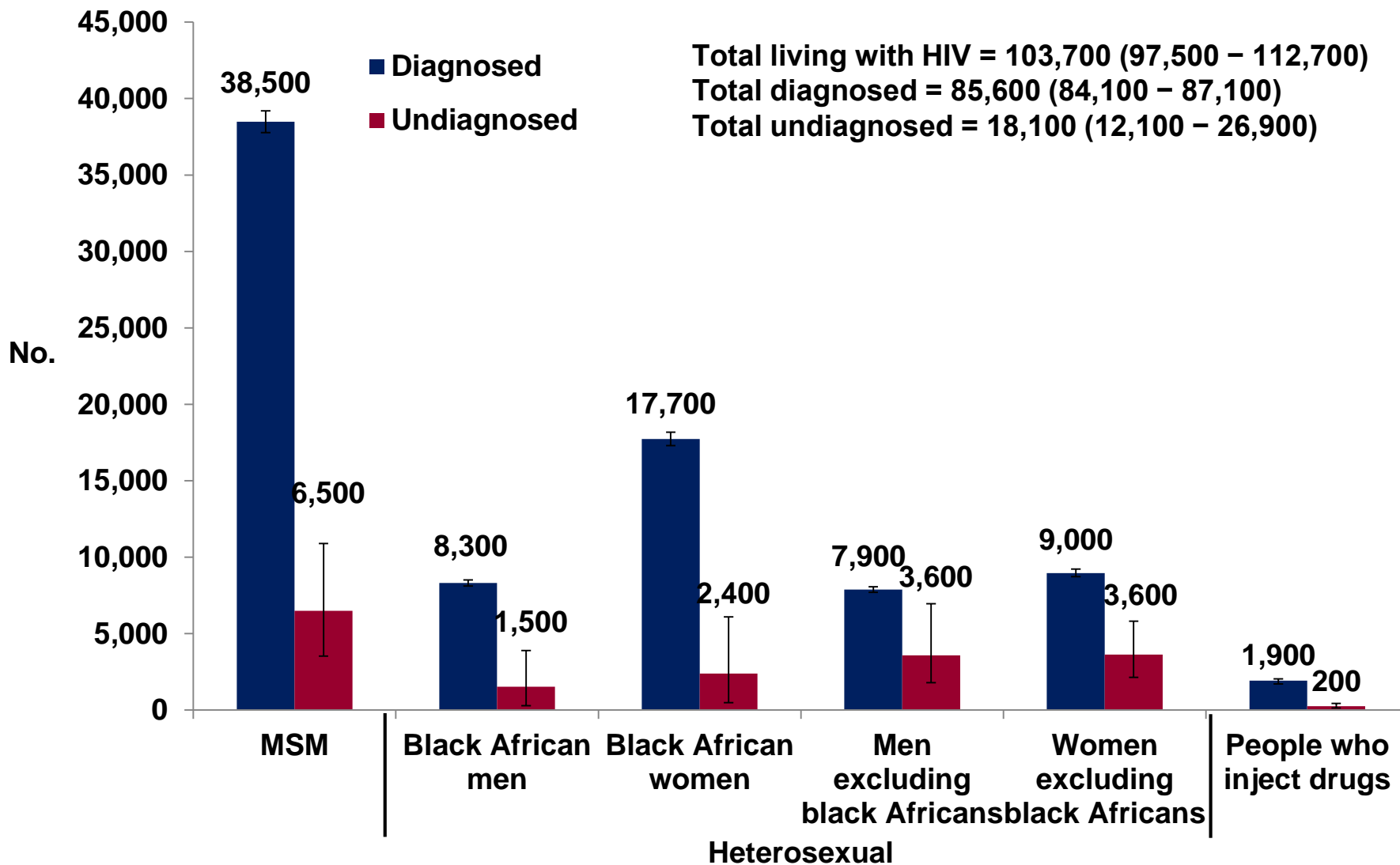
- In total, almost half (48%, 40,842) of all people accessing HIV care acquired their infection through heterosexual sex (15,383 men and 25,459 women).
- New diagnoses acquired through heterosexual sex has declined over the same time period (3,440 to 2,490), largely due to a reduction in diagnoses among black African men and women (1,801 in 2010 to 1,044 in 2014).
- Among heterosexuals, 60% of people were of black African ethnicity, 24% white, and 4% black Caribbean.
- In 2014, 24% of all heterosexual men (5,100, CrI 2,800-8,900) living with HIV were unaware of their HIV infection compared to 18% of heterosexual women.

Modelling *the undiagnosed*





Estimated number of people living with HIV (both diagnosed and undiagnosed): United Kingdom, 2014



Sources of data for the Multi-Parameter Evidence Synthesis Model

Subgroup	% subgroup	HIV prevalence	% undiagnosed	# diagnosed PLWH	Misc
<i>MSM</i>	NATSAL-3 ¹²³			SOPHID ¹²³	GMSHS ¹ , NATSAL-3 ² , HANDD ¹²³
<i>PWID</i>	Home Office ¹² , NTA ¹²	UA PWID ¹²	UA PWID ¹²	SOPHID ¹²³	
<i>Black Africans</i>	Census ¹²³	UA DBS ¹²³ , case-study ¹²	NSHPC ¹² , UA DBS ¹² , case-study ¹² , BASS Line ¹²	SOPHID ¹²³	
<i>GUM clinic patients</i>	NATSAL-3 ¹²³	GUMCAD ¹²³	GUM Anon ¹²³	SOPHID ¹²³	HANDD ¹²³
<i>Low-risk</i>				SOPHID ¹²³	

Sources and coverage of HIV data for London¹, rest of England and Wales² and Scotland³.

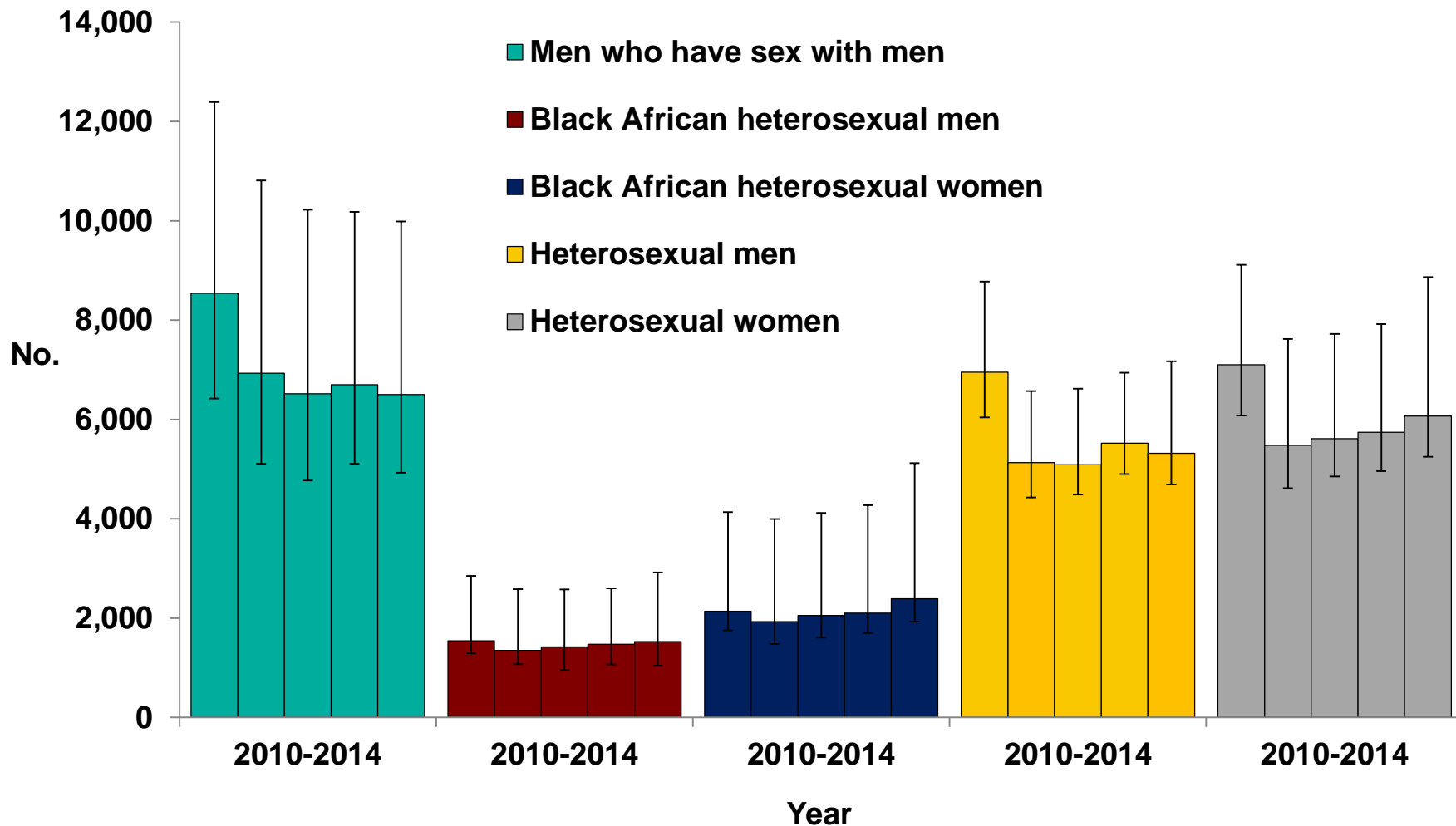
UA DBS: annual sero-prevalence survey on newborns linked with ONS birth registration records

NSHPC: annual registry of women diagnosed before, during or after pregnancy

OPHID: cross-sectional registry of all PLWH in care



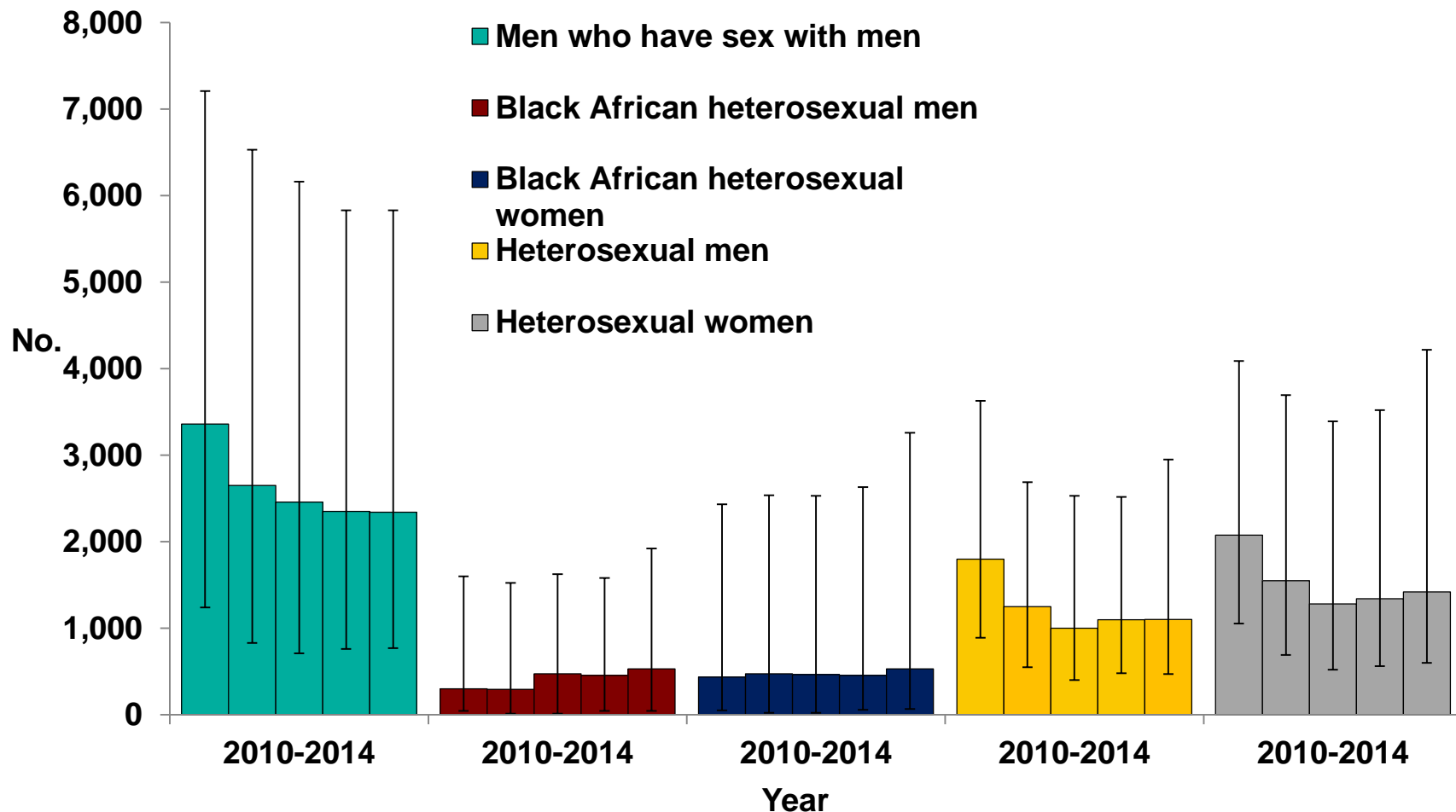
Estimated number of undiagnosed HIV infections by exposure group: United Kingdom, 2010-2014



Heterosexual men and women include black African heterosexuals. Lines through the bars represent 95% credible intervals



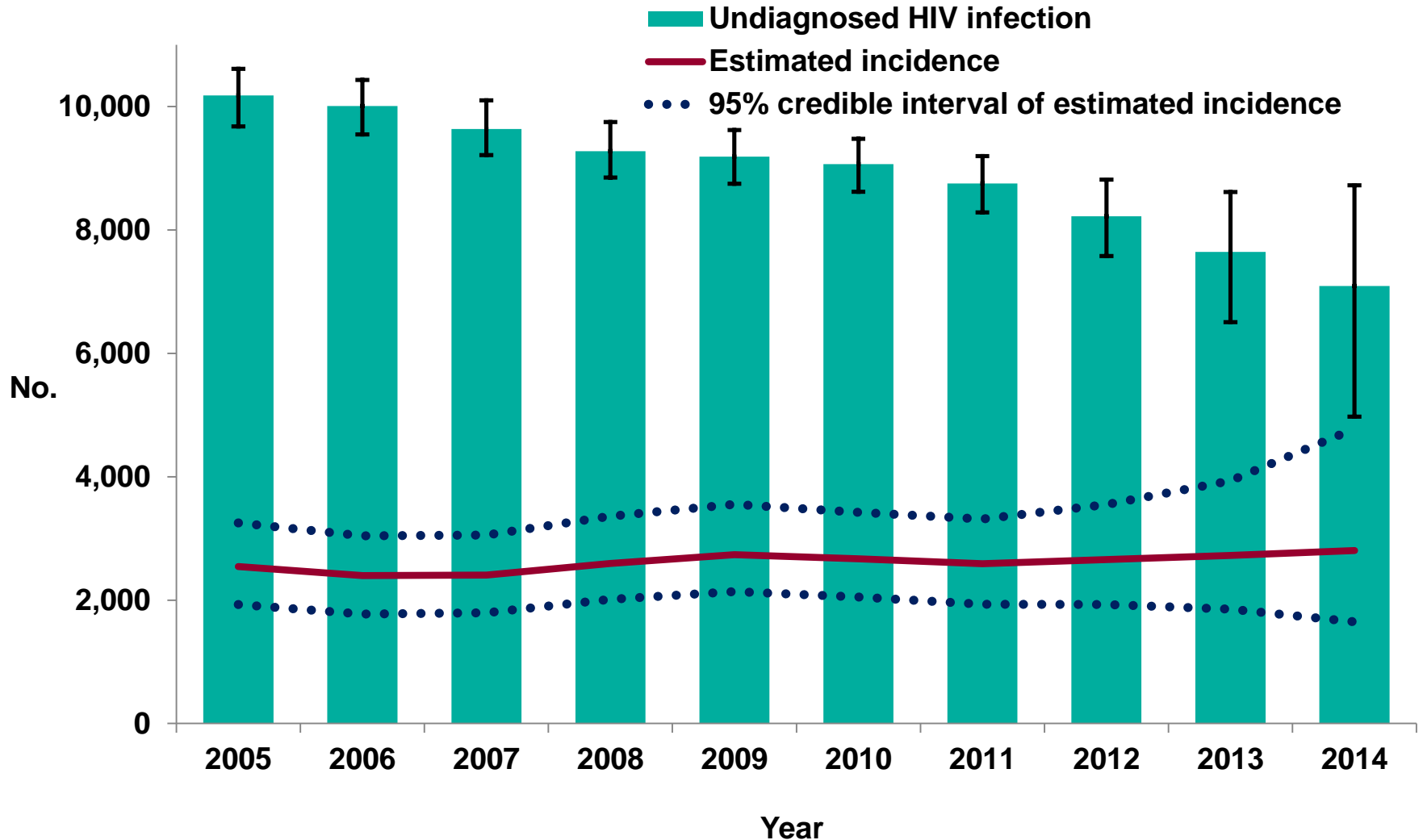
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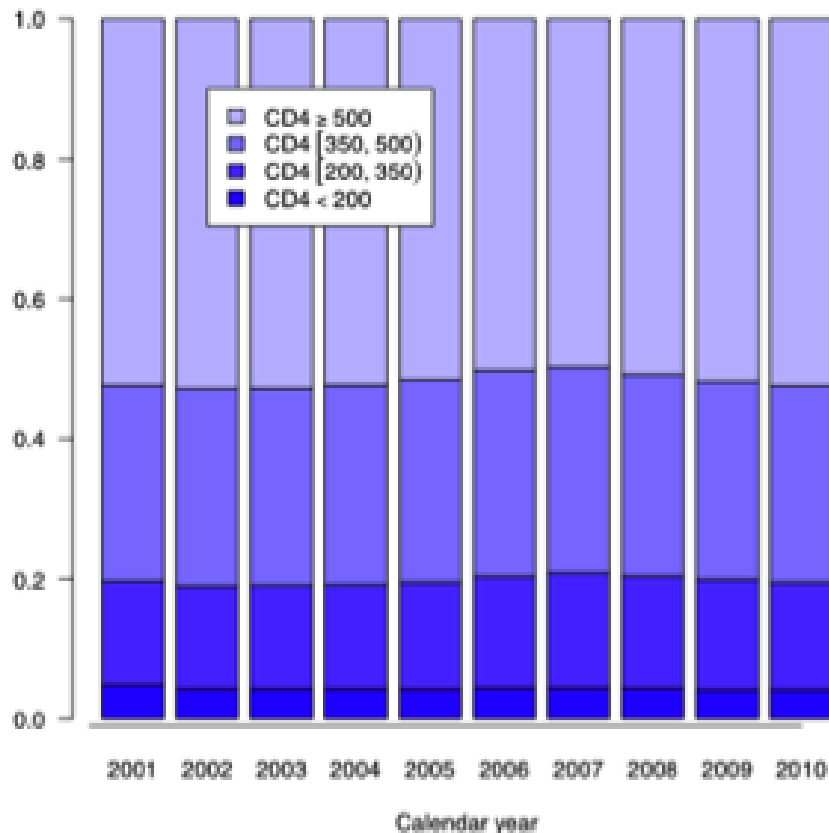


Back-calculation estimate of HIV incidence and prevalence of undiagnosed infection among Men who have sex with men: United Kingdom, 2005-2014

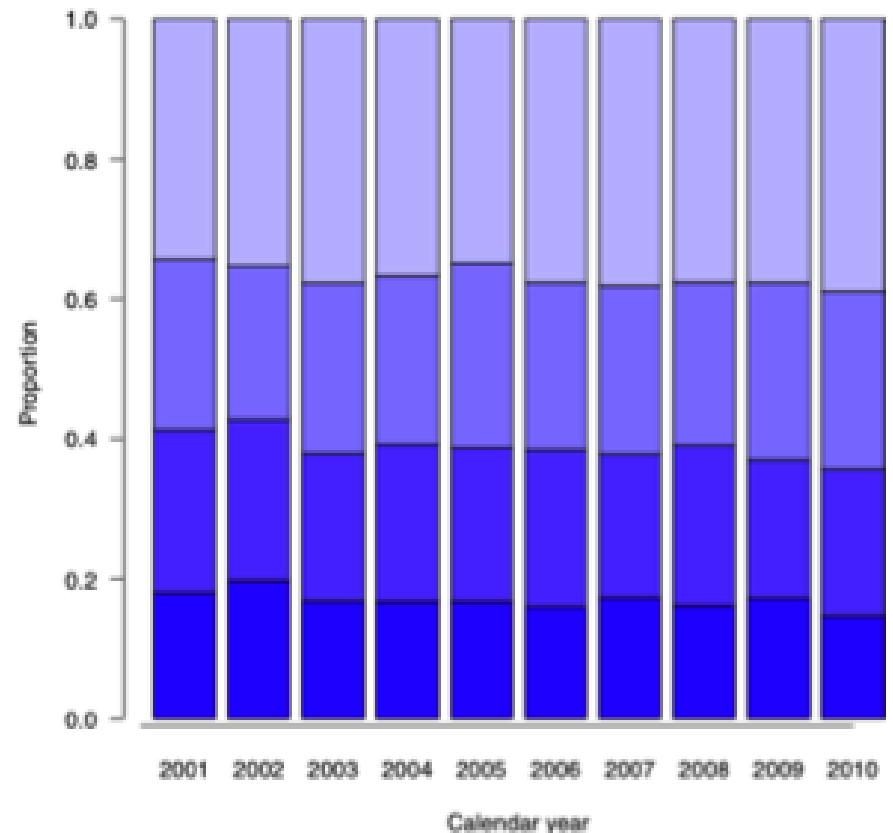


CD4 count distribution among undiagnosed and newly diagnosed MSM, England and Wales

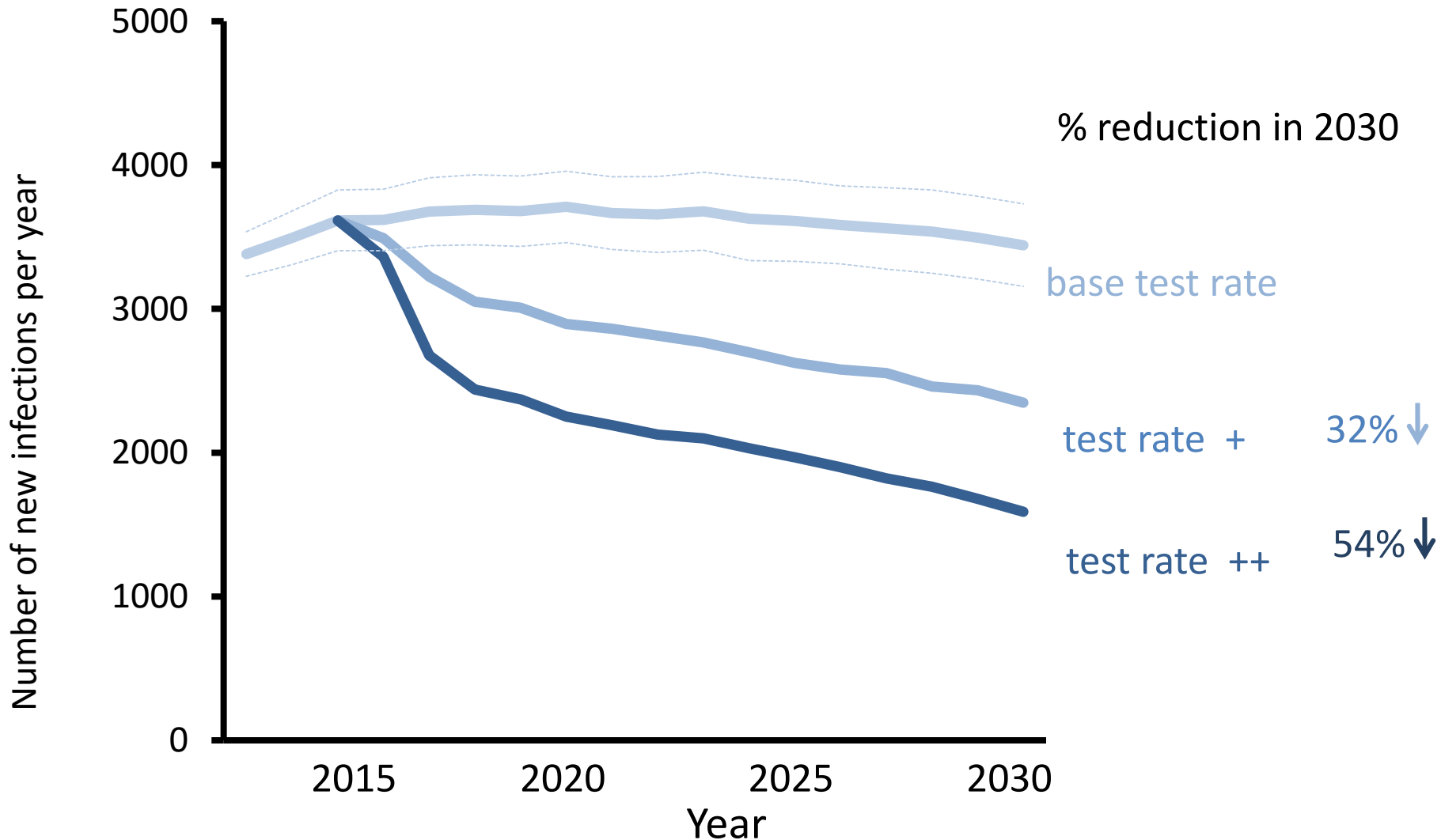
(b) Distribution of undiagnosed by CD4 count



(c) Distribution of CD4 counts at diagnosis

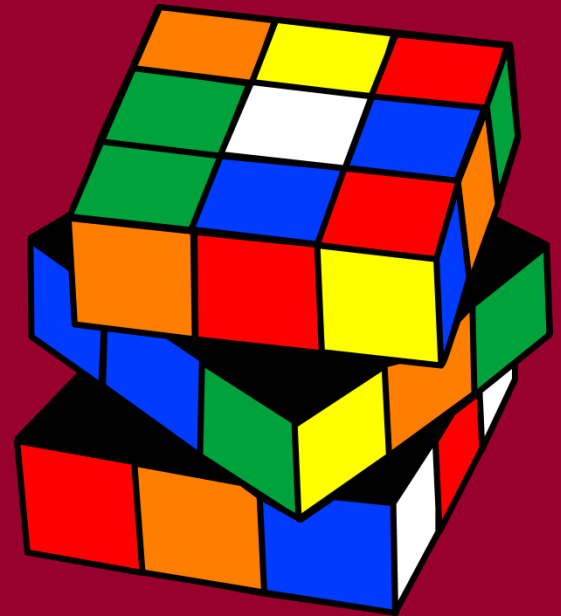


Modelled impact on HIV incidence of increased testing among MSM



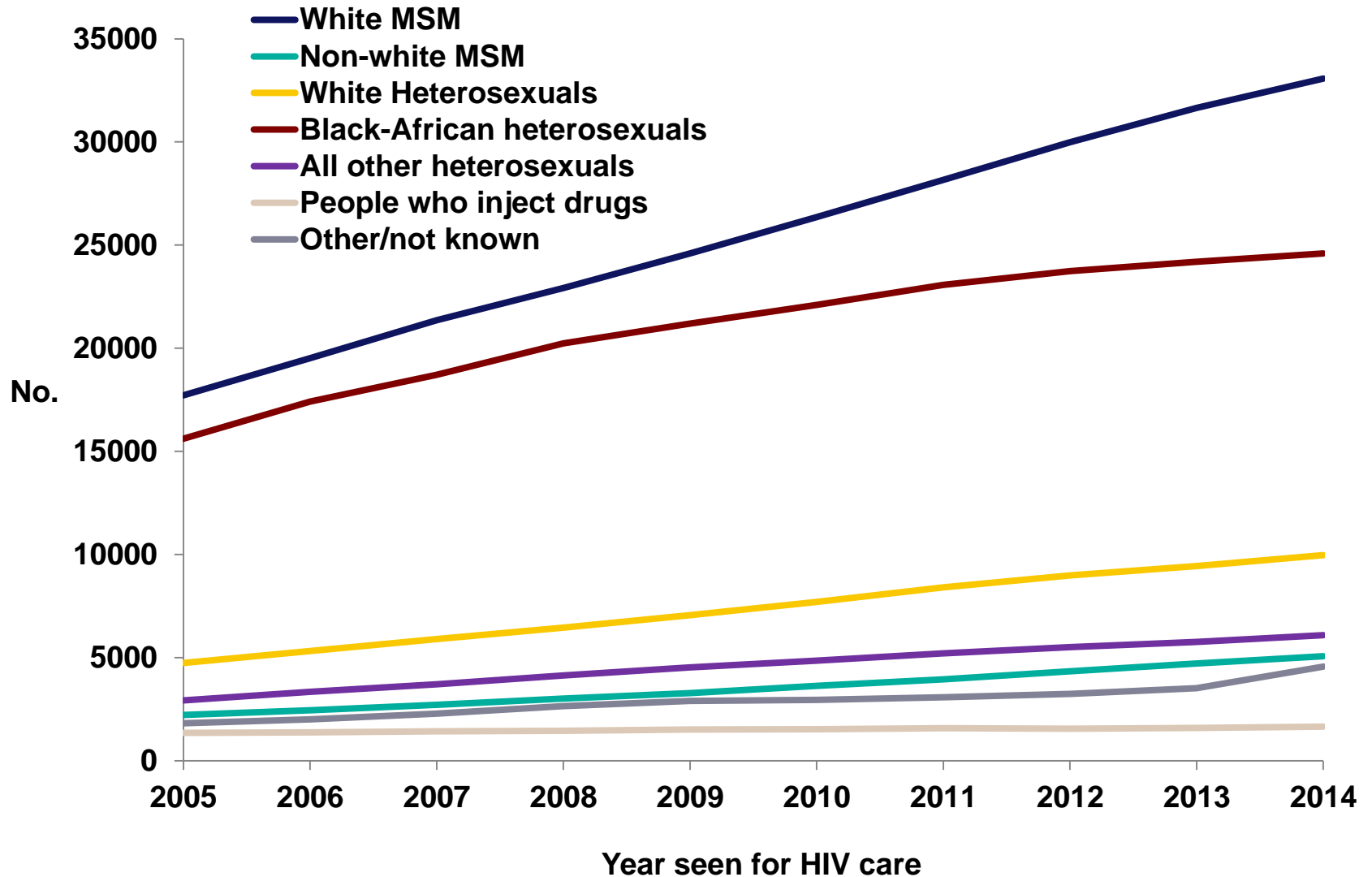
Robust data

Diagnosed prevalence

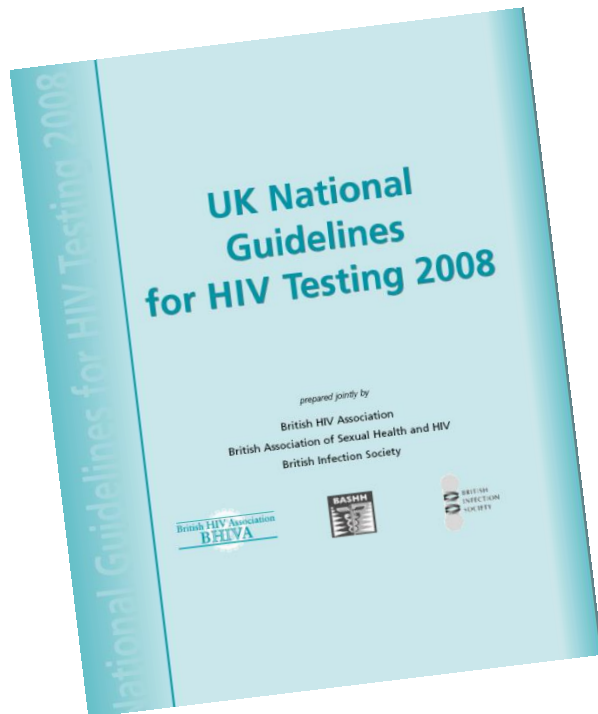




Number of people seen for HIV care by prevention group and ethnicity: United Kingdom, 2005 - 2014



UK National Guidelines for HIV testing, 2008



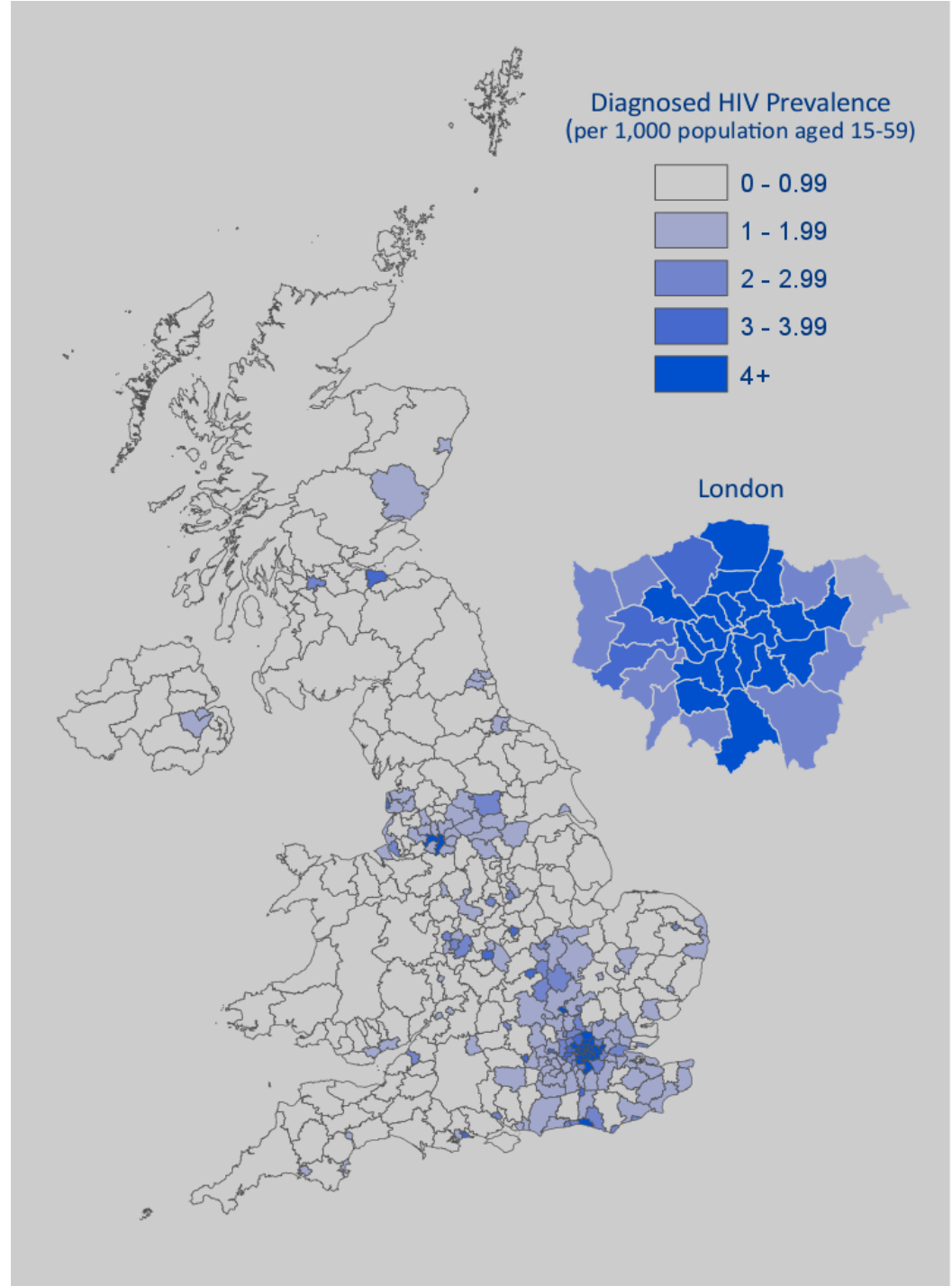
Expand routine offer and recommendation HIV test in areas of high diagnosed HIV prevalence (>2/1,000)

- Registrants in primary care
- General medical admissions



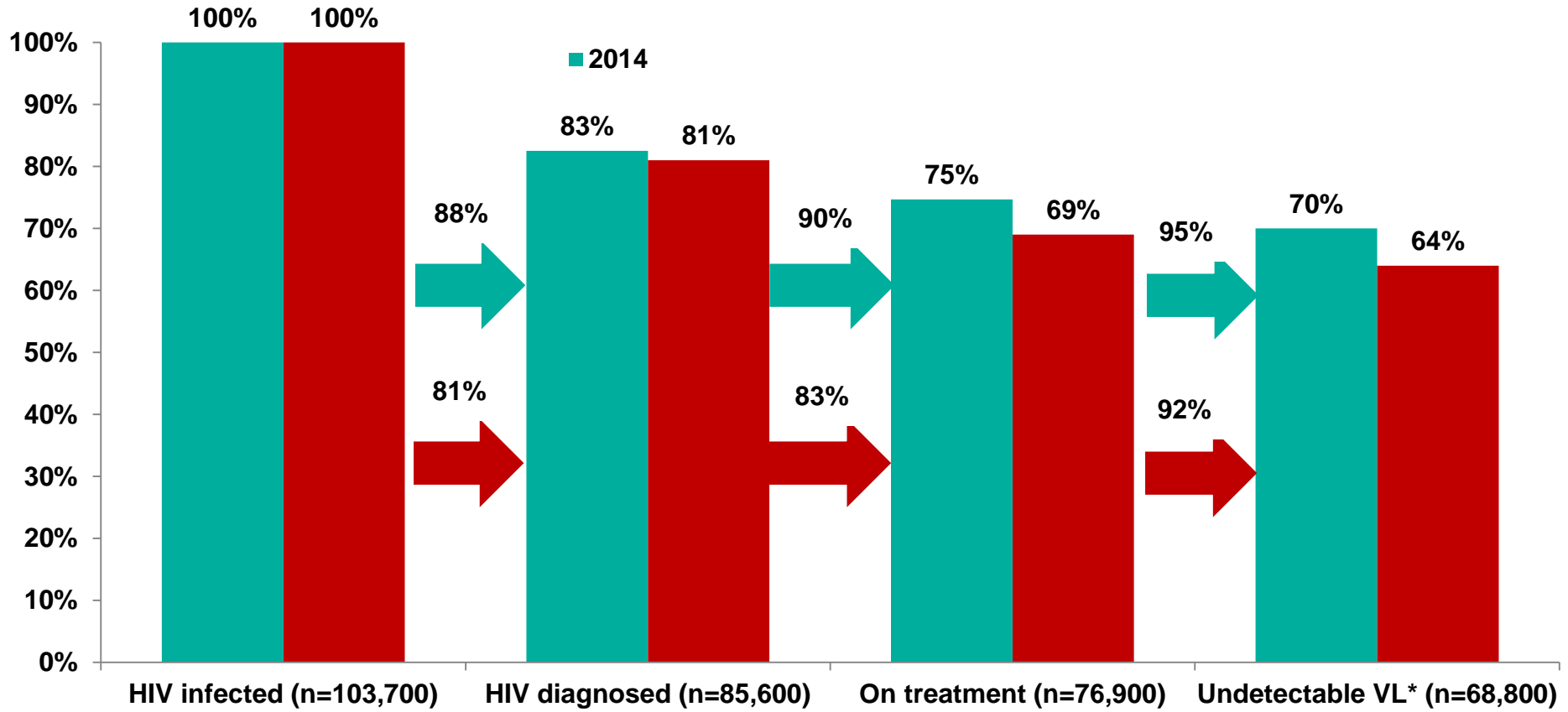
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Prevalence of diagnosed HIV infection by area of residence among population aged 15-59: United Kingdom, 2014





Continuum of HIV care United Kingdom, 2011 vs 2014

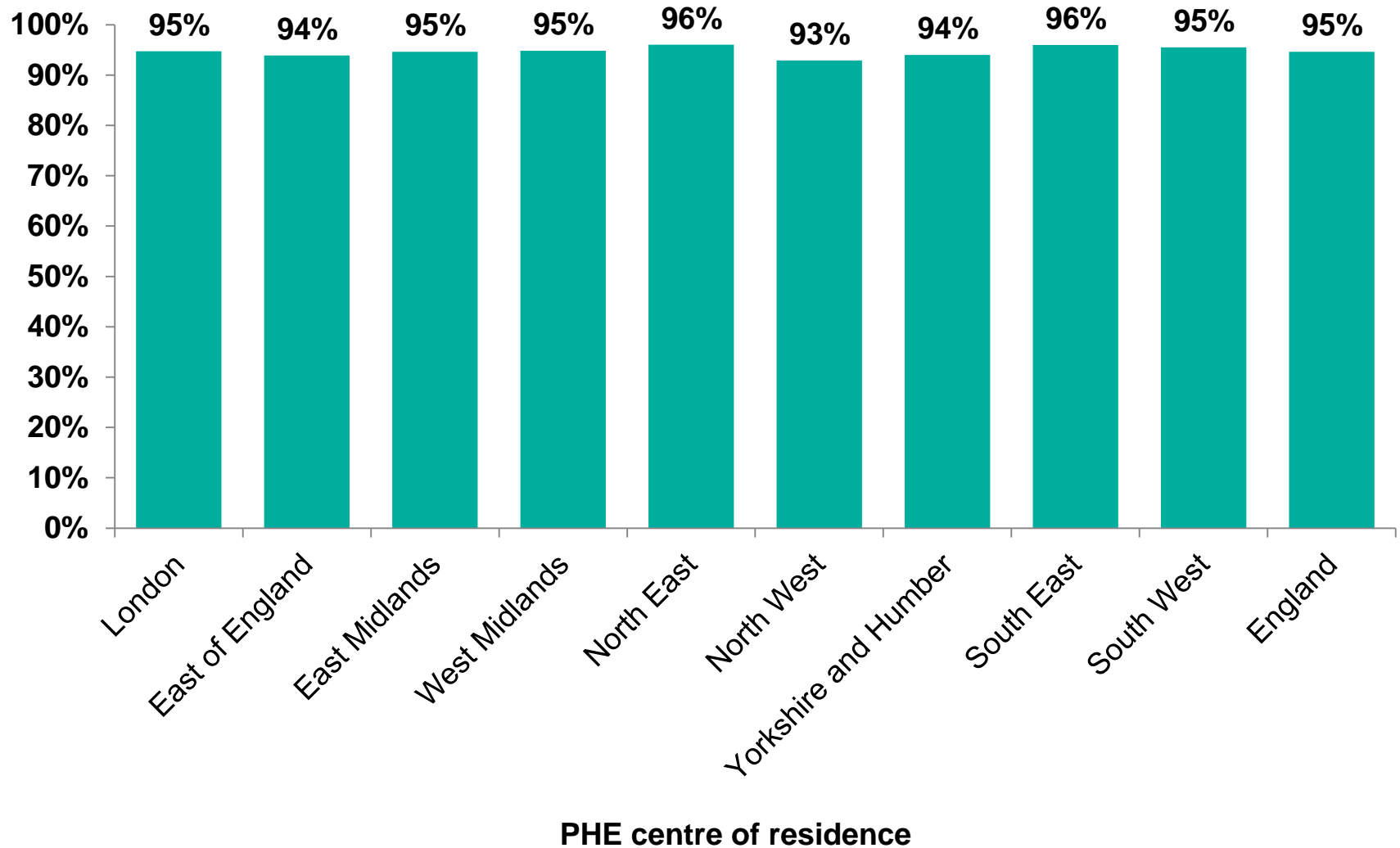


Undetectable VL: VL < 200 copies/ml



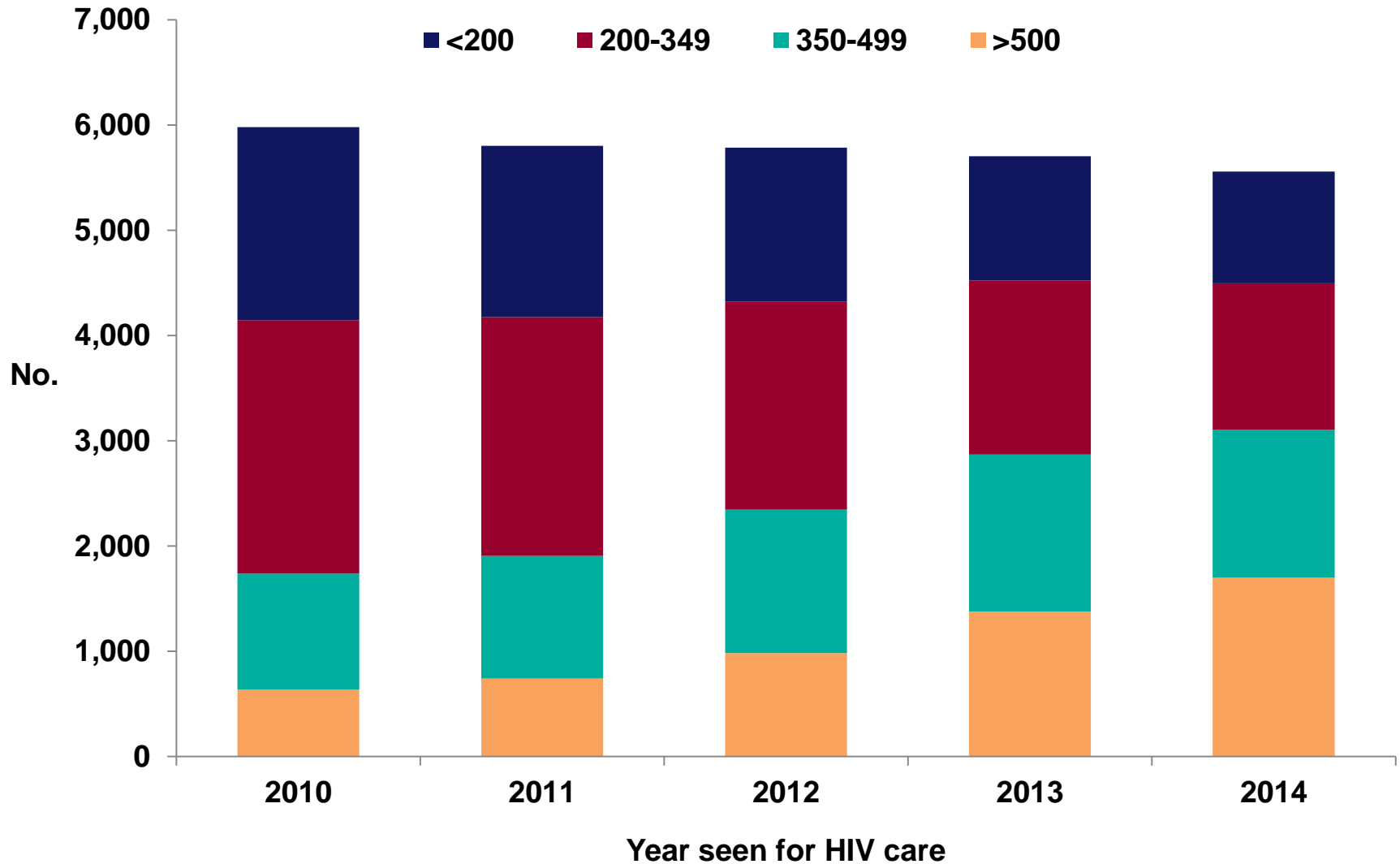
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Proportion of people on antiretroviral therapy with a viral load <200 particles/mL: England, 2014





Number of people starting ART by CD4 count at initiation: United Kingdom, 2005-2014

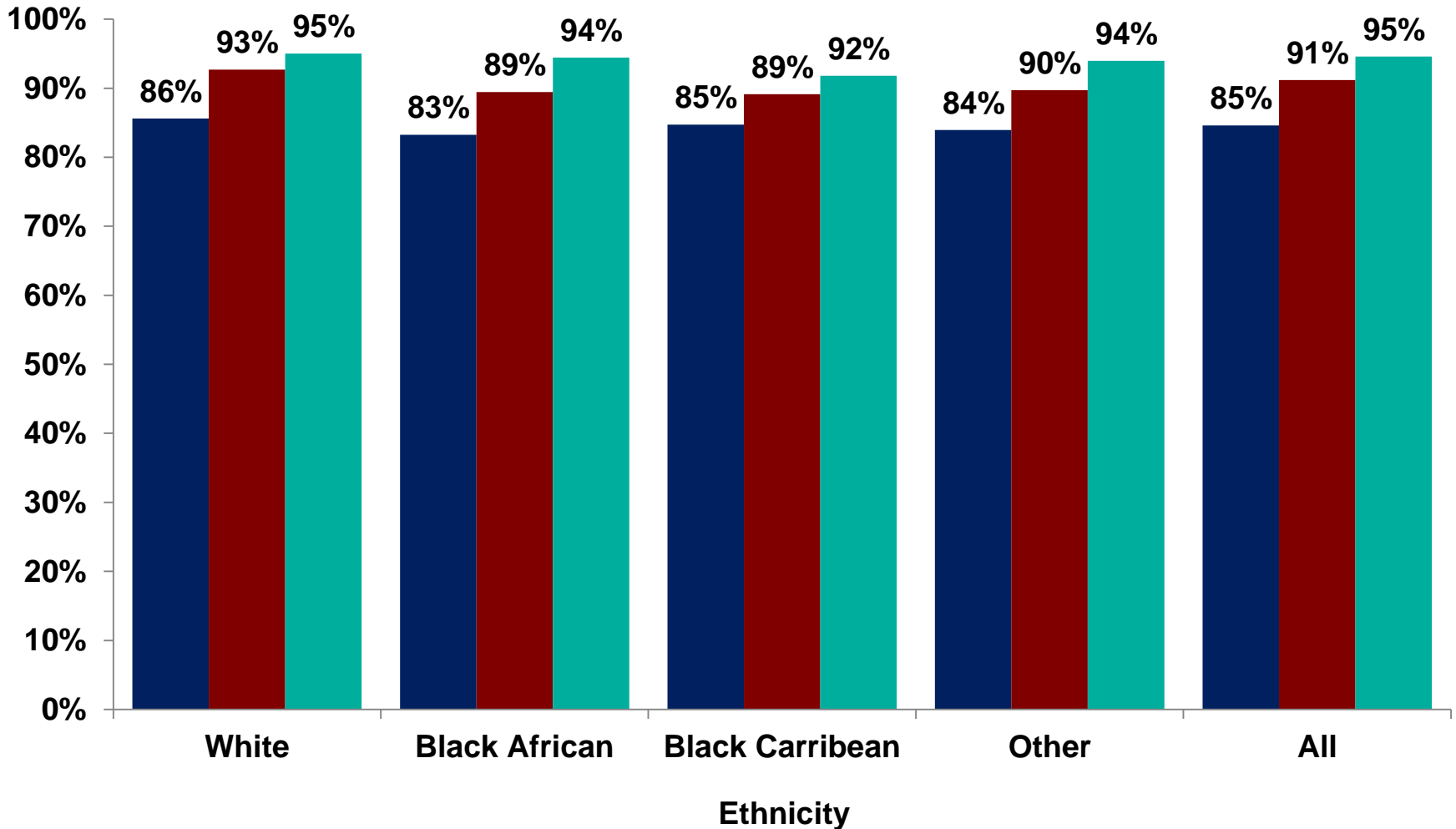




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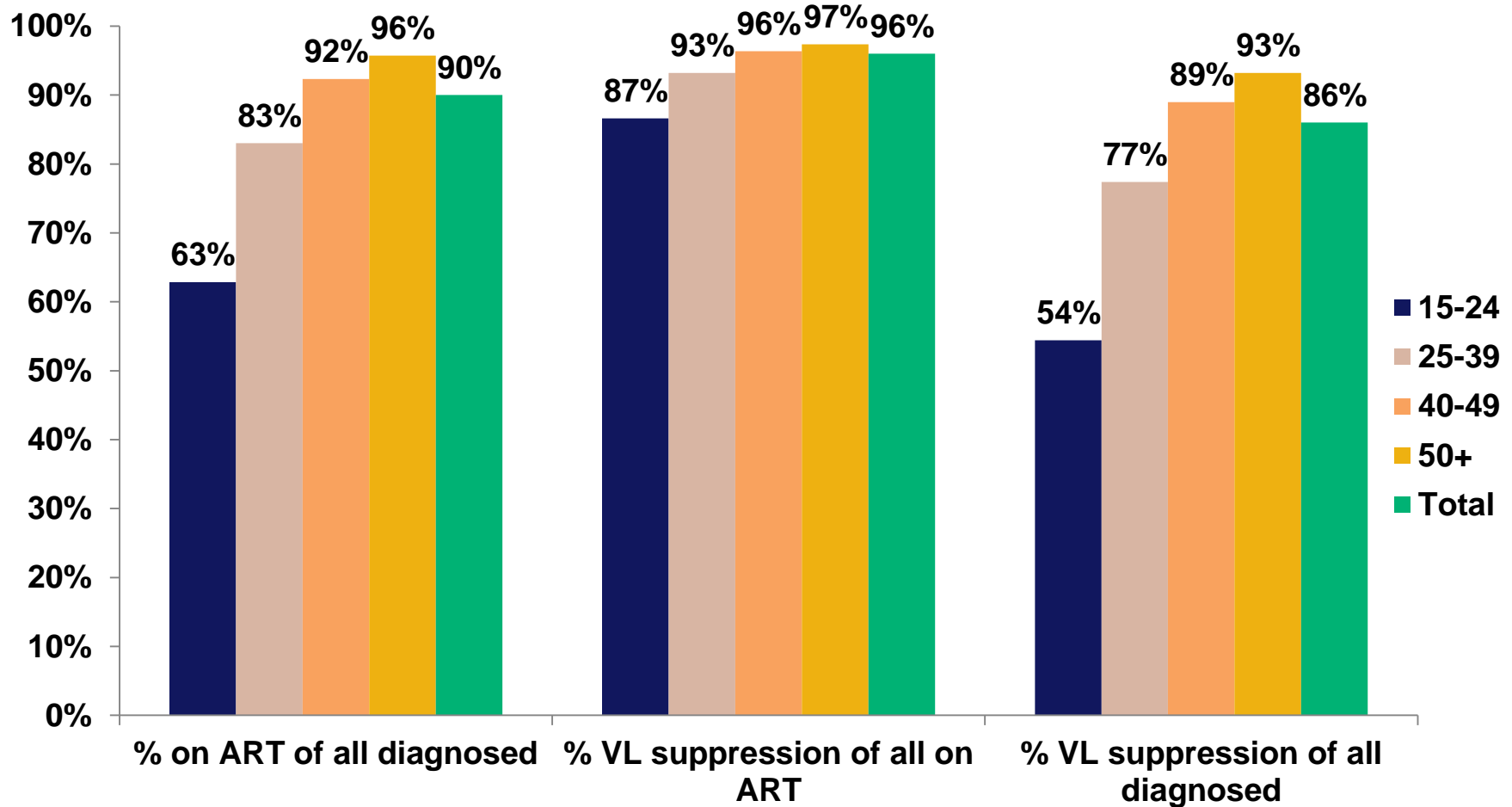
Proportion of persons on antiretroviral therapy with a viral load <200 particles/mL by ethnicity: United Kingdom, 2005-2014

■ 2005 ■ 2009 ■ 2014





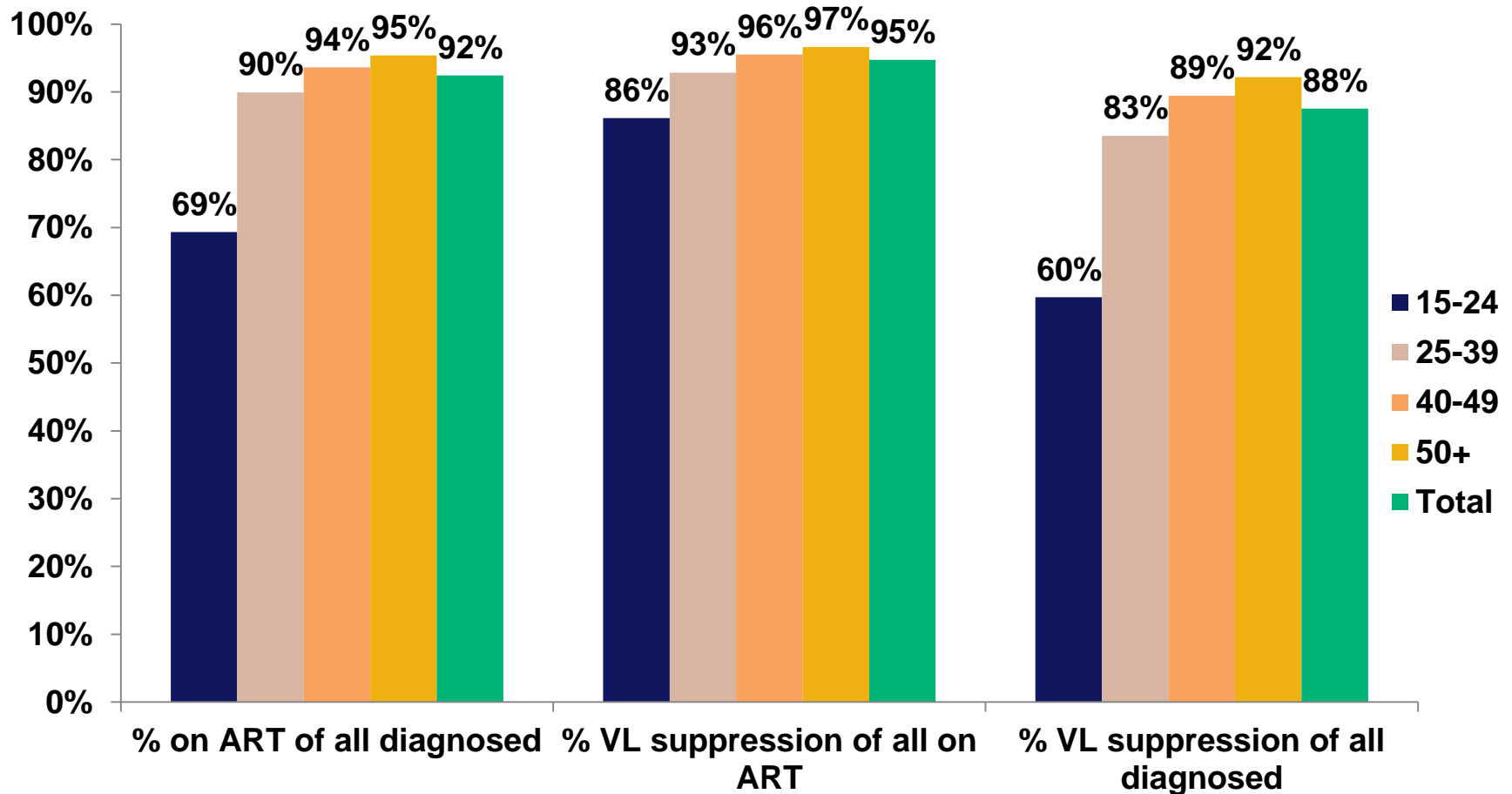
ART coverage and VL suppression among MSM by age group: United Kingdom 2014



VL suppression: having the most recent VL undetectable (VL < 200 copies/ml)



ART coverage and VL suppression among heterosexual Black African women by age group: United Kingdom 2014



VL suppression: having the most recent VL undetectable (VL<200 copies/ml)



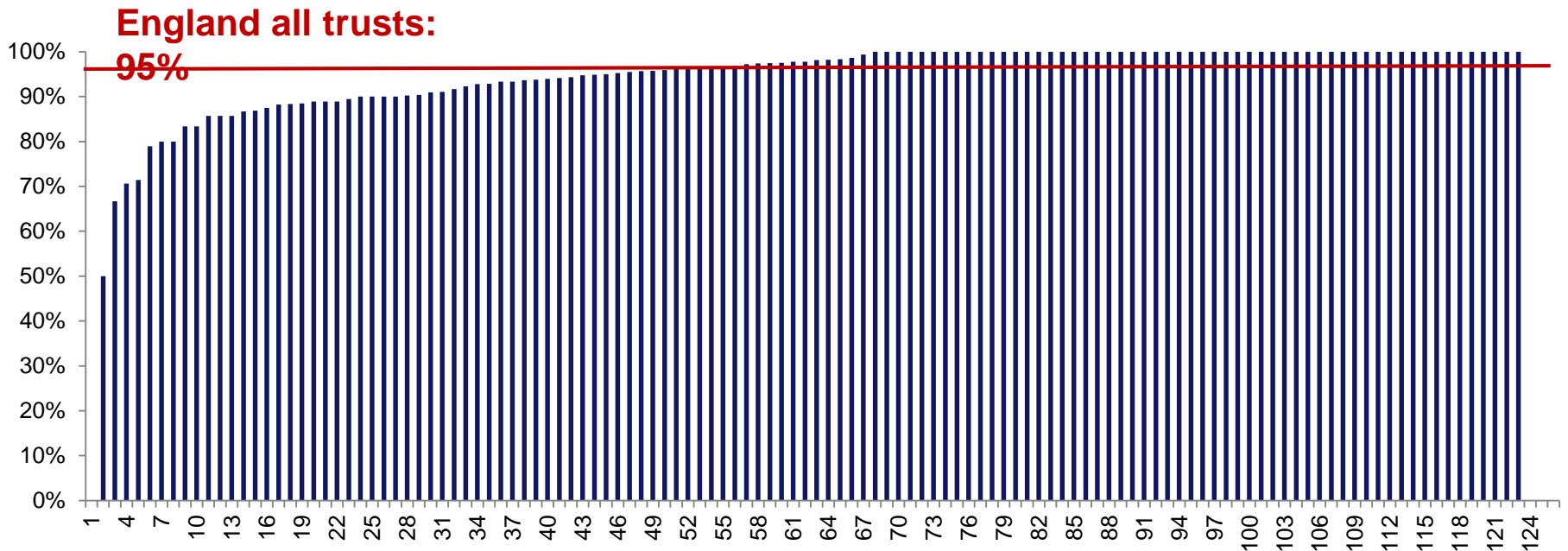
HIV Clinical Dashboard indicators (England results)

Indicator	Specification	2011	2013
Late diagnosis	To monitor timeliness of diagnosis <i>CD4 cell count <350 cells/mm³ within 3 months of diagnosis</i>	47%	40%
Link to care	To monitor prompt integration into care following HIV diagnosis: <i>CD4 cell count taken within 1 month of diagnosis</i>	88%	93%
Retention in care - new patients	To monitor the retention in care among newly-diagnosed adults: <i>New diagnoses seen for care in the next survey year</i>	86%	89%
Retention in care - all patients	To monitor the retention in care among adults seen for care in the last 12 months <i>Adults seen for HIV care and also seen in the net survey year</i>	96%	95%
Viral load suppression	To monitor the effectiveness of ART after initiating treatment <i>Viral load <200 copies/ml at 12 months of starting ART (window period 3 – 15 months)</i>	92%	95%
CD4 response	To monitor immune status of adults regardless of treatment status <i>CD4 cell count ≥350 cells/mm³ after at least 12 months in HIV care</i>	83%	86%



VL suppression (<200) among adults on ART >1 year 2013 results

- 123 trusts in England provided treatment to ART starters
- 95% of these starters had a VL <200 in 12 months of ART initiation
- 38% (47/123) trusts had a proportion below the England benchmark





New HIV and AIDS Reporting System

Advantages:

- Quarterly submission
- Attendance based data
- Online validation process
- Epidemiological fields
- Detailed clinical information
 - ✓ Attendance date
 - ✓ ART information
 - ✓ Complexity items

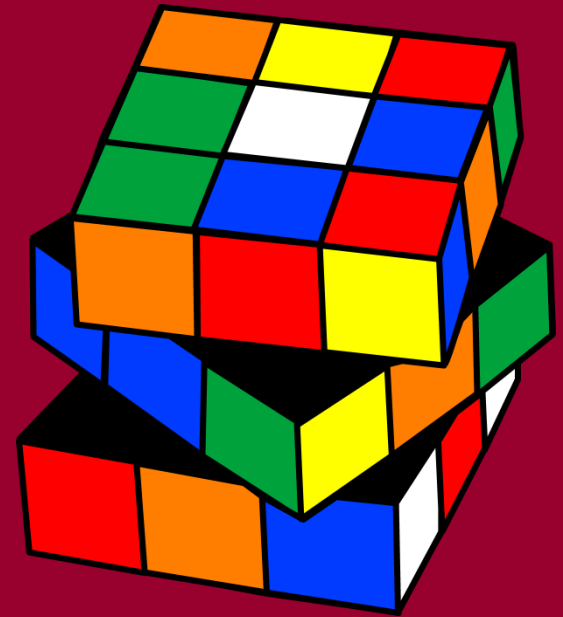




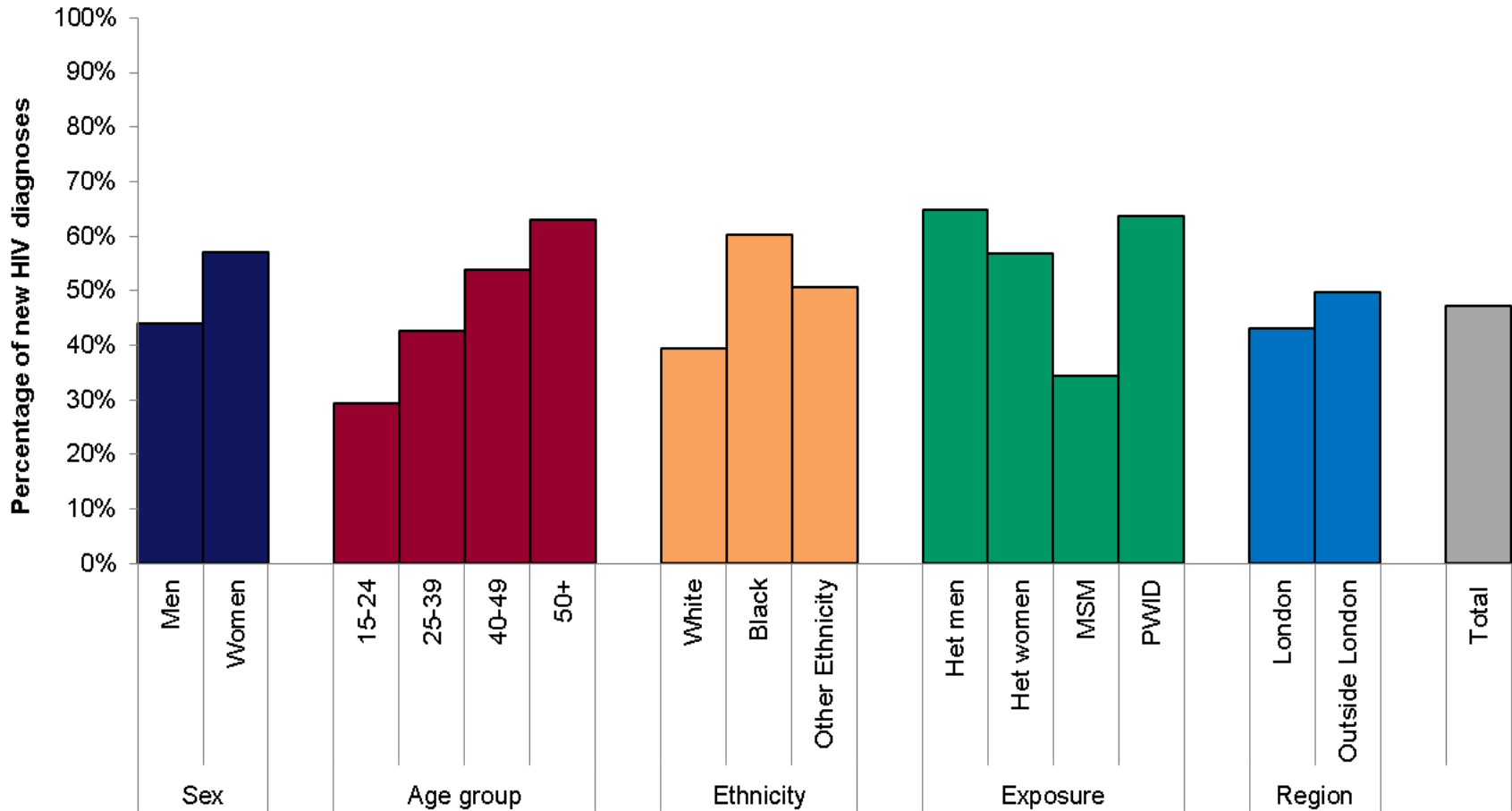
Dashboard indicators 2016/2017

Indicator	Description & Provenance	2015/6	2016/7
Late diagnosis	Proportion of newly diagnosed adults a CD4 count of <350	Yes	Yes
Very late diagnosis	Proportion of newly diagnosed adults a CD4 count of <200	No	Yes
Linkage to care	Proportion of newly diagnosed adults seen for care in 1 month	Yes	Yes
Virological success in people established on ART	Proportion of adults who had an undetectable viral load at least one year after starting therapy	Yes	Revised!
Virological success in people newly starting ART	Proportion of adults who had a undetectable viral load within one year after starting therapy	No	New!
Retention in care -newly diagnosed	Proportion of newly diagnosed adults retained in care in the following year of diagnosis	Yes	Yes
Retention in care - all patients	Proportion of all adults retained in care in the following year	Yes	Yes
Patients with CD4 count >350	Proportion of HIV diagnosed adults with the last CD4<350	Yes	Drop
ART coverage – all adults in care	Proportion of HIV diagnosed adults seen for HIV care and receiving ART	No	New!
ART coverage – patients with the last CD4<350	Proportion of patients with the last CD4 count<350 and receiving ART	No	New!

*New and
Late diagnosis*



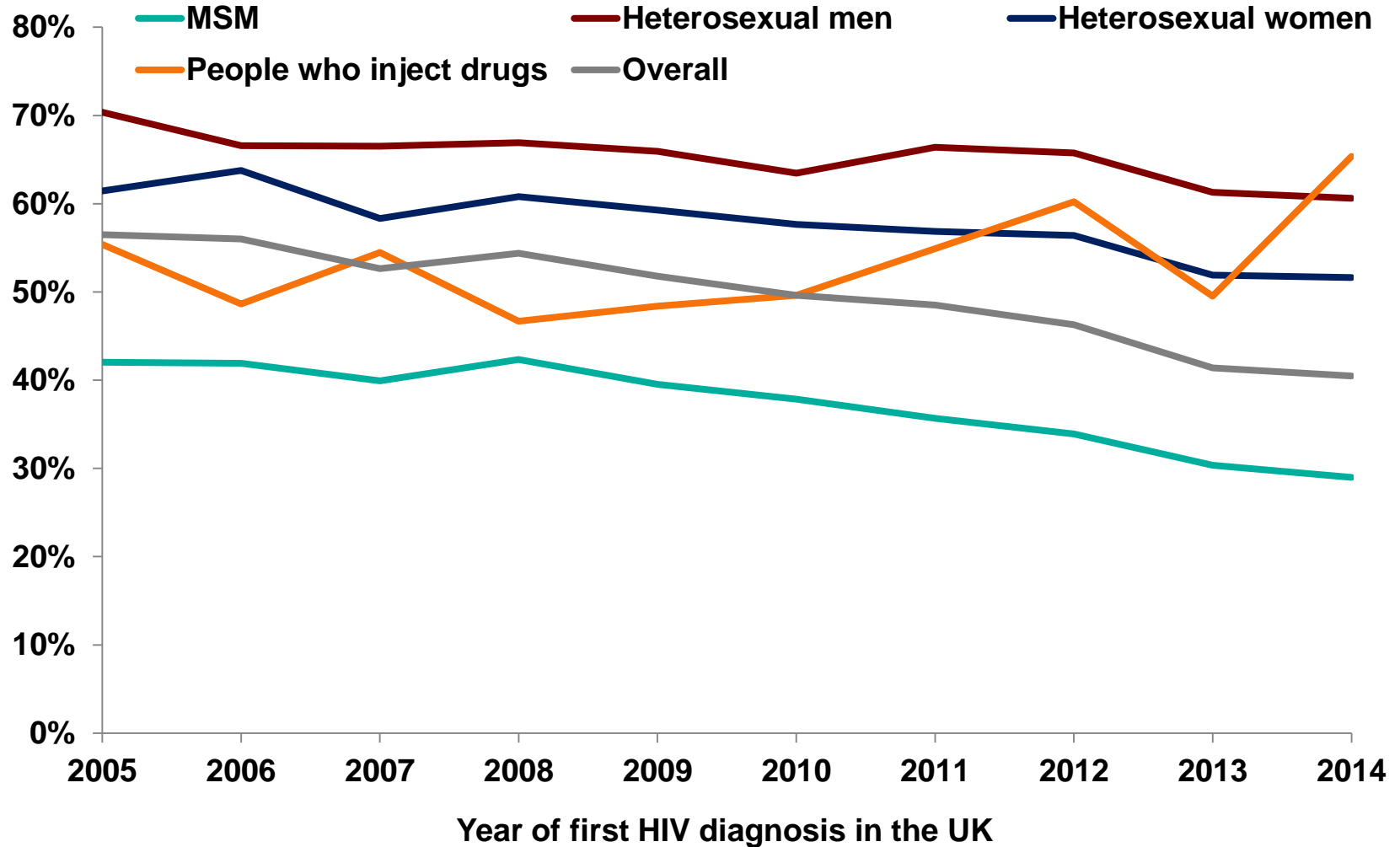
Late HIV diagnosis: Proportion* of adults diagnosed with a CD4 count <350 cells ,UK, 2014



* CD4 <350 cells/mm³ within three months of diagnosis



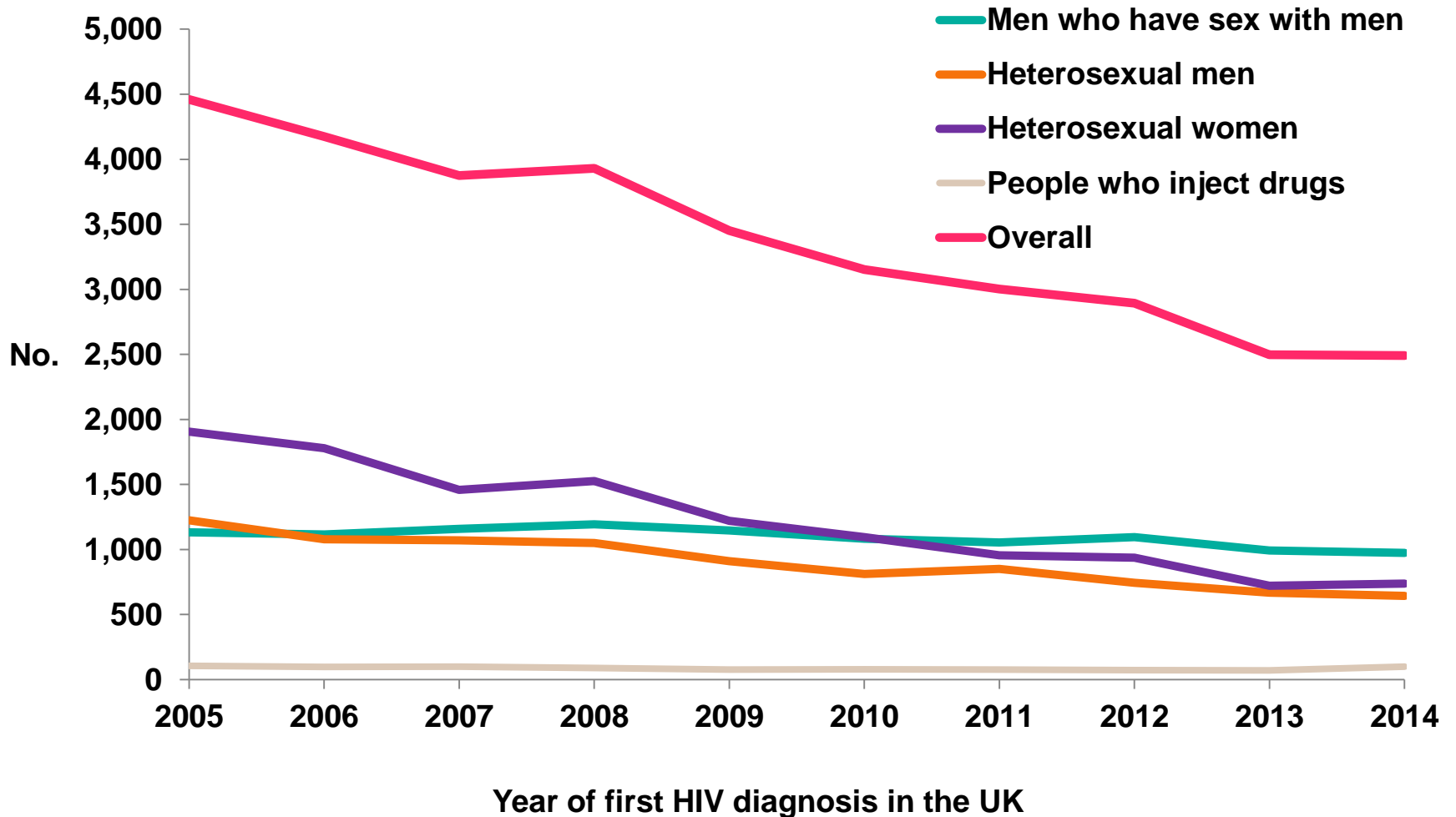
Proportion of people diagnosed with HIV at a late stage of infection by exposure category: United Kingdom, 2005-2014



Numbers have been adjusted for missing CD4 cell count at HIV diagnosis.
CD4 <350 cells/mm³ within three months of diagnosis.



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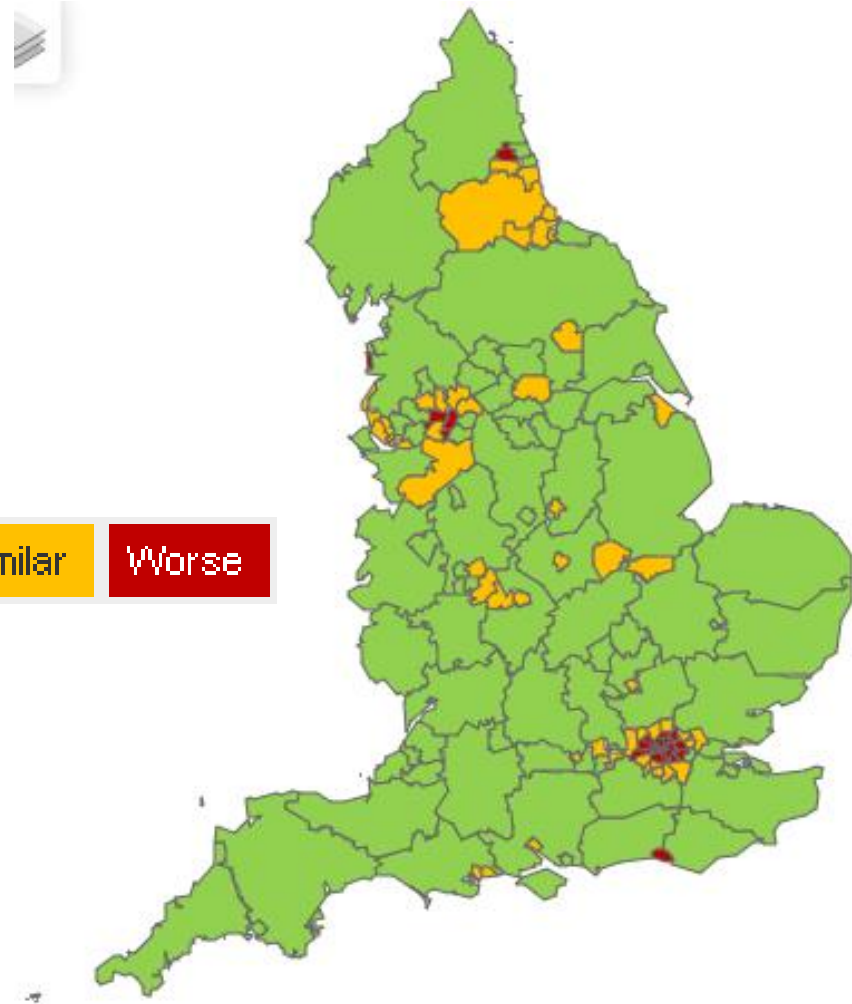
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Late HIV diagnosis (CD4<350 at diagnosis) by local authority of residence

Public Health Outcome
Framework indicator
(PHOF)

England: 42%

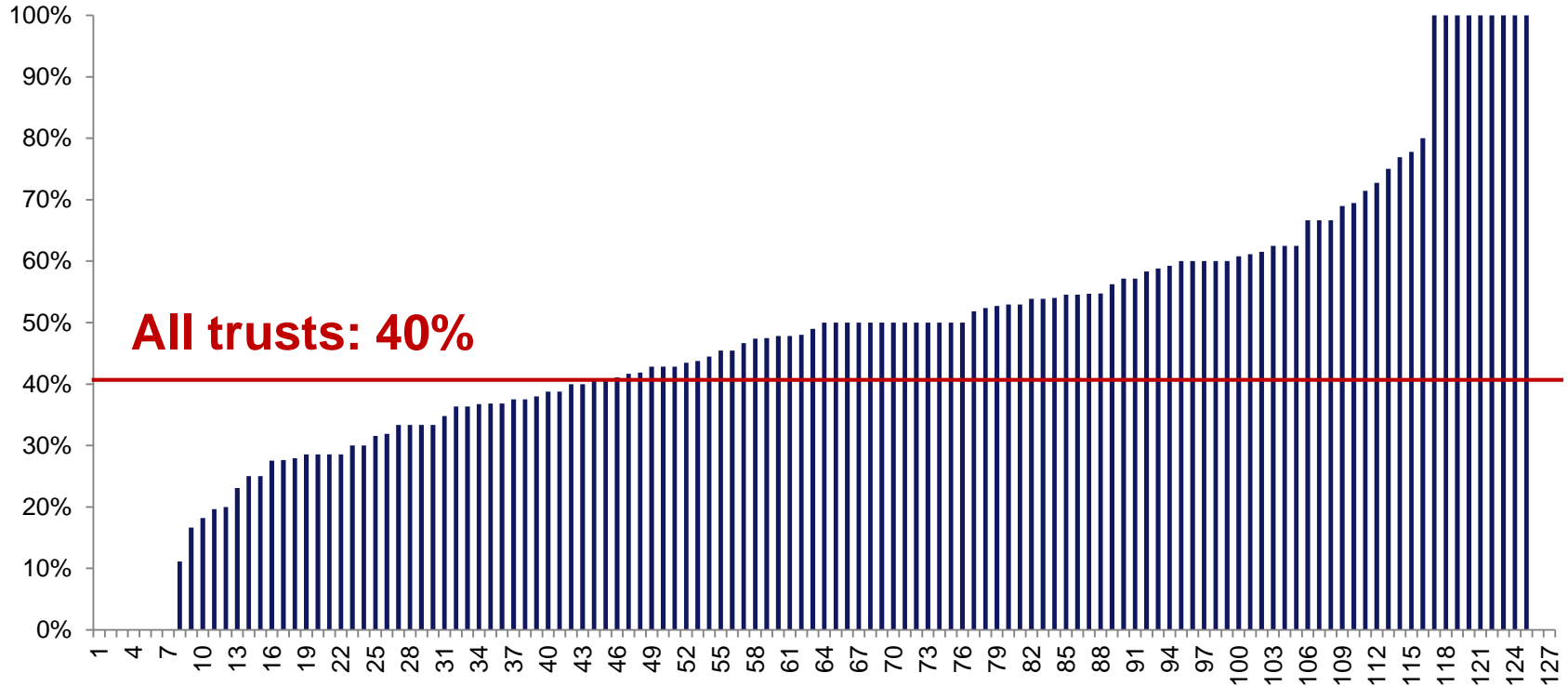
Compared with benchmark:



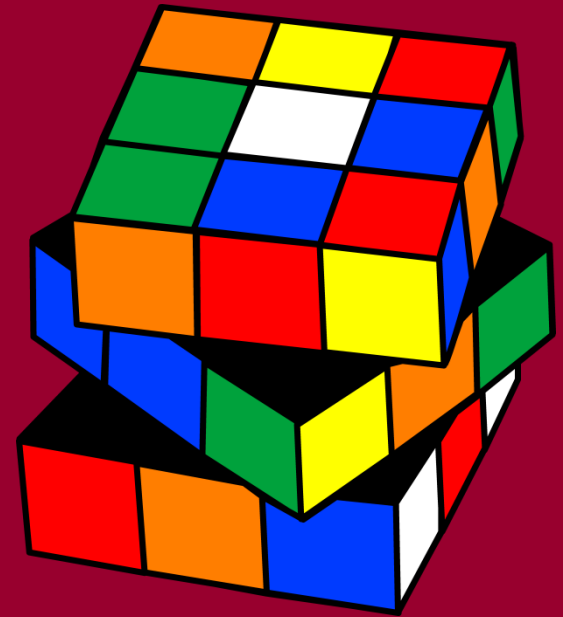


Late HIV diagnosis (CD4<350 at diagnosis) by HIV service provider in 2014

- 127 trusts in England received newly-diagnosed adults in 2014
- 40% of these adults had a CD4<350 at diagnosis
- 34% (43/127) trusts were below the England benchmark

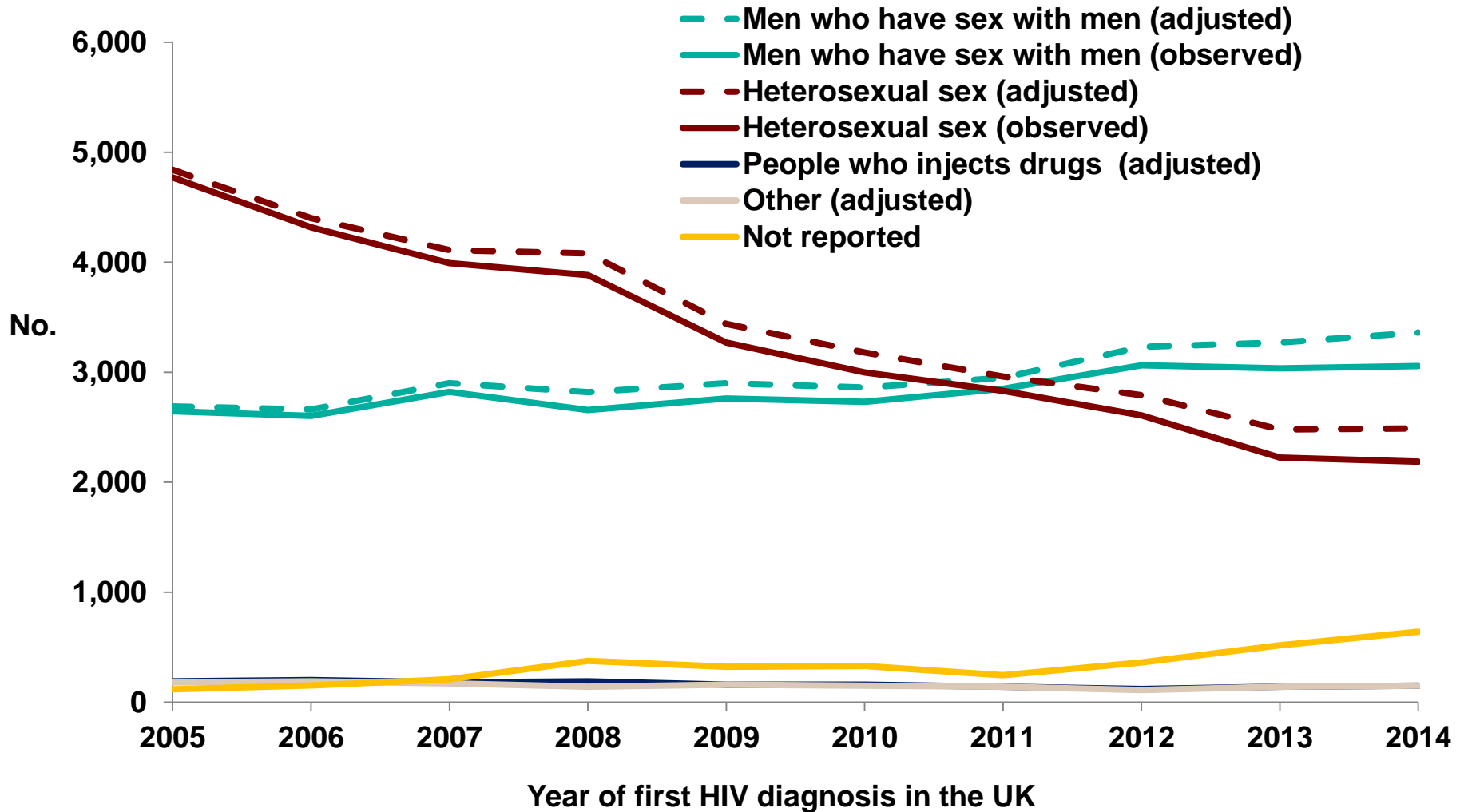


New diagnoses



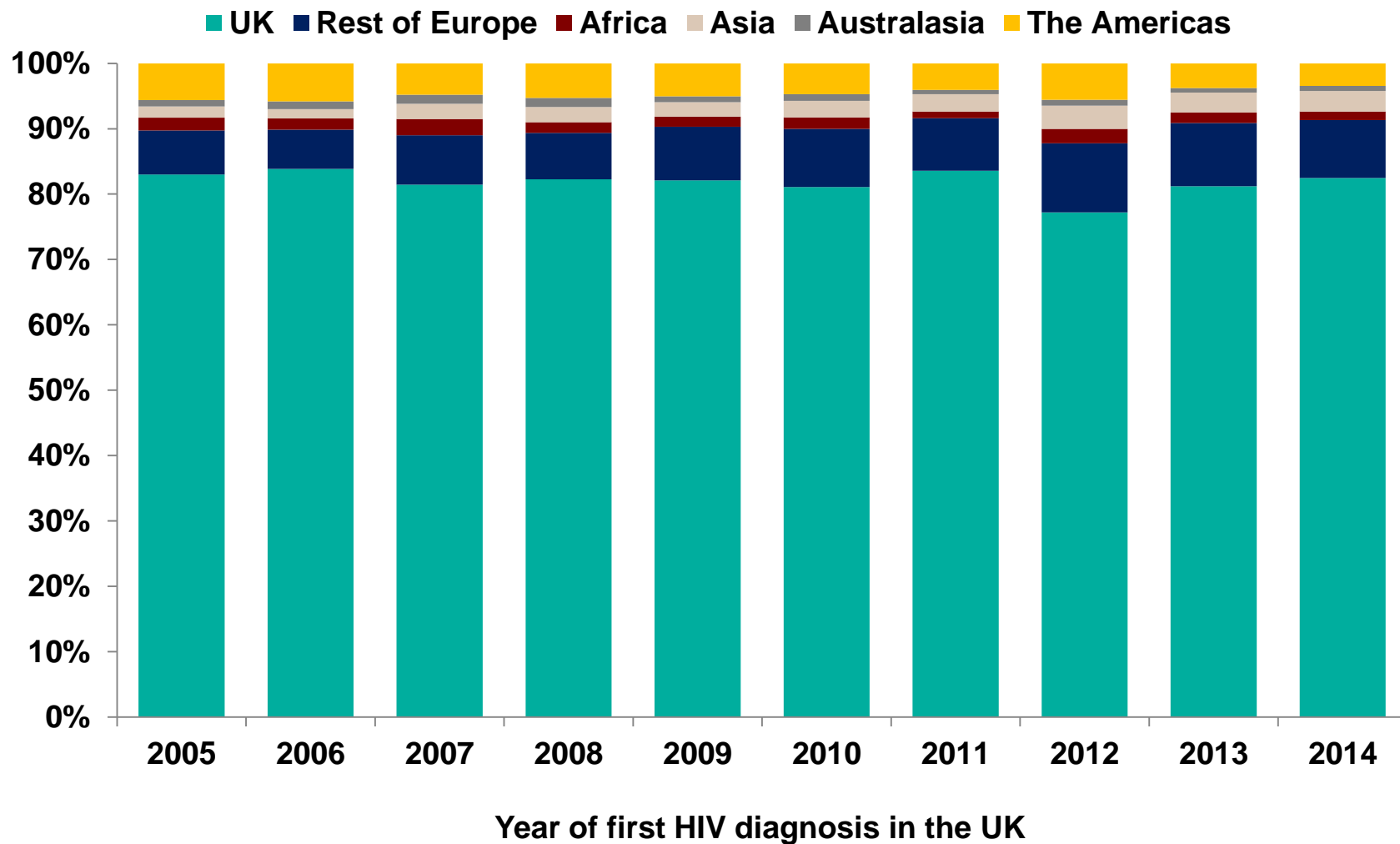


Number of people newly diagnosed with HIV by exposure group: United Kingdom, 2005-2014



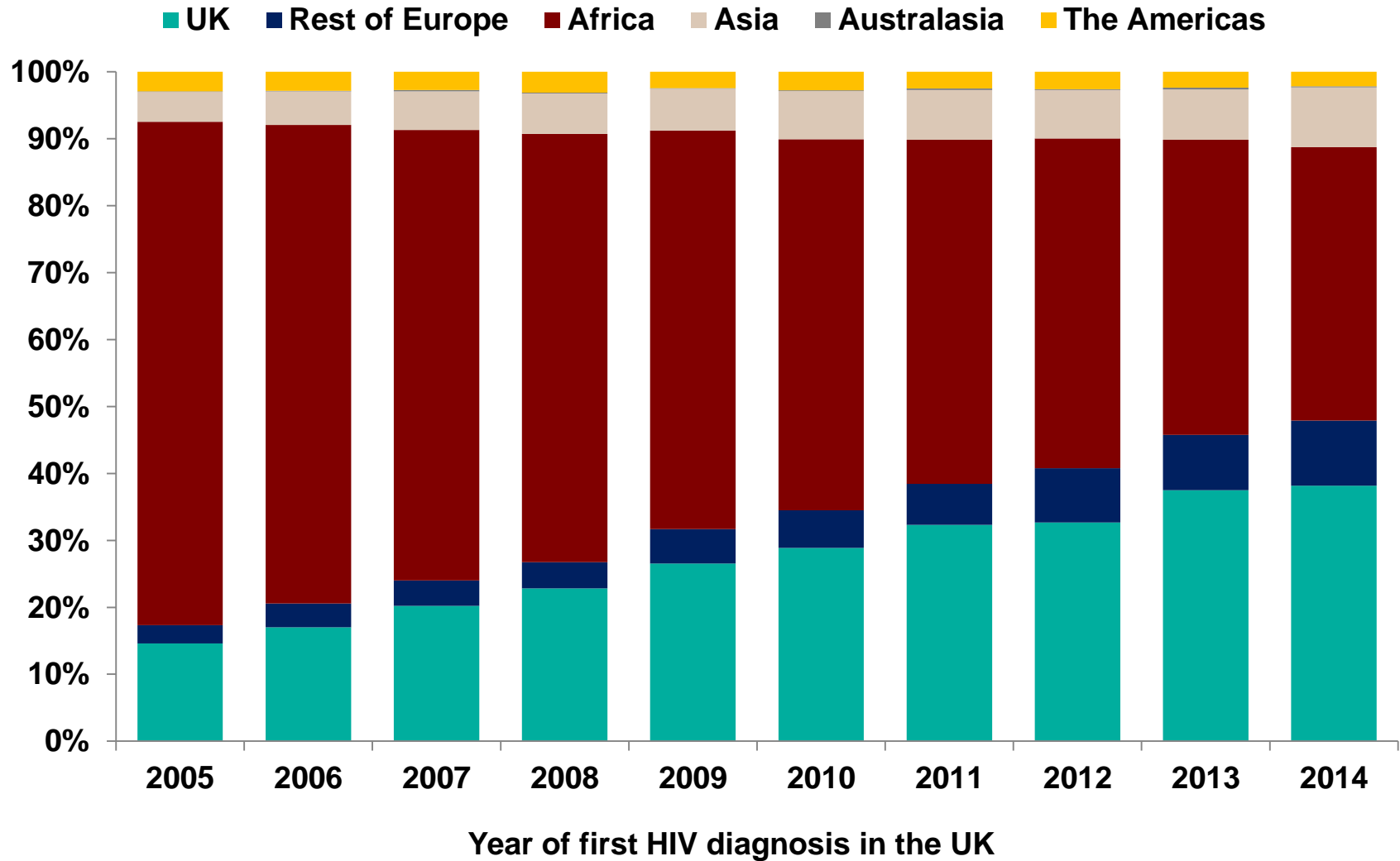


Proportion of men who have sex with men newly diagnosed with HIV by probable world region where HIV was acquired: United Kingdom, 2005-2014



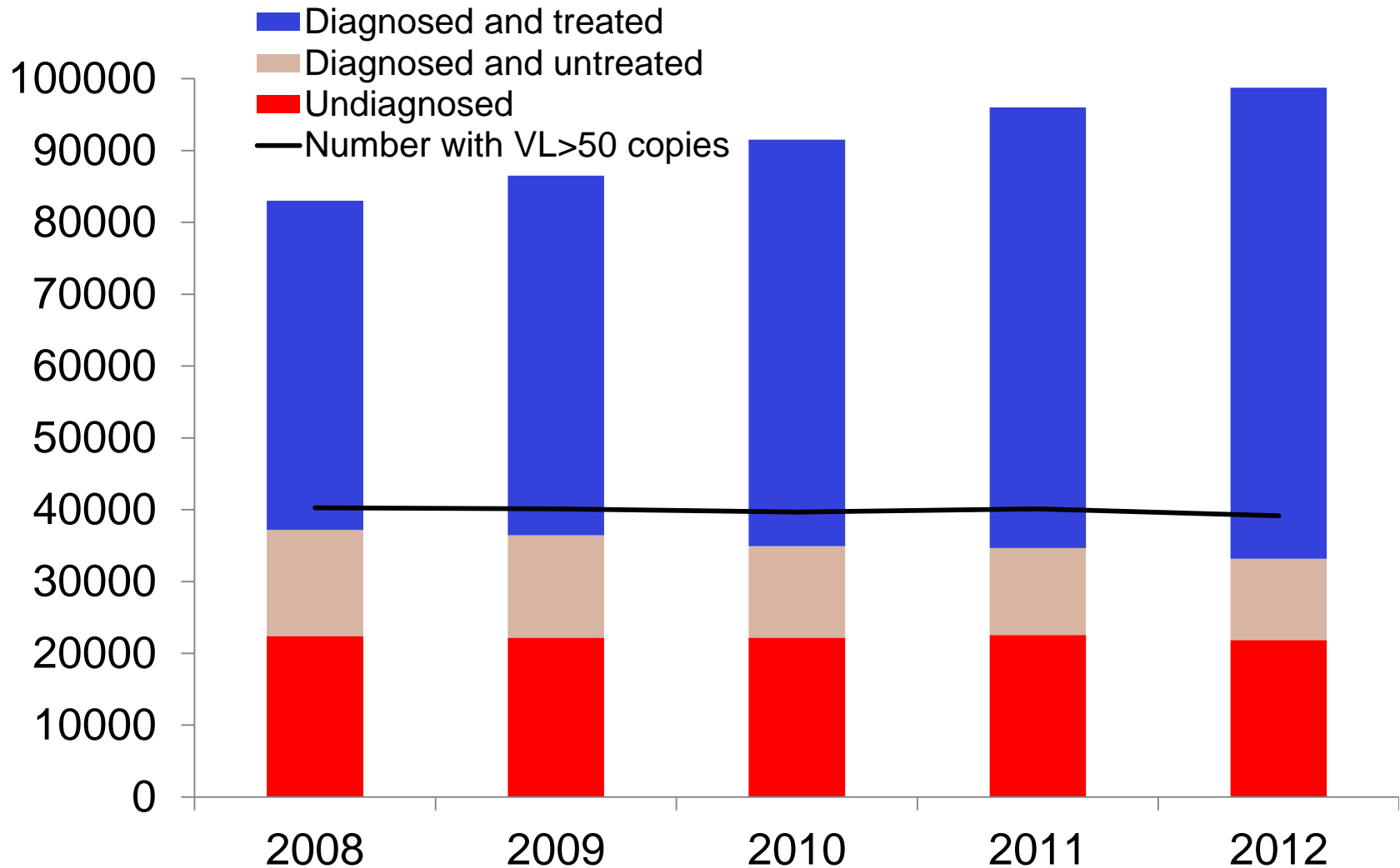


Proportion of heterosexual men and women newly diagnosed with HIV by probable world region where HIV was acquired: United Kingdom, 2005-2014



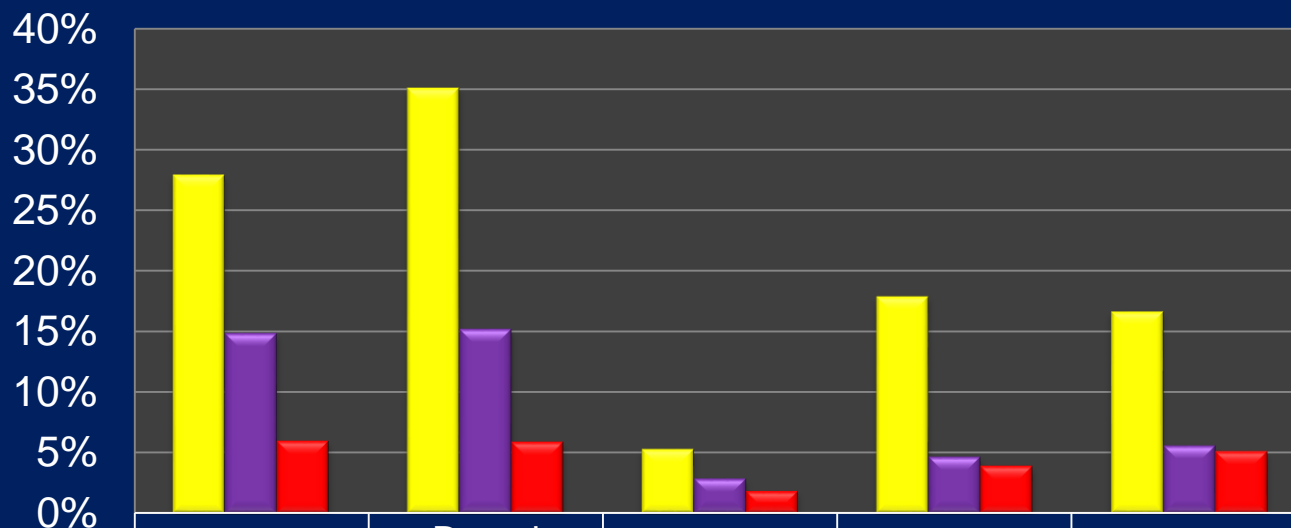
Excludes people with unknown country of HIV acquisition or abroad not specified

People living with HIV by diagnostic and treatment status, and number with detectable viral load, UK, 2006-2012





Anticipated and experienced stigma in the last 12 months (N=1576)



	GP	Dental practice	GUM clinic	Outpatient	Inpatient
■ Worried about being treated differently	28%	35%	5%	18%	17%
■ Avoided seeking care	15%	15%	3%	5%	6%
■ Felt refused or delayed treatment	6%	6%	2%	4%	5%



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Acknowledgements

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.