



Public Health
England

CASCADISTA... into the pond....





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England

Acknowledgments

Thank you to patients for their time, patience and contribution to our understanding and control of the HIV epidemic

Thank you to clinicians, health advisors, nurses and microbiologists for contribution to clinical care, research and surveillance

Thank you to the researchers from all disciplines for shedding the light

Thank you to the politicians, commissioners and policy makers who are committed to tackling HIV and health inequalities

Thank you to the HIV team at PHE



Warning:

This presentation contains

SURVEILLANCE data

But

NO CASCADE !

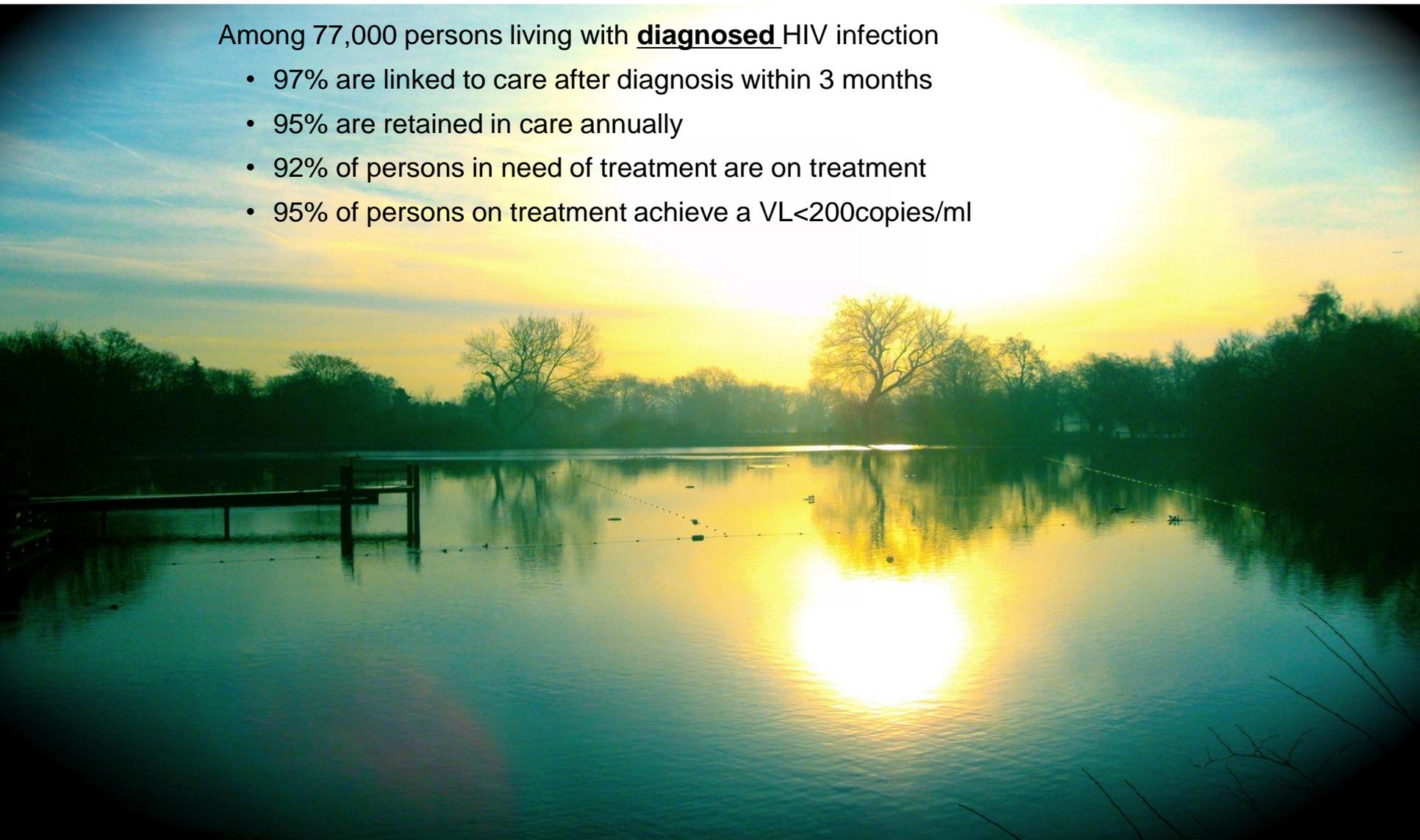


Continuum of care in the United Kingdom

The pond...

Among 77,000 persons living with **diagnosed** HIV infection

- 97% are linked to care after diagnosis within 3 months
- 95% are retained in care annually
- 92% of persons in need of treatment are on treatment
- 95% of persons on treatment achieve a VL<200copies/ml





But...shifting to the left...

- 25,000 persons remain undiagnosed (and half are diagnosed late)
- Testing rates are improving but relatively low
- 85% of **all** persons diagnosed are on treatment, 76% of those diagnosed are virally suppressed
- Viral suppression for all persons living with HIV
 - 58% (<50 copies)
 - 63% (<200 copies)
 - 66% (<15000 copies)
- High transmission rates among MSM
- (difficult to quantify among hets)

Estimated annual HIV incidence in MSM: E&W 2001-2010

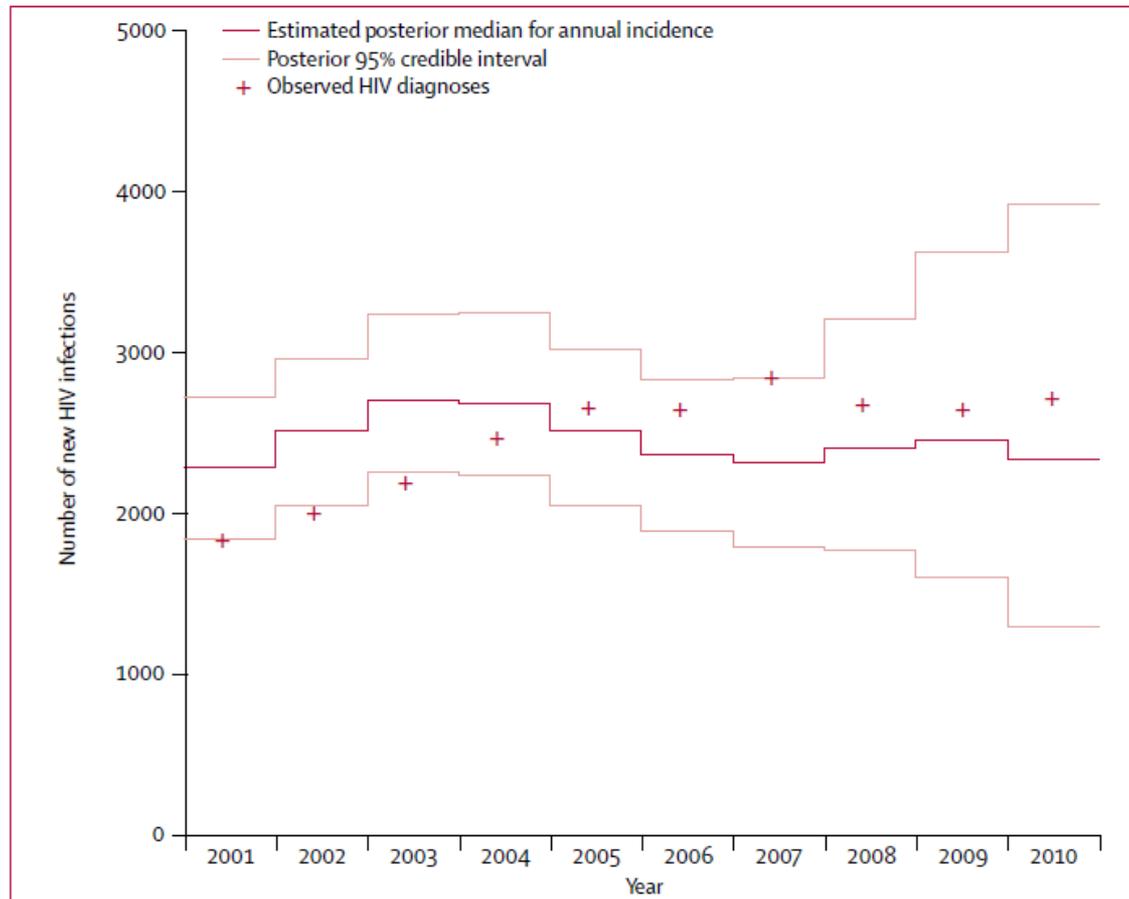
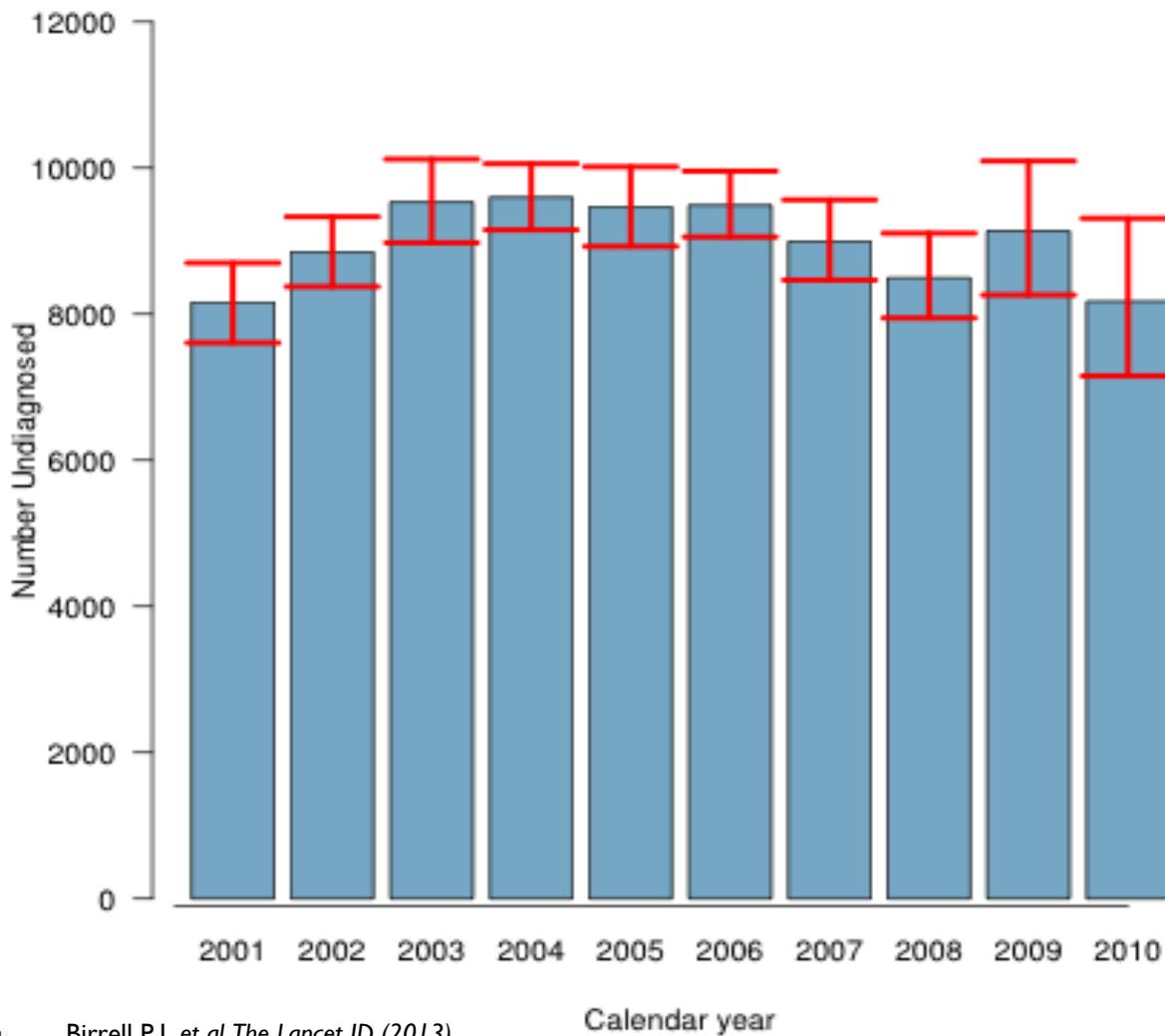


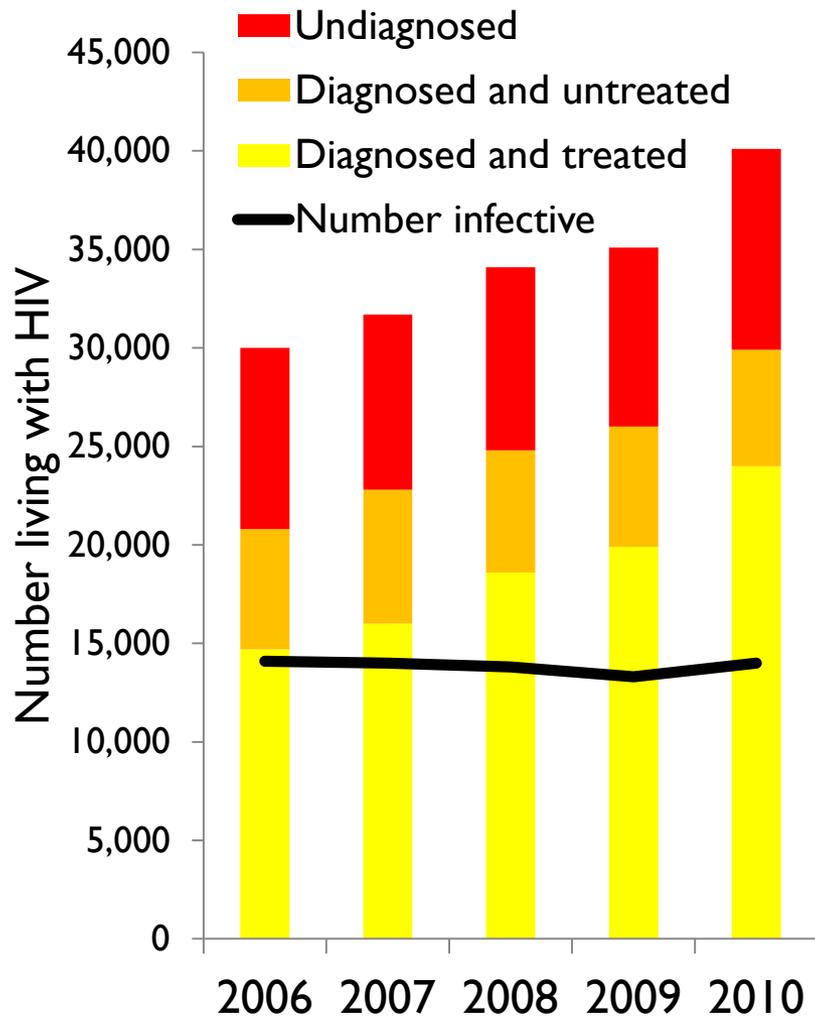
Figure 1: Annual numbers of new HIV infections for men who have sex with men in England and Wales

Birrell P.J. *et al.* HIV incidence in men who have sex with men in England and Wales 2001–10: a nationwide population study. *The Lancet ID* 2013

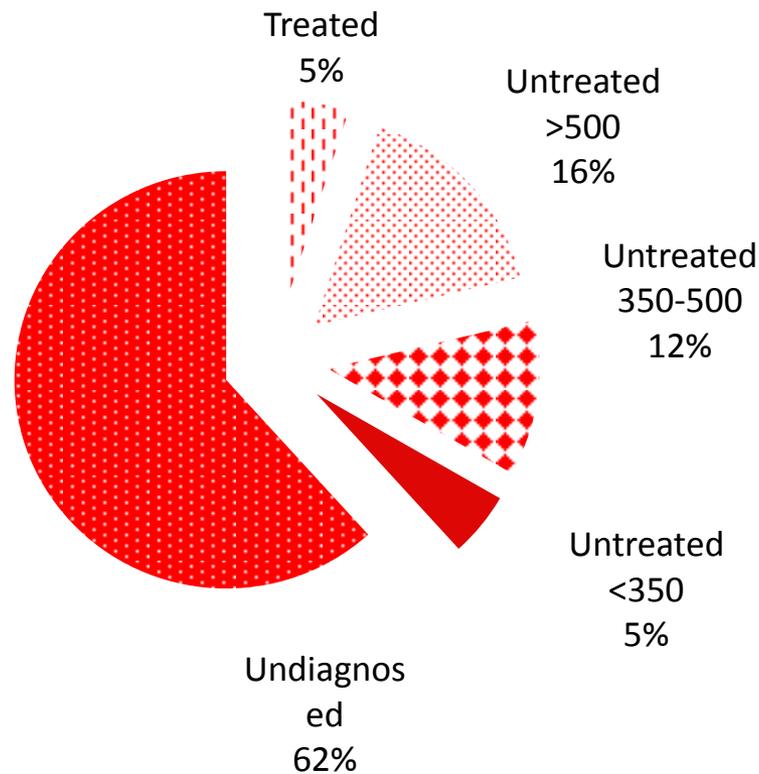
Estimated undiagnosed infections in MSM; England & Wales



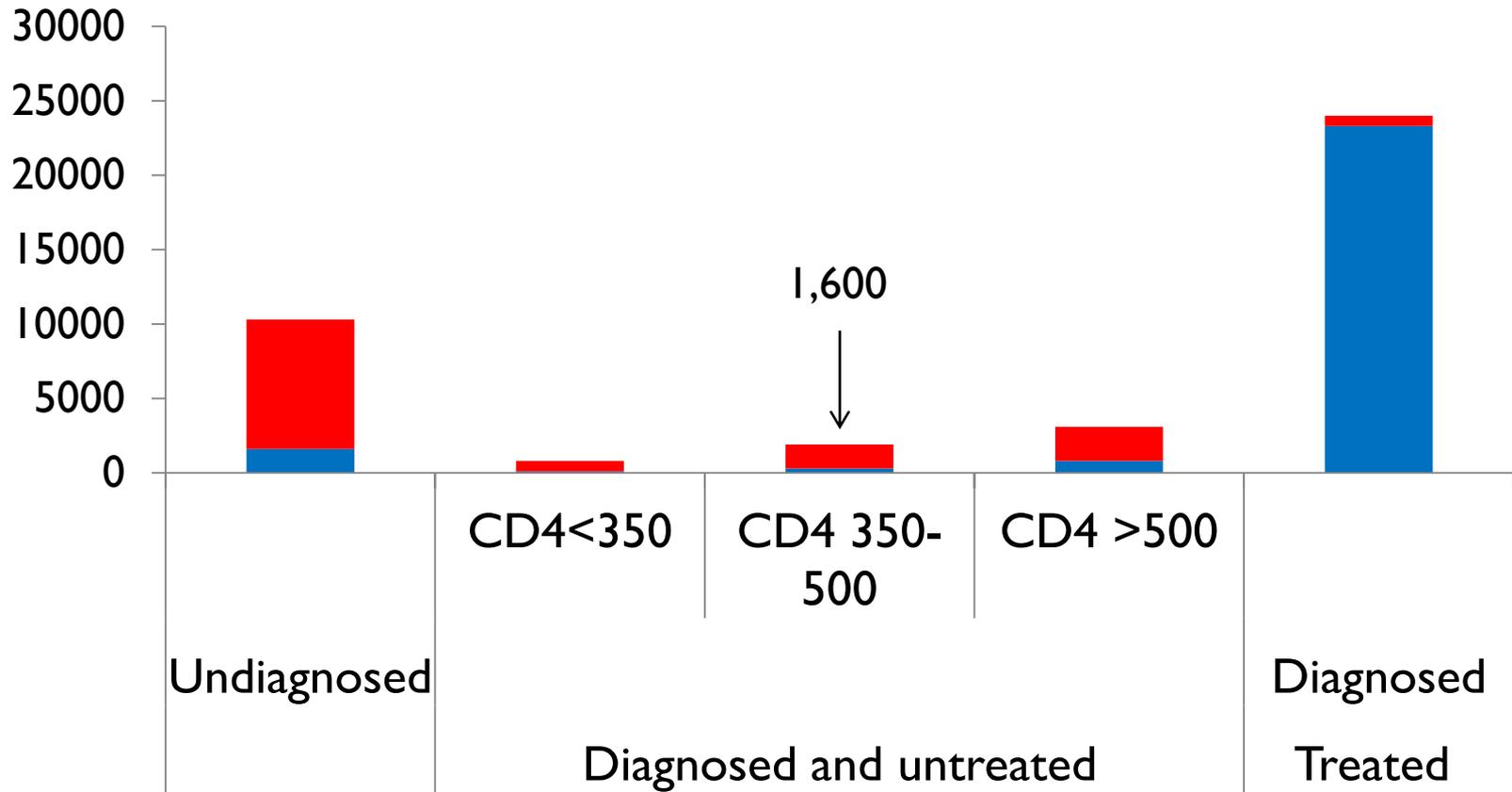
Why is HIV transmission continuing in MSM?



Among 14 000 men who are infectious

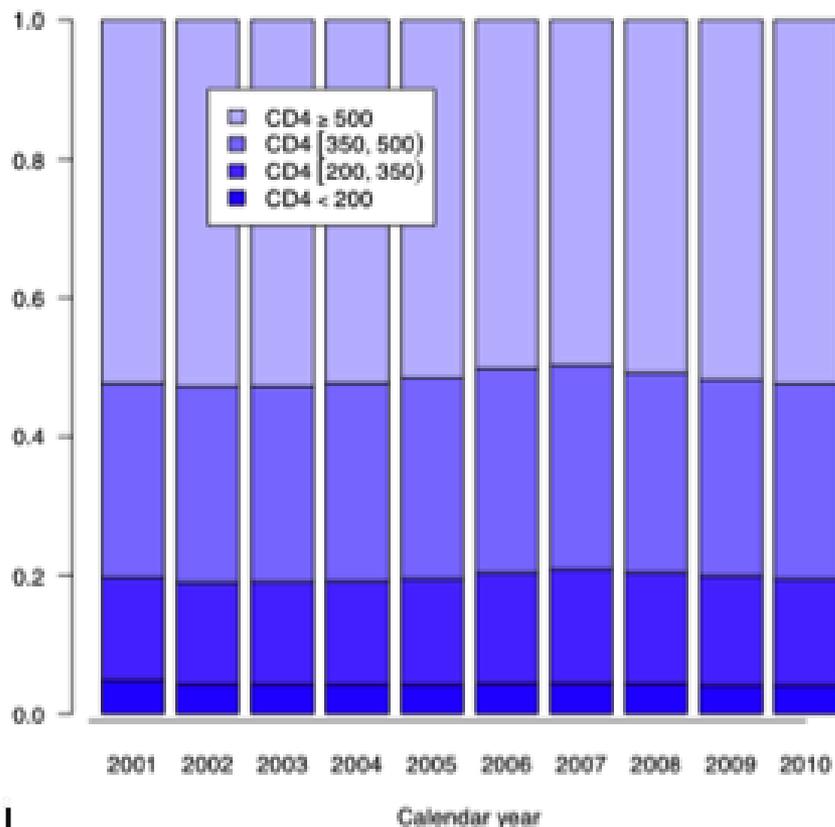


Number of HIV-infected MSM, and proportion infective (VL>1500 copies) by diagnostic and treatment status, UK: 2010

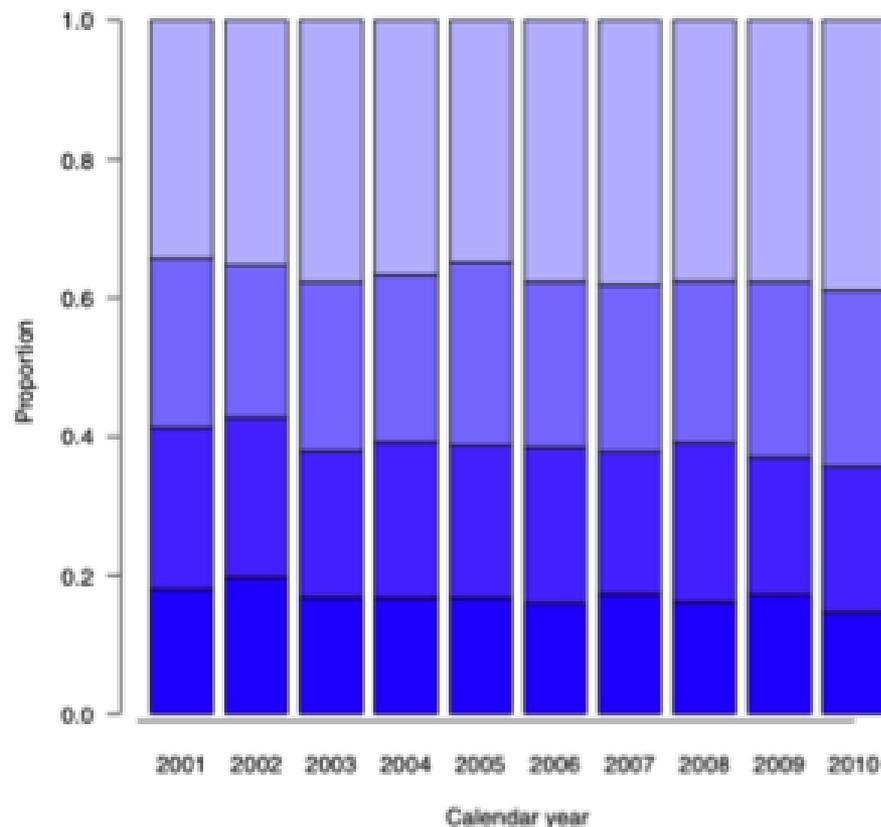


CD4 count distribution among undiagnosed and newly diagnosed MSM, England and Wales

(b) Distribution of undiagnosed by CD4 count



(c) Distribution of CD4 counts at diagnosis





The need for good surveillance data

Routine collection of data

- From those newly diagnosed
- From those accessing care

It does not have to be complicated data set but requires effort and incentives from data collection point to collation and analysis

- In the UK, collection of data is critical to understanding and informing the HIV response, policy development and auditing of clinical and public health guidelines
- Important stakeholders, patients, clinicians, microbiologists, commissioners and public health

HIV variables

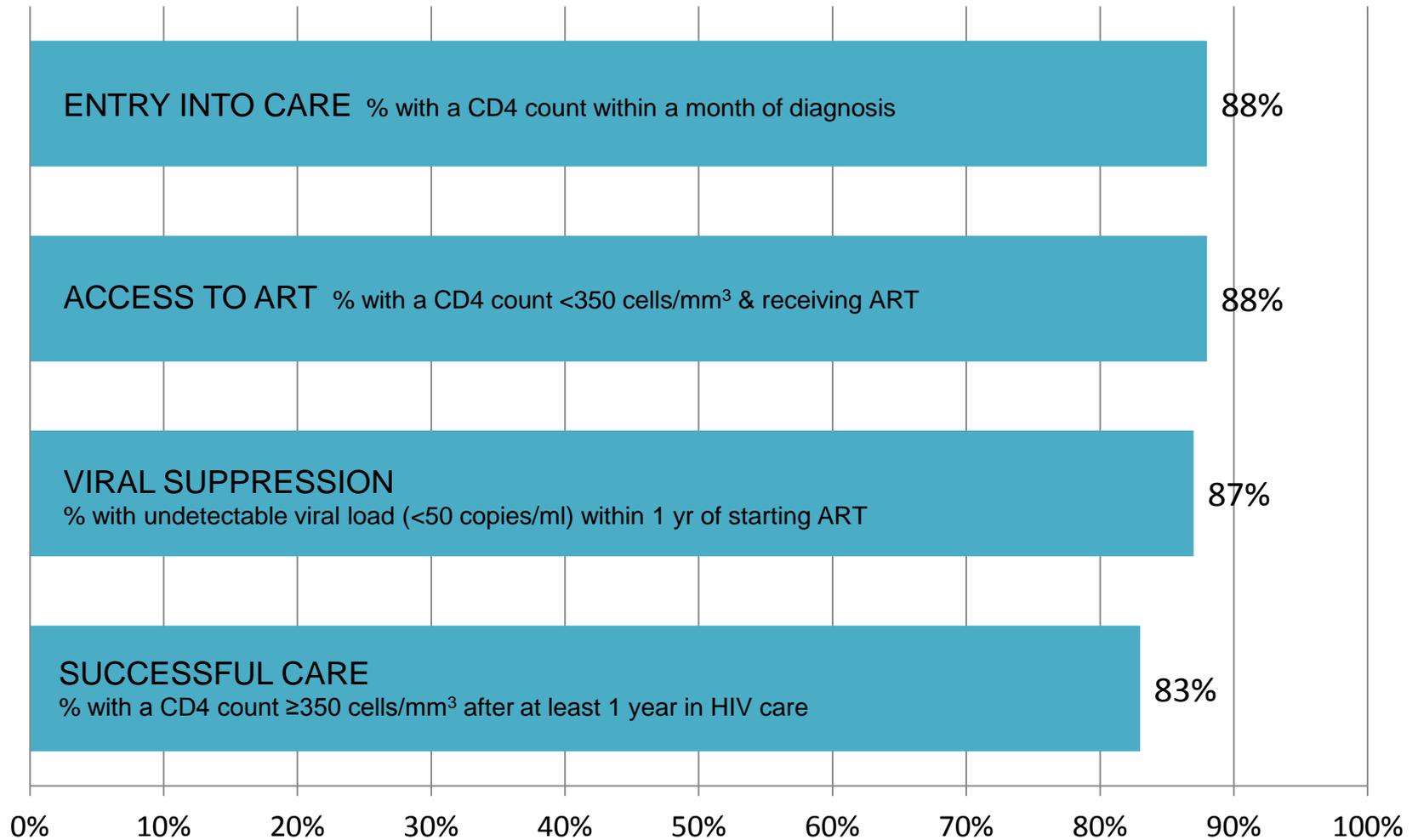
Collected once at diagnosis and once a year among patients in HIV care

	Variable Name
Demographics	Age, gender, ethnicity, residence code
Service information	Site code, Clinic number
Diagnosis information	Date of diagnosis, Date first seen at clinic, Route of transmission
Treatment information	Start date on ART, Receiving ART at date last seen
Clinical information	CD4 and VL at date last seen



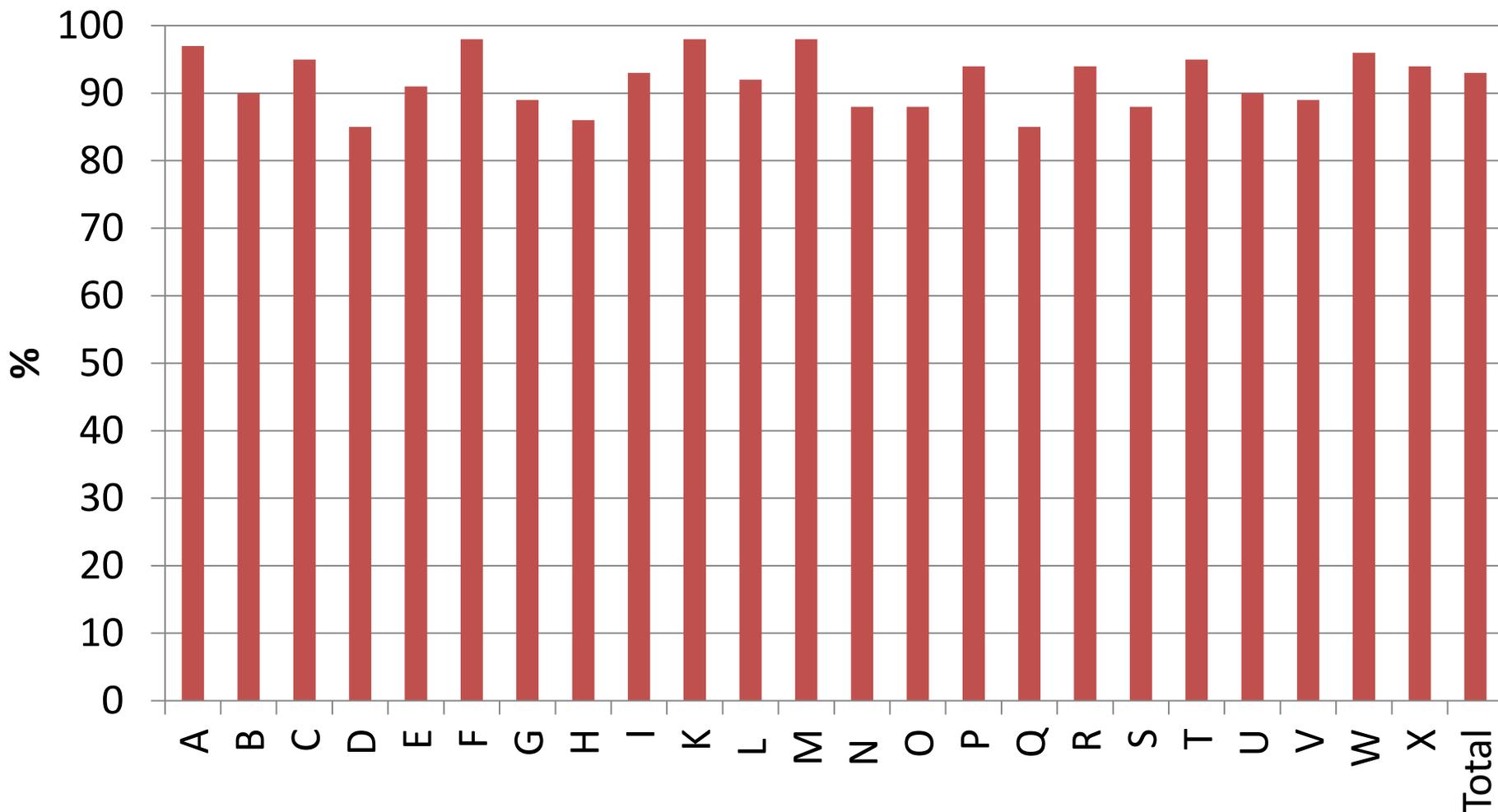


Quality of HIV care in adults United Kingdom, 2011





Proportion of patients virally suppressed (VL<50 copies/mL) within 12 months of ART initiation, by service, London: 2011



United Kingdom

Identifying differences in quality of care across population groups





adults living with HIV: United Kingdom, 2011

	Total HIV infected	% diagnosed	Total HIV diagnosed
All adults	94,900	77%	73,000
Men 15 – 44 yrs	36,400	70%	26,200
Men 45+	26,600	85%	22,500
Women 15 – 44	23,300	72%	17,100
Women 45+	8,500	88%	7,100
Men who sex with men	40,100	80%	31,300
Heterosexual men	20,600	70%	13,300
Heterosexual women	30,800	75%	22,300
People who inject drugs	2,300	83%	1,600



Treatment cascade of adults living with HIV: United Kingdom, 2011

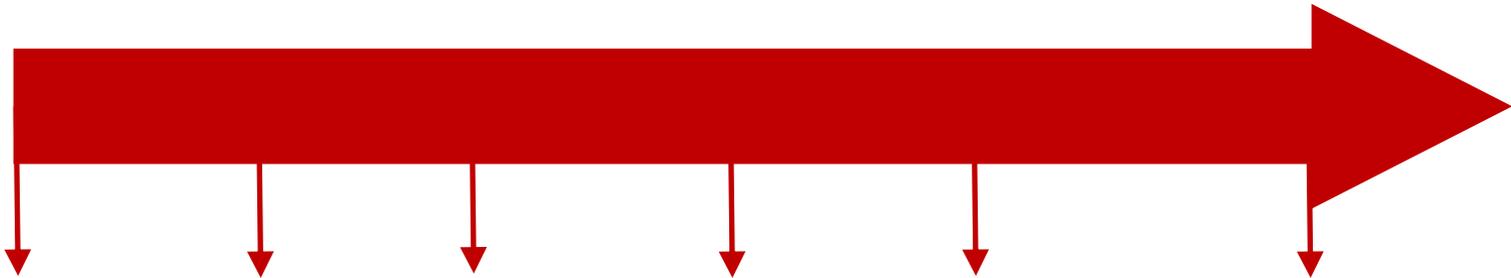
	Total HIV diagnosed	% diagnosed Retained in care	% diagnosed on ART	% diagnosed VL<50
All adults	73,000	95%	84%	76%
Men 15 – 44 yrs	26,200	94%	77%	69%
Men 45+	22,500	97%	91%	89%
Women 15 – 44	17,100	94%	81%	72%
Women 45+	7,100	96%	90%	83%
Men who sex with men	31,300	97%	82%	76%
Heterosexual men	13,300	95%	88%	77%
Heterosexual women	22,300	95%	85%	76%
People who inject drugs	1,600	94%	85%	71%



FIRST YEAR OF HIV DIAGNOSIS

First Diagnosis

12 months



Late
Diagnosis

Clinical
Aids

Link to
Care

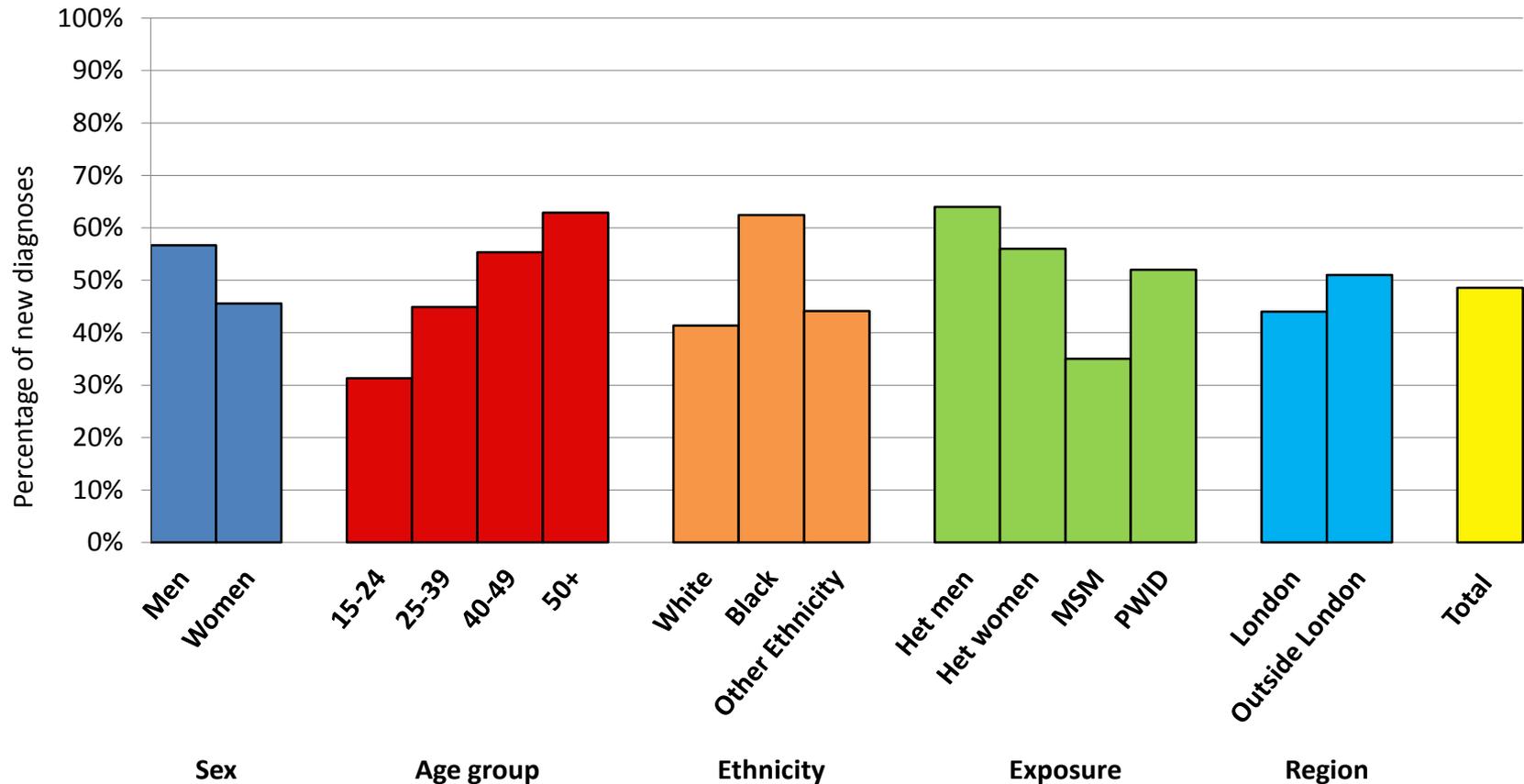
ART
uptake

Viral
Suppression

Alive /
Dead



Late HIV diagnosis: Proportion* of adults diagnosed with a CD4 count <350 cells ,UK, 2011 N= 4 910

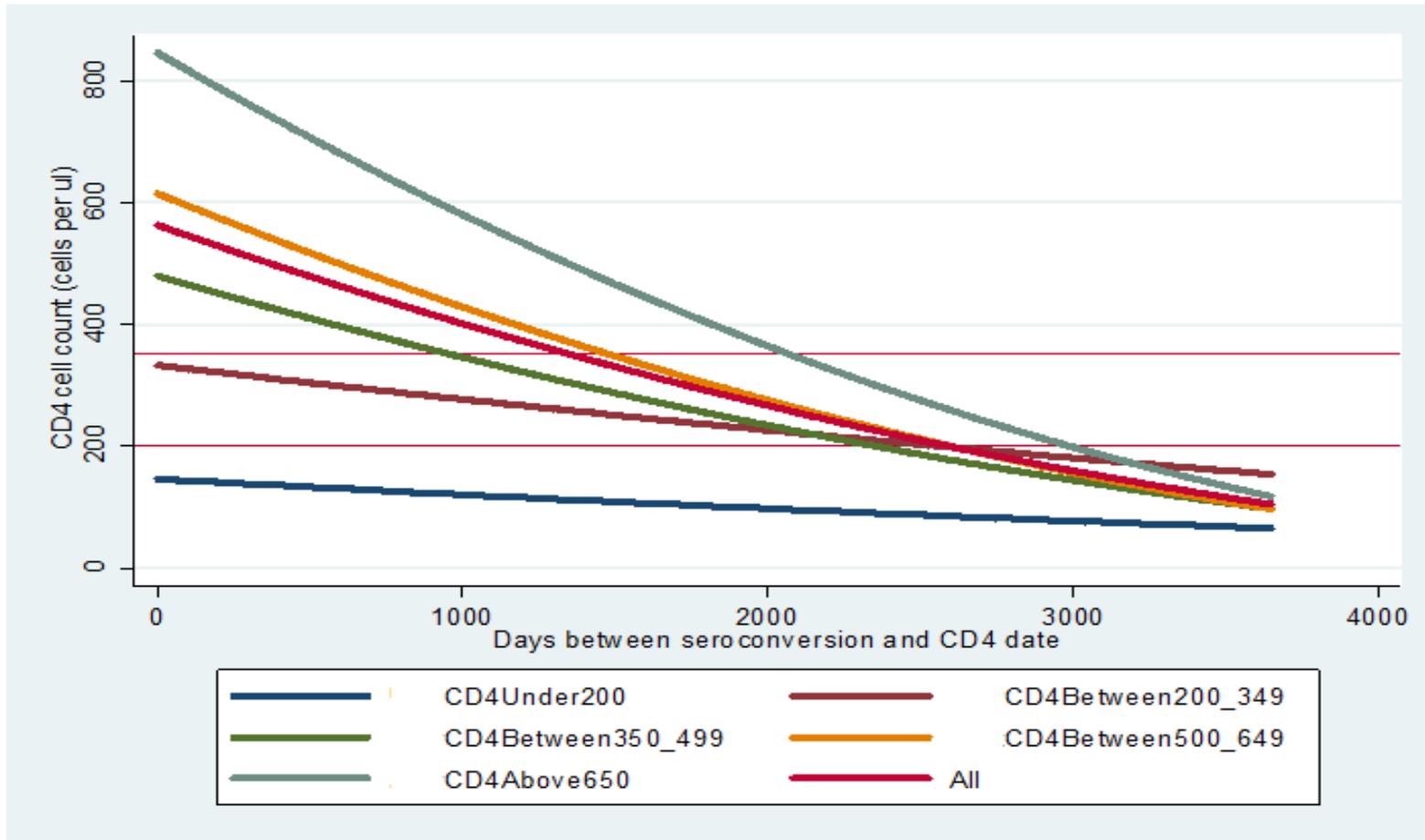


Delpech et al, *HIV medicine*, 2013

* Excludes 1300 patients diagnosed in 2011, with CD4 counts not available within three months of HIV diagnosis.

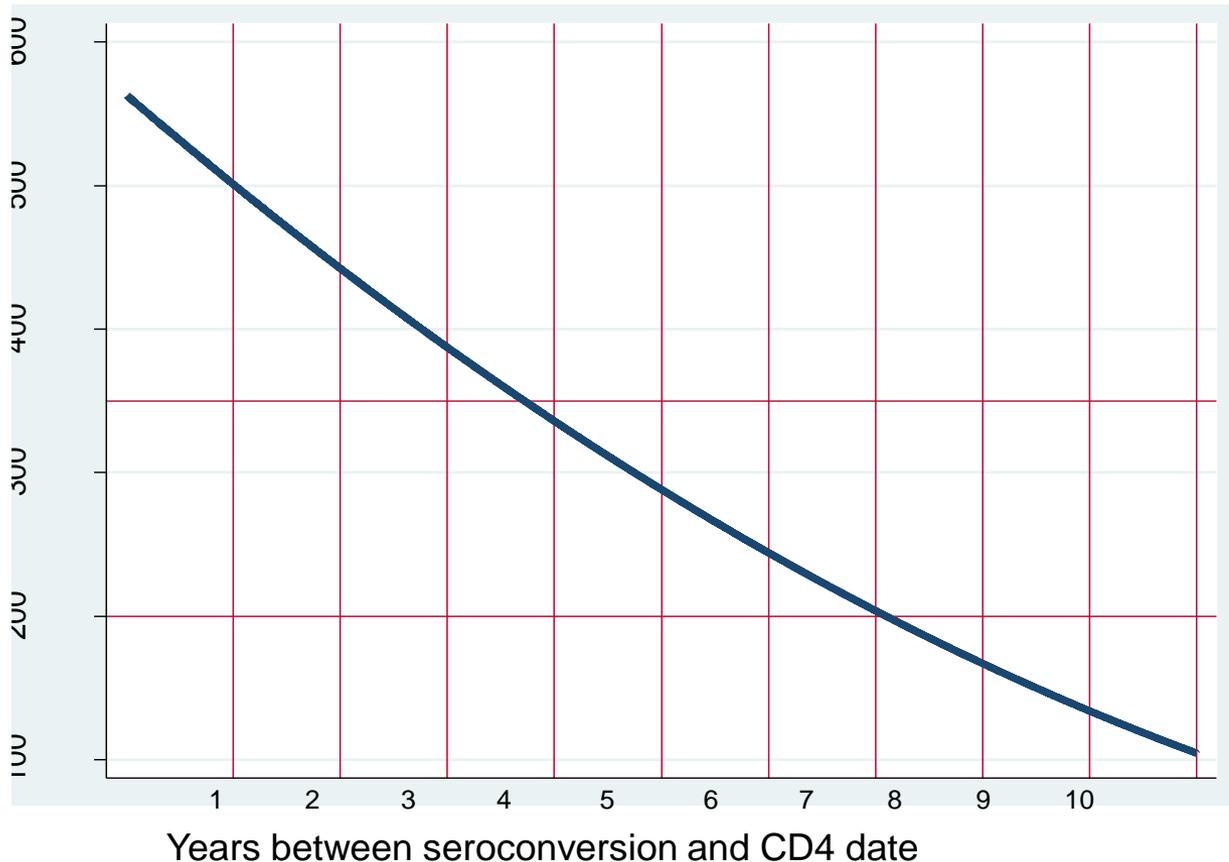


CD4 decline after seroconversion among newly-diagnosed adults by first CD4 cell count: E, W&NI, 1997 - 2010





CD4 decline after seroconversion among newly-diagnosed adults: E, W&NI, 1997 - 2010



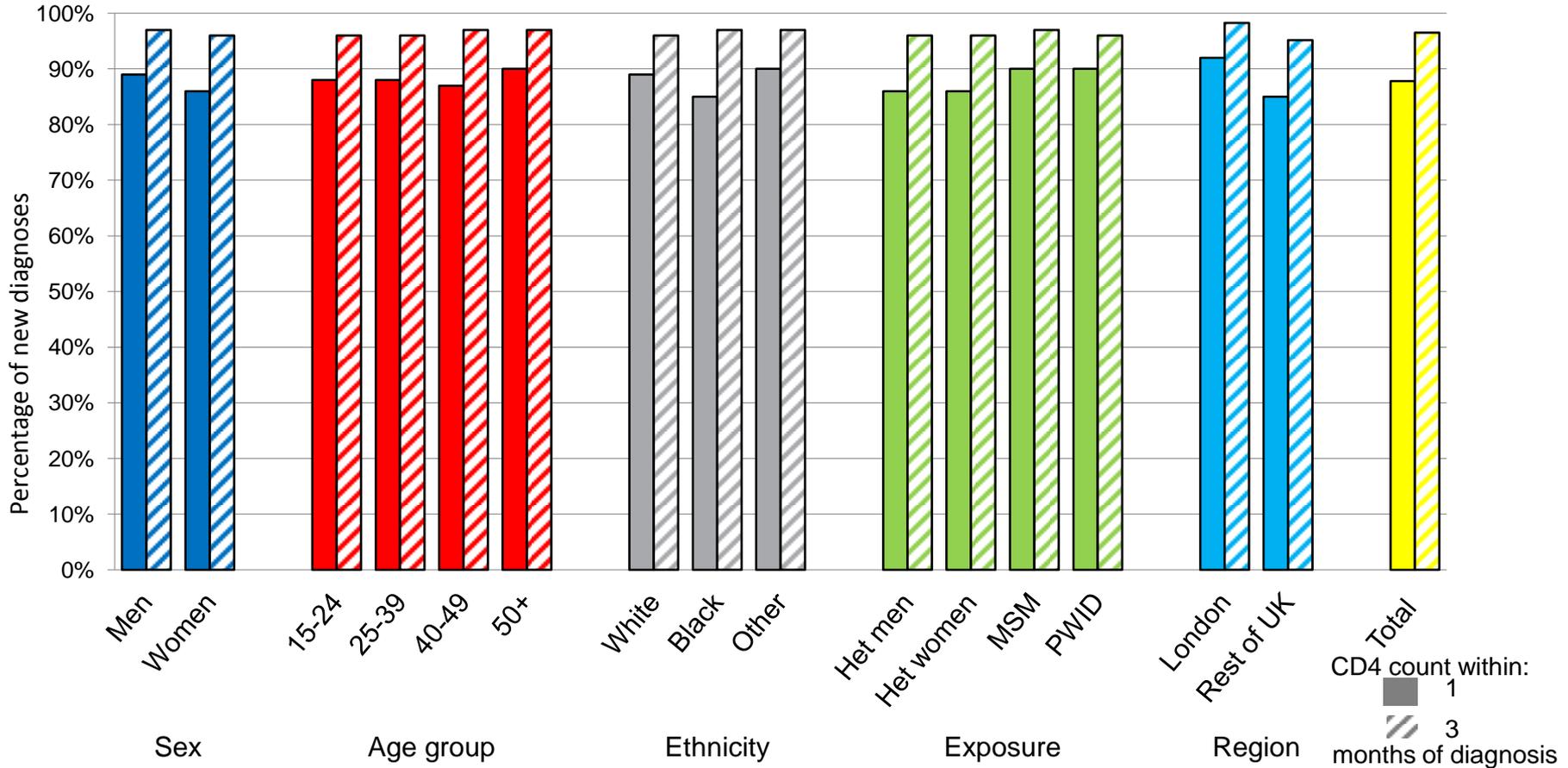
- CD4 counts and dates of 3,133 ART naïve patients diagnosed in E,W&NI (1997-2010) who had a previous negative HIV test and positive test within 2 years

- Average CD4 decline in a year is 65 counts
- (CASCADE: 50 – 70)

- Adults with an estimated CD4 <350 at seroconversion: 17%



Link to care: Proportion* of adults with CD4 count within 1 and 3 months of HIV diagnosis, UK, 2011

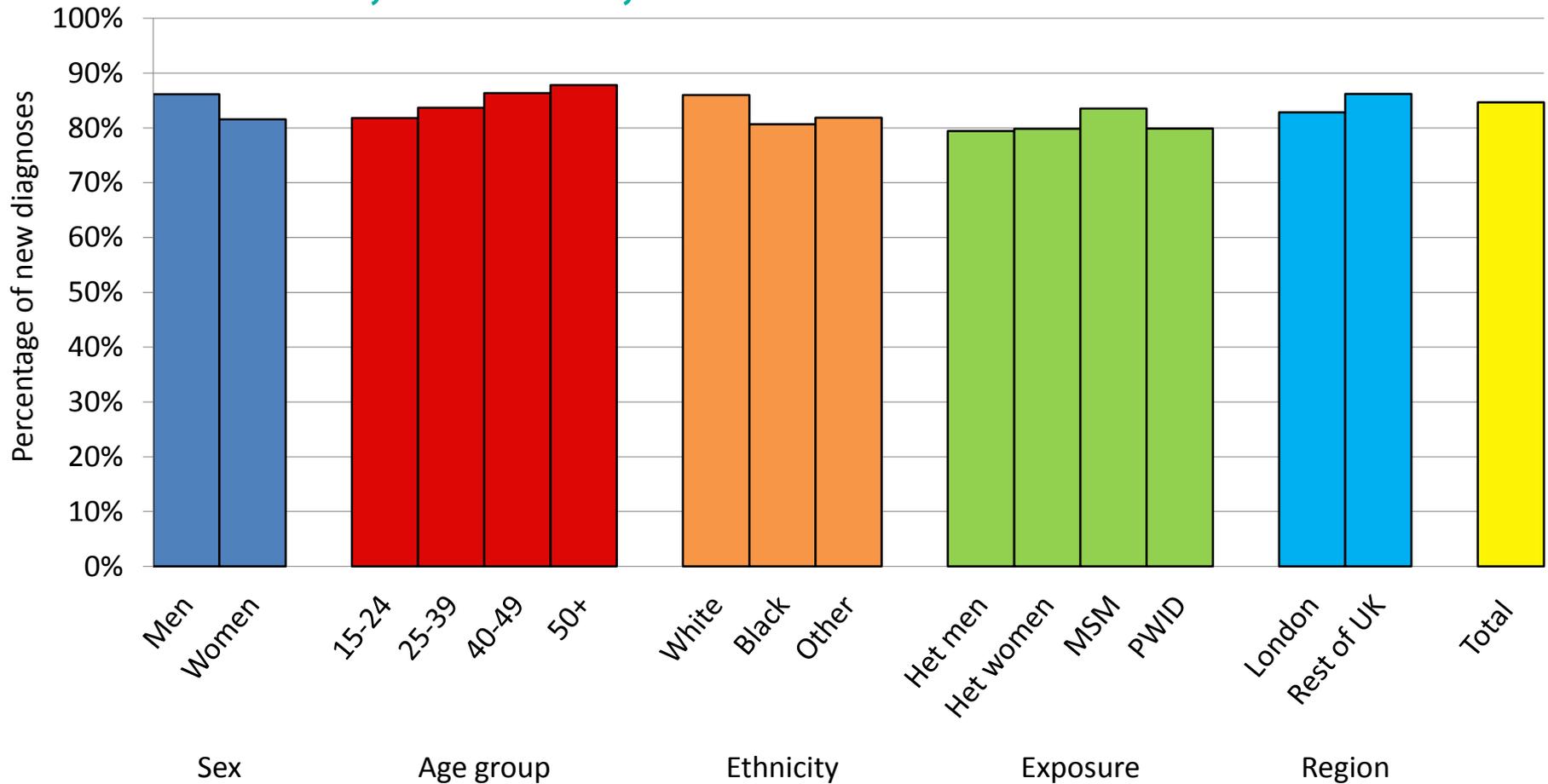


* Excludes 1123 patients diagnosed in 2011, with CD4 counts not available within twelve months of HIV diagnosis.

Delpech et al, *HIV medicine*, 2013



Retention in HIV care: Proportion* of adults diagnosed seen for care in the following year, UK, 2010-2011, N= 4 940

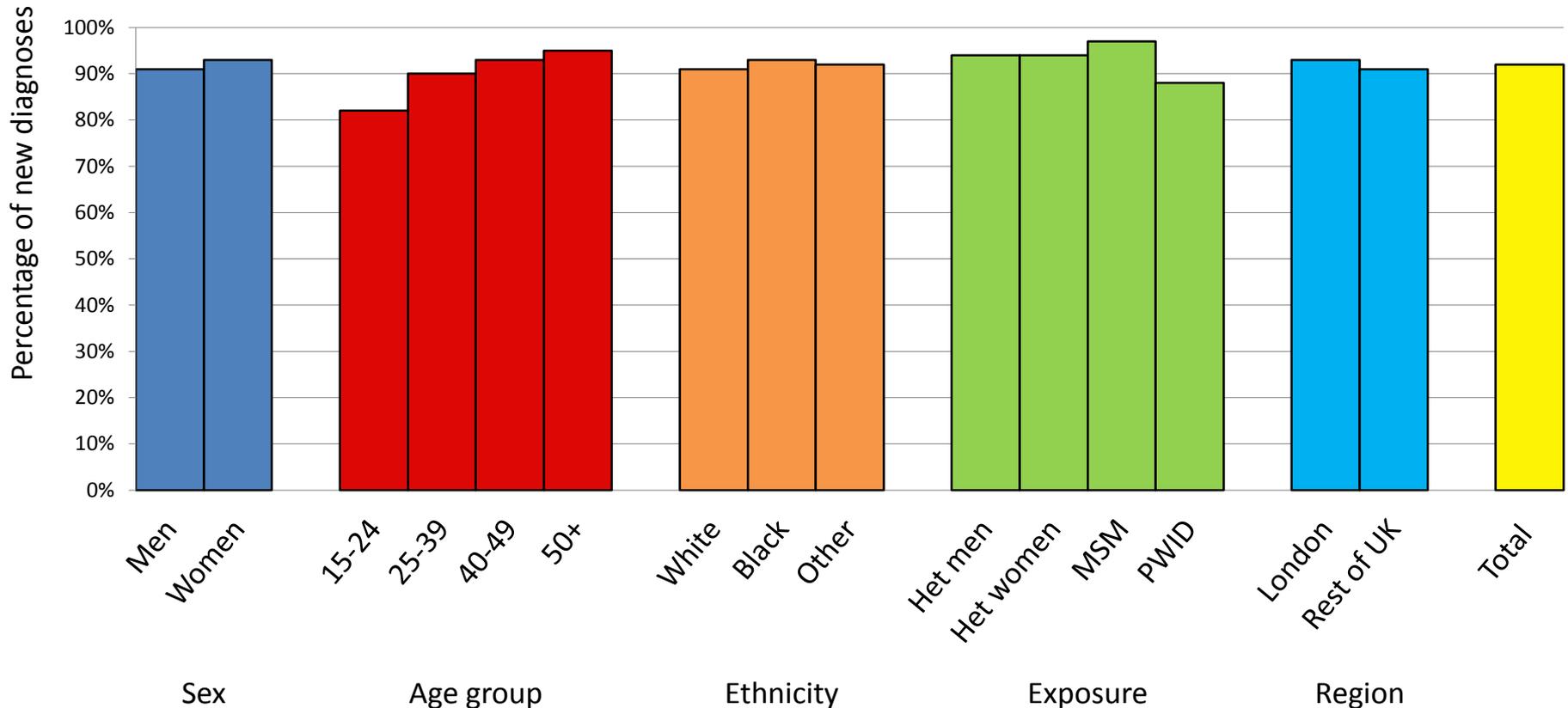


* Excludes 199 patients diagnosed in 2010 who subsequently died.

Delpech et al, *HIV medicine*, 2013



Treatment guidelines: Proportion* of adults diagnosed late receiving ART the following year, UK, 2010-2011

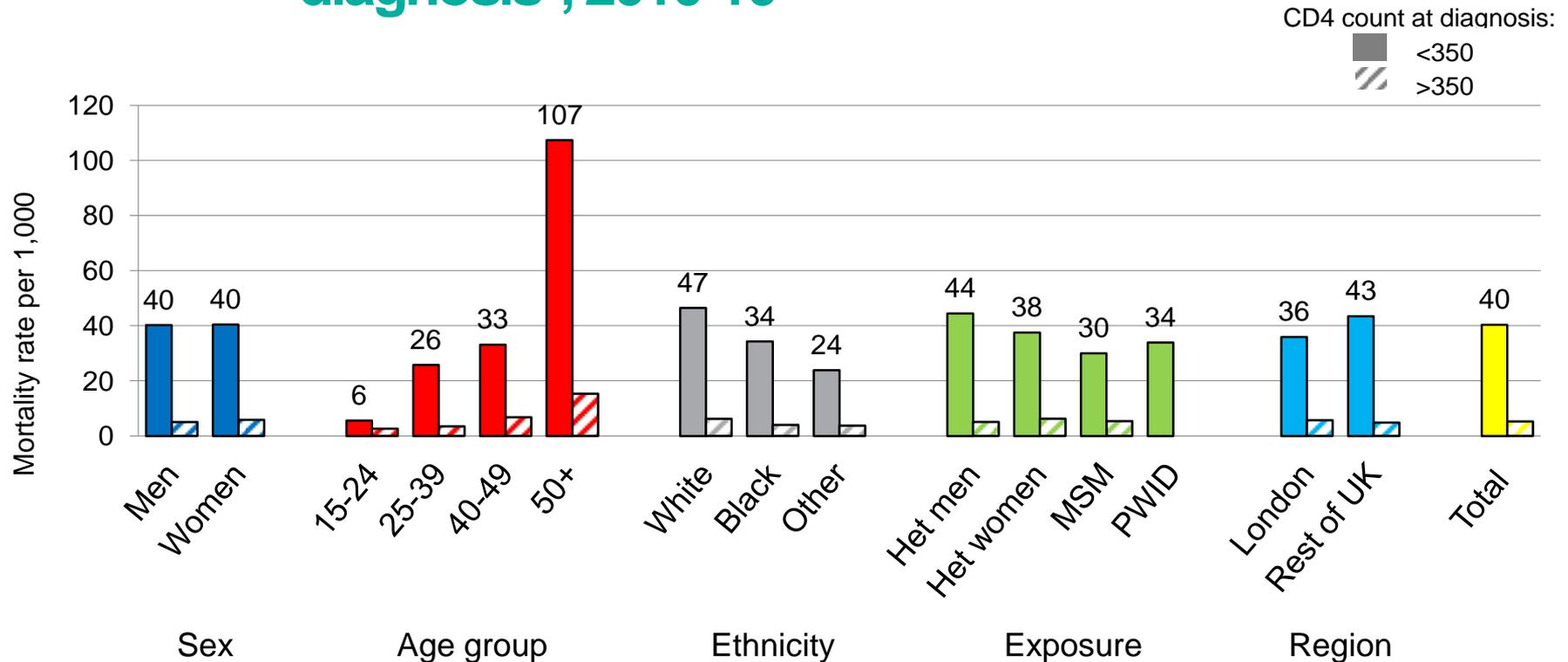


* Excludes 1067 patients diagnosed in 2010, with CD4 counts not available within three months of HIV diagnosis.

Delpech et al, *HIV medicine*, 2013



Short-term mortality: Adult deaths within 12 months of HIV diagnosis, by CD4 at diagnosis*, 2010-10



* Excludes 1067 patients diagnosed in 2010, with CD4 counts not available within three months of HIV diagnosis.



Next steps....Patient experience

Positive Voices: the national survey of people living with HIV

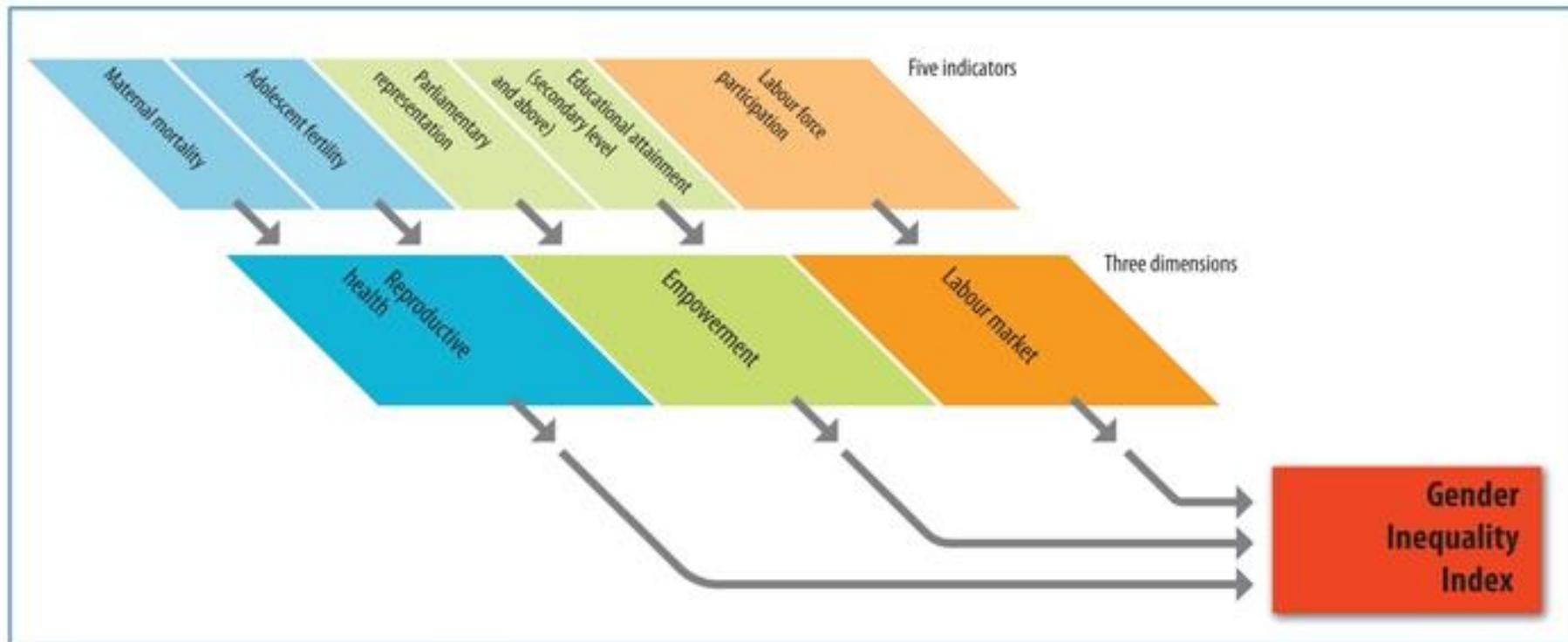
- Aim – to provide nationally representative data on the lives, experiences and healthcare needs of people with HIV,
- To improve understanding of the epidemiology of HIV, inform commissioning, drive improvements in specialist services, and stimulate further research
- Methods –
 - Phase 1 – FGDs with patient groups, semi-structured interviews with clinic staff, cognitive interviews (May – Sept 13)
 - Phase 2 – pilot RCT in 24-28 HIV clinics to test optimal recruitment method and patient incentive (Nov 13 – March 14)
 - Phase 3 – national roll-out in EW&NI (late 2014/early 2015)

SIRAH- survey of persons recently diagnosed and infected in HIV infection



Components of the Gender Inequality Index

GII—three dimensions and five indicators

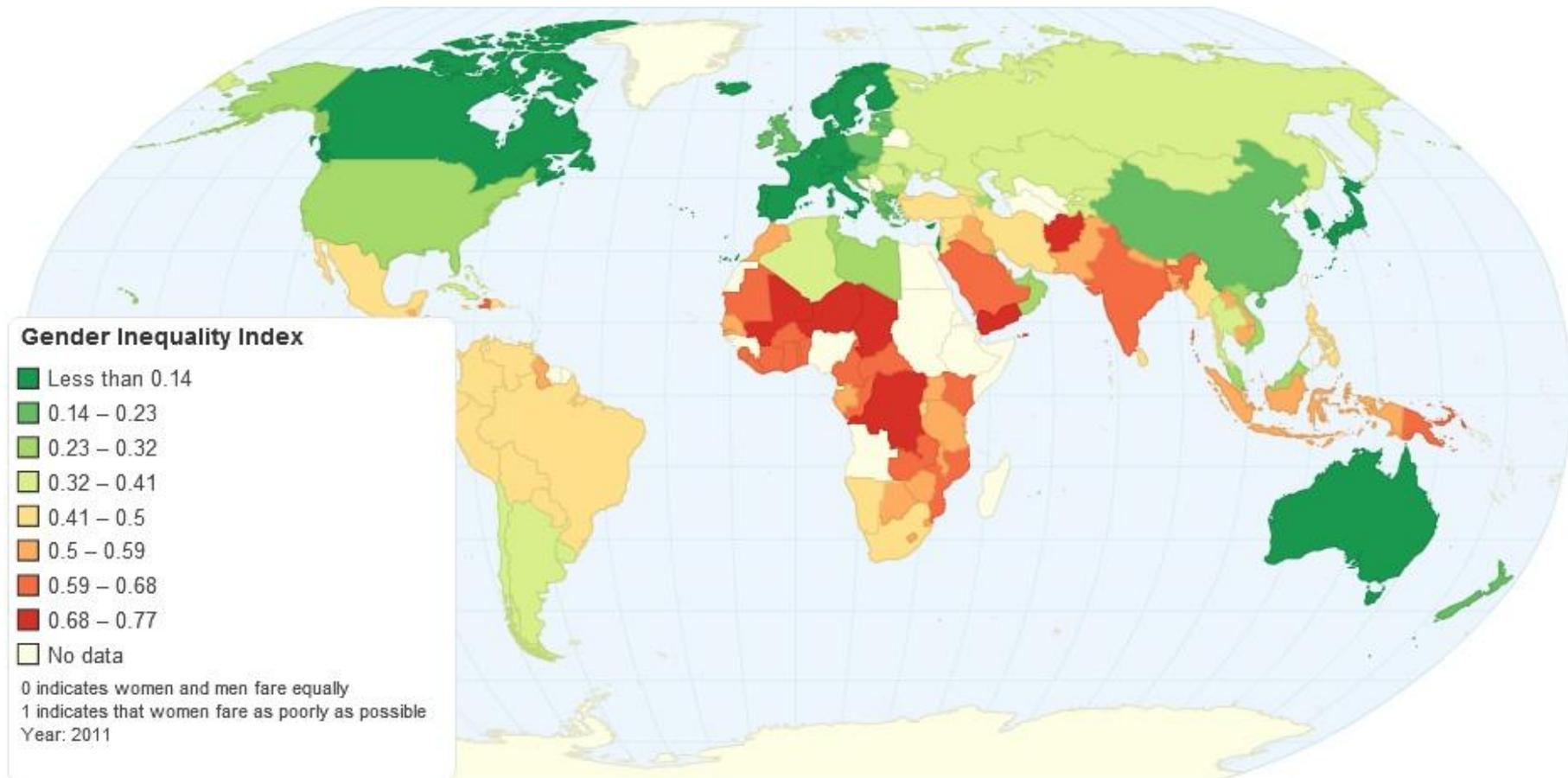


Note: The size of the boxes reflects the relative weights of the indicators and dimensions.

Source: HDRO.



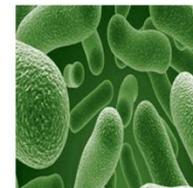
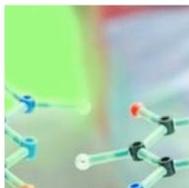
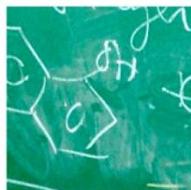
Tackling inequalities





Translation: from the test tube to real world

- How do we translate science into clinical and public health practice
- Involvement of all stakeholders – including the public health capacity
- Multidisciplinary approach
- Community mobilisation
- Good epidemiological and quality of care data
- A space to share practice – what works in prevention and health care delivery
- continued funding and sponsorship

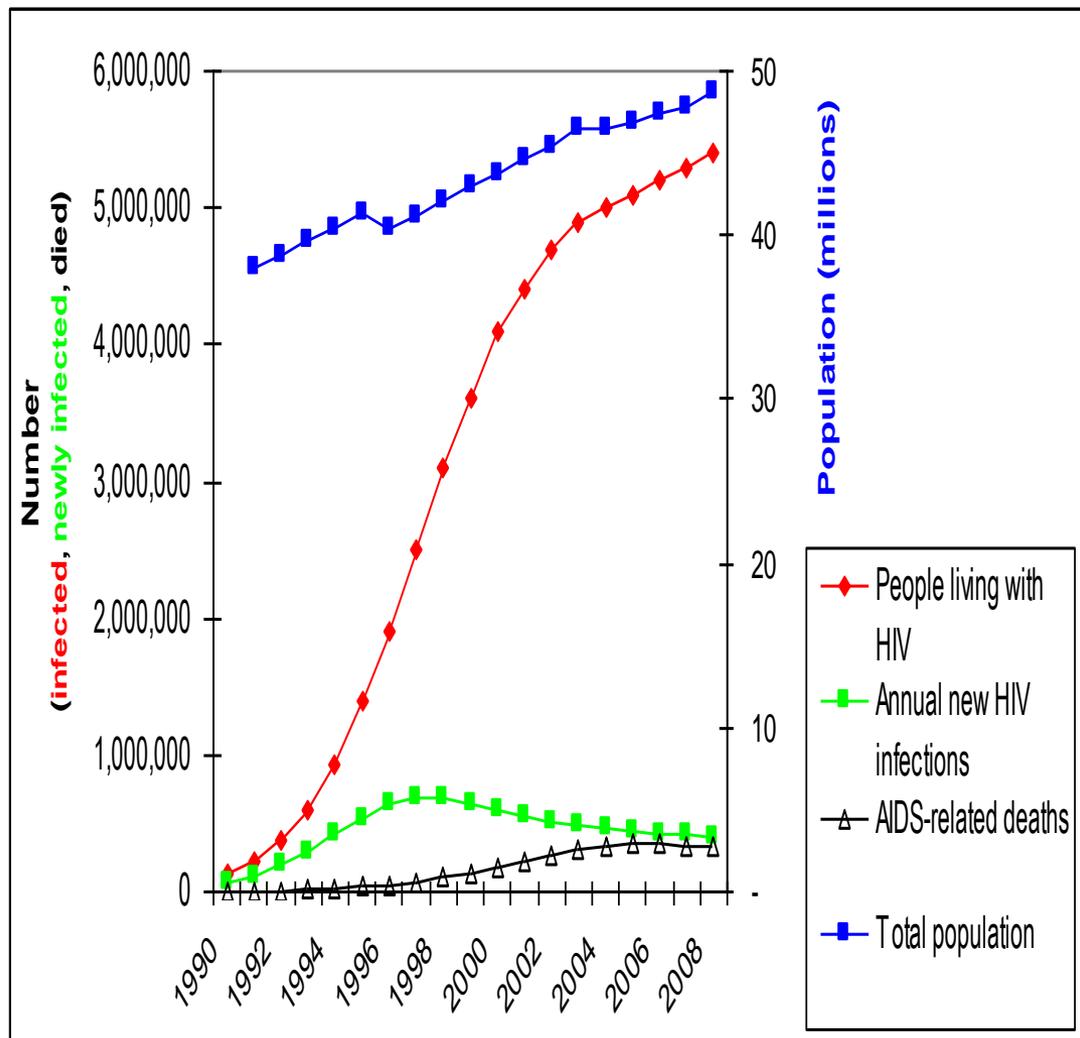


Collaboration between South Africa's NICD and PHE

Simbarashe Takuva, Adrian Punen
Centre for HIV and STIs,
National Institute for Communicable Diseases,
NHLS, Johannesburg.

Modelled numbers of PLHIV, annual new infections, AIDS-related deaths and total population size, adults aged 15-49

- 6.4 million people live with HIV in SA (2012)
- 5.8 to 6.0 million in 2011
- **Worldwide, one in six PLHIV live in SA**
- Reduced life expectancy
- Significant progress in scaling up some key interventions, with the main goals:
 - to reduce the HIV incidence rate by 50%, and
 - to expand the access to ART to 80% of people in need of ART



Background: Data Sources

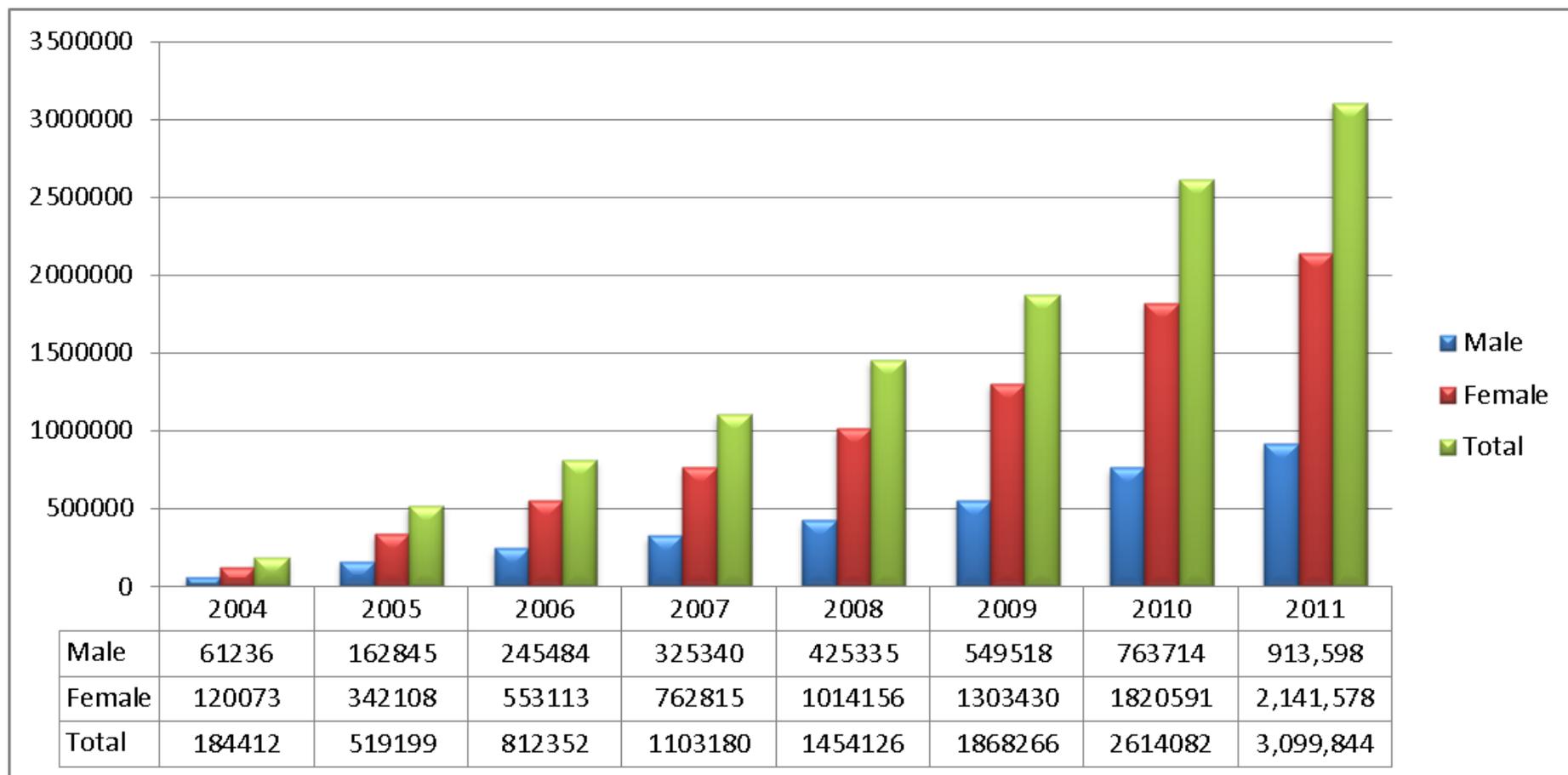
- Human Sciences Research Council (HSRC) Household Survey
- National Department of Health (DoH) Antenatal HIV and Syphilis Survey (ANSUR)
- Spectrum Aids Impact Model (SPECTRUM)
- National Health Laboratory Service (NHLS) Central Data Warehouse (CDW)

NHLS Data for HIV Surveillance

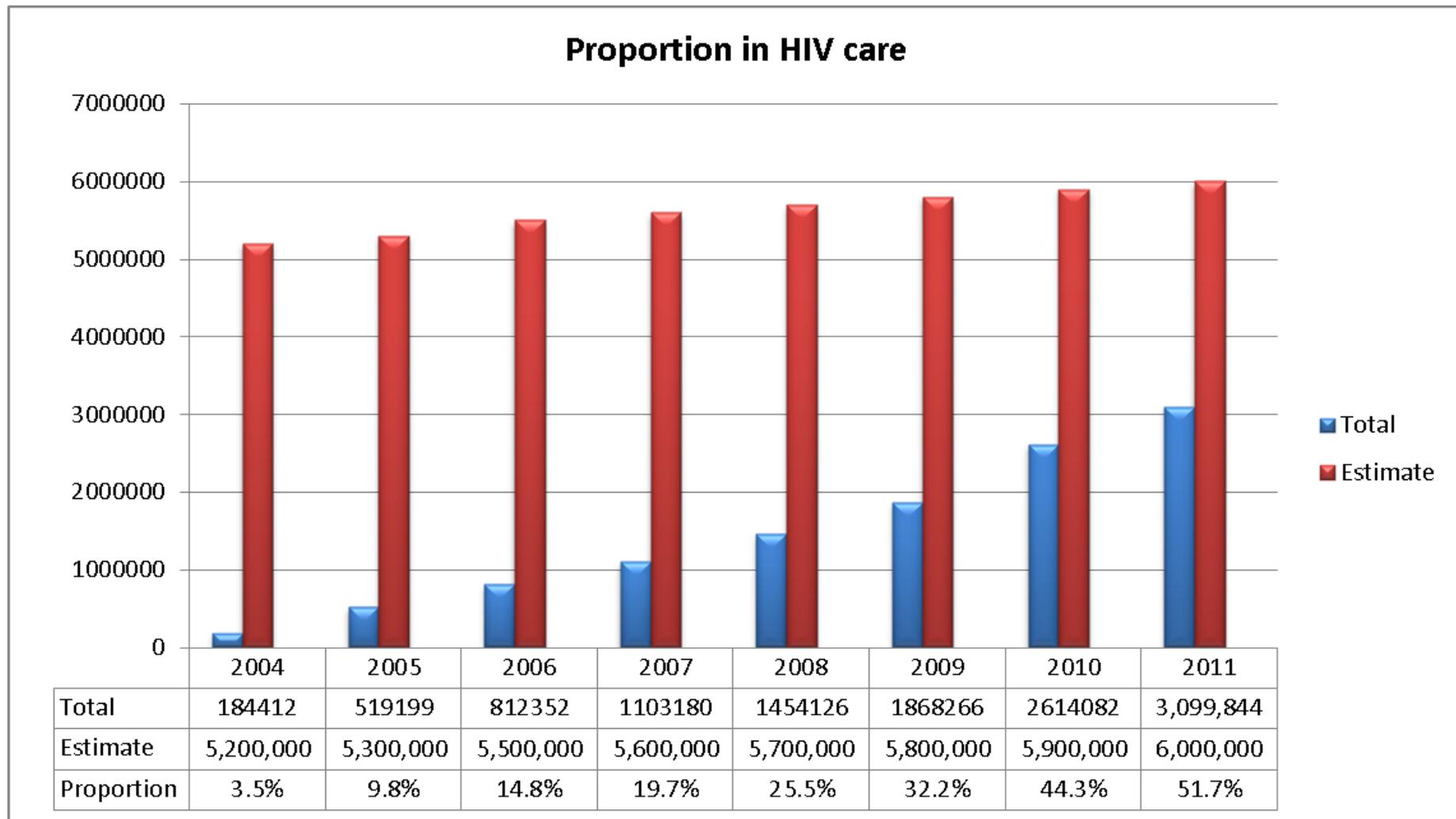
- The NHLS is the sole provider of laboratory diagnostic services for all public sector facilities
- Services 80% of the South African population
- All specimen data is entered and stored in a data warehouse
- Unique opportunity for making optimal use laboratory based data for HIV surveillance to inform public health action in South Africa

- Project: to extract datasets with CD4 count and Viral load measurements
- 13 million plus CD4 count measurements since 2004
- Variables – **Unique patient id**, sex, age, gender, race, geographical location (province, district, sub-district), result, date of test
- Completeness > 98% except for race and some gaps in KZN dataset

Persons with a CD4 count, CDW 2004-2011 (Proxy for people in care)



PLHIV: Proportion in HIV Care

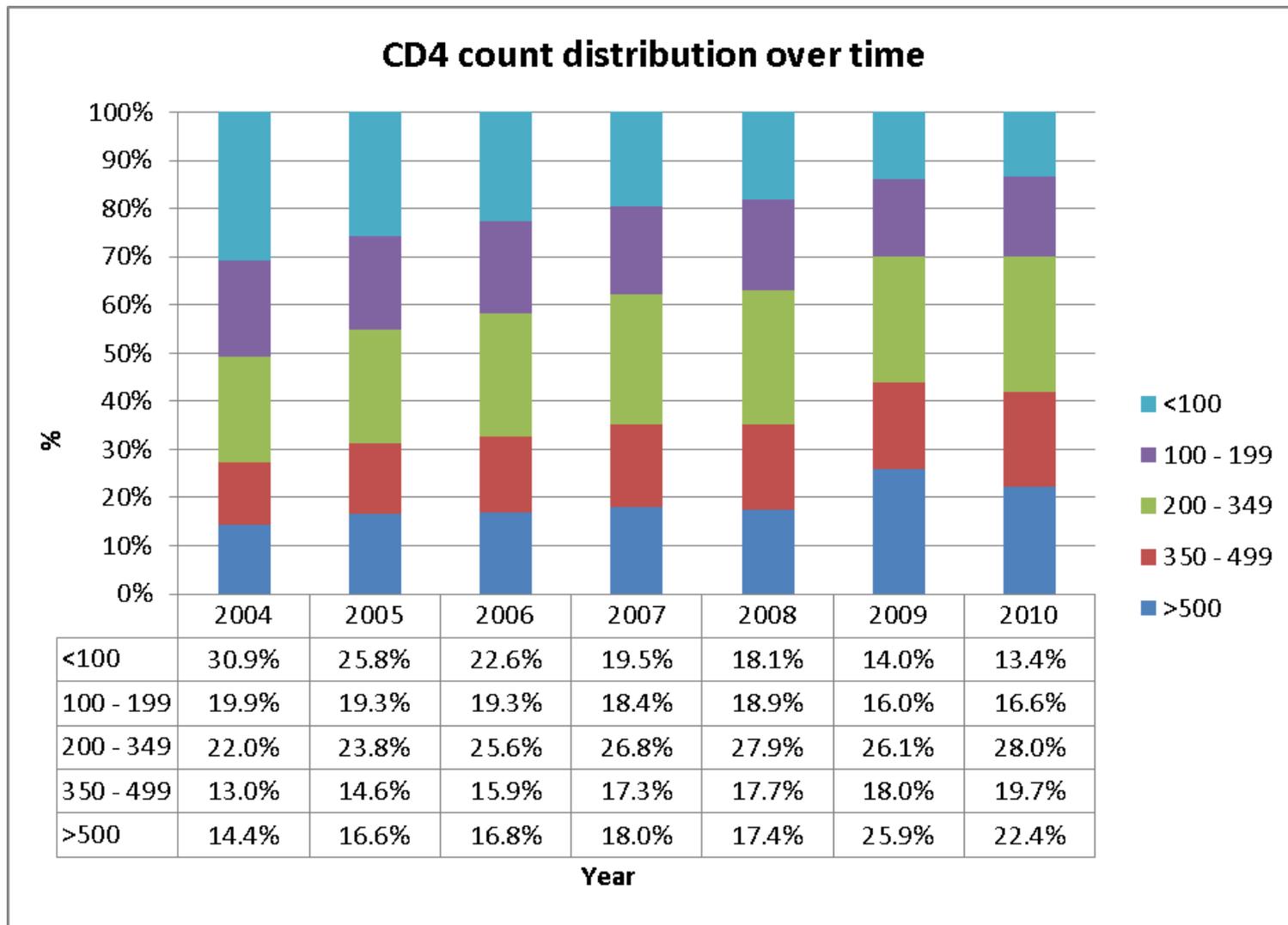


By Gender: c.a. Males = 40% and Females = 62%

Median CD4 Count, 2004-2012

Year	Median	IQR
2004	195	75-371
2005	224	93-403
2006	236	104-411
2007	252	119-423
2008	252	125-417
2009	276	144-441
2010	285	157-446
2011	316	182-481
2012	333	192-499

CD4 Count Distribution, 2004-2012



On-going analysis (NICD and PHE)

- We still need to better understand the de-duplication process of the raw data
- Understand the margins of error if any issues with the process
- Most likely to re-run the matching/de-duplication process and validate
- Further outputs
 - New HIV diagnosis
 - Late HIV diagnosis
 - South Africa HIV Report (first draft)

Current Obstacles

- Unique identifier generated from a matching process – need to understand and validate the algorithms
- Capacity – capable warm bodies to crunch the data (to explore hire subject to funding)
- Epidemiologic capacity to focus on developing new projects and strengthening existing ones



HIV clinical dashboards

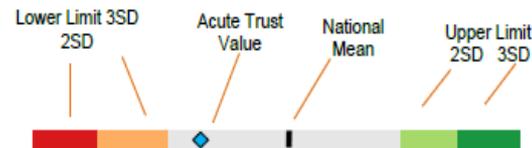


Maintained by Methods Insight for the Specialised Service National Transition Team HIV Specialised Service Quality Dashboard

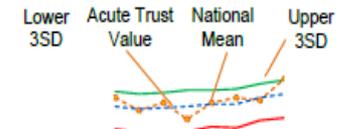
████████████████████ NHS FOUNDATION TRUST

Spring 2013/14

Spine Charts



SPC Sparklines



Annual Indicators (2011)		Num	Denom	Exclusions	Value	National Mean	Chart	Trend
HIV02b	Proportion of newly diagnosed patients with a CD4 count test done within 1 month of diagnosis	20.0	21.0	5	95.2	94.0		
HIV02c	Proportion of newly diagnosed patients with a CD4 count test done within 3 months of diagnosis	21.0	21.0	5	100.0	98.4		
HIV09aii	Proportion of newly diagnosed patients retained in HIV care one year after diagnosis	27.0	28.0	3	96.4	85.3		
HIV09bii	Proportion of all patients retained in HIV care in the following year	222.0	231.0	0	96.1	95.2		

Taking the plunge... get tested!





European testing week

<http://www.hivtestingweek.eu/>

European HIV testing week

22 to 29 November 2013 marks the date for the first ever European HIV testing week. It provides an unprecedented opportunity for partners (civil society, healthcare organisations, healthcare professionals and policy makers) across Europe to unite for one week to help more people become aware of their HIV status. The theme for the week is **Talk HIV. Test HIV.** and has been introduced to encourage people to openly talk about the benefits of HIV testing and to increase dialogue between all partners in the field...[read more»](#)

58 DAYS 10 HOURS 55 MINUTES 58 SECONDS

Resources for the European HIV testing week

A range of materials and resources have been developed to help you get started with your testing week activities. They can be downloaded from the [HIV testing week materials](#) section. In the [Get involved](#) section we have uploaded examples of effective testing initiatives to help inspire you with ideas about what you can do to encourage more people to get tested for HIV. We hope that you find them useful.

Sign-up to take part in the European HIV testing week

If all relevant partners unite for one week we can make a difference to the lives of thousands of people across Europe who are unknowingly living with HIV. Sign-up to let us know that you would like to participate. If you sign-up before 15 October 2013 you will be acknowledged as an early initiator for the testing week.

[SIGN-UP HERE](#)

Partners implementing the European HIV testing week

Check out the live feed to see the latest three organisations that have signed-up to implement testing week activities in their country. The testing week is spanning the length and breadth of the continent with partners participating from up to 56 countries. Sign-up now to put your organisation on the map! [See the full list and find out more about signing up to the testing week»](#)