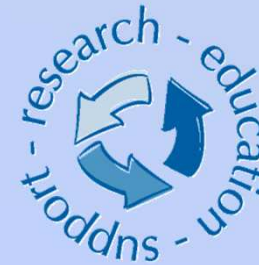


16th Annual Conference of the
National HIV Nurses Association (NHIVNA)



National HIV Nurses Association

Dr Vivian Hope

Public Health England

26-27 June 2014- City Hall, Cardiff



Public Health
England

An overview of the epidemiology of Hepatitis C, Hepatitis B & HIV in the UK.

Vivian Hope,

Centre for Infectious Disease Surveillance and Control,
Public Health England.

NHIVNA Pre-Conference Study Day 2014, 25/06/14.



Public Health
England

Overview of the UK epidemiology of:

- Hepatitis C.
- Hepatitis B.
- HIV.

The overlaps.

The extent of co-infection.



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Overview of the epidemiology of Hepatitis C in the UK



Hepatitis C prevalence in the UK

Updated estimates suggest that
**~ 215,000 individuals are chronically
infected with hepatitis C in the UK¹**

Currently statistical modelling predicts, in 2005, there were:

- 218,000 adults (over 15 years of age) who were hepatitis C antibody positive in England (~ 0.54% of the English adult population)²
- Assuming a chronicity rate of 74%, 161,320 adults would be living in England with chronic HCV infection (0.40% of the adult population)

¹ Hepatitis C in the UK – 2013 report. PHE, London, July 2013

² Harris RJ *et al.* *Eur.J.Public Health.* 2011, Jun 26. [**Epub**]

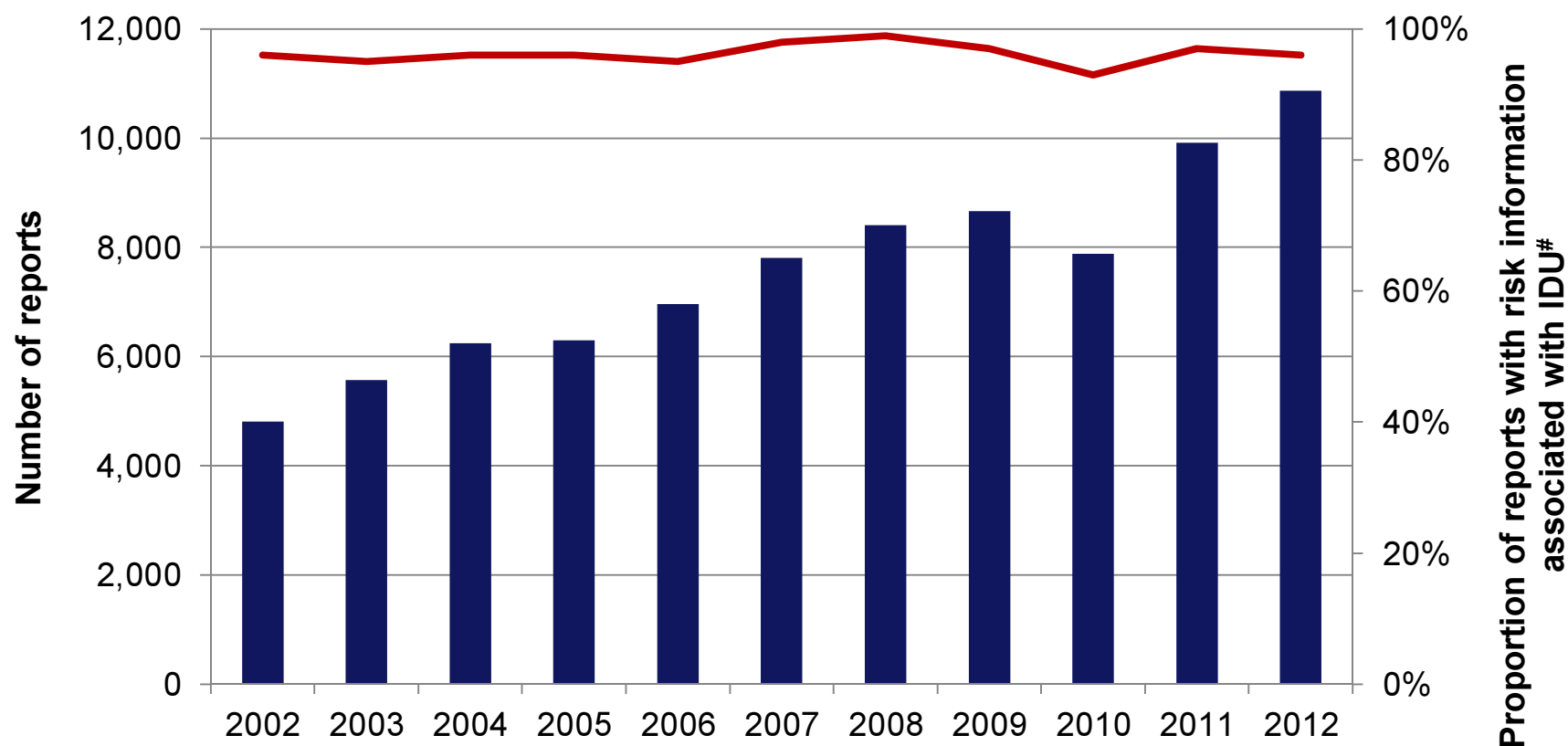


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Reported laboratory diagnoses of hepatitis C infection: England

■ Total number of reports: All exposures and exposure not known.

— Proportion of the reports with exposure data, in which injecting drug use was indicated#



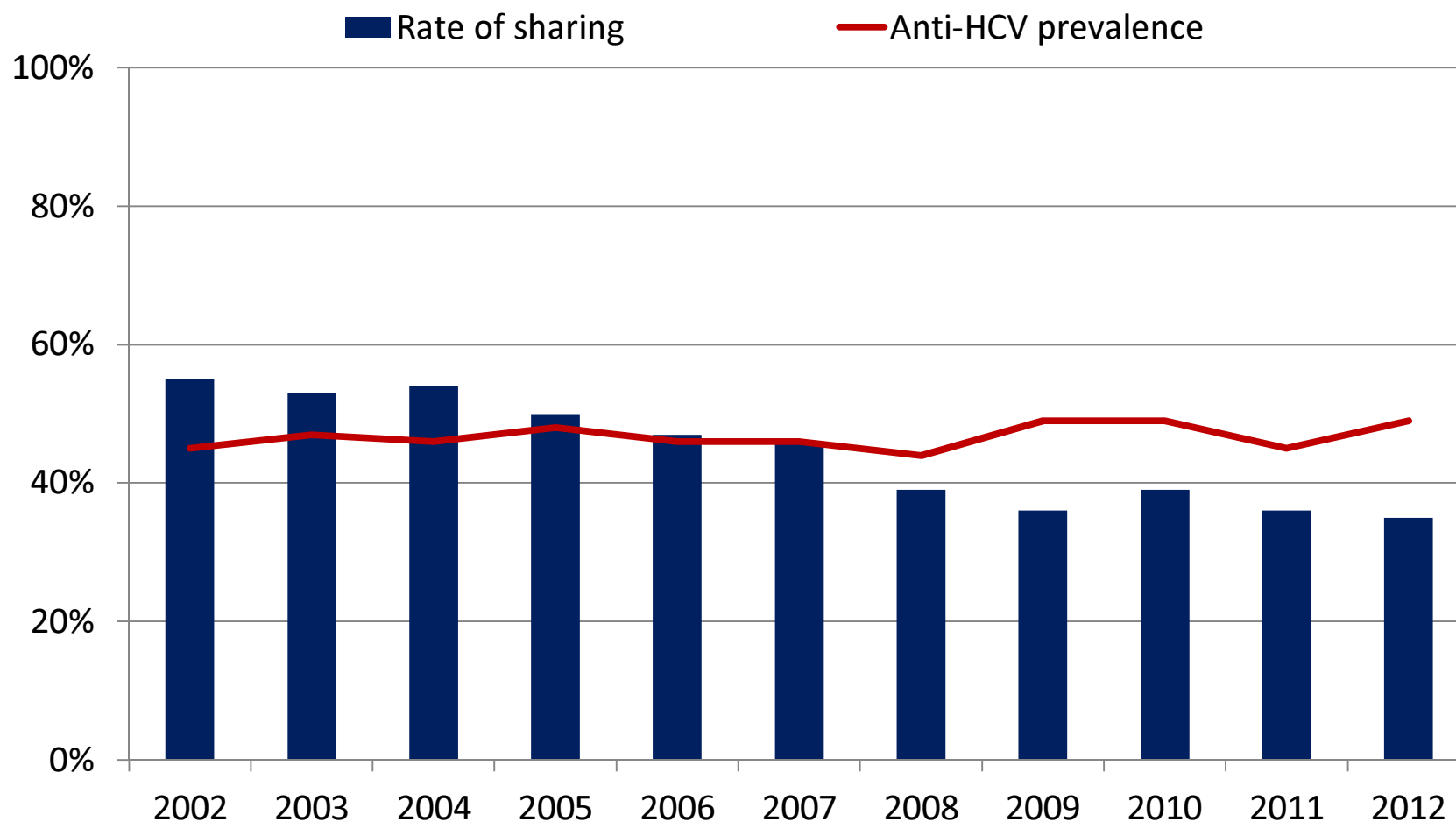
Data on exposure is often incomplete or missing.

HCV in UK report, 2013; Shooting Up, 2013.



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Hepatitis C prevalence among people who inject psychoactive drugs

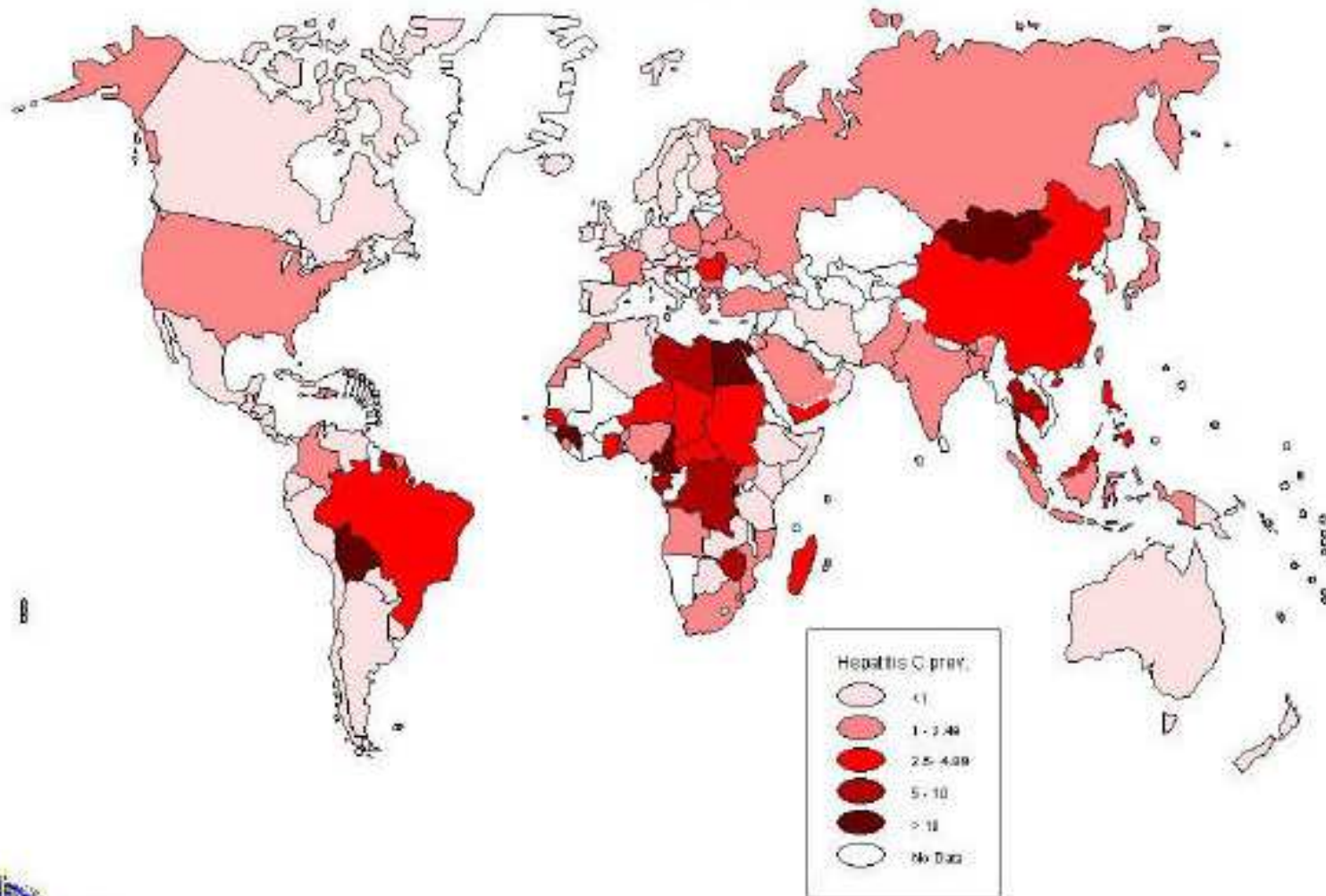


UAM Survey of PWID Data Tables, 2013.



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Global prevalence of hepatitis C



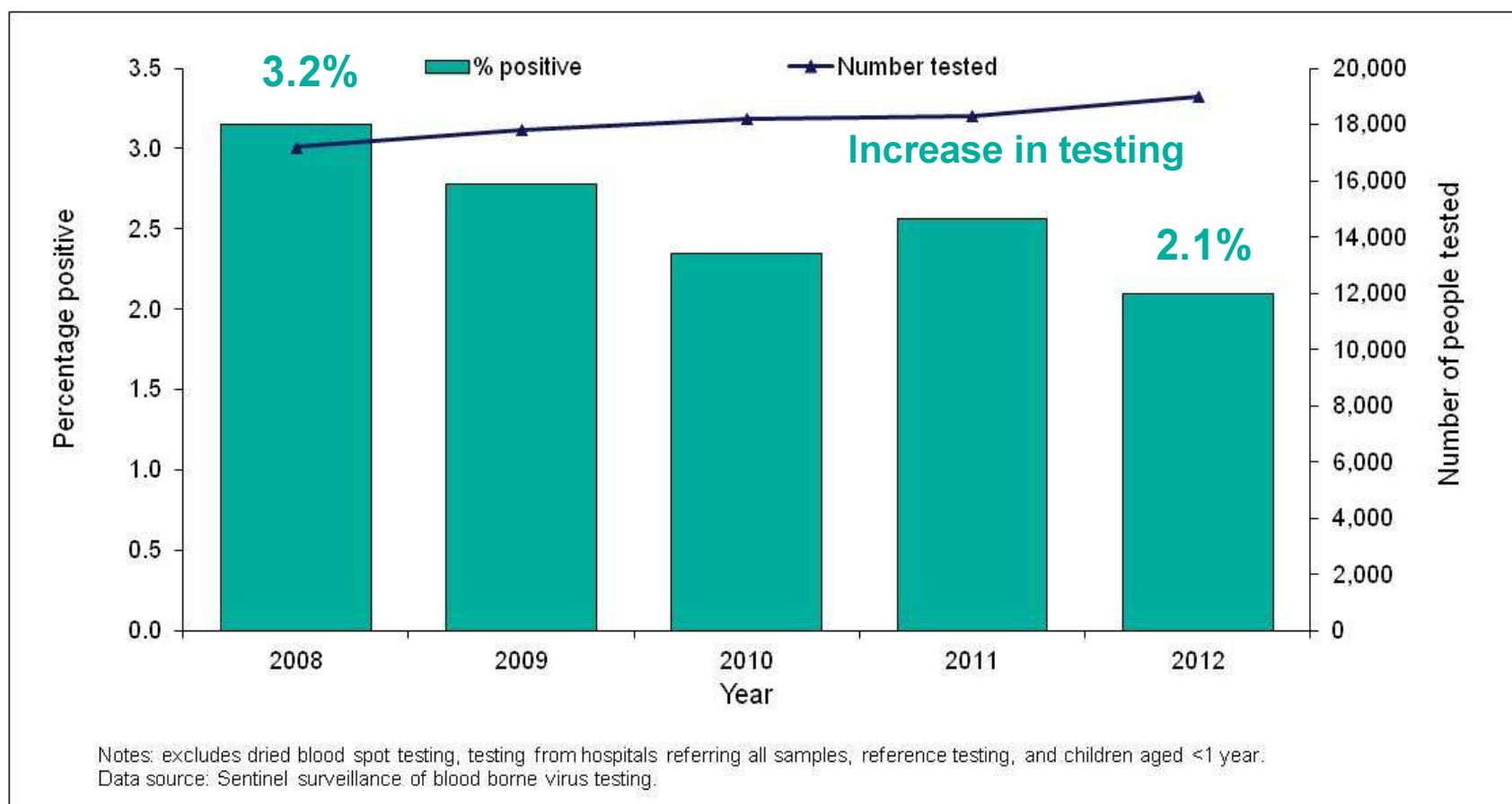
WHO
(GSR/EDC)

Based on unpublished data, update June, 1999



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Number of Asian or Asian British people tested, and proportion positive, in 24 sentinel laboratories: 2008-2012





MSM & hepatitis C

A survey of men using commercial gay venues in London during 2008-9 found a hepatitis C antibody prevalence of 2.1% [95% CI 1.4–3.2%].

With prevalence higher among those with HIV infection, 7.7% (95% CI 4.2–12.9%) vs. 1.2% (95% CI 0.6–2.1%) in those without HIV infection. (Price et al, *HIV Medicine* 2013).
Studies in GUM clinic populations suggest similar levels.

In England, enhanced surveillance of newly acquired HCV infection in MSM provides evidence of on-going, but declining sexual transmission of HCV among HIV positive MSM. In this population, the estimated incidence of infection declined significantly over time from 7.0 per 1,000 person years in 2008 to 2.2 in 2012 ($p < 0.001$).



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Overview of the epidemiology of Hepatitis B in the UK



UK epidemiology of hepatitis B

- Low prevalence: 0.3-0.4%: 180,000-200,000 chronically infected
- Estimated incidence low and stable: 1.04 per 100,000 (2012)
- Transmission: sexual exposure, contact with infected blood, perinatal
- Heterogeneous distribution of risk:-

Adults

Chronic burden mostly among migrants who acquired infection during childhood in country of origin.

Transmission: mainly sexual exposures, some by injecting drug use.

Children

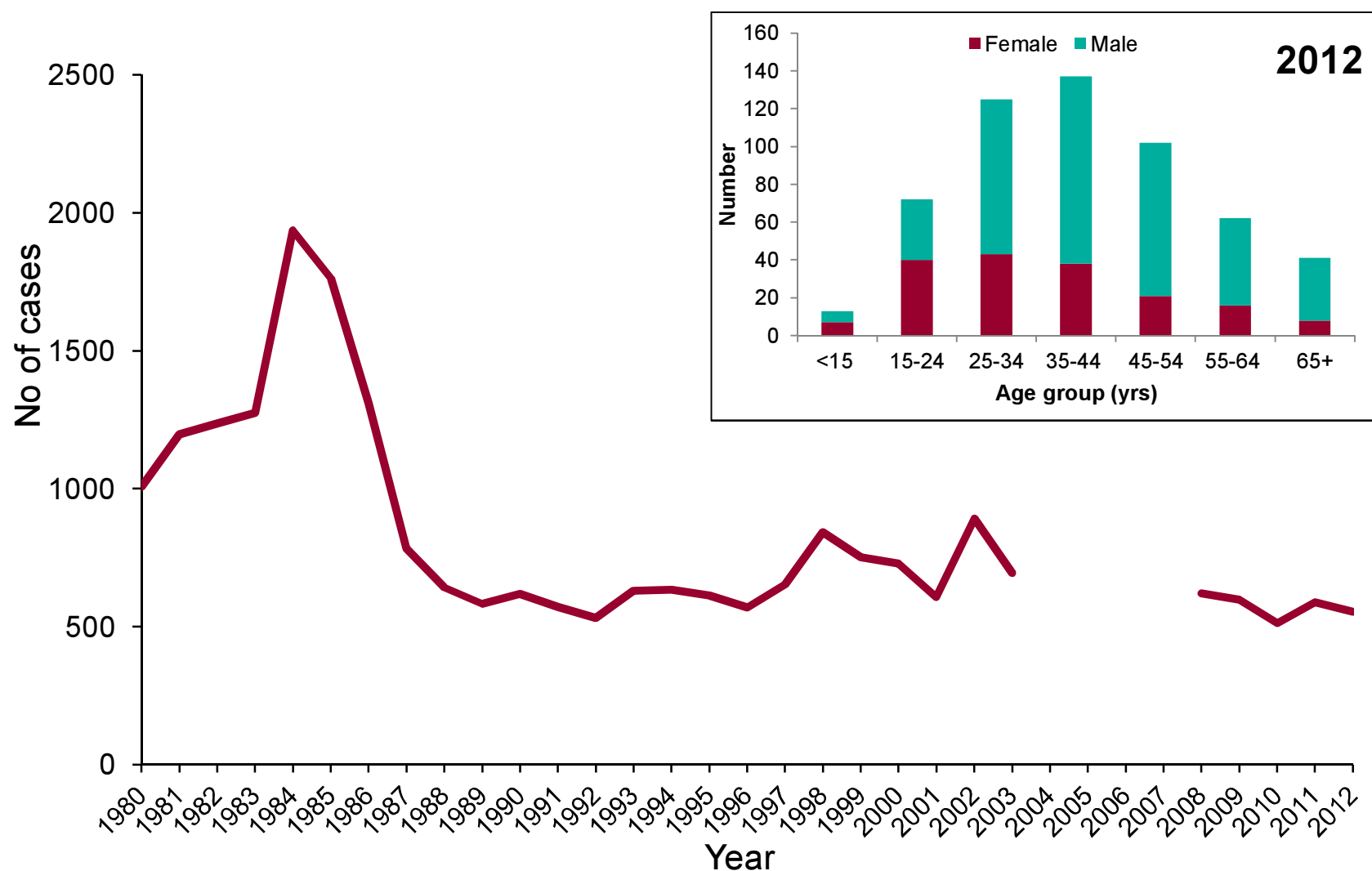
Transmission: mother to child, horizontal, exposure overseas.



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Laboratory reports of acute hepatitis B

England and Wales, 1980-2012

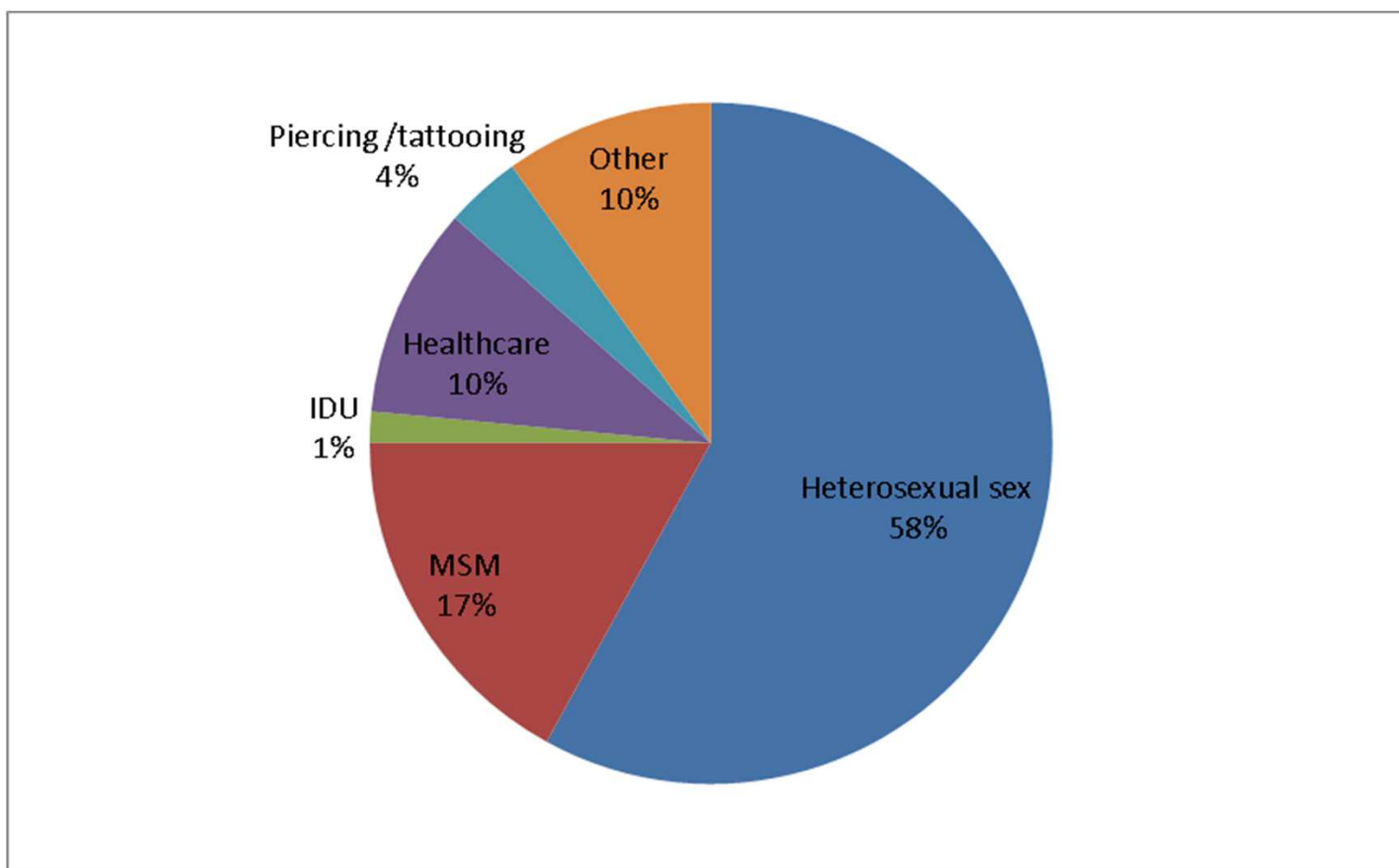




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Risk factors for acute hepatitis B

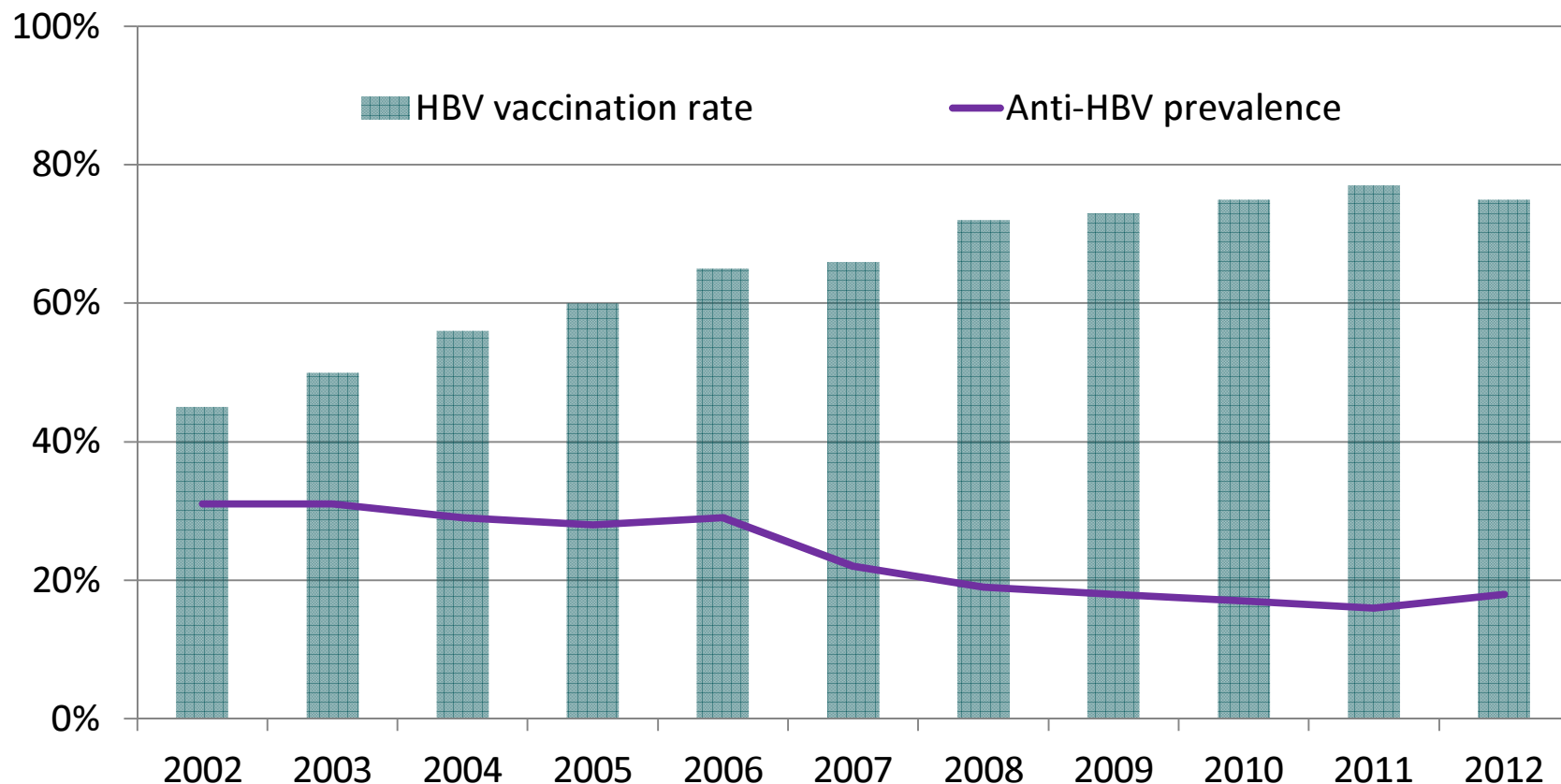
Probable route of acquisition recorded in 332 (60%) lab reports of acute hepatitis B in 2012.





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Hepatitis B among people who inject psychoactive drugs

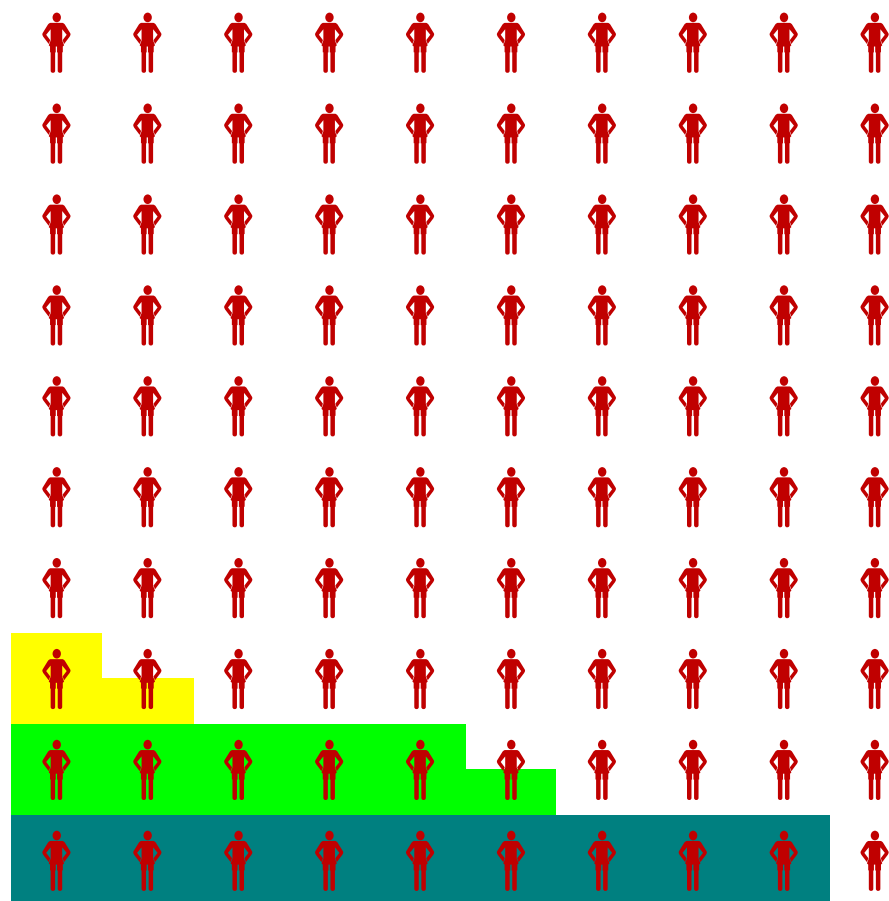


<1% of PWID have a current hepatitis B infection – these will mostly be chronic infections.



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Hepatitis among people who inject image & performance enhancing drugs



Prevalence of hepatitis B is lower among those injecting psychoactive drugs

Around one in 12 people who image & performance enhancing drugs have ever been infected with hepatitis B.

1.5% are living with **HIV**

5.5% have been infected with **hepatitis C**

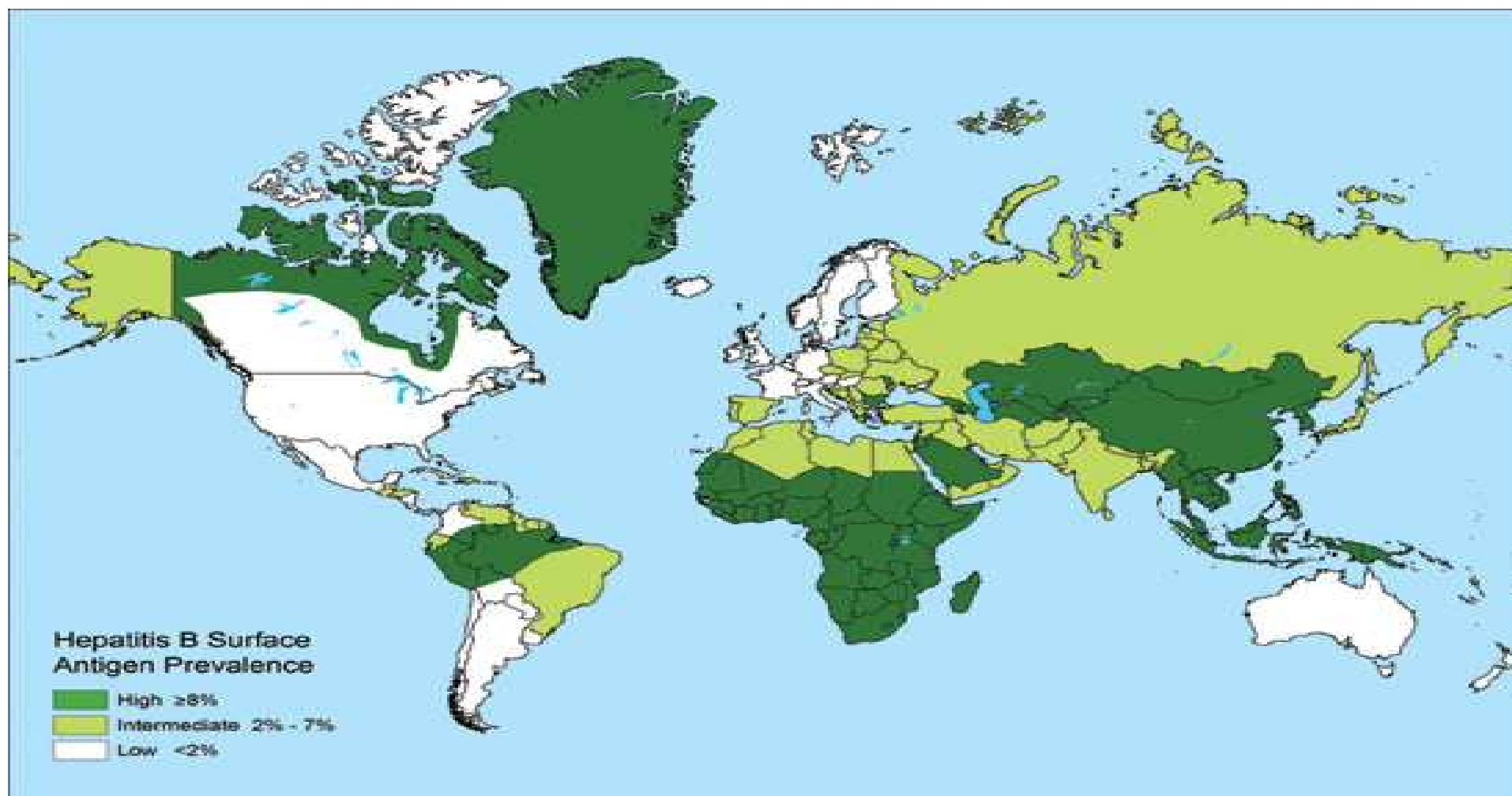
8.8% have been infected with **hepatitis B**

Only 9% of those who inject image and performance enhancing drugs reported ever sharing injecting equipment.



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Global prevalence chronic hepatitis B, 2006



Source: CDC, Yellow Book



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Individuals tested, and testing positive for HBsAg by ethnicity, 2008-2012

Ethnicity	Number tested	Number positive	% positive
Asian	103,045	2,731	2.7
Black	18,638	1,289	6.9
Other/mixed	27,678	2,326	8.4
White	491,477	4,327	0.9
Unknown	202,194	3,462	1.7
Total	843,032	14,135	1.7

Source: PHE sentinel surveillance of BBV testing supplementary data tables 2012



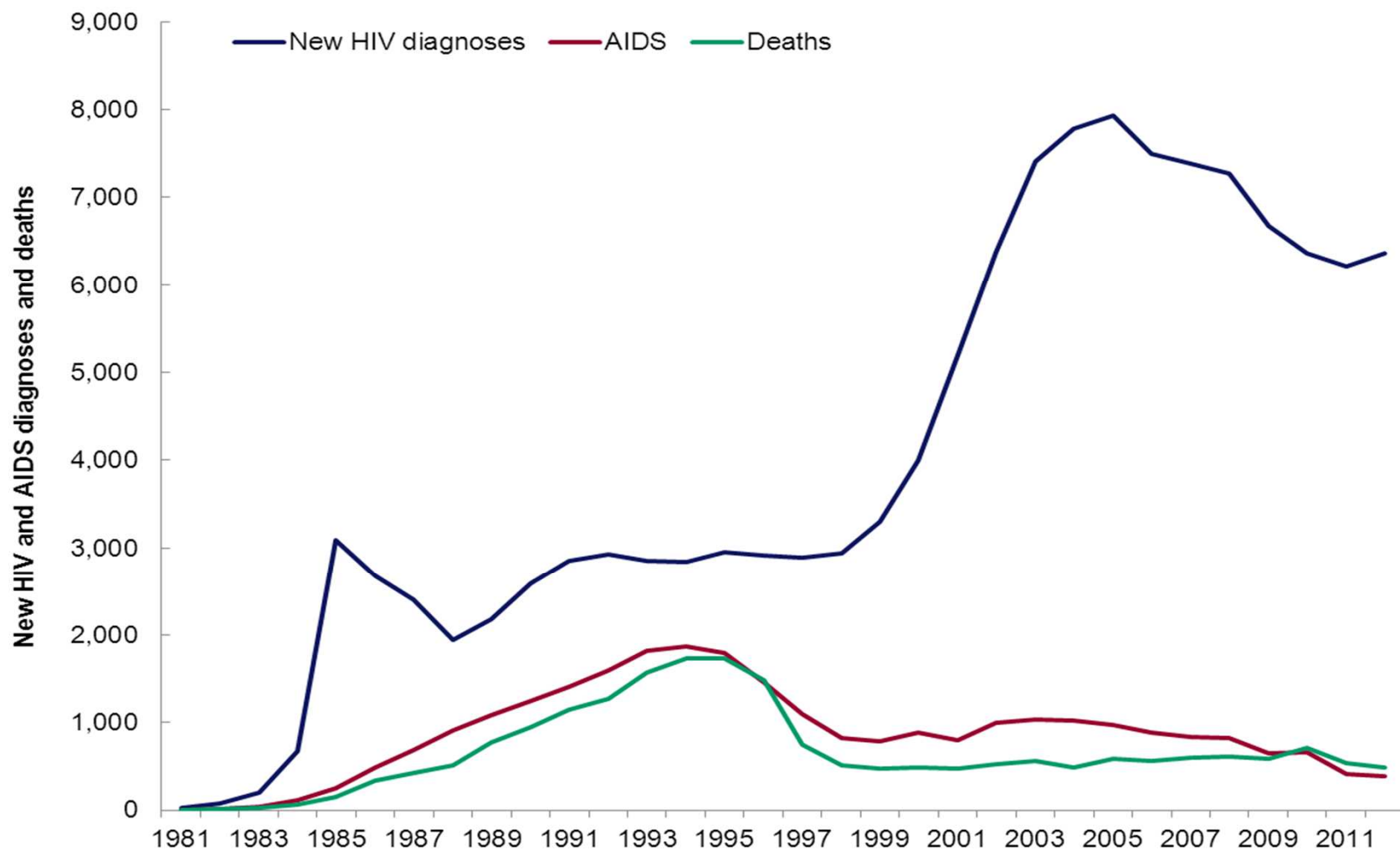
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Overview of the epidemiology of HIV in the UK



Public Health
England

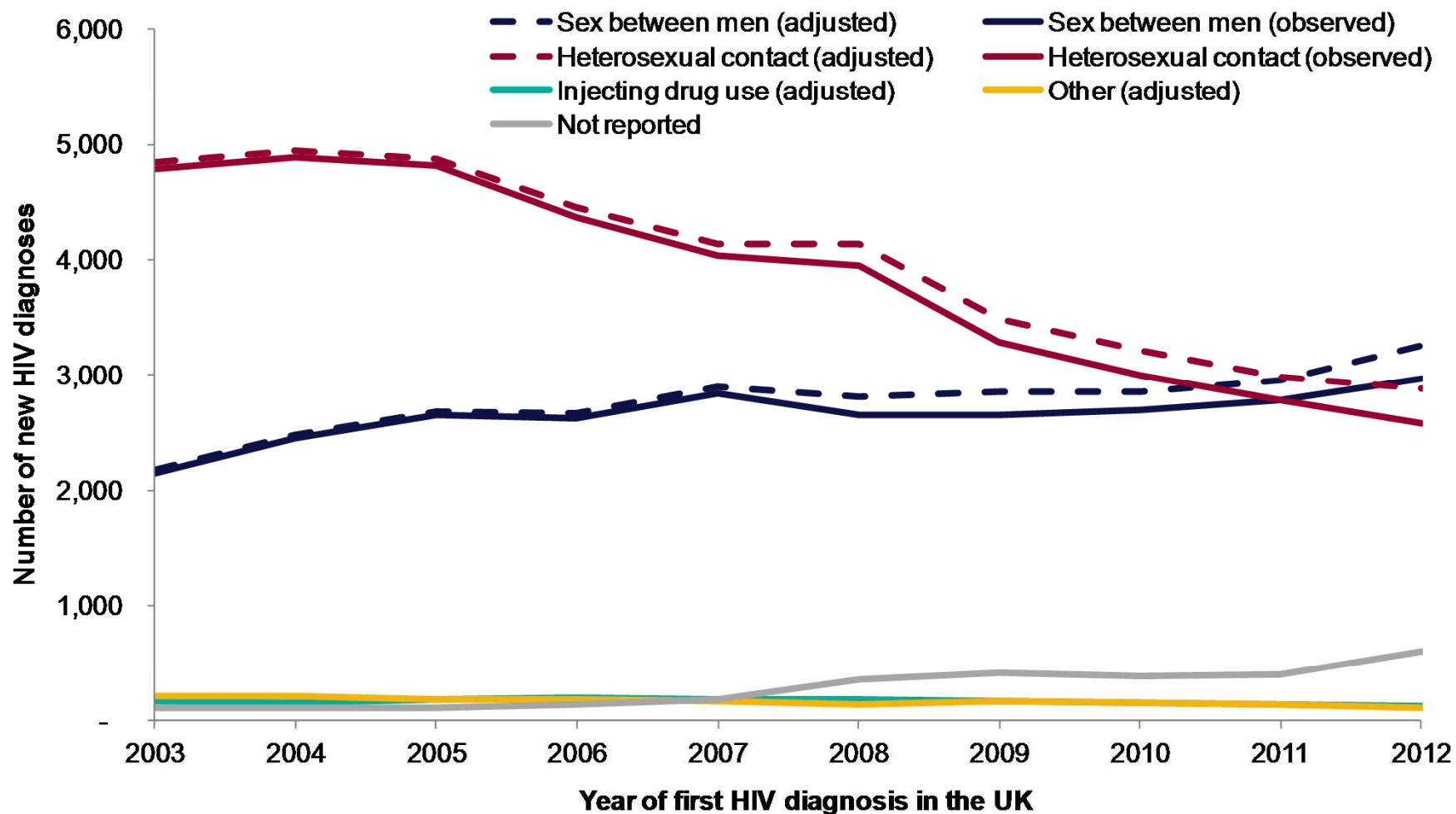
Annual new HIV and AIDS diagnoses and deaths: UK, 1981-2012





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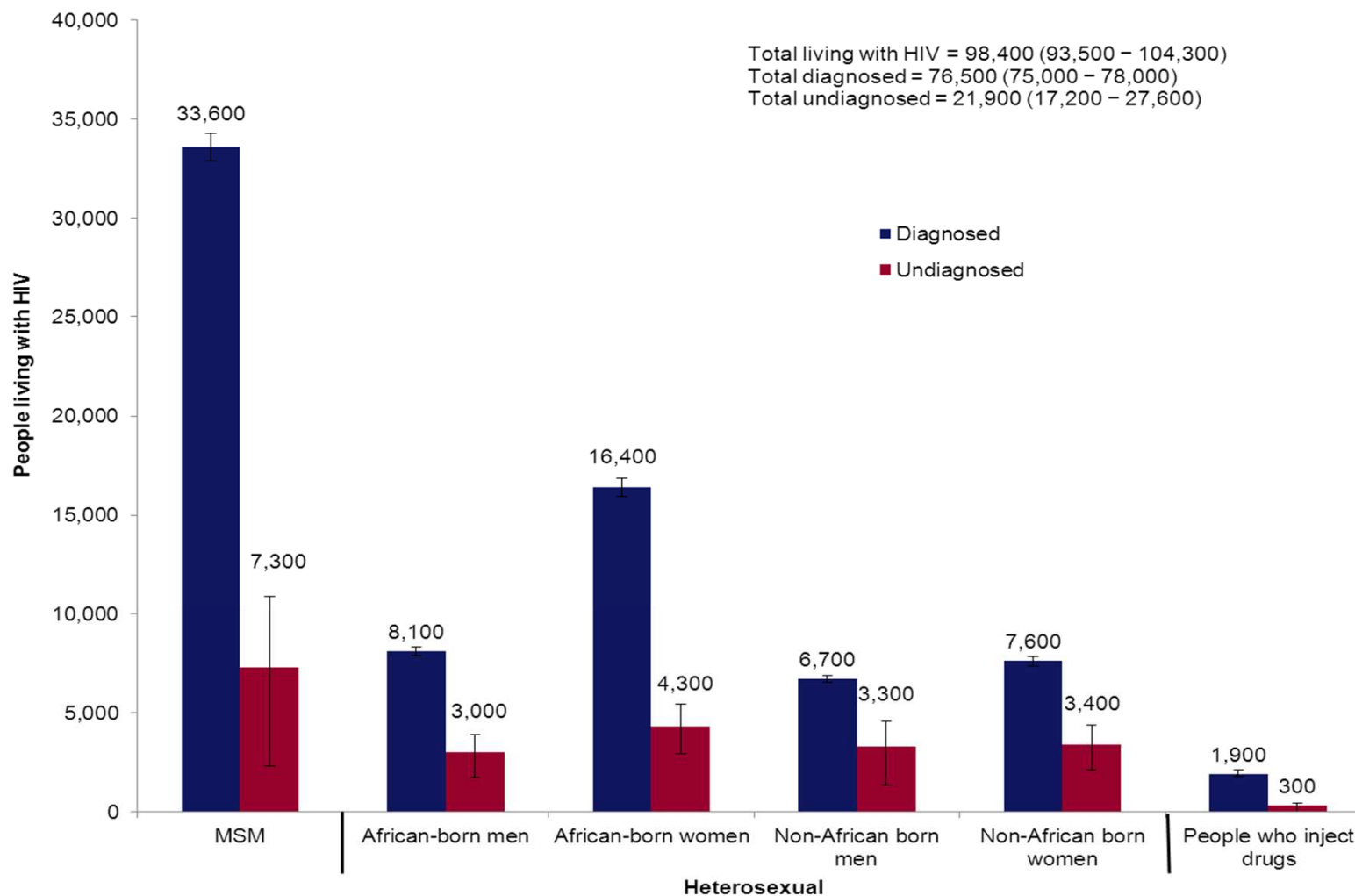
New HIV diagnoses by exposure group: United Kingdom, 2003 - 2012





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Estimated number of people living with HIV (both diagnosed and undiagnosed): UK, 2012

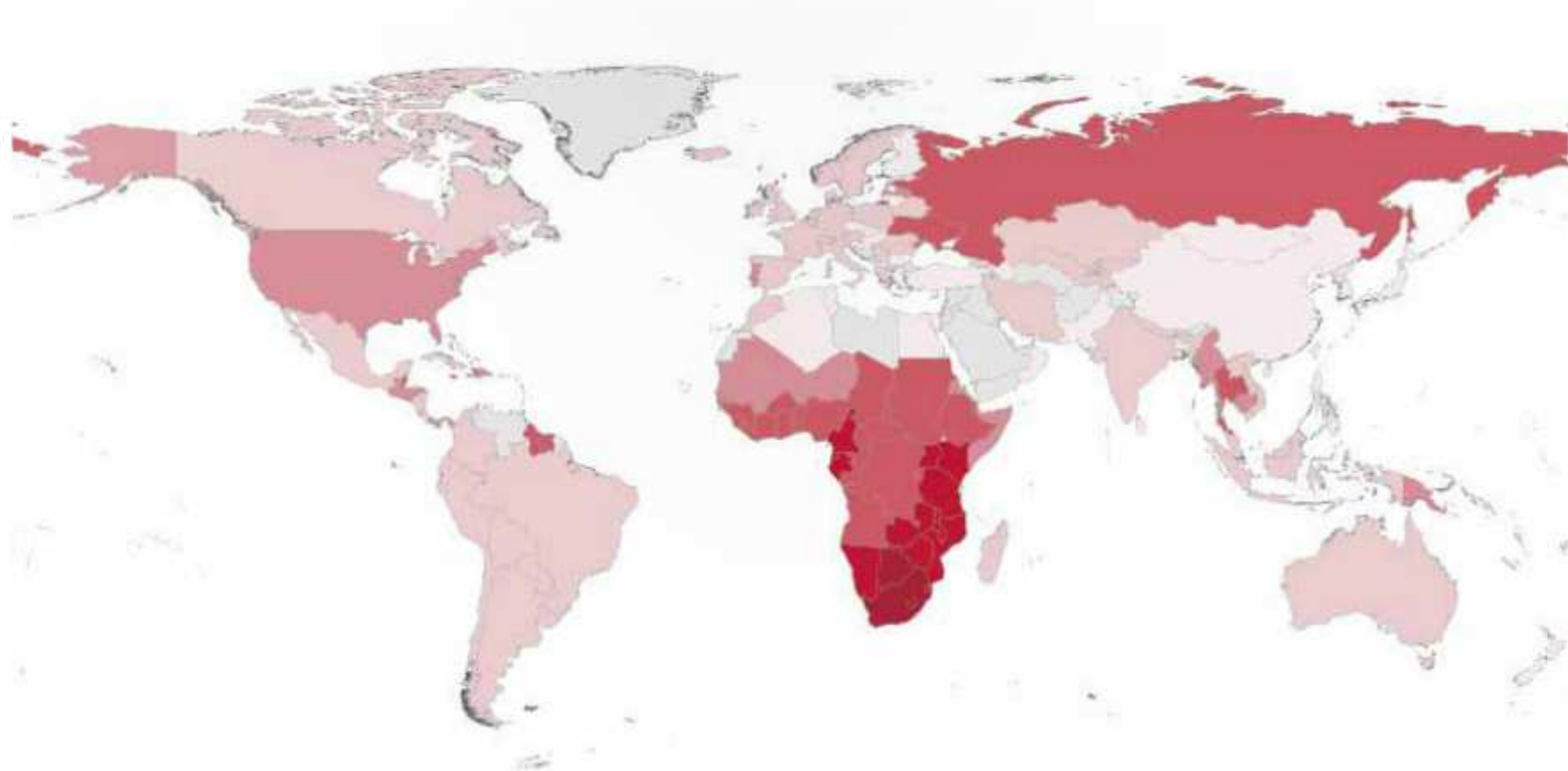




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Global prevalence of HIV, 2009

Source: UNAIDS.



■ No data ■ < .1% ■ .1%–<.5% ■ .5%–<1% ■ 1%–<5% ■ 5%–<15% ■ >15%–28%



HIV in the United Kingdom, 2012

Men who have sex with men

- MSM remain the group most affected by HIV with 47 per 1,000 living with the infection (18% unaware).
- Over the past decade, an estimated 2,400 (1,600-4,100) MSM acquired HIV infection each year.

Heterosexual men and women

- Black-African men and women were the second largest group affected by HIV with 38 per 1,000 living with the infection (26 in men and 51 in women) (23% unaware).
- Over the past five years, an estimated 1,000 black-African men and women probably acquired HIV in the UK annually.

People who injected drugs

- Proportion people who inject drugs living with HIV is likely to be around 10 per 1,000 (14% unaware).



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Co-infections

Groups most affected

HIV

(N~98,000)

MSM.

Those with links
to high
prevalence
countries.

PWID.

Heterosexuals.

Hepatitis C

(N~215,000)

PWID.

Those with links
to endemic
countries.

MSM.

Hepatitis B

(N~190,000)

Those with links
to endemic
countries.

MSM.

PWID.

Heterosexuals.

Co-infection levels

Data on the prevalence's of co-infections are limited.

What data there is suggests that:-

- Among HIV positive MSM (N~41,000) around **1 in 20** are may also have hepatitis C infection.
- Among HIV positive PWID (N~2,200) around **3 in 4** are likely to have hepatitis C infection.
- Both these groups will also be at elevated risk of HIV & hepatitis B co-infection
(e.g. around 1 in 50 HIV positive PWID will also have hepatitis B).

Hepatitis C or B co-infection with HIV will also be found among those with links to countries with higher prevalence's of these infections.



Summary

Significant overlaps between the epidemiology of the three infections –
MSM and PWID are at high risk of all three.

HIV prevalence in UK highest among MSM.

Hepatitis C prevalence in the UK highest among PWID.

Hepatitis B is vaccine preventable:-

- uptake of vaccine now high among PWID, new cases declining,
- still on-going transmission among MSM and through heterosexual sex, and
- most chronic cases are related to having links to countries where hepatitis B is endemic.

HIV & Hepatitis C co-infections will mainly be found among MSM & PWID.

Those with links to countries where hepatitis B and/or C are endemic may also be at elevated risk of co-infection.

If someone has HIV or hepatitis C, or at risk of infection, check if they are vaccinated against B.



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Acknowledgments:

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Thank you.