

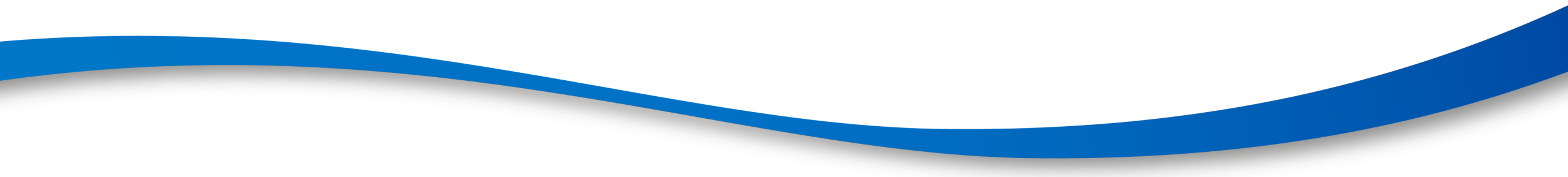
# Sex, Drugs and Rock and Roll

Su Brailsford

Consultant in Epidemiology and Health Protection

Interim Associate Medical Director: Manufacturing and Microbiology

# Outline

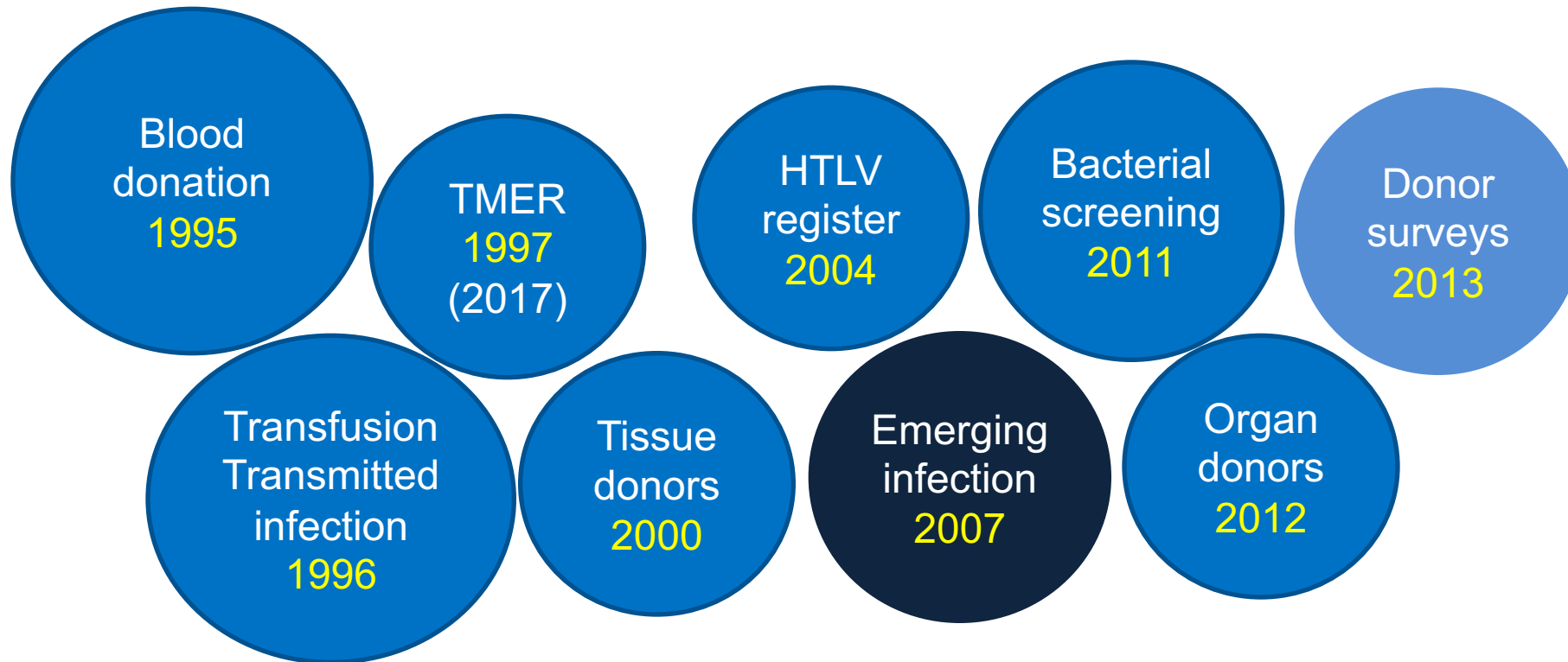
- A bit of history
  - What's changed in the general population
  - Impact on donor selection and testing
  - Where are we now?
- 
- A thick, solid blue line that starts at the bottom left, dips down, and then rises towards the bottom right, creating a wavy, decorative border at the bottom of the slide.

# Joint NHSBT/PHE Epidemiology Unit

- NHS Blood and Transplant and Public Health England set up a jointly funded surveillance unit in October 1995
- Enhance and share surveillance data associated with infected **blood and tissue** donors and recipients to **support a safe supply** within NHSBT and the wider UK blood services
- Expanded surveillance to inform other areas such as infection in organ donors



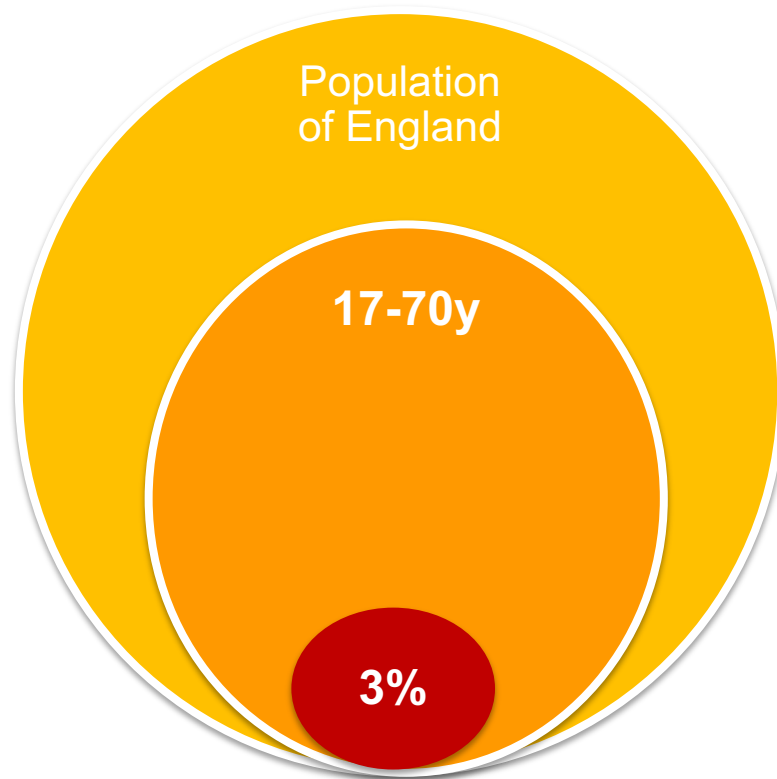
# Surveillance schemes



*Enhance and share*

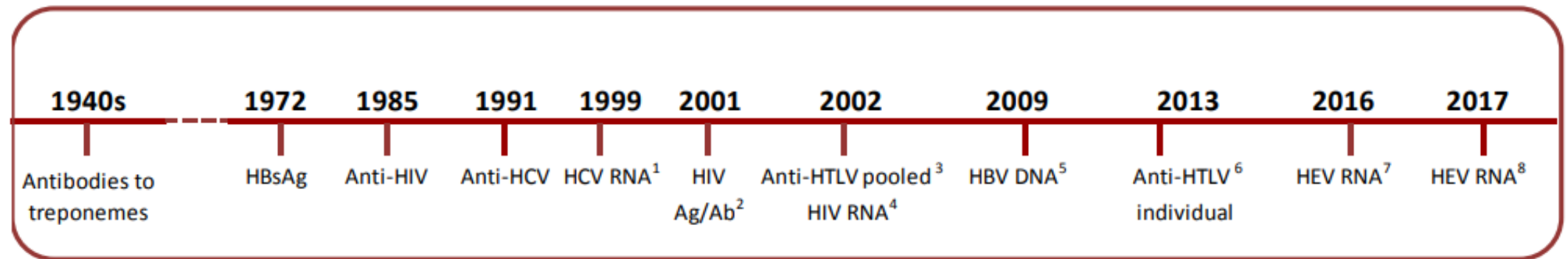


# The blood donor population



- Unpaid volunteers at low risk
- APPROX 2 million donations from 1 million individuals
- Females > males
- Variation by geographical region
- 9 of 10 white British
- 3 of 100 BAME
- New donors younger than repeat donors

# Timeline of introduction of microbiological tests for blood donations, UK



[Guidelines for the Blood Transfusion Services](#)

[Donor Selection Guidelines](#)

[Transfusion Handbook](#)

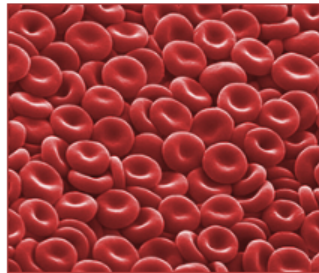
[Transfusion Practice](#)

[Regulations & Implementation](#)

[Systematic Review Initiative](#)

[UK Transfusion Committees](#)

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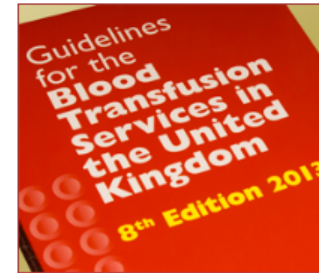
**Donor Selection Guidelines: Tissue and Cells**



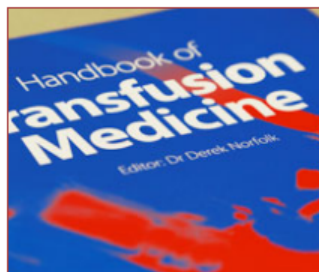
**Donor Selection Guidelines: Whole Blood and Components**



**Donor Selection Guidelines: Geographical Disease Risk Index**



**Guidelines for the Blood Transfusion Services in the UK**



**Handbook of Transfusion Medicine**



**Transfusion Practice**



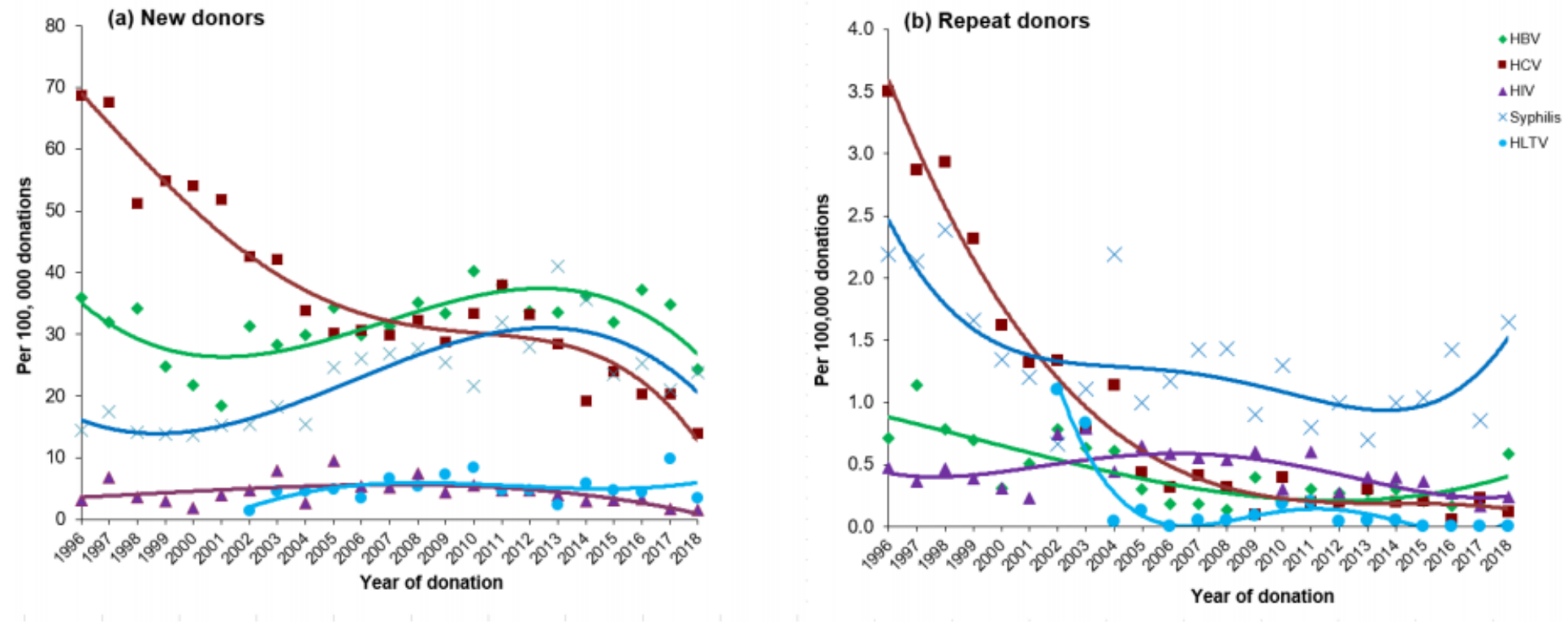
**Regulations & Implementation**



**UK Transfusion Committees**



# The rate of markers of HBV, HCV, HIV, HTLV and syphilis in blood donations from new and repeat donors UK blood centres



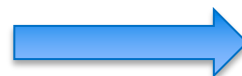


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**The UK independent, professionally-led haemovigilance scheme**

Search the SHOT website...

Last HIV transmission 2002  
Last HCV transmission 1997  
Last hepatitis B TTI 2017 reported 2018



**Table 20.3:**  
**Number of confirmed TTI incidents\*, by year of transfusion\*\* with total infected recipients and outcomes (death, major morbidity, minor morbidity) in the UK between October 1996 and December 2018 (Scotland included from October 1998)**

Year of transfusion**	Number of incidents (recipients) by infection										Implicated component					
	Bac teria	HAV	HBV	HCV**	HEV	HIV	HTLV I	Parvovirus (B19)	Malaria	vCJD/prion	Total	RBC	Pooled platelet	Apheresis platelet	FFP	Cryo
Pre 1996	-	-	1 (1)	-	-	-	2 (2)	-	-	-	3 (3)	3	-	-	-	-
1996	-	1 (1)	1 (1)	1 (1)	-	1 (3)	-	-	-	1 (1)	5 (7)	5	1	-	1	-
1997	3 (3)	-	1 (1)	1 (1)	-	-	-	-	1 (1)	2 (2)	8 (8)	6	1	1	-	-
1998	4 (4)	-	1 (1)	-	-	-	-	-	-	-	5 (5)	2	1	2	-	-
1999	4 (4)	-	2 (3)	-	-	-	-	-	-	‡ (1)	6 (8)	5	3	-	-	-
2000	7 (7)	1 (1)	1 (1)	-	-	-	-	-	-	-	9 (9)	1	5	3	-	-
2001	5 (5)	-	-	-	-	-	-	-	-	-	5 (5)	-	4	1	-	-
2002	1 (1)	-	1 (1)	-	-	1 (1)†	-	-	-	-	3 (3)	2	1	-	-	-
2003	3 (3)	-	1 (1)	-	-	-	-	-	1 (1)	-	5 (5)	1	1	3	-	-
2004	††	-	-	-	1 (1)	-	-	-	-	-	1 (1)	1	-	-	-	-
2005	2 (2)	1 (1)	1 (1)	-	-	-	-	-	-	-	4 (4)	1	3	-	-	-
2006	2 (2)	-	-	-	-	-	-	-	-	-	2 (2)	-	1	1	-	-
2007	3 (3)	-	-	-	-	-	-	-	-	-	3 (3)	2	1	-	-	-
2008	4 (6)	-	-	-	-	-	-	-	-	-	4 (6)	-	2	4	-	-
2009	2 (3)	-	-	-	-	-	-	-	-	-	2 (3)	1	-	2	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	1 (2)	-	1 (2)	-	-	-	-	-	2 (4)	2	-	-	2	-
2012	-	-	1 (1)	-	1 (1)	-	-	1(1)	-	-	3 (3)	2	-	-	1	-
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	2 (3)	-	-	-	-	-	2 (3)	1	-	-	2	-
2015	1 (1)	-	-	-	4 (5)	-	-	-	-	-	5 (6)	-	3	1	1	1
2016	-	-	-	-	1 (1)	-	-	-	-	-	1 (1)	1	-	-	-	-
2017	-	1 (1)	-	-	-	-	-	-	-	-	1 (1)	-	-	1	-	-
2018	-	-	-	-	1 (1)	-	-	-	-	-	1 (1)	-	-	1	-	-
Number of incidents	41	4	12	2	11	2	2	1	2	3	80	-	-	-	-	-
Number of infected recipients	44	4	14	2	14	4	2	1	2	4	91	36	27	20	7	1

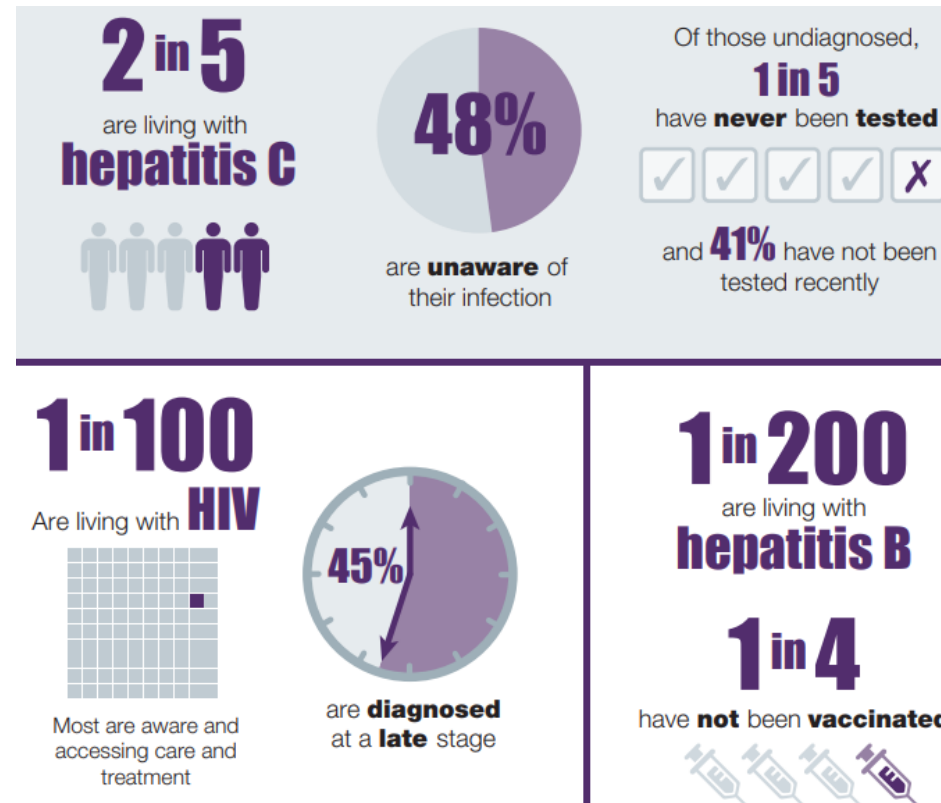
# Drugs

# Donor selection criteria: drugs

*“Have you ever injected yourself or been injected with illegal or non-prescribed drugs, including body building drugs or cosmetics or injectable tanning agents? (even if this was only once or a long time ago)”*

HIV prevalence in IPED users is similar to psychoactive users

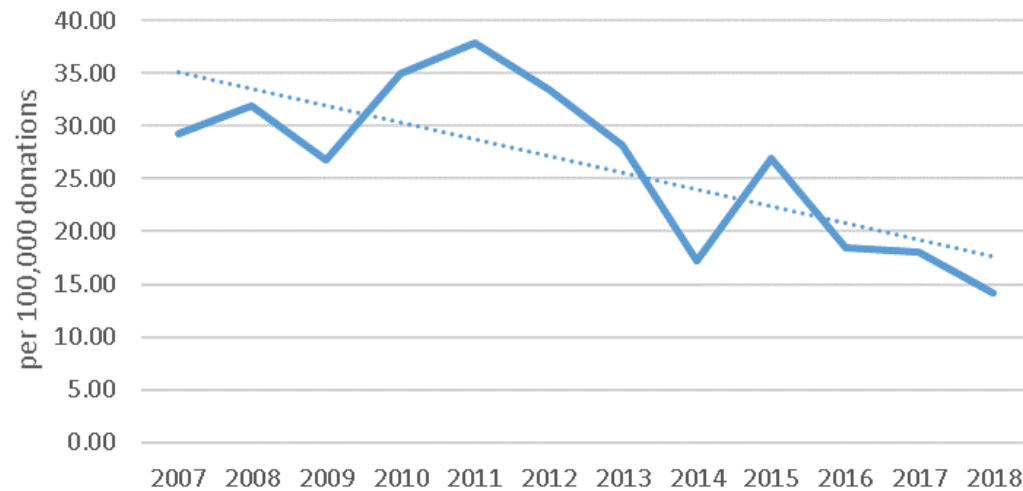
Among people who inject psychoactive drugs like heroin and crack-cocaine in 2015



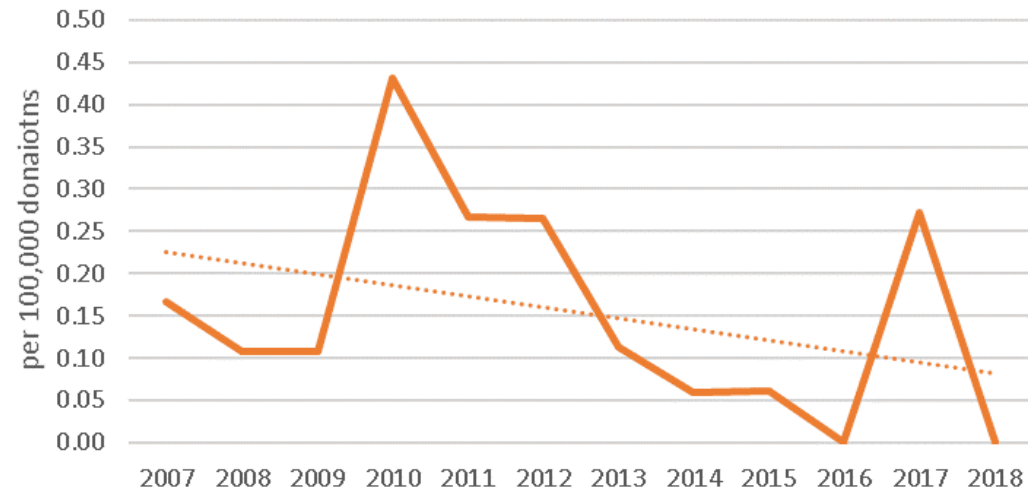


## Monitoring trends

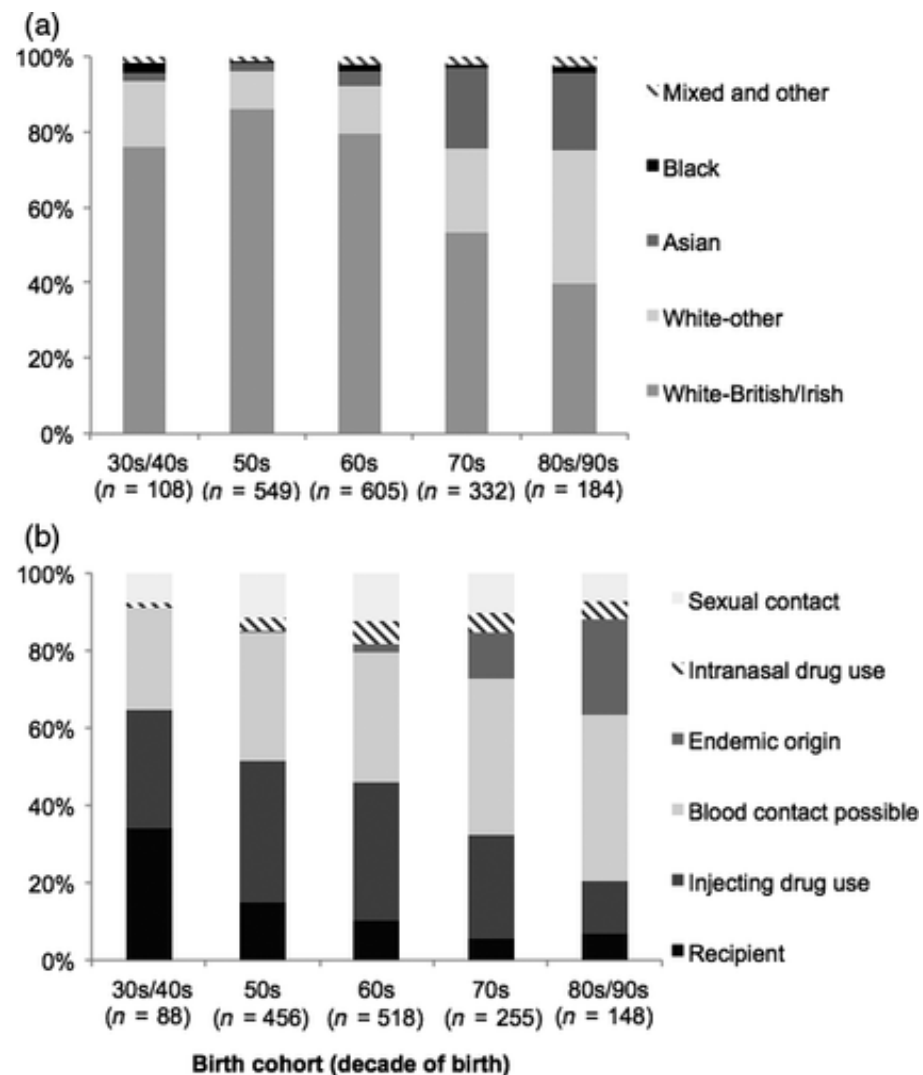
HCV annual rates first-time/returning blood donors: NHSBT 2007-31/08/2018



HCV annual rates repeat blood donors: NHSBT 2007-31/08/2018

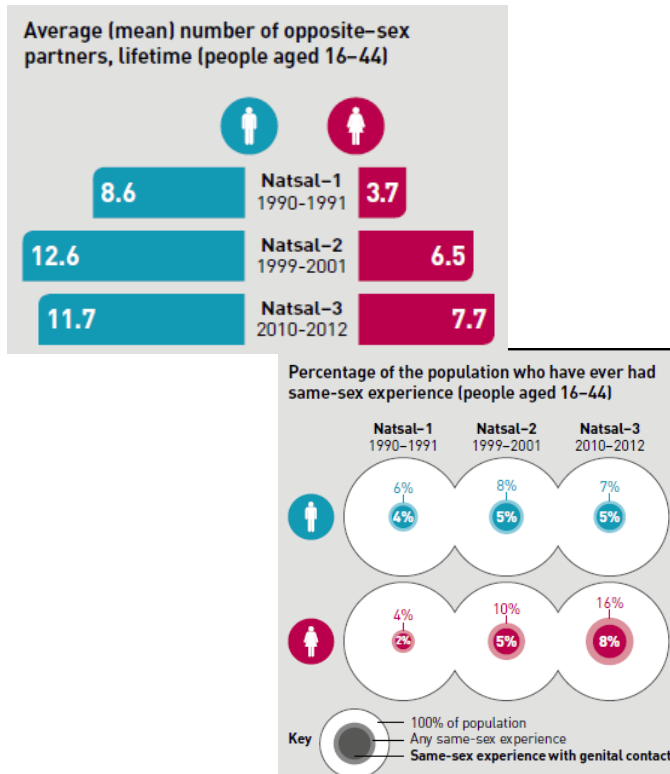


HCV declining trend

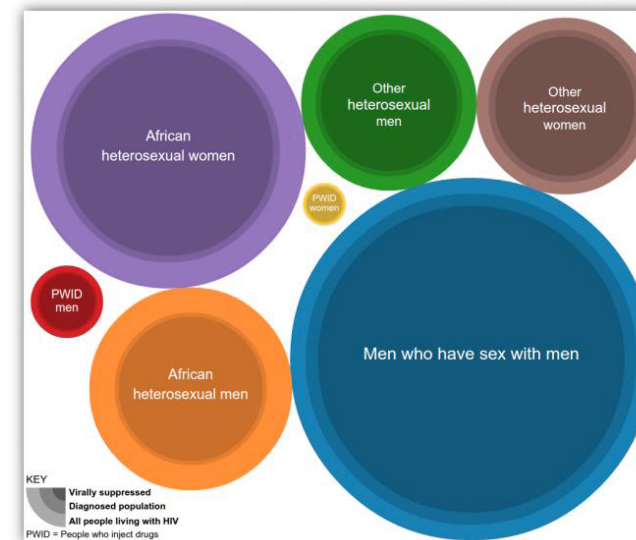
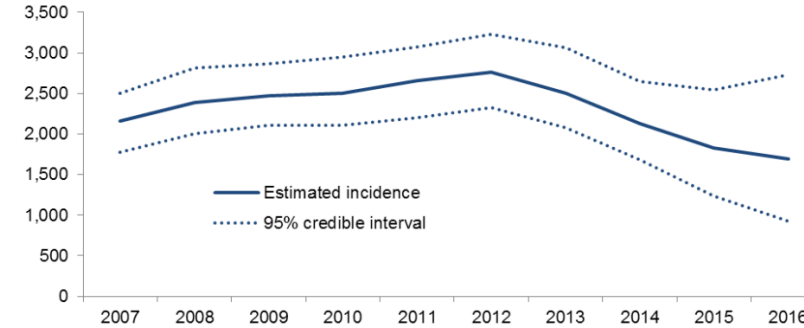


# Sex

- Increase in lifetime number of partners
- Increase in same-sex sex
- Increase in HIV diagnosis & sexual health clinic attendance



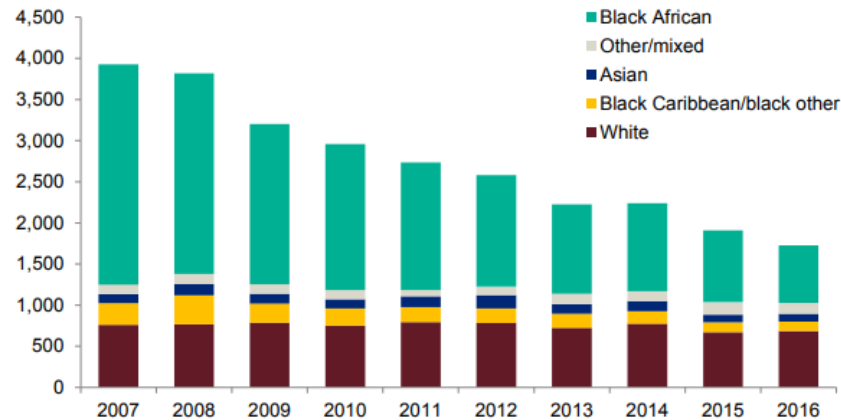
<http://www.natsal.ac.uk/home.aspx>



<https://www.gov.uk/government/collections/hiv-surveillance-data-and-management>

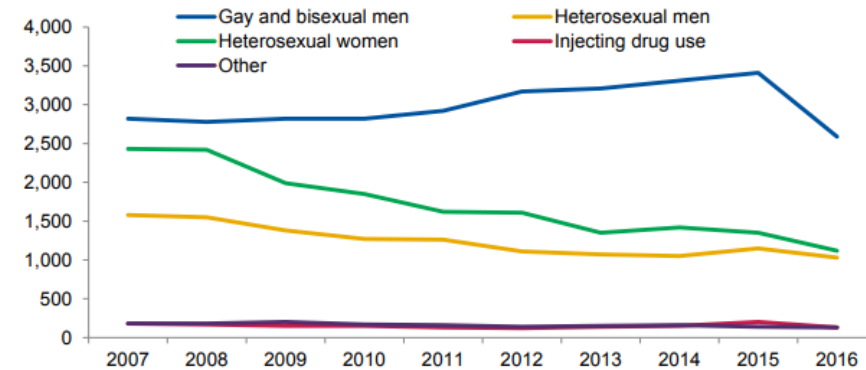
# Groups affected by HIV in UK

MEN-Have you ever had oral or anal sex with another man in the last 3 months with or without a condom or other form of protection?



\*Data adjusted for missing ethnicity information.

Figure 2: HIV diagnoses\* by exposure group: UK, 2007 to 2016



\*Adjusted for missing exposure information.

Have you ever had sex in the last 3 months with anyone who may EVER have had sex in parts of the world where AIDS/HIV is very common (this includes most countries in Africa)

**Letters** » HIV testing

## Don't forget HIV testing in the over 60s

*BMJ* 2011 ; 343 doi: <https://doi.org/10.1136/bmj.d4352> (Published 12 July 2011)

Cite this as: *BMJ* 2011;343:d4352

Article

Related content

Metrics

Responses

*Patricia Hewitt, consultant specialist in transfusion microbiology*<sup>1</sup>, *Catherine Chapman, consultant in transfusion medicine*<sup>2</sup>,  
*Rekha Anand, consultant haematologist*<sup>3</sup>, *Nicola Hewson, associate specialist*<sup>4</sup>,  
*Su Brailsford, consultant in epidemiology and health protection*<sup>5</sup>, *Richard Tedder, professor of virology*<sup>6</sup>

Author affiliations ▼

[patricia.hewitt@nhsbt.nhs.uk](mailto:patricia.hewitt@nhsbt.nhs.uk)

White reported routine offers of HIV tests at an accident and emergency department,<sup>1</sup> while Das and colleagues discussed primary HIV infection as "easily missed."<sup>2</sup> Our recent experience with three older people suggests that opportunistic offers of HIV testing should be more widespread.

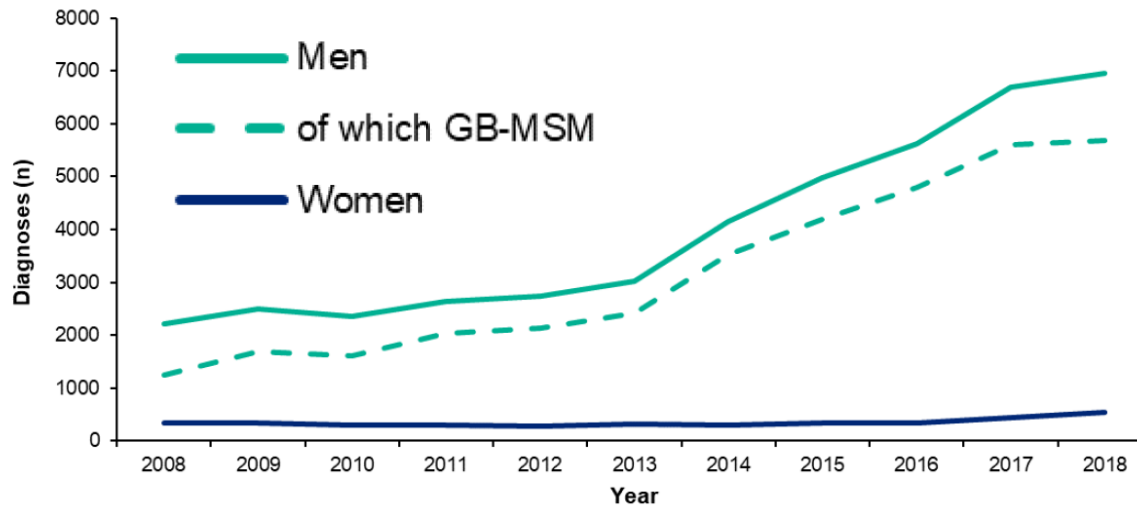
All three were repeat blood donors aged over 64 years who had seroconverted since their ...

[View Full Text](#)

# General population

- Infectious syphilis is rare but increasing
- Highest level since 1949
- 75% cases MSM but increasing in heterosexuals
- Indicates high risk network
- HI-MSM

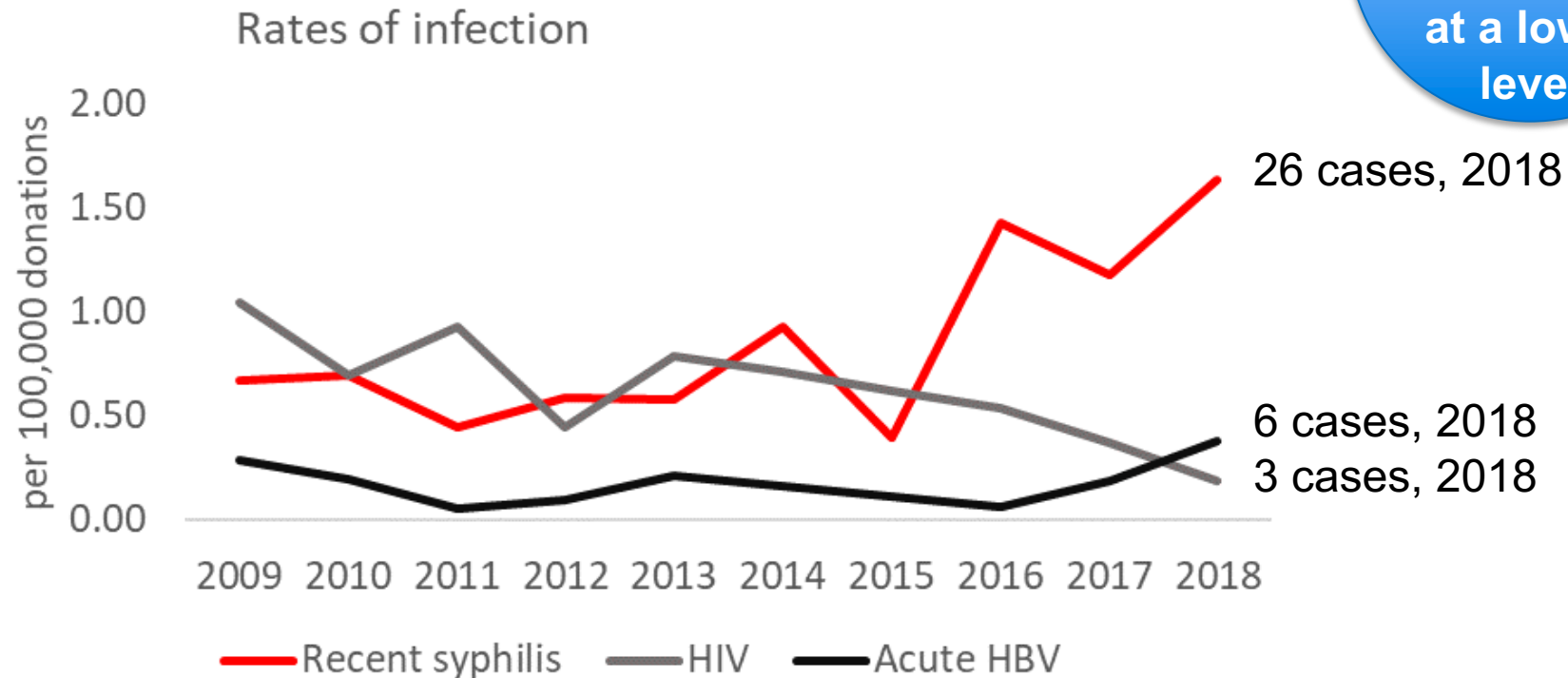
Diagnoses of syphilis (1y, 2y & early latent), by gender and male sexual orientation, England 2008-2018



Data source: GUMCAD STI surveillance System [12].

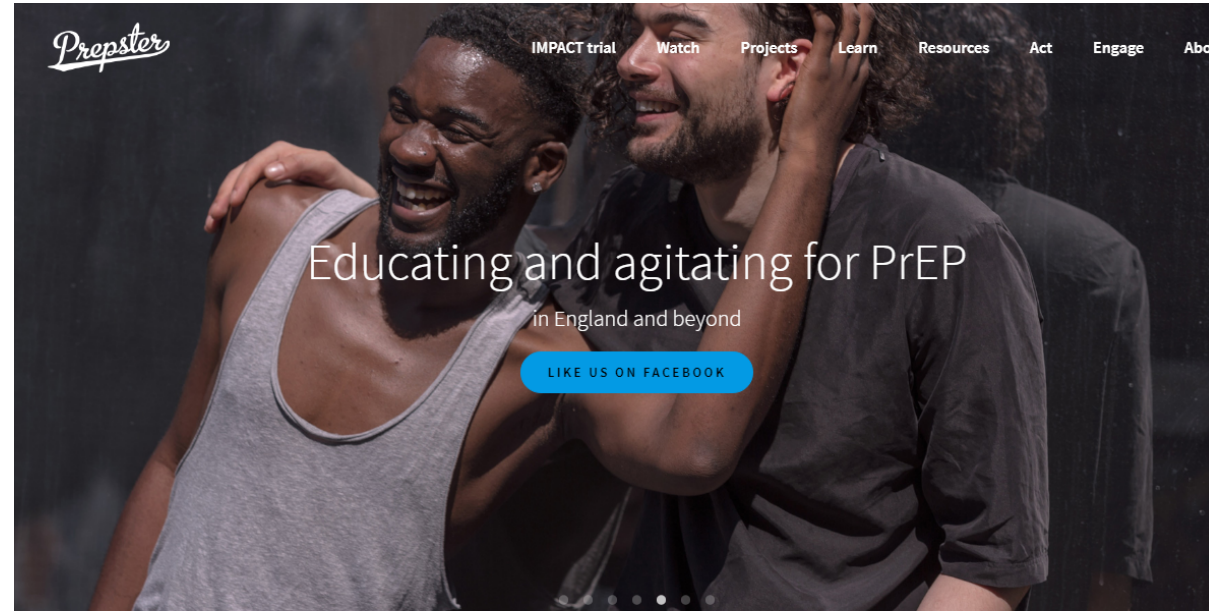
# Results- trends in infections

Mirrors  
increase  
in general  
population  
at a lower  
level





- Pre-exposure prophylaxis: Truvada
- England IMPACT study 10,000 places
- Alternatively on-line
- HIV negative pre-PrEP
- Impact on testing



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## I-BASE

### U=U: Undetectable = Untransmittable

28 March 2019. Related: [Advocates](#), [HIV positive people](#), [News](#), [Resources](#).

- [Questions on U=U.](#)
- [Download U=U Q&A factsheet \(PDF\)](#)  
Also in [arabic \(PDF\)](#), [French](#), [German](#), [Mandarin](#), [Polish](#), [Portuguese](#), [Romanian](#), [Russian](#) and [Turkish](#). (Translations thanks to Mortimer Market Clinic).
- [U=U posters and post cards for clinics](#) (free to order).

**Did you know that having an undetectable viral load when you are taking HIV treatment (ART) also stops HIV transmission?**

For at least 20 years we have known that ART reduces HIV transmission. But for the last two years, leading scientists have agreed that the risk is



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For sexual behaviours

# Informing policy: SaBTO reviews

**SaBTO**  
Advisory Committee on the  
Safety of Blood, Tissues and Organs


**MSM Deferral Review 2006**




No change to lifetime  
deferral of MSM from  
blood donation in UK

**More evidence needed**


**SaBTO**  
Advisory Committee on the  
Safety of Blood, Tissues and Organs




**Donor Selection Criteria Review 2010**



*Little NAT testing data for HBV  
Only HCV NAT is mandatory*




**CSW** 

Over 12 months

**Compliance is key  
to blood safety**



**SaBTO**  
Advisory Committee on the  
Safety of Blood, Tissues and Organs





**Donor Selection Criteria Review 2016**

*What is minimum safe period that tests would be  
expected to detect infection?*

*Rate of infections in donors / Ethics / Legal /  
Modelling new rates / International practice*











**NO DEFERRAL**  
if UK based practitioner  
Subject to law

**CSW**  

Over  
3 months

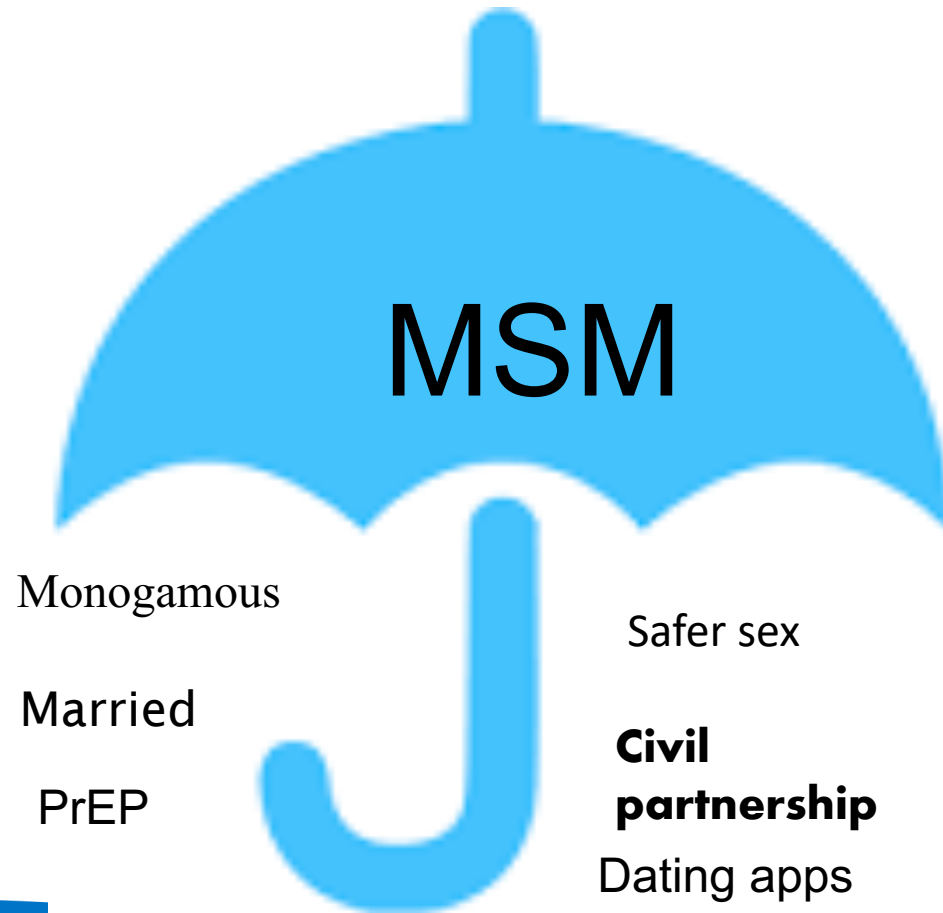
Over  
12 months  
Subject to  
law

**Work towards individualised  
risk assessment**

**Blood, tissue and cell donor selection criteria report: 2017**  
[www.gov.uk/government/publications/blood-tissue-and-cell-donor-selection-criteria-report-2017](http://www.gov.uk/government/publications/blood-tissue-and-cell-donor-selection-criteria-report-2017)

# Selection rules based on population



3 month deferral sex between men:  
oral or anal sex  
with or without a condom

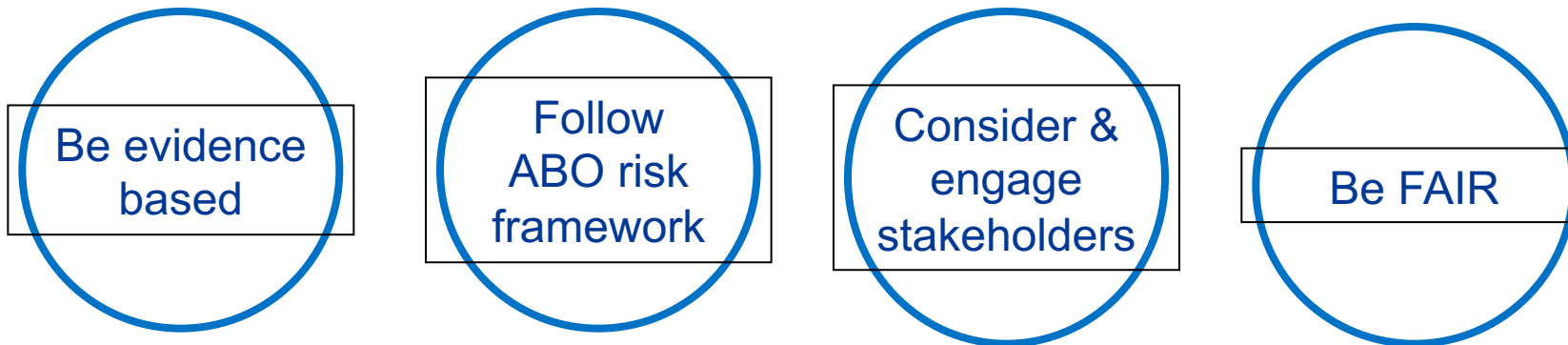
**Vs**

More individualised risk assessment

# FAIR

- Review of available literature and data
- Small scale survey-BEST
- Focus groups (session staff, donors, potential donors)
- Psychometric testing
- Large scale survey

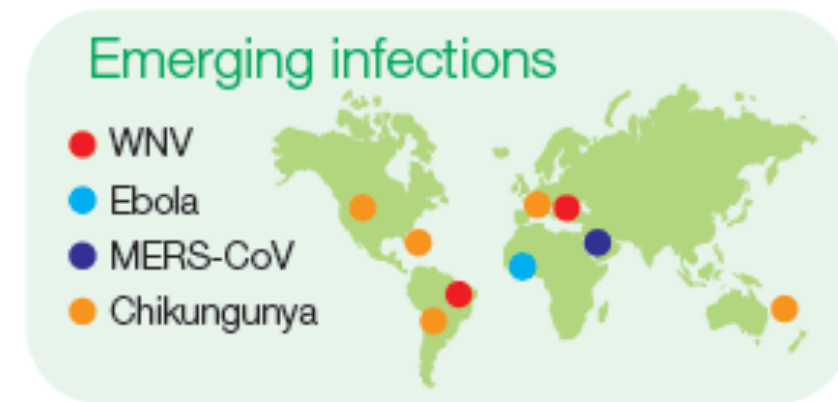
Everything we do must ...



# Rock and Roll?

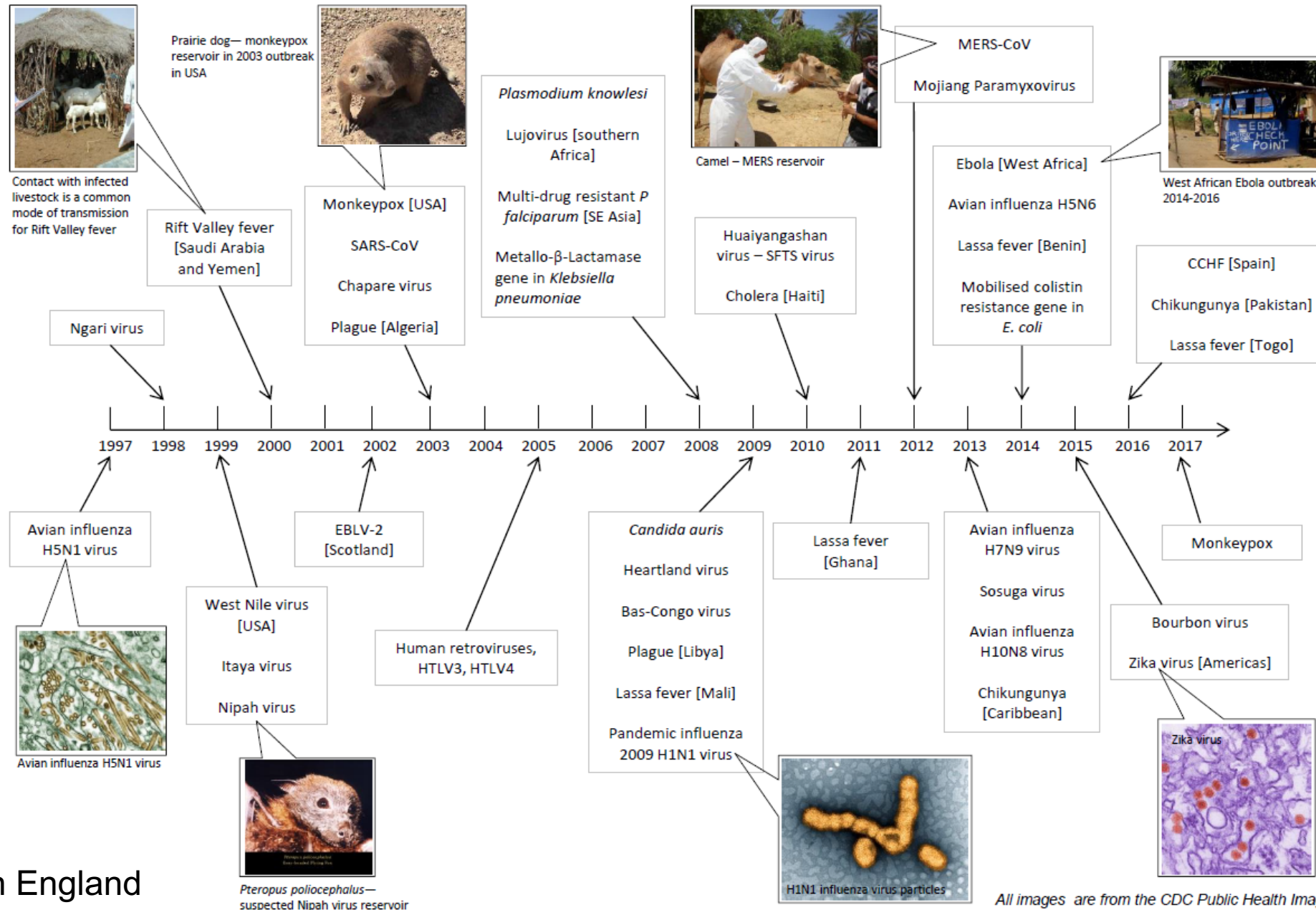
## Surveillance of Emerging Infections

- *Newly identified* eg **MERS-CoV**
- *Previously unrecognised* eg ***P. knowlesi***
- *changes in existing micro-organisms* eg **H1N1 and avian flu**
- *spread to new areas or populations* eg **WNV, chikungunya, Zika**
- *discovery that a known disease caused by an infection* eg **XMRV (or not)**
- *re-emerging resistant to treatment, or breakdown in public health* eg **malaria, syphilis, ebola, HAV**



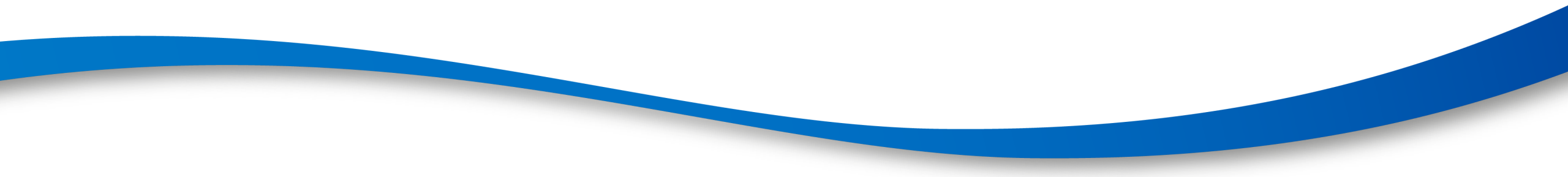


# Timeline of new and emerging infections since 1997





# *Sex or drugs or rock and roll*

- Reduction in HIV infections
  - Changing risks for HCV
  - Increase in acute syphilis
  - TTIs are rare
  - Are insects the greatest risk?
- 
- A thick blue wavy line that starts at the bottom left, dips down, and then rises towards the bottom right, spanning the width of the slide.



Thank you to all our  
collaborators across the  
UK and ROI

**NHSBT/PHE Epidemiology Unit:**

Claire Reynolds, Katy Davison, Su, Joe Flannagan, Zoe Gibney