

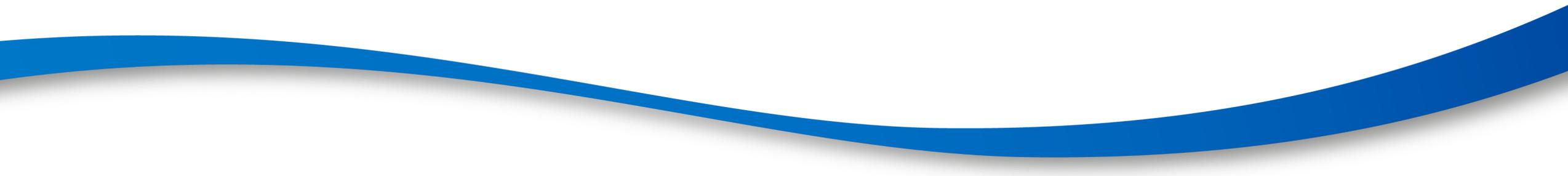
Sex, Drugs and Rock and Roll

Su Brailsford

Consultant in Epidemiology and Health Protection

Interim Associate Medical Director: Manufacturing and Microbiology

Outline

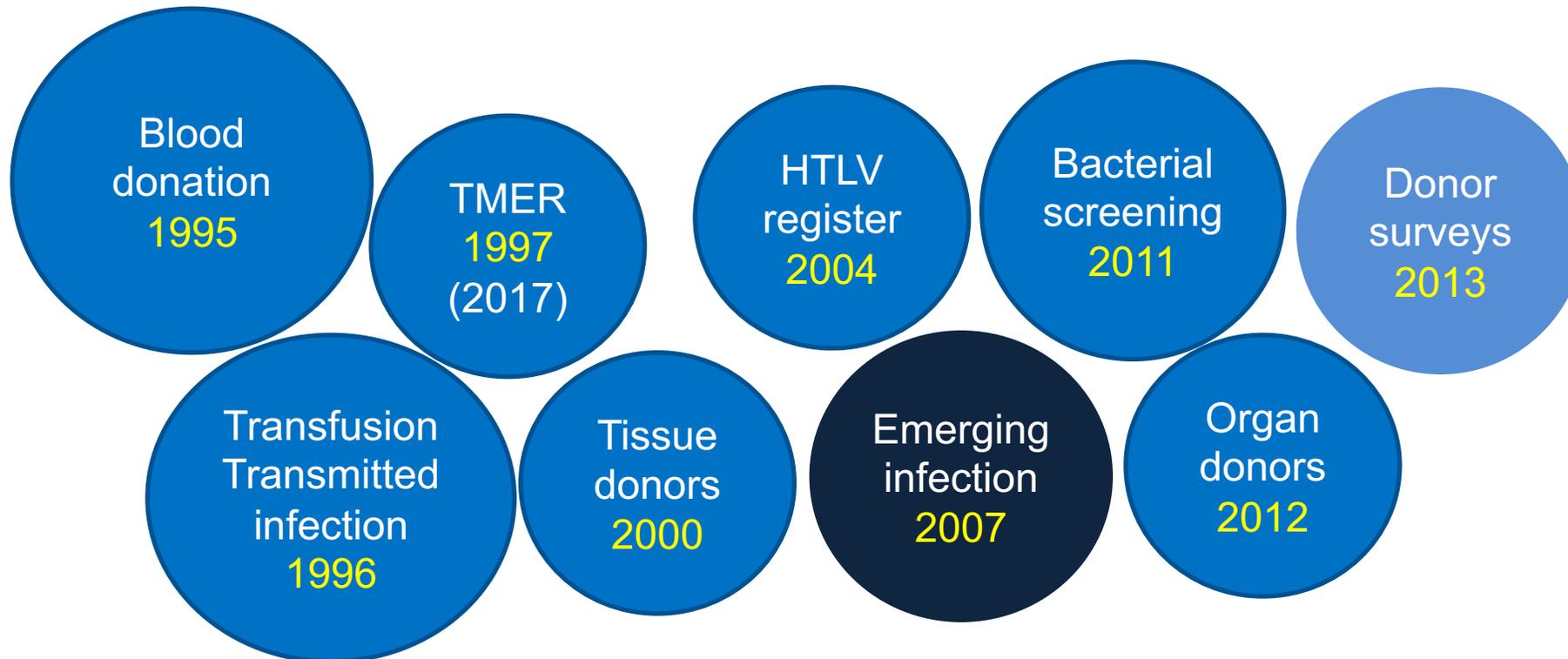
- A bit of history
 - What's changed in the general population
 - Impact on donor selection and testing
 - Where are we now?
- 
- A thick, solid blue wavy line that curves across the bottom of the slide, starting from the left edge and ending at the right edge.

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

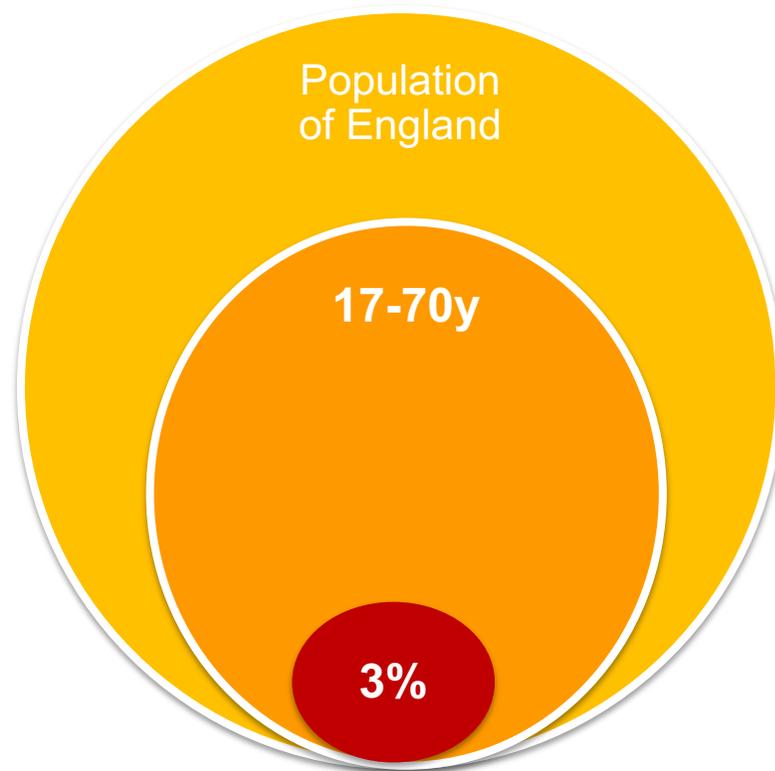


Surveillance schemes



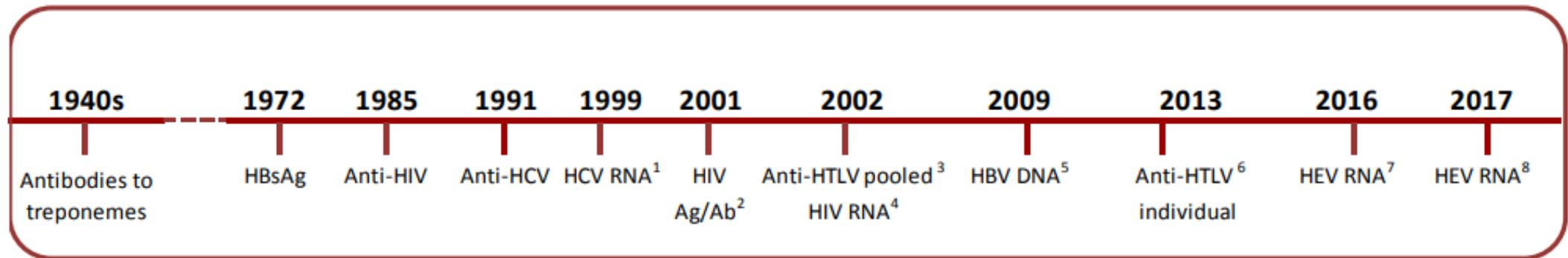
Enhance and share

The blood donor population



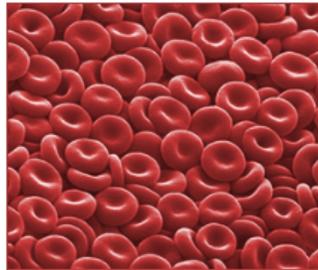
- Unpaid volunteers at low risk
- APPROX 2 million donations from 1 million individuals
- Females > males
- Variation by geographical region
- 9 of 10 white British
- 3 of 100 BAME
- New donors younger than repeat donors

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](#)

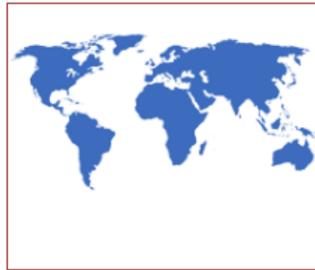
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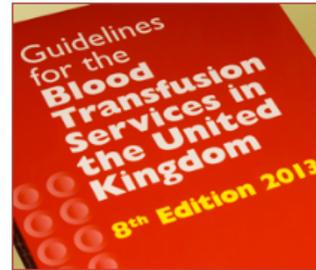
Donor Selection Guidelines: Tissue and Cells



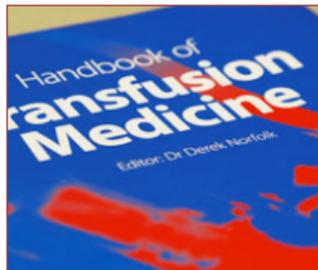
Donor Selection Guidelines: Whole Blood and Components



Donor Selection Guidelines: Geographical Disease Risk Index



Guidelines for the Blood Transfusion Services in the UK



Handbook of Transfusion Medicine



Transfusion Practice



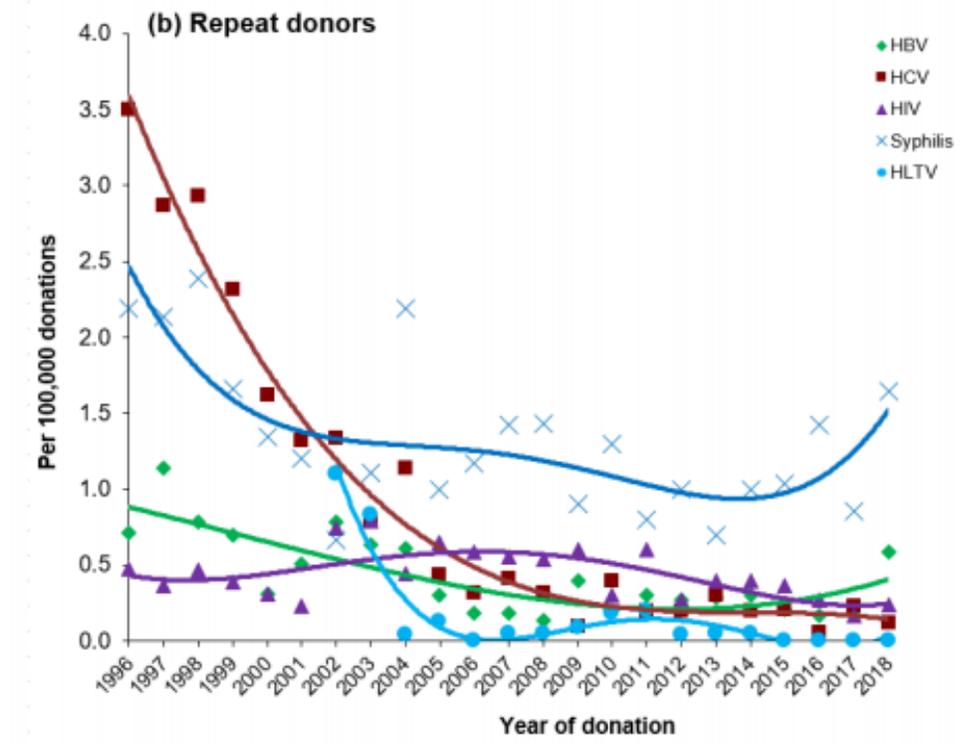
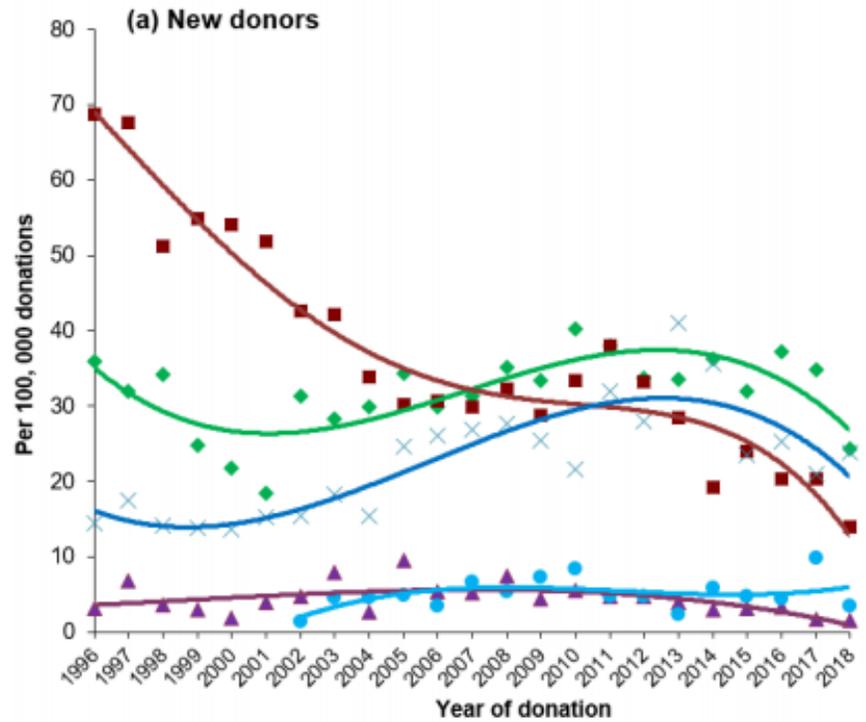
Regulations & Implementation



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

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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					
	Bacteria	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

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



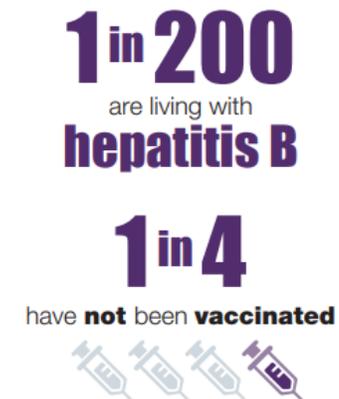
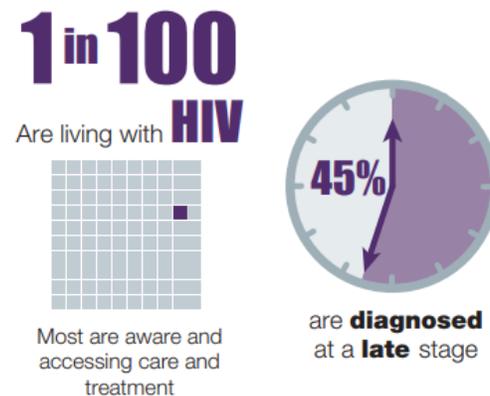
Drugs

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)”

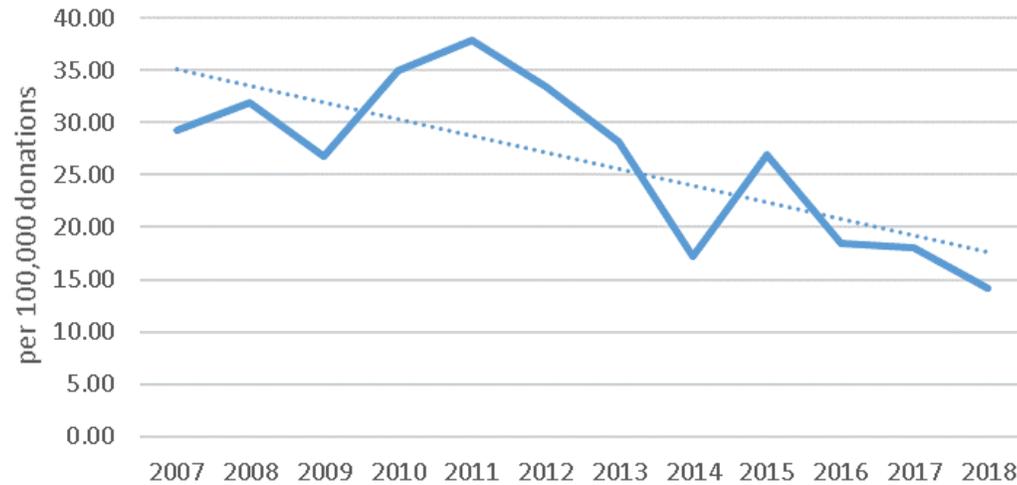
HIV prevalence in IPED users is similar to psychoactive users

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

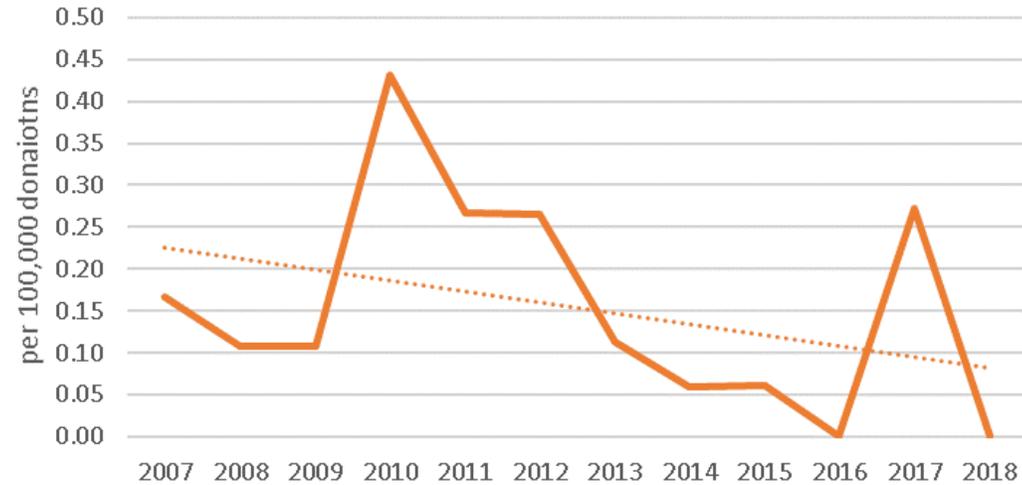


Monitoring trends

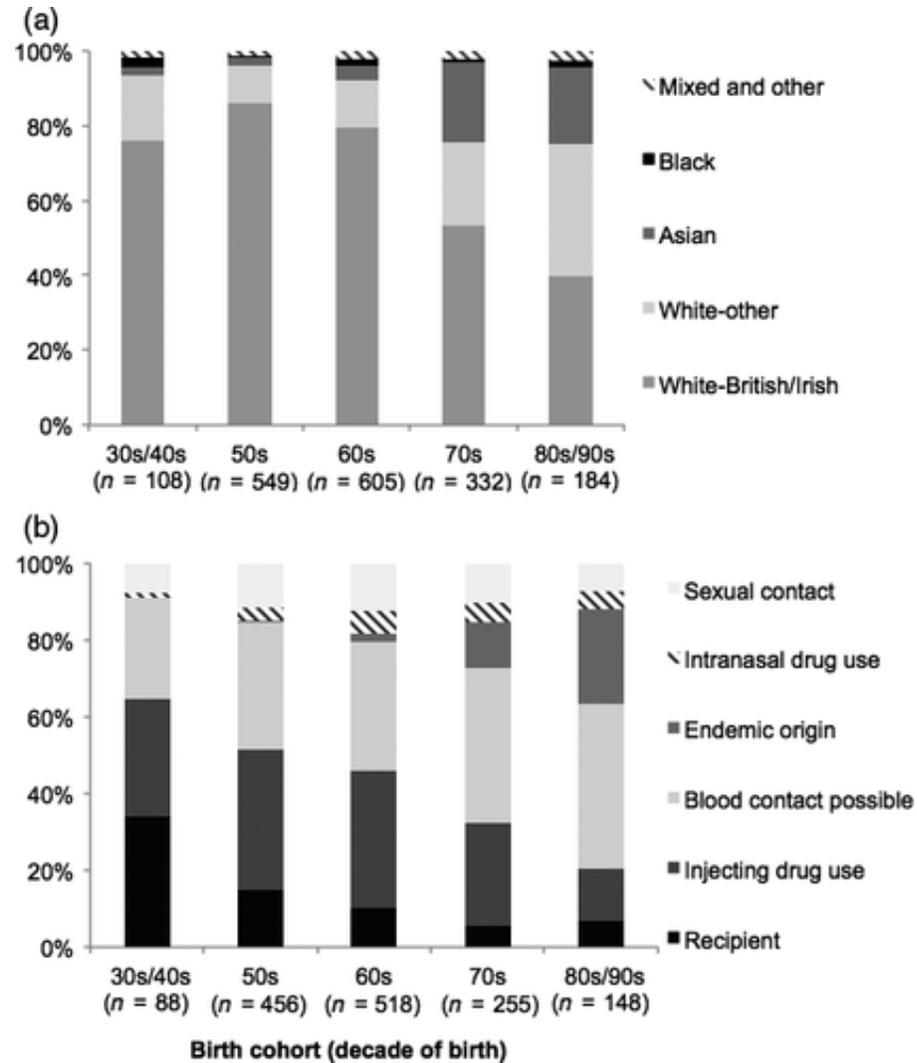
HCV annual rates first-time/returning blood donors: NHSBT 2007-31/08/2018



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



HCV declining trend

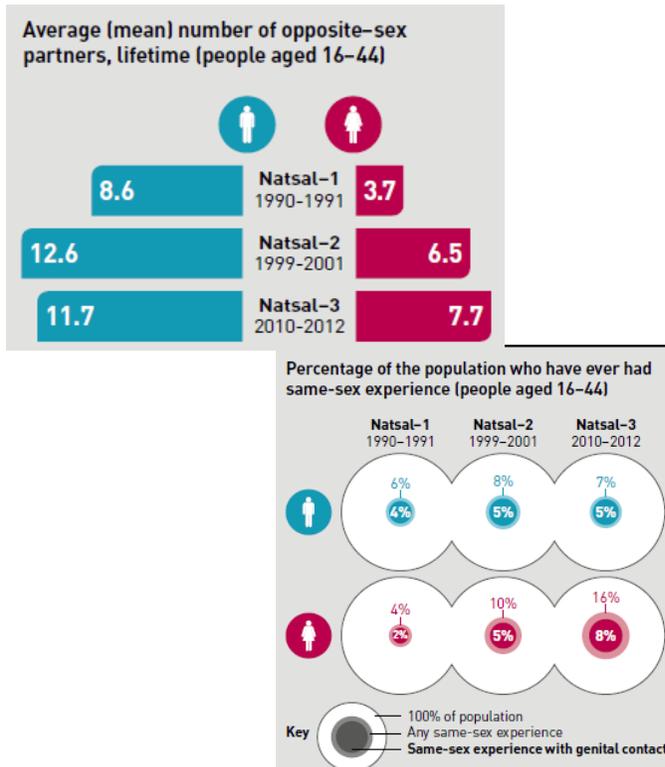


Sex



1990-2012

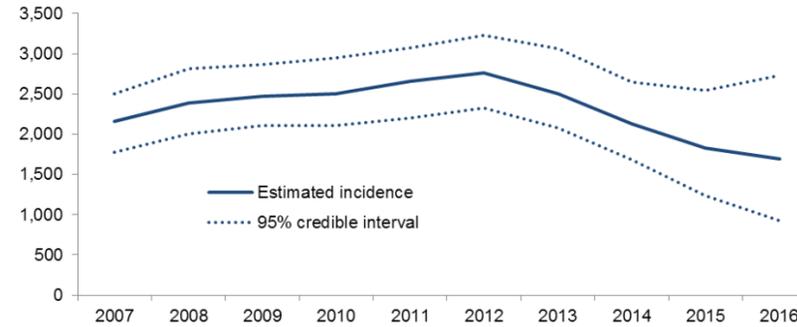
- Increase in lifetime number of partners
- Increase in same-sex sex
- Increase in HIV diagnosis & sexual health clinic attendance



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



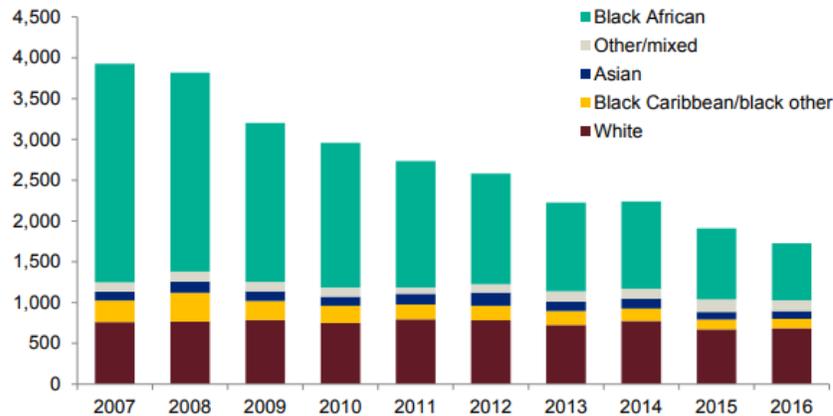
Estimates of HIV incidence in gay and bisexual men: England, 2007 to 2016



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

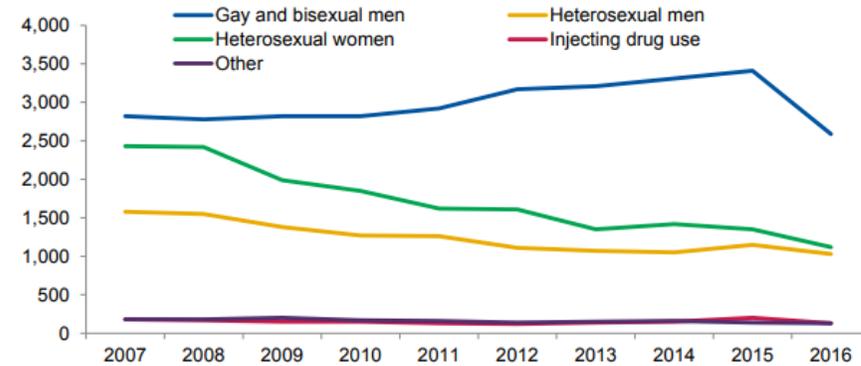
Groups affected by HIV in UK

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 microbiology¹, Catherine Chapman, consultant in transfusion medicine², Rekha Anand, consultant haematologist³, Nicola Hewson, associate specialist⁴, Su Brailsford, consultant in epidemiology and health protection⁵, Richard Tedder, professor of virology⁶

Author affiliations ▼

patricia.hewitt@nhsbt.nhs.uk

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

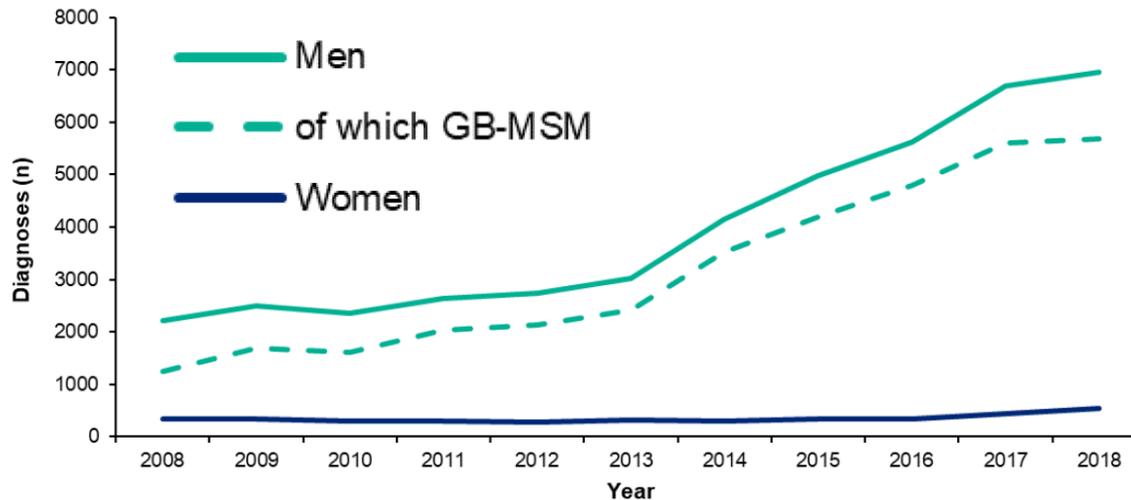
All three were repeat blood donors aged over 64 years who had seroconverted since their ...

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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

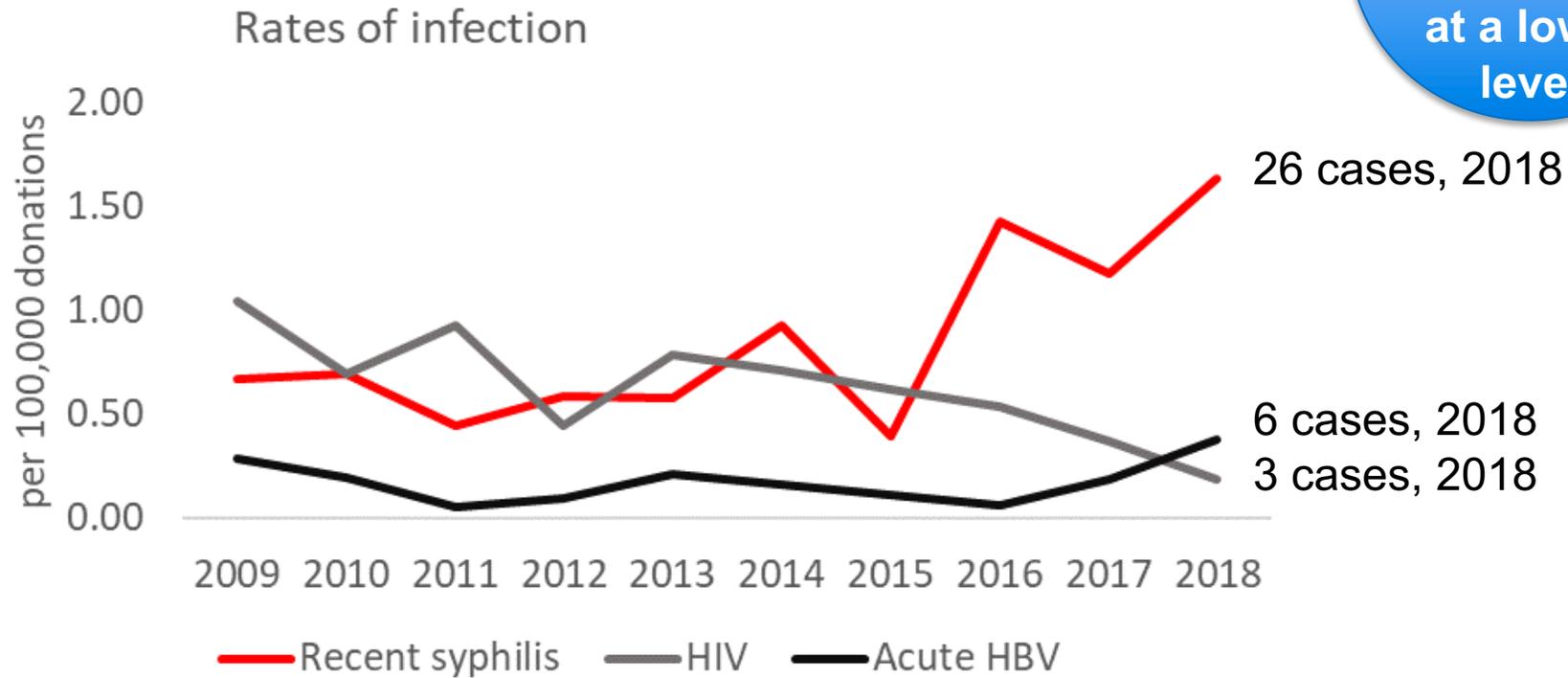
Diagnoses of syphilis (1y, 2y & early latent), by gender and male sexual orientation, England 2008-2018



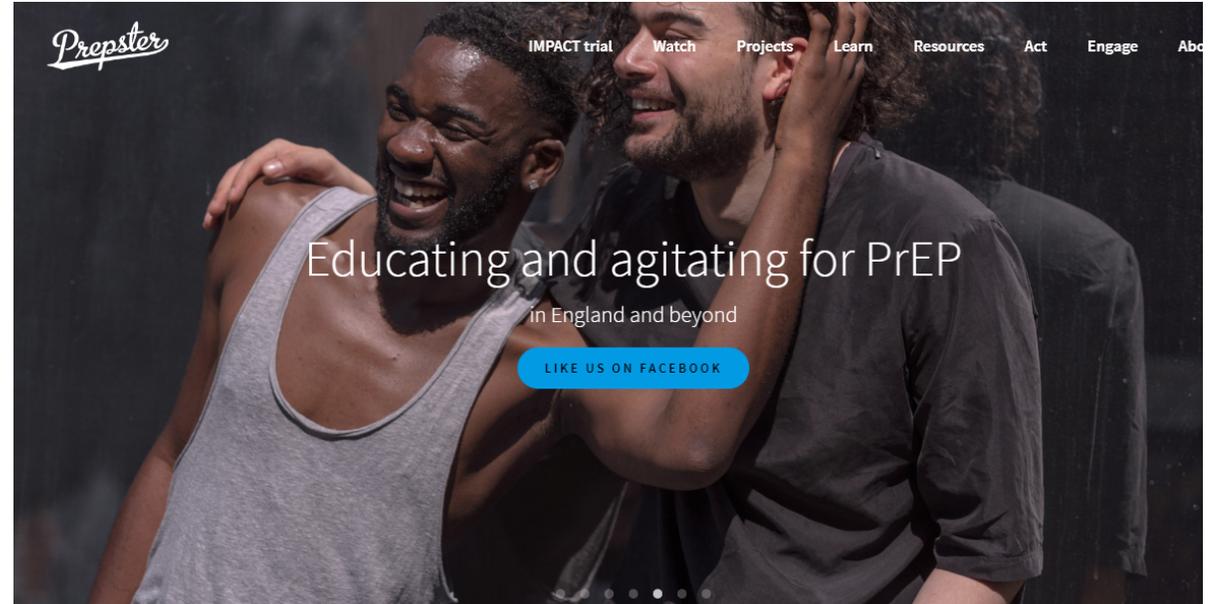
Data source: GUMCAD STI surveillance System [12].

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

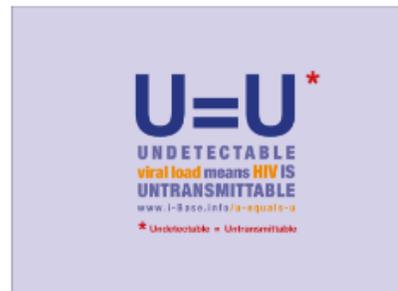
U=U: Undetectable = Untransmittable

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




Over 12 months
Subject to law

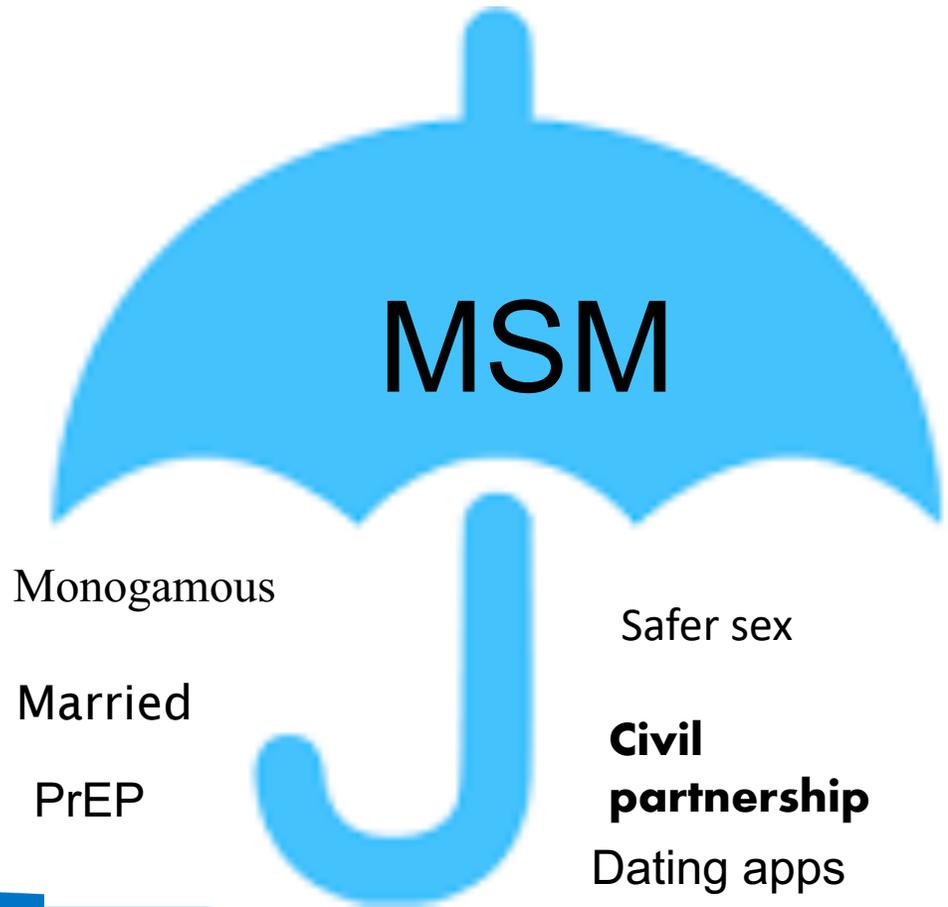
Over 3 months



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

Selection rules based on population



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

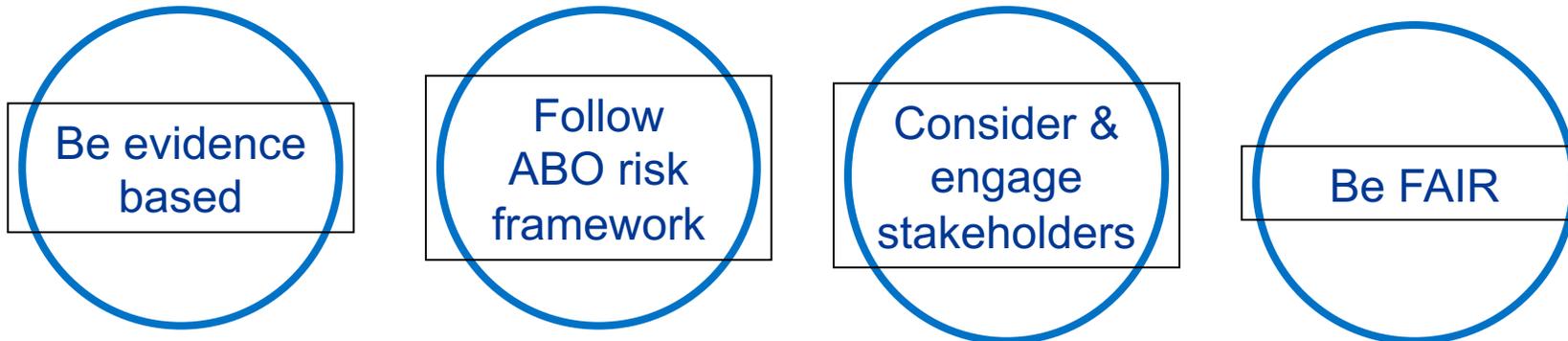
Vs

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

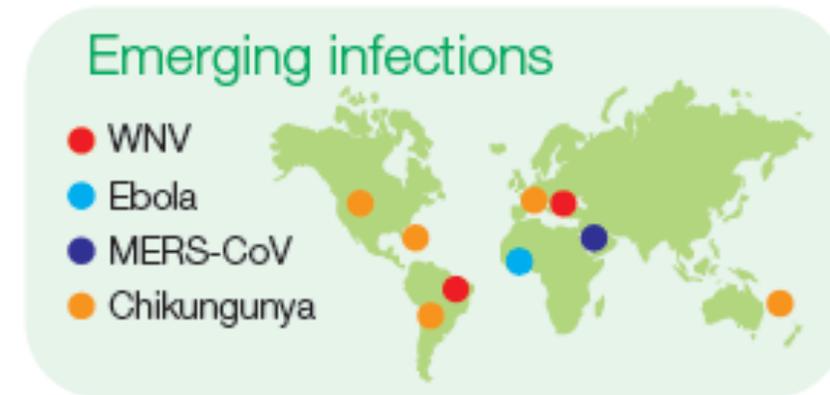
Everything we do must ...



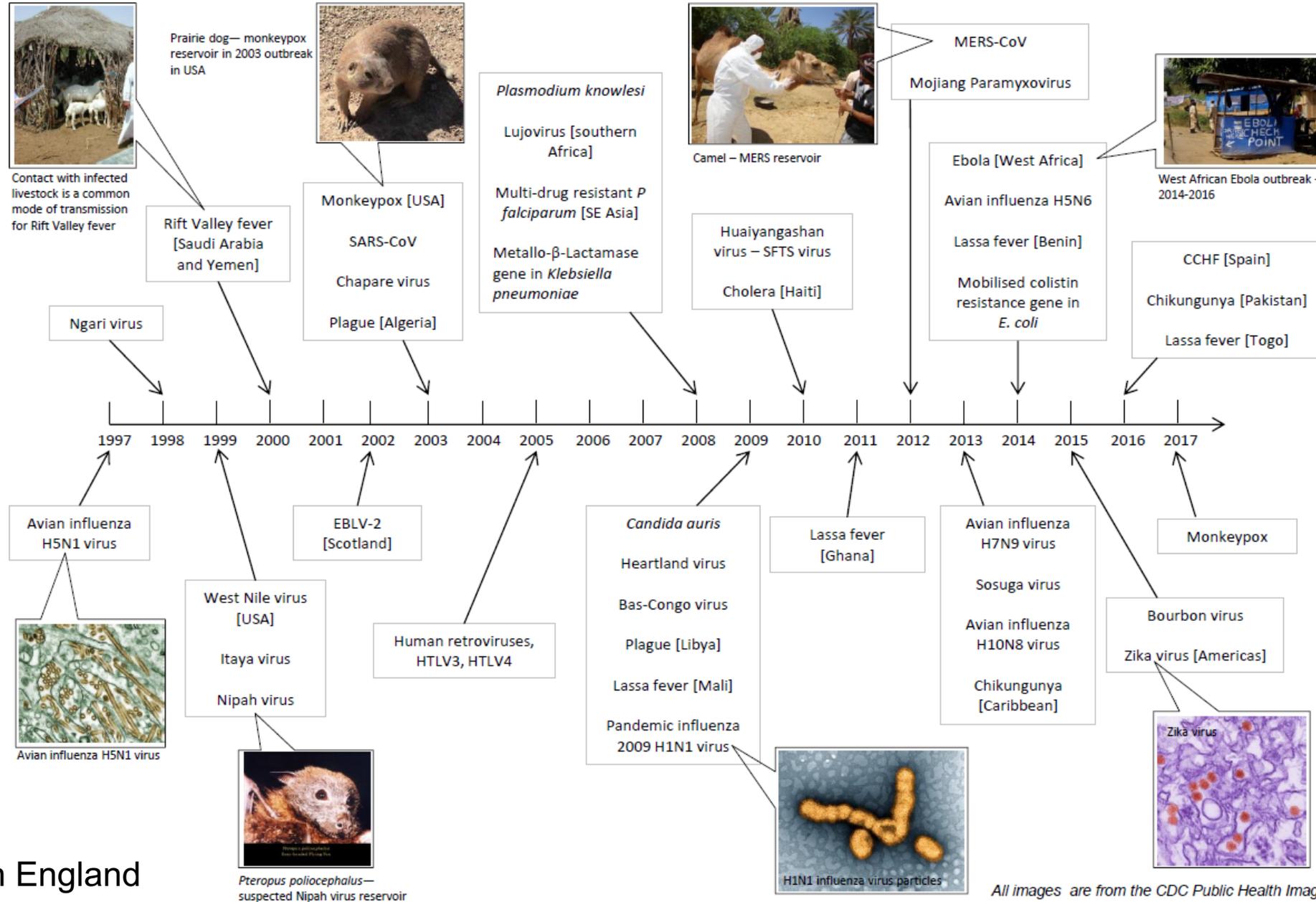
Rock and Roll?

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**

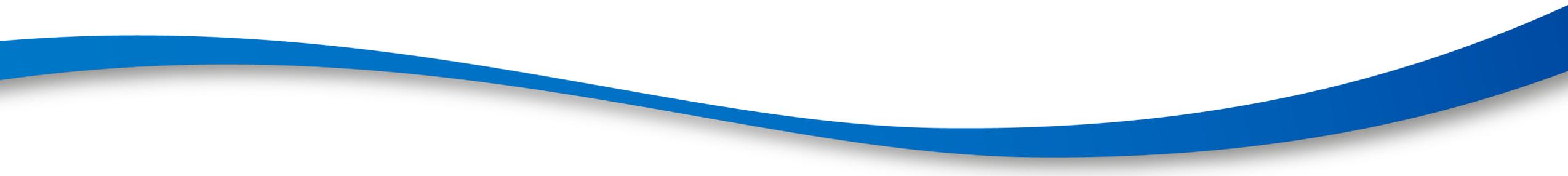


Timeline of new and emerging infections since 1997



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, solid blue wavy line that curves across the bottom of the slide, starting from the left edge and ending at the right edge.



Thank you to all our
collaborators across the
UK and ROI

NHSBT/PHE Epidemiology Unit:

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