



UK Health
Security
Agency



Blood and Transplant

Safe Supplies 2025: 30 years of collaboration, surveillance and evidence 2026 slide set

(Data to end of December 2025)

Slide set to accompany:

Safe supplies 2025: 30 years of collaboration, surveillance and evidence (Published)

The joint NHSBT and UKHSA Epidemiology Unit

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Data sources

Detailed information of the data used for the graphs is available in the Safe Supplies report with data tables available on request.

Data is reported for UK unless otherwise stated.

The annual report and infographic can be found here: [Annual review - Hospitals and Science – NHSBT](#)

The Methods and Sources for the data can be found here: [Methods and Sources - Hospitals and Science – NHSBT](#)

If you need further information or data please email the team at: epidemiology@nhsbt.nhs.uk

Feel free to use this information, cite as: Safe Supplies 2025: 30 years of collaboration, surveillance and evidence. Annual Review from the NHS Blood and Transplant and UK Health Security Agency Epidemiology Unit. London September 2026.

Blood donors confirmed positive for markers of infection by gender and age-group, UK 2021 to 2025

UK 2021 to 2025	HBV	HCV	HIV	HTLV	Syphilis	Whole Blood Donors
Gender* (n, %)						
Female	81 (22%)	56 (39%)	8 (21%)	35 (60%)	128 (16%)	497,831 (53%)
Male	293 (78%)	89 (61%)	30 (79%)	23 (40%)	663 (84%)	433,144 (47%)
Age group (n, %)						
17-24	25 (7%)	8 (6%)	3 (8%)	8 (14%)	51 (6%)	56,840 (6%)
25-34	110 (29%)	28 (19%)	14 (37%)	11 (19%)	227 (29%)	162,458 (17%)
35-44	132 (35%)	39 (27%)	8 (21%)	9 (16%)	234 (30%)	191,281 (21%)
45-54	68 (18%)	35 (24%)	7 (18%)	17 (29%)	165 (21%)	197,552 (21%)
55+	40 (11%)	35 (24%)	6 (16%)	13 (22%)	116 (15%)	322,844 (35%)

HBV shown are confirmed as chronic, acute or occult infection. HCV are confirmed for anti-HCV with or without HCV RNA or HCV RNA only. HIV are confirmed for anti-HIV with or without HIV RNA or HIV RNA only. HTLV are confirmed for anti-HTLV (type 1 or 2). Syphilis are confirmed for treponemal antibody (any stage, including treated).

* 2 donors with markers of syphilis and 1 donor with markers of HBV were recorded as non-binary

Blood donors confirmed positive for markers of infection by ethnic background and area of birth, UK 2021 to 2025

UK 2021 to 2025	HBV	HCV	HIV	HTLV	Syphilis	Whole Blood Donors*
Ethnic background (n, %)						
Asian or Asian British	111 (30%)	33 (23%)	4 (11%)	10 (17%)	94 (12%)	38,373 (4%)
Black, African, Caribbean or Black British	122 (33%)	3 (2%)	2 (5%)	34 (59%)	69 (9%)	14,691 (2%)
Mixed or other	20 (5%)	8 (6%)	5 (13%)	6 (10%)	48 (6%)	24,341 (3%)
White	111 (30%)	99 (68%)	26 (68%)	8 (14%)	561 (71%)	811,694 (90%)
Not known	11 (3%)	2 (1%)	1 (3%)	0 (0%)	21 (3%)	15,387 (2%)
Area of birth (n, %)						
Africa	107 (29%)	4 (3%)	1 (3%)	9 (16%)	39 (5%)	N/A
Asia	109 (29%)	31 (21%)	5 (13%)	10 (17%)	73 (9%)	N/A
Europe	88 (23%)	44 (30%)	4 (11%)	4 (7%)	74 (9%)	N/A
UK	40 (11%)	37 (26%)	14 (37%)	24 (41%)	342 (43%)	N/A
Other	4 (1%)	0 (0%)	4 (11%)	7 (12%)	40 (5%)	N/A
Not known	27 (7%)	29 (20%)	10 (26%)	4 (7%)	225 (28%)	N/A

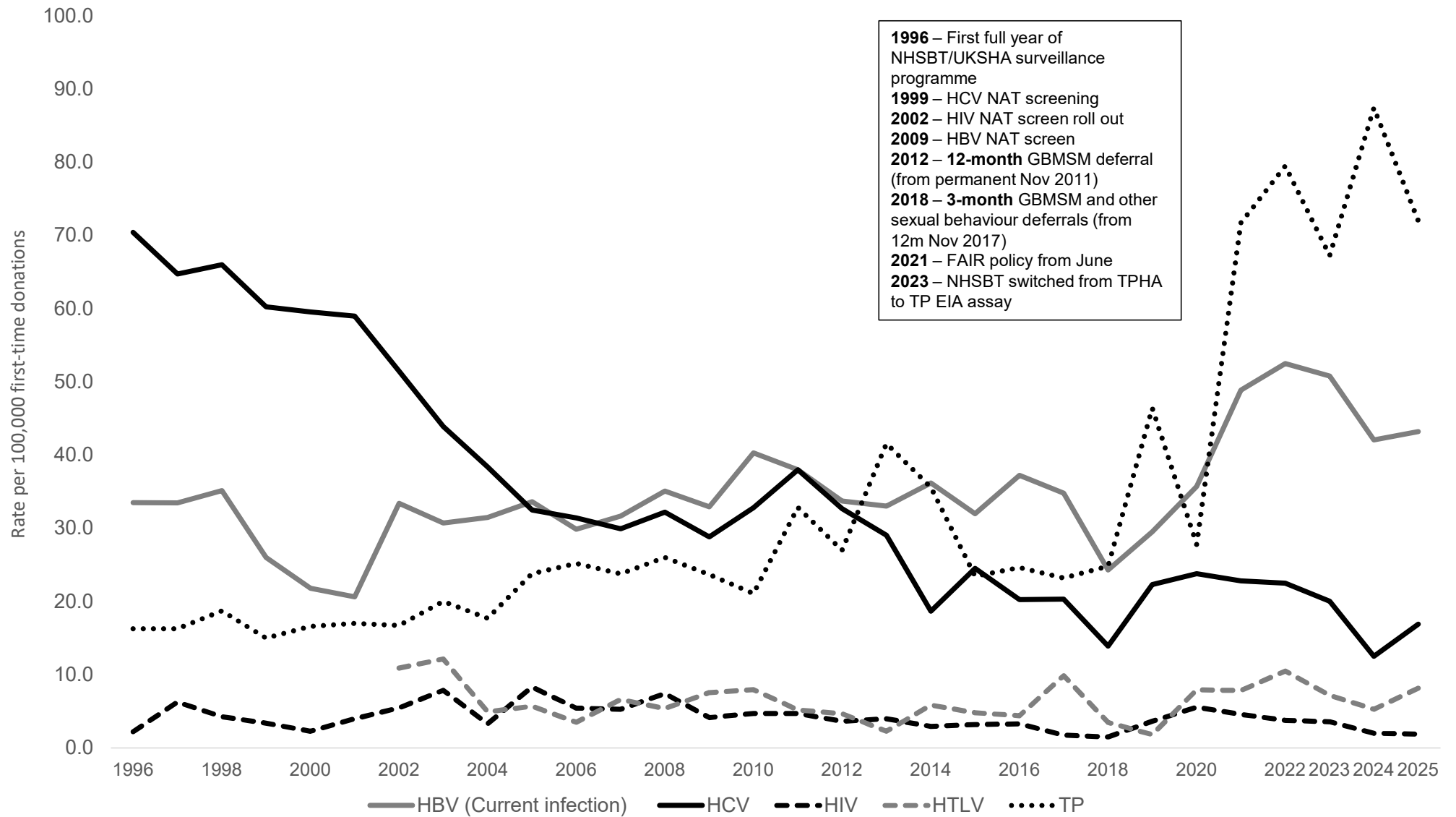
* Using England whole blood donors making a donation for ethnic background comparison

Blood donors confirmed positive for markers of infection by probable exposure, UK 2021 to 2025

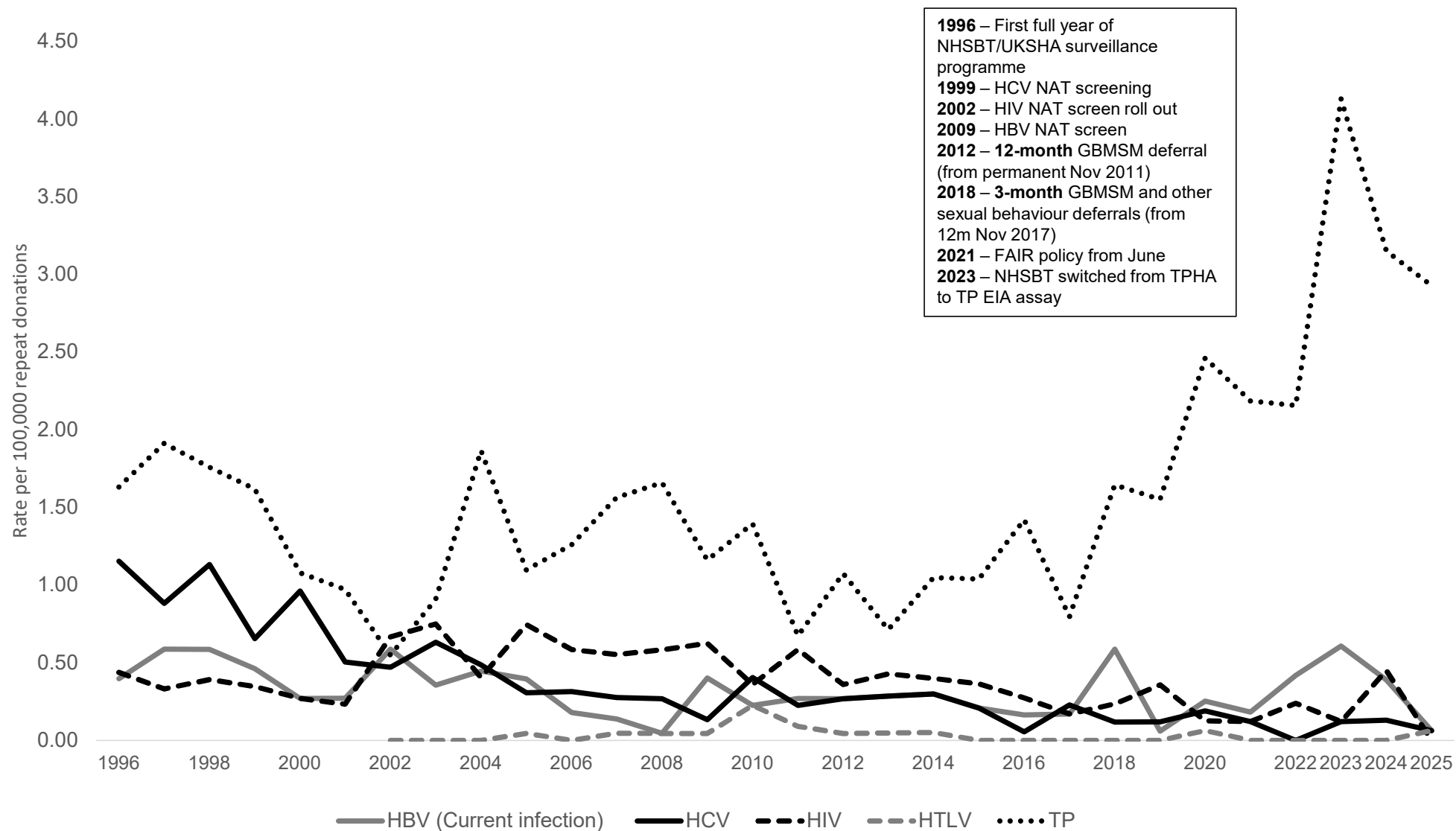
UK 2021 to 2025	HBV	HCV	HIV	HTLV	Syphilis	Whole Blood Donors
Probable exposure (n, %)						
Injecting drug use	0 (0%)	13 (9%)	0 (0%)	0 (0%)	0 (0%)	N/A
Intranasal drug use	0 (0%)	11 (8%)	0 (0%)	0 (0%)	0 (0%)	N/A
Sex between men	7 (2%)	1 (1%)	15 (39%)	1 (2%)	296 (37%)	N/A
Sex between men and women	13 (3%)	14 (10%)	16 (42%)	5 (9%)	338 (43%)	N/A
Sex between women	1 (0%)	0 (0%)	0 (0%)	0 (0%)	3 (0%)	N/A
Blood/tissue transfer, blood product treatment*	0 (0%)	3 (2%)	0 (0%)	0 (0%)	0 (0%)	N/A
Blood contact possible	11 (3%)	21 (14%)	2 (5%)	5 (9%)	1 (0%)	N/A
Infection associated with an endemic area	274 (73%)	26 (18%)	0 (0%)	40 (69%)	12 (2%)	N/A
No exposure identified	69 (18%)	56 (39%)	5 (13%)	7 (12%)	143 (18%)	N/A

*Probable exposure either UK or abroad prior to HCV donation screening

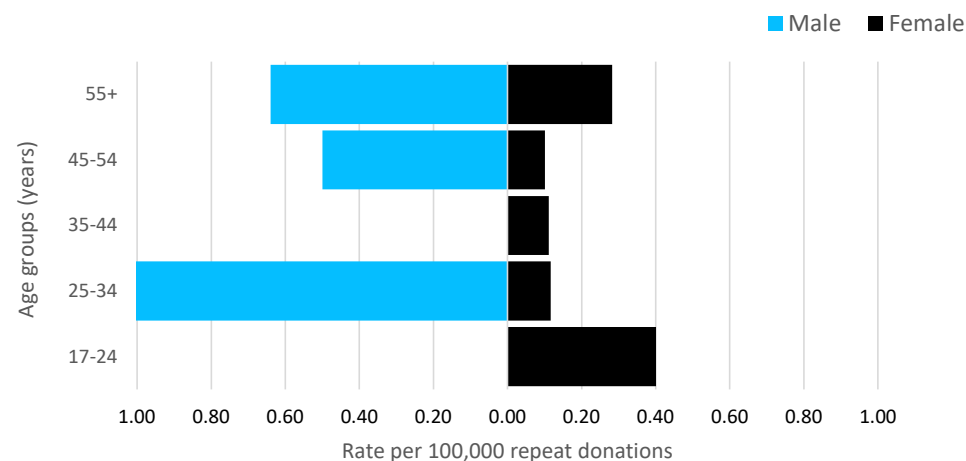
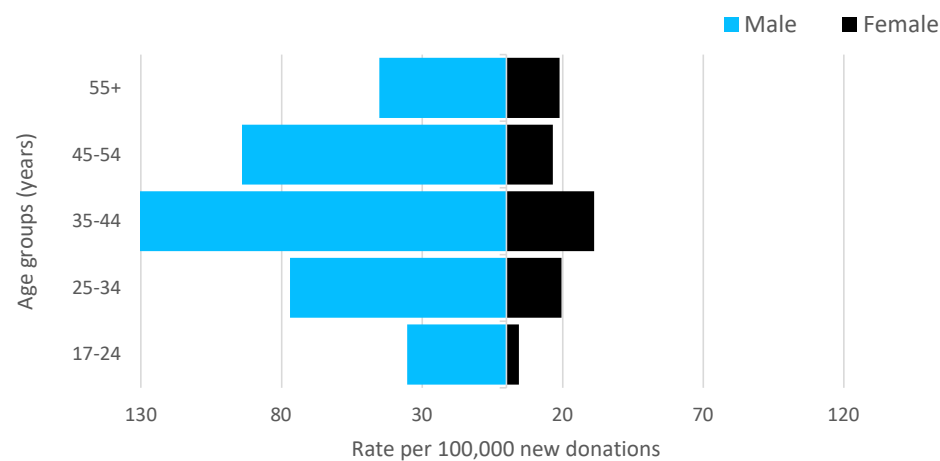
Rate of markers of infection per 100,000 donations from first-time donors, UK 1996 to 2025



Rate of markers of infection per 100,000 donations from repeat donors, UK 1996 to 2025



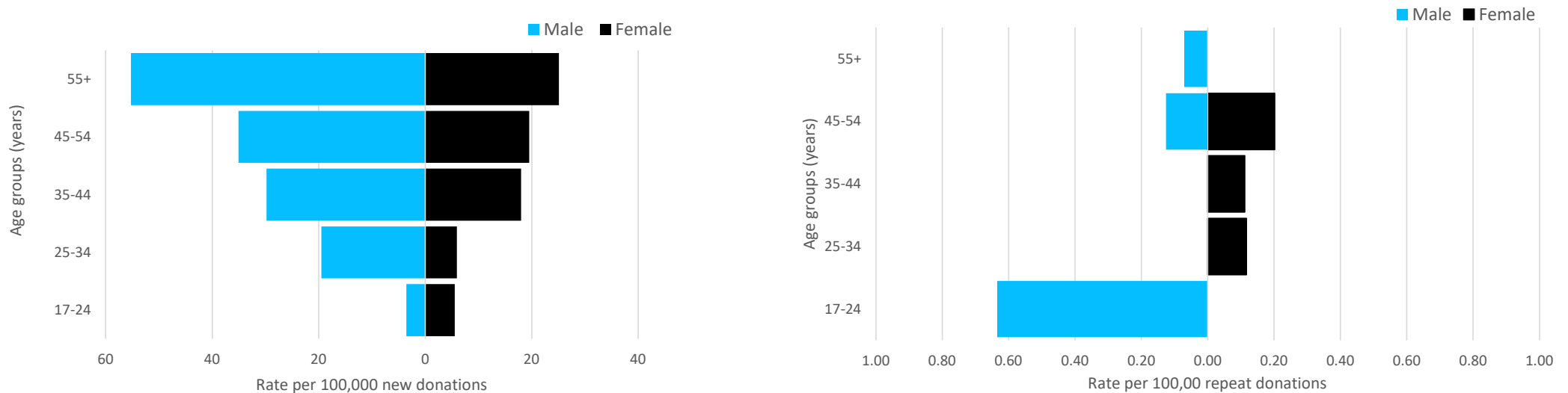
Age and gender distribution of donors with markers of current HBV in first-time (n=346) and repeat donors (n=28), UK 2021 to 2025



Note lower scale

HBV shown are confirmed as chronic, acute or occult infection

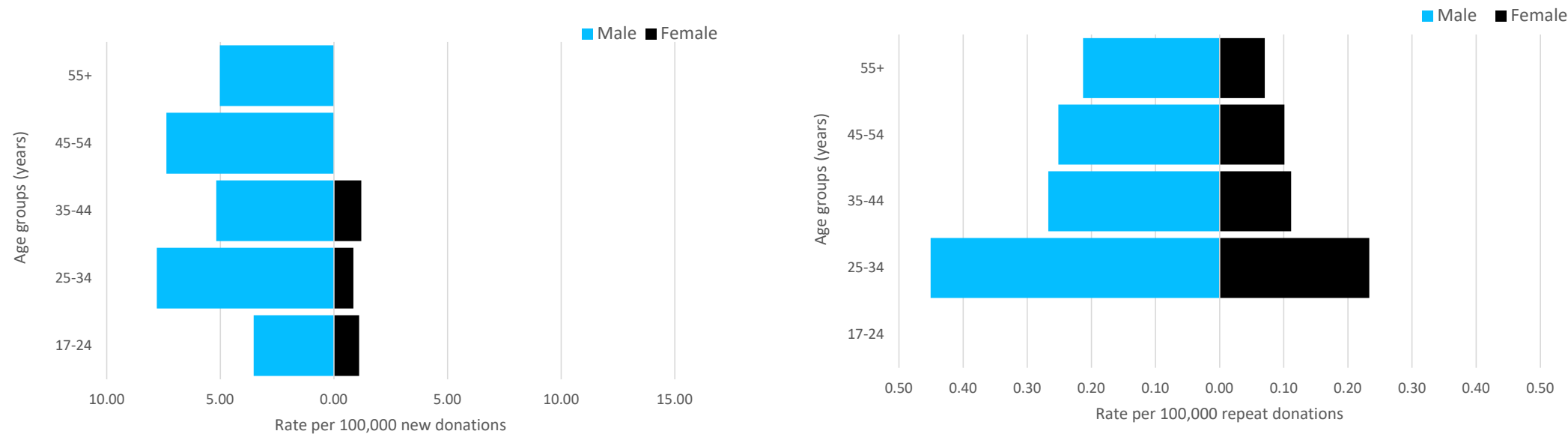
Age and gender distribution of donors with markers of HCV in first-time (n=138) and repeat donors (n=7), UK 2021 to 2025



Note lower scale

HCV are confirmed for anti-HCV with or without HCV RNA or HCV RNA only.

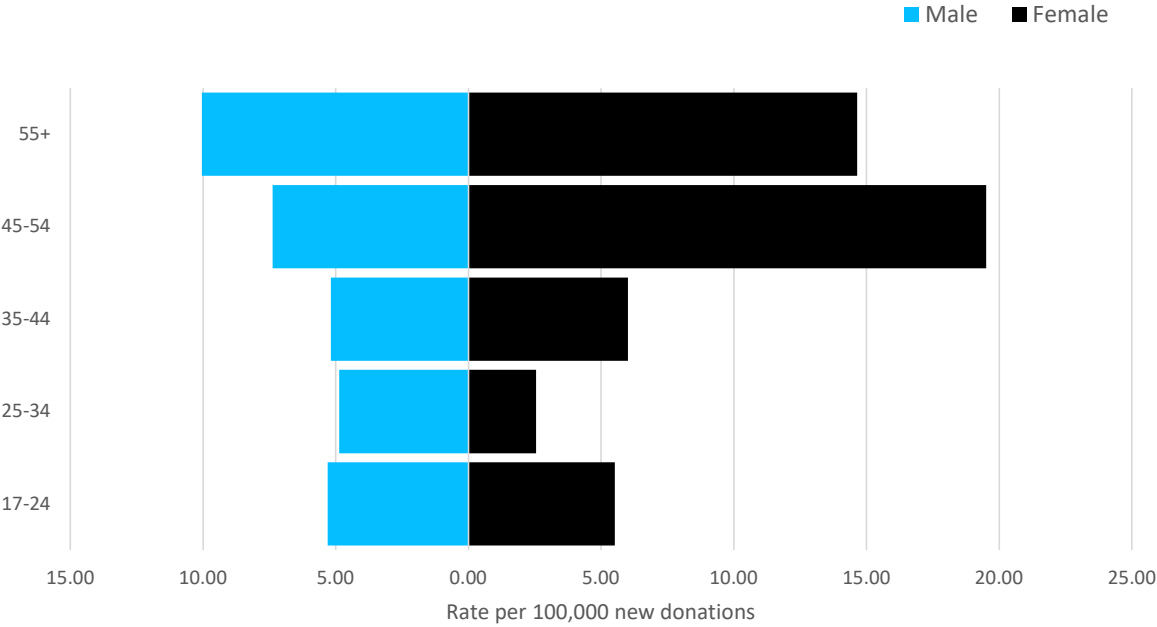
Age and gender distribution of donors with markers of HIV in first-time (n=23) and repeat donors (n=15), UK 2021 to 2025



Note lower scale

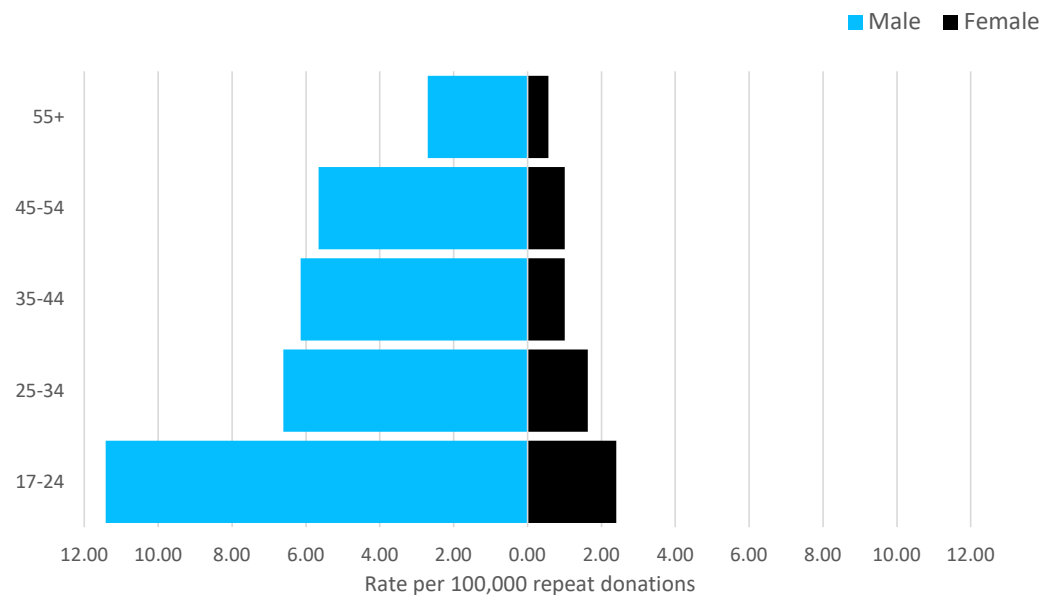
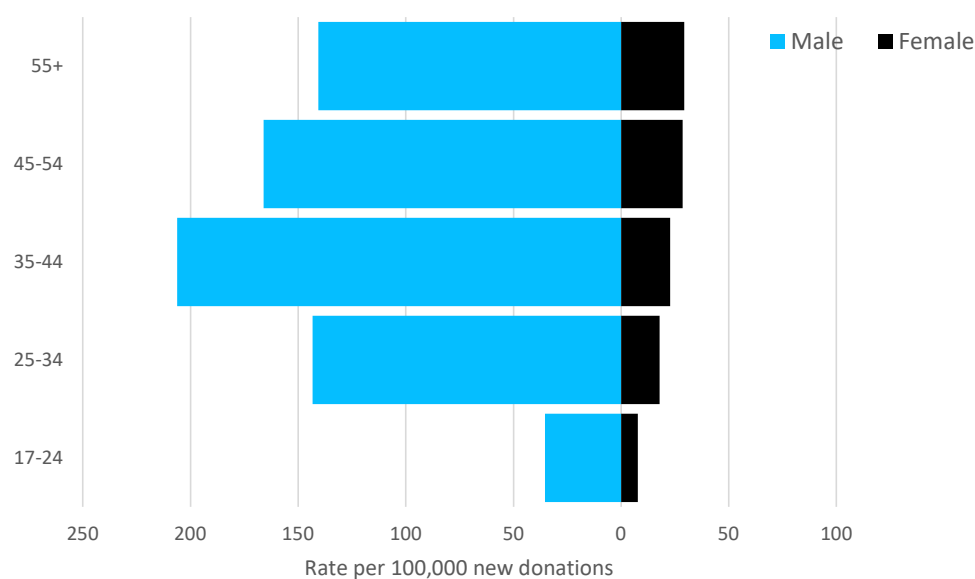
HIV are confirmed for anti-HIV with or without HIV RNA or HIV RNA only.

Age and gender distribution of donors with markers of HTLV in first-time donors (n=53), UK 2021 to 2025



HTLV are confirmed for anti-HTLV (type 1 or 2).

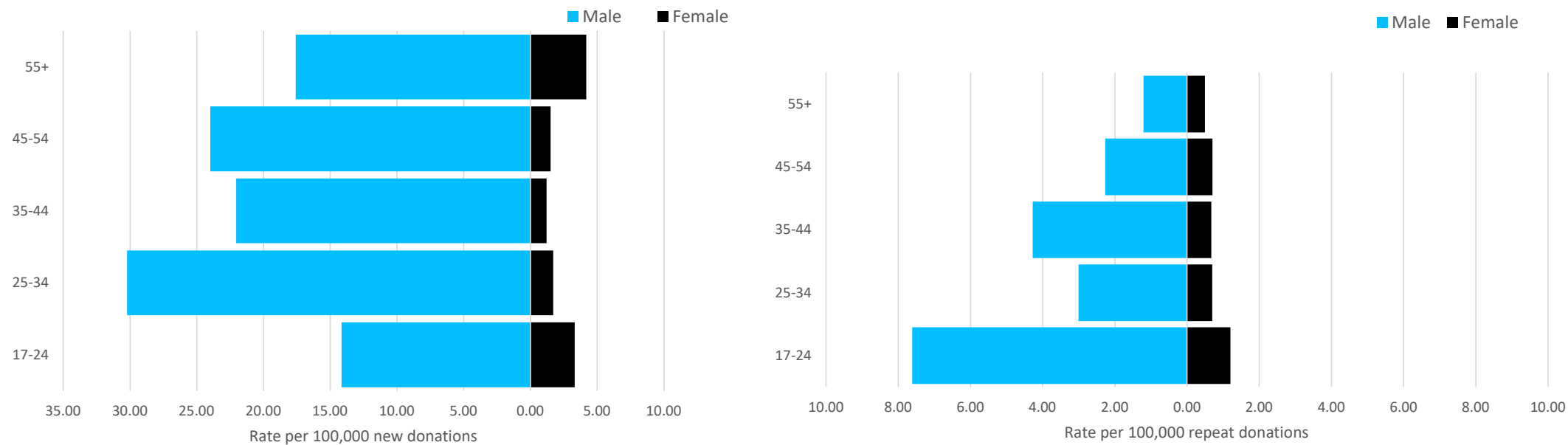
Age and gender distribution of donors with markers of syphilis in first-time (n=552) and repeat donors (n=238), UK 2021 to 2025



Note lower scale

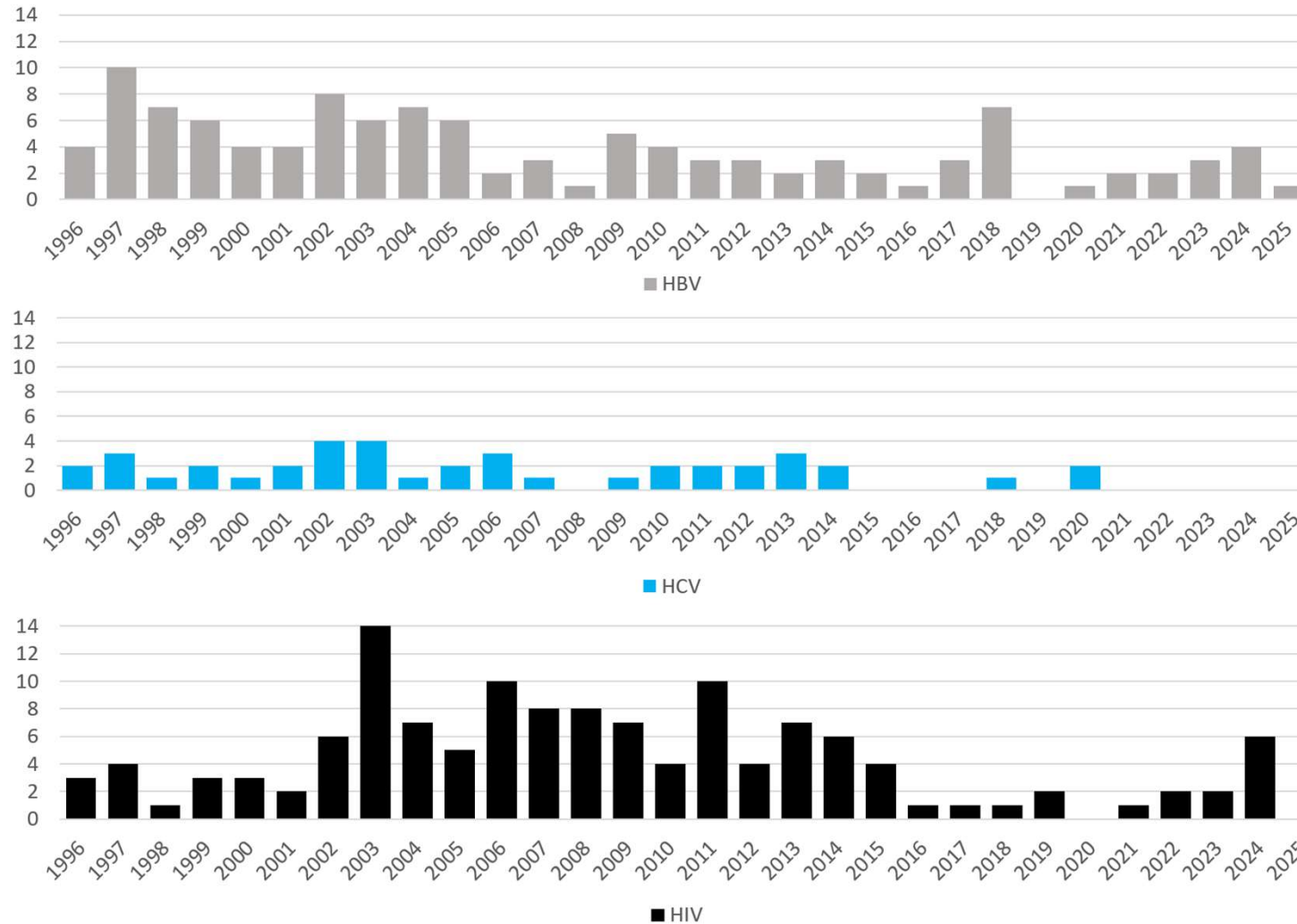
Syphilis are confirmed for treponemal antibody (any stage, including treated).

Age and gender distribution of donors with recent syphilis in first-time (n=85) and repeat donors (n=128), UK 2021 to 2025



Recent syphilis likely acquired in the last 12 months assigned if: confirmed as RPR/IgM positive, or history of treatment or negative donation within 12 months.

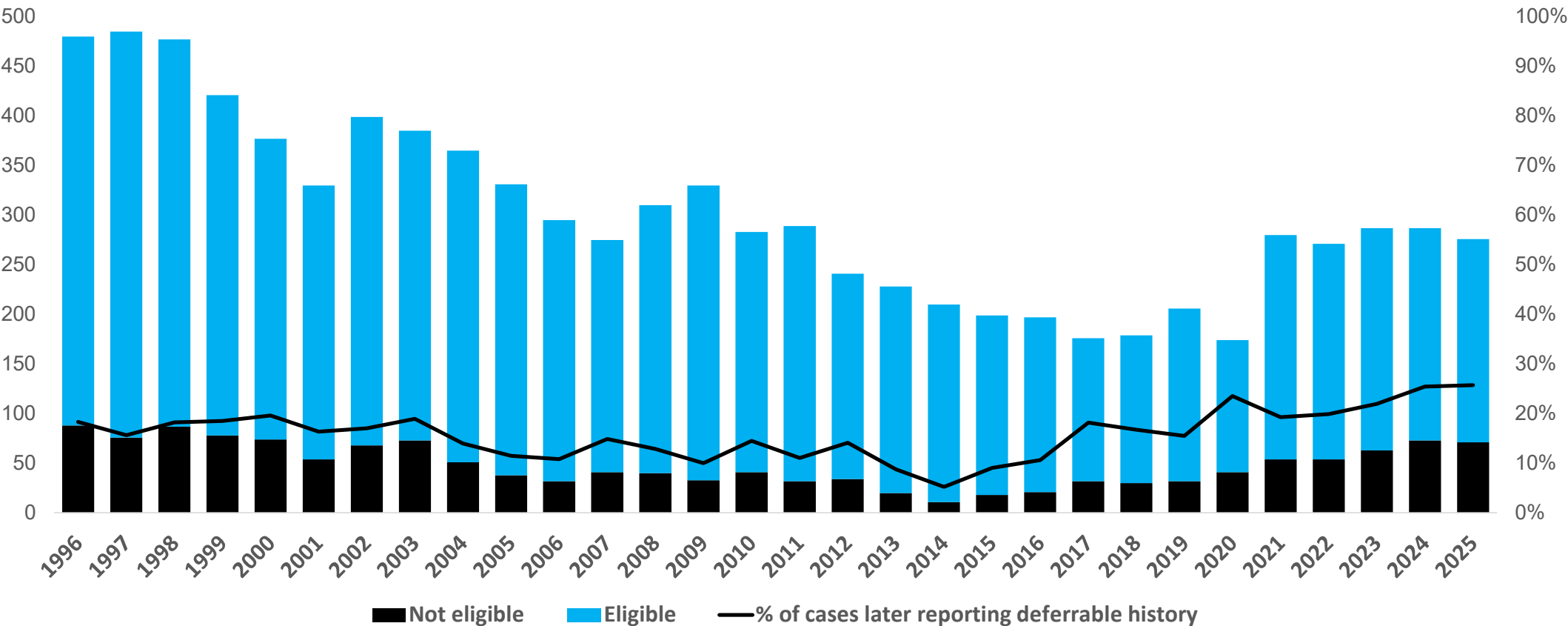
The number of whole blood or apheresis donors who seroconverted for HIV, HCV or HBV, UK 1996 to 2025



1996 – First full year of NHSBT/UKSHA surveillance programme
1999 – HCV NAT screening
2001 – HIV Ab/Ag screening rollout
2002 – HIV NAT screen rollout
2009 – HBV NAT screen
2012 – **12-month** GBMSM deferral (from permanent Nov 2011)
2018 – **3-month** GBMSM and other sexual behaviour deferrals (from 12m Nov 2017)
2021 – FAIR policy from June

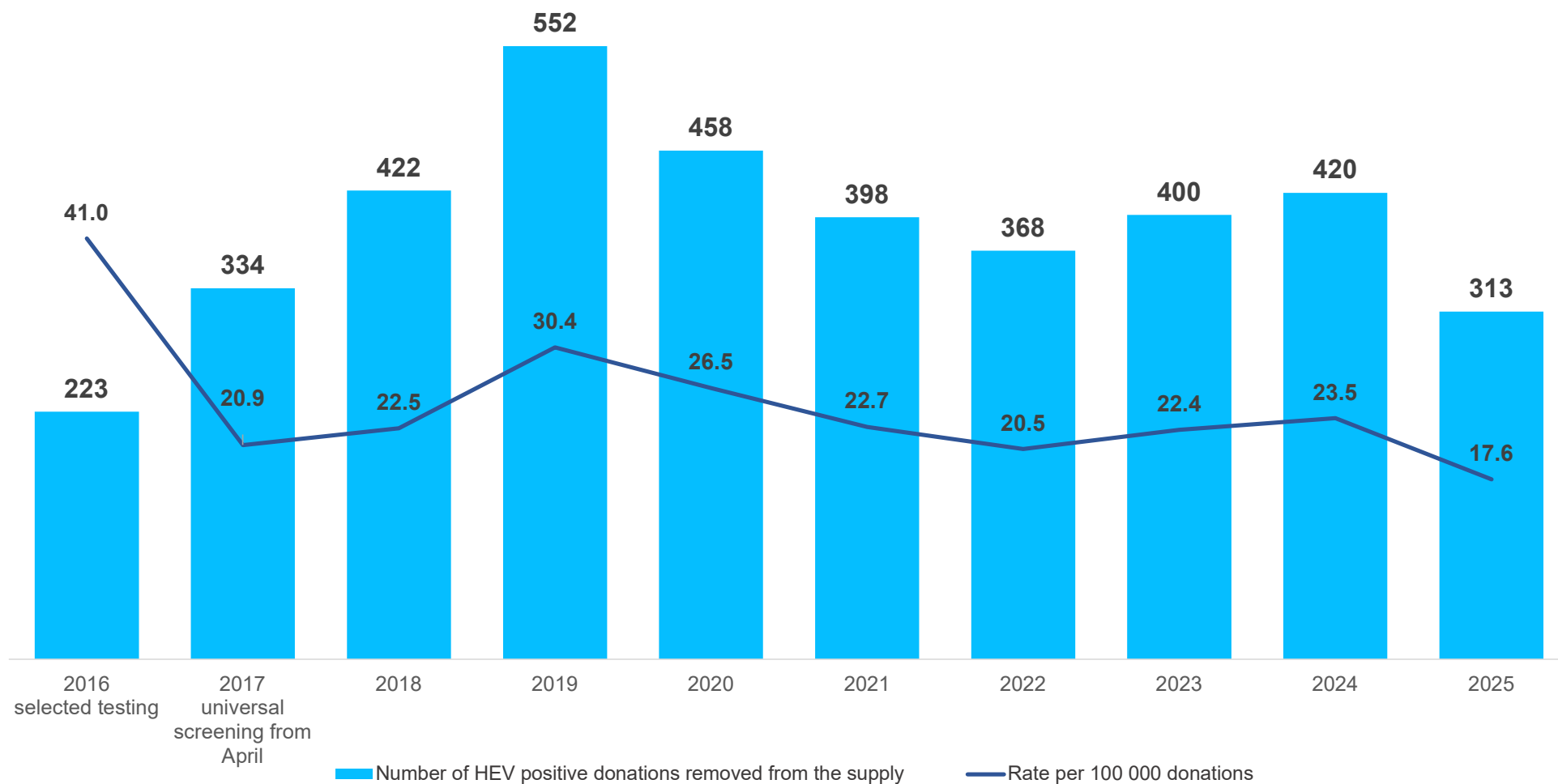
Seroconverter assigned if confirmed with a negative donation within 12 months **or** markers of recency (acute HBV, HIV NAT pick up or recency test, HCV NAT pick up) and negative donation within 3 years

Number of donors confirmed with markers of HBV (acute, chronic or occult), HCV, HIV, HTLV, or syphilis by eligibility, UK 1996 to 2025

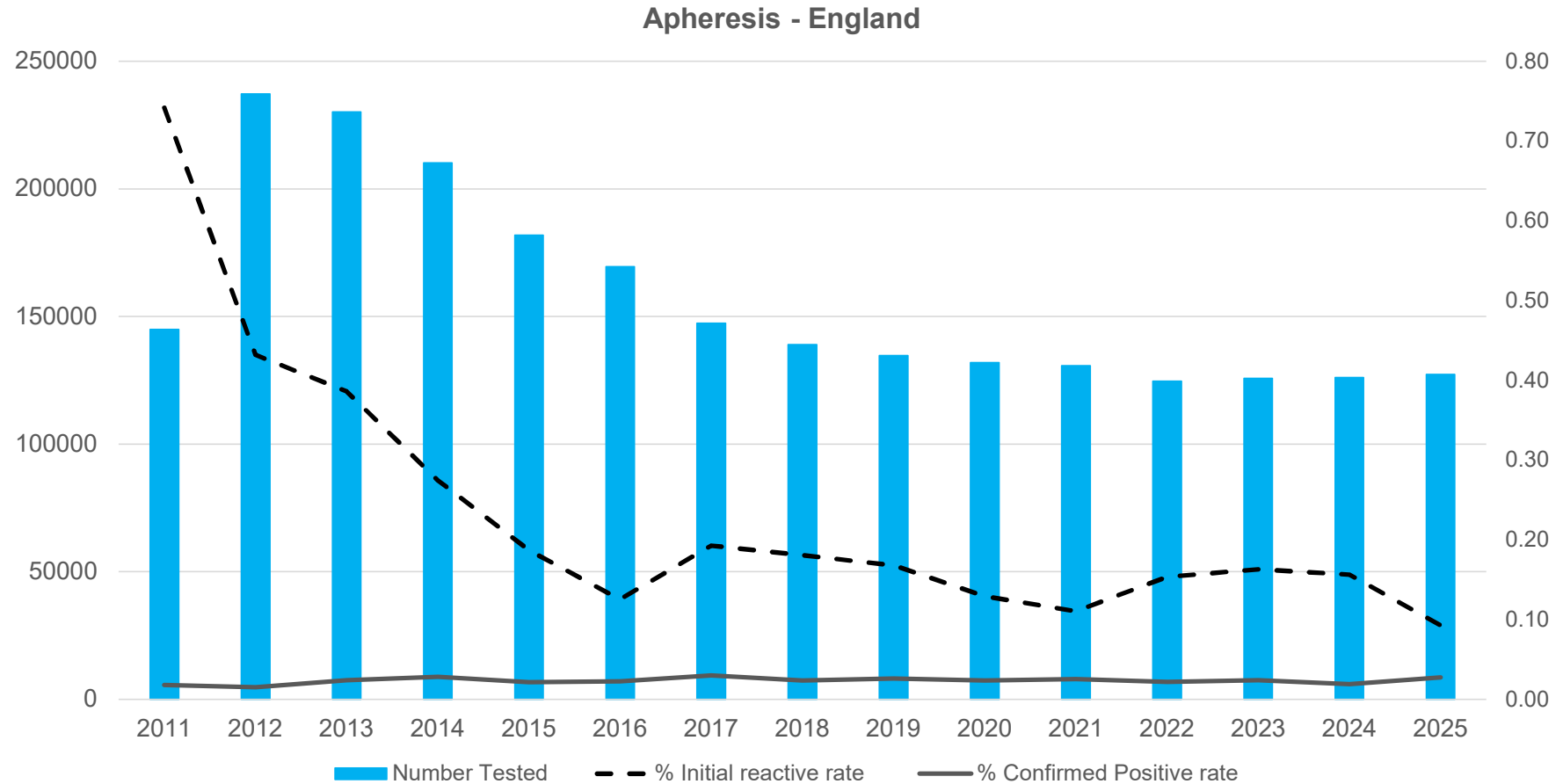


In 1996 most donors confirmed with markers of infection who were not eligible later reported injecting drug use (70/88) with 7 reporting sex between men. In 2025 most donors confirmed with markers of infection who were not eligible later reported a history of syphilis treatment (55/68), 4 reporting previous injecting drug use and 1 donor reported HIV prevention medication in the last 3 months.

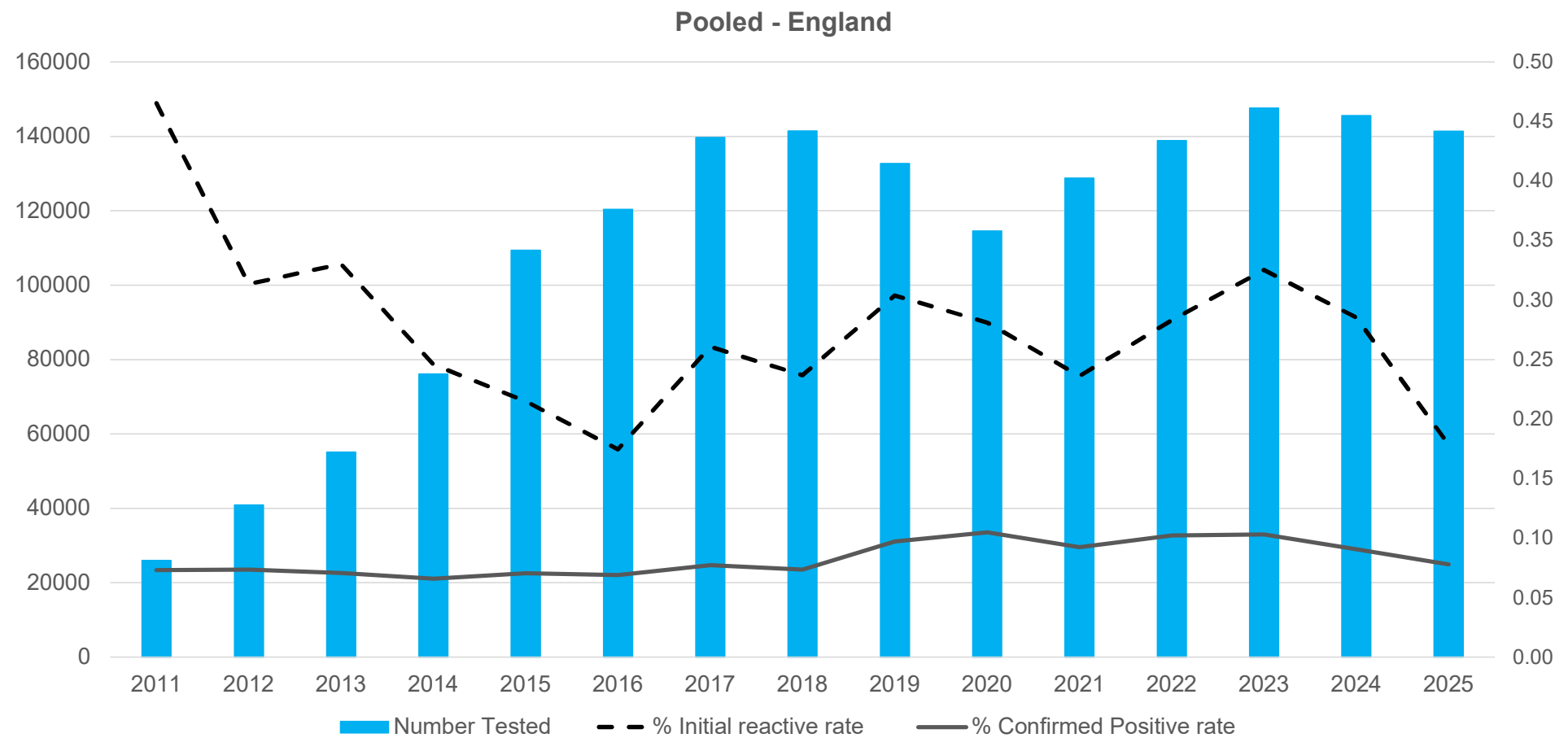
Whole blood and apheresis donations confirmed positive for HEV RNA, UK 2016 to 2025



Bacterial screening of apheresis platelets, England 2011 to 2025



Bacterial screening of pooled platelets, England 2011 to 2025



Summary of likely source of organisms isolated on bacterial screening, 2025 (England only)

Speciation	Confirmed positive (apheresis)	Indeterminate positive (apheresis)	Confirmed positive (pooled)	Indeterminate positive (pooled)
Total Gram-positive cocci skin flora	8	14	19	37
Total Gram-positive rods skin flora	21	33	79	43
Total Gut flora	4	1	3	1
Total Oropharyngeal flora	2	12	6	4
Other bacteria	0	5	3	7
Total	35	65	110	92

Species data is available for bacterial screening on request.

TTI definition

- If, following investigation, a recipient had evidence of infection post transfusion, there was no evidence of infection prior to transfusion and no evidence of an alternative source of infection

AND

- **Either** at least one component received by the infected recipient was donated by a donor who had evidence of the same infection
- **Or** at least one component received by the infected recipient was shown to contain the agent of infection.

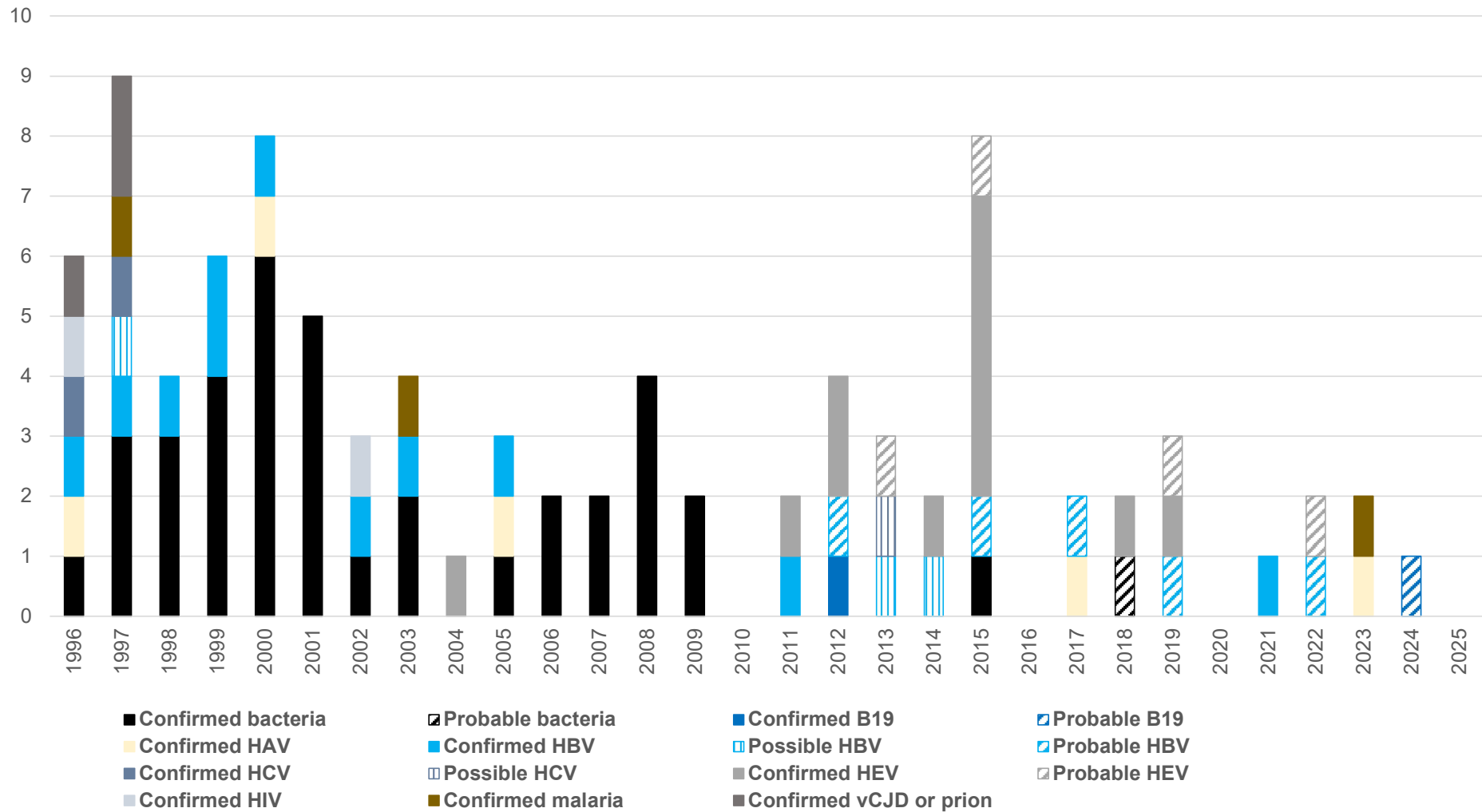
Confirmed TTI

- as per the definition, with evidence that the virus/bacterium is indistinguishable on molecular typing between patient and donor/donation

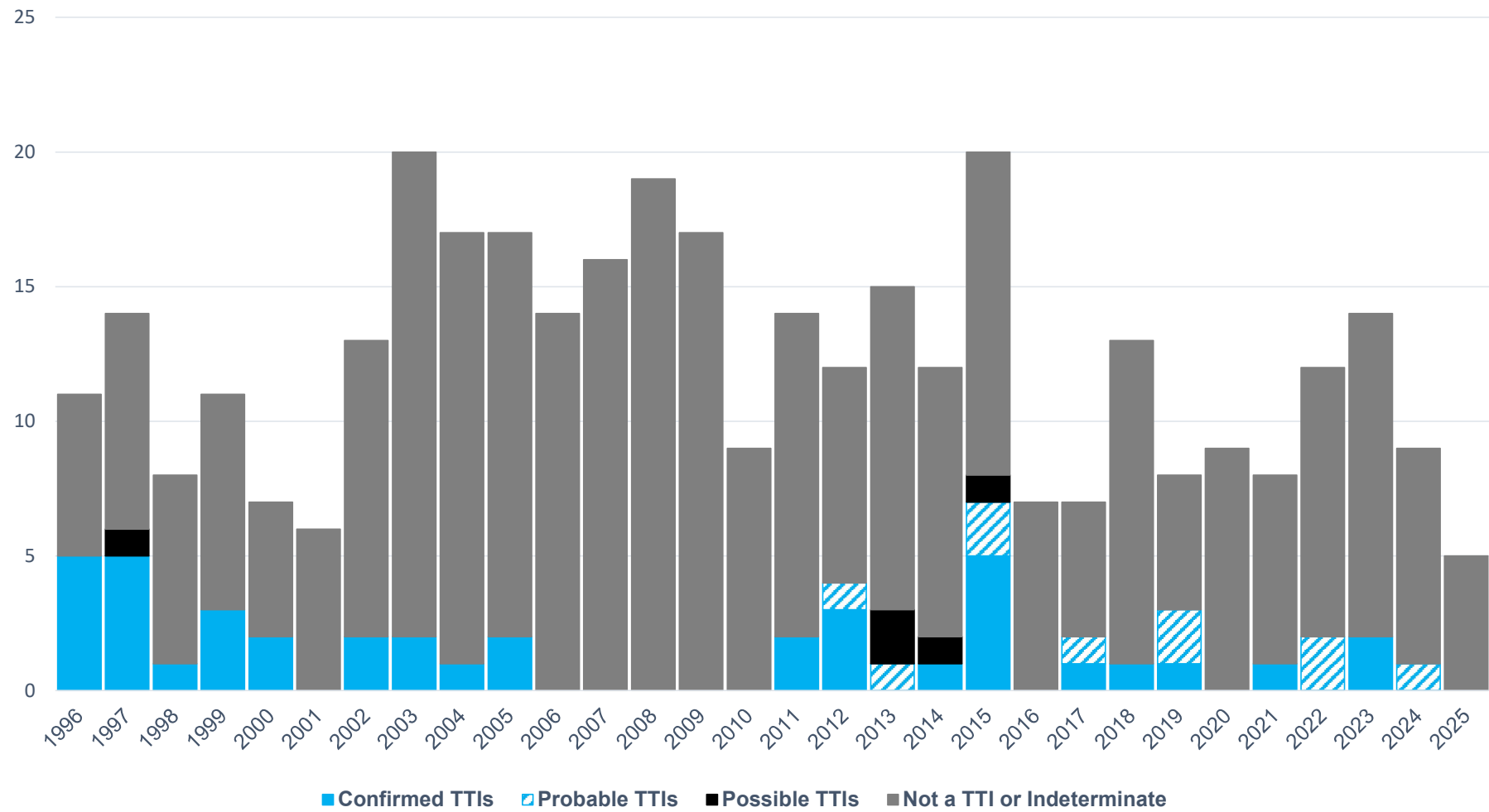
Probable TTI

- as per the definition but molecular typing cannot be carried out to confirm this

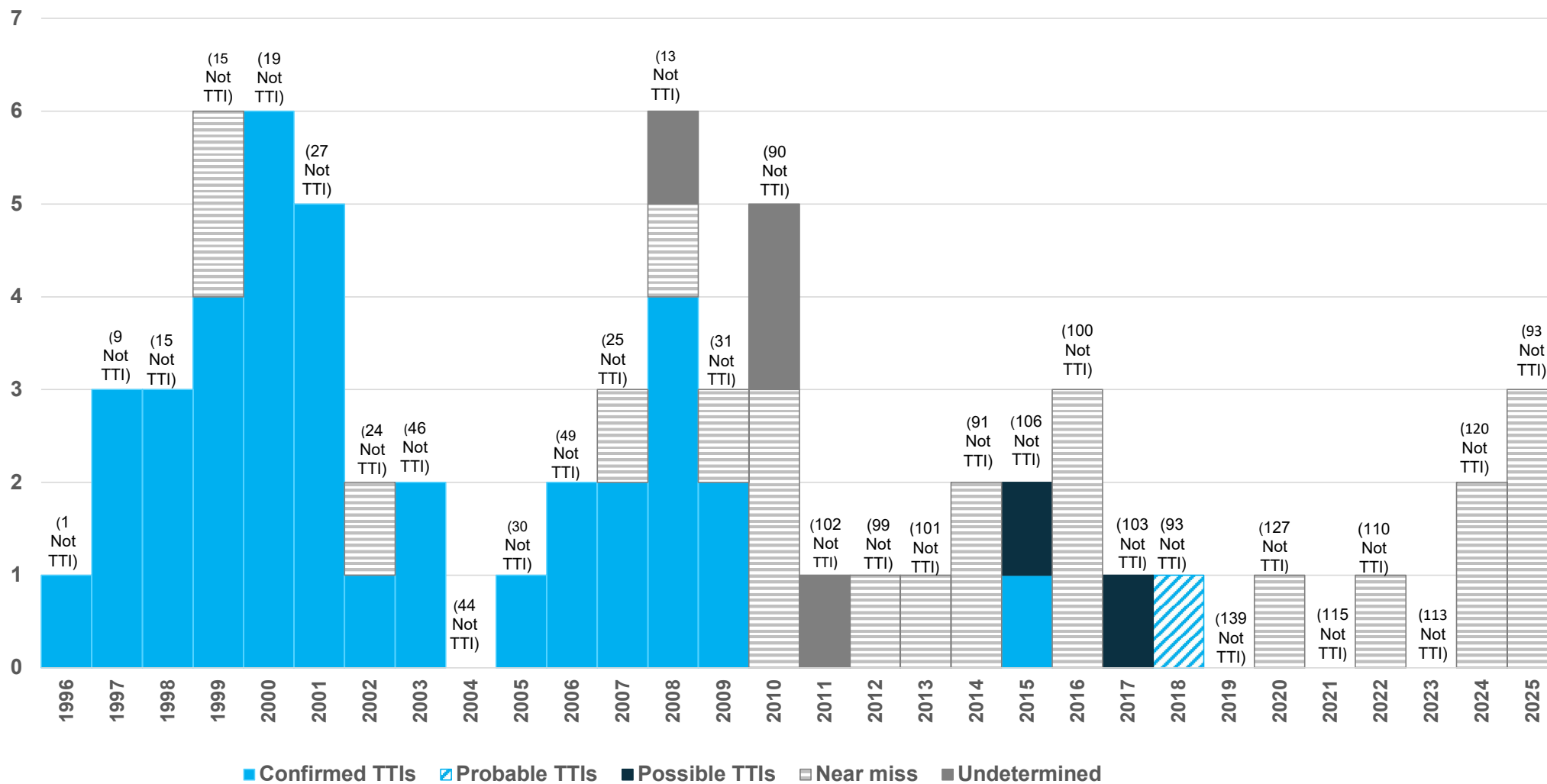
Confirmed and probable TTIs investigated by NHSBT / UKHSA Epidemiology Unit, by year of transfusion and pathogen, UK 1996 to 2025



Non-bacterial TTI investigations reported to NHSBT UKHSA Epidemiology Unit, by year of transfusion and investigation outcome, UK 1996 to 2025



Bacterial TTI investigations reported to NHSBT UKHSA Epidemiology Unit, by year of transfusion and investigation outcome, UK 1996 to 2025



Outcome of confirmed TTI incidents and implicated components by infection in the UK, reported to SHOT, with transfusions between October 1996 and December 2025 (Scotland included from October 1998)

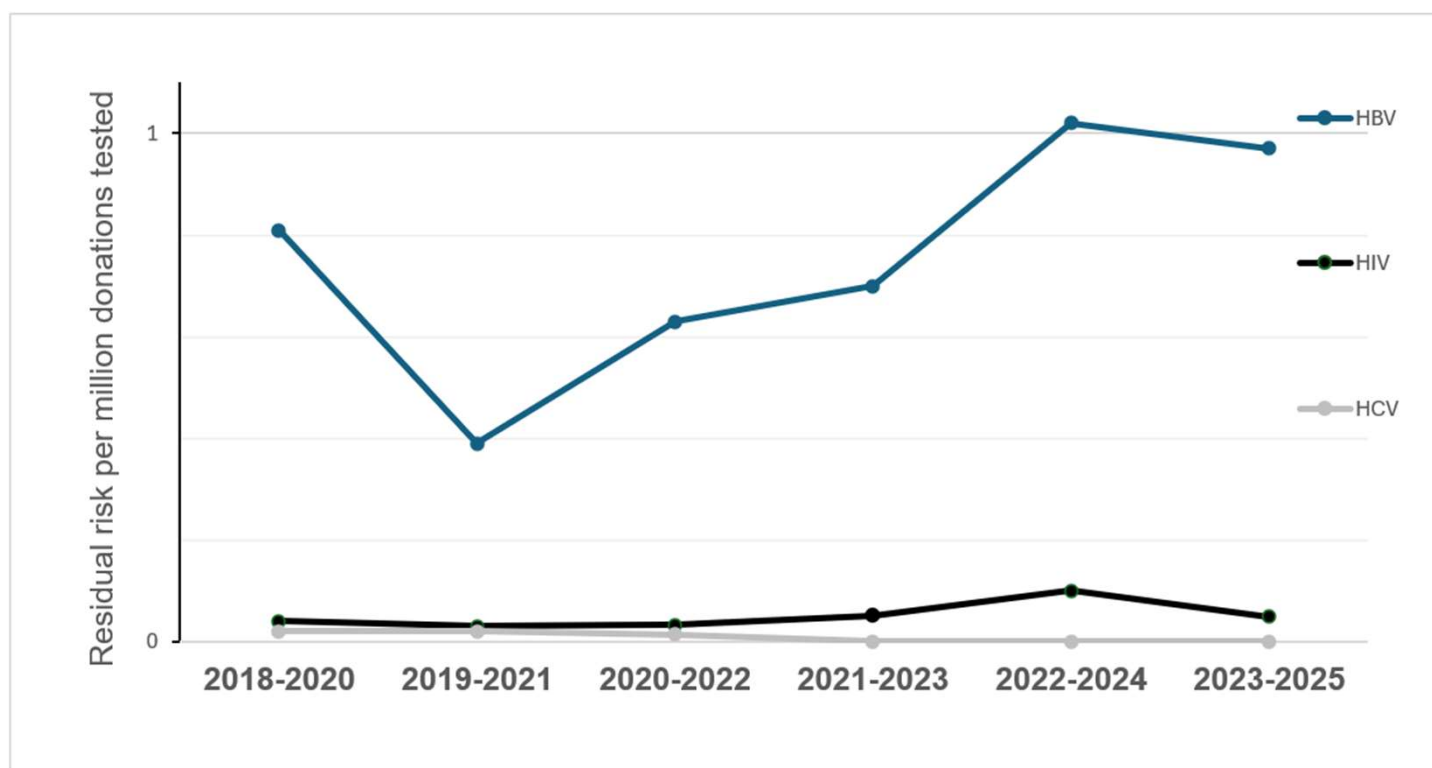
	Bacteria	HAV	HBV	HCV	HEV	HIV	Malaria	Parvovirus (B19)	vCJD or prion	Total
Death due to, or contributed to, by TTI	7	0	1	0	2	0	1	0	3	14
Major morbidity	5	2	3	0	7	0	2	1	0	20
Minor morbidity or not reported, or unknown	25	3	7	2	3	0	0	0	0	42
Cryoprecipitate	0	0	0	0	1	2	0	0	0	1
Fresh Frozen Plasma	0	0	2	0	5	0	0	0	0	7
Platelets	30	3	1	0	4	1	0	0	0	39
Red blood cells	7	2	8	2	2	1	3	1	3	29

Summary of lookback investigations, England 2025

	HEV	OBI	Total
Donors with a previous donation identified as positive in retrospective testing	1	1	2
Archive samples available for testing	0	0	0
Donations by these donors considered here	1	3	4
Total components from these donations	2	6	8
cryoprecipitate	0	1	1
FFP	0	1	1
plasma for medicine	0	0	0
platelets	2	2	4
red cells	0	2	2
not known	0	0	0
Components reported as transfused (recipients transfused)	2	5	7
Recipient identified but deceased	1	4	5
recipient identified and alive	1	1	2
recipient status unknown	0	0	0
Recipients tested	1	1	2
recipient tested positive	0	0	0
recipients tested negative	1	1	2
recipient test pending	0	0	0

* The recipient was IgG positive, which was not unexpected given their age so evidence of past EBV but unlikely due to the transfusion

The estimated residual risk that a potentially infectious HBV, HCV and HIV window period donation is not detected on testing of whole blood donations (this is not equal to transmission risk), estimated for 3-year periods 2018-2020 to 2023-2025



HBV testing assumed all donations were tested for markers of HBsAg and HBV DNA using NAT with a WP of 30 days

Anti-HCV testing and HCV RNA testing with a WP of four days.

Combined HIV antigen/antibody testing and HIV NAT with a WP of nine days.

WP: window period

NAT: nucleic acid technology

The annual residual risk calculations can be found in the [JPAC position statements](#). Estimated residual risk for HBV, HCV and HIV

The estimated residual risk that a whole blood donation made in the infectious window period is not detected on testing: Risks specific for HBV, HCV and HIV, UK 2023 to 2025

	Donor type	HBV ¹	HCV ²	HIV ³
The number of potentially infectious window period donations NOT detected in 1 million whole blood donations tested. This is equal to risk x 1 million	All ⁴ (95% confidence interval)	0.97 (0.36-2.05)	<0.01 (0.00-0.09)	0.08 (0.02-0.15)
	First-time (95% confidence interval)	2.44 (0.65-7.86)	<0.10 (0.00-0.93)	0.12 (0.03-0.29)
	Repeat (95% confidence interval)	0.82 (0.31 -1.66)	<0.01 (0.00-0.02)	0.07 (0.02-0.14)
The number of millions of whole blood donations tested before a potentially infectious window period donation would NOT be detected. This is equal to 1/(risk x 1 million)	All ⁴	1.03		12.80
	First-time	0.41		8.52
	Repeat	1.21		13.48
Approximate years to not detect 1 window period donation based on 1.7 million donations/year	All	0.5	More than 50	8

¹ HBsAg and HBV NAT with a WP of 30 days.

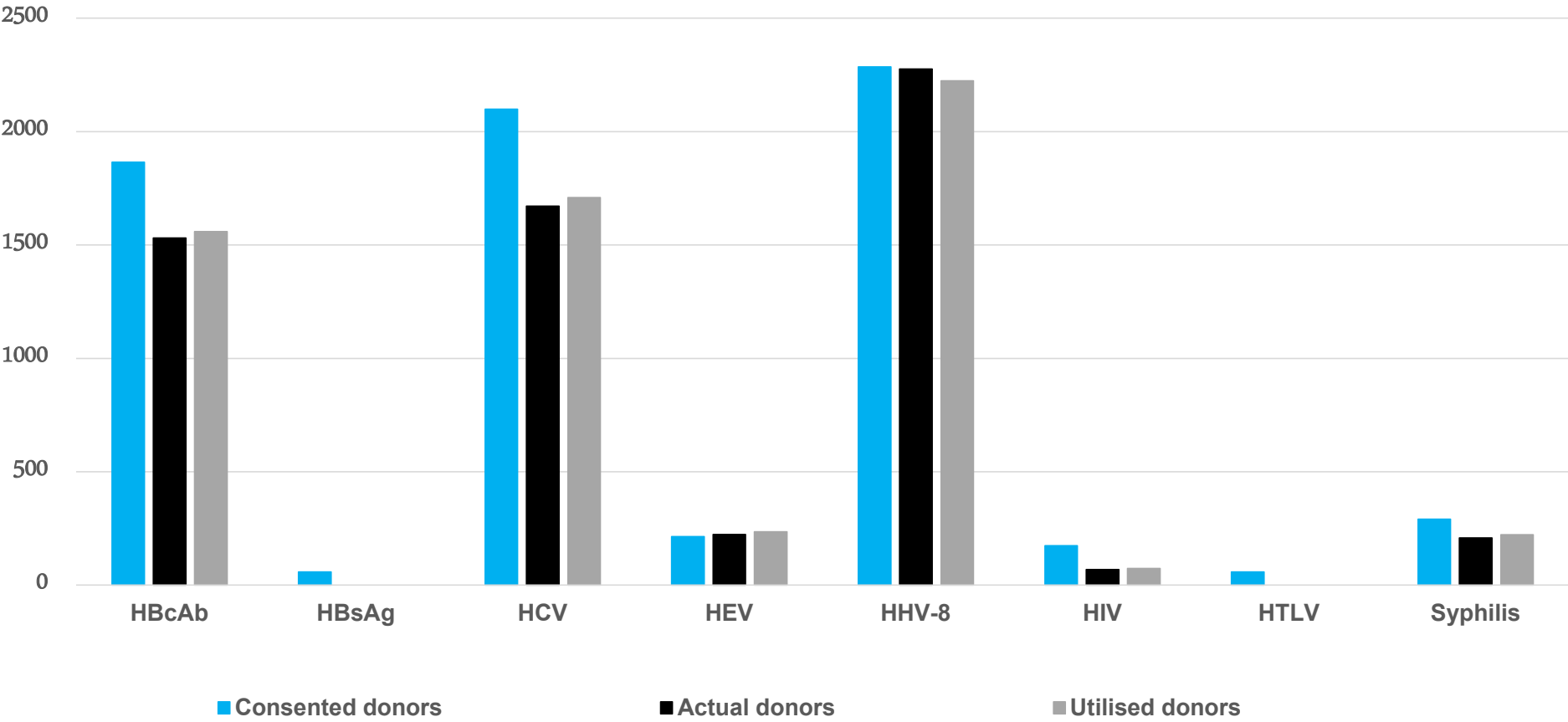
² Anti-HCV testing and HCV NAT with a WP of four days.

³ Combined HIV antigen/antibody testing and HIV NAT with a WP of nine days.

⁴ The risk due to WP amongst all donations was calculated as the weighted average of the risk amongst new and repeat donors, weighted according to the number of whole blood donations made from new and repeat donors.

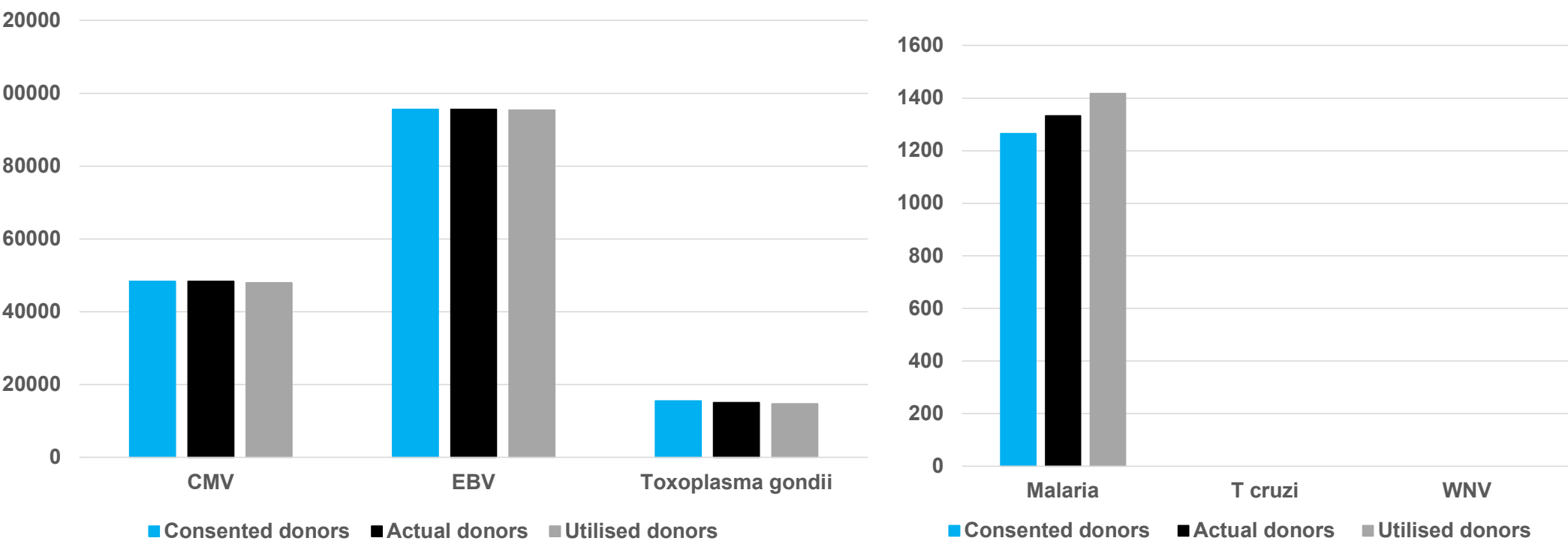
All NAT screening was performed in pooled samples of 24 donations

Reactive marker rates per 100,000 donations identified in consented, actual and utilised organ donors, UK 2025



People consented to donate became actual donors when at least one organ was retrieved.
Actual donors became utilised donors when their organ(s) were transplanted.

Reactive marker rates per 100,000 donations identified in consented, actual and utilised organ donors, UK 2025



People consented to donate became actual donors when at least one organ was retrieved.
Actual donors became utilised donors when their organ(s) were transplanted.
Malaria, *T.cruzi* and WNV are discretionary markers

Characteristics of utilised donors from whom at least one organ was transplanted and who were reactive for at least one marker, UK 2025

Gender	HBcAb	HBsAg	HCV	HEV	HHV8	HIV	HTLV	Malaria^	Syphilis	CMV	EBV	<i>Toxoplasma gondii</i>
Total males	15	0	15	1	13	0	0	2	1	337	754	121
Total females	6	0	8	2	13	1	0	0	2	304	526	75
Age												
Range	42 - 66	-	40 - 57	45 - 64	44 - 65	65	-	36 - 54	27 - 36	42 - 67.5	41 - 67	46 - 72
Ethnicity												
Asian	NR	0	NR	0	NR	NR	0	NR	NR	46	48	16
Black	NR	0	0	0	NR	NR	0	NR	0	16	20	5
Not reported	NR	0	0	0	NR	NR	0	NR	0	16	38	8
Other	NR	0	NR	0	NR	NR	0	NR	0	14	20	3
Unknown	0	0	0	0	0	NR	0	NR	0	2	7	0
White	15	0	18	3	21	NR	0	NR	NR	547	1147	164

Please note:

*NR - not reported to minimise identification

^ discretionary marker

The reactive numbers listed are not confirmed

Ethnicity definitions provided by NHSBT Statistics and Clinical Research

Living surgical bone, deceased tissue and cord blood donors positive for markers of infection, England 2025 and 2006 to 2025

UK 2025	Total number tested	HBV	HCV	HEV	HIV	HTLV	Syphilis	Total positive for infection	Total number tested for Malaria	Total number positive for Malaria	Total number tested for <i>T. cruzi</i>	Total number positive for <i>T. cruzi</i>
Cord blood	130	0	0	0	0	0	0	0	43	2	0	0
Deceased tissue	2892	6	2	0	0	0	5	13	NA	NA	NA	NA
Living surgical bone	674	2	0	0	0	0	1	3	NA	NA	NA	NA
UK 2006 to 2025												
Cord blood	25726	4	13	0	0	12	12	41	7903	234	491	0
Deceased tissue	45,823	67	27	8	3	4	66	175	NA	NA	NA	NA
Living surgical bone	36,445	11	15	0	1	1	26	54	NA	NA	NA	NA

Note:

Excludes positivity for anti-HBc only, ie HBsAg and/or HBV nucleic acid testing (NAT) positive only.

HEV testing data are reported from 2018 only

Data for deceased donors who gave corneas only were included from 2012.

Rate of markers of infection per 100 000 donors tested in living surgical bone, deceased tissue donors and cord blood donors, England 2006 to 2025

