

Something old, something new.....

What did we learn in Transfusion
Microbiology in 2007?

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What did we learn in 2007?

- viral transmissions rare
- bacterial transmissions still occur in low numbers



Viral infections reported in blood recipients 2007 (1)

- 19 reports:
HIV (7), HBV (4), HCV (3), HTLV (2)
plus malaria, Parvo B19 and CMV
- almost all in recipients with other risk, but often reported “no other risk”



Viral infections 2007 (2)

- in all 19 cases, transfusion excluded as source of infection
- are we surprised?



Current risk estimates (per donation)

- HBV 1 in 0.64 million
- HIV 1 in 4.5 million
- HTLV 1 in 10 million
- HCV 1 in 43.6 million

based on 2005/6 donor data



Viral infections (4)

- often investigating to satisfy recipient (and ?clinicians) when a reasoned risk assessment would argue unnecessary
- better now than when a solicitor's letter is received years hence



Viral infections (5)

“no identified/other risk”

- lived in a high prevalence area (esp HIV, HBV) and/or born to mother from high prevalence area
- hospital admission, other interventions



Seroconversions in donors

- rare, except for HIV
- often not recent: long inter-donation interval (especially for HCV)
- window-period donations continue to be very rare



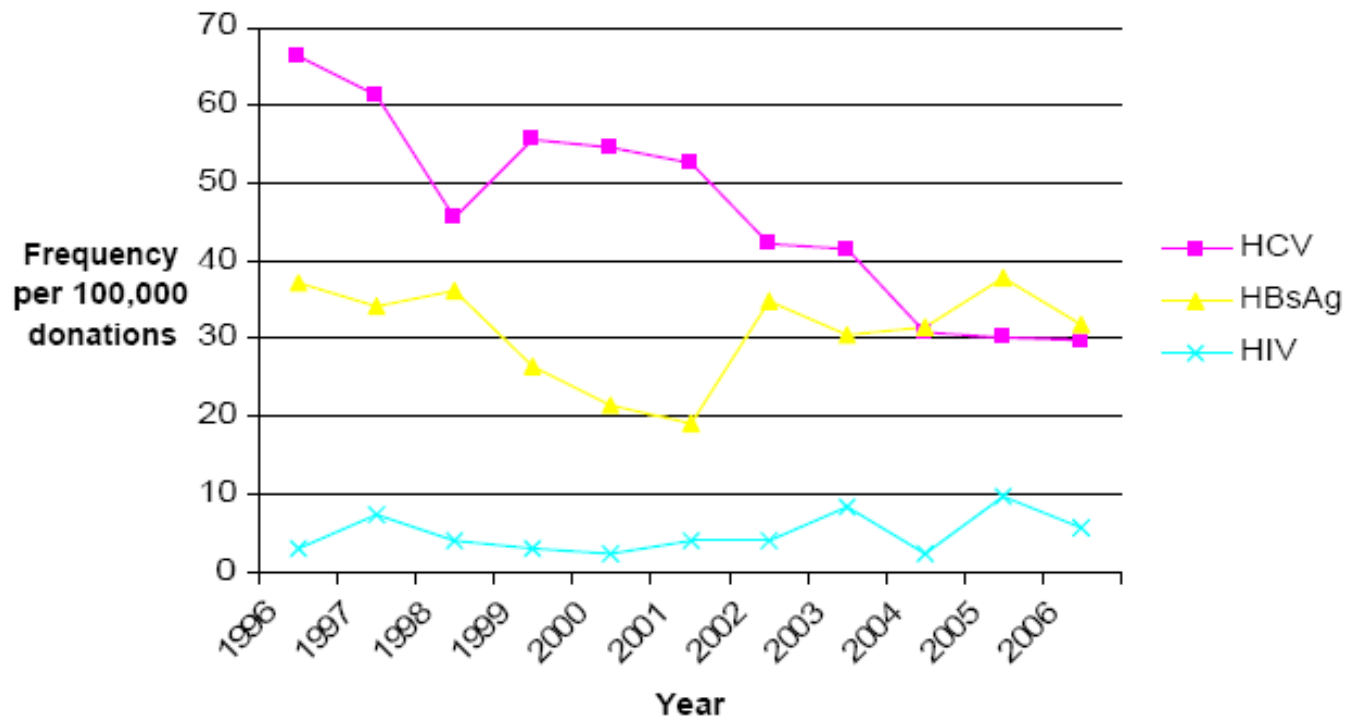
Infections detected in blood donors 2007

Marker	total	“new” donors
• HBV	73	69
• HCV	64	59
• HIV	27	13
• HTLV	16	15
• <i>T.pallidum</i>	81	56

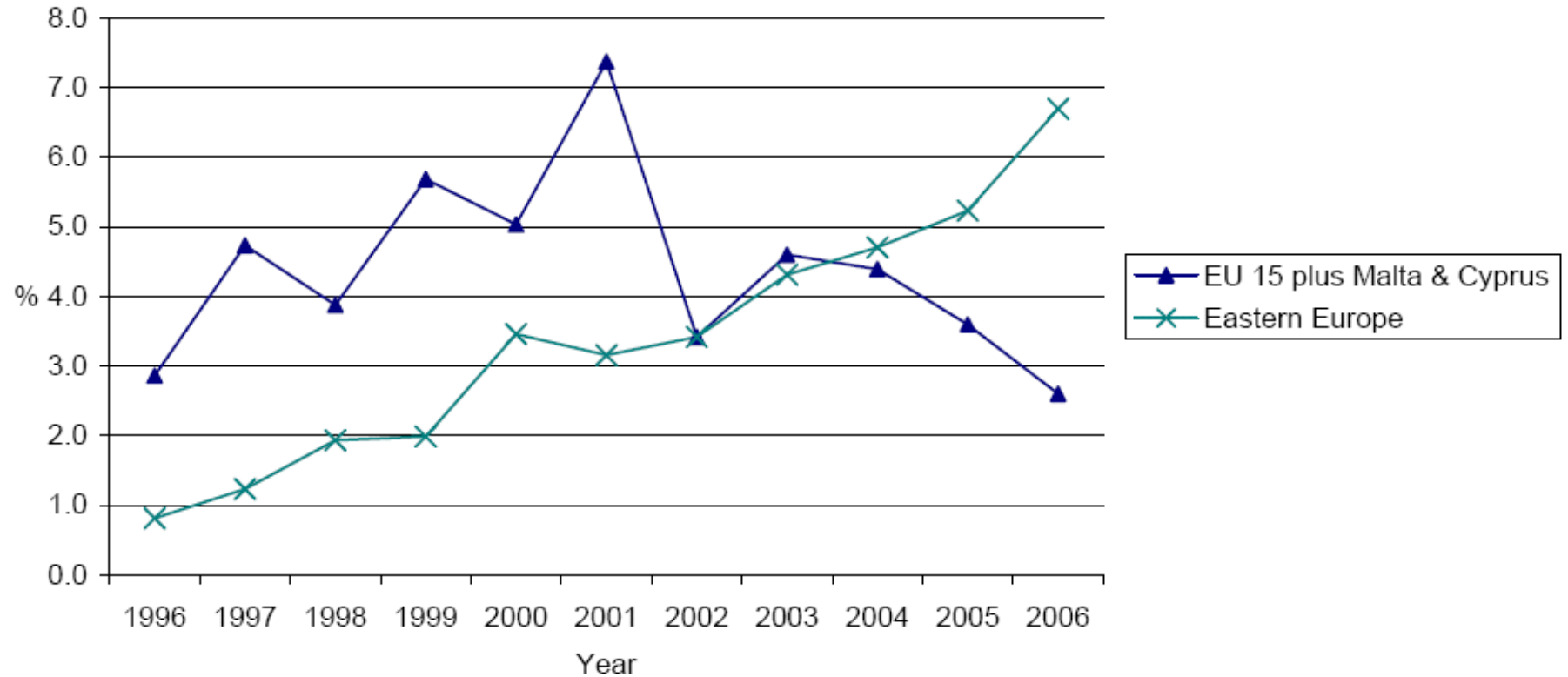


Positive donations made by new donors in England and Wales 1996 - 2006

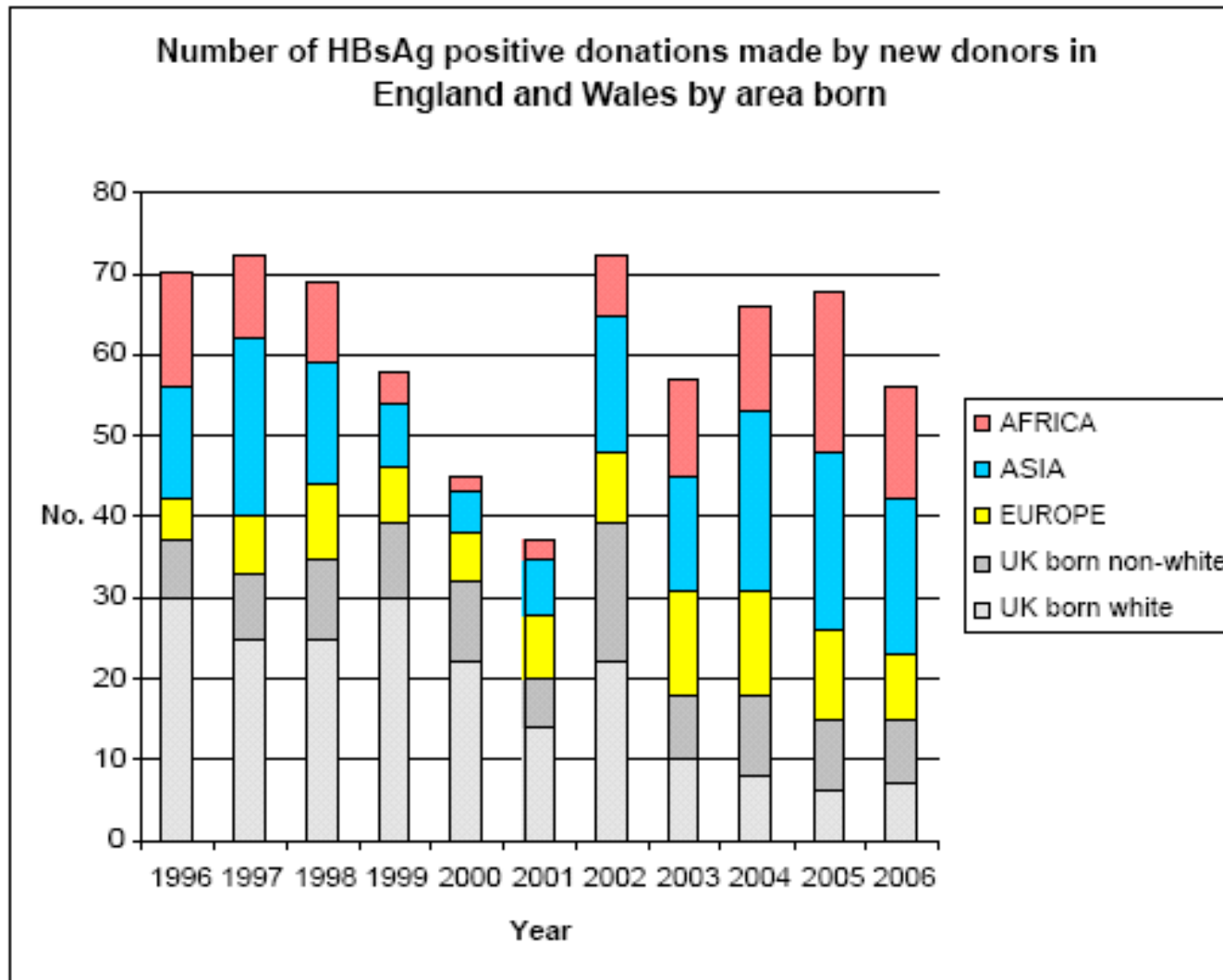
Frequency of HCV, HBsAg and HIV in new donors in England and Wales



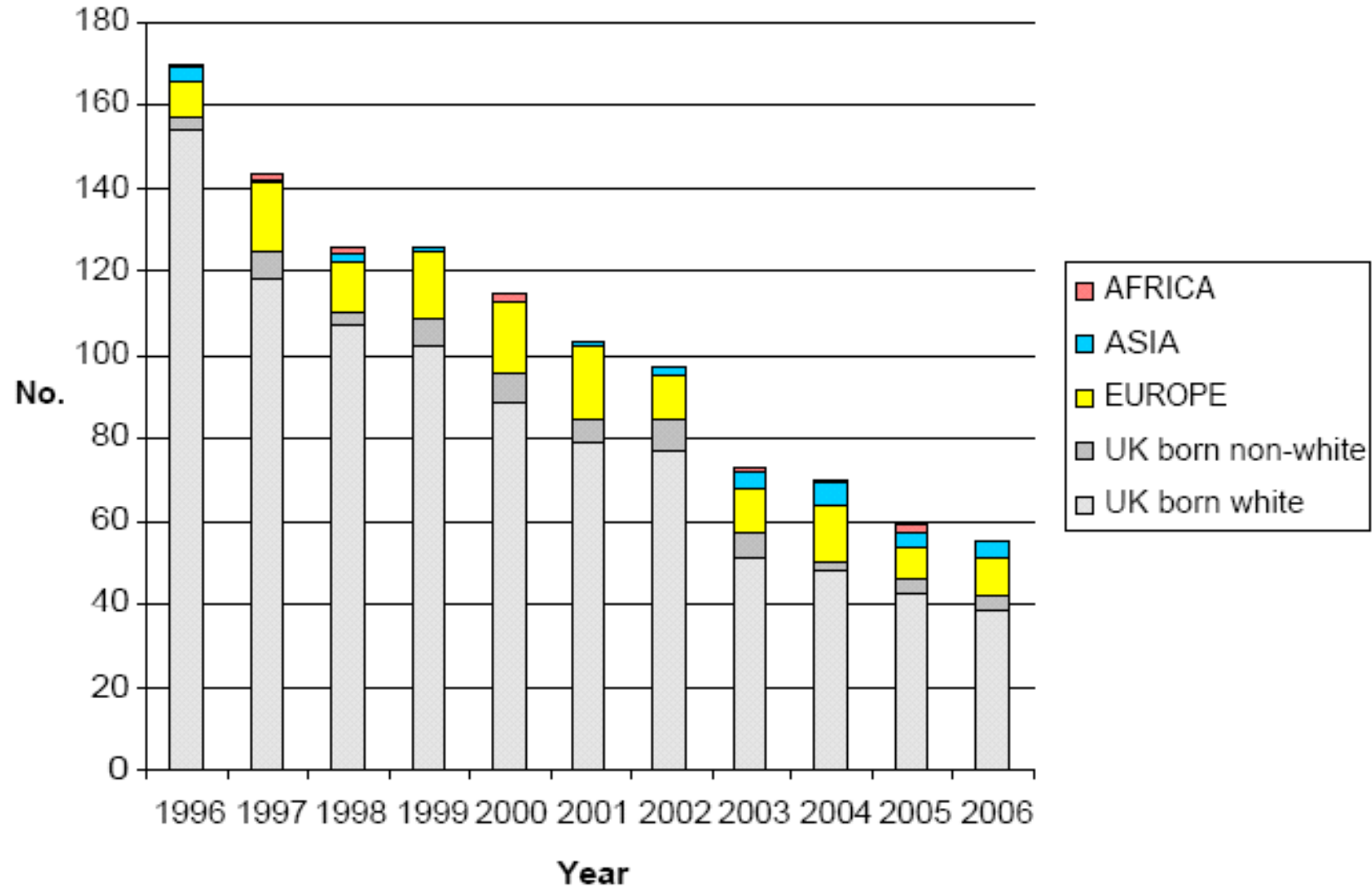
Percentage of donations in England and Wales positive for any marker where donor is born in Europe (excl. UK) by year



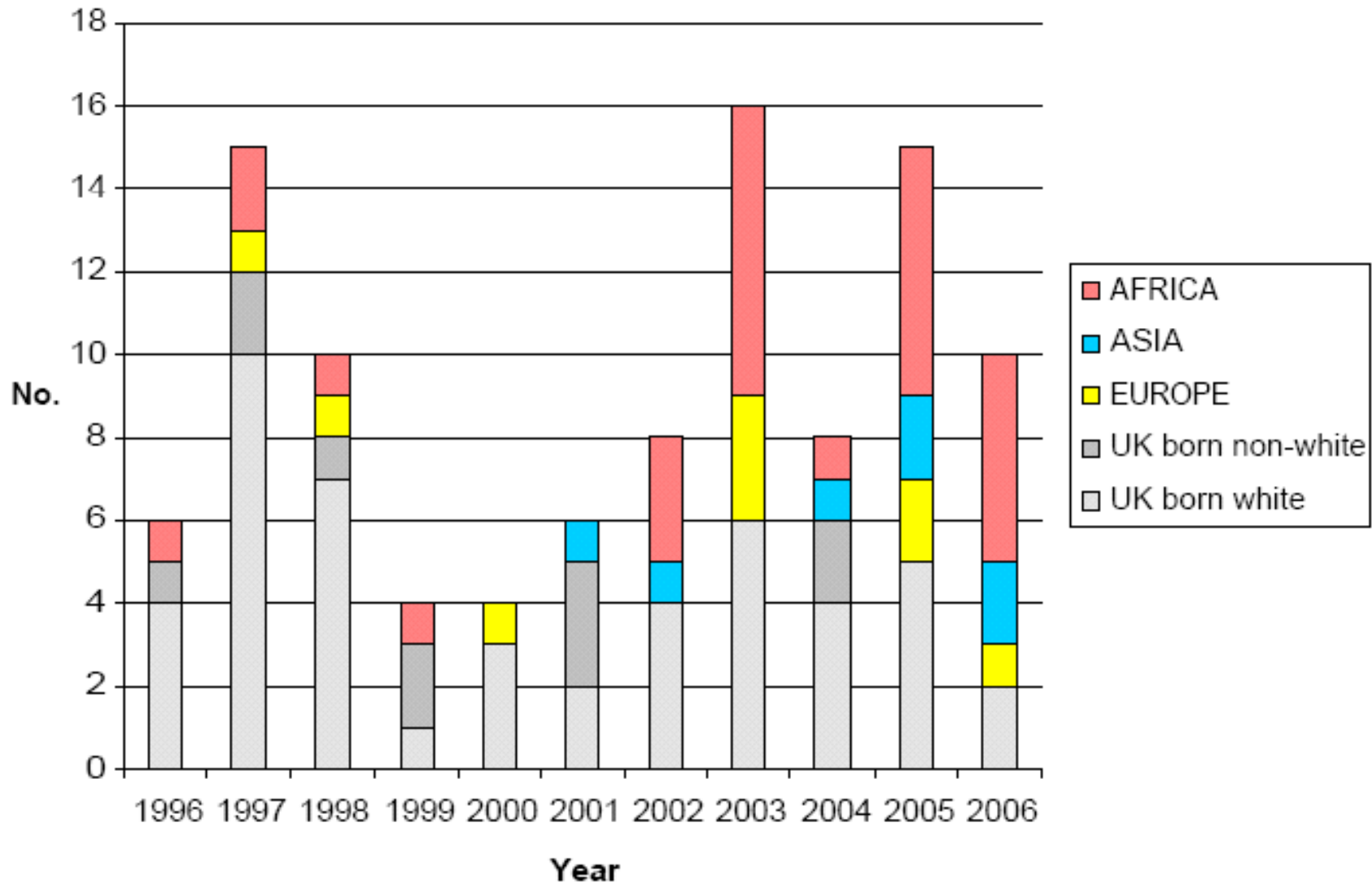
Positive donations made by new donors split by area born



Number of HCV positive donations made by new donors in England and Wales by area born



Number of HIV positive donations made by new donors in England and Wales by area born



Bacterial transmissions 2007

- 3 proven transmissions
- 2 from red cell components
- none fatal: is this due to heightened awareness and prompt management, or good luck?



Bacterial transmission (2)

- one platelet near-miss: first pack transfused without incident, second pack visually abnormal
- emphasises importance of alertness of staff in checking pre-transfusion



Bacterial contamination

- we do not yet have the answer
- interventions to reduce the risk, but no single intervention has been shown to abolish the risk



vCJD

- no new cases in donors or recipients in 2007
- existing recipients have survived one year longer
- have we seen the peak of cases or will there be a second peak?



vCJD blood tests

- still 18 months away?
- problems remain: validation of tests under development
- UK blood services repeating donor attitudes survey to assess possible consequences of introduction of test



Prion filters

- clinical safety trials: cardiac patients
- then multi-transfused
- how to validate prion removal?



Prion filters or blood tests?

- cost: either will be expensive
- how will decision be made?
- difficulties in withdrawing safety measures once introduced



What should we expect in 2008?

- very low risk of viral transmission
- continued efforts to reduce bacterial transmission further: evaluate optimum method for bacterial screening of platelets, pathogen inactivation?



Blood safety involves everyone
in the transfusion process



Thank you

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- NBS/HPA Infection Surveillance Scheme:
Katy Davison, Lisa Brant and Claire Reynolds
- HTT's

