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News

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MRSA bacteraemia, *Clostridium difficile* and GRE bacteraemia data published

Quarterly (January to March 2007), six monthly (October 2006 to March 2007) and annual (April 2006 to March 2007) data collected from the mandatory surveillance of MRSA bacteraemia in England have been released this week [1]. Data for January to March 2007 show that there were 1,444 reports of MRSA bacteraemia, which is a 6.4% decrease on the 1,542 cases recorded for October to December 2006. In the six months between October 2006 and March 2007 there were 2,986 reports of MRSA bacteraemia, this represents a 12% decrease from the 3,392 reports in the previous six month period. During the year April 2006 to March 2007 6,378 cases of MRSA bloodstream infection were reported. This is a decrease of 10% over the same period in 2005/06, when there were 7,096 reports. The rate of reported cases of MRSA bacteraemia per 10,000 bed-days for 2006/07 was 1.59. This compares to a rate of 1.77 cases per 10,000 bed-days reported for 2005/06.

New data from the MRSA bacteraemia enhanced surveillance scheme have also been published. The enhanced surveillance scheme enables the collection of more detailed information such as age, sex and treatment speciality. Age distribution clearly shows that MRSA bacteraemia occurs more frequently among men and the elderly. Seventy-seven per cent of MRSA bacteraemia were reported to have occurred in those aged 60 years and over. Almost two thirds of MRSA bacteraemia cases over the past year were detected two or more days after admission to the reporting trust, implying that infections were acquired during the hospital admission. Amongst the ten most frequently selected specialties for patients whose MRSA bacteraemia was detected two or more days after admission, the highest rates (per 10,000 bed-days) are in Nephrology (3.24) and Gastroenterology (2.32) whereas the lowest rates amongst these ten specialties can be found in Trauma and Orthopaedics (0.50) and Cardiology (0.42).

The latest quarterly (January to March 2007) mandatory reporting of *C. difficile* in patients aged 65 and over shows that there were 15,592 cases recorded. This figure represents a 2% rise when compared to the same period last year (January to March 2006), when 15,342 cases were reported. Yearly data will next be published in April 2008.

The latest annual (October 2005 to September 2006) reporting of glycopeptide-resistant enterococcal (GRE) bacteraemia shows that there were 903 reports during this period. This represents an increase of 19% from the 758 cases reported between October 2004 and September 2005.

Figures for MRSA bacteraemia and *C. difficile* will continue to be published on a quarterly basis as part of the commitment to open reporting. GRE bacteraemia will continue to be reported on an annual basis.

The HPA's MRSA bacteraemia enhanced surveillance web-enabled system has recently been redesigned to allow the inclusion of *C. difficile* in addition to MRSA bacteraemia data [2]. This system has been available since April and enables Trusts and PCTs to monitor progress

towards meeting local targets. Starting from April, data for *C. difficile* will now include patients aged 2 years and older and will be collected monthly instead of quarterly, to support monitoring of the infection. The HPA will, however, continue to publish these figures quarterly as it has since January.

References

1. *Quarterly reporting results for Clostridium difficile infections and MRSA Bacteraemia*. April 2007 . Health Protection Agency website [online]. London: Health Protection Agency, 26 April 2007 [accessed 26 April 2007]. Available at <http://www.hpa.org.uk/infections/topics_az/hai/Mandatory_Results.htm >.
2. Chief Medical Officer for England . *Changes to the mandatory healthcare associated infection surveillance system for Clostridium difficile associated diarrhoea from April 2007*. PLCMO (2007)4. London: Department of Health, 2007. Available at <http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Professionalletters/Chiefmedicalofficerletters/DH_073767>.

HIV guidance on post-exposure prophylaxis (PEP) – update

Following the Medicines and Healthcare products Regulatory Agency (MHRA) alert on the recall of all batches of Viracept products [1], the Chief Medical Officer for England has circulated an update to the guidance of the Expert Advisory Group on AIDS (EAGA) on post-exposure prophylaxis (PEP).

The recall of the antiretroviral Viracept (nelfinavir) from the European market in June 2007 has implications for PEP, since Viracept is the currently recommended protease inhibitor component of PEP starter packs. EAGA has therefore recommended an update to its HIV PEP guidance, as an interim measure pending a complete update of the guidance, which is in preparation.

EAGA recommends that Kaletra (lopinavir/ritonavir) tablets be substituted for Viracept in PEP starter packs. In preliminary discussions regarding changes to the recommended PEP starter pack, EAGA had already concluded that Kaletra (tablet formulation) should be the preferred protease inhibitor.

The CMO letter (*CEM/CMO/2007/16*), containing further detailed information, can be accessed at <http://www.info.doh.gov.uk/doh/embroadcast.nsf/vwDiscussionAll/1D1582812A934F1A80257322002ED694>

References

1. *Class 1 Drug Alert (action now - including out of hours): Contaminated originator and parallel distributed product - Viracept (nelfinavir mesilate) - EL(07)A/10*. MHRA website [online], 6 June 2007 [accessed 25 July 2007]. Available at <http://www.mhra.gov.uk/home/idcplg?IdcService=SS_GET_PAGE&useSecondary=true&ssDoctypeName=CON2031377&ssTargetNodeId=364 >.

Immunisation

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- ▶ Laboratory reports of hepatitis A infection in England and Wales January to March 2007
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Invasive meningococcal infections, England and Wales, laboratory reports: weeks 26-29/2007

	Method of diagnosis			Total reports	Cumulative*
	CSF and blood Culture	Non-culture	Other sites	21-25/2007	Total to week 25/2007
Group A	–	–	–	–	–
B	38	39	5	82	604
C	3	1	–	4	22
W135	2	1	1	4	16
X	–	–	–	–	1
Y	1	–	1	2	23
Z/29E	–	–	–	–	–
Ungroupable	1	–	–	1	2
Ungrouped	–	9	–	9	39
Total	45	50	7	102	707

*Latex antigen, microscopy, polymerase chain reaction combined Health Protection Agency Centre for Infections data and Meningococcal Reference Unit data.

Laboratory Reports of *Haemophilus influenzae* by age group and serotype, England and Wales: January to March 2007 (2006)

Type	Age (years)					Total
	<1y	1-4y	5-14y	15+	nk	
b	5 (3)	5 (10)	1 (–)	15 (17)	– (–)	26
nc	7 (16)	3 (15)	1 (8)	80 (70)	– (–)	91
a,e,f	3 (–)	– (–)	1 (–)	9 (8)	– (1)	13
not typed	3 (4)	4 (3)	2 (–)	64 (39)	3 (–)	76
Total	18 (–)	12 (–)	5 (8)	168 (134)	3 (1)	206

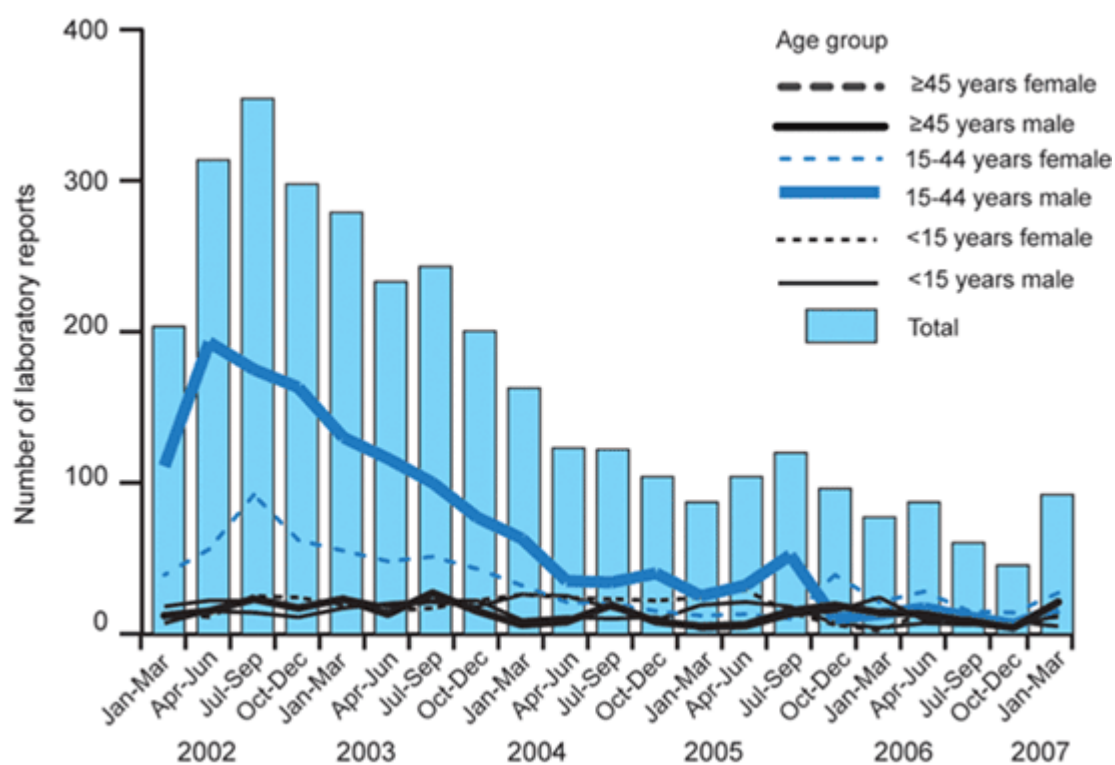
Laboratory reports of hepatitis A infection in England and Wales January to March 2007

During the first quarter of 2007, 95 laboratory reports of hepatitis A were made to the Health Protection Agency Centre for Infections. In this quarter, 29% of the cases were men aged 15 to 44 years (table) and females accounted for 18% of the cases in this age group. Of those aged 45 years and over, 23% of cases were females and 13% males. In those aged under 15 years, males and females accounted for 5% and 12% of cases respectively.

Table Laboratory reports of hepatitis A infection in England and Wales: January to March 2007

Age Group (years)	Male	Female	Unknown	Total
<1	2	–	–	2
1-4	2	2	–	4
5-9	–	7	–	7
10-14	1	2	–	3
15-24	9	6	1	16
25-34	12	8	1	21
35-44	6	3	–	9
45-54	3	9	–	12
55-64	4	7	–	11
65 or over	5	5	–	10
Unknown	–	–	–	–
Total	44	49	2	95

Figure Number of laboratory reports of hepatitis A by age group and sex: 2002 to 2007



Laboratory reports of hepatitis C infection in England and Wales January to March 2007

There were 2188 reports of hepatitis C infection were reported in the first quarter of 2007 (table) compared to 1916 in the first quarter of 2006. In the first quarter of 2007, 63% (1338/2128) of the cases were in 25 to 44 year olds. The ratio of males to females is 2.3:1.

Table Laboratory reports of hepatitis C infection in England and Wales: January to March 2007

Age Group (years)	Male	Female	Unknown	Total
1-4	3	10	1	14
5-9	–	2	–	2
10-14	–	1	–	1
15-24	73	74	3	150
25-34	450	200	17	667
35-44	505	183	13	701
45-54	296	92	8	396
55-64	95	51	3	149
65 or over	41	35	4	80
Unknown	12	5	11	28
Total	1475	653	60	2188

Quarterly report from the sentinel surveillance study of hepatitis testing in England: data for January-March 2007

The sentinel surveillance study of hepatitis testing, which began in 2002, aims to supplement routine surveillance of hepatitis B and C in England by providing information on trends in testing, individual risk exposures and clinical symptoms. This initiative contributes to the improved surveillance of hepatitis C as outlined in the Department of Health Hepatitis C Strategy and Action Plan for England [1, 2]

The study collects information on all hepatitis B and C testing carried out in participating centres regardless of test result and therefore can also be used to estimate prevalence in those individuals tested [3].

Laboratory test results and demographic information on all individuals tested for hepatitis in participating centres are extracted electronically from laboratory records. After data are cleaned and checked by the project co-ordinator in Leeds, soundex codes are applied and patient names are removed before a collated dataset is forwarded to HPA Centre for Infections for analysis. Patients are identified using a unique unnamed reference number. Study results are fed back to participating centres and local Health Protection Units with the aim of informing local needs assessment of hepatitis testing and treatment.

This report is the first publication of sentinel surveillance of hepatitis testing data in the *Health Protection Report*. Although this report focuses on hepatitis C testing only, future reports are likely to include data on hepatitis B testing, as well as analysis of trends in testing and use of sentinel surveillance data to assess the completeness of routine hepatitis surveillance.

It is important to note that no laboratory methods are currently available to distinguish between acute, chronic or resolved hepatitis C virus infections. Positive anti-HCV results do not therefore necessarily represent incident infections and the data presented here should be interpreted with care.

Hepatitis C virus (HCV) testing

During the first three months of 2007, a total of 31,479 individuals were tested at least once for hepatitis C-specific antibodies (anti-HCV) in 18 participating sentinel centres (table 1). This is the first time these individuals had been reported to the sentinel surveillance scheme.

Table 1. Individuals tested for anti-HCV in participating centres, January-March 2007

Region (number of centres)	Number tested†	Number positive† (%)
East Midlands(1)	2057	46 (2.2)
Eastern (1)	1404	65 (4.6)
London (5)*	8396	364 (4.3)
North East(1)	813	39 (4.8)
North West(5)	9003	701 (7.8)
South East(2)	3214	68 (2.1)
West Midlands(1)	1147	49 (4.3)
Yorkshire and Humberside(2)	5445	198 (3.6)
Total (18)	31479	1530 (4.9)

*Figures do not include February 2007 data from one of the five London centres, which was not available at the time of publication.

† Excludes reference and confirmatory testing. Includes individuals aged less than one year (n tested = 156, n positive = 18), in whom positive tests may reflect the presence of passively-acquired maternal antibody rather than true infection. Some duplication of individual patients may occur due to limitations of the information supplied. All data are provisional.

Overall, 4.9% of individuals tested for anti-HCV were positive, though this varied by region (table 2). The percentage of positive tests was highest in North West England, though it is unclear whether this reflects genuinely higher prevalence in this area or more targeted testing of risk groups. Though the South West is not represented in these figures, data from a newly-recruited centre in this region will be available from the second quarter of 2007 onwards.

Table 2. Age and sex of individuals tested for anti-HCV in participating centres, January-March 2007

Age (Years)	Female		Male		Unknown		Total	
	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)
<1	63	8 (12.7)	92	10 (10.9)	1	0 (0.0)	156	18 (11.5)
1-14	255	2 (0.8)	236	6 (2.5)	6	0 (0.0)	497	8 (1.6)
15-24	2457	39 (1.6)	2038	52 (2.6)	76	1 (1.3)	4571	92 (2.0)
25-34	3474	140 (4.0)	3876	277 (7.1)	150	8 (5.3)	7500	425 (5.7)
35-44	2897	137 (4.7)	3909	376 (9.6)	117	6 (5.1)	6923	519 (7.5)
45-54	1801	83 (4.6)	2293	222 (9.7)	56	4 (7.1)	4150	309 (7.4)
55-64	1546	29 (1.9)	1721	68 (4.0)	28	2 (7.1)	3295	99 (3.0)
65 plus	1976	23 (1.2)	2159	27 (1.3)	19	1 (5.3)	4154	51 (1.2)
Unknown	39	0 (0.0)	62	5 (8.1)	132	4 (3.0)	233	9 (3.9)
TOTAL	14508	461 (3.2)	16386	1043 (6.4)	585	26 (4.4)	31479	1530 (4.9)

Excludes reference and confirmatory testing. Individuals aged less than one year are shown separately since positive tests in this age group may reflect the presence of passively-acquired maternal antibody rather than true infection. Some duplication of individual patients may occur due to limitations of the information supplied. All data are provisional.

Of the 1530 individuals testing positive for anti-HCV during the first quarter of 2007, 448 (29.3%) were also tested for HCV RNA by PCR. Of these individuals, 318 were PCR positive (71.0%) and 130 were PCR negative (29.0%).

Sex was reported for the majority of people tested. Slightly more males were tested than females (Table 2); the ratio of males to females tested was 1.1:1. Twice as many men were positive than females; the ratio of males to females testing positive was 2.3:1. This is consistent with data reported through routine surveillance of hepatitis C [4]. The majority (60%) of people tested were aged 15 to 44 years. Excluding individuals aged less than one year (in whom a positive anti-HCV result does not necessarily reflect HCV infection) and those for whom age is unknown, the percentage of individuals testing positive was highest among those aged 35 to 54 years, for both males and females.

To provide an indication of trends in testing, data from the 17 sentinel centres for which full data were available were compared for the first three months of 2006 and 2007. In the period January to March 2007, 1491 of 30,649 (4.9%) people tested were positive for anti-HCV, compared to 1663 of 33,995 (4.9%) for the same period in 2006. This is a 9.5% decrease in testing in these centres between the two periods. This could reflect changes in testing patterns within each centre or a true decrease in the number of people being tested. As the proportion of people identified as positive is the same for these two periods, it suggests that those tested were at similar risk for HCV. This is in contrast to data presented in 2006 [5] which suggested that testing increased between 2002 and 2006, but that the people being tested were at lower risk. A more detailed analysis of this data is currently underway.

References

1. Department of Health. *Hepatitis C. Strategy for England*. London: Department of Health Publications, 2002.
2. Department of Health. *Hepatitis C. Action Plan for England*. London: Department of Health Publications, 2004.

3. Brant, LJ *et al.* Sentinel laboratory surveillance of hepatitis C antibody testing in England: understanding the epidemiology of HCV infection. *Epidemiol Infect* 2007 **135** (3) 417-26.
4. HPA. Laboratory reports of hepatitis C infection by age group and sex, England and Wales. *Health Protection Report* [serial online] 2007; **1** (30): Immunisation. Available at <<http://www.hpa.org.uk/hpr/infections/immunisation.htm>>.
5. HPA. *Hepatitis C in England: An update 2006*. London: Health Protection Agency Centre for Infections, 2006.

Surveillance of viral infections in donated blood: England and Wales, 2006

Donated blood is collected from volunteer (unpaid) adult donors who do not acknowledge any medical conditions, travel histories, or behaviours that are known to be associated with an increased risk of bloodborne infections. In 2006, all blood donations made in England and Wales were tested for antibodies to HIV, hepatitis C, and human T-cell lymphotropic virus (HTLV), hepatitis B surface antigen (HBsAg), hepatitis C RNA on pools of up to 48 donations (and in some instances HIV RNA) and antibodies to syphilis. In addition, some donations were tested for antibodies to hepatitis B core antigen (anti-HBc), malaria, and *Trypanosoma cruzi* (Chagas disease) depending on the donor's history. A donation found positive for any of these markers is excluded from the blood supply. The donor is informed of their infection, told to stop donating and referred to specialist services to receive appropriate care.

In 2006, a total of 181 donations collected by the English and Welsh blood services were positive for markers of viral infections (table 1). Of these infected donations, 74 (41%) were positive for HBsAg, 72 (40%) were positive for anti-HCV, 26 (14%) were positive for anti-HIV, and 9 (5%) were positive for anti-HTLV (table 1).

Table 1: Infections detected in blood donations collected in England and Wales during 2006

Donations with confirmed marker of infection	Infections in blood donations				
	HBV (HBsAg)	HCV (anti-HCV/HCV RNA)	HIV (anti-HIV)	HTLV (anti-HTLV)	Any of these four markers‡
All donations	74	72	26	9	181
per 100,000 donations tested	3.42	3.32	1.20	0.42	8.36
1 in x donations	29,273	30,087	83,317	240,692	11,968
Donations from new donors*	72	67	13	9	161
per 100,000 donations tested	31.94	29.72	5.77	3.99	71.43
1 in x donations	3,131	3,364	17,339	25,045	1,400
Donations from repeat donors†	2	5	13	–	20
per 100,000 donations tested	0.10	0.26	0.67	–	1.03
1 in x donations	970,410	388,164	149,294		97,041

* New donors are classified by blood centres as individuals donating for the first time

† Repeat donors are classified by blood centres to have previously donated. Some donations from repeat donors may be newly tested for markers of infection.

‡ Three donors had markers of dual infection: one anti-HIV and anti-HCV, 1 one HBsAg (carrier) and anti-HIV, and one HBsAg (carrier) and *T.pallidum*.

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Table 1: Infections detected in blood donations collected in England and Wales during 2006

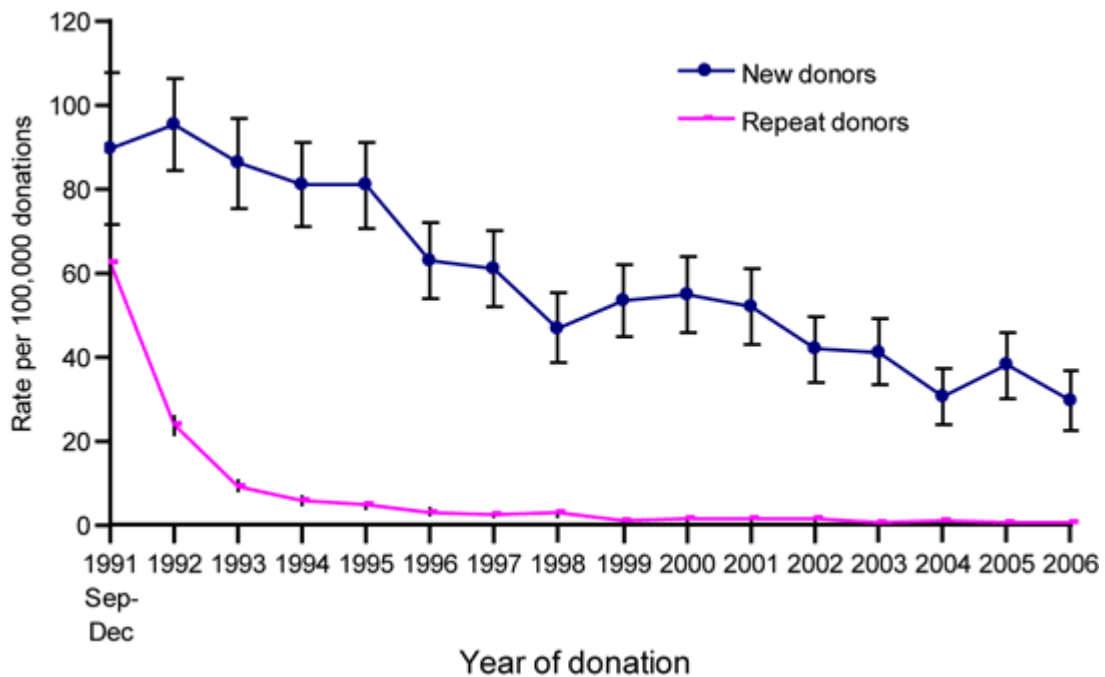
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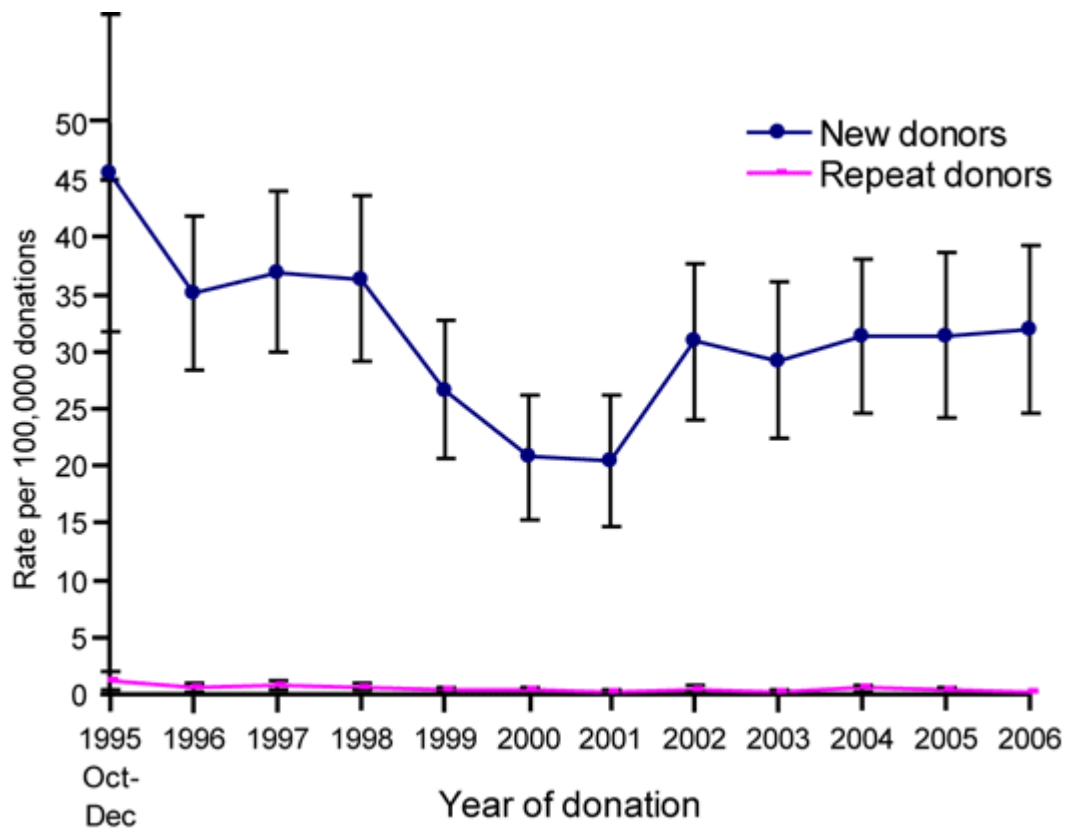
‡ Three donors had markers of dual infection: one anti-HIV and anti-HCV, 1 one HBsAg (carrier) and anti-HIV, and one HBsAg (carrier) and *T.pallidum*.

Figure 2. HBsAg infected blood donations, England and Wales: donations collected from 1 October 1995 to 31 December 2005



Error bars show 95% confidence limits

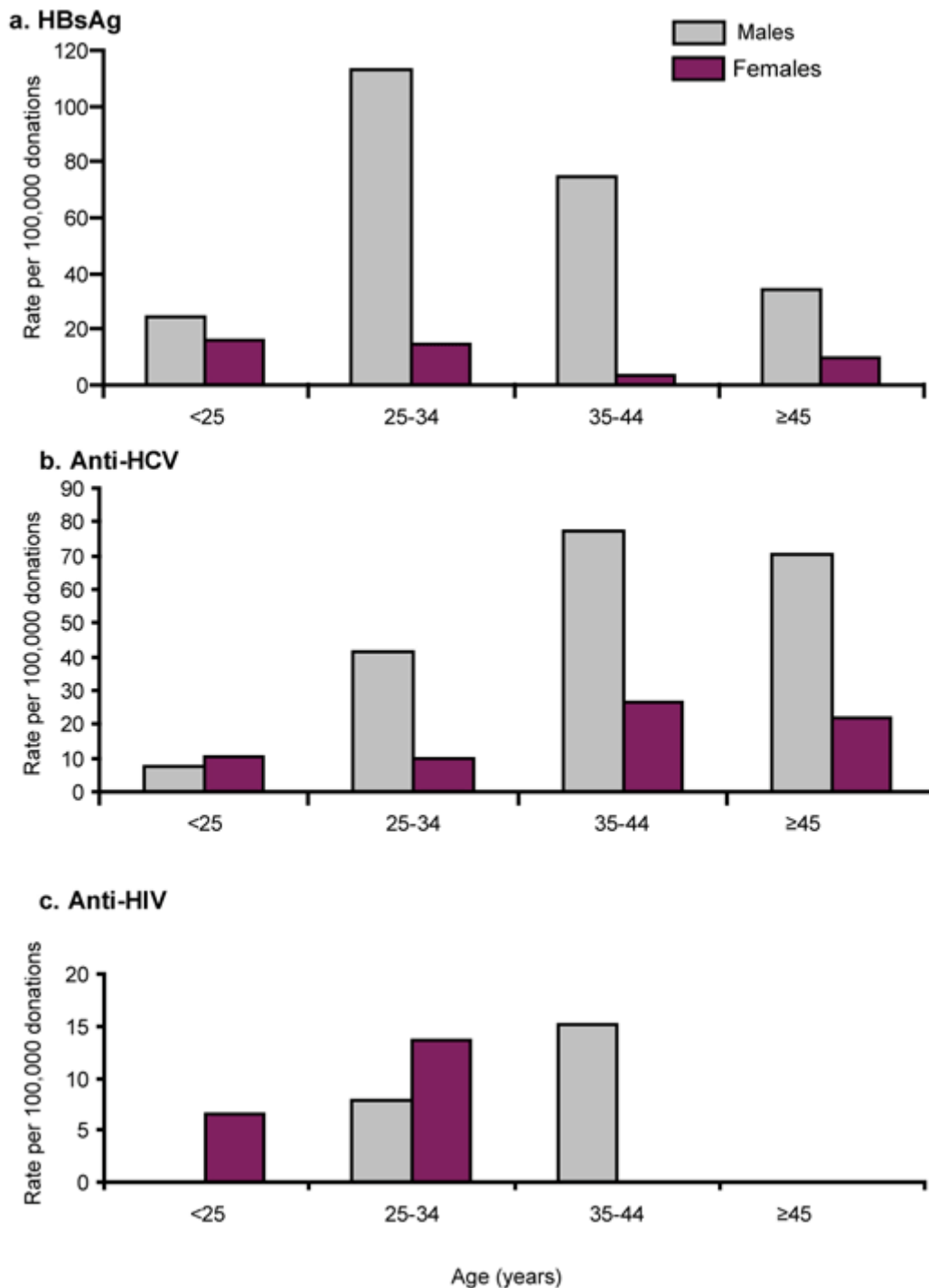
Figure 3. HCV infected blood donations, England and Wales: donations collected from 1 October 1995 to 31 December 2005



Error bars show 95% confidence limits

The prevalence of HBsAg, anti-HCV and anti-HIV in donations collected from new donors during 2006 by age group and sex of donors is shown in figure 4. For all three markers, there was a higher prevalence among donations from male donors than females except for HIV in those aged under 25 years, and 25 to 34 age groups. The prevalence of HBsAg in male donors peaked in the 25 to 34 age group and declined in older age groups. Prevalence of HBsAg in females was low and variable between age groups. The prevalence of HCV and HIV in males peaked in the 35 to 44 year age group. The pattern for males and females was similar for HCV. For HIV, however, the peak in prevalence was seen at an earlier age in females and no HIV infection was seen for either sex in older age groups after infection had peaked although the number of reports was low.

Figure 4 Age and sex of infected blood donors, newly tested donors*:donations collected during 2006



* Rates adjusted for underreporting by multiplying the denominator estimate for each age and sex group by the proportion of all detected infections for which age and sex information has been reported.