



Health Protection Report

weekly report

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Case of viral haemorrhagic fever in traveller recently returned from Nigeria

A rare case of Lassa fever was confirmed in a traveller, recently arrived in London from Nigeria, by the HPA's Novel and Dangerous Pathogens Laboratory (NDPL), Porton Down, on 23 January.

After initially having been admitted to Homerton University Hospital on 8 January with fever, confusion and diarrhoea (after experiencing fever and malaise during the flight to the United Kingdom (UK) on 6 January), the patient was transferred on the 22nd to the Infectious Diseases Unit (Hospital for Tropical Diseases), University College Hospital, and then to the Royal Free on the 23rd, for appropriate treatment. Tests for a wide range of common infections associated with travel to Africa carried out in London proved negative. An HPA press release was issued on 23 January confirming that there was no risk to the general public resulting from the case. The patient died on 29 January.

An assessment of the risk of infection for hospital staff was conducted by staff from the North East and North Central London Health Protection Unit, the Centre for Infections in Colindale and the NDPL. This took account of the fact that the case had been cared for in three different wards at the Homerton Hospital, before moving into a side room on 16 January. The following categories of healthcare workers were identified as having been potentially exposed: ambulance staff involved in transporting the patient; medical and nursing staff at the three hospitals; domestic staff at the Homerton Hospital; and pathology staff handling specimens in a number of laboratories. Laboratories holding clinical specimens were contacted and asked to safely destroy these or transfer them to the NDPL for further testing or destruction as appropriate.

The flight details were obtained and the airline company confirmed that there were no passengers on the flight who had required medical assistance. The risk to other passengers on the flight was deemed negligible and therefore they were not traced.

In total, 350 healthcare staff were identified as having been potentially directly exposed through contact with the patient or exposure to bodily fluids. Based on reports of other Lassa fever cases managed in European hospitals the likelihood of transmission to healthcare staff was judged to be very low. Members of staff were contacted either directly in person or by telephone and asked about their contact with the patient and then assigned to one of three categories: no risk, for those who had no contact with the patient (category 1); low risk, for those with direct contact with the patient, or a clinical sample, but using appropriate protective equipment (category 2); and high risk, for those with direct skin, percutaneous or mucosal exposure to bodily fluids (category 3).

Staff in category 1 were informed of the absence of risk and given a general factsheet on the disease. Staff at low risk were informed and asked to report to their occupational health department or other designated manager if they developed a fever within 21 days of their contact with the patient. Staff in the third category were informed and have been asked to self-monitor their temperature and report this to the occupational health department on a daily basis.

National Resistance Alert: carbapenemases in Enterobacteriaceae

Carbapenems (imipenem, meropenem, doripenem and ertapenem) are the most potent β -lactam antibiotics, with the broadest spectra and lowest resistance rates. They are the sole β -lactams to be reliably active against the increasing numbers of *Escherichia coli* and *Klebsiella pneumoniae* isolates that are cephalosporin resistant through production of AmpC or extended-spectrum β -lactamases (ESBLs) [1]. In the UK, carbapenem resistance has, so far, mostly been confined to strains of *Pseudomonas aeruginosa* with permeability mutations and to *Acinetobacter baumannii* clones with OXA-carbapenemases, although there is also a scatter of *Enterobacter* and *Klebsiella* spp. isolates with combinations of an ESBL or AmpC enzyme and impermeability [2]. This latter mechanism confers resistance to ertapenem and reduces susceptibility to other carbapenems, often without causing frank resistance. It is troublesome because the impermeability is sometimes selected during therapy [3], but strains with the mechanism may be relatively unfit, with impermeability restricting nutrition, and have not caused outbreaks; moreover, their resistance cannot transfer.

Outside the UK there is evidence of a slow but insidious accumulation of Enterobacteriaceae with true carbapenemases i.e. β -lactamases able readily to inactivate carbapenems. Many of these are transferable among strains. Problems include the clonal spread of *Klebsiella pneumoniae* (mostly) with KPC carbapenemases in the USA [4] and Israel [5] and the inter-strain spread of plasmids encoding VIM-1 metallo- β -lactamase among *K. pneumoniae* in Greece [6]. In Turkey there are outbreaks of *K. pneumoniae* with OXA-48 carbapenemases [7]. These KPC, VIM and OXA carbapenemases belong to different molecular classes and are not related; nevertheless all confer carbapenem resistance and their diversity makes it harder to design antibiotics that overcome the problem.

Up to 31 December 2007, the HPA's Antibiotic Resistance Monitoring and Reference Laboratory (ARMRL) had received just eight UK Enterobacteriaceae with carbapenemases. These comprised: five with MBLs, one of them imported with a patient initially hospitalized in Greece; two with KPC enzymes; and one *K. pneumoniae* with OXA-48 enzyme, from a patient previously hospitalized in Turkey. During 2008, ARMRL received 17 more carbapenemase-producing isolates, thus doubling the total for all previous years combined and leading to the issue of a National Resistance Alert on 23 January, 2009.

These 17 carbapenemase producers comprised:

- ▶ Five *K. pneumoniae* with KPC carbapenemases. One was from a patient previously hospitalized in Israel and two were from patients initially hospitalized in Greece, while the other two, both from the same hospital in Scotland, had no apparent overseas links. All five, and one pre-2008 isolate belong to a single strain based on DNA fingerprint, and almost certainly corresponding to ST258, a strain that has disseminated in the USA and Israel. The Scottish isolates were isolated several months apart and there was no inference of cross-infection, though a local reservoir is possible.
- ▶ Nine *K. pneumoniae* with OXA-48 enzyme, none with defined overseas links. These were from three patients at two hospitals, and, worryingly, from two residents at a nursing home. The only evidence of cross-infection was at the nursing home; the other patients all had different strains.
- ▶ Two *K. pneumoniae* with VIM MBLs, both linked to travel to Greece, and a *Pantoea* sp. with a different (IMP-type) MBL and no overseas link.

In the opening weeks of 2009 we have had further MBL-producing Enterobacteriaceae from four hospitals in England and these isolates are presently under molecular investigation.

Microbiologists should be suspicious of any Enterobacteriaceae isolate with resistance or reduced susceptibility to carbapenems, except for *Proteus* and *Morganella* spp. with borderline resistance to imipenem only (an inherent trait of these genera) and *Enterobacter* spp., eight with borderline resistance to ertapenem only (usually associated with high level chromosomal β -lactamase expression). Suspect isolates should be sent to ARMRL for further investigation. Based on current experience, most will prove to have resistance contingent on combinations of an ESBL or AmpC β -lactamase together with impermeability but a minority will be confirmed as carbapenemase producers. Where these enzymes are found we urge the need for stringent infection control and the Centre for Infections Laboratory of Healthcare-Associated Infection will be happy to advise on this aspect. It should be stressed that producers can be difficult to recognize. The *K. pneumoniae* clone with the KPC carbapenemase is typically susceptible only to gentamicin, tigecycline and polymyxins and has clear resistance to all carbapenems, but many other producers have only low-level resistance and variable (though usually considerable) resistance to other agents. Laboratories should be especially alert to carbapenem-resistant isolates from patients with a history of hospitalization in countries where carbapenemase-producing

Enterobacteriaceae are prevalent – particularly Greece, Turkey, Israel and the USA, as these have been a repeated source of introduction to the UK.

Treatment presents major challenges and will often demand antibiotic combinations. Polymyxin is usually active in vitro, but of uncertain efficacy in pneumonia, where it may be advantageous to co-administer the nebulised formulation. Tigecycline is often active in vitro, but has low serum levels and unproven efficacy in severe single-pathogen infections. Aminoglycosides retain strain-variable activity whilst aztreonam is active against some, but not all, MBL producers.

References

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Call for applications for European intervention epidemiology fellowships

Applications have been invited for 20 two-year fellowship posts, commencing in September 2009, within the European Programme for Intervention Epidemiology (EPIET) programme [1]. The EPIET programme, managed by the European Centre for Disease Prevention and Control, is aimed at medical practitioners, public-health nurses, microbiologists, veterinarians and other health professionals with experience in public health and a keen interest in epidemiology. The programme provides training and practical experience in intervention epidemiology at national and sub-national centres for surveillance and control of communicable diseases in the European Union. Closing date for submission of applications is 15 February 2009.

Reference

1. Further details on the ECDC website at: http://ecdc.europa.eu/en/Job_opportunities/Vacancies/Call_for_application_ECDC_Cohort_15_Fellowship.doc.

Infection reports

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Invasive meningococcal infections, England and Wales, laboratory reports: weeks 40-52/08

	Method of diagnosis						Cumulative totals to week to week:	
	CSF and blood Culture		Non-culture		Other sites		52/2008	52/2007
	2008	2007	2008	2007	2008	2007		
Group A	–	–	–	–	–	–	1	1
B	120	124	177	167	7	10	1027	1137
C	3	4	2	5	–	–	20	40
W135	4	8	3	2	–	–	17	34
X	–	–	–	–	–	–	0	1
Y	9	3	5	–	–	–	40	34
Z/29E	1	–	–	–	–	–	3	1
Ungroupable	–	–	–	–	1	–	2	2
Ungrouped	–	–	4	30	–	–	39	81
Total	137	139	191	204	8	10	1149	1331

Source: HPA Meningococcal Reference Unit

Quarterly report from the sentinel surveillance study of hepatitis testing in England: data for July to September 2008 (quarter 3)

The sentinel surveillance study of hepatitis testing, which began in 2002, aims to supplement routine surveillance of hepatitis A, B and C infections in England by providing information on trends in testing, individual risk exposures and clinical symptoms. The study collects information on hepatitis A, 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.

It should be borne in mind when the data presented here are compared with those in previous reports that:

- since the last quarterly report was published, a sixth London laboratory has joined the scheme;
- previous data extraction problems have been resolved.

1. Hepatitis A IgM testing

The sentinel surveillance study collects data on testing for hepatitis A-specific IgM antibody (anti-HAV IgM), a marker of acute hepatitis A infection. Table 1 shows the number of individuals tested, and testing positive, for anti-HAV IgM in sentinel laboratories between July to September 2008.

Table 1. Number of individuals tested, and testing positive, for anti-HAV IgM in participating centres, July – September 2008*.

Region (number of centres)	Number tested	Number positive
East Midlands (1)	1038	5 (0.5)
East of England (1)	499	2 (0.4)
London (6)	1658	15 (0.9)
North East (1)†	6	– (–)
North West (5)	1092	7 (0.6)
South Central (1)	272	1 (0.4)
South East Coast (1)	376	7 (1.9)
South West (1)	952	3 (0.3)
Wales *†	5	– (–)
West Midlands (1)	459	4 (0.9)
Yorkshire & the Humber (2)	763	7 (0.9)
Total, all regions (20)	7120	51 (0.7)

* Excludes reference and confirmatory testing. Individuals aged less than one year are included. Some duplication of individual patients may occur due to limitations of the information supplied. All data are provisional.

† The low number of individuals tested in the North East is due to changes in sample referral patterns which mean that most of the testing carried out by the sentinel laboratory in this region is referred from other hospitals and is therefore excluded from these quarterly analyses.

*† Although there are no sentinel centres outside England, limited first-line testing from general practices in Wales is carried out by sentinel centres in the North West and is therefore included here.

Table 2 shows the age and gender of individuals tested, and testing positive, for anti-HAV IgM in sentinel laboratories between July to September 2008. Gender was reported for the majority of people tested; the ratio of males to females tested was 1.3:1. The highest overall percentage of individuals testing positive was among children under one year of age (3.4%); however, only a small number of people were tested in this age-group.

Table 2. Number of individuals tested, and testing positive, for anti-HAV IgM in participating centres, July – September 2008*

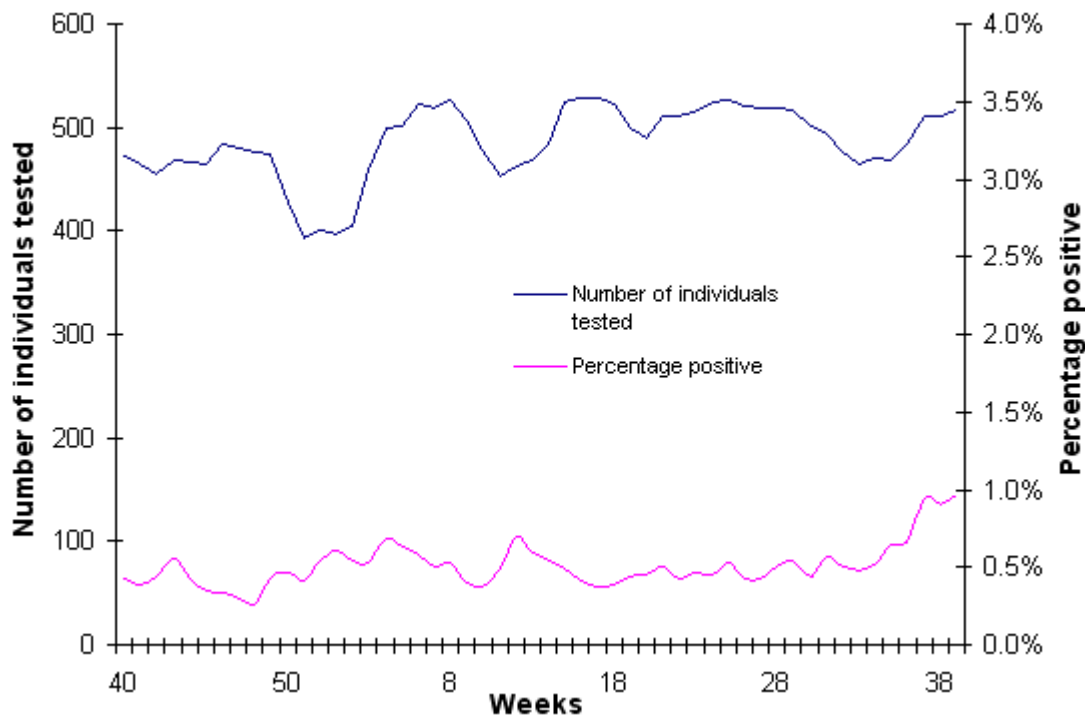
Age group	Female		Male		Unknown		Total	
	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)
Under 1 year	88	4 (4.5)	119	3 (2.5)	1	– (–)	208	7 (3.4)
1-14 years	339	4 (1.2)	376	6 (1.6)	7	– (–)	722	10 (1.4)
15-24 years	516	3 (0.6)	781	13 (1.7)	20	– (–)	1317	16 (1.2)
25-34 years	496	2 (0.4)	886	3 (0.3)	12	– (–)	1394	5 (0.4)
35-44 years	516	– (–)	705	5 (0.7)	10	– (–)	1231	5 (0.4)
45-54 years	494	2 (0.4)	523	1 (0.2)	3	– (–)	1020	3 (0.3)
55-64 years	580	3 (0.5)	587	3 (0.5)	6	– (–)	1173	6 (0.5)
≥65 years	19	– (–)	29	0 (–)	0	– (–)	48	– (–)
Unknown	2	– (–)	4	0 (–)	1	– (–)	7	– (–)
Total, all age groups	3050	18 (0.6)	4010	34 (0.8)	60	– (–)	7120	52 (0.7)

* Excludes reference and confirmatory testing. Some duplication of individual patients may occur due to limitations of the information supplied. All data are provisional.

To provide an indication of trends in testing, data from the 19 sentinel centres for which full data were available were compared for the third quarters of 2007 and 2008. In the period July to September 2008, 44 of 6582 (0.7%) people tested positive for anti-HAV IgM compared to 51 of 6068 (0.8%) for the same period in 2007. This shows a slight increase in the number of people tested with a corresponding slight decrease in the number of positive tests.

Figure 1 shows the five-weekly moving average for number of people tested for anti-HAV IgM and percentage positive over the last year (October 2007 to September 2008 inclusive) for the 19 centres from which full data were available. This shows little variation in the number of individuals tested, apart from a trough during the Christmas holiday period and a small peak shortly after. The proportion of people testing positive increased slightly from week 34.

Figure 1. Five-weekly moving average of number of people tested, and percentage positive, for anti-HAV IgM between October 2007 to September 2008 (Note difference in scale of axes compared with Figures 2 and 3)



2. Hepatitis B surface antigen (HBsAg) testing

All pregnant women in the UK are offered hepatitis B screening as part of their antenatal care. Data from the test request location and freetext clinical details field accompanying the test request were reviewed to distinguish individuals tested for HBsAg as part of routine antenatal screening (section 2a) from those tested in other settings and for other reasons (section 2b). It is possible that some women undergoing antenatal screening may not be identified as such and may therefore be included in section 2b as non-antenatal testing.

a) Antenatal HBsAg testing

During the third quarter of 2008, a total of 15848 individuals were identified as undergoing antenatal testing for HBsAg in 20 participating sentinel centres (table 3). Of these, 0.6% (n=97) were positive. This is the first time these individuals had been reported to the sentinel surveillance scheme. It should be noted that the data represent testing for hepatitis B surface antigen and therefore do not distinguish between acute and chronic infections.

Variation in levels of testing by region will reflect local antenatal testing arrangements in each area; for example, in some areas the majority of antenatal screening is carried out by NHS Blood and Transplant (NHSBT) laboratories or other hospital laboratories which do not participate in sentinel surveillance.

Individuals identified as undergoing antenatal testing comprised 30.3% of all individuals tested for HBsAg in participating laboratories during the third quarter of 2008.

Table 3. Number of individuals tested, and testing positive, for HBsAg through antenatal screening in participating laboratories, July – September 2008*

Region (number of centres)	Number tested	Number positive (%)
East Midlands (1)	20	6 (30.0)
East of England (1)	924	6 (0.6)
London (6)	3380	35 (1.0)
North East (1)	–	– (–)
North West (5)	2253	16 (0.7)
South Central (1)	1159	5 (0.4)
South East Coast (1)	1812	7 (0.4)
South West (1)	2616	5 (0.2)
West Midlands (1)	93	1 (1.1)
Yorkshire & the Humber (2)	3591	16 (0.4)
Total, all regions (20)	15848	97 (0.6)

* Excludes reference and confirmatory testing. Some duplication of individual patients may occur due to limitations of the information supplied. All data are provisional.

b) Non-antenatal HBsAg testing

This includes all individuals tested for HBsAg at participating centres who are not identified from the test request location or the clinical details accompanying the test request as undergoing antenatal screening.

During the third quarter of 2008, a total of 52305 individuals were tested for HBsAg in 20 participating sentinel centres, excluding antenatal testing (table 4). Of these, 2.0% (n=1052) were positive. This is the first time these individuals had been reported to the sentinel surveillance scheme.

The proportion of individuals testing positive was highest in London for the third consecutive quarter. This may reflect more targeted testing of risk groups and/or genuinely higher prevalence in people being tested in this region.

Table 4. Number of individuals tested, and testing positive, for HBsAg in participating centres (excluding antenatal testing), July – September 2008*

Region (number of centres)	Number tested	Number positive (%)
East Midlands (1)	4680	57 (1.2)
East of England (1)	2540	32 (1.3)
London (6)	19309	554 (2.9)
North East (1)	564	1 (0.2)
North West (5)	8364	194 (2.3)
South Central (1)	1590	17 (1.1)
South East Coast (1)	3719	19 (0.5)
South West (1)	4994	45 (0.9)
Wales †	9	– (–)
West Midlands (1)	1511	40 (2.6)
Yorkshire & the Humber (2)	5025	93 (1.9)
Total, all regions (20)	52305	1052 (2.0)

* Excludes reference and confirmatory testing. Individuals aged less than one year are included. Some duplication of individual patients may occur due to limitations of the information supplied. All data are provisional.

† Although there are no sentinel centres outside England, limited first-line testing from general practices in Wales is carried out by sentinel centres in the North West and is therefore included here.

Excluding individuals identified from the test request location or clinical details as undergoing antenatal testing, slightly more women than men were tested for HBsAg (table 5). This may represent antenatal testing that cannot be identified as such from the information provided, or may reflect genuinely higher levels of testing among women.

As was reported in the first and second quarter of 2008 the proportion testing positive for HBsAg was higher among men than women (2.4% v 1.6%). The relatively high prevalence of HBsAg among tested individuals of unknown gender may reflect testing of individuals in settings such as prisons, drug services and GUM clinics where few demographic details on patients (such as gender) were available and where service users may be at high risk of hepatitis B infection.

Table 5. Age and gender of individuals tested for HBsAg in participating centres (excluding antenatal testing), July – September 2008*

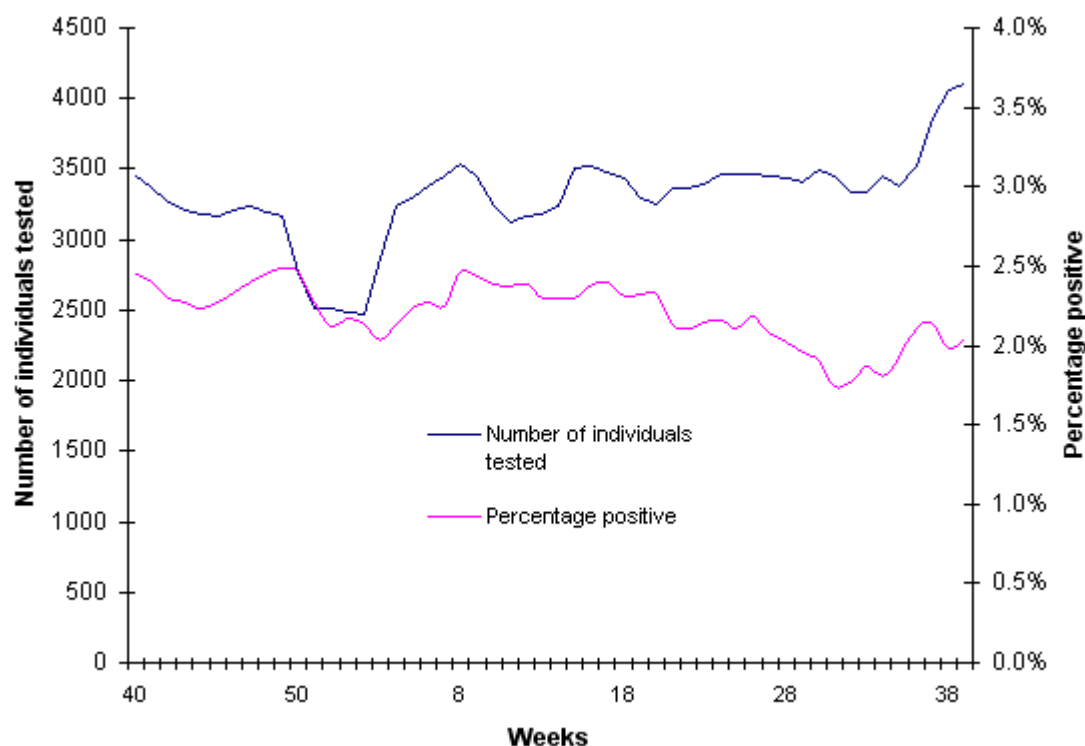
Age group	Female		Male		Unknown		Total	
	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)
Under 1 year	347	4 (1.2)	404	2 (0.5)	14	– (–)	765	6 (0.8)
1-14 years	6344	76 (1.2)	4021	72 (1.8)	183	3 (1.6)	10548	151 (1.4)
15-24 years	8436	151 (1.8)	6943	219 (3.2)	284	10 (3.5)	15663	380 (2.4)
25-34 years	4951	96 (1.9)	5746	159 (2.8)	155	5 (3.2)	10852	260 (2.4)
35-44 years	2383	53 (2.2)	3296	86 (2.6)	76	2 (2.6)	5755	141 (2.5)
45-54 years	1728	22 (1.3)	2190	45 (2.1)	40	– (–)	3958	67 (1.7)
55-64 years	2036	17 (0.8)	2448	27 (1.1)	19	– (–)	4503	44 (1.0)
≥65 years	64	1 (1.6)	82	1 (1.2)	2	– (–)	148	2 (1.4)
Unknown	40	– (–)	38	1 (2.6)	35	– (–)	113	1 (0.9)
Total, all age groups	26329	420 (1.6)	25168	612 (2.4)	808	20 (2.5)	52305	1052 (2.0)

* Excludes reference and confirmatory testing. Some duplication of individual patients may occur due to limitations of the information supplied. All data are provisional.

To provide an indication of trends in testing, data from the 19 sentinel centres for which full data were available were compared for the third quarters of 2007 and 2008. In the period July to September 2008, 920 of 47,055 (2.0%) people tested positive for HBsAg (excluding antenatal testing), compared to 1051 of 42,226 (2.5%) for the same period in 2007. This shows a slight increase in the number of people tested with a decrease in the proportion of individuals testing positive for HBsAg during 2008.

Figure 2 shows the five-weekly moving average for number of people tested for HBsAg and percentage positive over the last year (excluding antenatal testing; October 2007 to September 2008 inclusive) for the 19 centres from which full data were available. This shows little variation in the number of individuals tested prior to week 36, apart from a trough during the holiday period and a small peak shortly after. Data from the last quarter of 2008 will indicate if the increase from week 36 to the end of the quarter is a genuine trend in testing. There has been a slight decrease in the proportion of individuals testing positive for HBsAg in 2008.

Figure 2. Five-weekly moving average of number of people tested, and percentage positive, for HBsAg between October 2007 and September 2008 (excluding antenatal testing) (Note difference in scale of axes compared with Figures 1 and 3)



3. Hepatitis C testing

During the third quarter of 2008, a total of 43172 individuals were tested at least once for hepatitis C-specific antibodies (anti-HCV) in 20 participating sentinel centres (table 6). This is the first time these individuals had been reported to the sentinel surveillance scheme.

Overall, 4.0% of individuals tested for anti-HCV were positive, though this varied by region with the highest proportion of positive tests in the North West (table 6). This may reflect more targeted testing of risk groups and/or genuinely higher prevalence in people being tested in this region.

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.

Table 6. Number of individuals tested, and testing positive, for anti-HCV in participating centres, July – September 2008*

Region (number of centres)	Number tested	Number positive (%)
East Midlands (1)	4066	131 (3.2)
East of England (1)	1739	53 (3.0)
London (5)	14285	550 (3.9)
North East (1)	429	25 (5.8)
North West (6)	7931	489 (6.2)
South Central (1)	1155	25 (2.2)
South East Coast (1)	3675	59 (1.6)
South West (1)	3920	189 (4.8)
Wales †	11	– (–)
West Midlands (1)	1442	41 (2.8)
Yorkshire and Humberside (2)	4519	175 (3.9)
Total, all regions (20)	43172	1737 (4.0)

* Excludes reference and confirmatory testing. Excludes individuals aged less than one year, 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.

† Although all sentinel centres are in England, a small amount of first-line testing from general practices in Wales is carried out by laboratories in the North West and West Midlands.

Of the 1737 individuals testing positive for anti-HCV during the third quarter of 2008, 531 (30.6%) were also tested for HCV RNA by PCR. Of these individuals, 153 were PCR positive (71.2%).

Gender was reported for the majority of people tested. As in previous quarters, similar numbers of males and females were tested (table 7); the ratio of males to females tested was 1.1:1. The ratio of males to females testing positive was 2.2:1. The largest group tested were aged 25-34 years (n=11827). The percentage of individuals overall testing positive was highest among people of unknown age. This may reflect testing of individuals in settings such as prisons, drug services and GUM clinics where few demographic details on patients were available and where service users may be at high risk of hepatitis C infection.

Table 7. Age and gender of individuals tested for anti-HCV in participating centres, July – September 2008*

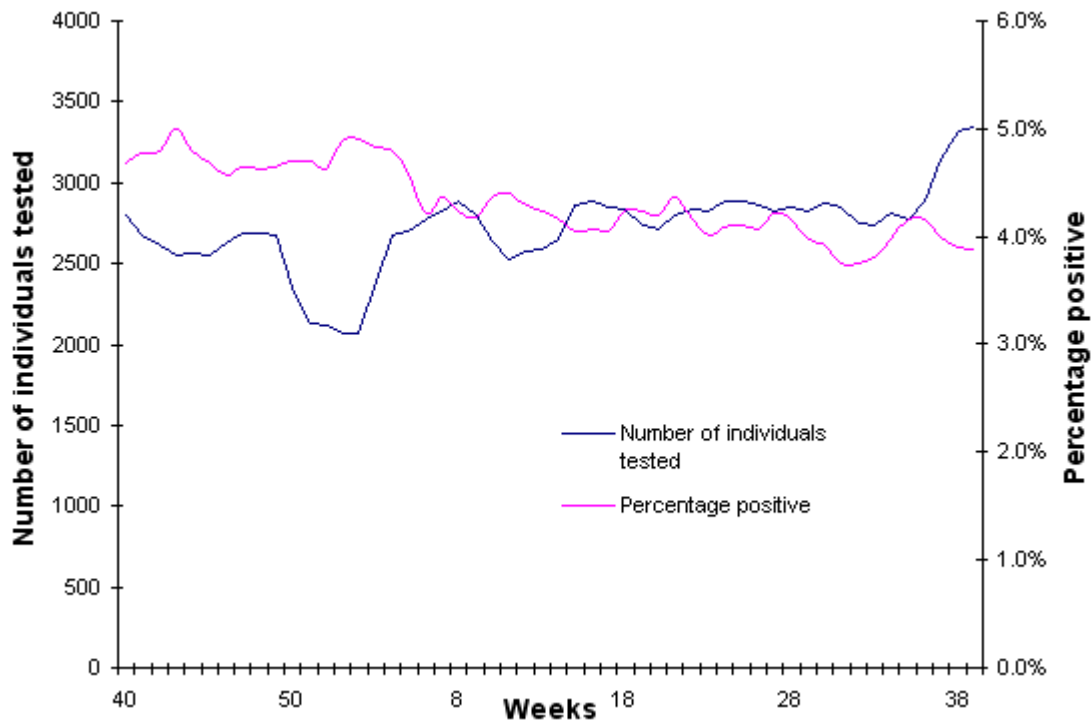
Age group	Female		Male		Unknown		Total	
	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)
1-14	294	5 (1.7)	308	5 (1.6)	5	– (–)	607	10 (1.6)
15-24	4596	39 (0.8)	3302	37 (1.1)	121	– (–)	8019	76 (0.9)
25-34	5601	163 (2.9)	6012	311 (5.2)	214	3 (1.4)	11827	477 (4.0)
35-44	3930	150 (3.8)	5455	432 (7.9)	134	2 (1.5)	9519	584 (6.1)
45-54	2109	113 (5.4)	3056	258 (8.4)	57	4 (7.0)	5222	375 (7.2)
55-64	1614	35 (2.2)	1958	88 (4.5)	22	1 (4.5)	3594	124 (3.5)
≥65	1977	39 (2.0)	2276	39 (1.7)	18	2 (11.1)	4271	80 (1.9)
Unknown	34	1 (2.9)	39	5 (12.8)	40	5 (12.5)	113	11 (9.7)
Total, all age groups	20155	545 (2.7)	22406	1175 (5.2)	611	17 (2.8)	43172	1737 (4.0)

* Excludes reference and confirmatory testing. Individuals aged less than one year are excluded 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.

To provide an indication of trends in testing, data from the 19 sentinel centres from which full data were available were compared for the third quarters of 2007 and 2008. In the period July to September 2008, 1541 of 38581 (4.0%) people tested were positive for anti-HCV, compared to 1708 of 34978 (4.9%) for the same period in 2007. This suggests increased testing of people at lower risk of infection.

Figure 3 shows the five-weekly moving average for number of people tested for anti-HCV and percentage positive over the last year (October 2007 to September 2008 inclusive) for the 19 centres from which full data were available. Apart from a trough during the Christmas and New Year holiday period, levels of anti-HCV testing shows a slight increase over the year. Data from the last quarter of 2008 will indicate if the increase in number of individuals tested from week 37 to the end of the quarter is a genuine trend. As observed over the previous two quarters, several peaks in testing correspond to simultaneous troughs in the percentage positive; perhaps suggesting increased testing of people at low risk of infection. An overall decline in the percentage positive over the past year is apparent, confirming the long-term trend in declining percentage positive among individuals tested for anti-HCV observed over the course of the study.

Figure 3. Five-weekly moving average of number of people tested, and percentage positive, for anti-HCV between January 2007 and December 2007. (Note difference in scales to Figure 1 and 2)



Reference

1. Health Protection Agency. Quarterly report from the sentinel surveillance study of hepatitis testing in England: data for April to June 2008 (quarter 2). *Health Protection Report* [serial online] 2008; 2 (43): immunisation. Available at: <http://www.hpa.org.uk/hpr/archives/2008/hpr4308.pdf>

Diary

12th annual meeting on practical aspects of infection control

The twelfth annual *Don't Panic!* Meeting, to be held at the Sheffield Hallam University, City Campus, Sheffield, on 22-23 June, will examine current issues and practical aspects of infection control and be of interest to microbiologists and infection control nurses, public health staff and biomedical scientists.

Organised by Sheffield Teaching Hospitals and Sheffield Hallam University, in association with the Hospital Infection Society, the programme includes lectures on:

- Making the case for a vascular access team in your Trust;
- Zero tolerance to infection in ICU - reality or fantasy?
- What is the role of disinfectants in infection control?
- Controlling cross infection with multi-resistant Gram negatives;
- The role of prion deactivation in decontamination of equipment;
- Infection control and PFI - an inevitable conflict of interests?
- Infection Control in the community - "home" or "hospital" standards?
- MRSA, ESBL, *C.difficile* - how much is out in the community?
- New approaches to managing *C. difficile* infection;
- Antibiotic prescribing and control of *C. difficile* infection;
- Planning for the worst - pandemic 'flu update; and
- Using human error theory to design better hospital outbreak control tools.

In addition: a workshop on Monday 22 June will consider use of the Hand-hygiene Observation Tool (HHOT) for audit and feedback; and there will be posters and a free paper session on each day.

The closing date for receipt of abstracts is 31 March 2009. A £500 bursary will be awarded to the lead author/presenter of the best free paper or poster.

The registration fee is £60 per day which includes refreshments. Accommodation is available in local hotels at discounted rates.

Venue:

City Campus,
Sheffield Hallam University,
Sheffield.

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