



Health Protection Report

weekly report

Volume 4 Number 4 Published on: 29 January 2010

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Pandemic H1N1 influenza: UK and international update

Global situation

Although much of the temperate northern hemisphere passed a peak of autumn and winter-time pandemic influenza activity between late October and late November 2009, virus transmission remains active in several later affected areas, particularly in North Africa, limited areas of eastern and southeastern Europe, and in parts of South and East Asia, according to the WHO's latest update of the global situation [1].

The WHO noted that:

- ▶ In **North Africa**, limited data suggest that pandemic influenza virus transmission remains active and geographically widespread, particularly in Morocco, Algeria, Libyan Arab Jamahiriya, and in Egypt, although most countries in the region appeared to have recently passed a peak of activity during December 2009 or January 2010;
- ▶ In **South Asia**, pandemic influenza activity remains active but geographically variable. Recent peaks in activity were noted during late December and early January 2010 in northern India, Nepal, and Sri Lanka;
- ▶ In **East Asia**, transmission of pandemic influenza virus remains active, however, overall activity continued to decline in most countries;
- ▶ In **south-east Asia**, transmission of pandemic influenza virus persists, but current activity levels are low;
- ▶ In **Europe** transmission of pandemic influenza virus remains geographically regional-to-widespread in the central, eastern, and southeastern parts of the continent. However, overall activity continues to decline in most places. Several countries (Austria, Albania, Bulgaria, Slovakia, and the Russian Federation) reported slight increases in the levels of ARI or ILI activity, however in most, levels remain well below recent peaks in activity;
- ▶ In the **Americas**, both in the tropical and northern temperate zones, overall pandemic influenza activity continued to decline or remain low in most places. Of note, detections of RSV have increased in a few countries in the Americas, which may partially account for elevated ILI activity in those areas, particularly among young children;
- ▶ In **temperate regions of the southern hemisphere**, sporadic cases of pandemic influenza continued to be reported without evidence of sustained community transmission.

UK situation at 28 January 2010

Key points of the Health Protection Agency's Weekly National Influenza Report of 28 January (week 4) [2] covering the UK situation were as follows:

- Pandemic (H1N1) 2009 influenza activity was generally decreasing across the UK;
- In week 03 (ending 24 January), the weekly influenza-like illness consultation rate decreased or remained stable in all schemes across the UK;
- The National Pandemic Flu Service continued to issue antiviral drugs to people in England. This service will continue until 11 February 2010, from this date onwards, antivirals will be authorised via health care professionals. The number of assessments and antiviral collections through this service have decreased over the past week;

- A decrease in respiratory syncytial virus detections has been observed recently and GP consultation rates for acute bronchitis continue to fall, especially in people aged under 5 years and 65 or over;
- The main influenza virus circulating in the UK continued to be the pandemic (H1N1) 2009 strain, with few influenza H1 (non-pandemic), H3 and B viruses detected. Thirty-six of 4,975 pandemic viruses tested have been confirmed to carry a mutation which confers resistance to the antiviral drug oseltamivir; three are phenotypically resistant to the drug but retain sensitivity to zanamivir;
- The majority of pandemic influenza cases continued to be mild. The cumulative number of deaths reported due to pandemic (H1N1) 2009 in the UK was 391 (figure for England to 21 January 10);
- The UK pandemic influenza vaccination programme continues for people at high risk of severe disease, health-care workers and healthy children aged between six months and five years. For further information see the [Department of Health website](#).

References

1. WHO. Update no. 85 of 29 January 2010 (<http://www.who.int/csr/don/en/>).
2. HPA. Weekly National Influenza Report: week 4 (28 January 2010, PDF 435 KB), HPA website: www.hpa.org.uk/swineflu/surveillance&epidemiology.
3. Department of Health Central Alerting System. [Pandemic H1N1 \(2009\) Influenza](#), 27 January 2010.

EFSA-ECDC zoonoses report for 2008

Campylobacteriosis remains the most commonly reported zoonosis in the European Union (EU), followed by salmonellosis and yersiniosis, according to the latest joint annual report from the European Food Safety Authority (EFSA) and the European Centre for Disease Prevention and Control (ECDC) [1].

Salmonellosis, the second most commonly recorded zoonosis, has continued to follow a statistically significant downward trend for five consecutive years, the report notes, as a result of intensified control of Salmonella in animal populations, particularly in poultry, and better hygiene throughout the food chain.

Also decreased was the number of confirmed cases of listeriosis in the EU. There were 11% fewer reported cases in 2008 (1,381) compared to 2007 (1,554), the foodstuffs most likely to have been implicated being ready-to-eat products (fish and meat), soft cheeses, salads and sandwiches.

Q-fever increased by 172% in 2008 (1594) compared with 2007(585) mainly due to several outbreaks in people entering areas with infected sheep and goats, in the Netherlands in particular. The report suggests that the occurrence of Q-fever in humans and animals may be seriously under-reported in Europe. Also increased were cases of Shiga-toxin/vero-toxin producing E. coli (STEC/VTEC), of which of 3,159 confirmed cases were reported in 2008, representing an 8.7% increase from 2007 (2,905 cases).

Reference

1. European Centre for Disease Prevention and Control (ECDC) and the European Food Safety Authority (EFSA). The Community Summary Report on trends and sources of zoonoses, zoonotic agents and food-borne outbreaks in the European Union in 2008 Stockholm, Parma; 2010. Available from: <http://www.efsa.europa.eu/en/scdocs/scdoc/1496.htm>.

Chemical Hazards and Poisons

The January 2010 issue of Chemical Hazards and Poisons Report is available to download from the HPA website, at www.hpa.org.uk/chemicals/reports.

A short article explains the background to the forthcoming merger, with effect from 1 April 2010, between the Chemical Hazards and Poisons and the Radiation Protection Divisions of the HPA. The combined divisions will be a single Agency Centre - the Centre for Radiation, Chemicals and Environmental Hazards (CRCE). The article notes that the merger will facilitate the development of synergies of expertise and assist in strengthening work in a number of areas, including:

- modelling of the movement of pollutants
- biokinetic studies on the uptake and distribution of pollutants in the body
- health effects studies on the mechanism of action of potential harmful agents
- response to emergencies and incidents
- development of service delivery
- training of healthcare professionals
- provision of consistent expert advice to the frontline.

A feature article reports the results of a review of incidents (the most notable of which was the explosion and fire at the Buncefield fuel terminal in December 2005) reported to the Agency's Chemical Hazards and Poisons Division that were suspected and/or confirmed to be related to sites regulated under the Control of Major Accident Hazards (COMAH) Regulations.

Other articles include those concerned with:

- public use of HPA online guidance for cleaning up after mercury thermometer breakages;
- a Hazmed training course run by the Yorkshire Ambulance Service;
- the start of a project to develop a Recovery Handbook for Chemical Incidents that will codify best practice based on past emergencies in the UK and abroad;
- reports from past conferences and courses, and details of forthcoming events in 2010.

Regular emails providing information about future issues of the Chemical Hazards and Poisons Report are available. For subscriptions contact: chapreport@hpa.org.uk.

Infection reports

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Immunisation

- ▶ **Laboratory reports of invasive meningococcal infections: weeks 40-53/2009**
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 - ▶ **Quarterly report from the sentinel surveillance study of hepatitis testing in England: July to September 2009 (quarter 3)**
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Laboratory reports of invasive meningococcal infections: weeks 40-53/2009 (2008)

	Method of diagnosis						Cumulative totals	
	CSF and blood Culture		Non-culture		Other sites		To	To
	2009	2008	2009	2008	2009	2008	53/2009	53/2008
Group A	–	–	–	–	–	–	1	1
B	81	144	186	198	2	8	950	1105
C	2	4	2	2	–	–	10	22
W135	6	5	2	2	–	–	23	18
X	–	–	–	–	–	–	2	–
Y	12	13	7	4	–	–	62	44
Z/29E	–	1	–	–	–	–	–	3
Non-groupable	1	–	–	–	1	1	2	2
Ungrouped	–	–	4	5	–	–	15	37
Total	102	167	201	211	3	9	1065	1232

Source: HPA Meningococcal Reference Unit

Laboratory reports of hepatitis A and C in England and Wales: July to September 2009

Laboratory reports of hepatitis A infection in England and Wales

In the third quarter of 2009 (July-September), a total of 73 cases of hepatitis A were diagnosed. This was almost a 20% decrease from the previous quarter. It is comparable to the first and second quarters of 2008 (which had 55 and 77 cases, respectively). However, due to a problem in reporting from a London laboratory which is still being investigated, nothing can yet be said about how it compares to the second half of 2008 and the beginning of 2009.

The majority of cases were in adults and adolescents (85% cases were in those ≥ 10 years old) which is in line with the fact that severity of hepatitis A increases with age; individuals are more likely to be symptomatic and, consequently, be tested. Of the total number of cases, 23% (17) and 18% (13) were male and female, respectively, aged between 15 and 44 years old; and 19% (14) and 18% (13) were male and female, respectively, aged over 45 years old. Of the under-fifteen age group, males accounted for 14% (10) and females for 7% (5) of the total number of cases.

Laboratory reports of hepatitis A infection in England and Wales: July to September 2009

Age group	Male	Female	Unknown	Total
<1 year	–	–	–	–
1-4 years	2	–	–	2
5-9 years	5	4	–	9
10-14 years	3	1	1	5
15-24 years	7	5	–	12
25-34 years	5	3	–	8
35-44 years	5	5	–	10
45-54 years	2	3	–	5
55-64 years	8	5	–	13
≥ 65 years	4	5	–	9
Unknown	–	–	–	–
Total	41	31	1	73

Hepatitis C

There were a total of 2040 cases of hepatitis C diagnosed in the third quarter of 2009 (July-September). This was nearly a 10% decrease from the previous quarter. The ratio of males to females diagnosed was 2.4:1 – a further increase on the previous two quarters of 2009. Consistent with previous quarters, the majority of diagnoses were among those aged between 25 and 44 years old (59%).

Laboratory reports of hepatitis C in England and Wales: July to September 2009

Age group	Male	Female	Unknown	Total
<1 year	–	3	–	3
1-4 years	1	3	–	4
5-9 years	2	–	1	3
10-14 years	3	3	–	6
15-24 years	57	49	6	112
25-34 years	379	185	18	582
35-44 years	455	161	15	631
45-54 years	325	108	10	443
55-64 years	120	40	2	162
≥65 years	45	28	3	76
Unknown	11	4	3	18
Total	1398	584	58	2040

Quarterly report from the sentinel surveillance study of hepatitis testing in England: July to September 2009 (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.

Over recent months, dried blood spot testing [1] has started to be rolled out in some of the laboratories that participate in the sentinel surveillance study. Early data indicates that individuals undergoing dried blood spot testing are at increased risk of Hepatitis C infection when compared the general population undergoing hepatitis testing. Therefore, these data are excluded from the main analysis of HBsAg and anti-HCV testing and will be presented separately in future reports.

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. During the third quarter of 2009, a total of 7,744 individuals were tested at least once for anti-HAV IgM in 21 participating sentinel centres (table 1). This is the first time these individuals had been reported to the sentinel surveillance scheme.

As in the second quarter, 0.6% of individuals tested for anti-HAV IgM during the third quarter were positive, though this varied by region. The highest proportion of positive tests was in South East Coast and the London regions (table 1). This may represent more targeted testing of individuals at risk in these areas or an increase in the incidence of HAV during the third quarter. The relatively low proportion positive in South Central and the West Midlands, when compared to the second quarter of 2009, may suggest either a decline in HAV or a change in people undergoing testing toward those at lower risk of infection.

Table 1. Number of individuals tested, and testing positive, for anti-HAV IgM in participating centres, July - September 2009*

Region (number of centres)	Number tested	Number positive
East Midlands (1)	1,153	- (-)
East of England (1)	494	4 (0.8)
London (7)	2,179	21 (1.0)
North East † (1)	16	- (-)
North West (5)	1,174	11 (0.9)
South Central (1)	240	- (-)
South East Coast (1)	378	4 (1.1)
South West (1)	752	6 (0.8)
Wales *†	9	- (-)
West Midlands (1)	479	2 (0.4)
Yorkshire & the Humber (2)	870	- (-)
Total, all regions (21)	7,744	48 (0.6)

* 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 2009. Gender and age were reported for the majority of people tested (>99%). Slightly more males were tested than females (55.3% male), which is the same as previous quarters. The mean age of individuals tested was 46.3 years (range 0-97 years), where as the mean age of those testing positive was 38.8 years (range 2-91 years). The largest group tested were aged 35-44 years (n=1,487). The highest overall percentage of individuals testing positive was among 25-34 year olds and children aged 1-14 years although few people were tested in this latter age group. These results are constant with those reported for the second quarter of 2009.

Table 2. Number of individuals tested, and testing positive, for anti-HAV IgM in participating centres, July - September 2009*

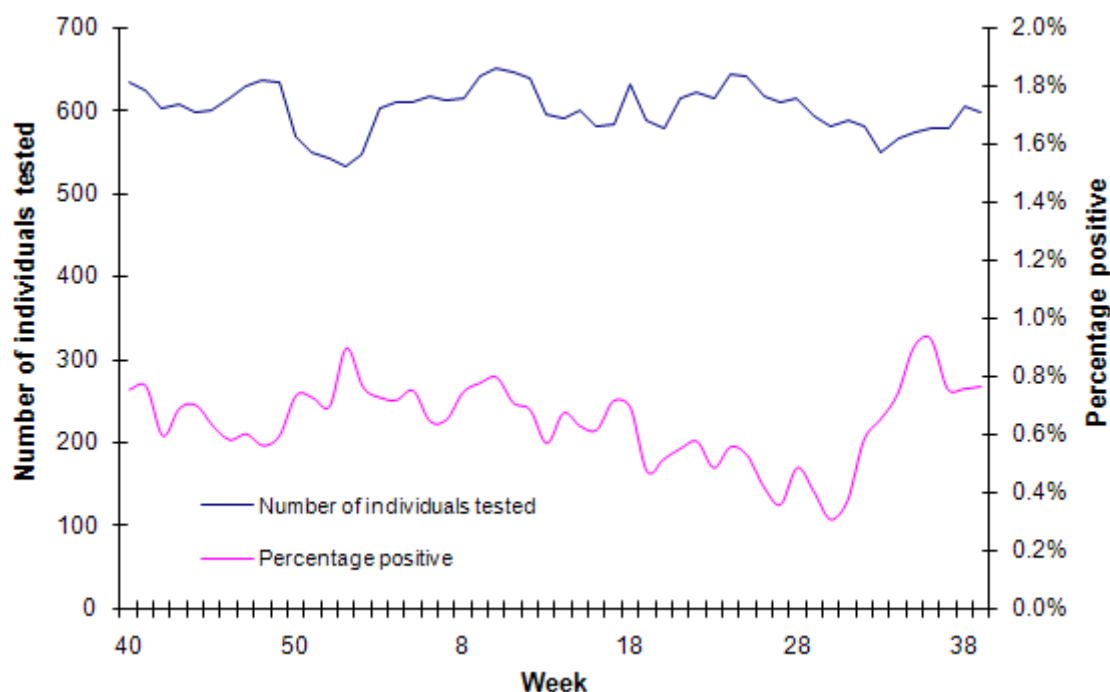
Age group	Female		Male		Unknown		Total	
	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)
Under 1 year	25	- (-)	22	- (-)	-	- (-)	47	- (-)
1-14 years	68	5 (7.4)	111	7 (6.3)	3	- (-)	182	12 (6.6)
15-24 years	379	4 (1.1)	395	2 (0.5)	6	- (-)	780	6 (0.8)
25-34 years	573	2 (0.3)	756	7 (0.9)	9	- (-)	1,338	9 (0.7)
35-44 years	531	3 (0.6)	939	1 (0.1)	17	- (-)	1,487	4 (0.3)
45-54 years	596	3 (0.5)	765	1 (0.1)	7	- (-)	1,368	4 (0.3)
55-64 years	557	2 (0.4)	598	3 (0.5)	6	- (-)	1,161	5 (0.4)
≥65 years	678	2 (0.3)	690	6 (0.9)	3	- (-)	1,371	8 (0.6)

Unknown	3	- (-)	4	- (-)	3	- (-)	10	- (-)
Total, all age groups	3,410	21 (0.6)	4,280	27 (0.6)	54	- (-)	7,744	48 (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. To provide an indication of trends in testing, data from 21 sentinel centres for which full data were available were compared for the third quarters of 2008 and 2009. In the period July to September 2009, 42 of 7,076 (0.6%) people tested positive for anti-HAV IgM compared to 31 of 7,066 (0.4%) for the same period and centres in 2008. This shows a slight increase in the proportion of individuals testing positive, while the level of testing remained stable.

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 2008 to September 2009 inclusive) for the 21 sentinel centres from which full data were available. Testing has remained stable over the last year with noticeable troughs during the Easter, summer and Christmas holiday periods. The proportion positive fluctuated, although a slight decline is suggested from May 2009. Data from fourth quarter of 2009 may show if this trend continues.

Figure 1. Five-weekly moving average of number of people tested, and percentage positive, for anti-HAV IgM between October 2008 to September 2009 (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 2009, a total of 13,470 individuals were identified as undergoing antenatal screening for HBsAg in 21 participating sentinel centres (table 3). Of these, 0.7% (n=92) were positive. This is the first time these individuals had been reported to the sentinel surveillance scheme.

Individuals identified as undergoing antenatal screening comprised 20.4% of all individuals tested for HBsAg in participating laboratories during the third quarter of 2009.

In those regions where few samples were tested (eg East and West Midlands) it is likely that routine antenatal screening was performed by another laboratory that does not participate in the sentinel surveillance study and that the sentinel laboratory is performing reference testing.

Table 3. Number of individuals tested, and testing positive, for HBsAg through antenatal screening in participating laboratories, July - September 2009*

Region (number of centres)	Number tested	Number positive (%)
East Midlands (1)	19	5 (26.3)
East of England (1)	738	1 (0.1)
London (7)	3,527	43 (1.2)
North East (1)	-	- (-)
North West (5)	1,963	14 (0.7)
South Central (1)	896	2 (0.2)
South East Coast (1)	1,262	3 (0.2)
South West (1)	2,164	6 (0.3)
West Midlands (1)	109	4 (3.7)
Yorkshire & the Humber (2)	2,792	14 (0.5)
Total, all regions (21)	13,470	92 (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.

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 2009, a total of 52,651 individuals were tested for HBsAg in 21 participating sentinel centres, excluding antenatal testing (table 4) and dried blood spot testing. Of these, 1.8% (n=951) were positive. This is the first time these individuals had been reported to the sentinel surveillance scheme.

London had the highest proportion of individuals testing positive 2.7% for the sixth consecutive quarter. The North West and West Midlands also had a high proportion of individuals testing positive (1.7% and 2.4% respectively), which is consistent with previous quarters. 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 2009*

Region (number of centres)	Number tested	Number positive (%)
East Midlands (1)	4,674	47 (1.0)
East of England (1)	2,745	25 (0.9)
London (7)	20,954	564 (2.7)
North East (1)	726	9 (1.2)
North West (5)	7,407	126 (1.7)
South Central (1)	1,789	22 (1.2)
South East Coast (1)	3,137	19 (0.6)
South West (1)	4,220	40 (0.9)
Wales †	24	- (-)
West Midlands (1)	1,972	47 (2.4)
Yorkshire & the Humber (2)	5,003	52 (1.0)
Total, all regions (20)	52,651	951 (1.8)

* Excludes dried blood spot, 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 Northern Ireland and 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, similar numbers of men and women were tested for HBsAg (table 5). The number of women tested may include some antenatal testing that cannot be identified as such from the information provided, or may reflect similar levels of testing among men and women.

Gender and age were reported for the majority of people tested (>98%). As reported previously the proportion testing positive for HBsAg was higher among men than women (2.3% v 1.4%). The largest group tested were aged 25-34 years (n= 15,971); where as the percentage of individuals testing positive was highest among people aged 35-44 years (2.3%). The mean age of individuals tested was 37.4 years (range 0-108 years) and of those testing positive was 36.8 years (range 2-93 years). As with previous quarters, the relatively high prevalence of HBsAg among tested individuals of unknown gender or age (2.1% and 2.6% respectively) 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 sex of individuals tested for HBsAg in participating centres (excluding antenatal testing), July - September 2009*

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	79	- (-)	77	- (-)	2	- (-)	158	- (-)
1-14 years	369	6 (1.6)	428	9 (2.1)	9	- (-)	806	15 (1.9)
15-24 years	6,383	72 (1.1)	4,147	79 (1.9)	354	3 (0.8)	10,884	154 (1.4)
25-34 years	8,827	118 (1.3)	6,885	200 (2.9)	259	10 (3.9)	15,971	328 (2.1)
35-44 years	4,844	82 (1.7)	5,469	150 (2.7)	155	5 (3.2)	10,468	237 (2.3)
45-54 years	2,456	43 (1.8)	3,234	66 (2.0)	63	1 (1.6)	5,753	110 (1.9)

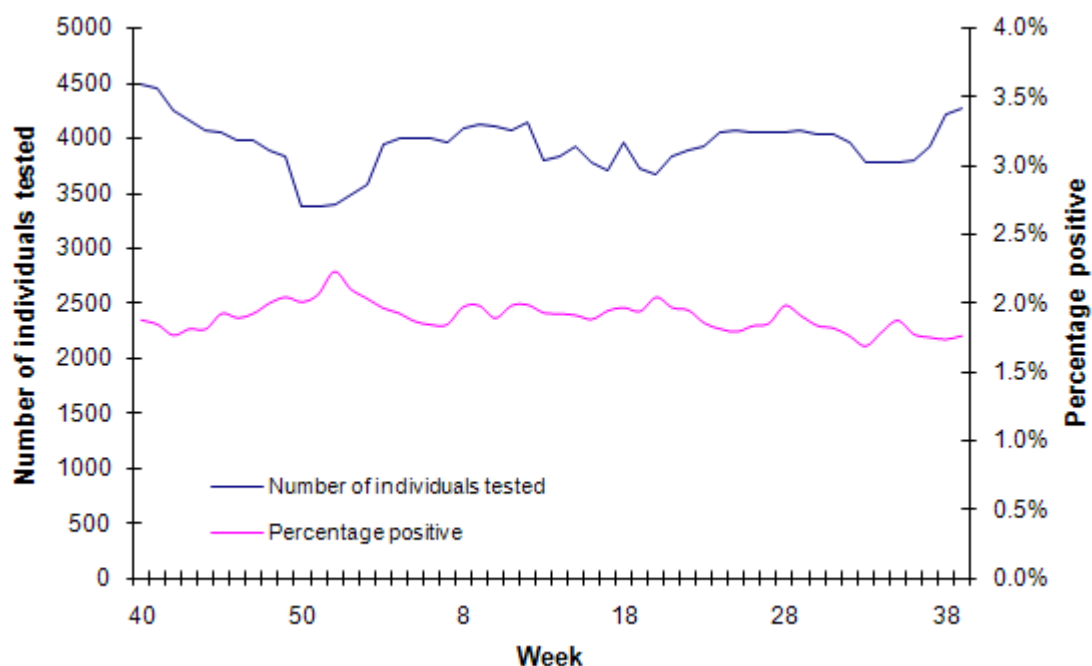
55-64 years	1,743	26 (1.5)	2,100	38 (1.8)	29	- (-)	3,872	64 (1.7)
≥65 years	2,079	19 (0.9)	2,487	20 (0.8)	17	- (-)	4,583	39 (0.9)
Unknown	31	- (-)	49	3 (6.1)	76	1 (1.3)	156	4 (2.6)
Total, all age groups	26,811	366 (1.4)	24,876	565 (2.3)	964	20 (2.1)	52,651	951 (1.8)

* Excludes dried blood spot, 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 21 sentinel centres for which full data were available were compared for the third quarters of 2008 and 2009. In the period July to September 2009, 951 of 52,651 (1.8%) people tested positive for HBsAg (excluding antenatal testing), compared to 974 of 51,446 (1.9%) for the same period in 2008. This shows a slight increase in the number of people tested and decline in the proportion of individuals testing positive for HBsAg which is consistent with results previously reported for 2009.

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 2008 to September 2009 inclusive) for the 21 sentinel centres from which full data were available. Although the level of testing drops during the Christmas and Easter holiday period testing overall has remained stable over the past year. In contrast to the second quarter 2009 report the proportion positive now shows a very slight decline over the past 12 months.

Figure 2. Five-weekly moving average of number of people tested, and percentage positive, for HBsAg between October 2008 and September 2009 (excluding antenatal testing) (Note difference in scale of axes compared with Figures 1 and 3)



3 Hepatitis C testing

During the third quarter of 2009, a total of 42,838 individuals were tested at least once for hepatitis C-specific antibodies (anti-HCV) in 21 participating sentinel centres (table 7), excluding dried blood spot testing. This is the first time these individuals had been reported to the sentinel surveillance scheme.

Overall, 2.9% of individuals tested for anti-HCV were positive, though this varied by region. This shows a decline in the number and proportion of positive individuals identified when compared with the previous quarter [2]. As with previous quarters the highest proportion of positive tests in England were from the North West (table 6). This may reflect a 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 or chronic hepatitis C virus infections. These positive anti-HCV results do not therefore necessarily represent incident infections.

Table 6. Number of individuals tested, and testing positive, for anti-HCV in participating centres, July - September 2009*

Region (number of centres)	Number tested	Number positive (%)
East Midlands (1)	4,117	92 (2.2)
East of England (1)	1,785	56 (3.1)
London (7)	14,823	397 (2.7)
North East (1)	598	11 (1.8)
North West (5)	7,250	300 (4.1)
South Central (1)	1,225	23 (1.9)
South East Coast (1)	3,056	53 (1.7)
South West (1)	3,736	129 (3.5)
Wales †	15	1 (6.7)
West Midlands (1)	1,765	51 (2.9)
Yorkshire and Humberside (2)	4,468	134 (3.0)
Total, all regions (19)	42,838	1,247 (2.9)

* Excludes dried blood spot, 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 1,247 individuals testing positive for anti-HCV during the third quarter of 2009, 765 (61.3%) were also tested for HCV RNA by PCR (qualitative and/or quantitative). Of these individuals, 533 were PCR positive (69.7%).

Gender was reported for the majority of people tested (>98%) (table 7). Slightly more males (51.3%) were tested than females. As reported previously the proportion testing positive was nearly twice as high among men as among women (3.8% vs. 2.0%). The mean age of individuals tested was 39.5 years (range 1-107 years) and of those testing positive was 41.2 years (range 1-87 years). As with the previous quarter the largest group tested were aged 25-34 years (n=11,516). The percentage of individuals testing positive was highest among 45-54 year olds (5.0%). The relatively high level of individuals with unknown age testing positive (4.9%) may reflect testing of individuals in settings such as prisons, drug services and GUM clinics where fewer demographic details on patients were available and where service users may be at high risk of hepatitis C infection.

Table 7. Age and sex of individuals tested for anti-HCV in participating centres, July - September 2009*

Age group	Female		Male		Unknown		Total	
	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)
1-14	282	2 (0.7)	320	2 (0.6)	6	- (-)	608	4 (0.7)
15-24	4,571	35 (0.8)	3,467	23 (0.7)	328	2 (0.6)	8,366	60 (0.7)
25-34	5,403	128 (2.4)	5,899	210 (3.6)	214	4 (1.9)	11,516	342 (3.0)
35-44	3,806	118 (3.1)	5,059	300 (5.9)	134	4 (3.0)	8,999	422 (4.7)
45-54	2,207	70 (3.2)	2,901	188 (6.5)	56	1 (1.8)	5,164	259 (5.0)
55-64	1,655	37 (2.2)	1,939	71 (3.7)	24	1 (4.2)	3,618	109 (3.0)
≥65	2,078	18 (0.9)	2,325	27 (1.2)	14	- (-)	4,417	45 (1.0)

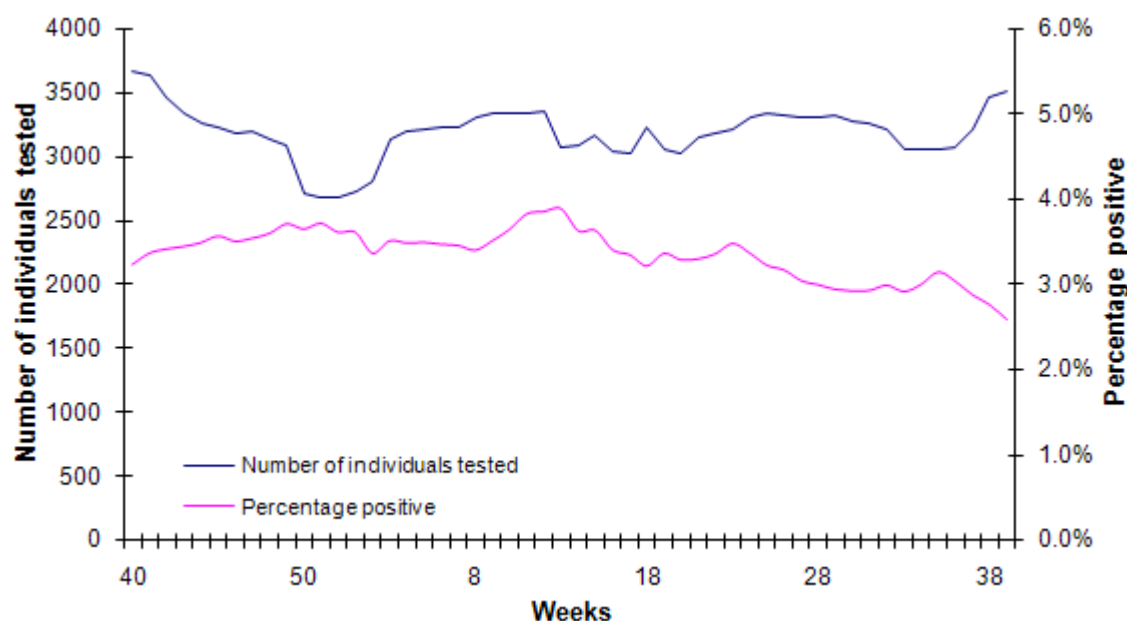
Unknown	25	2 (8.0)	45	4 (8.9)	80	- (-)	150	6 (4.0)
Total, all age groups	20,027	410 (2.0)	21,955	825 (3.8)	856	12 (1.4)	42,838	1,247 (2.9)

* 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 21 sentinel centres from which full data were available were compared for the third quarters of 2008 and 2009. In the period July to September 2009, 1,247 of 42,838 (2.9%) people tested were positive for anti-HCV, compared to 1,464 of 41,783 (3.5%) for the same period in 2008. This may suggest a greater proportion of people at lower risk of infection were tested during the third quarter of 2009, and/or the prevalence of hepatitis C was decreasing among the individuals tested.

Figure 3 shows the five-weekly moving average for number of people tested for anti-HCV and percentage positive over the last year (October 2008 to September 2009 inclusive) for the 21 sentinel centres from which full data were available. Apart from a trough during the Christmas and Easter holiday periods, there was a decline in testing from the beginning of October 2008 to the end of November 2008. As observed over the previous quarters, several peaks in testing correspond to simultaneous troughs in the percentage positive; perhaps suggesting increased testing of people at low risk of infection. The proportion of people testing positive increased slightly in March, then declined. As reported previously this decline may be due in part to the role out of dried blood spot testing to high risk individuals who are difficult to bleed, mainly intravenous drug users. An overall decline in the percentage positive over the past year is still apparent, in line with the long-term annual 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 October 2008 and September 2009 (Note difference in scales to Figures 1 and 2.)



References

1. Judd A, Parry J, Hickman M, McDonald T, Jordan L, Lewis K, et al. Evaluation of a modified commercial assay in detecting antibody to hepatitis C virus in oral fluids and dried blood spots. *J Med Virol* 2003; **71**(1) 49–55.
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