Public Health England

Health Protection Report
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News

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Latest *Shooting Up* report focuses on the changing nature of injecting drug use

The 12th annual report on infections among people who inject drugs (PWID) in the United Kingdom – *Shooting Up* – has been published by Public Health England [1].

PWID are vulnerable to a wide range of infections – including those caused by viruses such as HIV and hepatitis B and C, and bacteria such as botulism and group A streptococci – that can cause significant morbidity and mortality. The report examines the extent of infections and the associated risks among PWID under six headings:

Hepatitis C levels are still high

Among people who inject psychoactive drugs, such as heroin and mephedrone, around half have antibodies to hepatitis C (58% in Scotland, 50% in England, 47% in Wales, and 32% in Northern Ireland). As around a quarter of those infected with hepatitis C clear their infection, these data suggest that about two in five of those who inject psychoactive drugs are currently living with hepatitis C infection in the UK. Although the uptake of testing is high, about half of these hepatitis C infections remain undiagnosed, either because people have never had a test or have become infected since their last test. About one in 30 (3.6%) of those who inject image and performance enhancing drugs, such as anabolic steroids, are living with hepatitis C.

Hepatitis B is now rare and vaccine uptake has improved

Among people who inject psychoactive drugs the proportion ever infection with hepatitis B has declined (falling from 30% in 2003 to 16% in 2013 in England, Wales and Northern Ireland), probably reflecting the marked increase in the uptake of the hepatitis B vaccine. In 2013, only 0.57% of this group had a current hepatitis B infection. Vaccine uptake levels among people who inject psychoactive drugs have been stable in recent years (72% in England, Wales and Northern Ireland, 74% in Scotland in 2013), but could be increased further. Vaccine uptake is, however, much lower (40%) among people who inject image and performance enhancing drugs.

HIV levels remain low and the uptake of care is good

Around one in every 100 people who inject drugs is living with HIV. The level of HIV infection among those injecting image and performance enhancing drugs is similar to that among those injecting psychoactive drugs. Most people who inject psychoactive drugs report ever being tested for HIV (76% in England, Wales and Northern Ireland, and 78% in Scotland) and the

majority of those with HIV are aware of their infection. Only 41% of those injecting image and performance enhancing drugs reported ever being tested for HIV. Overall, the uptake of HIV related care, including anti-retroviral therapy, is high among PWID.

Bacterial infections remain a major problem

Severe illnesses among people who inject drugs due to bacterial infections continue to place a significant burden on health services. Around a quarter (28%) of people who inject psychoactive drugs report a recent symptom of an injecting site bacterial infection. Among those who inject image and performance enhancing drugs, one in six (16%) report ever having a symptom of an injecting site bacterial infection.

Injecting risk behaviours have declined but remain a problem

Reported needle and syringe sharing among people injecting psychoactive drugs has halved over the last 10 years; in England, Wales and Northern Ireland this has fallen from 29% in 2003 to 16% in 2013. However, almost one in three (29%) of this group reported that they had injected drugs using a needle that they had attempted to clean. Sharing injecting equipment is less commonly reported among people injecting image and performance enhancing drugs; 13% of those surveyed in 2012-13 reported ever sharing a needle, syringe or vial of drugs.

Changing patterns of psychoactive drug injection are a cause for concern

There has been a recent increase in the injection of amphetamines and amphetamine-type drugs, such as mephedrone – with more than one in two now reporting these as their main drug. The injection of these drugs has been associated with higher levels of infection risk. Although the injection of these drugs is much less common than the injection of opiates, crack-cocaine, or image and performance enhancing drugs, this increase is a concern.

The findings presented in the report indicate a need to maintain, and improve services that aim to reduce injecting-related harms and to support those who want to stop injecting. A range of services should be provided including needle and syringe programmes, opioid substitution treatment, and other drug treatment, as well as easy access to diagnostic testing for hepatitis C and HIV (including access to care pathways for those living with these infections), to vaccinations including that for hepatitis B, and to information and advice on safer injecting practices, on preventing infections and on the safe disposal of used equipment. These services should be developed in line with published guidelines [2,3,4,5] to ensure that the interventions they provide have sufficient coverage to prevent infections.

References

1. Health Protection Agency, Health Protection Scotland, Public Health Wales and Public Health Agency Northern Ireland (November 2004). "*Shooting Up: infections among people who inject drugs in the UK, update November 2014*".
2. Department of Health (2007). "Drug misuse and dependence – guidelines on clinical management: update 2007"
3. NICE (July 2007). "Drug misuse: psychosocial interventions (Clinical Guideline CG51)".
4. NICE (July 2007). "Drug misuse: opioid detoxification (Clinical Guideline CG52)".
5. NICE (March 2014). "Needle and syringe programmes: providing people who inject drugs with injecting equipment".

Updated guidance for healthcare professionals on the use of antivirals for the treatment and prophylaxis of influenza

Public Health England has published a summary for healthcare professionals of the current guidance and evidence on the use of antivirals for the treatment and prophylaxis of influenza [1,2]. This follows the publication of an updated Cochrane Review on the efficacy of NAIs for influenza in April 2014 [3].

The PHE guidance makes the following key recommendations:

- there is evidence that antivirals can reduce the risk of death in patients hospitalised with influenza
- in the light of this evidence it is important that doctors treating severely unwell patients continue to prescribe these drugs where appropriate
- PHE continues to support the early use of antivirals for patients with proven or suspected seasonal influenza who are in high risk groups or who are considerably unwell (even if not in a high risk group).

Influenza remains a significant cause of severe illness, hospital admissions and death, particularly over the winter season. The only class of drugs that are in regular use for the treatment of influenza are the antiviral drugs – neuraminidase inhibitors, NAIs – oseltamivir ('Tamiflu') and zanamivir ('Relenza').

The *British Medical Journal* (*BMJ*) and the Cochrane Collaboration have rightly campaigned to gain access to all clinical trial data for the antiviral drugs used against influenza. The 2014 Cochrane Review included previously unpublished data for healthy children and adults, and some who had chronic illness (asthma, diabetes, and hypertension). Overall the review adds to the evidence base for the treatment of influenza in some settings. However Cochrane Reviews consider evidence only from randomised control trials, which by their nature are usually carried out in an otherwise healthy population in the community setting. The findings of the review are not therefore necessarily applicable to the more severe end of the influenza spectrum.

Observational data is available in hospitalised patients but was not considered in the review, including evidence that antivirals can stop the deterioration of some types of influenza and

reduce the risk of death in patients hospitalized with influenza. A recent meta-analysis of observational studies of patients hospitalised with influenza [4] showed that among adults, treatment with a NAI was associated with a 25% reduction in the likelihood of death compared with no antiviral treatment. Early treatment with NAIs within 48 hours of onset of symptoms halved the risk of death compared with no antiviral treatment. This supports the view that the benefit of NAI antiviral treatment is greatest when started within two days of onset of illness.

Although the findings of the 2014 Cochrane Review were not substantially different to the previous (2010 and 2012) reviews, and there is no evidence to support a change to the recommended use of NAIs, media reporting around the Cochrane Review 2014 publication suggested that antivirals are not effective for influenza. This may impact on the prescribing of these important drugs.

It is essential that physicians treating severely unwell patients in any setting are not deterred from prescribing what may be lifesaving drugs as a result of confusion over efficacy in this situation; this is especially true for patients hospitalised with proven or suspected influenza.

Due to the evidence that antivirals can be of benefit in patients with severe influenza, PHE continues to support the use of NAIs for patients with proven or suspected seasonal influenza who are in high risk groups (as per NICE guidance) or who are considerably unwell (even if not in a high risk group). PHE also continues to support stockpiling of antiviral drugs to ensure adequate national supply, as part of pandemic influenza preparedness.

The PHE position is consistent with that taken by the World Health Organisation (WHO) and other national public health organisations such as the USA's Centers for Disease Control and Prevention (CDC).

References

1. "Antivirals in the fight against flu this winter", PHE press release, 5 November 2014, https://www.gov.uk/government/news/antivirals-in-the-fight-against-flu-this-winter.
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4. Muthuri *et al* (2014). "Effectiveness of neuraminidase inhibitors in reducing mortality in patents admitted to hospital with influenza A H1N1pdm09 virus infection: a meta-analysis of individual participant data", *Lancet Respiratory Medicine* **2**(5), 396-404.

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Infection reports

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Infection Reports

Respiratory

Laboratory reports of respiratory infections made to CIDSC from PHE and NHS laboratories in England and Wales: weeks 40 to 44

Immunisation

Quarterly report from the sentinel surveillance study of hepatitis, HIV and HTLV testing in England: data for April to June 2014

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Laboratory reports of respiratory infections made to the CIDSC from PHE and NHS laboratories in England and Wales: weeks 40-44/2014

Data are recorded by week of report, but include only specimens taken in the last eight weeks (i.e. recent specimens)

Table 1. Reports of influenza infection made to PHE Colindale, by week of report

Week	Week 40	Week 41	Week 42	Week 43	Week 44	Total
Week ending	5/10/14	12/10/14	19/10/14	26/10/14	2/11/14	
Influenza A	**6**	**7**	**6**	**13**	**14**	**46**
Isolation	–	–	–	1	–	1
DIF *	1	–	–	2	–	3
PCR	5	4	5	3	6	23
Other †	–	3	1	7	8	19
Influenza B	**2**	**1**	**5**	**2**	**4**	**14**
Isolation	–	–	2	1	–	3
DIF *	–	–	–	–	–	–
PCR	2	1	3	1	4	11
Other †	–	–	–	–	–	–

* DIF = Direct Immunofluorescence. † Other = "Antibody detection - single high titre" or "Method not specified".

Table 2. Respiratory viral detections by any method (culture, direct immunofluorescence, PCR, four-fold rise in paired sera, single high serology titre, genomic, electron microscopy, other method, other method unknown), by week of report

Week	Week 40	Week 41	Week 42	Week 43	Week 44	Total
Week ending	5/10/14	12/10/14	19/10/14	26/10/14	2/11/14	
Adenovirus*	35	37	44	33	39	**188**
Coronavirus	1	1	–	1	4	**7**
Parainfluenza†	20	26	32	44	39	**161**
Rhinovirus	235	218	180	189	195	**1017**
RSV	22	31	56	81	105	**295**

* Respiratory samples only. † Includes parainfluenza types 1, 2, 3, 4 and untyped.

Table 3. Respiratory viral detections by age group: weeks 40-44/2014

Age group (years)	<1 year	1-4 years	5-14 years	15-44 years	45-64 years	≥65 years	Un-known	Total
Adenovirus *	39	63	10	37	21	14	–	**184**
Coronavirus	2	–	–	1	–	4	–	**7**
Influenza A	1	2	2	12	15	13	–	**45**
Influenza B	–	5	1	5	2	1	–	**14**
Parainfluenza †	44	46	16	26	15	12	–	**159**
Rhinovirus	204	58	7	4	9	9	3	**291**
Respiratory syncytial virus	301	191	67	206	118	119	–	**1002**

* Respiratory samples only.
† Includes parainfluenza types 1, 2, 3, 4 and untyped.

Table 4 Laboratory reports of infections associated with atypical pneumonia, by week of report

Week	Week 40	Week 41	Week 42	Week 43	Week 44	Total
Week ending	**5/10/14**	**12/10/14**	**19/10/14**	**26/10/14**	**2/11/14**	
Coxiella burnettii	1	–	–	2	1	**4**
Respiratory *Chlamydia* sp.*	2	3	2	2	2	**11**
Mycoplasma pneumoniae	13	9	10	10	10	**52**
Legionella sp.	11	13	6	20	15	**65**

* Includes *Chlamydia psittaci*, *Chlamydia pneumoniae*, and Chlamydia sp detected from blood, serum, and respiratory specimens.

Table 5a Reports of Legionnaires Disease cases in England and Wales, by week of report

Week	Week 40	Week 41	Week 42	Week 43	Week 44	Total
Week ending	**5/10/14**	**12/10/14**	**19/10/14**	**26/10/14**	**2/11/14**	
Nosocomial	–	–	–	1	1	**2**
Community	1	3	4(1*)	5	3	**16**
Travel Abroad	9	9	2	13(1**)	10	**43**
Travel UK	1	1	–	1	1	**4**
Total	**11**	**13**	**6**	**20**	**15**	**65**
Male	7	7	5	16	10	**45**
Female	4	6	1	4	5	**20**

(*) Onset in 2013, (**) Non-pneumonic case

Sixty-four cases were reported with pneumonia and one case was reported with non-pneumonic infection. Forty-five males aged 24 – 85 years and twenty females aged 52 – 95 years. Sixteen cases had community-acquired infection and two cases were reported to be associated with hospital infection.

Forty-seven cases were reported with travel association:
Barbados/United Kingdom (1), Croatia (2), Croatia/Montenegro/Italy (1), Croatia/United Kingdom (1), Cyprus (1), France/Italy (1), Greece (4), India (1), Ireland/United Kingdom (1), Italy (4), Mauritius (1), Mexico (2), Portugal (1), Russia/United Arab Emirates (1), Slovakia (1), Spain (12), Spain/United Kingdom (1), Turkey (4), United Arab Emirates (3) and United Kingdom (4).

Table 5b. Reports of Legionnaires Disease cases cases in England and Wales, by PHE Centre: weeks 40-44/2014

Region/Country	Nosocomial	Community	Travel Abroad	Travel UK	Total
North of England					
North East	–	1	3	1	**5**
Cheshire & Merseyside	–	1	2	1	**4**
Greater Manchester	–	–	3	–	**3**
Cumbria & Lancashire	–	–	2	–	**2**
Yorkshire & the Humber	–	2	2	–	**4**
South of England					
Devon, Cornwall & Somerset	–	1	–	–	**1**
Avon, Gloucestershire & Wiltshire	–	–	2	–	**2**
Wessex	–	3 (1*)	2	1	**6**
Thames Valley	–	2	3 (1**)	–	**5**
Sussex, Surrey & Kent	1	–	1	–	**1**
Midlands & East of England					
East Midlands	–	–	4	–	**4**
South Midlands & Hertfordshire	–	1	3	–	**4**
Anglia & Essex	–	2	1	–	**3**
West Midlands	–	1	6	–	**7**
London Integrated Region					
London	1	2	3	–	**6**
Public Health Wales					
Mid & West Wales	–	–	–	–	**–**
North Wales	–	1	–	1	**2**
South East Wales	–	–	2	–	**2**
Miscellaneous					
Other	–	–	1	–	**1**
Not known	–	–	–	–	**–**
Total	**2**	**16**	**43**	**4**	**65**

(*) Onset in 2013, (**) Non-pneumonic case

Immunisation

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Quarterly report from the sentinel surveillance study of hepatitis, HIV and HTLV testing in England: data for April to June 2014

The sentinel surveillance study of hepatitis testing in England began in 2002 and provides information on trends in testing, individual risk exposures and clinical symptoms, as a supplement to the routine surveillance of hepatitis A, B and C. The study collects information on hepatitis A, B and C testing carried out in participating sentinel centres regardless of test result and therefore can also be used to estimate prevalence in those individuals tested. Data from 24 centres are detailed in this report. In the second quarter (April to June) 2014, sentinel surveillance captured front-line testing for hepatitis A, B, C and HIV among all Public Health England Centres (PHECs) in England.

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 second quarter of 2014, 7,065 individuals were tested at least once for anti-HAV IgM. Overall, 0.3% (n=23) of individuals tested positive, which varied by region. The highest proportion of positive tests were from Cheshire and Merseyside PHEC (1.3%) although few individuals were tested in this region.

Table 1 shows the age group and gender of individuals tested, and testing positive, for anti-HAV IgM. Gender and age were reported for the majority of individuals (>99.8%). As in previous quarters, where available, a higher proportion of males were tested than females (57.1% vs. 42.9%). The mean age of individuals tested was 47.6 years (range 0.01-98.7 years), whereas the mean age of those testing positive was 34.7 years (range 1.9-80.1 years). The largest age group tested were aged 65 and over. The highest overall percentage of individuals testing positive was among those of 1-14 years, although few were tested in this age group.

Table 1. Number of individuals tested, and testing positive, for anti-HAV IgM in participating centres, April - June 2014*.

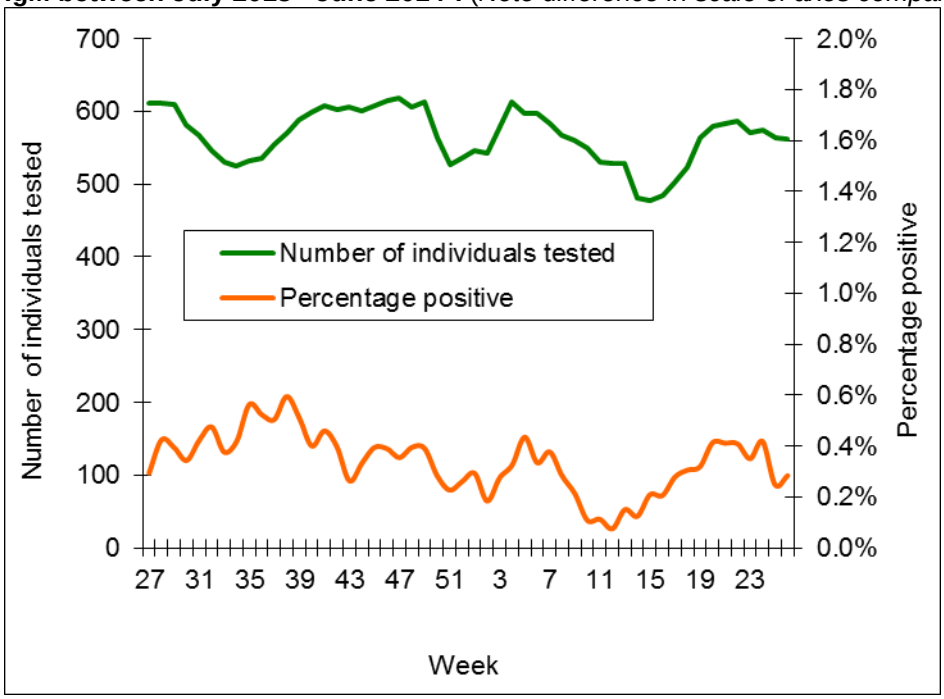
Age group	Female		Male		Unknown		Total	
	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)
Under 1 year	15	0 (0.0)	32	0 (0.0)	0	0 (0.0)	47	0 (0.0)
1-14 years	88	2 (2.3)	101	3 (3.0)	1	0 (0.0)	190	5 (2.6)
15-24 years	344	2 (0.6)	425	1 (0.2)	3	0 (0.0)	772	3 (0.4)
25-34 years	402	2 (0.5)	782	4 (0.5)	3	0 (0.0)	1,187	6 (0.5)
35-44 years	391	0 (0.0)	722	1 (0.1)	5	0 (0.0)	1,118	1 (0.1)
45-54 years	508	0 (0.0)	627	3 (0.5)	2	0 (0.0)	1,137	3 (0.3)
55-64 years	491	1 (0.2)	501	1 (0.2)	0	0 (0.0)	992	2 (0.2)
≥65 years	783	3 (0.4)	820	0 (0.0)	2	0 (0.0)	1,605	3 (0.2)
Unknown	5	0 (0.0)	12	0 (0.0)	0	0 (0.0)	17	0 (0.0)
Total, all age groups	**3,027**	**10 (0.3)**	**4,022**	**13 (0.3)**	**16**	**0 (0.0)**	**7,065**	**23 (0.3)**

* Excludes reference testing and testing from hospitals referring all samples. Data are de-duplicated subject to availability of date of birth, soundex and first initial. All data are provisional.

To provide an indication of trends in testing, data for the period April to June 2014 (0.3%; 23/6,883) were compared to data received for the same time periods of 2013 and 2012. These show a reduction in the number of people tested in 2014 compared to 2013 and a reduction in the proportion tested positive in both 2013 (0.4%; 31/7,236) and 2012 (0.5%; 34/6,837).

Figure 1 shows the five-weekly moving average for number of people tested for anti-HAV IgM and percentage positive between April and June 2014, inclusive, for 24 participating sentinel centres.

Figure 1. Five-weekly moving average of number of people tested, and percentage positive, for anti-HAV IgM between July 2013 - June 2014*. (*Note difference in scale of axes compared with figures 2 and 3.)*



* Excludes reference testing and testing from hospitals referring all samples. Data are de-duplicated subject to availability of date of birth, soundex and first initial. All data are provisional.

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 screening

During the second quarter of 2014, a total of 23,129 women were identified as undergoing antenatal screening for HBsAg, representing 31.2% (23,129/74,123) of all individuals tested in participating sentinel centres. Overall 0.5% (n=115) of women tested positive. Among the 115 HBsAg positive women identified, 110 (95.7%) had HBeAg results available, and of these, 6.4% were HBeAg positive.

b) Non-antenatal HBsAg testing

During the second quarter of 2014, excluding dried blood-spot and antenatal testing, 50,994 individuals were tested for HBsAg in participating sentinel centres. Overall, 1.2% (n=619) of individuals tested positive. Unknown PHECs had the highest proportion of individuals testing positive (2.3%). The West Midlands and London also had a high proportion of individuals testing positive (1.7% and 1.6%, respectively). This may reflect more targeted testing of risk groups and/or genuinely higher prevalence in people being tested in these regions.

Table 2 shows the age group and gender of individuals tested, and testing positive, for HBsAg. Gender and age group were reported for the majority of individuals (>99.1%), and where available, slightly more males were tested compared to females (53.0% and 47.0% respectively. As reported previously the proportion testing positive for HBsAg was higher among males than females (0.9% v 1.5%). The greatest number of tests performed were among those aged 25-34 years where as the highest percentage of individuals testing positive were those aged 35-44 years. The mean age of individuals tested was 40.3 years (range 0.0-98.7 years) and of those testing positive was 38.3 years (range 1.8-84.1 years). The prevalence of HBsAg among tested individuals of unknown gender (3.1%) is higher than both males and females (1.5% and 0.9% respectively). This may reflect a change to the 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 higher risk of hepatitis B infection.

Table 2. Age and gender of individuals tested for HBsAg in participating centres (excluding antenatal testing), April - June 2014*.

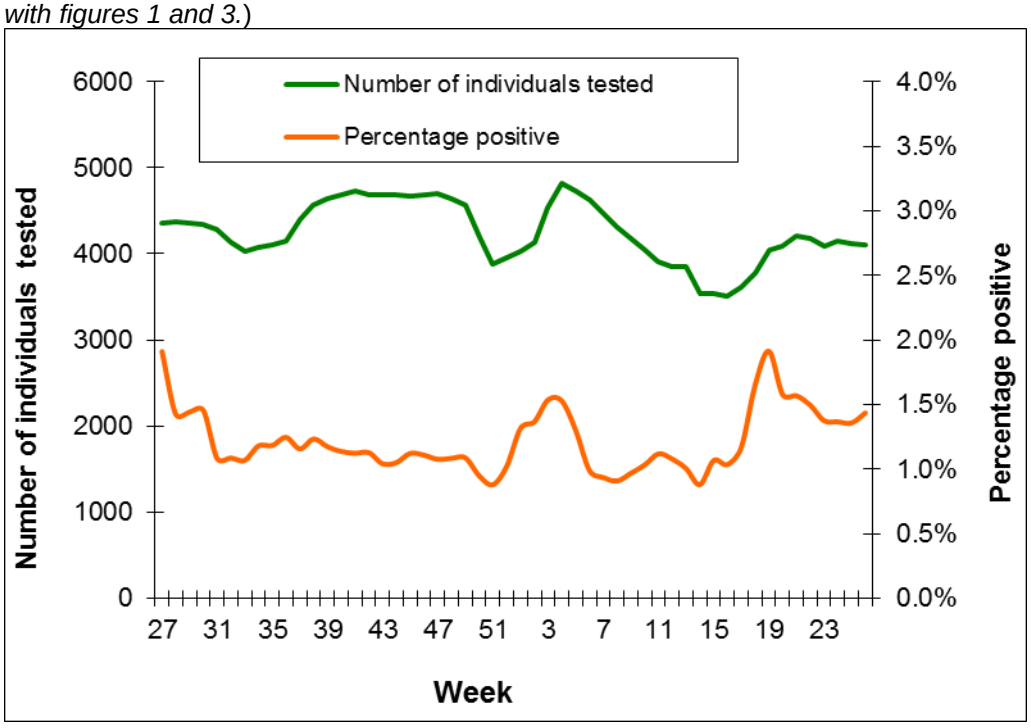
Age group	Female		Male		Unknown		Total	
	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)
Under 1 year	65	0 (0.0)	82	0 (0.0)	2	0 (0.0)	149	0 (0.0)
1-14 years	406	4 (1.0)	457	4 (0.9)	10	0 (0.0)	873	8 (0.9)
15-24 years	4,376	21 (0.5)	4,135	37 (0.9)	126	4 (3.2)	8,637	62 (0.7)
25-34 years	7,042	64 (0.9)	7,359	142 (1.9)	99	5 (5.1)	14,500	211 (1.5)
35-44 years	4,011	59 (1.5)	5,457	117 (2.1)	65	3 (4.6)	9,525	179 (1.9)
45-54 years	2,931	32 (1.1)	3,709	67 (1.8)	24	1 (4.2)	6,664	100 (1.5)
55-64 years	2,125	12 (0.6)	2,436	22 (0.9)	7	0 (0.0)	4,568	34 (0.7)
≥65 years	2,753	9 (0.3)	3,132	15 (0.5)	11	0 (0.0)	5,896	24 (0.4)
Unknown	41	1 (2.4)	72	0 (0.0)	69	0 (0.0)	182	1 (0.5)
Total, all age groups	**23,750**	**202 (0.9)**	**26,831**	**404 (1.5)**	**413**	**13 (3.1)**	**50,994**	**619 (1.2)**

* Excludes dried blood spot, oral fluid, reference testing and testing from hospitals referring all samples. Data are de-duplicated subject to availability of date of birth, soundex and first initial. All data are provisional.

To provide an indication of trends in testing, data for the period April to June 2014 (1.1%; 554/48,617) were compared to data received for the same time periods of 2013 and 2012. This indicated a slight decrease in the number of individuals tested and a slight increase in the proportion of individuals testing positive for HBsAg in 2014 when compared to 2013 (1.0%; 539/51,474) and an increase in the number of individuals tested and a slight decrease in the proportion of individuals testing positive in 2012 (1.4%; 616/42,875).

Figure 2 shows the five-weekly moving average for number of people tested for HBsAg and percentage positive between July 2013 and June 2014 inclusive, for 24 participating sentinel centres.

Figure 2. Five-weekly moving average of number of individuals tested, and percentage positive, for HBsAg between July 2013 - June 2014*. (excluding antenatal testing)*. (*Note difference in scale of axes compared with figures 1 and 3.*)



* Excludes reference testing and testing from hospitals referring all samples. Data are de-duplicated subject to availability of date of birth, soundex and first initial. All data are provisional.

3. Hepatitis C testing

During the second quarter of 2014, excluding dried blood spot testing, a total of 44,109 individuals were tested at least once for hepatitis C specific antibodies (anti-HCV). Overall, 1.9% (n=822) of individuals tested positive, although this varied by region. The highest proportion of positive tests in England were from the South Midlands and Hertfordshire PHECs (13.0%) although few individuals were tested in this region and Cumbria and Lancashire (3.2%). This may reflect changes in testing patterns and/or in the prevalence of hepatitis C in people being tested in these regions. Of the 822 individuals testing positive for anti-HCV during the second quarter of 2014, 534 (65.0%) were also tested for HCV RNA by PCR (qualitative and/or quantitative), of whom 352 were PCR positive (65.9%).

Table 3 shows the age group and gender of individuals tested, and testing positive, for anti-HCV. Gender and age were reported for the majority of individuals (>99.1%), and where available, there was a slightly higher proportion males tested (57.0%) compared to females (43.0%). As reported previously the proportion testing positive was also higher among males than among females (2.2% vs.1.3%). The mean age of individuals tested was 41.9 years (range 1.0-98.7 years) and of those testing positive was 43.1 years (range 6.8-86.3 years). As with the previous quarter the largest group tested were aged 25-34 years. The percentage of individuals testing positive was highest among the unknown age group (3.6%). As with HBsAg testing, individuals with unknown gender and age have a higher proportion testing positive when compared to those of known gender and age. This may reflect a change in testing of individuals in settings such as prisons, drug services and GUM clinics where fewer demographic details on patients are routinely available.

Table 3. Age and gender of individuals tested for anti-HCV in participating centres, April - June 2014*.

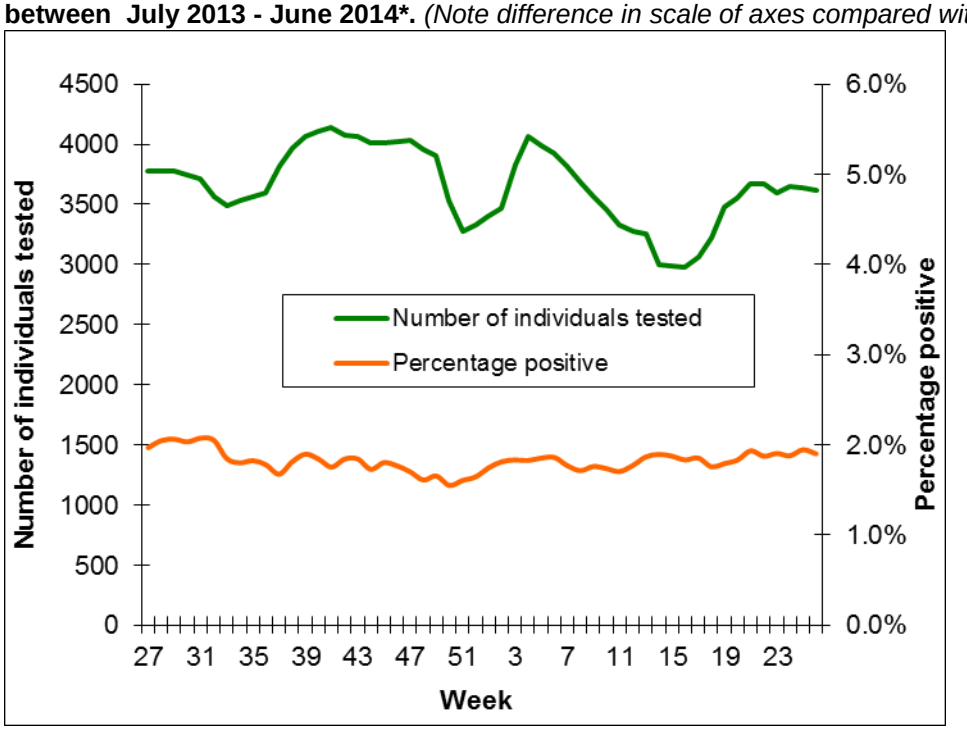
Age group	Female		Male		Unknown		Total	
	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)
1-14	323	0 (0.0)	342	3 (0.9)	8	0 (0.0)	673	3 (0.4)
15-24	2,966	9 (0.3)	3,529	38 (1.1)	124	3 (2.4)	6,619	50 (0.8)
25-34	4,801	61 (1.3)	6,758	139 (2.1)	96	2 (2.1)	11,655	202 (1.7)
35-44	3,308	65 (2.0)	5,241	157 (3.0)	56	0 (0.0)	8,605	222 (2.6)
45-54	2,657	62 (2.3)	3,625	123 (3.4)	22	2 (9.1)	6,304	187 (3.0)
55-64	2,020	34 (1.7)	2,353	67 (2.8)	7	1 (14.3)	4,380	102 (2.3)
≥65	2,689	21 (0.8)	3,003	27 (0.9)	12	2 (16.7)	5,704	50 (0.9)
Unknown	38	1 (2.6)	63	5 (7.9)	68	0 (0.0)	169	6 (3.6)
Total, all age groups	**18,802**	**253 (1.3)**	**24,914**	**559 (2.2)**	**393**	**10 (2.5)**	**44,109**	**822 (1.9)**

* Excludes dried blood spot, oral fluid, reference testing and testing, hospitals referring all samples and individuals aged less than one year (as positive tests may reflect maternal antibody rather than true infection). Data are de-duplicated subject to availability of date of birth, soundex and first initial. All data are provisional.

To provide an indication of trends in testing, data for the period April to June 2014 (1.9%; 779/41,050) were compared to data received for the same time periods of 2013 and 2012. These show an increase in the number of people tested over time, when compared to both 2013 (1.9%; 772/40,905) and 2012 (2.4%; 862/36,091).

Figure 3 shows the five-weekly moving average for number of people tested for anti-HCV and percentage positive between April and June 2014 inclusive, for 24 participating sentinel centres. Overall a slight decline in the proportion positive overtime is apparent.

Figure 3. Five-weekly moving average of number of people tested, and percentage positive, for anti-HCV between July 2013 - June 2014*. *(Note difference in scale of axes compared with figures 1 and 2.)*



* Excludes dried blood spot, oral fluid, reference testing and testing, hospitals referring all samples and individuals aged less than one year (as positive tests may reflect maternal antibody rather than true infection). Data are de-duplicated subject to availability of date of birth, soundex and first initial. All data are provisional.

4. Hepatitis D testing

The sentinel surveillance study collects data on testing for hepatitis D-specific total antibody (HDV-TA). A positive HDV results does not necessarily represent an incident infection and these data should be interpreted accordingly.

During the second quarter of 2014, a total of 526 individuals were tested at least once for HDV TA. Overall 3.8% (n=20) of individuals tested positive, although this varied by region. Where gender was available (>97.3%), a higher proportion of males tested (56.4%) than females. The mean age of individuals tested was 38.1 years (range 0.7-92.7 years), whereas the mean age of those testing positive was 40.0 years (range 20.7-66.6 years).

5. Hepatitis E IgM testing

The sentinel surveillance study collects data on testing for hepatitis E-specific IgM antibody (anti-HEV IgM), a marker of acute hepatitis E infection. Thirteen sentinel laboratories provided anti-HEV IgM testing during the second quarter of 2014. A total of 2,573 individuals were tested at least once for anti-HEV IgM. Overall, 8.2% (n=211) of individuals tested positive, although this varied by region. Where gender was available (>98.4%), a higher proportion of males (52.3%) were tested than females. The mean age of individuals tested was 50.4 years (range 0.0-99.4 years), whereas the mean age of those testing positive was 57.4 years (range 15.4-93.2 years).

6. HIV testing

All pregnant women in the UK are offered HIV 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 HIV as part of routine antenatal screening (section 6a) from those tested in other settings and for other reasons (section 6b). It is possible that some women undergoing antenatal screening may not be identified as such and may therefore be included in section 6b as non-antenatal testing.

a) Antenatal HIV screening

During the second quarter of 2014, a total of 13,358 women were identified as undergoing antenatal screening for HIV, representing 16.8.% (13,358/79,330) of all individuals tested in participating sentinel centres. Overall 0.1% (n=18) of women tested positive.

b) Non-antenatal HIV testing

The sentinel surveillance study collects data on testing for HIV excluding dried blood-spot and antenatal testing, 22 sentinel laboratories provide HIV testing facilities.

During the second quarter of 2014, a total of 65,972 individuals were tested at least once for HIV. Overall, 0.9% (n=586) of individuals tested positive, although this varied by region. Sussex, Surrey and Kent and Greater Manchester PHECs had the highest proportion of individuals testing positive (1.2%), London also had a high proportion of individuals testing positive (1.0%). This may reflect more targeted testing of risk groups and/or genuinely higher prevalence in people being tested in these regions.

Table 4 shows the age group and gender of individuals tested, and testing positive, for HIV. Gender and age were reported for the majority of individuals (>95.1%), and a slightly higher proportion of females (50.5%) were tested than males, although the proportion testing positive was higher among males than among females (1.4% vs.0.4%). The mean age of individuals tested was 34.3 years (range 16.0-98.4 years), whereas the mean age of those testing positive was 38.7 years (range 16.1-77.8 years).The largest group tested were aged 25-34 years. The percentage of individuals testing positive was highest among 45-54 year olds (1.7%).

Table 4. Age and gender of individuals tested for HIV in participating centres (excluding antenatal testing), April - June 2014*.

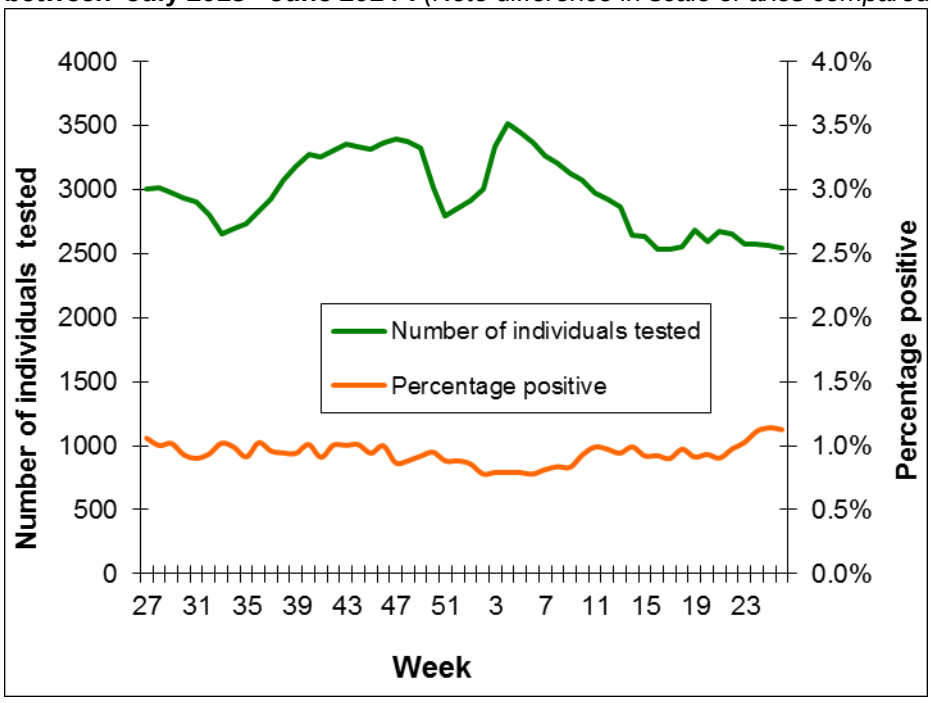
Age group	Female		Male		Unknown		Total	
	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)	Number tested	Number positive (%)
16-24 years	11,076	17 (0.2)	8,182	43 (0.5)	236	3 (1.3)	19,494	63 (0.3)
25-34 years	11,620	37 (0.3)	11,109	164 (1.5)	221	1 (0.5)	22,950	202 (0.9)
35-44 years	5,011	39 (0.8)	5,787	120 (2.1)	87	0 (0.0)	10,885	159 (1.5)
45-54 years	2,636	23 (0.9)	3,419	81 (2.4)	36	1 (2.8)	6,091	105 (1.7)
55-64 years	1,257	7 (0.6)	1,860	29 (1.6)	9	0 (0.0)	3,126	36 (1.2)
≥65 years	1,315	3 (0.2)	1,925	18 (0.9)	7	0 (0.0)	3,247	21 (0.6)
Unknown	42	0 (0.0)	65	0 (0.0)	72	0 (0.0)	179	0 (0.0)
Total, all age groups	**32,957**	**126 (0.4)**	**32,347**	**455 (1.4)**	**668**	**5 (0.7)**	**65,972**	**586 (0.9)**

* Excludes dried blood spot, oral fluid, reference testing and testing from hospitals referring all samples. Data are de-duplicated subject to availability of date of birth, soundex and first initial. All data are provisional.

To provide an indication of trends in testing, data for the period April to June 2014 (1.0%; 456/46,594) were compared to data received for the same time periods of 2013 and 2012. These show a increase in the number of people tested over time, when compared to both 2013 (0.9%; 421/44,452) and 2012 (1.2%; 491/41,806).

Figure 4 shows the five-weekly moving average for number of people tested for HIV and percentage positive between April and June 2014 inclusive, for 22 participating sentinel centres.

Figure 4. Five-weekly moving average of number of people tested, and percentage positive, for HIV between July 2013 - June 2014*. *(Note difference in scale of axes compared with figures 1 and 2.)*



* Excludes dried blood spot, oral fluid, reference testing and testing, hospitals referring all samples. Data are de-duplicated subject to availability of date of birth, soundex and first initial. All data are provisional.

7. HTLV testing

The sentinel surveillance study collects data on testing for HTLV. Twelve sentinel laboratories provided HTLV testing facilities during the second quarter of 2014. A total of 1,739 individuals were tested at least once for HTLV. Overall, 1.7% (n=29) of individuals tested positive, although this varied by region. Where gender was available (>93.0%), a slightly higher proportion of males (50.2%) were tested than females. The mean age of individuals tested was 45.6 years (range 0.0-93.8 years), whereas the mean age of those testing positive was 52.7 years (range 0.6-81.3 years).

8. Dried blood spot testing

Three sentinel laboratories provide dried blood spot testing facilities. Anti-HCV dried blood spot testing data have also been made available by Alere Toxicology Plc[†].

[†] Please note that testing data provided by Alere Toxicology Plc represent indicative results only and are not intended to be used for diagnosis

a) HBsAg testing

During the second quarter of 2014, a total of 1,647 individuals were tested at least once for HBsAg by dried blood spot testing. Overall, 0.5% (n=9) of individuals tested positive, although this varied by region.

b) Anti-HCV testing

During the second quarter of 2014, 12,324 individuals were tested at least once for hepatitis C-specific antibodies (anti-HCV) by dried blood spot testing. Alere Toxicology Plc tested 10,391 individuals of whom 7.0% (n=732) has a reactive test result. A further 1,933 individuals were tested by sentinel laboratories, of whom 12.0% (n=232) tested positive. The comparatively lower proportion of positive test results among individuals who were tested by sentinel laboratories may reflect differences in testing; for example dried blood spot testing has been trialled in pharmacies and other primary care settings as well as by specialist drug services. Samples tested by DBS by Alere Toxicology Plc include, but not limited to, those taken in/by drug action teams and prison services

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