Public Health England

Health Protection Report
weekly report

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News

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HAI and antimicrobial use point prevalence survey for England, 2016

More than four million people in Europe, each year, acquire a healthcare-associated infection (HAI), of whom approximately 37,000 die as a direct result of the infection [1]. The death toll from HAI is therefore comparable to the number dying each year in road traffic accidents.

Surveillance of both HAI and of antimicrobial use (AMU) – one of the drivers of antimicrobial resistance – are essential components of infection prevention and control, and of antimicrobial stewardship.

The latest point prevalence survey (PPS) for England to collect both HAI and AMU data is being conducted by PHE between 5 September and 14 December 2016. It is the fifth PPS to collect HAI data, and the second to also collect data on AMU (ie prescribing levels, doses used and the extent of adherence to guidelines).

In preparation for the 2016 survey, PHE has trained over 400 participants from NHS and independent sector organisations via a series of face-to-face and online training sessions.

Supporting documentation for participants has been published on the PHE website [2].

References

1. ECDC (2008). Annual epidemiological report on communicable diseases in Europe, 2008.
2. PHE website. Healthcare associated infections (HAI): point prevalence survey, England.

ECDC expert opinion on whole genome sequencing in Europe

The European Centre for Disease Prevention and Control has published an expert opinion on whole genome sequencing for public health surveillance developed through a collaboration between member state experts who considered the potential and the challenges associated with integrating the technology into EU level surveillance and cross-border outbreak assessment over the next five years [1,2].

Whole genome sequencing is transforming public health surveillance and outbreak investigation by providing more accurate pathogen identification, antimicrobial resistance profiling, transmission tracking and biological risk assessment. However, the ECDC expert group considered the obstacles needing to be overcome before WGS can be applied at the European level. These range from differences in the sequencing platforms, inter-laboratory comparability, lack of standard bioinformatics pipelines, definition of WGS-derived strain nomenclature, comparability with older typing techniques, and translation of epidemiological and genomic sequence data into meaningful information for public health decision-making.

To support member states in the transition to WGS from earlier technologies, and to ensure that WGS is adopted without compromising continuity of national and EU-level surveillance, ECDC is proposing to:

- map other WGS-based public health initiatives and engage partnerships
- lead on the integrated analysis of microbiological data and epidemiological data
- provide guidance on and validation of WGS-based methods for surveillance, and
- develop, run and evaluate selected pilot implementation studies.

Also published by ECDC is an updated “roadmap” for integration of molecular/genomic typing into EU surveillance and epidemic preparedness. This includes recommendations for priority diseases, and WGS-based surveillance implementation processes, developed by ranking the options according to public health added-value and taking account of resources available to member states and the ECDC [2].

References

1. ECDC (15 August 2016). Expert opinion on whole genome sequencing for public health surveillance.
2. "Whole genome sequencing empowers disease surveillance and outbreak investigation", ECDC website news story, 15 August.

Consultation on proposed clinical commissioning policy on PrEP for HIV

On 10 August, NHS England launched a 45-day public consultation on a proposed clinical commissioning policy proposition on pre-exposure prophylaxis (PrEP) for HIV [1,2]. The aim of the public consultation is to test the policy proposal with a wider group of stakeholders.

The public consultation is being run without prejudice to the outcome of legal proceedings that are ongoing relating to commissioning of HIV-PrEP services [3].

In the meantime, NHS England has said it remains committed to working in partnership with Public Health England to run a number of early-implementer test sites, over the next two years, to research how HIV-PrEP could be commissioned in the most clinically and cost effective way.

References

1. PHE (10 August, 2016). Consultation on Specialised Services clinical commissioning policies and service specifications.
2. "Clinical commissioning policy proposition on Pre-Exposure Prophylaxis", NHS England website news story, 10 August.
3. NHS England (2 August 2016). August update on the commissioning and provision of Pre Exposure Prophylaxis (PREP) for HIV prevention).

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Infection Reports

Vaccine preventable disease

- **Laboratory reports of hepatitis A and C (E&W): January to March 2016**
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Vaccine coverage

- **Vaccine coverage estimate for the GP based catch-up meningococcal ACWY (MenACWY) immunisation programme for school leavers (becoming 18 or 19 before 31 August 2016) in England, cumulative data to end-July 2016**

Infection report

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Vaccine preventable disease

Laboratory reports of hepatitis A and C in England and Wales (January-March 2016)

Laboratory reports of hepatitis A (E&W, January-March 2016)

There were a total of 113 laboratory reports of hepatitis A reported to Public Health England (PHE) during the first quarter of 2016 (January-March 2016). This was a 7.6% increase on the number of reports during the fourth quarter of 2015 (n=105) and a 22.8% increase on the same quarter in 2015 (n=92).

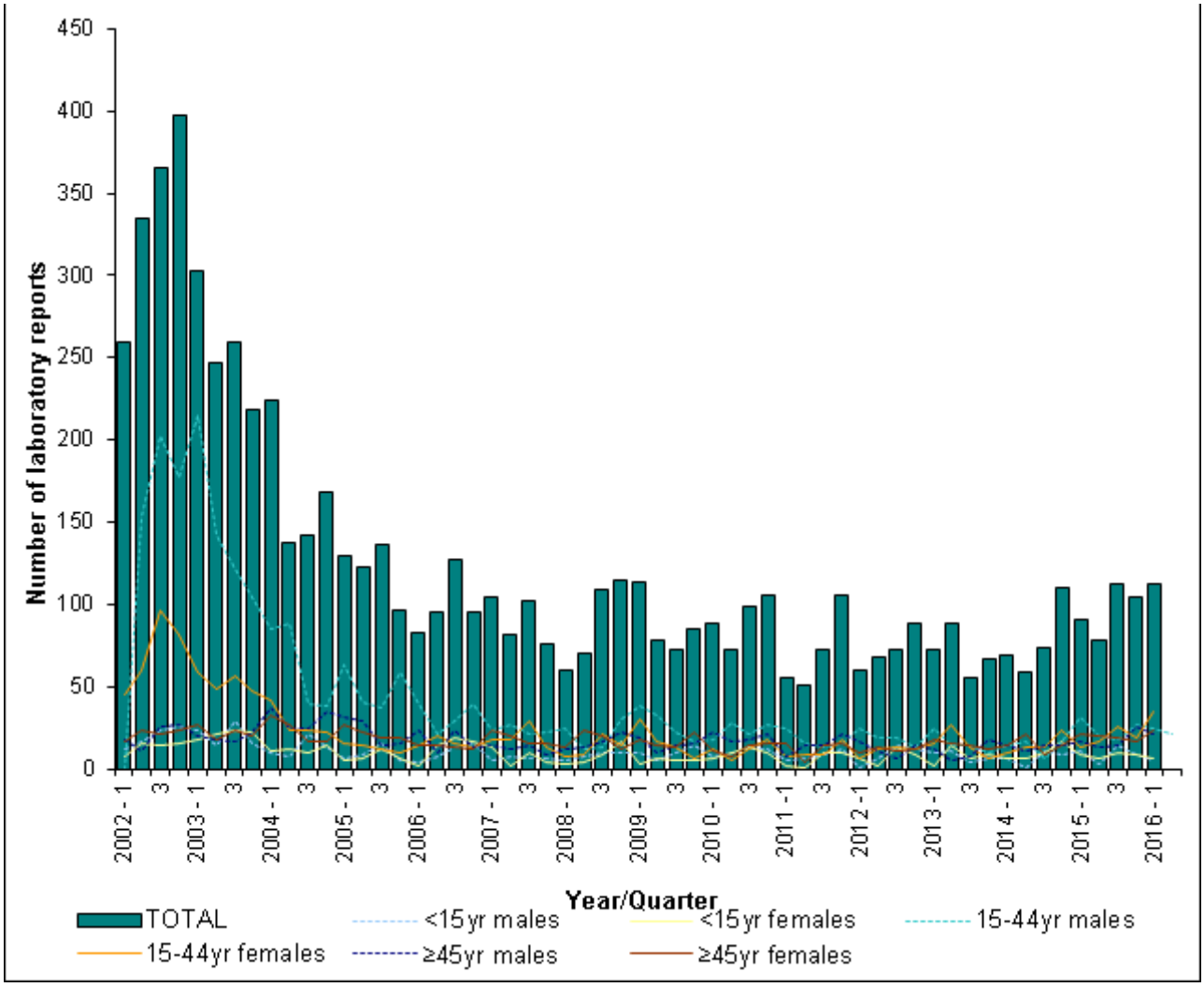
Age-group and sex were well reported (100% complete). Fifty six (49.6%) reports were among those aged 15-44 years, a further 45 (39.8%) reports were among the over 44 years old-age group, and 12 (10.6%) reports were from the under 15 year age-group.

Females accounted for 58.4% of all reports. A similar proportion of males and females were reported in the <15 years old group (58.3% females) and the 15-44 years age-group (62.5% females). Almost an equal proportion of males and females (53.3% females) was reported in the over 45 years age-group.

Laboratory reports of hepatitis A in England and Wales, January-March 2016

Age group	Male	Female	Unknown	Total
<1 year	0	0	0	**0**
1-4 years	0	2	0	**2**
5-9 years	2	2	0	**4**
10-14 years	3	3	0	**6**
15-24 years	3	11	0	**14**
25-34 years	6	15	0	**21**
35-44 years	12	9	0	**21**
45-54 years	9	9	0	**18**
55-64 years	5	3	0	**8**
>65 years	7	12	0	**19**
Unknown	0	0	0	**0**
Total	**47**	**66**	**0**	**113**

Figure 1. Laboratory reports of hepatitis A by age and sex (England and Wales): Jan. 2002 to March 2016

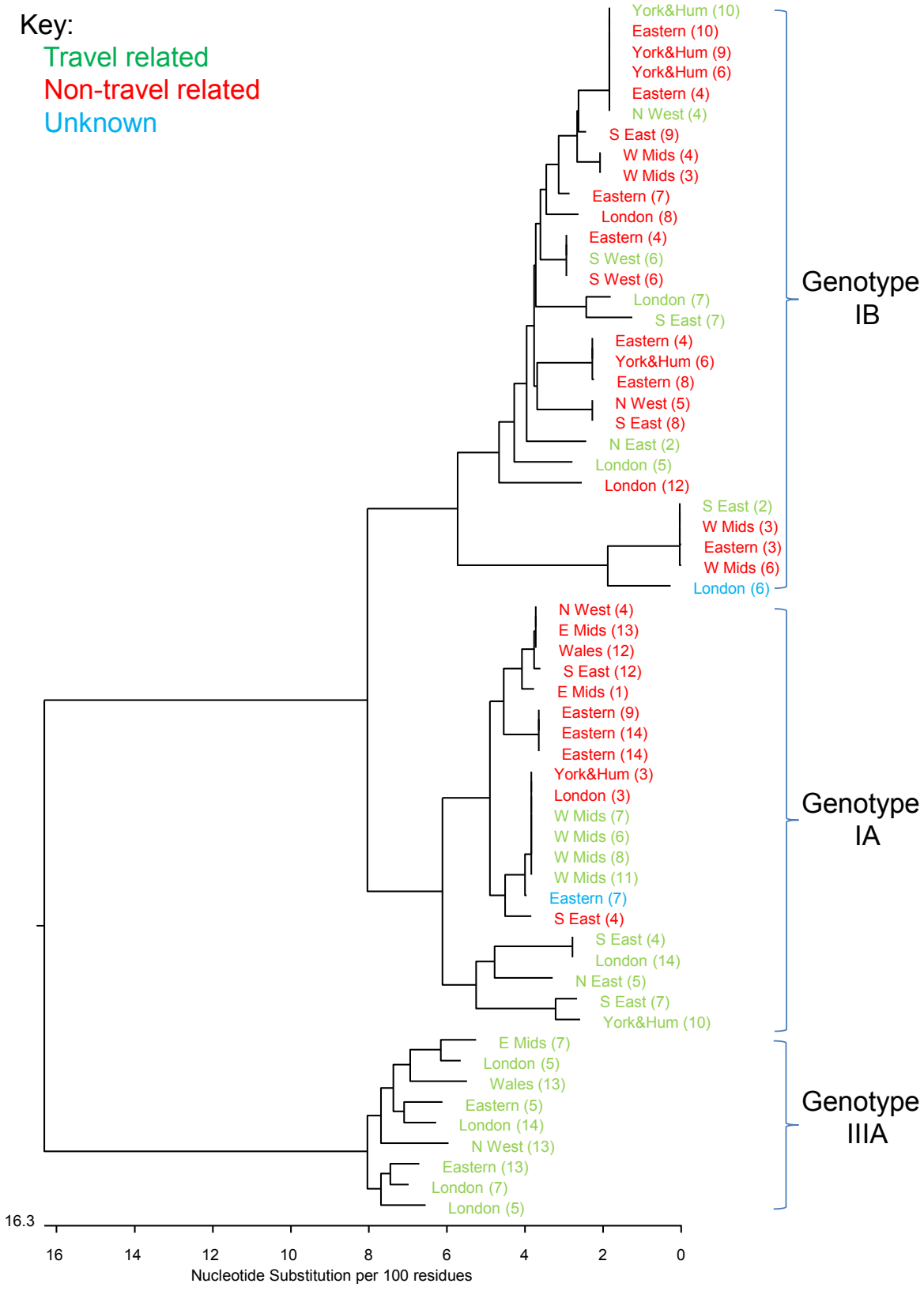


Reference laboratory confirmation and phylogeny of hepatitis A infection

Of the 113 patients notified as having acute HAV infection during the first quarter of 2016, 69 had samples forwarded to the Virus Reference Department for confirmation. Twenty four of the patients were not confirmed to have acute HAV infection. The remaining 45 patients were confirmed to have acute HAV infection. In addition 14 patients were confirmed to have acute HAV infection that had not been reported through the laboratory reporting system although they were recorded in HPzone.

A total of 59 patients could be genotyped over this period; 21 were genotype IA (35.6%), 29 were genotype IB (49.2%) and 9 were genotype IIIA (15.2%). Of these samples 25 were associated with travel (42.4%), 32 had no travel history (54.2%) and 2 had no information (3.4%). This information is presented as a phylogenetic tree. Each sequence is represented by a dot with the patient region and the week of sampling in brackets.

Figure 2. Phylogenetic tree of genotype IA, IB, and IIIA sequences January to March 2016 (n=59)



Laboratory reports of hepatitis C in England and Wales (January-March 2016)

There were a total of 2,918 laboratory reports of hepatitis C reported to PHE between January and March 2016. There was an 0.8% decrease in the number of reported cases compared to the fourth quarter of 2015 (n=2,942), and an 8.5% increase on the same quarter in 2015 (n=2,689).

Age-group and sex were well reported (>97.2% complete). Where known males accounted for 68.9% (1,970/2,860) of reports which is consistent with previous quarters. Adults aged 25-44 years accounted for 51.8% of the total number of hepatitis C reports.

Laboratory reports of hepatitis C in England and Wales, January-March 2016

Age group	Male	Female	Unknown	Total
<1 year	4	3	0	**7**
1-4 years	2	1	1	**4**
5-9 years	2	3	0	**5**
10-14 years	0	1	0	**1**
15-24 years	43	40	0	**83**
25-34 years	380	223	5	**608**
35-44 years	624	239	20	**883**
45-54 years	499	172	12	**683**
55-64 years	282	125	3	**410**
>65 years	120	73	0	**193**
Unknown	14	10	17	**41**
Total	**1,970**	**890**	**58**	**2,918**

Infection report

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Vaccine preventable disease

Acute hepatitis B (England): annual report for 2015

Hepatitis B is a blood borne infection of the liver caused by the hepatitis B virus (HBV). The virus can provoke an acute illness characterised by nausea, malaise, abdominal pain, and jaundice but can also produce a chronic persistent infection that is associated with an increased risk for chronic liver disease and hepatocellular carcinoma. Transmission is by parenteral exposure to infected blood and body fluids contaminated by blood, most often through sexual contact, blood to-blood contact and perinatal transmission from mother to child. HBV infection can be prevented by immunisation and in the UK immunisation is recommended for individuals at high risk of exposure to the virus e.g. people who inject drugs (PWID), healthcare workers, household contacts of people chronically infected with hepatitis B. Immediate post-exposure immunisation is used to prevent infection, especially in babies born to infected mothers or following needle-stick injuries [1].

Surveillance of acute hepatitis B is essential to target prevention and control activities such as the selective immunisation programme. Public Health England, formerly the Health Protection Agency (HPA) implemented national surveillance standards [1] for hepatitis B in 2007 which provided the framework for more consistent reporting of cases from PHE Centres. Available data on confirmed acute infections reported from laboratories can then be used to augment the epidemiological data collected from the local centres. The first report was published in 2008, and this current report provides an update and presents acute hepatitis B surveillance data for 2015.

Methods

The surveillance definition for acute hepatitis B [2] is

“HBsAg positive and anti-HBc IgM positive and abnormal liver function tests with a pattern consistent with acute viral hepatitis.”

As information on liver function is usually not available to PHE, for the purpose of this analysis:

- cases classified as acute viral hepatitis B by the local PHE Centre or the laboratory and/or with a documented positive anti-HBc IgM were classified as acute cases;
- cases classified as acute viral hepatitis B by the PHE Centre but without anti-HBc IgM test results, or not classified but with a positive anti-HBc IgM reported were assumed to be probable acute hepatitis B cases;
- cases classified as acute by the PHE Centre but with contradictory evidence e.g. positive hepatitis serology results dated before July 2012 were reclassified as chronic infections;

- cases classified as chronic infections or those not classified where anti-HBc IgM was negative or equivocal were assumed to be chronic infections;
- and cases that remained unclassified and without anti-HBc IgM results were excluded from further analysis.

PHE Centre cases with a date entered from 1 January 2015 to 31 December 2015 were extracted from HP Zone and matched to a laboratory dataset using Microsoft Access and algorithms comparing combinations of the following variables: Surname, First name, soundex, date of birth, sex, clinic number and NHS number. The laboratory database contained all confirmed hepatitis B infections reported to PHE by laboratories in England and Wales (SGSS).The SGSS data was used to determine final status of any matching cases reported from the PHE Centre. A final reconciled dataset included cases classified as acute or probable acute and reported from the PHE Centre and/or from laboratories around the country to SGSS. After follow up with the clinician and/or the patient, PHE Centre staff assigned a probable route of exposure and collected information on other possible exposure routes. For the analysis, where the probable route of exposure had not been assigned due to more than one exposure, the most likely route was assigned hierarchically (injecting drug use, followed by homosexual exposure, then heterosexual exposure, etc.).

Results

The PHE Centres reported 5,090 hepatitis B cases from 1 January to 31 December 2015 to the PHE Immunisation, Hepatitis and Blood Safety Department. The matching and classification exercise resulted in 368 of these being confirmed as acute and 17 re-classified as probable acute cases with the remainder classified as chronic or excluded. After deduplication, 20 cases reported as acute from the PHE Centres were excluded or reclassified because they had no anti-HBc IgM result, or were matched to a case classified as chronic in the SGSS data.

A total of 11,708 confirmed hepatitis B infections were reported from laboratories to SGSS in the same period, 329 (2.8%) of which were classified as acute cases, 13 (0.1%) as probable acute cases, 9,715 (83%) were classified as chronic and 1,651 (14.1%) remained unclassified.

After the two databases were linked and reconciled, a total of 457 acute or probable acute cases of hepatitis B were reported for England in 2015. This gives an annual incidence of 0.83 per 100,000 population, lower than the incidence of 0.91 per 100,000 reported for 2014.

London is still the region with the highest incidence (1.53 per 100,000) and this has increased slightly from the previous year (1.52 per 100,000). The highest increase was reported from East Midlands region (from 0.41 to 1.07 per 100,000 in 2014 and 2015 respectively). The largest decrease was reported from South West (from 1.08 to 0.49 per 100,000 in 2014 and 2015 respectively) and North East (from 0.84 to 0.34 per 100,000 in 2014 and 2015 respectively), followed by a smaller decrease reported by North West region (from 0.82 to 0.64 per 100,000 in 2014 and 2015 respectively). In the remaining regions incidence was similar or slightly declined from last year (table 1). There continues to be regional variation in the contribution of the different data sources to the overall total, although the overlap between sources has

continued to improve suggesting that completeness of reporting by laboratories and local clinicians has also improved.

As in previous years, where known the majority of cases were in men (69.8%) who had an overall incidence of 1.17 per 100,000 – a decrease from 1.26 per 100,000 in 2014 compared to a continuing decline from the previous year [3]. The corresponding incidence in women in 2015 was 0.49 per 100,000 - a slight increase from 0.48 per 100,000 in the previous year. Men aged 45-54 years had the highest incidence of acute hepatitis B at 2 per 100,000. Most males, except those aged less than 15 and those aged 55-64, had a slightly lower incidence than in 2014, compared to females who generally had a slight increase in the incidence (except those aged less than 24 and those aged the 55-64). The incidence in children remains very low (table 2).

Only 102 (22.3%) of the total acute or probable acute hepatitis B cases had their ethnicity recorded; a slightly higher proportion than the previous year. Sixty six percent of the cases were white (decrease from 67% in 2014), followed by Black or Black British (20.6%) and Asian or Asian British (11.8%), the latter lower than in 2014.

Of the total 457 acute and probable acute cases of hepatitis B, 256 (56%) had associated exposure information recorded (with the most probable route of acquisition assigned by the PHE Centre). A lower proportion (50.2 245/488) had exposure information available in 2014.

As in previous years where known the commonest reported risk attributed was heterosexual exposure, implicated as the probable route of exposure in 145 (56.6%), compared to 54.7% in this category in 2014 (n=134). Cases attributed to sex between men were reported in 40 (15.6%); a similar proportion to the 43 (17.6%) reported in 2014.

Nine cases (3.5%) with known exposure were attributed to PWID (a decrease from 4.9% in the previous year).

Where known, 21 (8.2 %) cases had health care related exposures (2 of which reported recent travel abroad), including surgery, dental treatment dialysis and other hospital exposure – an increase compared to the 14 cases assigned to medical risk factors last year. Skin piercing, tattooing and acupuncture combined were listed as probable exposures for twelve cases (4.7%, 12/256). A further 21 cases (8.2%) had other unspecified risk related to travel abroad. A range of other risks were reported for the remaining 8 cases. Of all cases with a risk exposure reported, 63 (24.6%) also had information stating recent travel abroad.

Discussion

In 2015, reporting of acute cases of hepatitis B from PHE Centres has continued to exceed the number reported from laboratories but the proportion of cases reported by both PHE Centres and laboratory systems is high at 59.1% (270/457), compared to 61% (296/489) of cases reported in 2014. This slight decrease in overlap may be due to the introduction of SGSS a new laboratory reporting system to replace LabBase that could on its initial stages of implementation compromise the quality of identifiers used for matching the data from both sources.

There was nonetheless an overall improved matching over the years that could be explained given the introduction of statutory laboratory reporting in October 2010 and the continued decline in the proportion of cases of unknown status reported from laboratories. Combining data from both sources does minimise under ascertainment and improve the completeness of associated data for analysis. Interpretation of trends should be made with caution, but based on this combined data, the incidence of acute hepatitis B remains low. Given the improved quality and completeness of data provided in 2014/2015, it is likely that there has been a continued gradual decline in incidence since 2008 which has become more apparent in the more recent years.

It is known that anti-HBc IgM, normally a marker of acute infection, may be detected during flares in chronic infections. To minimise misclassification, matching to historical laboratory reports can identify those chronic infections detected previously. However, there is still likely to be some misclassification of chronic cases as acute infections in both datasets. Given the large number of chronic cases diagnosed each year, even a small proportion of cases misclassified as acute can substantially increase the estimated incidence of acute hepatitis B, and confuse the attribution of exposures. Further testing using anti-HBc avidity is now being offered at PHE Colindale, to enable better distinction between acute and chronic infection. Local laboratories can send samples from IgM positive cases to the national virus reference laboratory where both genotyping and avidity testing will be undertaken free of charge [5].

Risk factor data were available in 56% of cases. The interpretation of these data is difficult because in many instances, more than one possible exposure is listed and a probable exposure had not been assigned by the local HPT. Despite this, the data suggest that the number of cases in PWID has remained low in 2015. The overall low incidence in this group is supported by the 2012 unlinked anonymous survey among PWID in contact with drug services which showed that anti-HBc prevalence has remained low and self-reported uptake of hepatitis B vaccine has remained high since 2009, particularly in recent initiates [6].

The incidence of acute hepatitis B continues to remain higher in males than females. This excess of male cases is partly explained by cases in men who have sex with men (MSM); the number of cases with this exposure reported has remained high again this year, following a large increase in 2010. Such cases are more likely to attend GUM clinics, reinforcing the important role of GUM clinics in providing opportunistic hepatitis B immunisation to MSM and individuals with multiple sexual partners. In 2010 the HPA worked with the British Association of Sexual Health and HIV (BASHH) to introduce a standard form for GUM clinics to report acute hepatitis to their local health protection team [7]. This may have helped to increase the reporting of cases diagnosed in this group. This year, a higher proportion of cases (8.2%) were attributed to medical exposure, compared to previous year (5.7). It is still likely that many of these attributions are incorrect, as further investigation may have been undertaken – for example by NHS Blood and Transplant and excluded transmission by this route. It is therefore recommended that cases with these exposures assigned are checked prior to reporting.

References

1. Immunisation against infectious disease, London, Department of Health, 2006. https://www.gov.uk/government/publications/hepatitis-b-the-green-book-chapter-18

2. Standards for local surveillance and follow up of hepatitis B and C, London. Health Protection Agency, 2006. https://www.gov.uk/government/publications/hepatitis-b-and-c-local-surveillance-standards

3. Acute hepatitis B (England): annual report for 2013 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/348576/hpr3314_hbv13.pdf

4. Mid-2013 and mid-2015 population estimates for England, Office of National Statistics, 2013, 2015.

5. Enhanced surveillance of acute hepatitis B virus infection: https://www.gov.uk/government/collections/hepatitis-b-guidance-data-and-analysis

6. Shooting up Infections among people who inject drugs in the United Kingdom 2013. An update (November 2014), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/370707/Shooting_Up_2014.pdf

7. Forms for reporting cases of acute hepatitis A, acute hepatitis B and acute hepatitis C diagnosed in Genitourinary Medicine Clinics (GUM) to local health protection teams (HPTs). https://www.gov.uk/government/publications/hepatitis-form-for-reporting-cases-from-gum-to-hpt

Table 1. Acute or probable acute hepatitis B cases by region and source of report, 2015 (incidence 2008-2014 – mid 2013 population, incidence 2015 – mid 2015 population ONS [4])

REGION	HPU	Lab/y	BOTH	TOTAL	**Incidence of reported acute hepatitis B per 100,000 in 2015**	Incidence of reported acute hepatitis B per 100,000 in 2014	Incidence of reported acute hepatitis B per 100,000 in 2013	Incidence of reported acute hepatitis B per 100,000 in 2012	Incidence of reported acute hepatitis B per 100,000 in 2011	Incidence of reported acute hepatitis B per 100,000 in 2010	Incidence of reported acute hepatitis B per 100,000 in 2009	Incidence of reported acute hepatitis B per 100,000 in 2008
EAST MIDLANDS	23	0	27	50	**1.07**	0.41	0.35	0.77	0.76	0.74	0.85	1.3
EAST OF ENGLAND	8	3	35	46	**0.76**	0.89	0.81	0.89	1.08	0.78	0.85	0.97
LONDON	25	33	75	133	**1.53**	1.52	1.22	2.02	2.06	1.82	1.8	1.83
NORTH EAST	3	0	6	9	**0.34**	0.84	0.65	0.46	0.54	0.54	1.28	0.7
NORTH WEST	20	4	22	46	**0.64**	0.82	0.87	0.61	0.99	0.96	1.64	1.79
SOUTH EAST	15	12	35	62	**0.69**	0.71	0.67	0.84	0.96	0.84	1.03	1
SOUTH WEST	4	12	11	27	**0.49**	1.08	0.63	1.40	1.16	1.05	0.78	0.85
WEST MIDLANDS	12	4	33	49	**0.85**	0.78	0.55	0.98	0.90	0.66	0.74	0.76
YORKS AND HUMBER	5	4	26	35	**0.65**	0.82	0.82	0.83	1.06	0.97	1.05	1.18
NATIONAL	**115**	**72**	**270**	**457**	**0.83**	**0.91**	**0.77**	**1.04**	**1.13**	**0.99**	**1.15**	**1.21**

Table 2. Age and sex breakdown of acute or probable acute hepatitis B reports, 2015 (incidence 2008-2014 – mid 2013 population, incidence 2015 – mid 2015 population ONS [4]).

	Female		**Male**		**NK**		**TOTAL**	
Age group	Number of cases	Incidence of reported acute hepatitis B per 100,000 population	Number of cases	**Incidence of reported acute hepatitis B per 100,000 population**	Number of cases	Incidence of reported acute hepatitis B per 100,000 population	Number of cases	Incidence of reported acute hepatitis B per 100,000 population
Less than15	2	0.04	4	0.08	0	-	6	0.06
15-24	31	0.93	33	0.95	0	-	64	0.94
25-34	32	0.86	61	1.63	1	-	94	1.26
35-44	36	1.01	58	1.64	1	-	95	1.34
45-54	20	0.51	76	2.00	0	-	96	1.25
55-64	5	0.16	60	1.97	0	-	65	1.05
GE65	9	0.17	25	0.57	0	-	34	0.35
NK	2	0.01	0	0.00	1	-	3	0.01
Total	**137**	**0.49**	**317**	**1.17**	**3**	**-**	**457**	**0.83**

Infection report

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Vaccine coverage

Vaccine coverage estimate for the GP based catch-up meningococcal ACWY (MenACWY) immunisation programme for school leavers (becoming 18 or 19 before 31 August 2016) in England, cumulative data to end-July 2016

National vaccine coverage for the second cohort offered MenACWY vaccine through the GP based catch-up programme (those born 1 September 1997 to 31 August 1998) and evaluated from April to the end of July 2016 was 11.1%. As part of the service, the GP should be writing to this birth cohort encouraging them to get vaccinated as soon as possible. The message has been promoted through media communications from Public Health England and the meningitis charities (Meningitis Research Foundation and Meningitis Now), and through NHS England local teams. Further cumulative estimates of vaccine coverage for this programme will be published in the autumn showing the potential impact of these measures.

Cumulative national coverage for the first cohort offered MenACWY vaccine through the GP based catch-up programme from August 2015 (those born 1 September 1996 to 31 August 1997) has continued to be monitored and was 36.6% when evaluated at the end of July 2016, compared to 35.2% at the end of March 2016.

Both these cohorts remain eligible for vaccination until the age of 25.

Introduction

MenACWY immunisation was added to the national immunisation programme in August 2015 following advice from the Joint Committee on Vaccination and Immunisation (JCVI) in response to the rising number of meningococcal W (MenW) cases [1].

The objective of the MenACWY immunisation programme is to immunise all teenagers in school years 9 to 13 before they complete academic year 13. This is being met through replacing the routine adolescent MenC booster given in years 9 or 10 with the MenACWY vaccine since September 2015, and through a series of catch-up campaigns targeting older teenagers. The first urgent general practice (GP) based MenACWY vaccination catch-up campaign started in August 2015, targeting all those born between 1 September 1996 to 31 August 1997. A second GP based catch-up campaign started in April 2016, targeting all those born between 1 September 1997 to 31 August 1998. There will be a final catch-up campaign starting in April 2017 for those born between 1 September 1998 to 31 August 1999. All these cohorts will remain eligible for MenACWY vaccination until the age of 25.

Additionally, MenACWY is offered to older students aged up to 25 who are in university as part of the existing time-limited ‘freshers’ programme. Full details of the MenACWY programme are given in the April issue of *Vaccine Update* [2].

Methods

In order to assess vaccine coverage of this newly implemented immunisation programme Public Health England (PHE) has put in place a temporary sentinel surveillance system. This uses GP practice level MenACWY vaccine coverage data automatically uploaded via participating GP IT suppliers to the ImmForm* website on a monthly basis.

Cumulative monthly data are then validated and analysed by PHE to check data completeness, identify and query any anomalous results and describe epidemiological trends. Cumulative monthly MenACWY vaccine coverage data were collected for the target birth cohorts using the following definitions:

First GP based catch-up cohort

- *Denominator:* the number of patients registered in a GP practice born between 1 September 1996 to 31 August 1997;
- *Numerator:* the number of patients in the denominator who have received a MenACWY vaccine by 31 July 2016.

Second GP based catch-up cohort

- *Denominator:* the number of patients registered in a GP practice born between 1 September 1997 to 31 August 1998;
- *Numerator:* the number of patients in the denominator who have received a MenACWY vaccine by 31 July 2016.

Vaccine coverage is calculated as the total number of patients who have received the vaccination (numerators) as a percentage of the number of patients registered (denominator).

This report describes cumulative vaccine coverage to the end of July 2016 for the second GP based catch-up campaign by NHS England local team (LT) and area team (AT). Vaccine coverage estimates by NHS England Clinical Commissioning Group (CCG) are presented in an appendix associated with this report. The report also updates the previous estimate of national vaccine coverage for the first GP based catch-up campaign [3] to the end of July 2016.

Participation and data quality

MenACWY vaccine data to the end of July 2016 for both cohorts were available from all four GP IT suppliers representing 93.8% of all GP practices in England. No issues with data quality were identified.

Local level data are not provided for the first GP based catch-up cohort, see the previous HPR 10(18) for further details [3].

Results

In total MenACWY vaccine coverage data were available for 7154/7627 (93.8%) GP practices in England in July 2016. The proportion of GP practices represented ranged by LT from 88.1% (South East) to 97.7% (Central Midlands) and by AT from 85.2% (Kent and Medway) to 98.8% (West Yorkshire).

National cumulative MenACWY vaccine coverage at the end of July 2016 was 11.1% for the second GP based catch-up cohort. This ranged by LT from 6.7% (Lancashire and Greater Manchester) to 21.0% (Midlands and East (East)) and by AT from 5.9% (Merseyside) to 36.3% (Essex) (Table 1). Monthly cumulative coverage reported by the one GP IT supplier that provided data consistently through the evaluation period increased from 4.1% at the end of April to 10.0% at the end of July 2016.

National cumulative MenACWY vaccine coverage at the end of July 2016 was 36.6% for the first GP based catch-up cohort.

* ImmForm is the system used by Public Health England to record vaccine coverage data for some immunisation programmes and to provide vaccine ordering facilities for the NHS

Discussion

The relatively low coverage achieved in the first target group highlights the challenges of a GP-delivered vaccination programme in this age group, confirming findings from a previous HPV catch-up vaccination programme [4].

The second GP based cohort became eligible for MenACWY vaccine from April 2016. Coverage in this cohort is likely to have been affected by exams during the summer term and by students leaving for their gap year and other travel during the holiday period. Coverage estimates to the end of July varied across the country highlighting different local approaches to this programme. The highest estimate of 36.3% was reported from an AT where vaccine was offered through schools and colleges to year 13 students. Other ATs with coverage higher than the national average reported conducting immunisation change workshops and regular communications with local practices and schools. Nationally, the specification includes GPs writing to the eligible birth cohort encouraging them to get vaccinated as soon as possible if they have not already done so – a template letter has been provided by PHE [1]. In mid-August PHE, the Meningitis Research Foundation (MRF) and Meningitis Now published advice urging young people in these age groups to get vaccinated against meningitis and septicaemia whether starting university or not, signposting them to their GP, either at home or in their university town if they had not had the vaccine before the beginning of term [5-8]. Further cumulative estimates of vaccine coverage for this programme will be published in the autumn showing the impact of these measures.

Coverage estimates for the school-based routine and catch-up MenACWY programmes delivered in the 2015/16 academic year will be captured in an annual survey in September 2016 and are expected to be published in late 2016.

Further information

Further information relating to the implementation of this vaccination programme is available from the PHE website document collection, Meningococcal ACWY (MenACWY) vaccination programme.

References

1. Public Health England. *Introduction of MenACWY vaccine*. 2015; Available from: https://www.gov.uk/government/collections/meningococcal-acwy-menacwy-vaccination-programme.
2. Public Health England. *Vaccine update: issue 243, April 2016*. 2016; Available from: https://www.gov.uk/government/publications/vaccine-update-issue-243-april-2016.
3. Public Health England. *MenACWY vaccine coverage estimates, report: to end of March 2016*. 2016; Available from: https://www.gov.uk/government/publications/meningococcal-acwy-immunisation-programme-vaccine-coverage-estimates.
4. Department of Health. *Annual HPV vaccine coverage in England in 2009/2010*. 2011; Available from: https://www.gov.uk/government/publications/annual-hpv-vaccine-coverage-in-england-in-2009-2010.
5. Public Health England. *PHE publishes advice on meningitis and septicaemia vaccinations*. 2016; Available from: https://www.gov.uk/government/news/phe-publishes-advice-on-meningitis-and-septicaemia-vacinations.
6. Meningitis Research Foundation. *Our message to UK students: get vaccinated against meningitis and septicaemia now to #StopTheSpread*. 2016; Available from: http://www.meningitis.org/news-media/our-message-to-uk-students-114639.
7. Meningitis Research Foundation. *Problems accessing MenACWY vaccine?* 2016; Available from: http://www.meningitis.org/news-media/menacwy-problems.
8. Meningitis Now. *Public Health urge students to get Meningitis vaccine*. 2016; Available from: https://www.meningitisnow.org/support-us/news-centre/news-stories/public-health-urge-students-get-meningitis-vaccine/.

Table 1. Cumulative MenACWY vaccine coverage in the second GP based catch-up cohort (born 1 September 1997 to 31 August 1998 inc.) to end July 2016 by Local Team and Area Team, England

Local Team (code) Area Team (code) N.B. where Local Team and Area Team are the same they are displayed once only, in bold	**% of practices reporting**	**% Coverage in second urgent catch-up cohort**
NHS ENGLAND SOUTH (WESSEX) (Q70)	**94.5**	**19.4**
NHS ENGLAND LONDON (Q71)	**93.5**	**6.9**
NHS ENGLAND NORTH (YORKSHIRE AND HUMBER) (Q72)	**97.1**	**11.1**
NORTH YORKSHIRE AND HUMBER (Q50)	95.9	14.0
SOUTH YORKSHIRE AND BASSETLAW (Q51)	95.7	9.8
WEST YORKSHIRE (Q52)	98.8	9.9
NHS ENGLAND NORTH (LANCASHIRE AND GREATER MANCHESTER) (Q73)	**93.0**	**6.7**
GREATER MANCHESTER (Q46)	91.0	6.1
LANCASHIRE (Q47)	97.3	7.6
NHS ENGLAND NORTH (CUMBRIA AND NORTH EAST) (Q74)	**94.8**	**7.1**
CUMBRIA, NORTHUMBERLAND, TYNE AND WEAR (Q49)	95.9	7.4
DURHAM, DARLINGTON AND TEES (Q45)	93.0	6.7
NHS ENGLAND NORTH (CHESHIRE AND MERSEYSIDE) (Q75)	**91.6**	**6.8**
CHESHIRE, WARRINGTON AND WIRRAL (Q44)	95.8	7.6
MERSEYSIDE (Q48)	88.5	5.9
NHS ENGLAND MIDLANDS AND EAST (NORTH MIDLANDS) (Q76)	**92.8**	**12.3**
DERBYSHIRE AND NOTTINGHAMSHIRE (Q55)	98.5	14.4
SHROPSHIRE AND STAFFORDSHIRE (Q60)	86.4	9.5
NHS ENGLAND MIDLANDS AND EAST (WEST MIDLANDS) (Q77)	**92.3**	**8.3**
ARDEN, HEREFORDSHIRE AND WORCESTERSHIRE (Q53)	93.0	9.7
BIRMINGHAM AND THE BLACK COUNTRY (Q54)	91.9	7.4
NHS ENGLAND MIDLANDS AND EAST (CENTRAL MIDLANDS) (Q78)	**97.7**	**9.8**
HERTFORDSHIRE AND THE SOUTH MIDLANDS (Q58)	96.6	9.4
LEICESTERSHIRE AND LINCOLNSHIRE (Q59)	98.4	10.1
NHS ENGLAND MIDLANDS AND EAST (EAST) (Q79)	**97.4**	**21.0**
EAST ANGLIA (Q56)	96.8	9.4
ESSEX (Q57)	98.0	36.3
NHS ENGLAND SOUTH (SOUTH WEST) (Q80)	**93.3**	**16.7**
BRISTOL, NORTH SOMERSET, SOMERSET AND SOUTH GLOUCESTERSHIRE (Q65)	94.7	20.5
DEVON, CORNWALL AND ISLES OF SCILLY (Q66)	92.3	13.3
NHS ENGLAND SOUTH (SOUTH EAST) (Q81)	**88.1**	**12.0**
KENT AND MEDWAY (Q67)	85.2	12.0
SURREY AND SUSSEX (Q68)	90.4	12.0
NHS ENGLAND SOUTH (SOUTH CENTRAL) (Q82)	**92.6**	**12.4**
BATH, GLOUCESTERSHIRE, SWINDON AND WILTSHIRE (Q64)	94.7	11.5
THAMES VALLEY (Q69)	90.8	13.0
ENGLAND TOTAL	**93.8**	**11.1**

N.B. Data extraction date from ImmForm: 24 August 2016