Public Health England

Health Protection Report
weekly report

Volume 10 Number 9 Published on: **4 March 2016**

Current News

- **Zika virus: updated guidance for pregnant women**
- **Increase in *Mycoplasma pneumoniae* infections in England**
- **NHS Lanarkshire hepatitis C look-back exercise**
- **New SMIs for the laboratory investigation of infections associated with bone and joints**

Infection reports

Vaccine coverage

- **MenACWY vaccine coverage (England, provisional) to end-January 2016**

Infection report

- **Laboratory reports of respiratory infections (England and Wales), February 2016**

News

Volume 10 Number 9 Published on: **4 March 2016**

Zika virus: updated guidance for pregnant women

PHE and NaTHNaC have updated their guidance relating to travel to areas where there is active transmission of Zika virus, including areas in South and Central America and the Caribbean. A new recommendation is that pregnant women should postpone all non-essential travel to those areas [1,2]. This reflects increasing evidence that supports an association between Zika virus infection and microcephaly in developing foetuses.

Where travel to areas with active transmission cannot be postponed, pregnant women and those planning pregnancy should avail themselves of advice from their healthcare provider about the risks that Zika may present before they travel, and in some circumstances after they return. The principal, protective advice applicable to all travellers, but particularly pregnant women who cannot postpone travel, is to practise scrupulous mosquito bite avoidance.

PHE, the British Medical Association and the Royal College of General Practitioners have issued joint guidance for healthcare professionals in primary care who may be consulted by patients, including pregnant women, who are travelling to or returning from the affected areas [3]. This includes guidance on pre-departure travel advice, medical complications that may be associated with Zika virus infection, and management of returning travellers including assessment and diagnosis of patients with current symptoms suggestive of Zika virus infection. Additionally, new advice is available about Guillain-Barré syndrome, and also Zika virus and immunosuppressed patients.

Adopting a precautionary approach, guidance from PHE and its partners recommends measures to decrease the risk of male-to-female sexual transmission of Zika virus, particularly transmission to pregnant women and women planning pregnancy. This includes recommendations on condom use for men who have returned from affected areas (for a six-month period in the case of a male partner who has experienced symptoms compatible with Zika virus infection, and 28 days for men who have not had symptoms). Additionally, returned male travellers who are partners of pregnant women are advised to use condoms for the duration of pregnancy.

Links to all professional guidance produced by PHE and its partners are available on PHE's main Zika guidance webpage [4].

References

1. ‘Zika virus: updated travel advice for pregnant women’, PHE website news story, 1 March 2016.
2. National Travel Health Network and Centre (2 March). Zika - Risk Assessment.
3. PHE, BMA, RCGP (February 2016). Zika virus infection: guidance for primary care (updated 1 March).
4. PHE. Zika virus: health protection guidance collection (updated 3 March).

Increase in *Mycoplasma pneumoniae* infections in England

PHE has published an annual report on laboratory-confirmed *Mycoplasma pneumoniae* (Mpn) infections recorded in England and Wales in 2015 [1]. It is based on data extracted from PHE’s SGSS voluntary surveillance database that collates laboratory reports of Mpn detection by PHE and NHS laboratories.

This annual report includes laboratory reports based on either serological or genomic test methods. Genomic methods are considered to produce a more robust indication of acute infection.

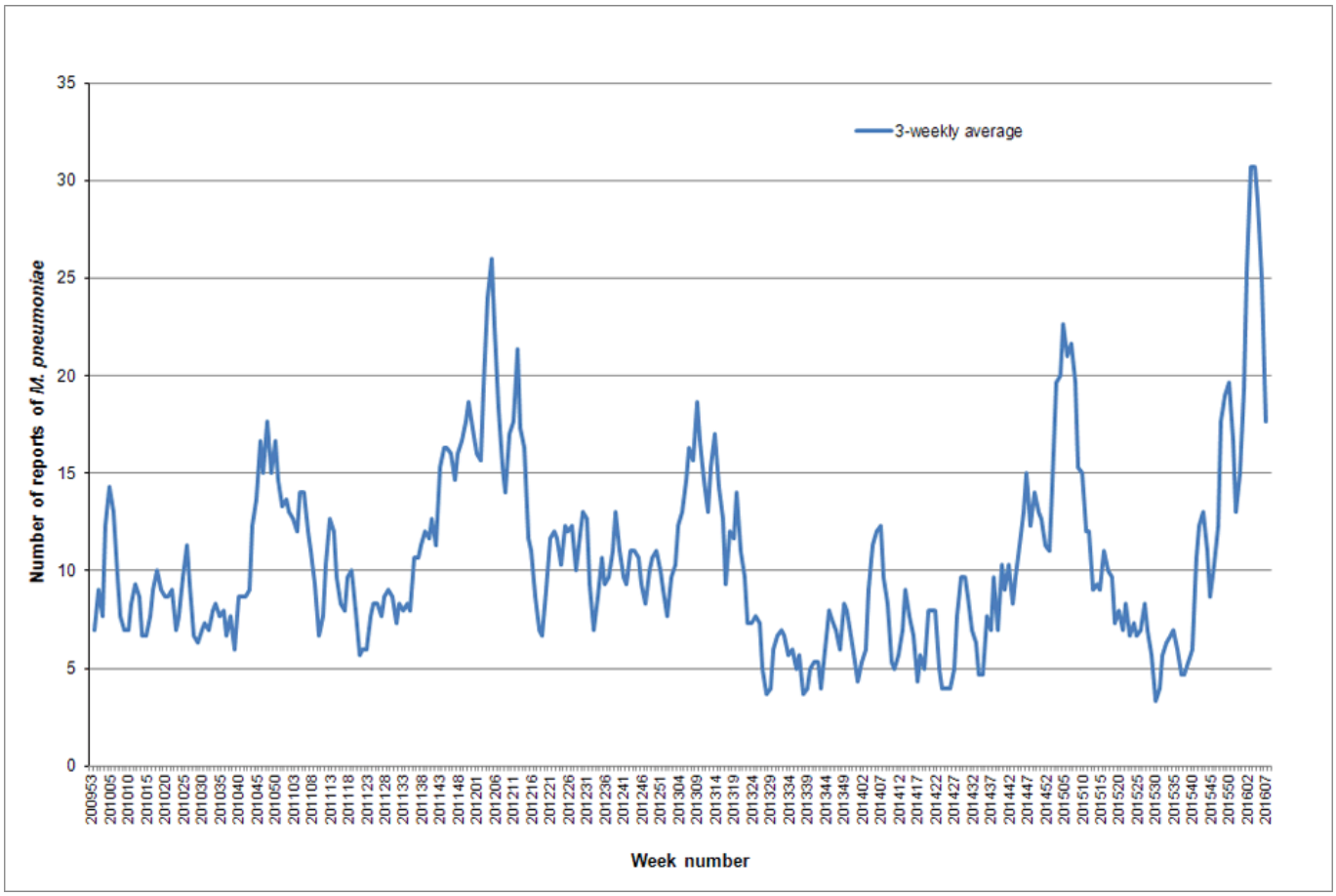
A total of 578 cases of Mpn infection were reported during 2015, an increase from 429 cases in 2014. The proportion of cases reported by genomic methods has increased from 12% in 2014 to 28% in 2015.

Although, overall, national numbers of reports remain low (fewer than 35 per week), it has been noted that, according to the latest data extracted from the SGSS database, Mpn case reports from laboratories in England have risen in the first two months of 2016 (not covered by the annual report) (see graph). No cases have been reported from Wales in 2016.

The currently observed trend in Mpn cases is consistent with a seasonal increase in the three-weekly average numbers of cases each winter, although this is higher than that observed in previous years.

Clinicians are alerted to the increased Mpn activity and are requested to consider testing for Mpn by nucleic acid amplification tests (NAATs), or similar tests, where clinically appropriate. Reporting laboratories are requested to send Mpn NAAT-positive specimens, or extracted DNA, to the Respiratory and Vaccine-Preventable Bacteria Reference Unit, PHE Colindale, for confirmation and determination of point mutations associated with macrolide resistance (free of charge on referred positives).

Laboratory reports of Mycoplasma pneumonia in England and Wales



Reference

1. PHE (March 2016). Annual report of *Mycoplasma pneumoniae* laboratory surveillance data, 2015, England and Wales.

NHS Lanarkshire hepatitis C look-back exercise

Patients who may have been treated by a former NHS Lanarkshire (Scotland) healthcare worker are being contacted as part of a patient notification exercise which has been endorsed by the UK Advisory Panel for Healthcare Workers Infected with Blood Borne Viruses [1,2].

The former healthcare worker tested positive for hepatitis C infection in 2008 and immediately stopped carrying out healthcare procedures and did not return to clinical practice.

NHS Lanarkshire is working with other NHS boards and health agencies in other parts of the UK to notify patients who may have had a surgical procedure carried out by the former healthcare worker between 1982 and January 2008. Advice from Scottish and UK experts is that the risk of the hepatitis C virus having been transmitted to a patient during surgery involving the healthcare worker is low.

Patients – mainly from Lanarkshire, but also across Scotland and the rest of the UK – have been sent letters informing them of the situation and recommending that they arrange an appointment for a blood test. Of the 8,383 patients being contacted 7,313 are from Lanarkshire.

Patients are receiving a detailed question and answer sheet with their letter which includes information about hepatitis C and how to arrange to be tested. Health Protection Scotland has endorsed the recommendation from the board that people take up the offer of a blood test to ensure that anyone who does have the virus can receive the right treatment. Treatment for hepatitis C is known to be highly effective.

References

1. NHS Lanarkshire website. Public Health Situation: Hepatitis C.
2. ‘Scotland leads hepatitis C patient notification exercise’, PHE website news story, 23 February 2016.

New SMIs for the laboratory investigation of infections associated with bone and joints

UK Standards for Microbiology Investigations (UK SMI) have recently issued three documents relating to the investigation of infection associated with bone and joints. The SMIs are standards for use in clinical bacteriology laboratories and cover the sample pathway from receipt in the laboratory through to issuing of reports.

Information regarding rapid methods, such as nucleic acid amplification tests (NAAT) and matrix assisted laser desorption ionisation – time of flight (MALDI-TOF) mass spectrometry have been included in each of the documents as these methods are now routinely used within clinical microbiology laboratories [1,2]. Advantages of rapid methods include shorter turnaround times and the ability to identify organisms that are slow to grow or that are un-culturable.

In addition, the use of blood culture monitoring systems for enrichment has also been included in two of the documents. Continuous monitoring systems are well established for blood culture; the introduction of these fully automated, continuous-monitoring systems has led to earlier detection and better identification of pathogens. This technology is now being used for the investigation of other sample types including bone marrow and orthopaedic implant samples. The method has been shown to have equivalent sensitivity to conventional enrichment broth for the culture of orthopaedic implant associated samples when incubated for five days [3]. Similar studies have not yet been published regarding use for bone and soft tissue specimens associated with osteomyelitis and therefore it is not currently included in the procedure for this sample type.

The issued documents can be found via the following links:

- UK SMI B38 – Investigation of bone marrow
- UK SMI B42 – Investigation of bone and soft tissue associated with osteomyelitis
- UK SMI B44 – Investigation of orthopaedic implant associated infections

References

1. Clark AE, Kaleta EJ, Arora A, Wolk DM (2013). Matrix-assisted laser desorption ionization-time of flight mass spectrometry: a fundamental shift in the routine practice of clinical microbiology. *Clin Microbiol Rev* **26**: 547-603.
2. Espy MJ, Uhl JR, Sloan LM, Buckwalter SP, Jones MF, Vetter EA, et al (2006). Real-time PCR in clinical microbiology: applications for routine laboratory testing. *Clin Microbiol Rev* **19**: 165-256.
3. Minassian AM, Newnham R, Kalimeris E, Bejon P, Atkins BL, Bowler IC (2014). Use of an automated blood culture system (BD BACTEC) for diagnosis of prosthetic joint infections: easy and fast. *BMCInfectDis* **14**: 233.

Public Health England

Health Protection Report
weekly report

Infection reports

Volume 10 Number 9 Published on: **4 March 2016**

Infection Reports

Vaccine coverage

- **MenACWY vaccine coverage (England, provisional) to end-January 2016**

Vaccine preventable disease

- **Laboratory reports of respiratory infections (England and Wales), February 2016**

Infection report

Volume 10 Number 9 Published on: **4 March 2016**

Vaccine coverage

Preliminary vaccine coverage estimate for the urgent catch-up meningococcal ACWY (MenACWY) immunisation programme for England, January 2016

A preliminary estimate of vaccine coverage for the first cohort offered MenACWY vaccine as part of an urgent catch-up programme from August 2015 (those born between 1 September 1996 and 31 August 1997) evaluated at the end of January 2016 was 33.7%.

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.

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 done by replacing the routine adolescent MenC booster given in years 9 or 10 with the MenACWY vaccine from September 2015, and by a series of catch-up campaigns targeting older teenagers. These include, an urgent general practice (GP) based MenACWY vaccination catch-up campaign from August 2015, targeting all those in the 2014/15 school year 13. There will be further catch-up campaigns in 2016 and 2017 for those currently aged 15 to18 who will not have been offered MenACWY vaccination. Additionally, MenACWY is offered to older students aged up to 25 who are starting university this academic year as part of the existing time-limited ‘freshers’ programme.

This report describes the provisional estimate of national vaccination coverage in the year 13 catch-up as of the end of January 2016.

Methods

In order to assess vaccine coverage of this newly implemented immunisation programmes 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.

* 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

Cumulative monthly MenACWY vaccine coverage data (from September 2015 to April 2016) are collected for the target birth cohort using the following definitions:

- *Denominator:* the number of patients registered in a GP practice aged 17-18 years on 1 August 2015 (born 1/9/1996 to 31/8/1997);
- *Numerator:* the number of patients in the denominator who have received a MenACWY vaccine between 1 August 2015 and the end of the survey month.

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).

Participation and data quality

To date, five monthly collections (September 2015 to January 2016) of MenACWY vaccine coverage data have been uploaded. Only one GP IT supplier, representing around 50% of all English GP practices, has provided data consistently for all uploads since the beginning of the evaluation period (September 2015).

All four GP IT suppliers provided information for cumulative coverage estimates to the end of January 2016, however, data quality assessments undertaken by PHE identified that data from one supplier, representing approximately 34% of GP practices in England, were not accurate. This supplier's data is therefore excluded from the estimate reported here.

This urgent MenACWY catch-up programme is being offered to individuals in the target population from August 2015 through to the end of March 2016. Many individuals in this cohort will change their GP registration as they move to university or college, military establishment, etc. during this period. For this reason the denominators and numerators for individual GP practices will fluctuate between monthly data extractions, limiting the month on month comparability for any given geography. As a result, local MenACWY coverage estimate cannot be confidently estimated and are not provided.

Results

Based on data from three GP IT suppliers representing 62.3% of practices in England, national cumulative MenACWY vaccine coverage at the end of January 2016 for the urgent catch-up cohort in England is 33.7%.

Monthly cumulative coverage reported by the one GP IT supplier that provided data consistently through the evaluation period increased from 28.9% at the end of September to 34.4% at the end of January 2016. This suggests that 84% of all vaccinations were given during August and September 2015.

Discussion

The response to the increase in cases of invasive meningococcal group W (MenW) disease, which has been declared a national incident, was swift: The announcement of the urgent catch-up programme was made in June 2106, MenACWY vaccine became available for GP practices to order in July, and the call and recall of the target cohort of adolescents started in August. The aim of the programme was to vaccinate as many of this cohort as possible before the start of the 2015/16 academic year.

The relatively low coverage in the 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 [1]. Low MenACWY coverage may be exacerbated by a significant number of the target individuals in this age group attending university or other educational organisations away from their home address, which may lead to a temporary change in GP, making both invitation to the vaccination programme and monitoring more complex. Adolescents born between 1 September 1996 and 31 August 1997 are still able to obtain MenACWY vaccination from their GP.

A final estimate of cumulative coverage for vaccinations given up to the end of March 2016 will be published for the urgent MenACWY catch-up programme later this year.

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.

Reference

1. Department of Health. Annual HPV vaccine coverage in England in 2009/2010.

Infection report

Volume 10 Number 9 Published on: **4 March 2016**

Respiratory

Laboratory reports of respiratory infections made to PHE from PHE and NHS laboratories in England and Wales: weeks 5 to 8, 2016

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 CIDSC, by week of report

Week	Week 5	Week 6	Week 7	Week 8	Total
Week ending	7/2/2016	14/2/2016	21/2/2016	28/2/2016	
Influenza A	**562**	**506**	**630**	**737**	**2435**
Isolation	38	44	44	55	**181**
DIF *	27	59	34	57	**177**
PCR	437	342	505	512	**1796**
Other †	60	61	47	113	**281**
Influenza B	**57**	**56**	**54**	**98**	**265**
Isolation	1	4	2	8	**15**
DIF *	5	11	2	13	**31**
PCR	47	34	47	67	**195**
Other †	4	7	3	10	**24**

* 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 5	Week 6	Week 7	Week 8	Total
Week ending	7/2/2016	14/2/2016	21/2/2016	28/2/2016	
Adenovirus *	79	103	118	112	**412**
Coronavirus	97	130	130	132	**489**
Parainfluenza†	46	71	43	36	**196**
Rhinovirus	257	290	240	210	**997**
RSV	266	202	151	152	**771**

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

Table 3. Respiratory viral detections by age group: weeks 5-8/2016

Age group (years)	<1 year	1-4 years	5-14 years	15-44 years	45-64 years	≥65 years	Un-known	Total
Adenovirus *	71	110	35	110	56	26	4	**412**
Coronavirus	78	75	35	92	74	135	–	**489**
Influenza A	161	390	155	811	797	556	4	**2874**
Influenza B	17	18	39	135	34	53	6	**302**
Parainfluenza †	52	43	16	26	35	25	–	**197**
Respiratory syncytial virus	232	109	34	128	128	133	7	**771**
Rhinovirus	319	233	74	127	115	127	2	**997**

***** 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 5	Week 6	Week 7	Week 8	Total
Week ending	**7/2/2016**	**14/2/2016**	**21/2/2016**	**28/2/2016**	
Coxiella burnettii	–	–	1	–	**1**
Respiratory *Chlamydia* sp. *	3	1	3	2	**9**
Mycoplasma pneumoniae	33	26	34	15	**108**
Legionella sp.	4	4	3	–	**11**

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

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

Week	Week 5	Week 6	Week 7	Week 8	Total
Week ending	**7/2/2016**	**14/2/2016**	**21/2/2016**	**28/2/2016**	
Nosocomial	–	1	–	–	1
Community	2	3	2	–	7
Travel Abroad	2	–	–	–	2
Travel UK	–	–	1	–	1
Total	**4**	**4**	**3**	**0**	**11**
Male	3	3	2	–	8
Female	1	1	1	–	3

Eleven cases were reported with pneumonia. Eight males aged 50-70 years and three females aged 46-75 years. Seven cases had community-acquired infection and one case was reported to be associated with a hospital/healthcare facility. Two deaths were reported in three males aged 57 and 70 years.

Three cases were reported with travel association: Mauritius (1), Thailand (1) and United Kingdom (1).

Table 6. Reports of Legionnaires Disease cases in England and Wales, by PHE Centre: weeks 5-8/2016

Region/Country	Nosocomial	Community	Travel Abroad	Travel UK	Total
North of England					
North East	–	–	–	–	**0**
Cheshire & Merseyside	–	1	–	–	**1**
Greater Manchester	–	–	–	–	**0**
Cumbria & Lancashire	–	–	–	–	**0**
Yorkshire & the Humber	–	–	–	–	**0**
South of England					
Devon, Cornwall & Somerset	–	–	–	–	**0**
Avon, Gloucestershire & Wiltshire	–	–	–	–	**0**
Wessex	–	–	1	–	**1**
Thames Valley	–	–	–	–	**0**
Sussex, Surrey & Kent	–	1	–	–	**1**
Midlands & East of England					
East Midlands	–	2	–	–	**2**
South Midlands & Hertfordshire	–	–	–	–	**0**
Anglia & Essex	–	–	1	–	**1**
West Midlands	–	1	–	1	**2**
London Integrated Region					
London	1	2	–	–	**3**
Public Health Wales					
Mid & West Wales	–	–	–	–	**0**
North Wales	–	–	–	–	**0**
South East Wales	–	–	–	–	**0**
Miscellaneous					
Other	–	–	–	–	**0**
Not known	–	–	–	–	**0**
Total	1	7	2	1	**11**