



Public Health
England

Protecting and improving the nation's health

Laboratory confirmed cases of invasive meningococcal infection (England): April to June 2019

Health Protection Report
Volume 13 Number 34
30 September 2019

Laboratory confirmed cases of invasive meningococcal infection (England): April to June 2019

In England, the national Public Health England (PHE) Meningococcal Reference Unit (MRU) confirmed 120 cases of invasive meningococcal disease (IMD) between April and June 2019 [1]. IMD cases were 31% lower during these three months compared to 175 cases in the equivalent period in 2018 (table 1). This relatively low number of confirmed cases was observed across all capsular groups.

The age distribution of meningococcal capsular groups causing IMD is summarised in table 2, with capsular group B (MenB) accounting for 55% (66/120) of all cases, followed by MenW (n=32, 27%), MenY (n=12, 10%) and MenC (n=9, 8%).

There were 66 MenB cases confirmed between April and June 2019, 34% lower than the equivalent period in 2018 (100 cases) and similarly MenW cases were 30% lower (32 cases) than the number of cases confirmed in the same time period in 2018 (46 cases). In this quarter, the number of cases confirmed with MenC disease was 40% lower (9 cases) in 2019 than the equivalent period in 2018 (15 cases) while the number of MenY cases confirmed (12 cases) in this period in 2019 was similar to the previous year (13 cases) (table 1). There were no reported cases for capsular groups A, X and Z/E during the reporting period.

Between April and June 2019, MenB was responsible for the majority of IMD cases in children aged less than five years of age (18/26, 69%) followed by MenW (19%, n=5), two cases were confirmed with MenC and one with MenY. MenB also accounted for more than half of cases in individuals aged between 5 and 64 years (60%) and for 34% of cases in adults aged 65 years or more (table 2).

The introduction of a routine national MenB immunisation programme for infants was announced in June 2015 [2] with immunisation of infants starting from 1 September 2015. Vaccine coverage estimates for infant MenB immunisation across England was 92.2% for two doses at 12 months of age and 88.8% for the booster dose by 24 months of age (evaluated between April to June 2019 [3]). The two-dose infant MenB schedule has been shown to be highly effective in preventing MenB disease in infants [4].

Of the 32 MenW cases confirmed between April and June 2019, a third (38%, 12 cases) were aged 65 years or older with adults aged between 45-64 years accounting for 25% of cases (8 cases). Adults aged between 20-44 years accounted for 16% (5 cases) of MenW cases and two cases were confirmed in older children/teenagers aged between 10 and 19 years. Five MenW cases were confirmed in children aged less than 5 years old.

The earlier increase in MenW cases, which has been previously reported [5], led to the introduction of MenACWY conjugate vaccine to the national immunisation programme in England [6,7]. Targeted catch-up with MenACWY vaccine began in August 2015 at which time it also replaced the existing time-limited MenC 'freshers' vaccination programme. MenC vaccine was also directly substituted with MenACWY vaccine in the routine adolescent school programme (school year 9 or 10) from autumn 2015.

Coverage for the first cohorts to be routinely offered MenACWY vaccine in schools from September 2015 and evaluated up to the end August 2018 was 86.2% (Year 9 in 2017/2018) and 84.6% (Year 10) [9].

In October 2018 the Joint Committee on Vaccination and Immunisation (JCVI) released a statement advising that the Department of Health and Social Care, Public Health England and the Chief Medical Officer will be supporting efforts to improve MenACWY vaccine coverage in young adults aged 18 to less than 25 years who are eligible for vaccination. It is anticipated that efforts to improve MenACWY vaccine coverage in this age group will lead to a reduction in cases of MenC and further reductions in MenW disease across the population [10]

The impact of the MenACWY teenage and the MenB infant vaccination programmes continues to be monitored. Early assessment of the infant MenB programme [11] and MenACWY vaccination in the 2015 school leaver cohort have been published [12].

All teenage cohorts remain eligible for opportunistic MenACWY vaccination until their 25th birthday and it is important that these teenagers continue to be encouraged to be immunised, particularly if they are entering Higher Educations Institutions.

Table 1: Invasive meningococcal disease in England by capsular group and laboratory testing method: April to June 2018 and 2019

Capsular groups~	CULTURE AND PCR		CULTURE ONLY		PCR ONLY		Total	
	2018	2019	2018	2019	2018	2019	2018	2019
B	26	14	17	21	57	31	100	66
C	2	1	7	5	6	3	15	9
W	5	10	35	19	6	3	46	32
Y	3	2	7	8	3	2	13	12
Other*	0	0	1	0	0	1	1	1
Total	36	27	67	53	72	40	175	120

~No cases of group A, Z/E and ungroupable were confirmed during the periods summarised in the table.

* Other includes group X and ungrouped (ungroupable refers to invasive clinical meningococcal isolates that were non-groupable, while ungrouped cases refers to culture-negative but PCR screen (ctrA) positive and negative for the four genogroups [B, C, W and Y] routinely tested for).

Table 2. Invasive meningococcal disease in England by capsular group and age group at diagnosis: April – June 2019

Age groups	Capsular Group~					Total	%
	B	C	W	Y	Other*		
<1 year	10	2	1	1	0	14	11.7
1-4 years	8	0	4	0	0	12	10.0
5-9 years	8	0	0	0	0	8	6.7
10-14 years	2	1	1	0	0	4	3.3
15-19 years	4	0	1	0	0	5	4.2
20-24 years	9	0	3	0	0	12	10.0
25-44 years	6	1	2	1	0	10	8.3
45-64 years	8	3	8	4	0	23	19.2
65+ years	11	2	12	6	1	32	26.7
Total	66	9	32	12	1	120	

~No cases of group A, X, Z/E and ungroupable were confirmed during the period summarised in the table.

*Other includes ungrouped (ungroupable refers to invasive clinical meningococcal isolates that were non-groupable, while ungrouped cases refers to culture-negative but PCR screen (ctrA) positive and negative for the four genogroups [B, C, W and Y] routinely tested for).

References

1. Data source: PHE Meningococcal Reference Unit, Manchester.
2. PHE and NHS England (22 June 2015). Introduction of Men B immunisation for infants. (Bipartite letter.)
3. Quarterly vaccination coverage statistics for children aged up to five years in the UK (COVER programme): HPR 13(34), 27 September 2019.
4. Parikh SR, Andrews NJ, Beebeejaun K, Campbell H, Ribeiro S, Ward C et al (27 October 2016). Effectiveness and impact of a reduced infant schedule of 4CMenB vaccine against group B meningococcal disease in England: a national observational cohort study, Lancet 388 (10061), 2775-2782.
5. PHE (2015). Continuing increase in meningococcal group W (MenW) disease in England. HPR 9(7): news.
6. PHE and NHS England (22 June 2015). Meningococcal ACWY conjugate vaccination (MenACWY). (Bipartite letter.)
7. PHE website. Meningococcal ACWY (MenACWY) vaccination programme.
8. PHE (2018). Vaccine coverage for the GP based catch-up meningococcal ACWY (MenACWY) immunisation programme in England to the end of March 2018. HPR 12(18), 25 May 2018
9. PHE (2019) Vaccine coverage estimates for the school based meningococcal ACWY (MenACWY) adolescent vaccination programme in England, to 31 August 2018, HPR 13(3), 25 January 2019
10. GOV website (2018) JCVI statement on meningococcal vaccination, 24 October 2018
11. PHE (2016) "Impact of MenB vaccination programme in England", HPR 10(37), 28 October 2016.
12. Campbell H, Edelstein M, Andrews N, Borrow R, Ramsay M, Ladhani S, et al (2017). Emergency Meningococcal ACWY vaccination program for teenagers to control group W meningococcal disease, England, 2015–2016. Emerg. Infect. Dis. **23(7)**, 1184-1187.

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-class science, research, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health, and are a distinct delivery organisation with operational autonomy to advise and support government, local authorities and the NHS in a professionally independent manner.

About Health Protection Report

Health Protection Report is a national public health bulletin for England and Wales, published by Public Health England. It is PHE's principal channel for the dissemination of laboratory data relating to pathogens and infections/communicable diseases of public health significance and of reports on outbreaks, incidents and ongoing investigations.

Public Health England, Wellington House, 133-155 Waterloo Road, London SE1 8UG
Tel: 020 7654 8000 www.gov.uk/phe

Twitter: [@PHE_uk](https://twitter.com/PHE_uk) Facebook: www.facebook.com/PublicHealthEngland

Queries relating to this document should be directed to:

Immunisation, Hepatitis and Blood Safety Department,
National Infection Service, PHE Colindale,
61 Colindale Avenue, London NW9 5EQ.

immunisation@phe.gov.uk

© Crown copyright 2019

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v3.0. To view this licence, visit [OGL](https://www.ogil.io) or email psi@nationalarchives.gsi.gov.uk. Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Published: **September 2019**

PHE publications

gateway number: **2019123**

PHE supports the UN

Sustainable Development Goals

