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England

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Laboratory confirmed cases of invasive meningococcal infection (England): October to December 2018

Health Protection Report
Volume 13 Number 7
22 February 2019

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In England, the national Public Health England (PHE) Meningococcal Reference Unit (MRU) confirmed 144 cases of invasive meningococcal disease (IMD) between October and December 2018 [1]. IMD cases were 16% lower during these three months compared to 171 cases in the equivalent period in 2017 (table 1). MenB and MenC case totals were similar whilst MenW and MenY case numbers fell when compared to the same time period in 2017.

The age distribution of meningococcal capsular groups causing IMD is summarised in table 2, with capsular group B (MenB) accounting for 58% (84/144) of all cases, followed by MenW (n=25, 17%), MenY (n=18, 13%) and MenC (n=13, 9%).

There were 84 MenB cases confirmed between October and December 2018, similar to the equivalent period in 2017 (80 cases). In this quarter, the number of cases confirmed with MenW was 53% lower (25 cases) in 2018 than the equivalent period in 2017 (53 cases). MenY cases also fell by 28% from 25 to 18 cases whilst MenC in this quarter were similar to the number confirmed in the fourth quarter of 2017 (table 1). Whilst confirmed MenC cases remain very low, they have increased compared to recent years. There were no reported cases for capsular groups A, X and Z/E.

Between October and December 2018 MenB was responsible for most IMD cases in children aged less than five years of age (20/33, 61%) followed by MenW (21%, n=7). MenB also accounted for the majority of cases in individuals aged between 5 and 64 years (73%) but only accounted for 17% 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 (excluding London)¹ was 91.9% for two doses at 12 months of age and 87.7% for the booster dose by 24 months age (evaluated between July and September 2018) [3]. The two-dose infant MenB schedule has been shown to be highly effective in preventing MenB disease in infants [4].

¹ Due to data quality issues London data has been excluded from the national figures for the reported period.

Of the 25 MenW cases confirmed between October and December 2018, 44% (n=11) were aged 65 years or older followed children aged between aged less than 5 years old (n=7, 28%).

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 schools programme (school year 9 or 10) from autumn 2015.

National cumulative MenACWY vaccine coverage to the end of March 2018 was 39.8% for the third GP based catch-up cohort (aged 18-19 years during the 2017/2018 academic year), higher (6.8%) than the second GP based catch-up at the same point in the previous year (33.0%) [8].

Coverage for the first cohorts to be routinely offered MenACWY vaccine in schools from September 2015 and evaluated up to the end September 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 vaccination and the MenB infant programme continues to be monitored. A first 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: October to December 2017 and 2018

Capsular groups~	CULTURE AND PCR		CULTURE ONLY		PCR ONLY		Total	
	2017	2018	2017	2018	2017	2018	2017	2018
B	24	29	15	10	41	45	80	84
C	4	4	4	6	4	3	12	13
W	11	5	33	15	9	5	53	25
Y	7	2	12	13	6	3	25	18
Other*	0	0	0	3	1	1	1	4
Total	46	40	64	47	61	57	171	144

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

* Other includes ungrouped and ungroupable (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: October – December 2018

Age groups	Capsular Group~					Total	%
	B	C	W	Y	Other*		
<1 year	12	0	2	2	0	16	11.1
1-4 years	8	2	5	1	1	17	11.8
5-9 years	9	2	0	1	0	12	8.3
10-14 years	2	0	1	0	0	3	2.1
15-19 years	15	0	2	0	2	19	13.2
20-24 years	10	0	0	2	0	12	8.3
25-44 years	12	1	2	3	1	19	13.2
45-64 years	11	1	2	2	0	16	11.1
>=65 years	5	7	11	7	0	30	20.8
Total	84	13	25	18	4	144	

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

* Other includes ungrouped and ungroupable (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).

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Published: **February 2019**

PHE publications

gateway number: **2018769**

PHE supports the UN

Sustainable Development Goals

