Public Health England

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Laboratory confirmed cases of invasive meningococcal infection (England): July to September 2019

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In England, the national Public Health England (PHE) Meningococcal Reference Unit (MRU) confirmed 76 cases of invasive meningococcal disease (IMD) between July and September 2019 [1]. IMD cases were 18% lower during these three months compared to 93 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 67% (51/76) of all cases, followed by MenW (n=13, 17%), MenC (n=5, 7%) And MenY (n=4, 5%).

There were 51 MenB cases confirmed between July and September 2019, similar to the equivalent period in 2018 (54 cases). MenW cases were 28% lower (13 cases) than the number of cases confirmed in the same time period in 2018 (18 cases). In this quarter, the number of cases confirmed with MenC disease was 55% lower (5 cases) in 2019 than the equivalent period in 2018 (11 cases) and the number of MenY cases confirmed (4 cases) in this period in 2019 was 56% lower than the previous year (9 cases) (table 1). One confirmed case of capsular group X and two ungroupable cases were reported in this quarter. There were no reported cases for capsular groups A, Z/E and ungrouped during the reporting period.

Between July and September 2019, MenB was responsible for the majority of IMD cases in children aged less than five years of age (13/16, 81%), with one confirmed case of MenW, one MenY and one ungroupable also in this age group.

MenB also accounted for more than two-thirds of cases in individuals aged between 5 and 64 years (72%) and for 36% 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 92.3% for two doses at 12 months of age and 88.6% for the booster dose by 24 months of age (evaluated between July to September 2019 [3]. The two-dose infant MenB schedule has been shown to be highly effective in preventing MenB disease in infants [4].

Of the 13 MenW cases confirmed between July and September 2019, half (54%, 7 cases) were aged 65 years or older with adults aged between 25-64 years accounting for 31% of cases (4 cases). One child aged less than 5 years of age and one child aged between 5 and 9

years were confirmed with MenW disease. There were no confirmed cases in young people aged between 10 and 24 years.

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) [8].

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 higher MenACWY vaccine coverage in age groups now leaving school will lead to further reductions in MenW and maintain low levels of MenC disease across the population [9]

The impact of the MenACWY teenage and the MenB infant vaccination programmes continues to be monitored. Early assessment of the infant MenB programme [10] and MenACWY vaccination in the 2015 school leaver cohort have been published [11].

All teenage cohorts remain eligible for opportunistic MenACWY vaccination until their 25th birthday and it is important that these young people 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: July to September 2018 and 2019

Capsular groups~	CULTURE AND PCR		CULTURE ONLY		PCR ONLY		Total	
	2018	2019	2018	2019	2018	2019	2018	2019
B	21	16	9	8	24	27	54	51
C	1	2	8	2	2	1	11	5
W	4	1	12	11	2	1	18	13
Y	2	0	7	4	0	0	9	4
Other*	1	1	0	2	0	0	1	3
Total	29	20	36	27	28	29	93	76

~No cases of group A, Z/E and ungrouped were confirmed during the periods summarised in the table.
* Other includes group X 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: July – September 2019

Age groups	Capsular Group~					Total	%
	B	C	W	Y	Other*		
<1 year	7	0	1	1	1	10	13.2
1-4 years	6	0	0	0	0	6	7.9
5-9 years	7	0	1	0	0	8	10.5
10-14 years	4	0	0	0	0	4	5.3
15-19 years	6	0	0	0	0	6	7.9
20-24 years	3	1	0	0	0	4	5.3
25-44 years	4	2	2	0	1	9	11.8
45-64 years	9	1	2	2	1	15	19.7
65+ years	5	1	7	1	0	14	18.4
Total	51	5	13	4	3	76	

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