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Laboratory confirmed cases of invasive meningococcal infection (England): October to December 2019

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In England, the national Public Health England (PHE) Meningococcal Reference Unit (MRU) confirmed 180 cases of invasive meningococcal disease (IMD) between October and December 2019 [1]. IMD cases were 26% higher during these 3 months compared to 143 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 61% (109/180) of all cases, followed by MenW (n=37, 21%), MenY (n=20, 11%) and MenC (n=9, 5%).

There were 109 MenB cases confirmed between October and December 2019, 31% higher to the equivalent period in 2018 (83 cases). MenW cases were 48% higher (37 cases) than the number of cases confirmed in the same time period in 2018 (25 cases). In this quarter, the number of cases confirmed with MenC disease was 31% lower (9 cases) in 2019 than the equivalent period in 2018 (13 cases) and the number of MenY cases confirmed (20 cases) in this period in 2019 was similar to the previous year (18 cases) (Table 1). One confirmed case of capsular group E, 2 ungrouped and 2 ungroupable cases were reported in this quarter. There were no reported cases for capsular groups A and Z during the reporting period.

Between October and December 2019, MenB was responsible for the majority of IMD cases in children aged less than 5 years of age (31/38, 82%), with 4 confirmed cases of MenY, 2 confirmed cases of MenW and 1 confirmed case of MenC in this age group.

MenB also accounted for 61% of cases in individuals aged between 5 and 64 years 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 2 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 2-dose infant MenB schedule has been shown to be highly effective in preventing MenB disease in infants [4].

Of the 37 MenW cases confirmed between October and December 2019, 43% (16 cases) were aged 65 years or older with adults aged between 25 to 64 years accounting for 38% of cases (14 cases). Two children younger than 5 years and 2 children aged between 5 and 9 were confirmed with MenW disease. One child aged between 10 and 14 years and 2 teenagers/young adults aged between 15 and 24 years were confirmed with MenW disease during this period.

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 2019 was 88% (Year 9 in 2018/2019) and 86.7% (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. Assessment of the infant MenB programme [10,11] 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 young people continue to be encouraged to be immunised, particularly if they are entering higher education Institutions.

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

Capsular groups~	CULTURE AND PCR		CULTURE ONLY		PCR ONLY		Total	
	2018	2019	2018	2019	2018	2019	2018	2019
B	28	21	10	29	45	59	83	109
C	4	1	6	6	3	2	13	9
W	5	7	15	25	5	5	25	37
Y	2	6	13	10	3	4	18	20
Other*	0	0	3	3	1	2	4	5
Total	39	35	47	73	57	72	143	180

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

* Other includes group E, 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 4 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 to December 2019

Age groups (years)	Capsular Group ~					Total	%
	B	C	W	Y	Other*		
<1	16	1	1	4	0	22	12.2
1 to 4	15	0	1	0	0	16	8.9
5 to 9	14	0	2	3	0	19	10.6
10 to 14	1	1	1	0	1	4	2.2
15 to 19	18	0	1	3	1	23	12.8
20 to 24	13	0	1	0	0	14	7.8
25 to 44	9	1	7	1	0	18	10.0
45 to 64	10	4	7	5	2	28	15.6
65+	13	2	16	4	1	36	20.0
Total	109	9	37	20	5	180	

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

* Other includes group E, 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 4 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 5 years in the UK (COVER programme): [HPR 13\(41\), 13 December 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 (2019) [Vaccine coverage estimates for the school based meningococcal ACWY \(MenACWY\) adolescent vaccination programme in England, to 31 August 2019](#), [HPR 14\(2\)](#), 28 January 2020
9. GOV website (2018) [JCVI statement on meningococcal vaccination](#), 24 October 2018
10. PHE (2016) ["Impact of MenB vaccination programme in England"](#), [HPR 10\(37\)](#), 28 October 2016.
11. Ladhani S, Andrews N, Parikh S, Campbell H, et al (2020). [Vaccination of Infants with Meningococcal Group B Vaccine \(4CMenB\) in England](#).
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](#).

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