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Laboratory confirmed cases of invasive meningococcal infection (England): January to March 2018

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In England, the national Public Health England (PHE) Meningococcal Reference Unit (MRU) confirmed 287 cases of invasive meningococcal disease (IMD) between January and March 2018 [1]. IMD cases were 7.9% higher during these three months compared to 266 cases in the equivalent period in 2017 (table 1).

The age distribution of meningococcal capsular groups causing IMD is summarised in table 2, with capsular group B (MenB) accounting for 52% (149/287) of all cases, followed by MenW (n=73, 25%), MenY (n=40, 14%) and MenC (n=22, 7.7%).

There were 149 MenB and 73 MenW cases confirmed between January and March 2018 similar to the number of cases confirmed in the equivalent period in 2017 (146 MenB and 80 MenW cases). In this quarter the number of MenY cases confirmed was 48% higher (40 cases) than the equivalent period in 2017 (27 cases). Whilst confirmed MenC cases remain low, they have increased compared to recent years, from 11 cases between January and March 2017 to 22 in the equivalent period in 2018 (table 1). There were no reported cases for capsular groups A, X and Z/E.

Between January and March 2018 MenB was responsible for the majority of IMD cases in children aged less than five years of age (48/68, 71%) but, as expected, contributed to a lower proportion of cases in older age groups (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. Preliminary vaccine coverage estimates for infant MenB immunisation are 95.3% for one dose, 92.9% for two doses and 86.7% for the booster dose by 18 months age (evaluated between January and March 2018) [3]. The two-dose infant MenB schedule has been shown to be highly effective in preventing MenB disease in infants [4].

Of the 73 MenW cases confirmed between January and March 2018, 41% (n=30) were aged 65 years or older followed by adults aged 45 to 64 years (n=16, 22%). The increase in MenW cases, which has been previously reported [5,6], led to the introduction of MenACWY conjugate vaccine to the national immunisation programme in England [7,8].

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%) [9].

Coverage for the first cohorts to be routinely offered MenACWY vaccine in schools from September 2015 and evaluated up to the end August 2017 was 83.6% (Year 9 in 2016/2017), 82.5% (Year 10) 79.0% (Year 11) and 71.4% (Year 12) [10].

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. A first assessment of the MenACWY vaccination impact in the 2015 school leaver cohort has been published [11].

The impact of the MenACWY teenage vaccination and the MenB infant programme continue to be monitored.

Table 1. Invasive meningococcal disease in England by capsular group and laboratory testing method: January – March 2018

Capsular groups~	CULTURE AND PCR		CULTURE ONLY		PCR ONLY		Total	
	2017	2018	2017	2018	2017	2018	2017	2018
	Q1	Q1	Q1	Q1	Q1	Q1	Q1	Q1
B	39	32	31	42	76	75	146	149
C	4	4	3	7	4	11	11	22
W	13	12	59	46	8	15	80	73
Y	2	1	19	29	6	10	27	40
Other*	1	0	1	2	0	1	2	3
Total	59	49	113	126	94	112	266	287

~No cases of groups A and X were confirmed during the periods summarised in the table.

* Other includes Z/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 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: January – March 2018

Age groups	Capsular Group~					Total	%
	B	C	W	Y	Other*		
<1 year	20	5	7	1	1	34	11.8
1-4 years	28	1	5	0	0	34	11.8
5-9 years	15	1	0	1	1	18	6.3
10-14 years	3	0	0	1	0	4	1.4
15-19 years	32	1	2	2	0	37	12.9
20-24 years	11	0	6	2	1	20	7.0
25-44 years	7	3	7	6	0	23	8.0
45-64 years	18	6	16	10	0	50	17.4
>=65 years	15	5	30	17	0	67	23.3
Total	149	22	73	40	3	287	

~No cases of groups 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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