



Infection report

Volume 10 Number 44 Published on: 16 December 2016

Invasive meningococcal disease (laboratory reports in England): England: July to September 2016

In England, the national PHE Meningococcal Reference Unit (MRU) confirmed 134 cases of invasive meningococcal disease (IMD) between July and September 2016 [1]. IMD cases were 19% higher during these three months compared to 113 cases in the equivalent period in 2015 (table 1).

The distribution of meningococcal capsular groups causing IMD by age is summarised in table 2, with capsular group B (MenB) accounting for 46% (61/134) of all cases, followed by MenW (n=43, 32%), MenY (n=23, 17%), MenC (n=6, 4%) and one ungrouped. The number of cases of MenB and MenC IMD confirmed between July and September 2016 were similar to the same period last year. The number of confirmed cases of MenW IMD increased by 65% from 26 in the same period last year to 43 cases and MenY increased by 92% from 12 to 23 cases. There were no reported cases for capsular groups A, X and Z/E (table 1) in England between July and September 2016.

Between July and September 2016 MenB was responsible for over half of IMD cases in infants (5/9, 56%) and the majority of IMD confirmed in toddlers (16/20, 80%) 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 those eligible for infant MenB immunisation are 94.3% for one dose and 91.5% for two doses by 52 weeks of age (evaluated to the end of August 2016) [3]. Recent assessment of the infant MenB programme has shown the two-dose schedule to be highly effective in preventing MenB disease in infants [4].

Over a third of the 43 MenW cases between July and September 2016 were in adults aged 65 years or older (42%, 18/43) followed by individuals aged between 15 and 24 years (n=9). Seven children under five years of age were confirmed with MenW IMD in England.

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]. MenACWY vaccine replaced the existing time-limited ‘freshers’ programme from August 2015 and was directly substituted for MenC vaccine in the routine adolescent schools programme (school year 9 or 10) from Autumn 2015. Preliminary coverage data for the first cohorts to be routinely offered MenACWY vaccine in schools from September 2015 (Year 9 and 10 in 2015/16) and evaluated up to the end of August 2016 was 84.1% (Year 9), 77.2% (Year 10) and 71.8% for the catch-up cohort (Year 11 in 2015/16) [9].

In addition, a GP-based catch-up campaign has been implemented for school leavers in 2015 (aged 18 on 31 August 2015) who were prioritised for the first phase of the GP-based catch-up that began in August 2015. Cumulative vaccine coverage was 38.3% when evaluated at the end of October 2016, compared to 35.2% at the end of March 2016 [10]. A second GP-based catch-up campaign started in April 2016, targeting school leavers in 2016. The early vaccine coverage estimates for the second MenACWY catch-up programme (individuals aged 18 on 31 August 2016) and evaluated from April 2016 to the end of October 2016 was 29.5%, compared to 17.4% to the end of August 2016 [10].

All teenage cohorts remain eligible for MenACWY vaccination until the age of 25 and it is important that these teenagers continue to be encouraged to be immunised, particularly if they are entering Higher Education Institutions. The early impact of the MenACWY teenage vaccination programme is being assessed.

Table 1. Invasive meningococcal disease in England by capsular group and laboratory testing method: July – September 2016

Capsular groups~	CULTURE AND PCR		CULTURE ONLY		PCR ONLY		Total	
	2015	2016	2015	2016	2015	2016	2015	2016
	Q3	Q3	Q3	Q3	Q3	Q3	Q3	Q3
B	19	13	13	14	33	34	65	61
C	2	2	2	1	2	3	6	6
W	5	7	20	29	1	7	26	43
Y	2	4	9	16	1	3	12	23
Ungrouped*	0	0	0	0	3	1	3	1
Ungroupable*	0	0	1	0	0	0	1	0
Total	28	26	45	60	40	48	113	134

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

* 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 2016

Age groups	Capsular Group~										Q3 Total	
	B		C		W		Y		Other*			
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
<1 year	5	8.2	1	16.7	3	7.0	0	-	0	-	9	6.7
1-4 years	16	26.2	0	-	4	9.3	0	-	0	-	20	14.9
5-9 years	9	14.8	1	16.7	0	-	1	4.3	0	-	11	8.2
10-14 years	1	1.6	0	-	0	-	1	4.3	0	-	2	1.5
15-19 years	13	21.3	0	-	5	11.6	1	4.3	1	100	20	14.9
20-24 years	3	4.9	0	-	4	9.3	0	-	0	-	7	5.2
25-44 years	5	8.2	1	16.7	2	4.7	1	4.3	0	-	9	6.7
45-64 years	4	6.6	2	33.3	7	16.3	5	21.7	0	-	18	13.4
>=65 years	5	8.2	1	16.7	18	41.9	14	60.9	0	-	38	28.4
Total	61		6		43		23		1		134	

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

* Other includes Ungrouped.

References

1. Data source: PHE Meningococcal Reference Unit, Manchester.
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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.
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6. [“Freshers told ‘it’s not too late’ for meningitis C vaccine”](#) PHE press release: 27 November 2014.
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10. PHE (2016) [HPR 10\(41\)](#), 25 November 2016.