



## Infection report

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### Invasive meningococcal disease (laboratory reports in England): England: October to December 2016

In England, the national Public Health England (PHE) Meningococcal Reference Unit (MRU) confirmed 201 cases of invasive meningococcal disease (IMD) between October and December 2016 [1]. IMD cases were 13% lower during these three months compared to 232 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 55% (110/201) of all cases, followed by MenW (n=59, 29%), MenY (n=19, 9%), MenC (n=10, 5%) and three ungrouped. The number of MenY cases confirmed between October and December 2016 decreased by 24% from 25 cases reported in the same period in 2015 to 19 cases and confirmed MenB cases decreased by 18% from 134 to 110 cases while confirmed cases of MenC and MenW were similar. There were no reported cases for capsular groups A, X and Z/E (table 1).

Between October and December 2016 MenB was responsible for over half of IMD cases in infants (14/23, 61%) and the majority of IMD confirmed in toddlers (38/45, 84%) 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 quarter of the 59 MenW cases confirmed between October and December 2016 were in adults aged 65 years or older (29%, 17/59) followed by individuals aged between 15 and 24 years (20%; n=12). Eleven (19%) children under 5 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].

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 Educations 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: October – December 2016**

Capsular groups~	CULTURE AND PCR		CULTURE ONLY		PCR ONLY		Total	
	2015	2016	2015	2016	2015	2016	2015	2016
	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4
B	31	30	24	21	79	59	134	110
C	4	4	2	4	3	2	9	10
W	10	13	44	34	9	12	63	59
Y	7	2	15	14	3	3	25	19
Ungrouped*	0	0	0	0	0	3	0	3
Ungroupable*	0	0	1	0	0	0	1	0
Total	52	49	86	73	94	79	232	201

~ 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: October – December 2016**

Age groups	Capsular Group~										Q3 Total	
	B		C		W		Y		Other*			
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
<1 year	14	12.7	1	10.0	5	8.5	1	5.3	2	66.7	23	11.4
1-4 years	38	34.5	0	-	6	10.2	0	-	1	33.3	45	22.4
5-9 years	9	8.2	0	-	1	1.7	1	5.3	0	-	11	5.5
10-14 years	1	0.9	0	-	3	5.1	1	5.3	0	-	5	2.5
15-19 years	13	11.8	0	-	9	15.3	2	10.5	0	-	24	11.9
20-24 years	10	9.1	1	10.0	3	5.1	0	-	0	-	14	7.0
25-44 years	5	4.5	3	30.0	4	6.8	0	-	0	-	12	6.0
45-64 years	8	7.3	1	10.0	11	18.6	4	21.1	0	-	24	11.9
>=65 years	12	10.9	4	40.0	17	28.8	10	52.6	0	-	43	21.4
Total	110		10		59		19		3		201	

~ 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.
2. PHE and NHS England (22 June 2015). [Introduction of Men B immunisation for infants](#). (Bipartite letter.)
3. PHE (2016). [Meningococcal B immunisation programme: vaccine coverage estimates: report to end of August 2016](#). *HPR* **10**(32), 23 September 2016.
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. "[Freshers told 'it's not too late' for meningitis C vaccine](#)" PHE press release: 27 November 2014.
7. PHE and NHS England (22 June 2015). [Meningococcal ACWY conjugate vaccination \(MenACWY\)](#). (Bipartite letter.)
8. PHE website. [Meningococcal ACWY \(MenACWY\) vaccination programme](#).
9. PHE (2016) [HPR 10\(44\)](#), 16 December 2016
10. PHE (2016) [HPR 10\(41\)](#), 25 November 2016.