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Invasive meningococcal disease (laboratory reports in England): January to March 2017

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Laboratory confirmed cases of invasive meningococcal infection (England): January to March 2017

In England, the national Public Health England (PHE) Meningococcal Reference Unit (MRU) confirmed 266 cases of invasive meningococcal disease (IMD) between January and March 2017 [1]. IMD cases were 3% lower during these three months compared to 273 cases in the equivalent period in 2016 (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% (146/266) of all cases, followed by MenW (n=80, 30%), MenY (n=27, 10%), MenC (n=11, 4%), one capsular group E and one ungroupable.

The number of MenW cases confirmed between January and March 2017 increased by 11% from 72 cases in the same period in 2016 to 80. The number of MenC cases confirmed during this period in 2017 decreased by a 35% from 17 cases reported in the same period in 2016 to 11 and confirmed MenY decreased by 23% from 35 to 27 cases while confirmed cases of MenB were similar. There were no reported cases for capsular groups A, X and Z (table 1).

Between January and March 2017 MenB was responsible for the majority of IMD cases in infants (19/25, 76%) and toddlers (33/46, 72%) 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 95.8% for one dose, 93.5% for two doses and 87.9 for the booster dose by 18 months age (evaluated to the end of February 2017) [3]. The two-dose infant MenB schedule has been shown to be highly effective in preventing MenB disease in infants [4].

Almost half of the 80 MenW cases confirmed between January and March 2017 were in adults aged 65 years or older (44%, 35/80) followed by individuals aged 45 to 64 years (20%; 16/80). Infants and toddlers accounted for 20% (n=16) of MenW IMD and young adults aged between 15 and 24 years for 6.3% (n=5) of MenW cases 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 [2,7]. 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) [8]. Vaccine coverage estimates for the first cohort through the GP based catch-up programme (individuals born from 1 September 1996 to 31 August 1997) and evaluated from August 2015 to end March 2017 was 38.9% and 33.0% for the second cohort, born 1 September 1997 to 31 August 1998, and evaluated from April 2016 to the end of March 2017 [9].

All teenagers born between 01/09/1998-31/08/1999 (2017 school leaver cohort) are now eligible for urgent catch-up with MenACWY vaccination. These young people should be invited

by their GP practice for vaccination. All teenage cohorts remain eligible for opportunistic 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. Early analysis of the MenACWY teenage vaccination programme has shown high effectiveness with no cases vaccinated under the current programme [11].

Table 1. Invasive meningococcal disease in England by capsular group and laboratory testing method: January – March 2017

Capsular groups~	CULTURE AND PCR		CULTURE ONLY		PCR ONLY		Total	
	2016	2017	2016	2017	2016	2017	2016	2017
	Q1	Q1	Q1	Q1	Q1	Q1	Q1	Q1
B	31	36	23	31	92	79	146	146
C	3	4	9	3	5	4	17	11
W	14	13	49	59	9	8	72	80
Y	10	2	22	19	3	6	35	27
Other*	0	1	0	1	3	0	3	2
Total	58	56	103	113	112	97	273	266

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

* Other includes group E 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 2017

Age groups	Capsular Group~										Q3 Total	
	B		C		W		Y		Other*			
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
<1 year	19	13.0	1	9.1	5	6.3	0	-	0	-	25	9.4
1-4 years	33	22.6	2	18.2	11	13.8	0	-	0	-	46	17.3
5-9 years	12	8.2	1	9.1	3	3.8	1	3.7	1	50.0	18	6.8
10-14 years	6	4.1	0	-	1	1.3	1	3.7	0	-	8	3.0
15-19 years	20	13.7	2	18.2	2	2.5	2	7.4	1	50.0	27	10.2
20-24 years	16	11.0	0	-	3	3.8	1	3.7	0	-	20	7.5
25-44 years	10	6.8	4	36.4	4	5.0	5	18.5	0	-	23	8.6
45-64 years	13	8.9	0	-	16	20.0	3	11.1	0	-	32	12.0
>=65 years	17	11.6	1	9.1	35	43.8	14	51.9	0	-	67	25.2
Total	146		11		80		27		2		266	

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

* Other includes group E 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).

References

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