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England

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Laboratory confirmed cases of invasive meningococcal infection (England): April to June 2017

Health Protection Report
Volume 11 Number 34
29 September 2017

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In England, the national Public Health England (PHE) Meningococcal Reference Unit (MRU) confirmed 146 cases of invasive meningococcal disease (IMD) between April and June 2017 [1]. IMD cases were 25% lower during these three months compared to 195 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 54% (79/146) of all cases, followed by MenW (n=43, 29%), MenY (n=10, 7%), MenC (n=11, 8%), and three ungrouped.

The number of MenB cases confirmed between April and June 2017 decreased by a quarter (24%) from 104 cases in the same period in 2016 to 79 and the number of MenW cases decreased by 14% from 50 cases in the same period in 2016 to 43. The number of Men Y cases confirmed during this period in 2017 decreased by 67% from 30 to 10 cases while confirmed cases of MenC were similar. There were no reported cases for capsular groups A, X, Z/E and ungroupable (table 1).

Between April and June 2017 MenB was responsible for the majority of IMD cases in infants (9/17, 56%) and toddlers (24/31, 77%) 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].

Over a quarter of the 43 MenW cases confirmed between April and June 2017 were in adults aged 65 years or older (28%, 12/43) followed by individuals aged 45 to 64 years (19%; 8/43). Infants and toddlers accounted for 28% (n=12) of MenW IMD and young adults aged between 15 and 24 years for 12% (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 [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]. 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 [10].

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: April – June 2017

Capsular groups~	CULTURE AND PCR		CULTURE ONLY		PCR ONLY		Total	
	2016	2017	2016	2017	2016	2017	2016	2017
	Q2	Q2	Q2	Q2	Q2	Q2	Q2	Q2
B	31	18	20	16	53	45	104	79
C	0	1	8	6	2	4	10	11
W	6	10	29	24	15	9	50	43
Y	3	2	20	7	7	1	30	10
Other*	0	0	1	0	0	3	1	3
Total	40	31	78	53	77	62	195	146

~No cases of groups A, X or 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 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: April – June 2017

Age groups	Capsular Group~					Total	%
	B	C	W	Y	Other*		
<1 year	9	2	5	0	1	17	11.6
1-4 years	24	0	7	0	0	31	21.2
5-9 years	9	2	1	0	0	12	8.2
10-14 years	2	2	0	2	0	6	4.1
15-19 years	11	0	3	1	1	16	11.0
20-24 years	5	0	2	1	1	9	6.2
25-44 years	5	1	5	1	0	12	8.2
45-64 years	6	2	8	1	0	17	11.6
>=65 years	8	2	12	4	0	26	17.8
Total	79	11	43	10	3	146	

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

* Other includes ungrouped (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

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 February 2017. *HPR* **11**(13), 31 March 2017.
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 (2017) *HPR* **11**(16), 28 April 2017
11. Campbell H, Edelstein M, Andrews N, Borrow R, Ramsay M, Ladhani S, et al. Emergency Meningococcal ACWY Vaccination Program for Teenagers to Control Group W Meningococcal Disease, England, 2015–2016. *Emerg Infect Dis.* 2017;**23**(7):1184-1187.
<https://dx.doi.org/10.3201/eid2307.170236>.

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Published June 2017

PHE publications gateway number: 2017419

