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# Laboratory confirmed cases of invasive meningococcal infection (England): July to September 2018

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# Laboratory confirmed cases of invasive meningococcal infection (England): July to September 2018

In England, the national Public Health England (PHE) Meningococcal Reference Unit (MRU) confirmed 92 cases of invasive meningococcal disease (IMD) between July and September 2018 [1]. IMD cases were 24% lower during these three months compared to 121 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 57% (52/92) of all cases, followed by MenW (n=18, 20%), MenC (n=11, 12%) and MenY (n=9, 10%).

There were 52 MenB cases confirmed between July and September 2018, 31% lower than the equivalent period in 2017 (75 cases). The number of cases confirmed with MenW, MenY and MenC in this quarter were similar to the number confirmed in the third quarter of 2017 (table 1). Whilst confirmed MenC cases remain very low, they have increased compared to recent years. There were no reported cases for capsular groups A, X and Z/E.

Between July and September 2018 MenB was responsible for the majority of IMD cases in children aged less than five years of age (30/32, 94%) 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. Vaccine coverage estimates for infant MenB immunisation across NHS England local teams ranged between 78.9% and 94.5 for two doses at 12 months of age and between 84.9% and 96.0% for the booster dose by 24 months age (evaluated between April and June 2018) [3]. The two-dose infant MenB schedule has been shown to be highly effective in preventing MenB disease in infants [4].

Of the 18 MenW cases confirmed between April and June 2018, 50% (n=9) were aged 65 years or older followed by adults aged 45 to 64 years (n=4, 22%). Two MenW cases were confirmed in children aged less than 5 years old. The earlier increase in MenW cases, which has been previously reported [5], led to the introduction of MenACWY conjugate vaccine to the national

immunisation programme in England [6,7]. 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%) [8].

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) [9].

In October 2018 the Joint Committee on Vaccination and Immunisation (JCVI) released a statement advising that the Department of Health and Social Care, Public Health England and the Chief Medical Officer will be supporting efforts to improve MenACWY vaccine coverage in young adults aged 18 to less than 25 years who are eligible for vaccination. It is anticipated that efforts to improve MenACWY vaccine coverage in this age group will lead to a reduction in cases of MenC and further reductions in MenW disease across the population [10]

The impact of the MenACWY teenage vaccination and the MenB infant programme continues to be monitored. A first assessment of the infant MenB programme [11] and MenACWY vaccination in the 2015 school leaver cohort have been published [12].

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.

**Table 1: Invasive meningococcal disease in England by capsular group and laboratory testing method: July to September 2017 and 2018**

| Capsular groups~ | CULTURE AND PCR | | CULTURE ONLY | | PCR ONLY | | Total | |
|---|---|---|---|---|---|---|---|---|
| | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 |
| B | 19 | 21 | 14 | 9 | 42 | 22 | 75 | 52 |
| C | 5 | 1 | 4 | 8 | 6 | 2 | 15 | 11 |
| W | 5 | 4 | 15 | 12 | 0 | 2 | 20 | 18 |
| Y | 1 | 2 | 7 | 7 | 2 | 0 | 10 | 9 |
| Other* | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 2 |
| Total | 30 | 29 | 41 | 36 | 50 | 27 | 121 | 92 |

~No cases of group 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).

**Table 2. Invasive meningococcal disease in England by capsular group and age group at diagnosis: July – September 2018**

| Age groups | Capsular Group~ | | | | | Total | % |
|---|---|---|---|---|---|---|---|
| | B | C | W | Y | Other* | | |
| <1 year | 9 | 0 | 1 | 0 | 0 | 10 | 10.9 |
| 1-4 years | 21 | 0 | 1 | 0 | 0 | 22 | 23.9 |
| 5-9 years | 5 | 0 | 0 | 0 | 0 | 5 | 5.4 |
| 10-14 years | 1 | 1 | 0 | 0 | 1 | 3 | 3.3 |
| 15-19 years | 5 | 0 | 0 | 0 | 0 | 5 | 5.4 |
| 20-24 years | 4 | 0 | 1 | 2 | 0 | 7 | 7.6 |
| 25-44 years | 3 | 1 | 2 | 1 | 0 | 7 | 7.6 |
| 45-64 years | 1 | 2 | 4 | 2 | 1 | 10 | 10.9 |
| >=65 years | 3 | 7 | 9 | 4 | 0 | 23 | 25.0 |
| Total | 52 | 11 | 18 | 9 | 2 | 92 | |

~No cases of group 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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