



## Infection (news) report

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### Continuing increase in meningococcal group W (MenW) disease in England

#### Summary

Meningococcal disease cases in England have been declining since the early 2000s. Within this overall decline, there has, however, been a slow and steady increase in invasive meningococcal disease due to capsular group W (MenW) since 2009. This increase appears to be due to expansion of a single hyper-virulent strain belonging to clonal complex 11 (cc11) and has been observed across all regions. MenW cases were not associated with travel, indicating that this strain is now endemic in England. Since 2011, MenW cases have been diagnosed across all age groups and are associated with higher case fatality than the more common meningococcal group B (MenB) cases [1].

#### Background

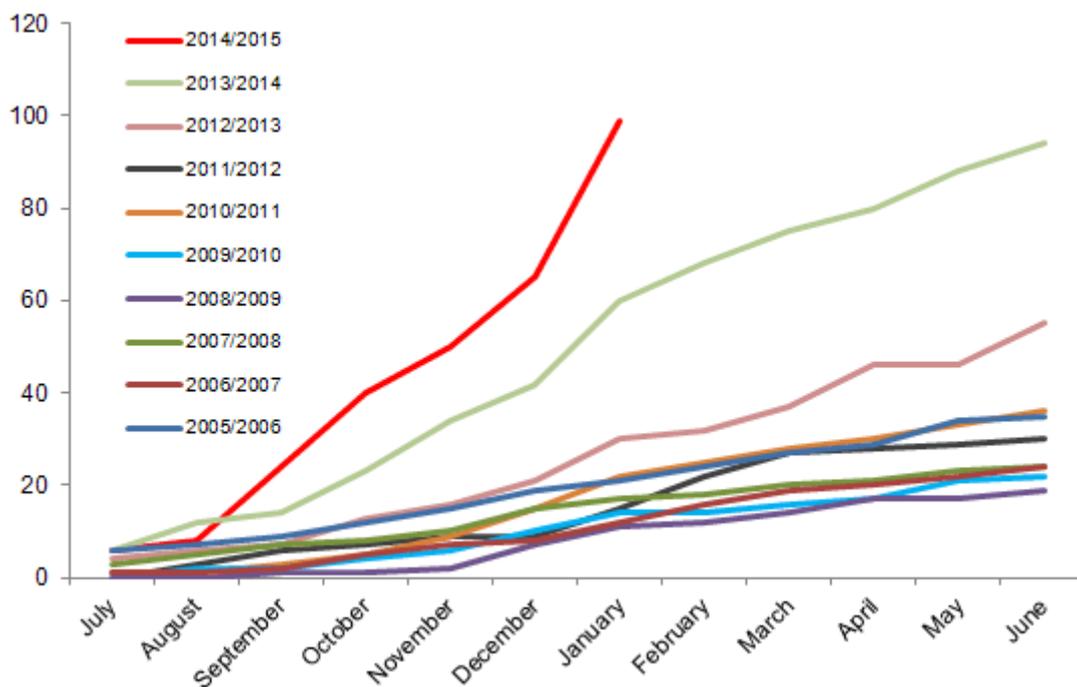
The incidence of invasive meningococcal disease (IMD) in the United Kingdom has been declining since the early 2000's because of the successful introduction of routine immunisation against meningococcal group C (MenC) and a secular decline in meningococcal group B (MenB) disease [2]. Historically, meningococcal group W (MenW) incidence has been low, accounting for only 1%–2% of IMD cases annually. An increase during 2000–2002 was associated with travel to the Hajj, but following mandatory meningococcal vaccination for pilgrims, MenW cases declined rapidly to pre-2000 levels.

Since 2009, however, MenW cases in England have increased year-on-year from 22 in 2009 to 117 in 2014 compared to 867 and 400 MenB cases, respectively. This increase now appears to be accelerating (see figure). In January 2015, there were 34 laboratory-confirmed MenW cases in England, compared to 18 in January 2014 and nine in January 2013. This increase is almost entirely due to endemic expansion of a single hypervirulent sequence type 11 (ST-11) strain belonging to clonal complex 11 (cc11). This clonal complex was previously associated with MenC and was responsible for the large MenC outbreak in the UK in the late 1990s.

MenW:cc11 cases were initially identified in adults but, by 2011, had extended across all age-groups. Between 2009 and 2012, MenW caused around four deaths every year, mainly among

the elderly. During 2013 and 2014, however, 24 of the 193 MenW cases died and, for the first time in the past decade, MenW-related deaths were observed in young children.

### Cumulative cases of laboratory-confirmed invasive meningococcal group W disease by epidemiological year in England, to end-January 2015



Unlike the international Hajj-associated MenW outbreak, the recent MenW cases were not associated with travel or recent entry into the UK, nor was there any evidence of clustering of cases. Most cases were diagnosed in healthy individuals who developed severe illness, often requiring intensive care support. There has also been an increase in MenW cases among students attending universities across the country, suggesting that this strain is now established in carriage.

Other than the UK, no European country has yet reported an increase in MenW disease. The current adolescent MenC immunisation programme targeting 14-year olds alongside a temporary catch-up campaign for new university entrants began in September 2013, but this vaccine does not protect against other meningococcal groups.

PHE is working with partners in Department of Health and NHS England to review potential options for responding to the increase in MenW nationally.

In the meantime, clinicians, microbiologists and Health Protection Teams should continue to be mindful of the increase in invasive MenW disease and maintain a high index of suspicion across all age groups. Early recognition and prompt initiation of specific and supportive therapy for patients with invasive MenW disease can be life-saving.

Relevant guidelines/FAQs are available at:

<https://www.gov.uk/government/collections/meningococcal-disease-guidance-data-and-analysis>

## References

1. Ladhani SN, Beebeejaun K, Lucidarme J, Campbell H, Gray S, Kaczmarski E, *et al* (2015). Increase in endemic *Neisseria meningitidis* capsular Group W sequence type 11 complex associated with severe invasive disease in England and Wales. *Clin Infect Dis.* **60**(4), 578-85.
  2. Invasive meningococcal disease (laboratory reports in England): October to December 2014, *HPR* **9**(7): infection report, 27 February 2015. See PHE website: [Meningococcal disease: laboratory confirmed cases in England and Wales](#).
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