

Meningococcal W meningitis and septicaemia: a new, virulent strain

- **Cases of meningococcal W disease are rising steeply in England and Wales**
- **Our genome library has identified the rise is due to a particularly virulent ST-11 strain**
- **The ST-11 strain is causing severe disease in healthy teenagers and young adults**
- **The cases are associated with a higher than usual death rate of 13%**
- **UK Government advisers have advised that 14-18 year olds be immunised with ACWY vaccine as soon as is practicable to prevent further increases in disease amongst the wider population**
- **17 and 18 year olds born between 1st September 1996 and 31st August 1997 and new starters at university under the age of 25 will be immunised first as they are most risk:**
 - **Eligible 17-18 year olds will be contacted by their GP and can be immunised from 1st August 2015**
 - **New starters at university older than 18 but younger than 25 are also eligible to receive the vaccine through their GP up until the end of March 2016, but will not be contacted by their GP about making an appointment**
 - **The MenC booster for 14 year olds will be directly replaced with MenACWY as of September 2015.**
 - **A catch up programme to vaccinate teenagers aged 14-17 who are not due the adolescent booster will take place over the next two years, although the catch up will be completed within one year in Scotland.**
 - **Babies will not be immunised with ACWY, but the MenB vaccine, Bexsero, would provide protection against this ST-11 strain**

Meningococcal infection has always been the leading cause of meningitis in the UK. Six different kinds, serogroups A, B, C, W, X, and Y cause the most disease. For decades meningococcal B has been the main serogroup, and meningococcal C was also common until the MenC vaccine was introduced, reducing cases to just a handful each year.

However, cases of meningococcal W (MenW) have risen year on year in England and Wales since 2009. Public Health England has shown that since 2008/9 when MenW accounted for only 1-2% of meningococcal cases, it has increased to cause 15% of cases in 2013/14.

Our meningococcal genome library has played a vital part in helping Public Health England to stay a step ahead of the game in the fight against meningococcal disease. Analysis of MenW isolates in the genome library has revealed that almost all of the increase in MenW disease is attributable to a particularly virulent type of meningococcal bacteria called ST-11¹.

The rise in this ST-11 MenW disease is particularly alarming because it is striking mainly healthy people across all age groups, with a marked spike amongst teenagers (figure 1) and cases are rising steeply. 34 cases were reported in January 2015 compared with 18 and 9 for the same time period over the previous two years².

The ST-11 strain is associated with severe illness which often requires treatment in intensive care and has a higher associated death rate than other strains of meningococcal disease, (13% case fatality compared to 5-10%)¹. This is the same strain that has been causing epidemic disease in Argentina, Brazil and in Chile, where it is associated with a death rate of 28%³ compared to 10% for other strains in the country.

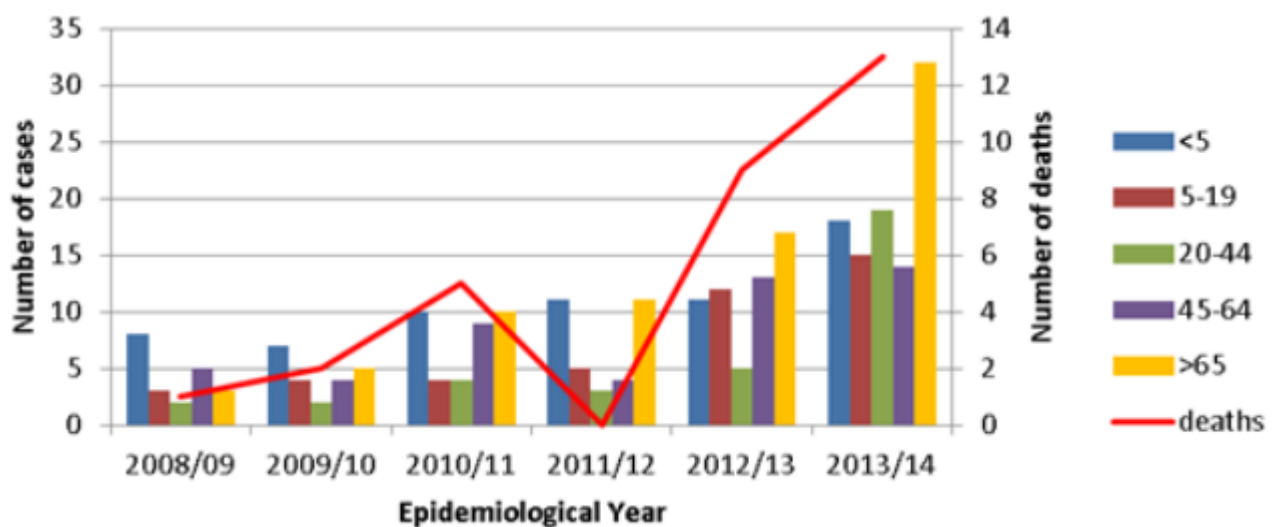


Figure 1: Number of laboratory confirmed cases of MenW disease and associated deaths by age group and year of diagnosis over six epidemiological years in England and Wales.

Source¹

As a direct result of this information, the government's vaccine advisers, the Joint Committee on Vaccination and Immunisation (JCVI) have advised that 14 to 18 year olds should be

immunised with ACWY vaccine as soon as possible to prevent rapid increases in disease amongst the rest of the population⁴. The Department of Health has accepted the JCVI's advice and is currently planning the implementation of a combined ACWY immunisation programme in this age group⁵.

How will the vaccination of 14 to 18 year olds protect the wider population?

Adolescents aged between 14 to 18 are more likely to carry meningococcal bacteria than any other age group and offering ACWY vaccine to all of them should stop the bacteria from being passed on. This means that even unvaccinated people will be protected from catching the disease – an effect known as herd protection.

Although we welcome the implementation of the ACWY vaccine amongst 14-18 year olds, it will take over a year for herd protection to establish so babies (who are particularly vulnerable to developing disease) will remain unprotected. However, it has been shown that the MenB vaccine Bexsero, to be brought in for children at 2, 4 and 12 months in the UK, would protect against this ST-11 MenW strain⁶.

Where can I go for further information and support?

Freephone helpline UK 080 88 00 33 44 Ireland 1800 41 33 444

email helpline@meningitis.org

Visit our website www.meningitis.org

References

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