Meningococcal disease notifications

This factsheet presents statistics on meningococcal notifications for children aged 0–14 years in New Zealand.

Key facts

- In 2018, there were 46 notifications (out of 120) of meningococcal disease in children aged 0–14 years in New Zealand.
- The rate of meningococcal disease notifications in children has doubled from 2.4 per 100,000 (22 notifications) in 2014 to 4.9 per 100,000 (46 notifications) in 2018.
- Meningococcal Group B continues to be the most dominant strain in children. However, there has been a sudden increase in Group W notifications in 2018.
- Infants (<1 year) have the highest notification rates of meningococcal disease in New Zealand since 2007.
- Māori and Pacific children continue to have the highest meningococcal disease notification rates.
- The meningococcal disease notification rate for children living in the most deprived areas (NZDep2013 quintile 5) was more than seven times as high as children living in the least deprived areas (quintile 1).
- In 2009–18, children living in Northland District Health Board (DHB) had the highest rate of meningococcal disease.

Meningococcal disease continues to be a major public health concern

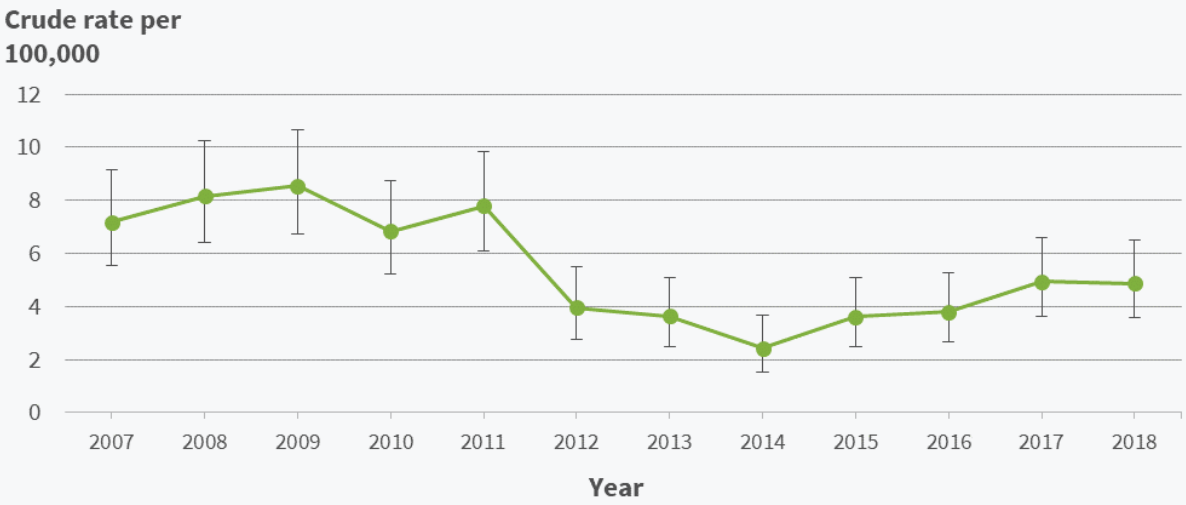
Meningococcal disease is a serious infection, which can cause meningitis (an infection of membranes that covers the brain), septicaemia (blood poisoning), and even death. Household crowding increases the risk of meningococcal disease, particularly in those aged 0–16 years (Baker et al 2013). Second-hand smoke exposure is also associated with an increased risk of meningococcal disease in children (Lee et al 2010; Murray et al 2012). This factsheet has therefore focussed on children aged 0–14 years.

Although there are several different groups of meningococcal bacteria, groups B and C are more likely to cause disease in New Zealand (ESR 2014). In New Zealand, there was a Meningococcal Group B disease outbreak from 1995–2004, which mostly affected children and young people (Martin and Lopez 2009). National rates dramatically decreased from 2004 onwards after a nationwide vaccination programme for those aged 0–19 years. Since mid-2017, there has been a sudden increase in Group W meningococcal disease (MenW) in New Zealand. This particular strain affects all age groups and is associated with a high case fatality rate (Ministry of Health 2018).

The rate of meningococcal notifications has doubled since 2014

In 2018, out of a total of 120 meningococcal disease notifications in New Zealand, 46 were children aged 0–14 years. The annual number of notifications for children has been increasing steadily since 2014, when there were 22 notifications, to 46 notifications in 2018. Similarly, the notification rate for meningococcal disease has doubled from 2.4 per 100,000 in 2014 to 4.9 per 100,000 in 2018 (Figure 1).

Figure 1 Notification rate for meningococcal disease in children aged 0–14 years, 2007–2018



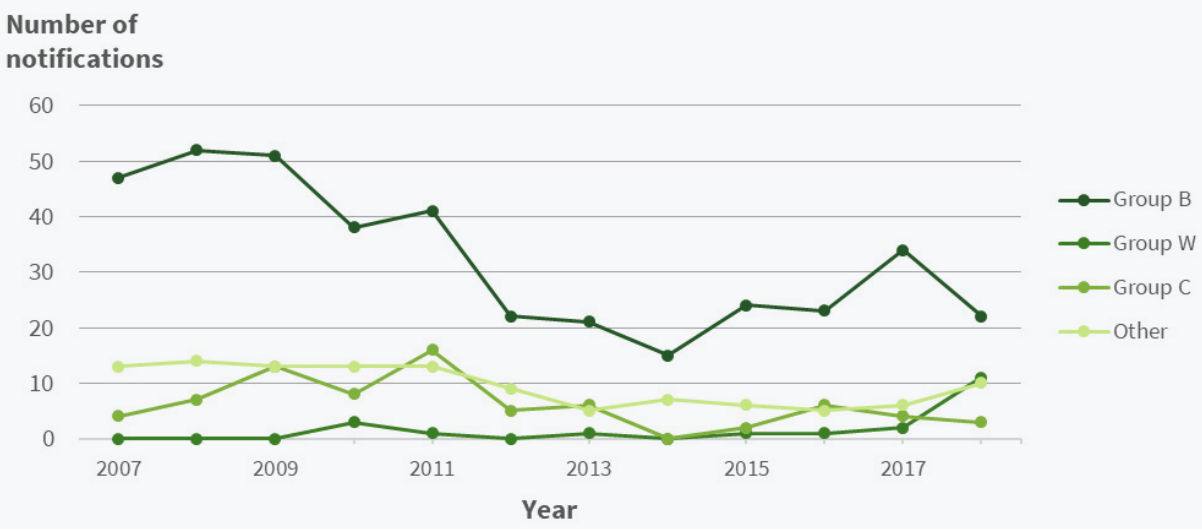
Source: EpiSurv, ESR.

Meningococcal Group B continues to be the most dominant strain in children

Since 2007, most notifications of meningococcal disease in children were for Group B (Figure 2). Group B notifications fluctuated from 23 in 2016, 34 in 2017, to 22 in 2018.

Meningococcal Group B continues to be the most prevalent of the serogroups in both children and adults. Since mid-2017, there has been a sudden rise in cases of MenW in adults and children (ESR 2019). The number of MenW notifications in children increased from two notifications in 2017 to 11 in 2018.

Figure 2 Number of meningococcal disease notifications in children aged 0–14 years, by serogroup, 2007–2018



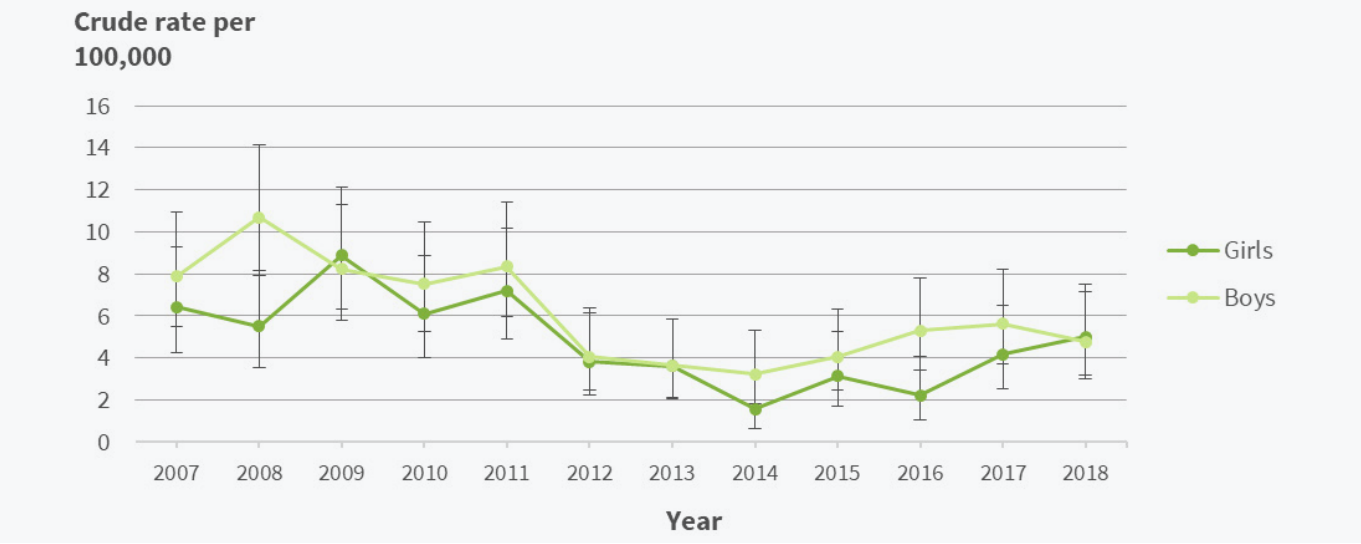
Note: 'Other' includes other serogroups (E, Y), non-groupable, other laboratory-confirmed cases, and unknowns.
Source: EpiSurv, ESR.

Boys and girls have similar notification rates for meningococcal disease

In 2018, there were 23 notifications of meningococcal disease in both boys and girls.

From 2007 to 2018, the meningococcal disease notification rate has mostly been similar for boys and girls (Figure 3).

Figure 3 Meningococcal disease notification rate in children aged 0–14 years, by sex, 2007–2018 (crude rate per 100,000 population)



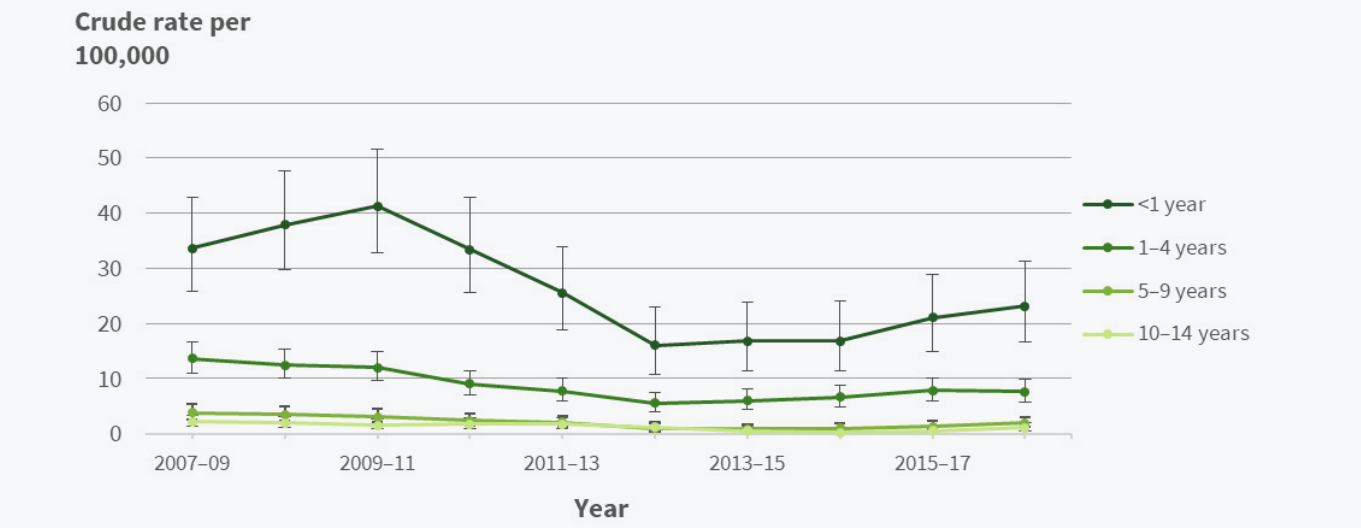
Source: EpiSurv, ESR.

Infants had the highest meningococcal disease rate

In 2018, infants (17 out of 46 notifications) and children 1–4 years (15 out of 46 notifications) had the highest number of meningococcal disease notifications. A further nine notifications were in children aged 5–9 years, and five notifications were in those aged 10–14 years.

Between 2007 and 2018, infants had the highest notification rates of meningococcal disease compared to their older counterparts (Figure 4).

Figure 4 Meningococcal disease notification rate in children aged 0–14 years, by age group, 2007–2018 (crude rate per 100,000 population)



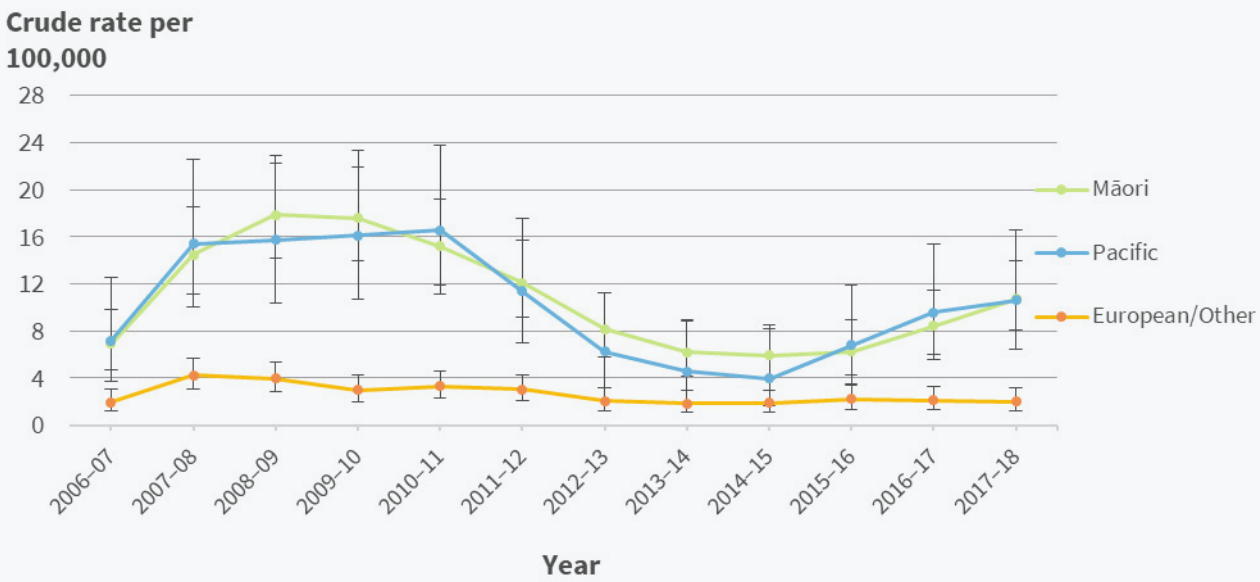
Source: EpiSurv, ESR.

Māori and Pacific children have much higher rates of meningococcal disease

In 2018, there were 25 notifications of meningococcal disease in Māori children, 10 notifications each in Pacific and European/Other children, and one in Asian children.

Between 2006 and 2018, Māori and Pacific children aged 0–14 years continue to experience higher meningococcal notification rates than their European/Other counterparts (Figure 5). Since 2014–15, rates for both Māori and Pacific children have been increasing while rates for European/Other children have been relatively stable.

Figure 5 Meningococcal disease notification rate in children aged 0–14 years, two-year moving averages, by ethnic group (prioritised), 2006–2018 (crude rate per 100,000)



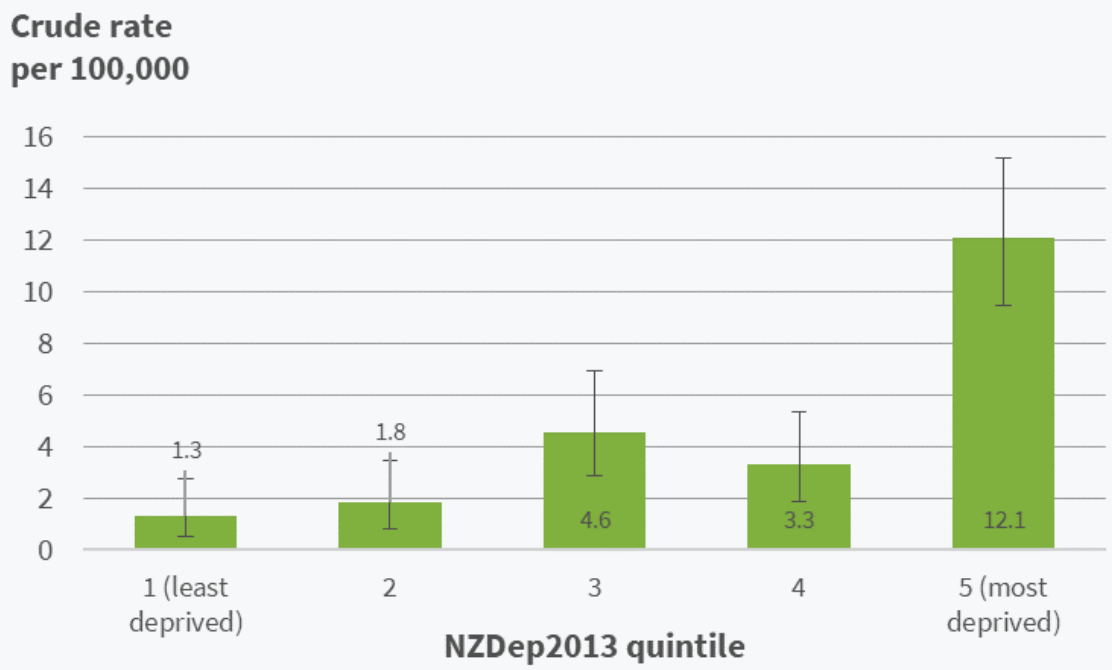
Note: The rate was suppressed for Asian children due to counts fewer than five.
Source: EpiSurv, ESR.

Higher rates of meningococcal disease in more deprived areas

Over half (25 out of 46 notifications) of the meningococcal disease notifications in children came from those living in the most deprived areas (NZDep2013 quintile 5) in 2018.

In 2016–18, children living in the most deprived areas had the highest notification rates (12.1 per 100,000) (Figure 6). Standardising for age, children living in the most deprived areas had more than seven times the rate of meningococcal disease as children living in the least deprived areas (standardised rate ratio 7.8, 95% confidence interval 3.6–17.0).

Figure 6 Meningococcal disease notification rate in children aged 0–14 years, by NZDep2013 quintiles, 2016–18 (crude rate per 100,000)



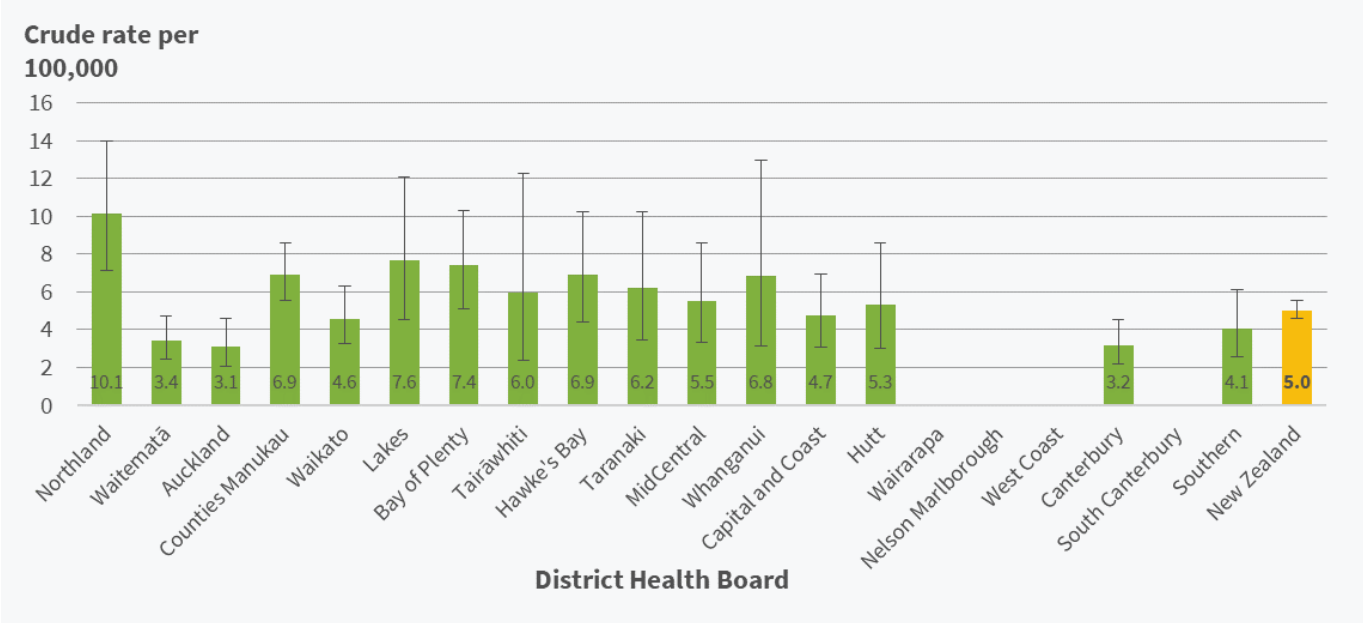
Source: EpiSurv, ESR.

Northland DHB had the highest rates of meningococcal disease in 2009–18

Of the 46 notifications of meningococcal disease in children 0–14 years in 2018, 10 were from Counties Manukau District Health Board (DHB), and five notifications each from Northland and Bay of Plenty DHBs.

In the ten years (2009–18), children living in the Northland DHB had the highest rate of meningococcal disease (10.1 per 100,000) (Figure 7). There have been several regional outbreaks over this time, including a recent outbreak of the group W disease in Northland in October 2018. The Ministry of Health then launched a targeted vaccination programme in December 2018 for those aged 9 months–4 years and 13–18 years to control the outbreak (ESR 2020).

Figure 7 Meningococcal notification rate in children aged 0–14 years, by District Health Board, 2009–18 (crude rate per 100,000)



Note: Rates were suppressed for Wairarapa, Nelson Marlborough, West Coast, and South Canterbury DHBs due to counts less than five.
Source: EpiSurv, ESR.

Data for this indicator

Data for this indicator come from the EpiSurv notifications surveillance database, from ESR. Notifications only cover those people who visited a GP or hospital treatment, and therefore may underestimate the true rate of disease in the population. For additional information, see the metadata link below.

95% confidence intervals have been presented as error bars on graphs.

Unless otherwise stated, all differences mentioned in the text between two values are statistically significant at the 5% level or less.

References

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Author

The author of this factsheet is Helene Marsters **ehinz@massey.ac.nz**

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Further information

For descriptive information about the data **Metadata Sheet**

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