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Rapu Mātauranga Hauora mo te Taiao – Aotearoa

Related indicators

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Meningococcal disease notifications

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

The number of meningococcal notifications dropped from 67 in 2019, to 16 in 2020.

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

Infants (under 1 year -year-old) continue to have the highest rate of meningococcal disease since 2001. They had 35 times the rate of meningococcal disease as children aged 10–14 years in 2018–20.

Pacific and Māori children had three to five times the rate of meningococcal disease than European/Other children.

Children living in the most deprived areas (NZDep 2018 quintile 5) had more than seven times the rate of meningococcal disease as children living in the least deprived areas (quintile 1).

Household crowding and second-hand smoke exposure increase the risk of meningococcal disease

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).

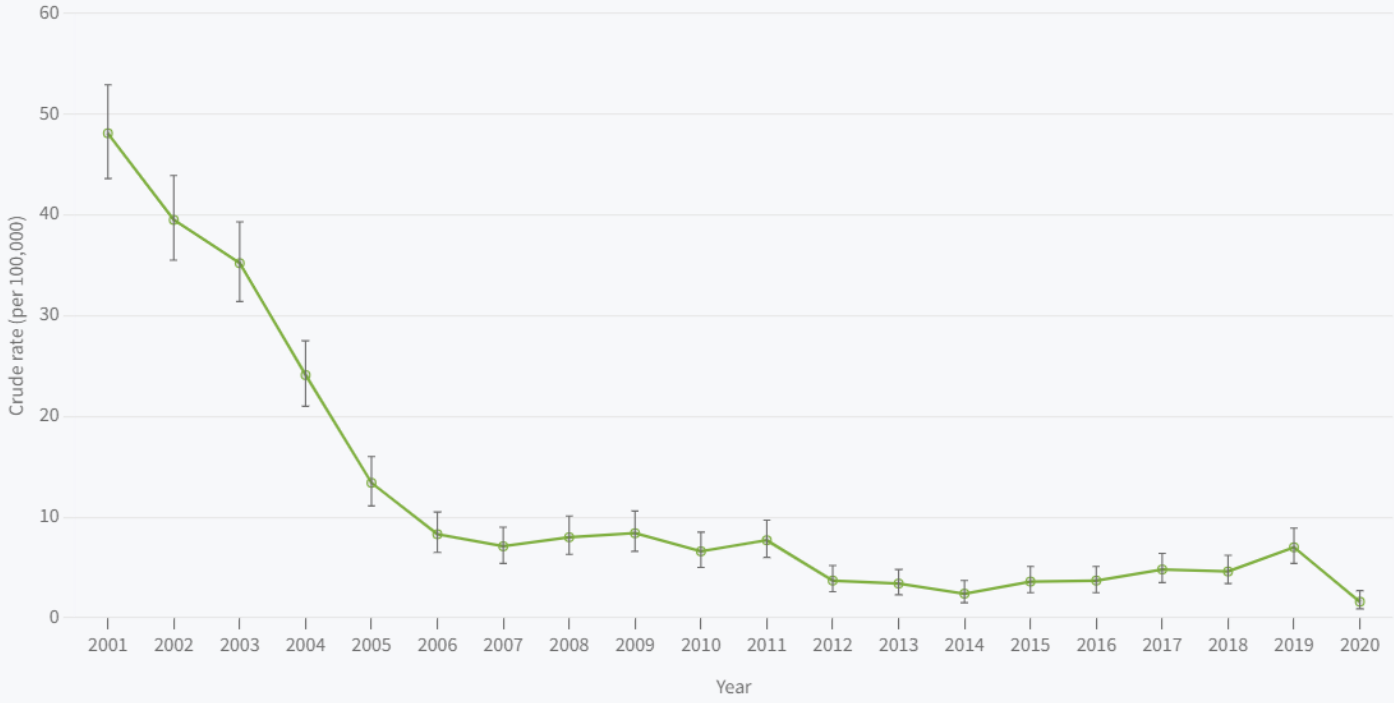
The COVID-19 pandemic may have impacted meningococcal disease spread

In March 2020, the New Zealand Government pursued an elimination strategy for COVID-19. New Zealand moved to Alert Level 4 (Lockdown) on 25 March 2020, along with temporary border closures, quarantine requirements, stay-at-home lockdown orders and strict public health measures. These control measures may have limited the transmission of meningococcal disease over the course of 2020 in New Zealand and overseas (Alderson et al 2022).

Meningococcal disease notification rate reached a new low in 2020

The rate of meningococcal disease notifications among children aged 0–14 years has substantially dropped from 7.0 per 100,000 (67 notifications) in 2019 to 1.6 per 100,000 (16 notifications) in 2020 (Figure 1). This is the lowest rate in the last 20 years. Since the onset of the COVID-19 pandemic, the number of meningococcal disease cases in New Zealand and several countries have declined substantially (Alderson et al 2022). While there has been a drop in meningococcal disease notification rates in 2020 due to lockdowns, it remains to be seen whether lower rates will continue as COVID-19 restrictions ease over time. Additionally, some studies have shown decreased meningococcal vaccination coverage among children, mainly due to lockdown regulations and parents' concern about visiting health services where they might get infected by COVID-19 (Harris et al 2021; Taine et al 2021; WHO 2020).

Figure 1 Meningococcal disease notification rate in children aged 0–14 years, 2001–20 (crude rate per 100,000



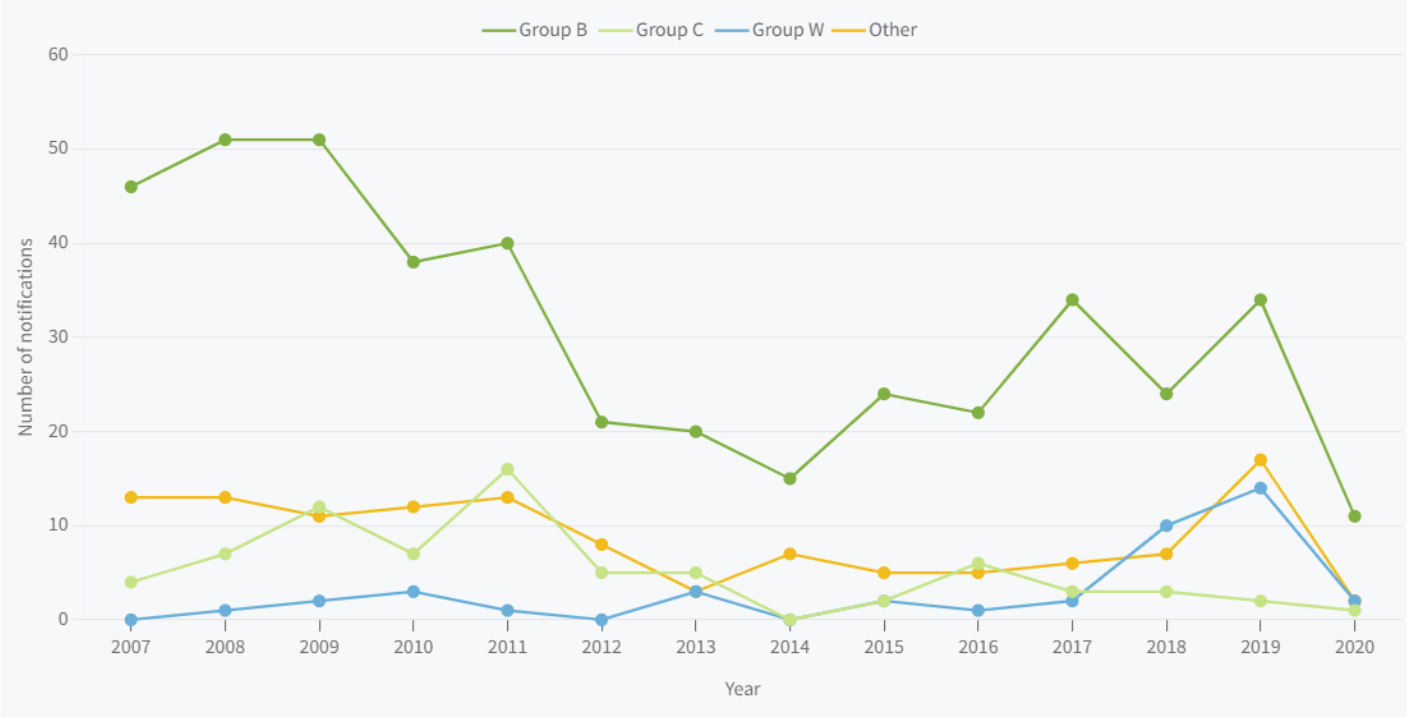
Note: 95% confidence intervals have been presented as error bars.

Source: EpiSurv, ESR 2021

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

From 2007, most notifications of meningococcal disease in children were for Group B (Figure 2). Since mid-2017, there has been a sudden increase in Group W meningococcal disease (MenW) in New Zealand. This strain affects all age groups and is associated with high case fatality rates (Ministry of Health 2018). In 2020, the number of notifications declined across most serotypes (Group B, W, and Other).

Figure 2 Meningococcal disease notification rate in children aged 0–14 years, by serotype, 2001–20 (crude rate per 100,000 population)



Note: Serotype data is only available from 2007 onwards.

Source: EpiSurv, ESR 2021

Infants continue to have the highest rate of meningococcal disease

Between 2001 and 2020, infants (under one-year-old) had the highest notification rates of meningococcal disease compared to their older counterparts (Figure 3). In 2018–20, the rate of meningococcal disease (29.3 per 100,000) among infants was 35 times higher than the rate (0.8 per 100,000) of children aged 10–14 years.

Figure 3 Meningococcal disease notification rate in children aged 0–14 years, by age group, three-year moving averages, 2001–20 (crude rate per 100,000 population)

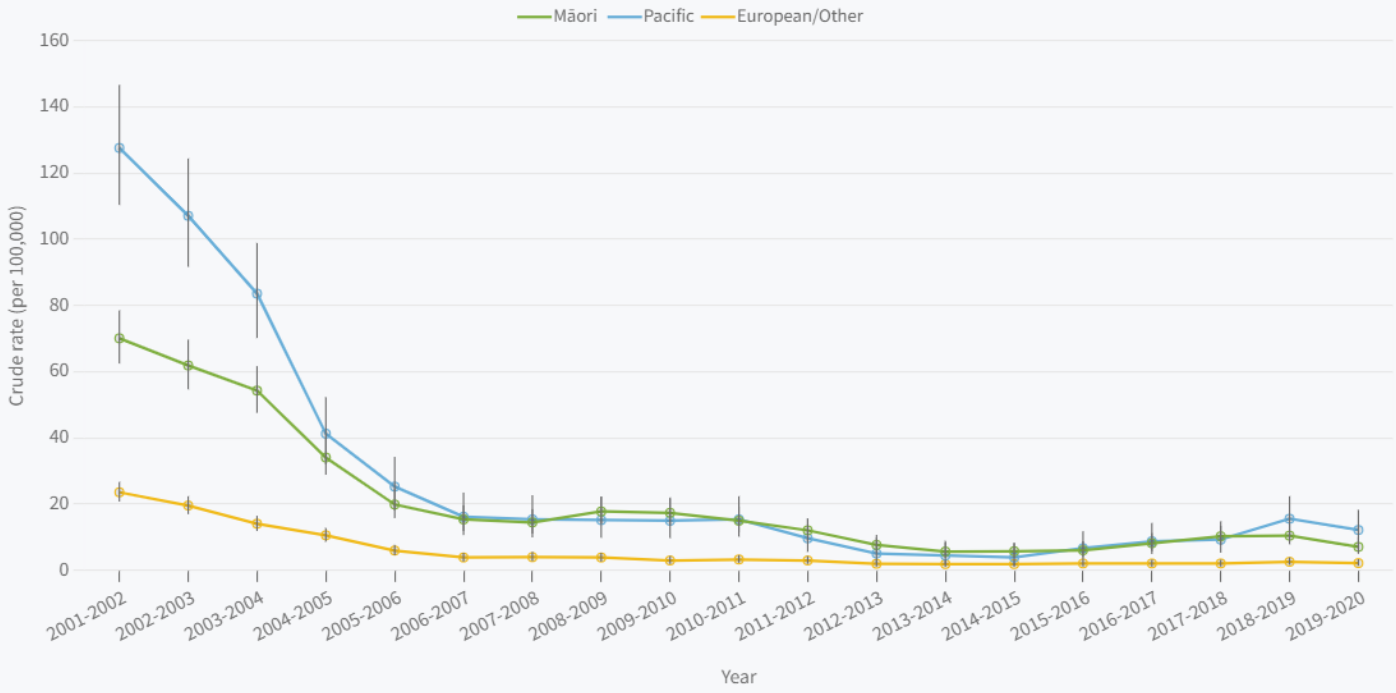
Note: 95% confidence intervals have been presented as error bars.

Source: EpiSurv, ESR 2021

Pacific and Māori children were disproportionately affected by meningococcal disease

Since 2001, Pacific and Māori children consistently had higher rates of meningococcal disease than European/Other children (Figure 4). In 2019–20, the meningococcal rate was five times higher in Pacific (12.2 per 100,000) than European/Other children (2.2 per 100,000). In Māori children, the rate (7.1 per 100,000) was three times higher than European/Other children.

Figure 4 Meningococcal disease notification rate in children aged 0–14 years, two-year moving averages, by ethnic group (prioritised), 2001–20 (crude rate per 100,000)



Note 1: The rate is suppressed for Asian children due to an unreliable estimate with small numbers. See Metadata for more information on how to interpret this graph.

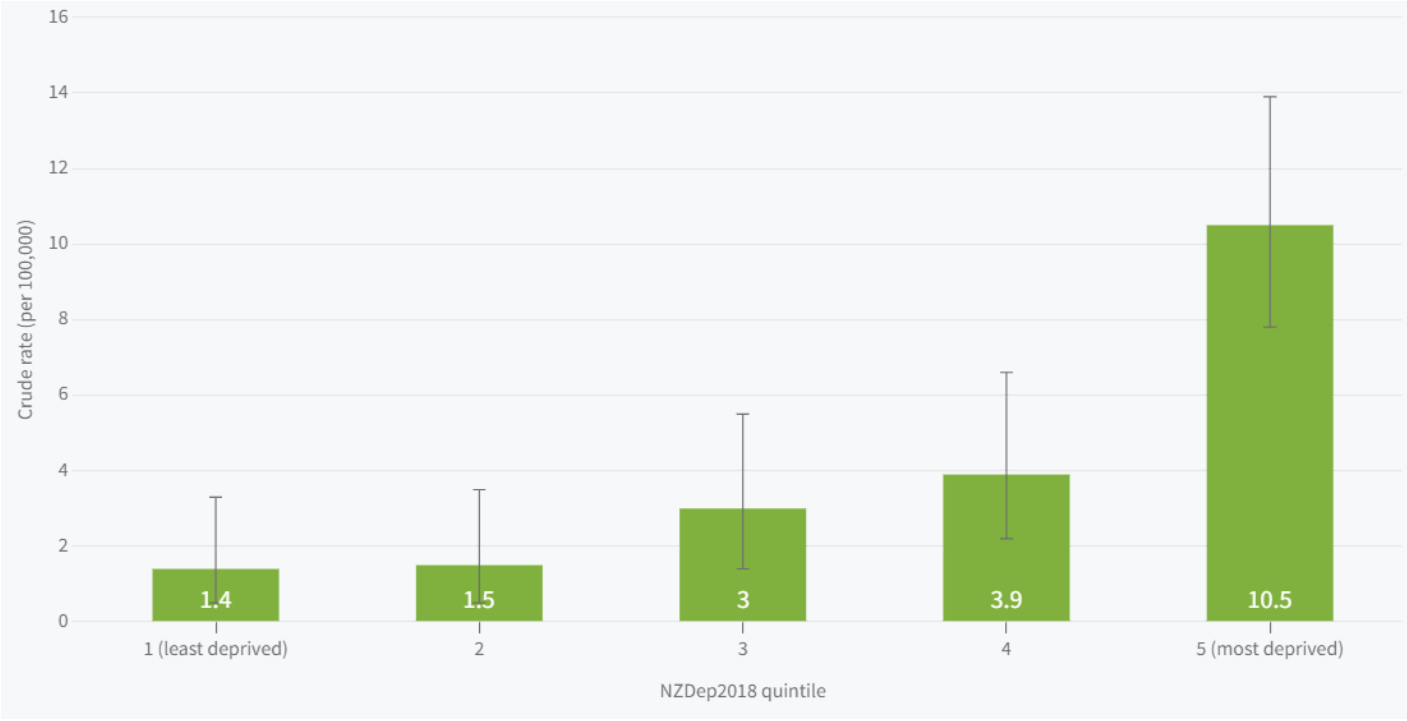
Note 2: 95% confidence intervals have been presented as error bars.

Source: EpiSurv, ESR 2021

Higher meningococcal disease notification rates in more deprived areas

In 2019–20, the meningococcal disease notification rate (10.5 per 100,000) for children living in the most deprived areas (NZDep2018 quintile 5) was much higher than for those living in the least deprived areas (quintile 1) (1.4 per 100,000) (Figure 5). Children living in the most deprived areas had more than seven times (Rate ratio=7.4) the rate of meningococcal disease as children living in the least deprived areas.

Figure 5 Meningococcal disease notification rate in children aged 0–14 years, by NZDep2018 quintiles, 2019–20 (crude rate per 100,000)



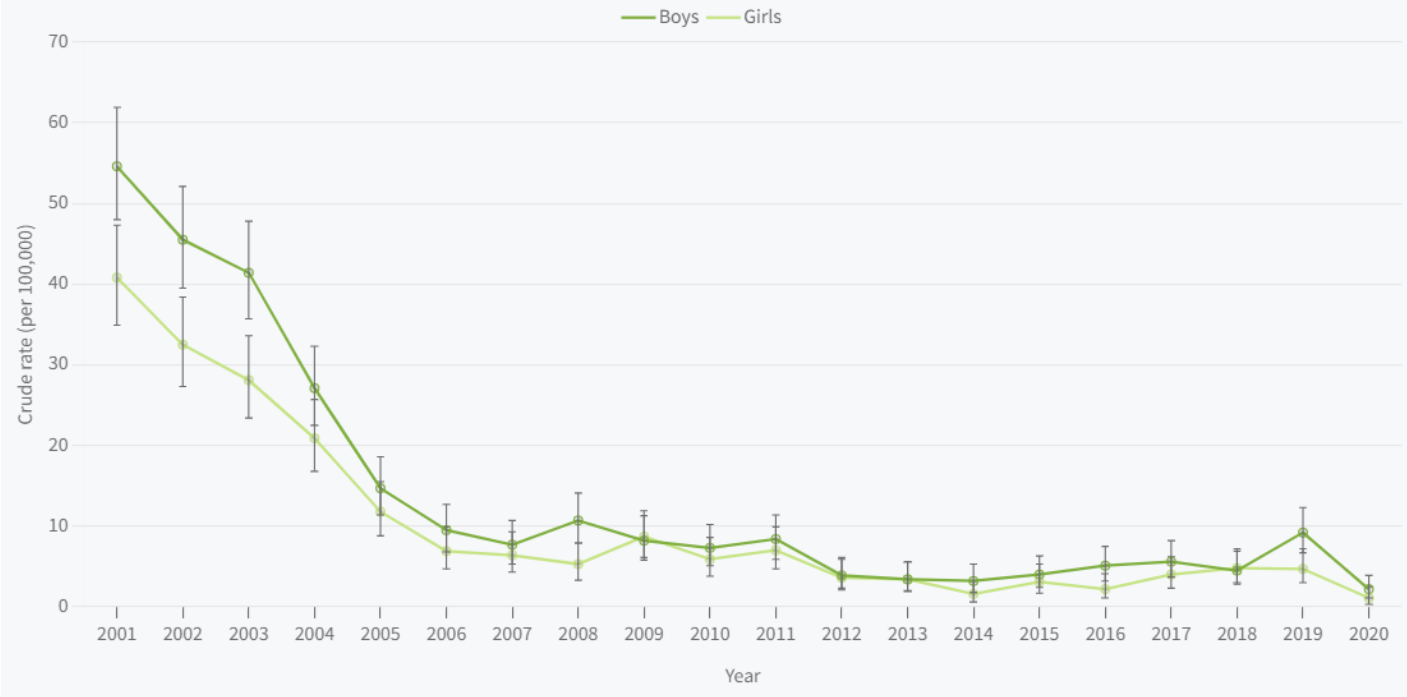
Note: 95% confidence intervals have been presented as error bars.

Source: EpiSurv, ESR 2021

Boys and girls have similar notification rates for meningococcal disease

In 2020, there were 11 notifications of meningococcal disease for boys (2.2 per 100,000) and 5 notifications for girls (1.1 per 100,000) (Figure 6). From 2004, the meningococcal disease notification rate has generally been similar for boys and girls.

Figure 6 Meningococcal disease notification rate in children aged 0–14 years, by sex, 2001–20 (crude rate per 100,000 population)



Note: 95% confidence intervals have been presented as error bars.

Source: EpiSurv, ESR 2021

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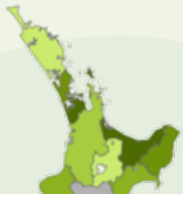
Interactive regional dashboard



Data for this indicator

This indicator is an analysis and interpretation of the most recent data available from the EpiSurv notifications surveillance database, provided to EHINZ by the ESR in November 2021. Notifications only cover those people who visited a GP or received hospital treatment and therefore may underestimate the true rate of disease in the population. For additional information, see the metadata link below.

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Other related topics include:

Household crowding | Second-hand smoke exposure | Health burden due to second-hand smoke exposure

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Further information

For descriptive information about the data Metadata Sheet

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