

Asthma prevalence and hospitalisations in children (0–14 years)

This report analyses data from the latest New Zealand Health Survey on the prevalence of medicated asthma in children aged 2–14 in 2024/25, alongside asthma (including wheeze) hospitalisation rates for children aged 0–14 years in Aotearoa New Zealand, based on the 2005–2024 National Minimum Dataset.

Key facts

- In 2024/25, around 94,000 children aged 2–14 years were diagnosed with asthma and were currently taking asthma medication.
- There were 8706 hospitalisations in children aged 0–14 years in 2024, up from 7537 in 2023.
- Children under five years old continued to have lower asthma prevalence rates but higher hospitalisation rates compared to other age groups. In 2024, 1-year-olds had the highest asthma hospitalisation rates (3783.1 per 100,000) within the 0–4 year age bracket.
- In 2024/25, Māori children aged 2–14 years had a higher prevalence of asthma compared to non-Māori children. In addition, since 2005, Pacific children aged 0–14 years have consistently experienced the highest asthma hospitalisation rates than other children.
- Asthma hospitalisation rates were higher for children living in the most deprived areas (NZDep 2023 quintile 5) than for children living in the least deprived areas.
- Children living in major urban areas had higher hospitalisation rates than children living in rural areas in 2024.
- The Auckland district had the highest asthma hospitalisation rates in 2023 and 2024.

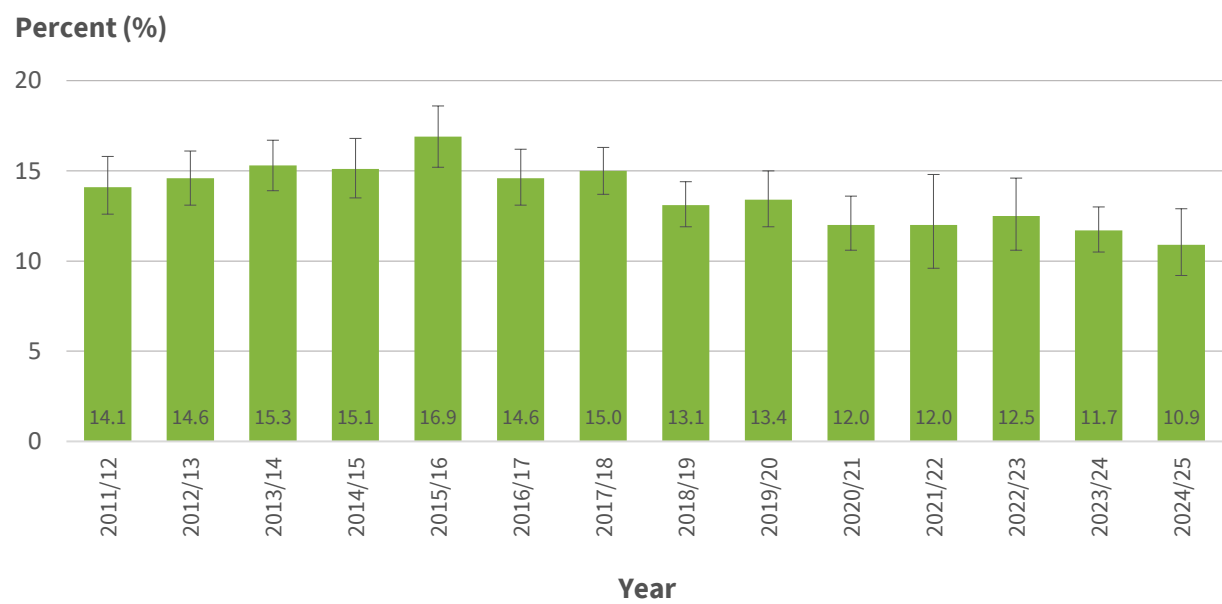
Both poor indoor and outdoor air quality increase the risk of asthma in children.

Asthma is a chronic respiratory condition that causes coughing, wheezing and shortness of breath. Poor indoor environmental conditions are associated with an increased risk of developing asthma in children. [Second-hand smoke exposure](#) can increase the risk of asthma and wheeze in children (He et al 2020). Indoor dampness/mould is also associated with asthma onset and exacerbation in children (Jaakkola et al 2011). Additionally, several studies have found an increase in asthma prevalence or incidence associated with exposure to outdoor air pollutants, particularly [nitrogen dioxide](#) (Guarnieri and Balmes 2014; Orellano et al 2017; Kuschel et al 2022). Asthma exacerbations can also be triggered by [lower respiratory tract infections](#) (Homaira et al 2022).

Asthma prevalence rates have remained stable since 2020/21

In 2024/25, 10.9% of children (about 94,000 children) were diagnosed with asthma and were currently being treated for it (Figure 1). Asthma prevalence in 2024/25 was statistically significantly lower than in previous years up to 2019/20 and remained relatively stable from 2020/21 onwards.

Figure 1: Medicated asthma in children aged 2–14 years, 2011/12–2024/25



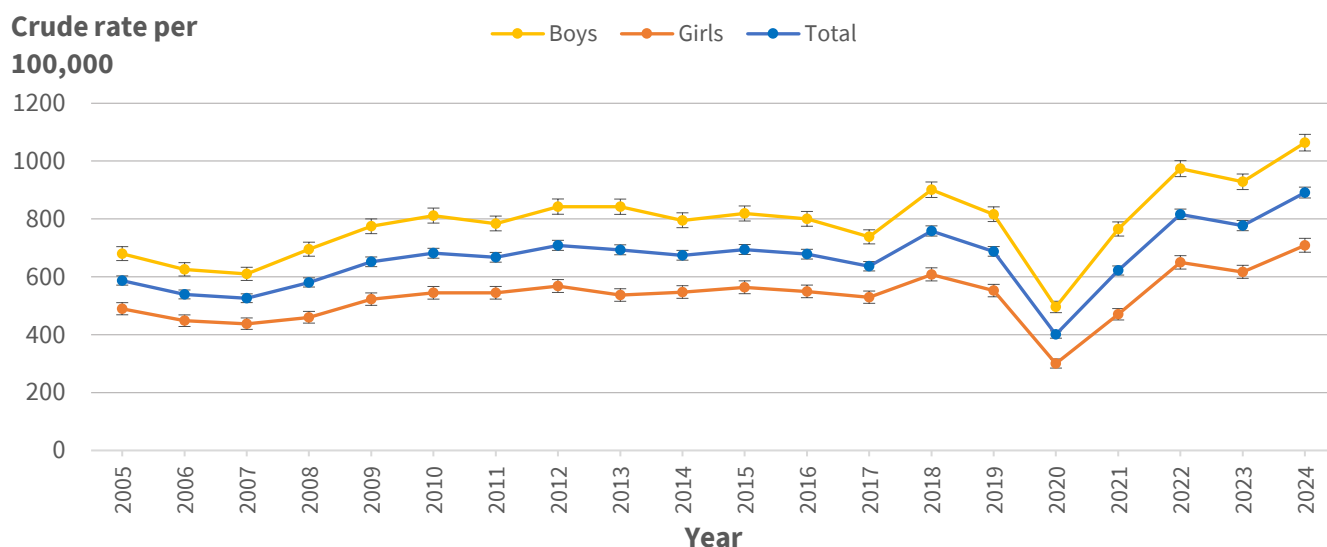
Note: 95% confidence intervals have been presented as vertical bars.
Source: New Zealand Health Survey, Ministry of Health 2025a

Asthma hospitalisation rates increased in 2024

In 2024, there were 8706 hospitalisations (891.2 per 100,000, 95%CI 872.6–910.1) in children aged 0–14 years, up from 7537 (777.0 per 100,000, 95%CI 759.6–794.8) in 2023 (Figure 2). A drop in hospitalisations in 2020 coincided with the nationwide COVID-19 lockdown on 25 March 2020. With the gradual relaxation of COVID-19 restrictions, hospitalisation rates have returned to levels similar to those seen before the pandemic.

Since 2005, boys have consistently had higher asthma hospitalisation rates than girls.

Figure 2: Asthma hospitalisations in children aged 0–14 years, by sex, 2005–2024 (crude rate per 100,000)

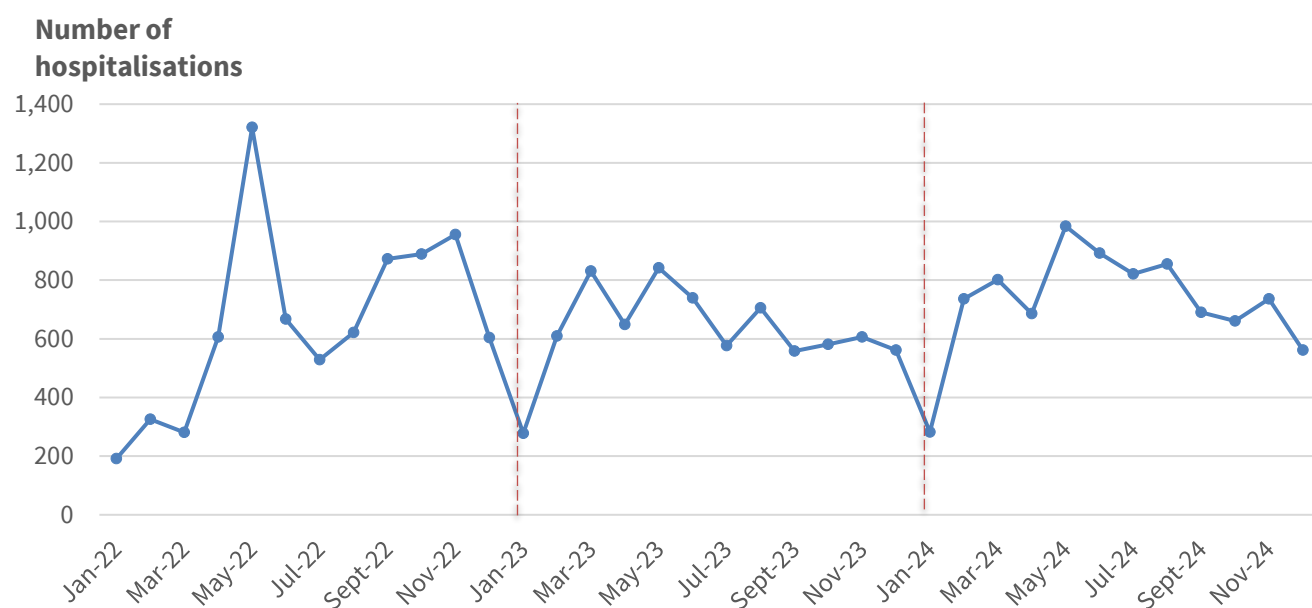


Note: 95% confidence intervals have been presented as vertical bars.
Source: National Minimum Dataset, Ministry of Health 2025

Asthma hospitalisations in 2024 were highest in May

In 2024, asthma hospitalisations among children increased sharply from February to a peak in May (984 hospitalisations), then declined for the rest of the year, mirroring the usual seasonal pattern seen in 2023 (Figure 3).

Figure 3: Number of asthma hospitalisations in children aged 0–14 years, by month, January 2022–December 2024

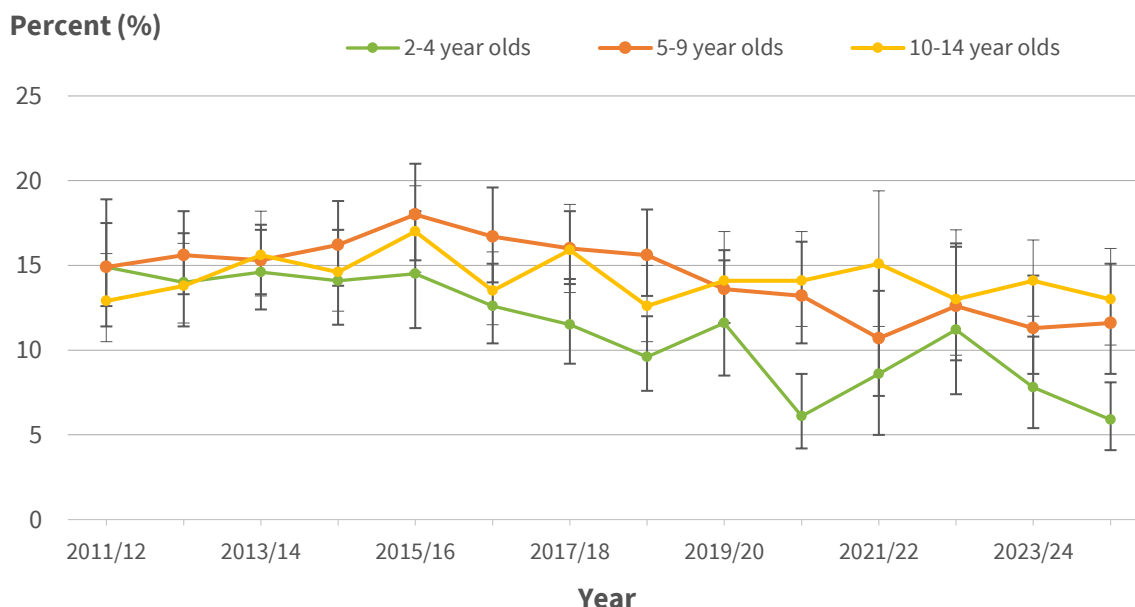


Source: National Minimum Dataset, Ministry of Health 2025

Children aged 2–4 years had lower asthma prevalence rates

In 2024/25, children aged 2–4 years had a lower asthma prevalence (5.9%) than those aged 5–9 (11.6%) and 10–14 years (13.0%) (Figure 4). This difference in prevalence has been consistent since 2012/13 and was statistically significant in 2024/25.

Figure 4: Medicated asthma in children aged 2–14 years, by age group, 2011/12–2024/25

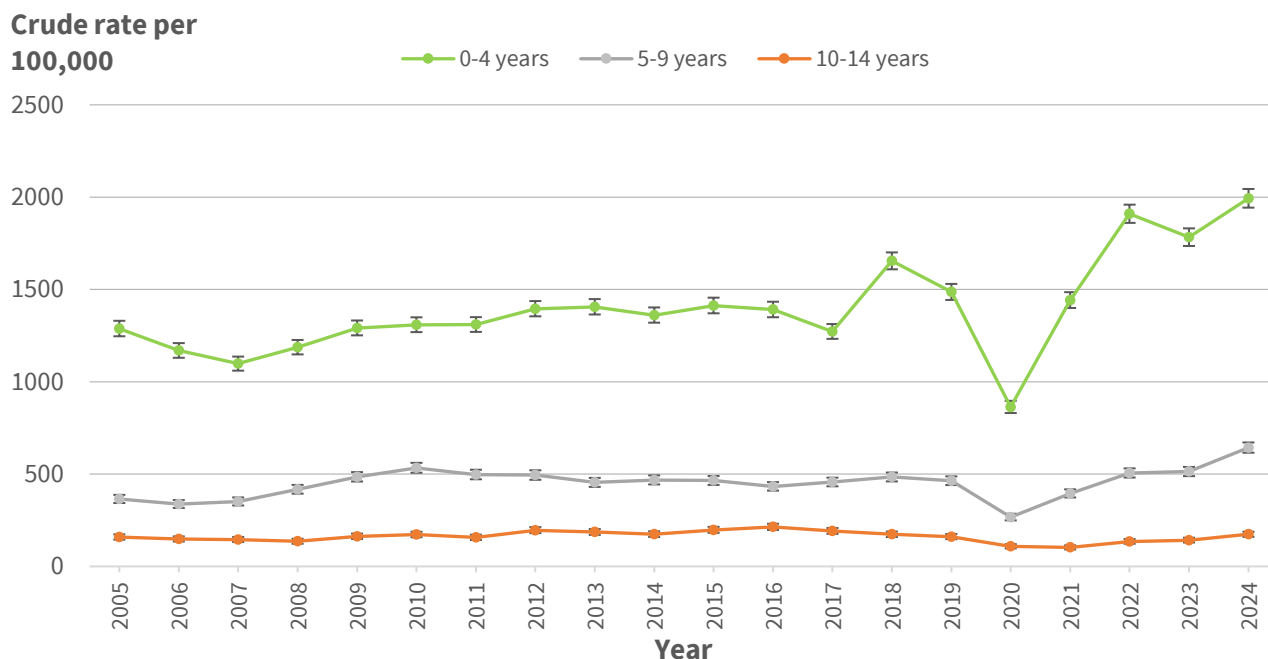


Note: 95% confidence intervals have been presented as vertical bars.
Source: New Zealand Health Survey, Ministry of Health 2025a

Children under five have the highest asthma hospitalisation rates

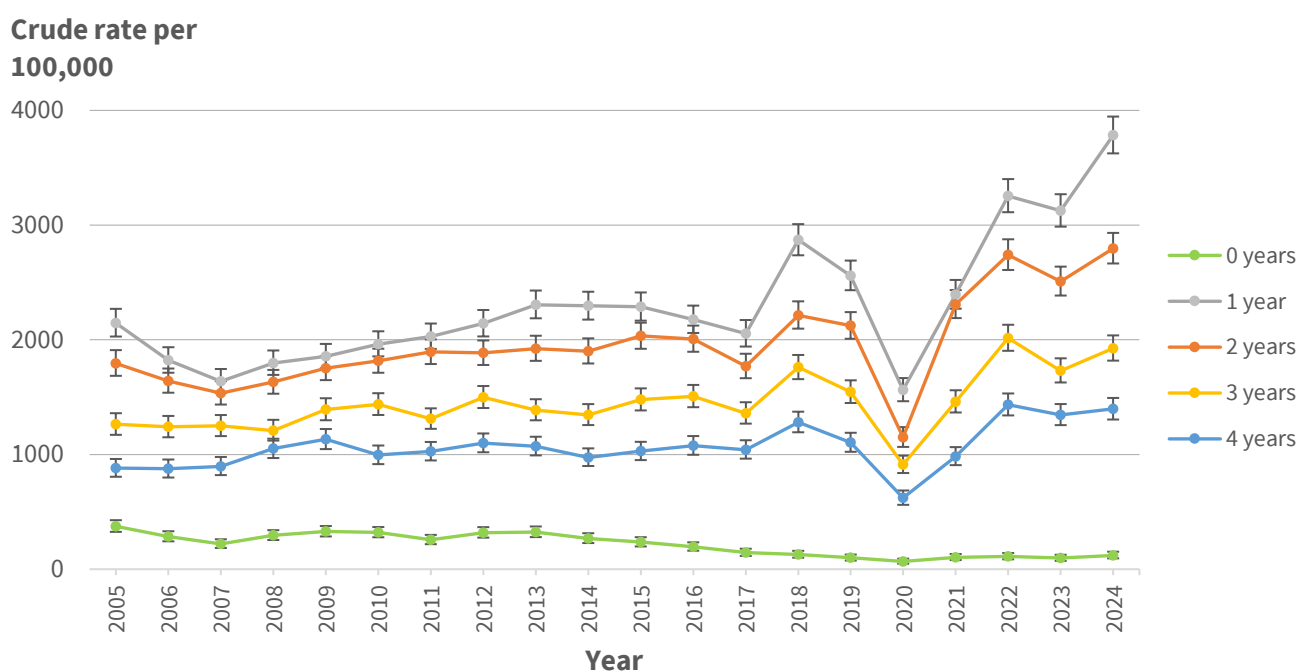
In 2024, the rate of asthma hospitalisation among 0–4-year-olds (1993.4 per 100,000; 95%CI 1943.2–2044.5) was 11 times higher than the rate of children aged 10–14 years (173.6 per 100,000; 95%CI 160.0–188.0) (Figure 5). Children aged 0–4 years consistently had the highest asthma hospitalisation rates between 2005 and 2024, with 2024 reaching the highest rate in the period. Asthma hospitalisations for children under five years are presented in Figure 6. Between 2005 and 2024, 1-year-olds had relatively high asthma hospitalisation rates and saw a sharp increase in 2024. Infants (under 1-year-old) generally had the lowest rates because they are more likely to be diagnosed with bronchiolitis than asthma or wheeze (BPAC 2020).

Figure 5: Asthma hospitalisations in children aged 0–14 years, by age group, 2005–2024 (crude rate per 100,000)



Note: 95% confidence intervals have been presented as vertical bars.
Source: National Minimum Dataset, Ministry of Health 2025

Figure 6: Asthma hospitalisations in children aged 0–4 years, 2005–2024 (crude rate per 100,000)



Note: 95% confidence intervals have been presented as vertical bars.
Source: National Minimum Dataset, Ministry of Health 2025

Māori and Pacific children were disproportionately affected by asthma

Māori children had the highest prevalence of medicated asthma in 2024/25 (14.0%) (Table 1). They were 1.46 times as likely to have medicated asthma as non-Māori children after adjusting for age and sex (adjusted rate ratio 1.46; 95%CI 1.06–2.01). Asian children were statistically significantly less likely to have medicated asthma than non-Asian children.

Table 1: Medicated asthma in children aged 2–14 years, by ethnic group (total response), 2024/25

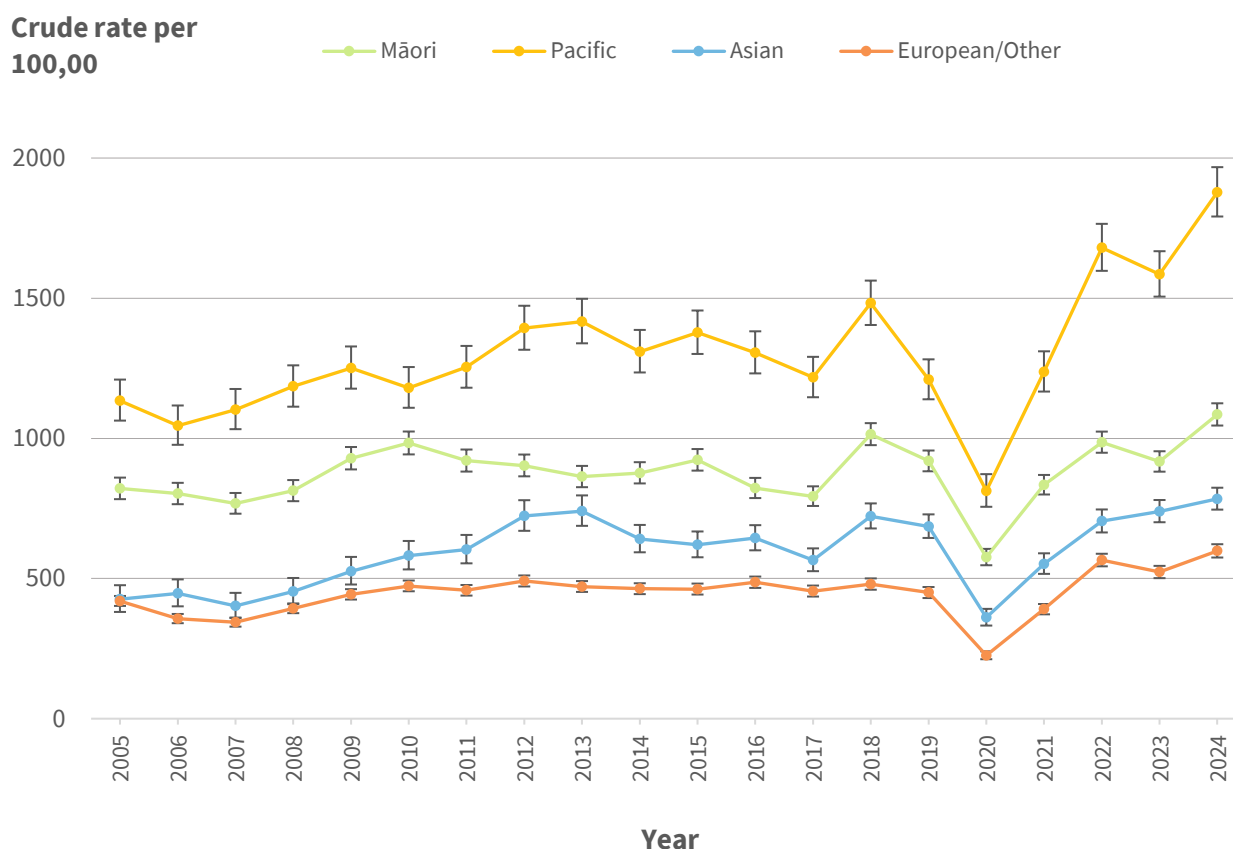
Ethnic group (total response)	Unadjusted prevalence (% ^a , 95%CI)	Estimated number of children	Comparison groups	Adjusted rate ratio (RR, 95%CI) ^a
Total	10.9 (9.2–12.9)	94,000		
Māori	14.0 (10.7–17.9)	33,000	vs non-Māori	1.46 (1.06–2.01)*
Pacific	13.3 (8.2–20.1)	14,000	vs non-Pacific	1.33 (0.85–2.07)
Asian	5.0 (3.2–7.3)	10,000	vs non-Asian	0.40 (0.26–0.61)*
European/Other	12.5 (10.4–14.9)	71,000		

Note: 95% confidence intervals (CI) are given in brackets. Estimated numbers will add to more than the total for ethnic groups due to total response ethnic groups being used (where everyone is included in every ethnic group they report).
^ Rate ratios (RR) are used to compare results for different population subgroups. Adjusted rate ratios are used to control for age and sex differences that could influence the comparison. An adjusted rate ratio above 1.0 shows that the indicator is more likely in the group of interest (eg, Māori) than in the comparison group (eg, non-Māori). An adjusted ratio below 1.0 shows the indicator is less likely in the group of interest than the comparison group.
* Indicates that the adjusted ratio is statistically significant.

Source: New Zealand Health Survey, Ministry of Health 2025a

Ethnic disparities in asthma hospitalisation rates persist and appear to be widening. Pacific children have consistently experienced the highest rates since 2005 (Figure 7). In 2024, the asthma hospitalisation rate for Pacific children was 1877.9 per 100,000 (95%CI 1791.4–1967.5), an increase from 1585.1 per 100,000 (95%CI 1505.6–1667.7) in 2023.

Figure 7: Asthma hospitalisations in children aged 0–14 years, by ethnic group (prioritised, 2005–2024 (crude rate per 100,000))



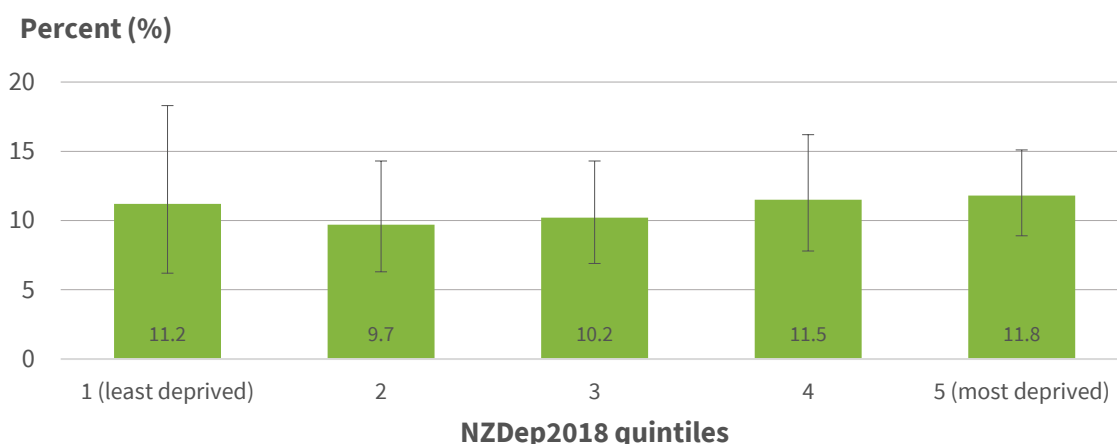
Note: 95% confidence intervals have been presented as vertical bars.

Source: National Minimum Dataset, Ministry of Health 2025

Asthma prevalence was similar across deprivation quintiles

For 2-14 year olds, there was no consistent pattern in asthma prevalence by deprivation quintile in 2024/25 (Figure 8). After adjusting for age, sex, and ethnicity, there was no statistically significant difference between children living in the most socioeconomically deprived areas (NZDep 2018 quintile 5) and those living in the least deprived areas (quintile 1).

Figure 8: Medicated asthma in children aged 2–14 years, by NZDep 2018 quintiles, 2024/25

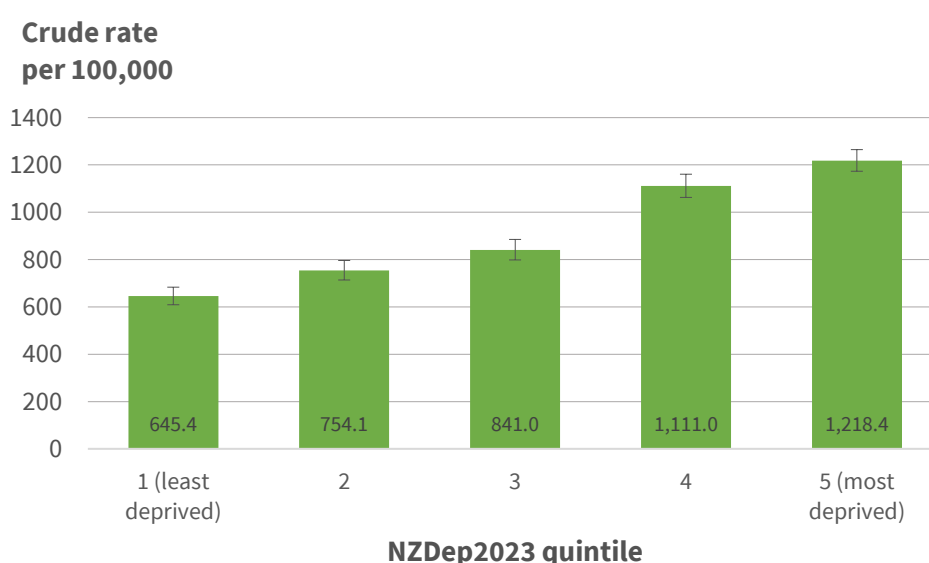


Note: 95% confidence intervals have been presented as vertical bars.

Source: New Zealand Health Survey, Ministry of Health 2025a

The rate of asthma hospitalisation in children aged 0–14 years was higher in more socioeconomically deprived areas (quintiles 4 and 5) (Figure 9). Children living in the most deprived areas (NZDep 2023 quintile 5) had 1.69 times the rate of asthma hospitalisation as children living in the least deprived areas (quintile 1) (rate ratio 1.69; 95%CI 1.58–1.81).

Figure 9: Asthma hospitalisations in children aged 0–14 years, by NZDep 2023 quintiles, 2024 (crude rate per 100,000)



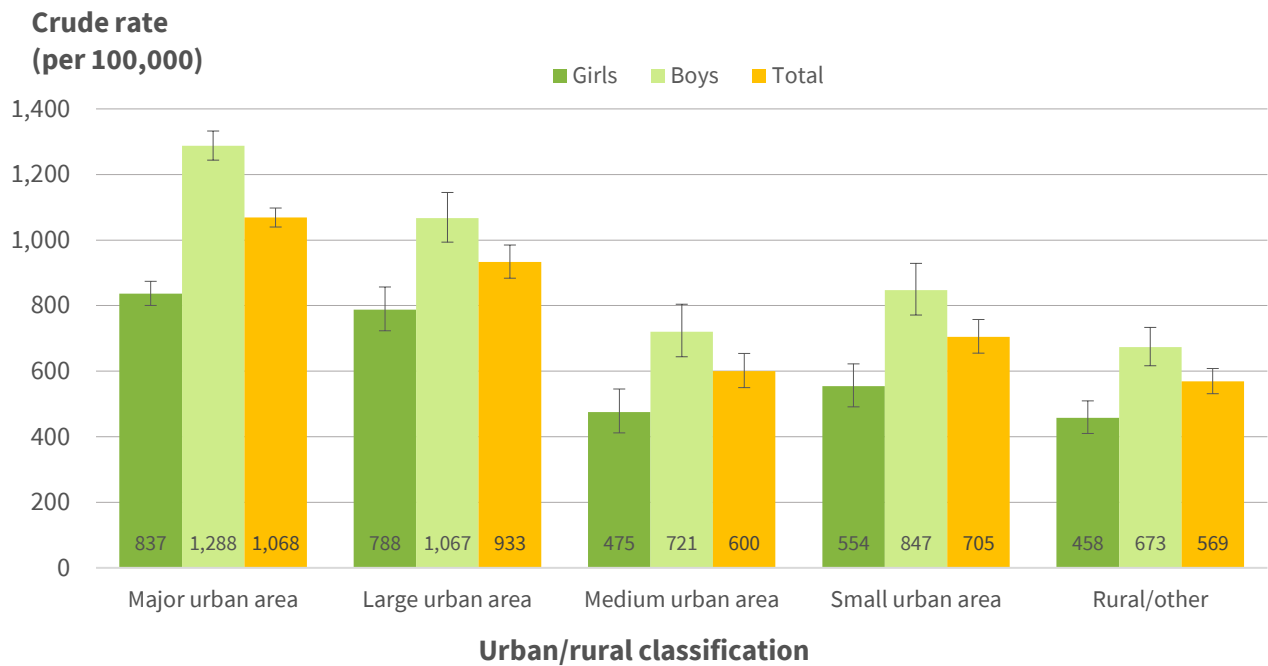
Note: 95% confidence intervals have been presented as vertical bars.

Source: National Minimum Dataset, Ministry of Health 2025

Higher asthma hospitalisation rates in urban areas

Asthma hospitalisation rates for 2024 were higher for children living in major urban areas (1068.4 per 100,000; 95%CI 1039.7–1097.6) than for children living in rural areas (568.7 per 100,000; 95%CI 531.3–608.1) (Figure 10). In all urban/rural categories, boys had higher hospitalisation rates than girls.

Figure 10: Asthma hospitalisations in children aged 0–14 years, by urban/rural classification, 2024 (crude rate per 100,000)

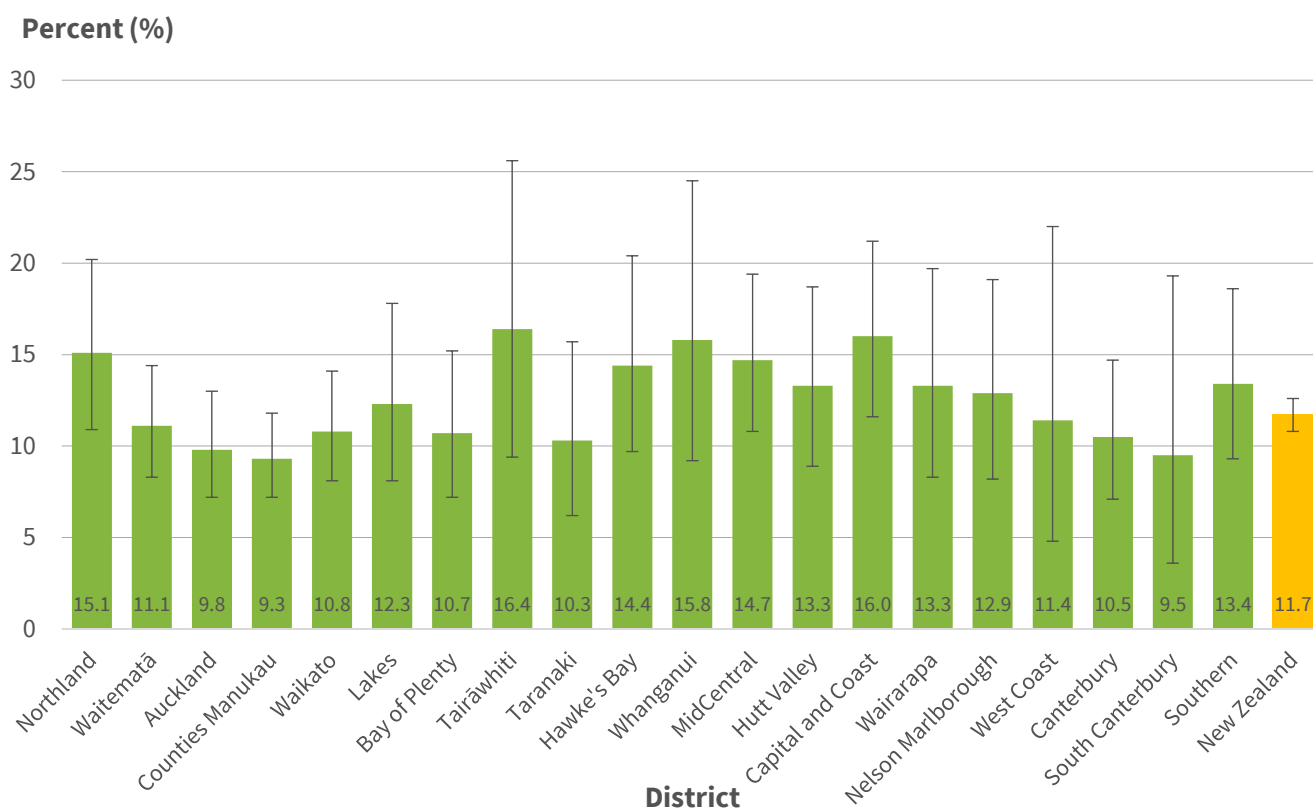


Note 1: 95% confidence intervals have been presented as vertical bars.
Note 2: The Statistics New Zealand urban-rural classification for 2023 has been used. Major urban areas are major towns and cities with a population of 100,000 or more. Large urban areas are larger towns and cities with a population of 30,000–99,999 people. Medium urban areas are towns with a population of 10,000–29,999 people. Small urban areas are smaller towns with a population of 1,000–9,999. Rural areas include rural centres, (less than 1,000 residents) and rural areas outside of these.
Source: National Minimum Dataset, Ministry of Health 2025

Higher asthma prevalence in the Tairāwhiti and Capital and Coast districts

From 2022/23 to 2024/25, the Tairāwhiti (16.4%) and Capital and Coast (16.0%) districts had relatively high asthma prevalence (Figure 11).

Figure 11: Medicated asthma in children aged 2–14 years, by district, 2022/23–2024/25



Note: 95% confidence intervals have been presented as vertical bars. District results are presented as a three-year rolling average. Data representing the three-year period from 2022/23 to 2024/25, contains data from survey years 2022/23, 2023/24, and 2024/25. Estimates for the West Coast, and South Canterbury districts have a relative standard error of over 30% and should be interpreted with caution.

Source: New Zealand Health Survey, Ministry of Health 2025a

Auckland health district continues to have the highest asthma hospitalisation rate

As in 2023, children living in the Auckland health district (areas formerly known as district health boards) had the highest rate of asthma hospitalisations in 2024 (1,640.4 per 100,000; 95%CI 1552.1–1732.4), while the West Coast and Nelson Marlborough districts recorded lower rates (Figure 12).

The HAPINZ 3.0 study found that in 2016, children in the Auckland region experienced the highest number of asthma hospitalisations linked to nitrogen dioxide exposure (Kuschel et al 2022).

Figure 12: Asthma hospitalisations in children aged 0–14 years, by district, 2023–2024 (crude rate per 100,000)



Note: 95% confidence intervals have been presented as vertical bars.
Source: National Minimum Dataset, Ministry of Health 2025

Within Auckland, asthma hospitalisation rates also varied by local board area. In 2024, the Maungakiekie-Tāmaki Local Board Area had the highest rate (2202.5 per 100,000; 95%CI 1980.5–2442.5). Further results by local board area can be accessed using the [Indoor Environment dashboard](#).

Whakatane District had high asthma hospitalisation rates compared to all other territorial authorities

In 2024, children living in the Whakatane District had the highest asthma hospitalisation rate at 1222.2 per 100,000 (95%CI 993.4–1488.0). Kawerau district recorded the highest rate in 2023.

To access the interactive map, refer to the [Indoor Environment dashboard](#).

Data for this indicator

The **Asthma prevalence** indicator contains the most recent data available from the 2024/25 New Zealand Health Survey published by the Ministry of Health in November 2025. The Ministry of Health calculated all the results.

The prevalence of medicated asthma is defined as having been diagnosed by a doctor or other health professional as having asthma and using inhalers, medicines, tablets, pills, injections or other medication, in children aged 2–14 years (Ministry of Health 2025b).

In the latest regional data release, data is presented as a three-year rolling average. This means that each statistic is calculated by pooling three consecutive Health Survey cycles and re-weighting the combined sample, so it represents an 'average' year across that three-year window.

Estimates with a high relative standard error (RSE) are suppressed if the RSE is over 100% or flagged as 'low quality' if the RSE is over 30%.

For additional information, see the Asthma prevalence [Metadata](#) sheet.

The **Asthma hospitalisation** indicator is an analysis of data from the National Minimum Dataset, provided to EHINZ by the Ministry of Health in November 2025.

This indicator reports on acute and semi-acute asthma hospitalisations among children aged 0–14 years with a primary diagnosis in the following ICD-10AM codes:

- asthma (J45–J46)
- wheeze (R06.2)

Including wheeze is consistent with the approach used by Child Youth and Epidemiology Service (Simpson et al 2017) and Health Quality and Safety Commission (HQSC 2020) to account for paediatricians increasingly diagnosing wheeze instead of asthma, particularly for young children.

For additional information, see the Asthma hospitalisation [Metadata](#) sheet.

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