CO1.6: Disease-based indicators: prevalence of diabetes and asthma among children

Definitions and methodology

This indicator presents information on the prevalence of two diseases that are relatively common among children: diabetes, and asthma. Data on the prevalence of diabetes are presented through one measure:

- *Estimated number of children (0-19) with type 1 diabetes, per 100,000 children.* The data concern "type 1 diabetes" only (i.e. do not include children with "type 2 diabetes") as the former is the predominant type of diabetes among children and adolescents. Estimates of the prevalence of type 1 diabetes among children come from the International Diabetes Federation, and refer to 2024.

Data on the prevalence of asthma can be presented through two measures:

- *The proportion (%) of children age 6-7 whose parents report that the child has ever had asthma,* that is, the proportion of children aged 6-7 with parents who responded positively to the question "Has you child ever had asthma?"
- *The proportion (%) of children age 13-14 self-report that they have ever had asthma,* that is, the proportion of children with parents who responded positively to the question "Have you ever had asthma?"

In both cases the data in the 1990s and early 2000s on asthma came from studies associated with the International Study of Asthma and Allergies in Childhood (ISAAC). Unfortunately, the country coverage of the latest Global Asthma Network (GAN I) collected in the late 2010s from 31 countries in the world is currently too limited (Global Asthma Network, 2022). No chart will be shown below.

Key findings

The prevalence of type 1 diabetes among children is generally very low in the Asia/Pacific countries included here, but there are exceptions (Chart CO1.6.A). Estimates for 2024 suggest that in all of China, Indonesia, Japan, Korea, Malaysia, Mongolia, Singapore, Thailand and Viet Nam, fewer than 50 in 100,000 children aged 0-19 suffered from type 1 diabetes, with rates below 15 children per 100,000 in Indonesia, Malaysia, Thailand, and Viet Nam. These are rates that are extremely low in comparison to New Zealand, the average for OECD countries (218 children per 100,000), and Australia with an estimated 221 children per 100,000, experiencing type 1 diabetes.

Other relevant indicators: CO1.1 Infant mortality; CO1.2 Life expectancy at birth; CO1.3 Low birth weight; CO1.4 Vaccination rates

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Chart CO1.6.A. **Estimated prevalence of type 1 diabetes in children, 2024**
Estimated number of children (0-19) per 100,000 with type 1 diabetes
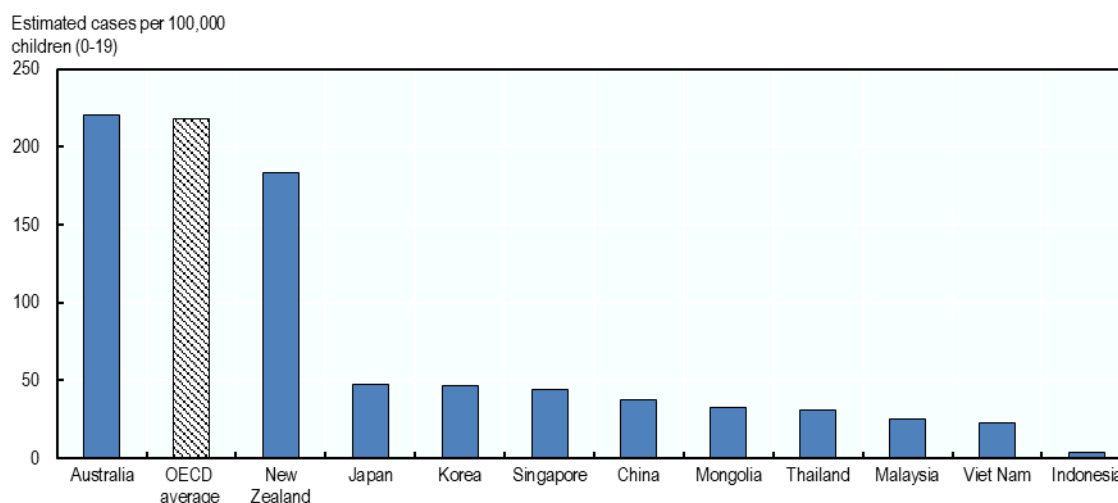
a) The OECD average refers to the unweighted average across OECD member countries in 2024 population aged 0 to 19.
Sources: International Diabetes Federation (IDF) http://www.diabetesatlas.org/.

Comparability and data issues

Estimates of the prevalence of type 1 diabetes are taken from the International Diabetes Federation (IDF) Diabetes Atlas (11th edition), published in 2025. The data published in the Diabetes Atlas were collected by the IDF through a search of the scientific literature for population-based studies on the incidence or prevalence of type 1 diabetes in children aged 0-19. In most cases, estimates of the prevalence of type 1 diabetes were derived from register-based data on the *incidence* of new cases each year. In some countries no (good quality) information was found available, in which case estimates were based on rates extrapolated from nearby or similar countries. As such, the estimates shown in Chart CO1.6.A should be read as estimates only. For more detail on the methods used and the limitations of the IDF data, see Patterson et al (2014).

In the past, data on asthma was taken from Phase 3 of the International Study of Asthma and Allergies in Childhood (ISAAC). Information on Asthma symptoms was collected through written questionnaires completed by parents for children age 6 to 7 and self-completed by those aged 13 to 14. The first phase of the ISAAC study was conducted between 1992 and 1996, the second phase between 1998 and 2004, and the third phase between 2000 and 2003. This last ISAAC phase covered 56 countries in total, including all of the Asia/Pacific included here. Unfortunately, the country coverage of the latest Global Asthma Network (GAN I) collected in the late 2010s from 31 countries in the world is currently too limited to be included here (The Global Asthma Network, 2022).

Sources and further reading:
C., Guariguata, L., Dahlquist, G., Soltész, G., Ogle, G., & Silink, M. (2014), "Diabetes in the young–a global view and worldwide estimates of numbers of children with type 1 diabetes", *Diabetes research and clinical practice*, Vol. 103, No. 2, 161-175.
Lai CKW, Beasley R, Crane J, Foliaki S, Shah J, Weiland S, and the ISAAC Phase Three Study Group (2009), "Global variation in the prevalence and severity of asthma symptoms: Phase Three of the International Study of Asthma and Allergies in Childhood (ISAAC)", *Thorax*, Vol. 64, pp. 476–483; Patterson,
Global Asthma Network (2022), "The Global Asthma Report 2022", http://globalasthmanetwork.org/index.php.