

Information topic	Details
Indicator name	Unintentional hazardous substances exposures in children (0–14 years); calls to the National Poisons Centre in 2017–2019
Domain and topic	Children: Children and the indoor environment
Rationale	<p>Children under five years of age continue to be the age group with the highest rate of unintentional hazardous substances-related hospitalisations and hazardous substance injury notifications from the Hazardous Substances Disease and Injury tool.</p> <p>This data can be used to investigate the incidence of unintentional child exposure to and poisoning from hazardous substances, describe the demographic characteristics of the cases, describe the hazardous substances involved and provide evidence to help the Ministry of Health make recommendations for policy priorities for unintentional hazardous substances injury prevention.</p>
Indicator definition and units	<p>The number of substances exposure calls to the New Zealand National Poisons Centre involving unintentional exposures to hazardous substances in children aged 0–14 years.</p> <p>In the context of poison centres, ‘exposure’ refers to any route of contact (eg, ingestion, inhalation, dermal, etc) between a person and a substance.</p>
Data source	Telephone enquiries to the New Zealand National Poisons Centre.
Numerator	Substance exposure calls made to the New Zealand National Poisons Centre related to unintentional exposures to hazardous substances in children aged 0–14 years.
Denominator	All children aged 0–14 years using StatsNZ estimated resident population.
Methodology	<p>Substances exposure calls data from the New Zealand Poison Centre involving child’s unintentional exposure to hazardous substances. It includes any substances that falls into the Hazardous Substances and New Organisms Act (HSNO) 1996 and Health Act 1956.</p> <p>The following substances were classified into 34 groups:</p> <ul style="list-style-type: none"> • HOUSEHOLD ANTI-INFECTIVE/CLEANERS • HOUSEHOLD DETERGENT • HOUSEHOLD INSECTICIDE • HOUSEHOLD MISCELLANEOUS • HOUSEHOLD LAUNDRY PREPARATION • HOUSEHOLD PETROL • HOUSEHOLD PAINT • HOUSEHOLD RODENTICIDE • HOUSEHOLD INSECT REPELLENT

	<ul style="list-style-type: none"> • HOUSEHOLD GLUE • HOUSEHOLD ANIMAL REMEDY • HOUSEHOLD FUMIGANT • HOUSEHOLD HERBICIDE • HOUSEHOLD POLISH • HOUSEHOLD CLEANER • HOUSEHOLD FILLER • COSMETIC • ESSENTIAL OILS/FRAGRANCES • LEAD • INDUSTRIAL • AGRICULTURAL MISCELLANEOUS • AGRICULTURAL FUNGICIDE • AGRICULTURAL FUMIGANT • AGRICULTURAL INSECTICIDE • AGRICULTURAL ANIMAL REMEDY • AGRICULTURAL RODENTICIDE • AGRICULTURAL FERTILISER • AGRICULTURAL HERBICIDE • AGRICULTURAL PESTICIDE • AGRICULTURAL MOLLUSCICIDE • AUTOMOTIVE • FIREWORKS • E-CIGARETTES/VAPING <p>The analysis does not include medicines in finished dosed form, alcohol other than industrial alcohol, radioactive materials, and manufactured articles (eg, glowsticks, button batteries).</p> <p>There were times where one call may involve a child with multiple exposures. The analysis has counted as more than one exposure to avoid under-counting.</p> <p>There were times where one call may involve more than one child. The analysis has counted as more than one exposure to avoid under-counting.</p> <p>Linked calls, where there were multiple calls relating to the same person or same event were excluded from the analysis to avoid over-counting.</p> <p>Some substances were given multiple classifications. The analysis modified to one classification entry only to avoid over-counting effect.</p> <p>Intentional exposures to hazardous substances and children who have abused the substances were excluded from the analysis.</p> <p>Prioritised ethnicity has been used, in the following prioritisation order: Māori, Pacific peoples, Asian, European/Other (Ministry of Health 2017).</p>
Time periods covered:	New Zealand National Poisons Centre call logs from 1 January 2017 00:00 to 31 December 2019 23:59.

Population coverage:	Children aged 0–14 years in New Zealand.
Reporting variables	Results are presented by quarter/year, age group, ethnicity, substance category, specific substances involved, management advice given to the patient and time elapsed before calls
Confidence intervals	95% confidence intervals were calculated based on the methodology outlined in APHO (2008). Confidence intervals are presented as error bars on graphs.
Limitations of indicator and data source	<p>Data captured by the New Zealand National Poisons Centre is only a subset of all exposures occurring in the community and therefore may not reflect all relevant exposures in New Zealand. Exposures may be missed where patients went to see a doctor or presents directly to emergency departments and these patients may not contact National Poisons Centre for management advice. Other possible exposures may go under reported if parents or caregivers did not witness the exposure or do not contact National Poisons Centre if the exposures is perceived to be minor. These will be underestimating the total exposures that were caused by hazardous substances.</p> <p>Calls to the National Poisons Centre are not routinely followed up, we did not know when a patient advised by the National Poisons Centre to seek medical attention/check-up actually went to the doctor. Therefore, the analysis could not provide comprehensive information on morbidity or outcome.</p>
Created by	Environmental Health Intelligence NZ, Massey University, Wellington
Related indicators	Hazardous substances notifications in New Zealand. Hazardous substances-related hospitalisations.
For more information	Environmental Health Intelligence New Zealand: Health effects of hazardous substances https://www.ehinz.ac.nz/indicators/hazardous-substances/health-effects-of-hazardous-substances/
References	<p>Ahmad, O.B., et al. (2000). Age Standardization of Rates: A New WHO Standard (Technical Report). GPE Discussion Paper Series: No. 31. Geneva: World Health Organization.</p> <p>APHO. (2008). Technical Briefing 3: Commonly used public health statistics and their confidence intervals. York, UK: Association of Public Health Observatories.</p> <p>Ministry of Health. 2017. HISO 10001:2017 Ethnicity Data Protocols. Wellington: Ministry of Health.</p>