

Information topic	Details
Indicator name	Sudden unexpected death in infancy (SUDI)
Domain and topic	Indoor Environment (and Children's Environmental Health) domain: Sudden Unexpected Death in Infancy
Indicator definition and units	The number and rate of deaths from SUDI, for children aged less than one year old. Rates are presented per 1,000 live births.
Data source	Fetal and Infant Deaths web tool , published by the Ministry of Health using data from the New Zealand Mortality Collection.
Numerator	<p>Deaths in children aged 0–12 months (ie, less than one year old) with an underlying cause of death in the following ICD-10AM codes:</p> <ul style="list-style-type: none"> • R95 (sudden infant death syndrome) • R96 (other sudden death, cause unknown) • R98 (unattended death) • R99 (other ill-defined and unspecified causes of mortality) • W75 (accidental suffocation and strangulation in bed) • W78 (inhalation of gastric contents) • W79 (inhalation and ingestion of food causing obstruction of respiratory tract). <p>This definition follows the recommendations of the Child and Youth Mortality Review Committee (2009).</p>
Denominator	<p>Number of live births. Live birth is defined by the Ministry of Health (2007), according to the World Health Organization definition, as:</p> <p><i>“the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached; each product of such a birth is considered liveborn”.</i></p>
Methodology	<p>Analysis We have used the variables provided in the Excel tables for the publication <i>Fetal and Infant Deaths web tool</i> (Health New Zealand – Te Whatu Ora 2023) for the analysis.</p> <p>Only crude (unadjusted) rates have been calculated due to the small age group (<1 year old).</p> <p>Confidence interval 95% confidence intervals were calculated based on the methodology outlined in APHO (2008). Confidence intervals are presented as vertical bars on graphs.</p> <p>Interpreting graphs Crude rates are suppressed for counts less than 5 or populations less than 30, due to unreliability of the estimate with small numbers.</p> <p>When comparing groups of varying population sizes, differences that involve small groups may not be statistically significantly different, compared with</p>

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	<p>similar differences for larger groups. This is due to a higher variability associated with the rate of the small group. For a more detailed explanation of this issue, see EHINZ Analytical Toolkit & Glossary.</p> <p>Prioritised ethnic groups have been used in the following prioritisation order: Māori, Pacific Peoples, Asian, European/Other.</p>
Time period and time scale	Annual data, from 2010 to the most recent data available.
Population coverage	All live births.
Spatial Coverage	Nationally, with regional results available by district (formerly District Health Board (DHB) areas).
Measures of frequency	Results are presented by year, ethnic group, maternal age group, NZDep2013 (Atkinson et al 2014), and district.
Limitations of indicator	The number of fetal and infant deaths in New Zealand is small and may cause rates to fluctuate markedly from year to year. Rates derived from small numbers should be interpreted with caution.
Limitations of data source	SUDI deaths often depend on a coroner's report, which can, in some cases, take several years to complete. For this reason, numbers may not exactly match previously published data.
Related indicators	<p>Second-hand smoke exposure</p> <p>Maternal smoking at two weeks postnatal</p> <p>Health burden due to second-hand smoke exposure</p> <p>Household crowding</p> <p>Home heating</p>
For more information	<p>Ministry of Health. Fetal and infant death deaths - series https://www.health.govt.nz/nz-health-statistics/health-statistics-and-data-sets/fetal-and-infant-deaths-series</p>
References	<p>APHO. 2008. <i>Commonly used public health statistics and their confidence intervals</i>. Technical Briefing No.3. York: APHO.</p> <p>Atkinson J, Salmond C, Crampton P. 2014. <i>NZDep2013 Index of Deprivation</i>. Wellington: Department of Public Health, University of Otago, Wellington. URL:https://www.otago.ac.nz/_data/assets/pdf_file/0029/318458/nzdep2013-index-of-deprivation-research-report-069936.pdf</p> <p>Child and Youth Mortality Review Committee, Te Rōpū Arotake Auau Mate o te Hunga Tamariki, Taiohi. 2009. <i>Fifth Report to the Minister of Health: Reporting mortality 2002–2008</i>. Wellington: Child and Youth Mortality Review Committee.</p> <p>Ministry of Health. 2007. <i>Report on Maternity: Maternal and Newborn Information 2004</i>. Wellington: Ministry of Health.</p> <p>Health New Zealand – Te Whatu Ora. 2023. <i>Fetal and Infant Deaths web tool</i>. URL: https://tewhatuora.shinyapps.io/fetal-and-infant-deaths-web-tool/</p>