Sudden Unexpected Death in Infancy (SUDI)

HIGHLIGHTS:

- **In 2014, 45 children aged less than one year old died from Sudden Unexpected Death in Infancy (SUDI), a rate of 0.8 deaths per 1000 live births. From 2000 to 2012, there was a substantial drop in the number (and rate) of SUDI deaths, although these have increased slightly from 2012 to 2014.**
- **In 2010–2014, SUDI rates were higher among Māori babies (1.7 per 1000 live births) and Pacific babies (0.8 per 1000 live births) than European/Other babies (0.4 per 1000 live births) and Asian babies (0.1 per 1000 live births).**
- **The SUDI rate was much higher in the most deprived areas (NZDep2006 quintile 5) (1.4 per 1000 live births) than in the least deprived areas (quintile 1) (0.2 per 1000 live births) in 2010–2014.**
- **The District Health Boards (DHBs) with the highest SUDI rates in 2010–2014 were Tairawhiti (2.5 per 1000 live births) and Lakes (2.0 per 1000 live births) DHBs.**

Relevance of SUDI to environmental health

Exposure to second-hand smoke increases the risk of sudden unexpected death in infancy (SUDI) for children under one year of age (US Department of Health and Human Services, 2007). In particular, evidence shows an increased risk of SUDI for infants whose mother smokes, independent of whether the mother smoked during pregnancy (Anderson & Cook, 1997).

Data for this indicator

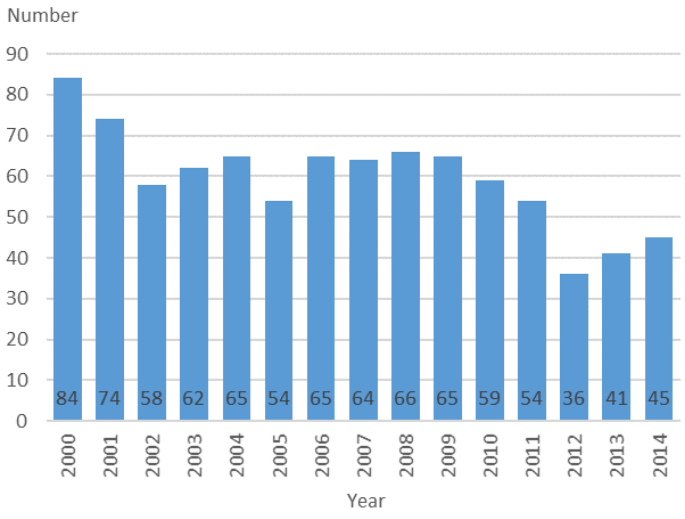
This indicator presents deaths from sudden unexpected death in infancy (SUDI) in children under one year of age, as a rate per 1000 live births, from the Ministry of Health publication *Fetal and Infant Deaths 2014* (Ministry of Health, 2017).

In 2014 there were 45 deaths from SUDI

In 2014, 45 children under one year of age died from SUDI in New Zealand. This is a rate of 0.8 deaths per 1000 live births.

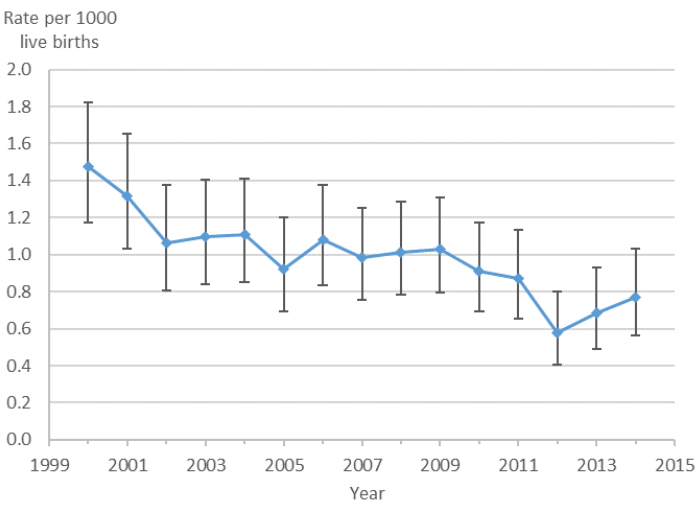
Since 2000, there has been a substantial drop in the number of SUDI deaths, as well as in the rate per 1000 live births (Figures 1 and 2). The SUDI rate decreased from 1.5 deaths per 1000 live births in 2000, to 0.6 deaths per 1000 live births in 2012. However, there has been a slight increase in the numbers and rate of SUDI deaths from 2012 to 2014.

Figure 1 : Number of SUDI deaths, children aged <1 year, 2000–2014



Source: Ministry of Health (2017)

Figure 2: Rate of SUDI deaths per 1000 live births, children aged <1 year, 2000–2014



Source: Ministry of Health (2017)

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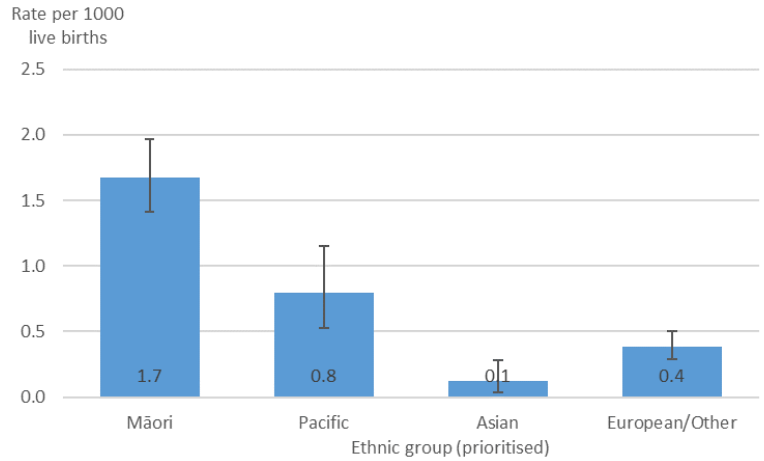
Māori and Pacific babies have higher SUDI rates

In 2014, 30 SUDI deaths were in Māori babies, 7 were in European/Other babies, 6 in Pacific babies and 2 in Asian babies. In 2010–2014, Māori babies had a much higher rate of SUDI deaths per 1000 live births than other ethnic groups (Figure 3).

Figure 3: SUDI deaths, children aged <1 year, by prioritised ethnic group, 2010–2014 (rate per 1000 live births)

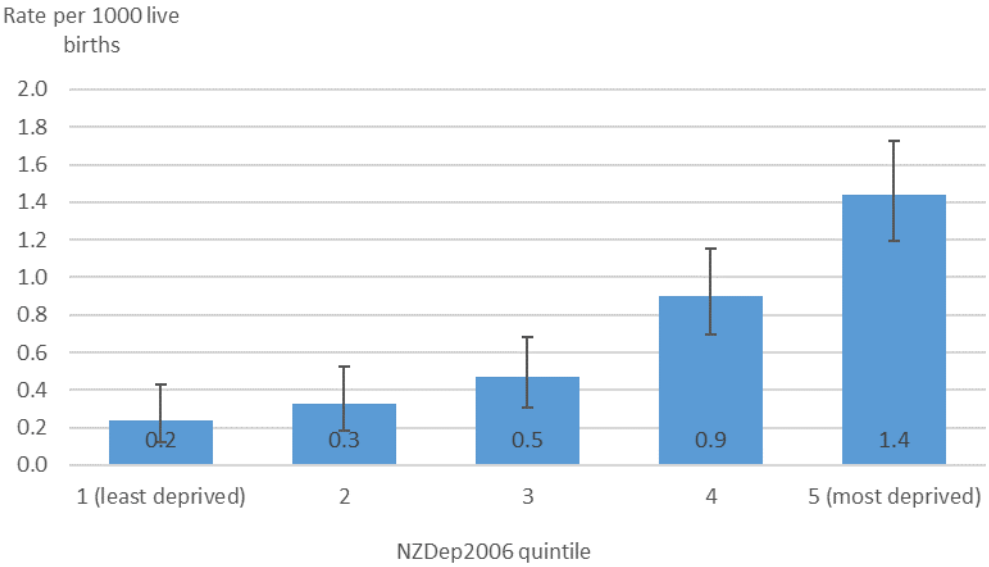


Source: Ministry of Health (2017)

Highest SUDI rates in the most deprived areas

In 2010–2014, babies living in the most deprived areas (NZDep2006 quintile 5) had a much higher SUDI rate (1.4 deaths per 1000 live births), than babies in the least deprived areas (quintile 1) (0.2 deaths per 1000 live births) (Figure 4).

Figure 4: SUDI deaths, children aged <1 year, by NZDep2006 quintiles, 2010–2014 (rate per 1000 live births)



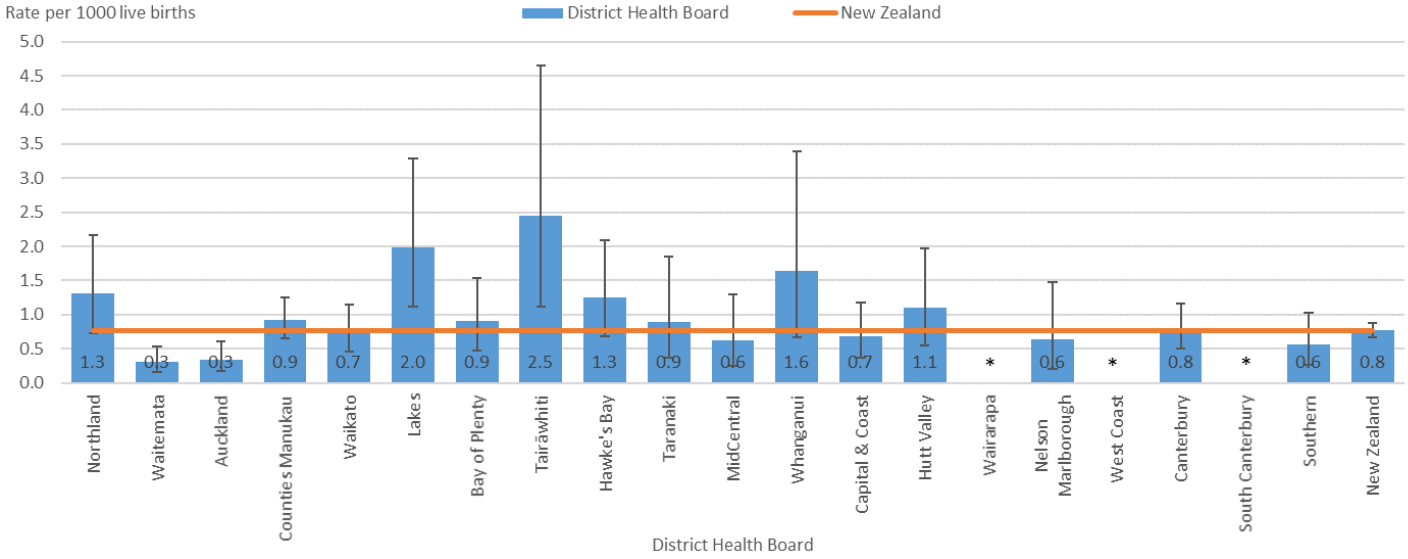
Source: Ministry of Health (2017)

Sudden Unexpected Death in Infancy (SUDI)

Tairawhiti and Lakes DHBs had the highest SUDI rates in 2010–2014

In 2010–2014, the highest SUDI rates were in Tairawhiti DHB (2.5 deaths per 1000 live births) and Lakes DHB (2.0 deaths per 1000 live births) (Figure 6).

Figure 6: SUDI deaths, children aged <1 year, by District Health Board, 2010–2014 (rate per 1000 live births)



* Some rates have been suppressed due to counts less than five.

Source: Ministry of Health (2017)

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DATA SOURCES AND ANALYSIS

Data come from the data tables *Fetal and Infant Deaths 2014* (Ministry of Health, 2017). The indicator presents data for sudden unexpected death in infancy (SUDI), defined as deaths in children aged less than one year old, with an underlying cause of death in the following ICD-10 codes: 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) and W79 (inhalation and ingestion of food causing obstruction of respiratory tract). This definition follows the recommendations of the Child and Youth Mortality Review Committee (2009).

Rates are presented per 1000 live births. 95% confidence intervals have been presented for this indicator. For more information about this indicator, see the metadata.

RELATED INDICATORS

Related environmental health indicators for the indoor environment, available from the EHINZ website (www.ehinz.ac.nz), include:

- Maternal smoking at two weeks postnatal
- Second-hand smoke exposure
- Asthma prevalence
- Asthma hospitalisations
- Lower respiratory tract infection hospitalisations
- Meningococcal disease
- Household crowding.

REFERENCES

Anderson H.R., & Cook, D. (1997). Passive smoking and sudden infant death syndrome: review of the epidemiological evidence. *Thorax, 52*, 1003-1009.

Child and Youth Mortality Review Committee, Te Rōpū Arotake Auau Mate o te Hunga Tamaraiki, Taiohi. (2009). *Fifth Report to the Minister of Health: Reporting mortality 2002–2008*. Wellington: Child and Youth Mortality Review Committee.

Ministry of Health. (2017). *Fetal and Infant Deaths 2014.* Wellington: Ministry of Health. Available online: http://www.health.govt.nz/publication/fetal-and-infant-deaths-2014 (accessed 9 November 2017).

U.S. Department of Health and Human Services. (2007). *Children and Secondhand Smoke Exposure. Excerpts from The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.

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