

## Second-hand smoke exposure in the home

### HIGHLIGHTS:

- **About 45,000 children and 106,000 non-smokers were exposed to second-hand smoke in their home in 2012/13.**
- **There has been a large drop in exposure to second-hand smoke in the home in the last six years.**
- **Higher rates of exposure are seen in children, Māori, and people living in more socioeconomically deprived areas.**



### Second-hand smoke is harmful to health

Second-hand smoke is a major cause of indoor air pollution in New Zealand. Second-hand smoke comes from two places: smoke breathed out by the smoker, and smoke smouldering from the end of the burning cigarette.

Exposure to second-hand smoke causes premature death and illness in both children and adults. In children, second-hand smoke can cause sudden unexpected death in infancy (SUDI), asthma, middle ear infections (otitis media), lower respiratory infections and low birth-weight. In adults, exposure to second-hand smoke can cause lung cancer, ischaemic heart disease and stroke (US Department of Health and Human Services 2014, US Surgeon General 2006).

### Over 150,000 New Zealanders are exposed to second-hand smoke in their home

In 2012/13, about 5.0% of children aged 0–14 years and 3.7% of non-smoking adults aged 15 years and over were exposed to second-hand smoke in their home. This is about 45,000 children and 106,000 non-smoking adults (Ministry of Health 2014).

### Large drop in exposure to second-hand smoke in the last six years

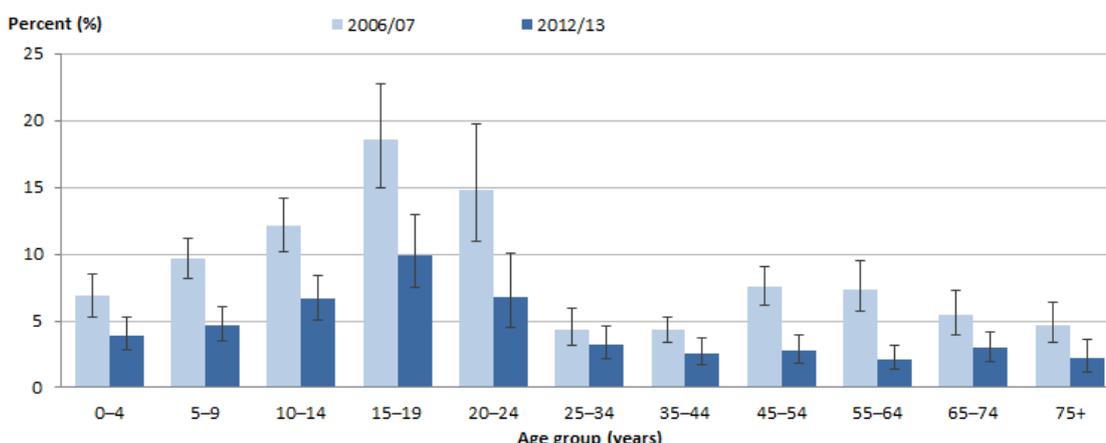
The proportion of children exposed to second-hand smoke had almost halved between 2006/07 (9.6%) and 2012/13 (5.0%). A similar decrease was seen for non-smoking adults (7.5% in 2006/07, to 3.7% in 2012/13).

### Children, young people and males are the most exposed

By age group, children and young people (particularly those aged 10–24 years) were the most likely to be exposed to second-hand smoke in their home in 2012/13, especially boys. Decreases in exposure were seen in almost all age groups from 2006/07 to 2012/13 (Figure 1).

Non-smoking men were 1.4 times as likely as non-smoking women to be exposed to second-hand smoke, adjusting for age.

**Figure 1: Exposure to second-hand smoke in the home among children and non-smoking adults (15+ years), by age group, 2006/07 and 2012/13**



Note: 95% confidence intervals are shown.  
Source: Ministry of Health (2014).

### Māori children and non-smokers are more likely to be exposed to second-hand smoke

By ethnicity, second-hand smoke exposure in the home was highest in Māori children (9.2%) and non-smoking adults (9.4%) (Table 1). Māori children and non-smokers were about 2.6 times as likely to be exposed to second-hand smoke in their home as non-Māori, adjusting for age and sex differences (Table 2). Asian children and non-smoking adults were much less likely to be exposed to second-hand smoke in the home (2.3–2.4%) than other people.

**Table 1: Exposure to second-hand smoke in the home, by ethnic group, 2012/13 (unadjusted prevalence and estimated number of people)**

Ethnic group (total response)	Exposed to second-hand smoke in their home (%)		Estimated number of people exposed	
	Children	Non-smoking adults	Children	Non-smoking adults
Total	5.0 (4.2–5.9)	3.7 (3.2–4.3)	45,000	106,000
Māori	9.2 (7.2–11.5)	9.4 (7.0–12.4)	21,000	25,000
Pacific peoples	6.4 (4.1–9.6)	5.5 (3.6–8.4)	8,000	8,000
Asian	2.3 (1.1–4.2)	2.4 (1.3–4.3)	2,000	9,000
European/Other	4.1 (3.3–5.2)	3.4 (2.8–4.0)	28,000	76,000

Note: 95% confidence intervals are given in brackets.  
Source: Ministry of Health (2014).

**Table 2: Comparisons by ethnic group, exposure to second-hand smoke in the home, 2012/13 (adjusted rate ratios)**

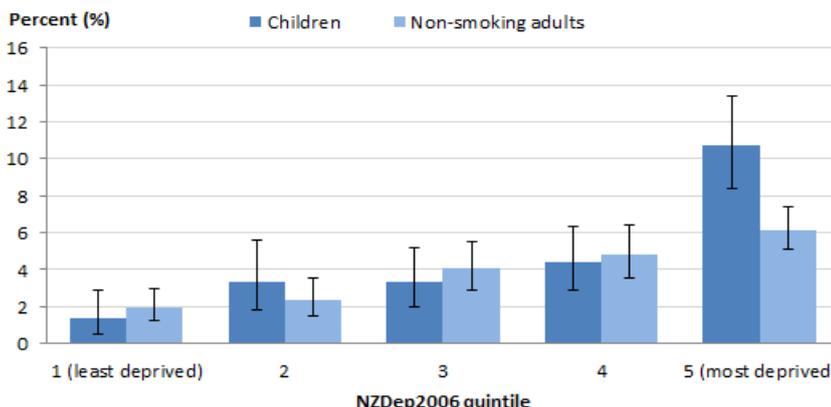
Ethnic group (total response)	Adjusted rate ratio (adjusting for age and sex)	
	Children	Non-smoking adults
Māori vs non-Maori	2.6 (1.9–3.7)*	2.6 (1.8–3.8)*
Pacific vs non-Pacific	1.4 (0.9–2.1)	1.3 (0.8–2.0)
Asian vs non-Asian	0.4 (0.2–0.9)*	0.5 (0.3–1.0)*

Note: Rate ratios above 1 show a higher exposure for people in the ethnic group, compared with other people. An asterisk (\*) shows a statistically significant result. 95% confidence intervals are given in brackets.  
Source: Ministry of Health (2014).

### Higher levels of second-hand smoke exposure in more deprived areas

Children and non-smoking adults living in more socioeconomically deprived areas were more likely to be exposed to second-hand smoke than other people. One in ten children (10.7%) living in the most deprived areas (NZDep2006 quintile 5) were exposed to second-hand smoke in their home (Figure 2).

**Figure 2: Exposure to second-hand smoke in the home, among children and non-smoking adults, by socioeconomic deprivation (NZDep2006 quintile), 2012/13 (unadjusted prevalence)**



Note: 95% confidence intervals are shown.  
Source: Ministry of Health (2014).

Children living in the most deprived areas were almost 8 times as likely to be exposed to second-hand smoke in their home as those in the least deprived areas, after adjusting for age, sex and ethnic differences (adjusted rate ratio=7.8, 3.4–17.9). A similar result was found for non-smoking adults (adjusted rate ratio=3.2, 1.8–5.9).

For more information about this indicator, see the EHI metadata sheet available on the EHI website ([www.ehinz.ac.nz](http://www.ehinz.ac.nz)).

**References**

Ministry of Health. 2014. *Tobacco Use 2012/13: New Zealand Health Survey*. Wellington: Ministry of Health.  
 US Department of Health and Human Services. 2014. *The Health Consequences of Smoking – 50 Years of Progress. A Report of the Surgeon General*. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control and Prevention.  
 US Surgeon General. 2006. *The Health Consequences of Involuntary Exposure to Tobacco Smoke, A Report of the Surgeon General*. Rockville, MD: US Department of Health and Human Services.

For more information, please contact Kylie Mason on [k.mason@massey.ac.nz](mailto:k.mason@massey.ac.nz)