

Oral health of children

HIGHLIGHTS:

- In 2017, 61% of 5-year-olds and 66% of children in school-year 8 were caries-free. These were the highest caries-free percentages since at least 2000
- Children with fluoridated water supplies continued to have better oral health than those without fluoridated supplies
- Māori and Pacific children continued to have poorer oral health compared to other ethnicities
- Waikato and Capital & Coast District Health Boards had the highest caries-free percentages for children in school-year 8 and 5-year old children respectively.



Oral health in children is important

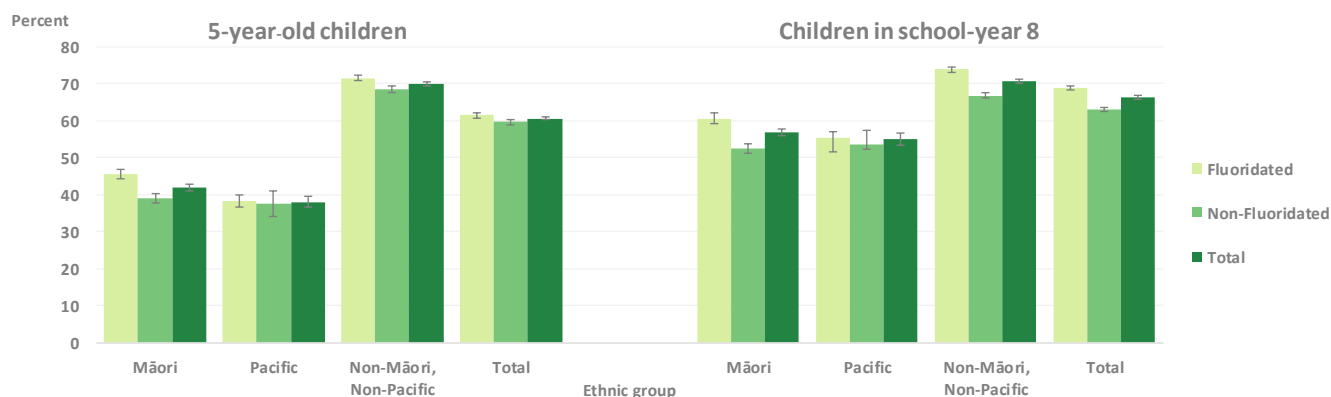
Good oral health in children has major benefits as it prevents pain, infection and oral disease such as dental caries (tooth decay). Children are at risk of dental caries as soon as their primary teeth ('baby teeth') begin to break through the gum at about the age of 6 months (Ministry of Health 2010). Tooth decay is the most common disease among children in New Zealand. It is also one of the leading reasons for preventable hospital stays in children (Ministry of Health 2015). Adding fluoride to drinking-water supplies can help prevent and reduce tooth decay (Royal Society of New Zealand 2014).

Children living in areas with fluoridated water have better oral health

The percentage of children who were caries-free (i.e. have no past or current experience of dental decay), was higher in areas with access to fluoridated drinking-water supplies for both age groups (Figure 1). In 2017, 61% of 5-year-old children who lived in fluoridated areas were caries-free, compared to 60% in non-fluoridated areas. For children in school-year 8 who lived in fluoridated areas, 69% were caries-free, compared to 63% in non-fluoridated areas (Figure 1).

Māori and Pacific children in both age groups had lower caries-free percentages compared to other ethnicities (Figure 1).

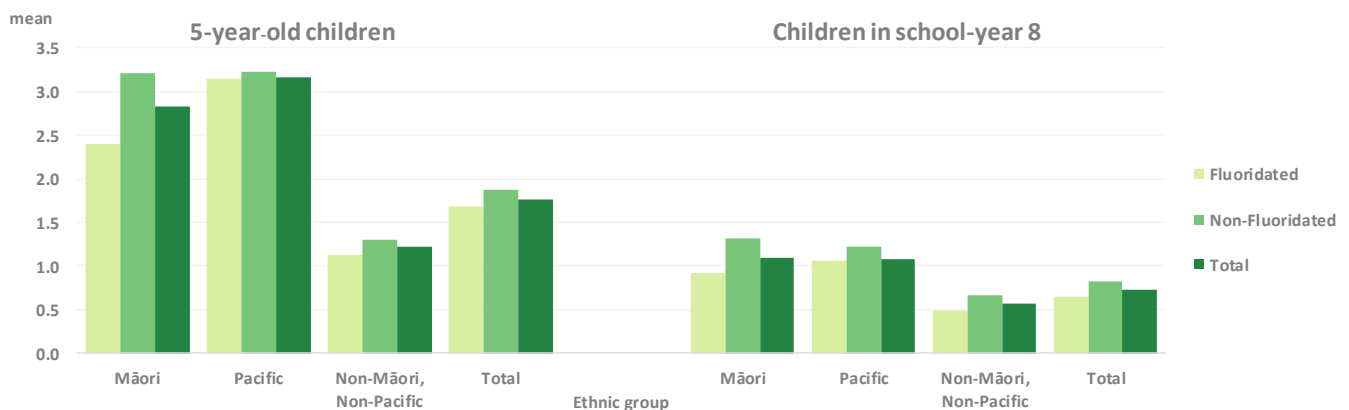
Figure 1: 5-year-old children and children in school-year 8 who were caries-free, by ethnic group and water fluoridation status, 2017



Source: Ministry of Health 2018

Among all ethnicities and both age groups the mean number of decayed, missing or filled teeth (dmft/DMFT) was lower in fluoridated areas compared to non-fluoridated areas (Figure 2). Māori and Pacific had higher mean dmft scores among 5-year-old children and children in school-year 8 compared to other ethnicities. This difference was larger among 5-year-old children. Pacific children aged 5-years-old had a mean of 3.2 dmft and Māori a mean of 2.8 dmft. This compares to just 1.2 dmft for Non-Māori/Non-Pacific 5-year-old children.

Figure 2: Mean dmft (5-year-olds) and DMFT (children in school-year 8), by fluoridation status, 2017



Source: Ministry of Health 2018

Note: dmft (decayed, missing or filled teeth) is a measure of the severity of tooth decay in primary teeth. DMFT is the equivalent measure for permanent teeth.

Oral health continues to improve

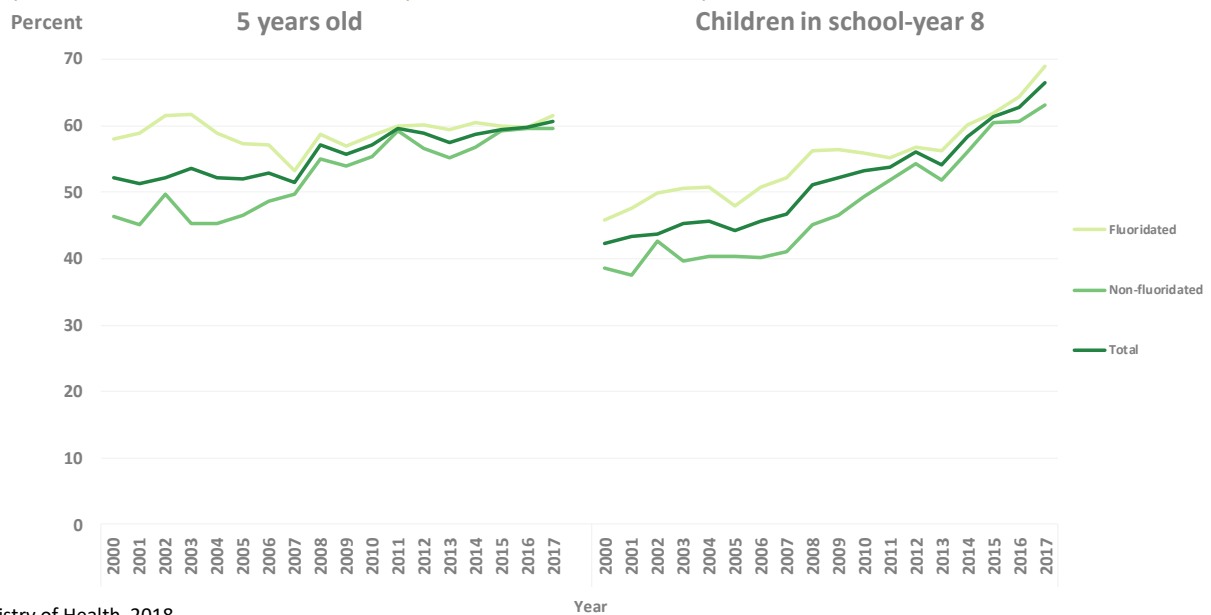
Overall, oral health in 5-year-old children and children in school-year 8 has improved between 2000 and 2017. Improvements can be seen in fluoridated and non-fluoridated areas. The largest improvement in oral health is in children in school-year 8.

Between 2000 and 2017, the level of children in school-year 8 that were caries-free increased from 42% to 66%. In the same time-frame, the level of 5-year-old children that were caries-free increased from 52% to 61%. From 2015 onwards, a higher percentage of children in school-year 8 were caries-free than 5-year-old children. Previously, 5-year-old children had consistently higher caries-free levels (Figure 3).

From 2000 to 2017, the difference in caries-free levels between fluoridated and non-fluoridated areas decreased in both age groups.

Oral health of children

Figure 3: 5-year-old children and children in school-year 8 who were caries-free, by fluoridation status, 2000-2017



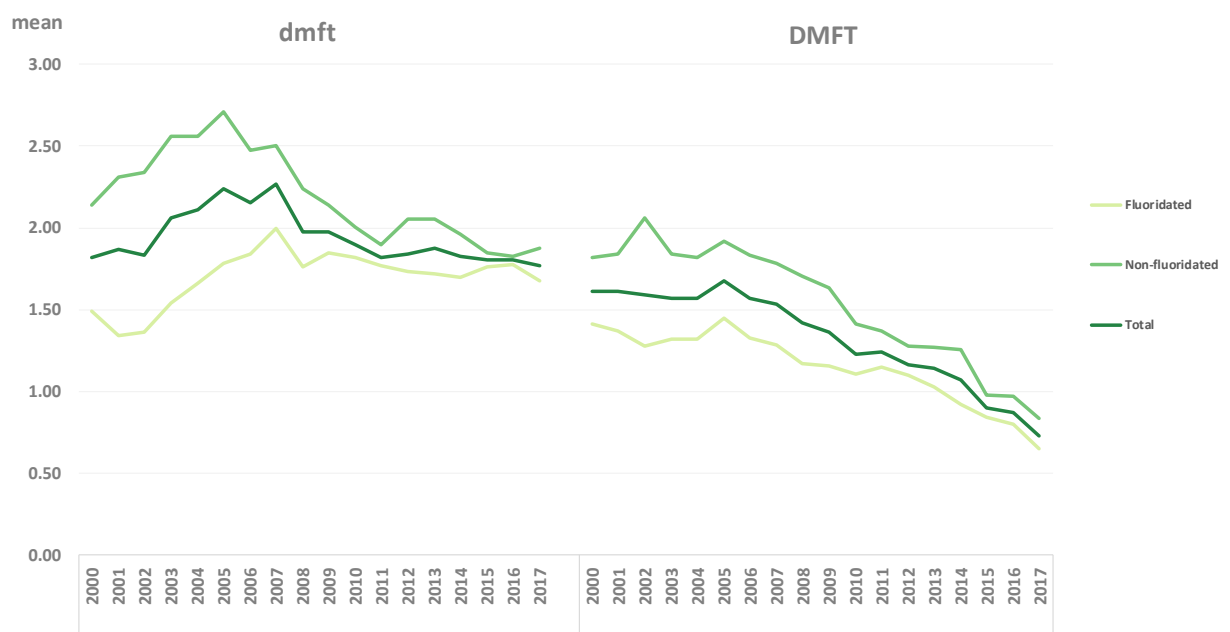
Source: Ministry of Health 2018

Between 2000 and 2017, the mean number of DMFT of children in school-year 8 dropped from 1.6 to 0.7 (Figure 4). This means that on average, children in school-year 8 had less than half as many decayed, missing or filled permanent teeth in 2017 compared to 2000.

Five-year-old children had, on average, 1.8 dmft in 2017 (Figure 4). The overall mean dmft increased between 2000 and 2007 but decreased from 2008 to 2017. It is now at the same level as in 2000.

In general, children who live in areas with access to fluoridated drinking-water had a lower mean number of decayed, missing or filled primary and permanent teeth. The difference between fluoridated and non-fluoridated areas decreased over time, as was seen previously for levels of caries-free children in Figure 3.

Figure 4: Mean dmft (5-year-old children) and DMFT (children in school-year 8), by fluoridation status, 2000-2017

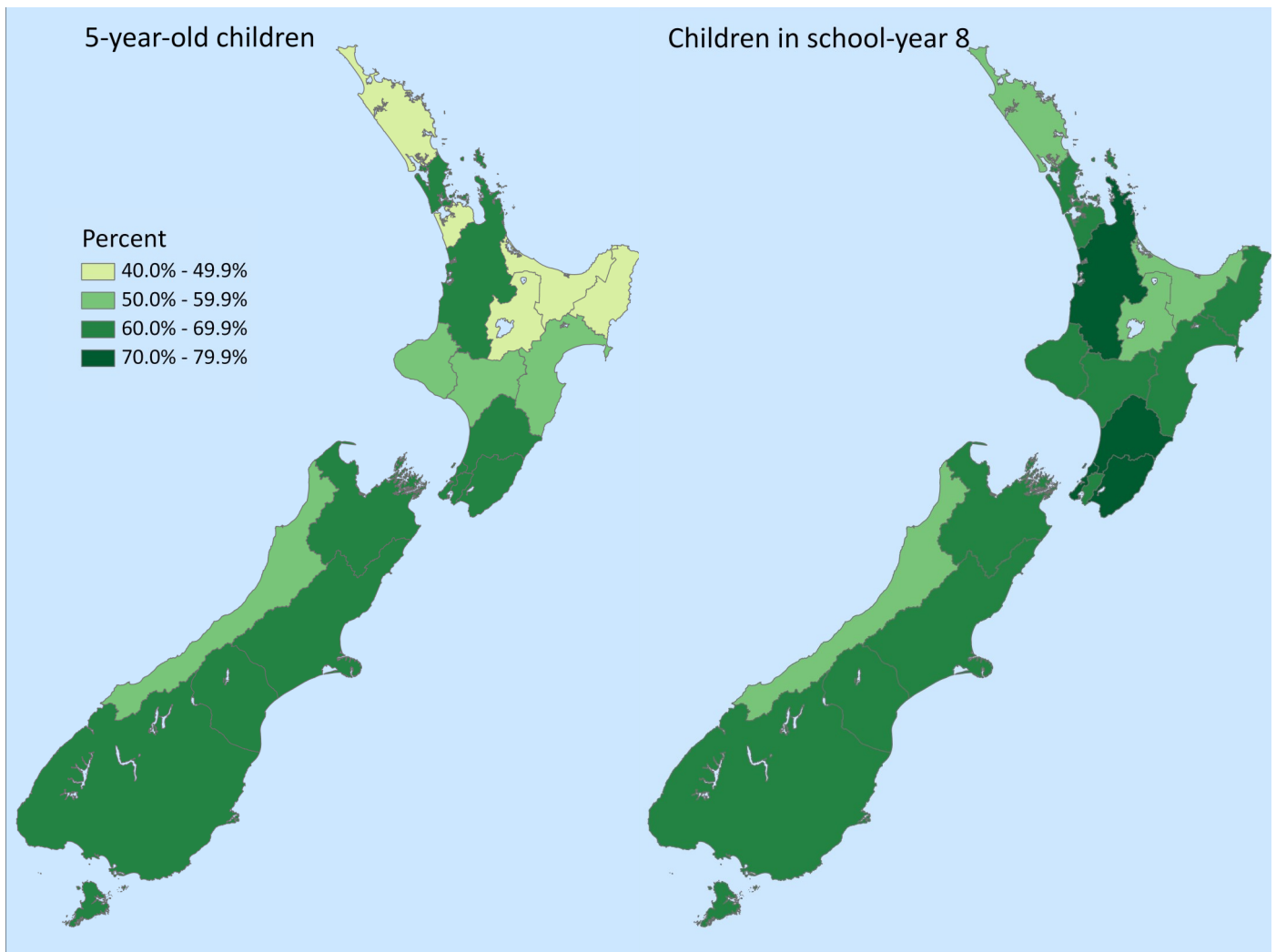


Source: Ministry of Health 2018

Children living in Capital & Coast and Waikato had the highest caries-free percentages

In 2017, the DHBs with the lowest caries-free percentages for 5-year-old children were Northland, Counties Manukau, Lakes, Bay of Plenty and Tairāwhiti (Figure 5). For children in school-year 8 the DHBs with the lowest caries-free percentages were Northland, West Coast, Lakes Bay of Plenty (Figure 5). For children in school-year 8 the DHBs with the highest caries-free percentages were Waikato, MidCentral, Wairarapa and Capital & Coast (Figure 5).

Figure 5: 5-year-old children and children in school-year 8 who were caries-free, by District Health Board, 2017



Note: Canterbury DHB includes Chatham Islands

Source: Ministry of Health 2018

FURTHER INFORMATION

Related environmental health indicators are available from the [EHINZ website](#).

DATA FOR THIS INDICATOR

Additional information for these indicators is available in the Metadata sheets: [Mean DMFT](#), [percent caries-free](#)

REFERENCES

Ministry of Health. 2010. *Our Oral Health: Key findings of the 2009 New Zealand Oral Health Survey*. Wellington: Ministry of Health.

Ministry of Health. 2015. *Annual Update of Key Results 2014/2015: New Zealand Health Survey*. Wellington: Ministry of Health.

Ministry of Health. 2018. *Age 5 and Year 8 oral health data from the Community Oral Health Service 2017*. Wellington: Ministry of Health.
URL: <http://www.health.govt.nz/nz-health-statistics/health-statistics-and-data-sets/oral-health-data-and-stats/age-5-and-year-8-oral-health-data-community-oral-health-service> (accessed November 2018)

Royal Society of New Zealand. 2014. *Health effects of water fluoridation: A review of the scientific evidence*. Wellington: Office of the Prime Minister's Chief Science Advisor and Royal Society of New Zealand.

Wright JC, Bates MN, Cutress T, Lee M. 1999. *The Cost-Effectiveness of Fluoridating Water Supplies in New Zealand. A report for the New Zealand Ministry of Health*. Porirua: Institute of Environmental Science and Research Limited.

AUTHOR

The author of this factsheet is Allan Schori, for more information please email (ehinz@massey.ac.nz).

CITATION

Environmental Health Indicators. 2018. Oral health of children. Wellington: Environmental Health Indicators Programme, Massey University.