Although fluoridation of community water supplies has previously been a contentious issue in Victoria, as described by Gavan Oakley on pages 62–3, strong evidence of its efficacy to safely prevent decay, combined with bipartisan political support, has led to its extension to 90 per cent of the state’s population.1

Fluorides are naturally occurring compounds found in plants and rocks. They are also found at very low levels in almost all fresh water. Community water fluoridation is the controlled addition of a fluoride compound to a public water supply in order to bring the fluoride concentration up to a level (one part per million) that prevents tooth decay without causing any ill effects. Some water supplies in Victoria have naturally occurring fluoride at this prevention level. Universal access to fluoride for caries prevention has been recognised by the World Health Organization as part of the basic right to human health.2 The Australian National Health and Medical Research Council (NHMRC) ‘strongly recommends community water fluoridation as a safe, effective and ethical way to help reduce tooth decay across the population’.3

The first town in Victoria to be fluoridated was Bacchus Marsh (about 50 kilometres north-west of Melbourne), in 1962. The city and suburbs of Melbourne followed in 1977. Water supplies in rural Victoria have been progressively fluoridated since that time, particularly through a focused and well-funded government program between 2004 and 2010, which led to more than 700,000 additional Victorians benefiting from a fluoridated water supply.4

The most recent NHMRC review found that water fluoridation reduces tooth decay by 26 to 44 per cent in children, and by 27 per cent in adults.5 Recent research in Australia found that children of five and six years of age who had lived more than half their lives in fluoridated areas had 50 per cent less decay in their primary teeth than did children who had not lived in fluoridated areas. Children 12 and 13 years old who had lived more than half their lives in fluoridated areas had 38 per cent less decay in their adult teeth than did children who had not lived in fluoridated areas.6

By reducing tooth decay, community water fluoridation reduces the risk of loss of teeth, time away from work and school, and the need for treatment under general anaesthesia. There are fewer cavities, less-severe cavities, less need for fillings and


Water fluoridation

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By reducing tooth decay, community water fluoridation reduces the risk of loss of teeth, time away from work and school, and the need for treatment under general anaesthesia. There are fewer cavities, less-severe cavities, less need for fillings and

removing teeth, and less pain and suffering because of tooth decay. Community water fluoridation has been shown to save money, both for families and the health care system. The return on investment for community water fluoridation varies with the size of the community, increasing as the community size increases. Fluoridating water in Australia is a population-wide investment. In Australia, for every dollar that is spent on fluoridation, between $7 and $18 is saved due to avoided treatment costs. It has been estimated that, following the introduction of water fluoridation in Victoria, the community has saved about $1 billion over 25 years, through avoided expenditure on dental treatment and fewer days absent from work or school. Water fluoridation has been recognised by the Public Health Association of Australia as among the top-10 public health success factors in Australia over the last 20 years. The Centers for Disease Control in the United States have included water fluoridation in their "Ten great public health achievements of the 20th century." More than half a million Victorians live on water grids that do not have community water fluoridation. Healthy mouths, healthy lives: Australia’s national oral health plan 2015–2024 states that communities of more than 1000 people should have a reticulated fluoridated water supply. Given disparities in oral health between different groups of people, inequalities that can exist in access to dental care, and the improved design and reducing cost of fluoridation plants, extending coverage to smaller communities may be appropriate. The fluoridation of Victoria’s drinking water supplies is regulated by the Health (Fluoridation) Act 1973. For more information, visit the website of the Victorian Department of Health and Human Services.

Dr John Rogers

4 NHMRC, ‘Water fluoridation in Victoria’.
5 NHMRC, ‘Water fluoridation and human health in Australia’.
9 Public Health Association of Australia, Top 10 public health successes over the last 20 years, PHAA Monograph Series No. 2, Canberra: Public Health Association of Australia, 2018.
10 MJ Murphy, ‘Community water fluoridation: One of CDC’s “10 great public health achievements of the 20th century”’, Public Health Reports, vol. 130, no. 4 (July–August 2015), pp. 294-98.