

Missed opportunities for improving oral health in rural Victoria: The role of municipal public health planning in improving oral health

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Handling editor: Jonathan Hallett

Abstract

Issue addressed: People in rural areas have poorer oral health than their urban counterparts due to a range of factors. Local governments (LGs) have a key role in addressing health issues that impact on local communities.

Methods: Publicly available oral health profile (OHP) data and Municipal Public Health and Wellbeing Plans (MPHWPs) (2017-2021) were downloaded from Dental Health Services Victoria and LG websites for 48 Victorian local government areas (LGAs) containing predominately rural areas. OHP data were collated to provide an overview of the oral health status of the communities and a content analysis of the MPHWPs undertaken.

Results: Despite poor oral health in rural Victorian LGAs, oral health was not often in MPHWPs. Twenty of the MPHWPs had some mention of oral health but only four included specific actions or strategies that would be used to improve oral health. None of the plans contained any specific targets for action or details of evaluations that might be used to assess success.

Conclusions: Poor oral health in rural Victorian communities continues to be demonstrated through local OHPs and is due to modifiable risk factors and poor access to water fluoridation. LGs have a key role to play in improving oral health through utilisation of OHP data in their MPHWPs.

So what? Oral health remains a low priority for LG action. This represents a missed opportunity for prioritising oral health prevention and promotion activities that improve oral health in rural Victoria.

KEYWORDS

health promotion, local government, MPHWP, oral health, public health planning

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1 | INTRODUCTION

Good oral health is fundamental to overall health and well-being.¹ Without it, a person's general quality of life and the ability to eat, speak and socialise is compromised, resulting in pain, discomfort, and embarrassment. Tooth decay (dental caries) is the most common chronic disease in Australia.² Oral diseases can destroy the tissues in the mouth, leading to lasting physical and psychological disability.³ People living in rural and remote areas have poorer oral health than those living in cities,¹ and oral health status generally declines as remoteness increases.^{2,4} Australians living in remote and rural areas have higher rates of dental caries, edentulism (having no natural teeth) and periodontal disease, as well as less favourable dental visiting patterns (they are more likely to visit a dental professional for a dental problem, irregularly, and do not have a regular dentist) and higher rates of potentially preventable hospital admissions (PPH) for dental problems.^{2,4-6} This is compounded by a number of factors including access to and availability of adequate oral health services, longer travel times and limited transport options services,^{7,8} recruitment and retention of the oral health workforce in rural areas⁹ and reduced access to preventative measures such as fluoridated water.^{10,11}

All levels of government have a role to play in improving oral health status of communities throughout Australia. Four priority population groups have been identified in the National Oral Health Plan: *Healthy Mouths, Healthy Lives*¹: people who are socially disadvantaged or on low incomes, Aboriginal and Torres Strait Islander people, people living in rural and remote areas and people with additional and/or specialised health care needs. The *Plan* recognises that oral diseases are preventable and that there are a range of effective oral health promotion strategies that can be implemented to reduce the occurrence and impact of oral disease.¹ Australia's Oral Health Tracker provides a report card on preventable oral diseases and their risk factors and contains a number of oral health targets to be achieved by 2025.² The latest progress report highlights that whilst some improvements have been made there are still some key areas needing urgent attention if key targets are to be met (eg, untreated decay and community water fluoridation).¹²

Local governments (LGs) in Victoria also have a clear role to play in improving community health and well-being. Under the Public Health and Wellbeing Act,¹³ each local council is required to develop an evidence-based Municipal Public Health and Wellbeing Plan (MPHWP) every 4 years. The Act specifically states that MPHWPs "must include an examination of data about health status and health determinants in the municipal district" (Section 26(2)(a)) and "identify goals and strategies based on available evidence" (section 26(2)(b)).¹³ Section 5 of the Act outlines that planners should make "decisions... about the use of resources and the choice of interventions ... based on evidence available in the circumstances that is relevant and reliable". Councils can create a stand-alone MPHWP, or they can integrate health and well-being planning into their council or community

plans. In regard to oral health, there are a number of key guides and documents to assist local councils to ensure that they have reliable local evidence and evidence-based interventions in their plans.^{2,14-17}

The MPHWPs are supported by a state-wide Victorian Public Health and Wellbeing plan that outlines the key health priorities for the state released 12 months before the local plans are due. The state-wide plan sets out a comprehensive approach to deliver improved public health and well-being outcomes for all Victorians ensuring that action is directed toward the factors that contribute most strongly to the burden of disease and health inequalities.¹⁸

Dental Health Services Victoria, in partnership with the Victorian Department of Health and Human Services, provides oral health profiles (OHPs) containing population oral health data and risk factor indicators to assist LG with their planning.¹⁹ These OHPs are supplemented by the *Improving Oral Health: Local Government Action Guide* also developed by Dental Health Services Victoria and the Victorian State Government²⁰ and the *Victorian Action Plan to Prevent Oral Disease*.¹⁵ These guides focus on the role that LG should play in improving community oral health by helping to create oral health promoting environments. In addition to these, LGs can also draw on the technical data provided in Australia's Oral Health Tracker reports and technical papers to support their planning.^{2,12,17,21}

We cannot ignore the impact that the social determinants have on poor oral health in rural and remote communities including low levels of education, low socio-economic status and lack of employment opportunities.^{22,23} In addition to these, people in rural areas face a number of other barriers to oral health, including lack of community water fluoridation, workforce shortages of oral health practitioners, a lack of oral health prevention activities, geographic isolation and transport costs.²⁴ Oral diseases share the main risk factors of other noncommunicable diseases including sugar consumption, tobacco use, and excessive alcohol use.^{25,26} These determinants of health are common to a number of chronic diseases such as diabetes, heart disease, cancer, strokes and injuries.²⁷ It has been argued that these factors combined with the stoicism of people living in rural and remote areas lead to an acceptance of levels of poor oral health that would be unacceptable to those living in the city.^{6,28-30}

Oral health is often low on the priority actions within MPHWPs (43 actions) compared to other action areas like healthy eating (310 actions) or physical activity (571 actions).^{31,32} Specific actions to improve oral health in rural Victoria are not often clearly articulated within MPHWPs. The low priority for direct action by LGs to improve oral health status is at odds with directions provided by the Victorian Department of Health.¹⁵ Whilst the focus on healthy eating and active living and improving physical activity are laudable, a lack of specific focus on oral health means there are missed opportunities to improve the oral health of rural Victorians. To better understand the role and actions of rural LGs in oral health promotion and prevention, the aim of this study was to explore key oral health indicators, modifiable oral health risk behaviours and to document how they were articulated within the MPHWPs (2017-2021).

2 | METHOD

2.1 | Data collection

Victoria comprises 79 municipal areas, often referred to as local government areas (LGAs) or councils. These are situated in six Department of Human Services (DHS) regions (Figure 1). There are five DHS regions that contain predominately rural/regional communities including Barwon South West, Loddon Mallee, Hume, Gippsland and Grampians. Forty-eight of the 79 LGAs are classified as containing predominately rural/regional areas, and data for these LGAs were included in the dataset.

2.2 | Oral health profile data

Oral health profiles were published by Dental Health Services Victoria.¹⁹ The data are sourced from a range of datasets including the Ambulatory Care Sensitive Conditions admissions in Victoria and the Victorian Health Information Surveillance System, DHHS, Victorian State Government, Melbourne.¹⁹ Data on dental caries experience (%dmft + DMFT > 0) provides an indication of the proportion of individuals presenting with at least one decayed (d), missing (m), or filled (f) deciduous (baby) or permanent tooth.¹⁹ The average number of decayed primary (dmft) and permanent (DMFT) due to dental caries gives an indication of the severity of dental caries. Oral health status data are collected for most people presenting for public dental care at the initial examination before any treatment is undertaken by Dental Health Services Victoria. Self-rated dental health estimates have been combined as excellent/very good, good, and fair/poor and have been age standardised to the 2017 Victorian population. The proportion of adults delayed/avoided a visit to a dental professional due to

costs (self-reported) have been age standardised to the 2017 Victorian population.

For the purposes of this study, these publicly available OHPs were downloaded for each of the 48 rural LGAs and data for the following indicators extracted:

1. Potentially preventable hospitalisations due to dental conditions for children aged 0-9 years 2018-2019.
2. Number of decayed, missing, or filled primary (baby) and permanent teeth for children attending public dental services, 2017-2019 aged 0-5 years.
3. Number of decayed, missing, or filled primary (baby) and permanent teeth for children attending public dental services, 2017-2019 aged 6 years.
4. Number of decayed, missing, or filled primary (baby) and permanent teeth for children attending public dental services, 2017-2019 aged 12 years.
5. Proportion of 0-5 years children presenting with at least one decayed, missing, or filled primary (baby) or permanent (adult) tooth, attending public dental services 2017.
6. Proportion of 6-year-old children presenting with at least one decayed, missing, or filled primary (baby) or permanent (adult) tooth, attending public dental services 2017.
7. Proportion of 12-year-old children presenting with at least one decayed, missing, or filled primary (baby) or permanent (adult) tooth, attending public dental services 2017.
8. Proportion of adults who rated (self-reported) their dental health as poor 2017.
9. Proportion of adults who delayed or avoided (self-reported) visiting a dental professional because of cost, 2017.

The OHPs also provide data on a number of modifiable risk factors for poor oral health taken from the Victorian Population Health

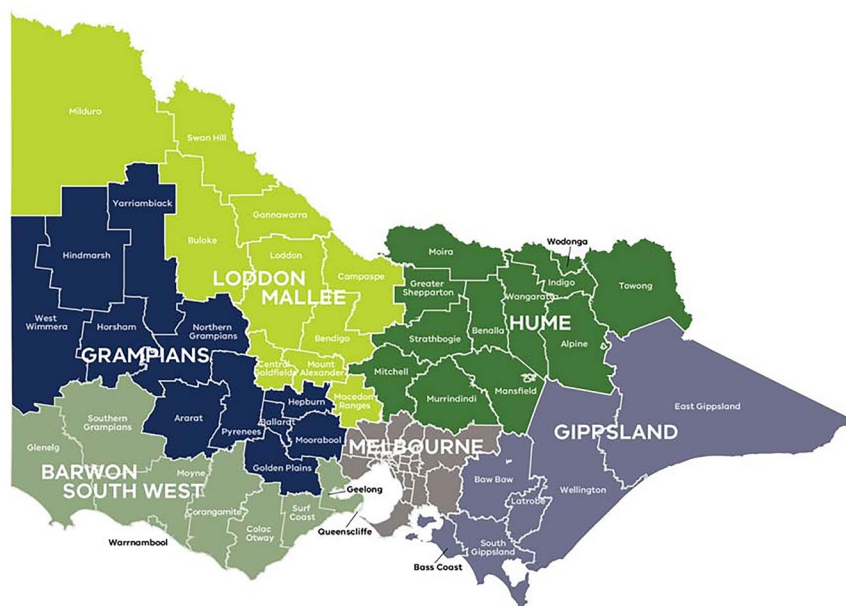


FIGURE 1 DHS regions Victoria
<https://www.rdv.vic.gov.au/regional-development-australia/about-regional-development-australia>

Survey data. The data in the current OHPs come from the Victorian Population Health Survey 2011-2012 and 2014. The OHPs for each of the 48 predominately rural LGAs were sourced from Dental Health Services website and downloaded in portable document format (PDF) format.

2.3 | MPHWP

The MPHWP were downloaded from the local council or Municipal Association of Victoria websites in PDF format for these 48 LGAs. Sixteen of the councils had chosen to incorporate their MPHWP into their council plans, and the remaining 32 councils produced stand-alone plans. This approach is in accordance with Section 26 of the Public Health and Wellbeing Act 2008 that provides for councils to integrate public health and well-being matters into their council plan. These publicly available PDFs were then imported into NVivo 12 for further analysis. Using a text search, option documents were initially searched using the text search query option and the words "oral," "dental," "teeth" and "tooth". This search included exact matches, stemmed words and synonyms. Twenty of the 48 (41.6%) MPHWP contained the relevant search terms and were included in the dataset for further content analysis.

2.4 | Data analysis

2.4.1 | Oral health profile data

The OHP key indicator data for each rural Victorian LGA ($n = 48$) were extracted, tabulated and compared to the Victorian averages and a range calculated. Data for modifiable risk factors were also extracted for the 48 rural LGAs and tabulated and compared to the Victorian average.

2.4.2 | MPHWP data

Consistent with previous studies^{31,33,34} the 20 MPHWP that contained instances of the included terms were analysed using deductive content analysis. The first step in this analysis involved secondary keyword search including recognition terms relating to oral and/or dental health and other relevant information. This included any statements that population within the LGA has poorer oral health status or potential for poor oral health status. Sections containing instances relating to oral health were then extracted and categorised into the following key areas:

1. Priority area (mentions of a specific priority area for oral health action)
2. General statement (these were general statements or aspirations for improving oral health)

3. Provision of specific evidence (specific statistics or other evidence was provided in relation to oral health status)
4. Strategies and/or actions (specific actions or strategies designed to address oral health were mentioned)

The OHP data for the 28 LGAs that did not contain any mention of oral health were then collated and compared to the Victorian average across each of the key indicators.

3 | RESULTS

3.1 | Oral health profile data

OHP data included numbers and percentages of rural LGAs that had higher rates for each indicator calculated and range (Table 1).

3.2 | MPHWP documents

Content analysis revealed that 20 out of 48 (41.6%) rural MPHWP had some mention of oral health within their plans. These ranged from short statements related to why oral health was important to significant data extracted from the Dental Health Services LGA OHPs. Extracted data were categorised according to the following: priority area, general statements or aspirations, provision of specific evidence and strategies or action.

1. Priority area (links to an identified priority area)

Five out of 20 (25%) of the MPHWP contained statements that were linked directly to an identified priority area (healthy eating/active living).

2. General statements or aspirations

Nine out of 20 (45%) of the MPHWP contained only general statements or aspirations related to oral health. These are outlined below.

A nutritious diet and adequate food supply are central for promoting health and well-being. Excess intake contributes to the risk of obesity, cardiovascular diseases, diabetes, some cancers and dental caries. Increased consumption of fruit and vegetables helps reduce the risk of overweight and obesity, heart disease and certain cancers

(LGA 1).

Good oral health is important for general health and well-being. Poor oral health, or the presence of oral diseases, is associated with major chronic disease and

TABLE 1 Key indicators from OHP for rural LGAs

Key indicators	Vic average	Rural LGAs higher than VIC average n = 48	Above VIC average with no OH in MPHWP (n = 28)	Rural LGAs higher than VIC average with no OH in MPHWP (%)	Rural LGA range
Potentially preventable hospitalisations due to dental conditions for children aged 0-9 y 2018-2019	6.1	30	17	56	1.30-17.50
Mean number of dmft for children attending public dental services, 2017-2019 aged 0-5 y	1.11	28	16	57	0.58-4.20
Mean number dmft for children attending public dental services, 2017-2019 aged 6 y	2.36	23	11	47	0.58-4.24
Mean number dmft and DMFT for children attending public dental services, 2017-2019 aged 12 y	1.87	22	13	59	1.00-6.00
Proportion of 0-5 y children presenting with dmft and DMFT > 0, attending public dental services 2017	26%	30	16	53	16%-77%
Proportion of 6-year-old children presenting with a dmft and DMFT > 0 attending public dental services 2017	51%	27	15	55	24%-100%
Proportion of 12-year-old children presenting with dmft and DMFT > 0, attending public dental services 2017	59%	24	16	66	31%-100%
Proportion of adults who rated (self-reported) their dental health as poor 2017	24%	23	12	52	24%-36%
Proportion of adults who delayed or avoided (self-reported) visiting a dental professional because of cost, 2017	34%	32	20	62	22%-69%

Note: Data on modifiable oral health risk behaviours for the 48 predominately rural LGAs were extracted, tabulated and compared to the Victorian average and a range calculated. Abbreviations: LGAs, local government areas; MPHWP, Municipal Public Health and Wellbeing Plan; OHP, Oral Health Profile.

can cause pain and discomfort, making eating difficult. This in turn can cause dental infection and has been associated with low self-esteem and reduced quality of life

(LGA 2).

To support for a range of initiatives that promote healthy living, this will include promoting healthy eating, decrease in alcohol consumption, increased in water consumption, increased physical activity and decrease of sugary drink consumption. These initiatives will promote reduced incidents of obesity, diabetes and oral health

(LGA 3).

In regard to their own health and well-being, people were least satisfied with how much they exercise, their oral health, their ability to cope with stress and their connection to community

(LGA 4).

Encouraging healthier eating and active living (including oral health)

(LGA 5).

Oral diseases place a considerable burden on individuals, families, and the community. The impact of oral disease comes from the four main conditions of tooth decay, gum disease, oral cancer and oral trauma. About 90% of all tooth loss can be attributed to tooth decay and gum disease health problems. Tooth decay is amenable to prevention through good nutrition, exposure to fluoride (such as in water and toothpastes), maintenance of adequate oral hygiene and access to regular dental visits. Oral health is linked to overall health and well-being in a number of ways. The ability to chew and swallow our food is essential for obtaining the nutrients we need for good health. Other adverse impacts of poor dental health include problems with speech and low self-esteem. Moreover, the impact of poor dental health is not just on the individual but also on the broader community through the health system and high associated economic costs. Despite a significant increase in Australian Government expenditure on dental health services during the period of the first National Oral Health Plan, the majority of the cost of dental care (\$4.7 billion) continues to fall to the individual

(LGA 7).

Poor oral health in childhood is the strongest risk factor for poor oral health in adulthood. Investment in promotion and support of oral health, breastfeeding and other aspects of health and well-being in early years are widely recognised as the most effective life stage for long-term health and well-being outcomes

(LGA 9).

Improving oral health requires access to fluoride (in water and toothpaste), good dental hygiene and regular access to preventative dental care. The major oral disease that causes poor oral health is tooth decay, gum disease and oral cancers. Dental decay is the second most costly diet-related disease in Australia, with an economic impact comparable with heart disease and diabetes. Oral disease is a key marker of disadvantage, with greater levels experienced by people on low income, dependant older people, Aboriginal people, people in rural areas, people with disability and immigrant groups from culturally and linguistically diverse backgrounds

(LGA 10).

3. Provision of specific evidence (specific statistics or other evidence was provided in relation to oral health status)

The Dental Health Services Victoria LGA level OHP data were used in some form in 15 out of 20 (75%) of the MPHWP, but there were wide variations in the types and depth of data presented. Two of the MPHWP presented the specific LGA data in its entirety. The OHP data included in each plan are provided in additional file 2.

4. Strategies or actions

Only four out of 20 (20%) of the included MPHWP included specific actions or strategies that they would use to improve oral health within their LGA. None of them contained any specific targets for action or details of evaluations. The following actions/strategies were identified.

Work in partnership with DHSV: Participate in the development of [LGA name] Health Needs Analysis Action Plan to further explore local health indicator data and advocate to overcome areas of disadvantage on the four main health priorities: diabetes, heart health, mental health and oral health. Advocate for fluoridation of the [name of town] town water supply to reduce oral health disadvantage. Smiles for Miles

(LGA 5).

Maternal and child health: nurses encourage oral health from birth, educating parents that healthy gums lead to healthy teeth, the negative effects of letting babies go to sleep with a bottle in their mouth, the negative effects of sweet drinks and brushing first teeth.

Early years: Council-managed kindergartens participate in the Dental Health Services Victoria's Smiles 4 Miles program that aims to improve the oral health of preschool aged children in Victoria. Community health coordinates the program that includes the development of healthy eating and drinking policies; provision of information to children, parents and teachers; and participation in activities that reinforce the three key messages of eat well, drink well and clean well.

Older People: Council's Community Support Assessment Officers talk to older people about the benefits of regular check-ups, correct fitting dentures etc during the assessment and provide information about dental services if needed. Links with the National Action Plan for Oral Health

(LGA 7).

Increase oral health (domain 1), promote oral health in early years

(LGA 8).

Oral health awareness at immunisation sessions

Support Early Childhood Services to implement activities that support the Smiles 4 Miles Program

(LGA 9).

4 | DISCUSSION

Despite the concerning statistics and direction from the Victorian State Government for LGAs to "analyse data to identify which determinants, risk factors or issues are having significant impacts on the health and well-being of the community, and to identify the potential to take necessary action"¹⁶ in the current study, less than half (41.6%) of the rural LGAs in Victoria mention oral health within their MPHWP. When oral health was mentioned (n = 20), it mainly consisted of the provision of a description of oral health status (for example, "40% of [LGA name] children, aged 5 or under, who attended a public dental service have at least one missing, filled, or decayed baby or adult tooth") or a set of general statements (for example, "good oral health is important for general health and well-being").¹⁹ Only four LGAs who had oral health within their MPHWPs included actions to improve it with none having any specific targets or processes for evaluation.

In Australia, LGAs are the arm of government "closest to the people",³⁵ which means they have unique experience of public health priorities at the local level, and play an important role in determining the health and well-being of their local communities.^{32,36} The purpose of MPHWPs is to encourage LGAs to understand and address, as far as possible, the health challenges that their communities face. For people living in rural areas, these challenges are often enormous, impacted by a range of social determinants.³⁷ The Commission on the Social Determinants of Health acknowledged the role of LGAs to improve health outcomes by focusing on social determinants in 2008.³⁸ Despite repeated calls for a focus on social determinants and a common risk factor approach to oral health promotion,^{22,23} high rates of preventable oral disease remain.^{2,12} People living in rural and regional Australian communities have more caries, more severe caries and more untreated caries than those in urban areas^{4,19,39}; they also experience higher rates of potentially preventable hospital admissions due to dental conditions.^{6,12}

The results of the current study confirm this dire state with LGA OHP data showing that more than 60% of rural LGAs having higher rates of potentially preventable hospitalisations (PPHs) due to dental conditions for children aged 0-9 years and higher rates of children aged 0-12 years with decayed, missing and filled teeth.¹⁹ Updated data from Australia's Oral Health Tracker highlight those improvements in PPH for children aged 5-9 years have not been made in the past 10 years.¹² Adults living in rural Victorian LGAs are also more likely to report poor oral health and to have avoided seeking dental advice due to cost than the state average. High rates of oral disease (measured by decayed, missing and filled teeth) in children were found in LGAs that did not have any mention of oral health within their plan with 0- to 5-year-old children in one LGA having an average of 4.24 decayed, missing, or filled primary (baby) and permanent teeth for children attending public dental services, 2017-2019 (state average 1.11).

In addition to these, modifiable risk behaviour data (Table 2) showed higher than the state average for daily smokers, increased lifetime risk of alcohol related harm, not meeting fruit and vegetable guidelines and daily consumption of sugar sweetened drinks.¹⁹ Whilst some of the MPHWPs included linked this data to statements around healthy eating and active living, none of them linked these key risk factors to poor oral health outcomes. This demonstrates a lack of consideration of the common risk factor approach to improving oral health outcomes.²⁷

Community-based water fluoridation is a cost-effective and equitable initiative that is supported by overwhelming scientific evidence and internationally recognised as one of the most important public health interventions.^{40,41} The provision of fluoride plays a crucial role in both preventing and reducing tooth decay.^{17,40,42-45} There is evidence that MPHWPs can be used as a platform to raise awareness of local oral health issues (like lack of water fluoridation) and to lobby for improved oral health. A recent case study outlining the process undertaken by one rural LGA to achieve fluoridation of the town water supply demonstrates how linking specific actions to improve oral health into the MPHWP can impact on implementation.⁴⁶

TABLE 2 Modifiable oral health risk behaviours for adults in rural local government areas (LGAs), 2017

Modifiable risk factor	Number of rural LGAs over state average (n = 48)	Percentage of rural LGAs over state average (%)	Rural LGA range	State average
Daily smokers ^a	38	79	6-26	12
Increased lifetime risk of alcohol related harm (yearly) ^b	32	66	12-30	18
Not meeting fruit and vegetable guidelines ^c	34	70	45-65	52
Daily consumption of sugar sweetened soft drink ^d	34	70	8-26	10

^aThe self-reported smoking status refers to proportion of adults who smoke daily.

^bThe lifetime risk of alcohol-related harm attempts to measure the risk associated with developing an illness. For healthy men and women, drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury.

^cDaily intake of fruit and vegetables is used as a proxy measure for the quality of a person's diet in Australia and internationally.

^dThe term sugar-sweetened soft drink refers to any beverage with added sugar and includes carbonated drinks, flavoured mineral water, cordial, sports drinks and energy drinks.

Over a period of 4 years, the local community, health service and local council staff worked together to lobby for water fluoridation to address high rates of poor oral health within the community. The council incorporated oral health and more specifically water fluoridation as a strategic direction into their MPHWP plan. This exemplar case study is provided on the Dental Health Services Victoria website and can be used as a resource for other communities wishing to undertake an advocacy process for water fluoridation (see Final-ECOH-Case-study.pdf [dhsv.org.au]).

Given the poor oral health status of rural Victorians highlighted in the OHPs provided by Dental Health Services Victoria¹⁹ and national, state, and local documents to support LGs to include oral health within their plans,^{2,12,14-17,20} oral health remains a low priority for LG action.^{31,47} Understanding the causal pathways between determinants, common risk factors and health outcomes (including oral health) enable identification of ways of preventing disease and promoting good health.^{27,48} Whilst some progress has been made toward improving oral health, the importance of having a national agenda with local community level actions remains a key to continued success.¹⁷ Previous research has highlighted that MPHWP often fail to fulfil their potential as effective strategic planning documents due to the lack of specific action and measures to evaluate success.^{31,47,49}

Recognising the impact that poor oral health can have across the lifespan, the Dental Health Services Victoria and the Department of Health and Human Services consulted with more than 550 people in the development of the *Victorian Action Plan to Prevent Oral Disease 2020-2030*.¹⁵ The plan promotes a vision for good oral health through addressing priority areas of improving oral health of children, promoting healthy environments, improving oral health literacy and improving oral health promotion, screening, early detection and prevention services. This action plan provides detailed information and key strategies for improving oral health outcomes for all. The MPHWP included in this study were developed for 2017-2021, so the references to the action plan priority areas may

not be evident. However, the lack of oral health action within the included MPHWP did not reflect a sound understanding of the key risk factors for poor oral health or the use of evidence to support action at the LG level. The failure to include specific information about oral health within MPHWP is a missed opportunity for rural Victorian LGs to improve the oral health of the communities they serve.

4.1 | Limitations

This study has a number of limitations. Firstly, the OHP data were drawn from the LGA profiles developed by Dental Health Services Victoria. These profiles represent data collected from only those people accessing public dental health services (health care cardholders and children) and do not represent the general population. The vast majority of dental care (about 85%) is accessed via the private sector. Data were only extracted within Victoria, so it may not represent the experiences across other areas in Australia. Data from those accessing private dental services are not publicly available, so the data from those accessing public oral health services are routinely used to support public health planning. Secondly, the MPHWP included in the study were those developed by each rural LGA and published on the local council websites. What is written in the plans and what happens in practice may be different. Speaking directly with local councils about the inclusion of oral health within MPHWP would be a useful next step for further research.

5 | CONCLUSION AND RECOMMENDATIONS

Although good oral health is fundamental to overall health and well-being, people living in rural and remote LGAs have poorer oral

health than those living in cities; 20 out of 48 (41.6%) rural Victorian MPHWP had some mention of oral health within their plans, and of them, only four included actions to improve oral health within the LGA with none having specific targets or processes for evaluation.

Recommendations include that local councils should consider oral health along with specific targets and evaluations, and water fluoridation would be included in all MPHWP when the local water supply is not fluoridated. When developing MPHWP, oral health expertise in the form of the OHPs (provided by Dental Health Services Victoria) or other dental experts should be requested. Councils should be supported to adopt a common risk factor approach in considering action to improve overall health and well-being (that includes oral health) and have access to oral health education and to oral health promotion services.

Whilst Victoria is the only state that mandates the development of a MPHWP, all states and LGs have roles to play in improving oral health. Understanding oral health status at the local community level and developing partnerships between LGs, local health service providers, Primary Health Networks and local communities will be the key to improving oral health for all Australians.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

ETHICS STATEMENT

The data used in this study were gathered from publicly available information; therefore, no ethics approvals were required.

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How to cite this article: Dickson-Swift V, Crocombe L. Missed opportunities for improving oral health in rural Victoria: The role of municipal public health planning in improving oral health. *Health Promot J Austral.* 2022;33:509–518. <https://doi.org/10.1002/hpja.525>