Making oral health everyone's business

Loddon Mallee Region Oral Health Integrated Area-Based Oral Health Plan

2010 - 2015

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Acknowledgment
Flynn Health Consulting and DPAR Consulting would like to acknowledge the assistance of the Department of Health (Loddon Mallee Region and Central Office), Dental Health Services Victoria and oral health stakeholders in the Loddon Mallee Region in the development of "Making oral health everyone's business".

Executive Summary

Most oral health problems are preventable. Poor oral health impacts on the individual, families, the health system and the economy more generally. It is clear that investment in the area of oral health needs to have a focus on health promotion and prevention, but also must enable accessible and appropriate, evidence-based treatments.

The Loddon Mallee Regional Office (Department of Health) commissioned Flynn Health Consulting and DPAR Consulting Pty Ltd to undertake the development of a plan to identify and address future oral health planning in the Region. The resultant "Making oral health everyone's business" will inform future investment of human and financial resources, strengthen system integration and increase both oral health promotion and disease prevention efforts to enhance the oral health of Loddon Mallee Region communities.

The Plan is based on consultation with the broad range of stakeholders who have an interest in the oral health of children and adults who are eligible for public dental services in the Loddon Mallee Region. It is also informed by a targeted review of the current literature, an analysis of the service and population data, and key government policy and strategic directions. The Plan identifies that the Loddon Mallee oral health services system has significant strengths upon which to build including the presence of the Latrobe University School of Dentistry and Oral Health.

Key factors to consider in planning, developing and investing in the Loddon Mallee Oral Health System include the fact that a significant part of the Region is relatively disadvantaged with respect to health indicators. Almost every local government area (with the exception of Macedon Ranges) has greater socioeconomic disadvantage than the state average. Consequently, the proportion of the population eligible for public dental services is larger than the State average and is growing.

Loddon Mallee Region has 23 public dental chairs, plus 14 chairs supporting student placements (these cannot operate at full capacity) and requires 25 chairs according to the state-planning ratio. Waiting time for general and denture care in Loddon Mallee is less than the State average as is the recall waiting times for children. Despite this, the regional hospital admission rate for dental conditions is significantly higher than the state average, most being for preschool aged children.

It is evident that good oral health is not just about increasing the number of dental chairs. In order to meet the growing demand, and ensure the community has appropriate access to oral health care, the oral health service system will need to become more integrated, the workforce capacity increased and efforts to prevent oral health problems strengthened. This means improving the integration of public dental chairs into a system that

includes enhanced health promotion and prevention, and that enables more tailored responses to meet the range of community needs, particularly the needs of people who are isolated and vulnerable, such as people who are elderly, people with mental health problems, people with disabilities and people from indigenous communities. The key to high quality, responsive oral health care is making it everyone's business, including the business of doctors, community health providers, families, and education providers.

Investment and action over the next five years should focus on the following five opportunities to improve the oral health of the Loddon Mallee Region:

1. Increasing public dental chair numbers to meet demand now and in the future
2. Raising oral health promotion and prevention as a priority for everyone
3. Improving integration of oral health services
4. Improving workforce capacity
5. Improving access to oral health services for high-needs groups

Under each of these opportunities for improvement, a range of strategies are suggested to facilitate the future development of a detailed plan of action (not required in this initial phase of the process). To enable implementation of the Loddon Mallee Integrated Oral Health Plan, the establishment of a Regional Network is suggested. This Loddon Mallee Oral Health Network would translate the broad areas for improvement and strategies contained herein into a detailed Regional Oral Health Action Plan. The Network would have responsibility for leading, implementing and reviewing the Action Plan over the next five years and would guide strategic implementation of change by prioritising strategies, and monitoring and evaluating progress and impact.

Background

The Loddon Mallee Regional Office funded the development of the **Loddon Mallee integrated area-based oral health plan**. The Plan will inform future investment of human and financial resources, strengthen system integration and increase both oral health promotion and disease prevention efforts to enhance the oral health of Loddon Mallee Region communities.

Oral health care is fundamental to overall health, well-being and quality of life. Private practitioners provide most oral health services in Victoria however the state government has responsibility for public oral health care delivery for eligible children and adults. Workforce availability creates issues for both private and public oral health delivery in rural Victoria. Dental ambulatory care sensitive conditions (ACSCs) admissions are more common in rural areas, particularly among children [1] and are potentially avoidable with early access to appropriate services.

Policy context

The policy context is provided by the following key state and commonwealth documents:

Care in your community **(DHS, 2007)** encourages 'person centered' rather than 'agency centered' health care delivery in community rather than organisational settings. This policy direction underpins an integrated planning approach to service delivery.

Improving Victoria's oral health ***(DHS, 2007)*** which shares key principles with the *Care in your community* policy:

- the best place to treat;
- together we do it better;
- technology to benefit people;
- a better health care experience; and
- a better place to work.

Broad themes underpinning ***Australia's National Oral Health Plan*** ***(July 2004)*** are:

- recognition of oral health as an integral part of general health;
- a population health approach with strong focus on health promotion and prevention and early identification of oral disease;
- access to appropriate and affordable services; and
- education to achieve a sufficient and appropriately skilled workforce.

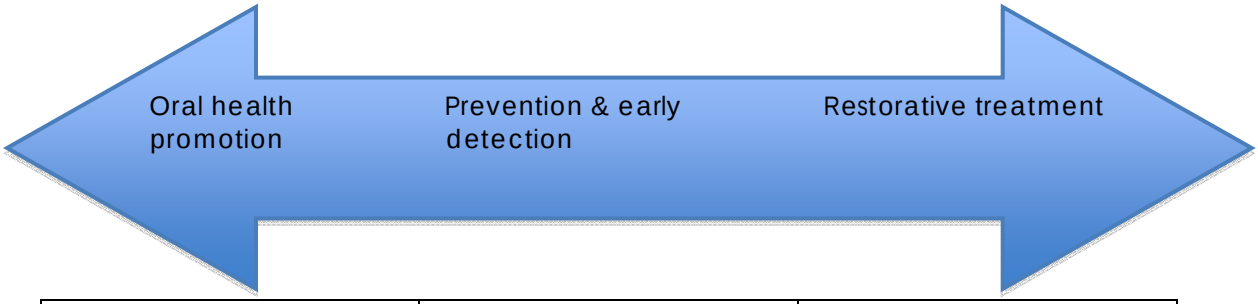
Loddon Mallee Region's Strategic Priorities 2008 – 2011 develops regional priorities under the following foundational elements:

- providing timely and accessible human services
- improving human service safety and quality
- promoting least intrusive and earliest effective care
- strengthening the capacity of individuals, families and communities
- reducing inequality by improving health and wellbeing particularly for disadvantaged people and communities
- building sustainable, well-managed and efficient human services.

Oral health care – what the evidence tells us

Oral health care operates along a continuum (see Figure 1) with oral health care responses being delivered across a range of settings (i.e. family, pre-school and school, community and primary care services, private and public community dental services and hospitals) operating variously at individual, community and population levels.

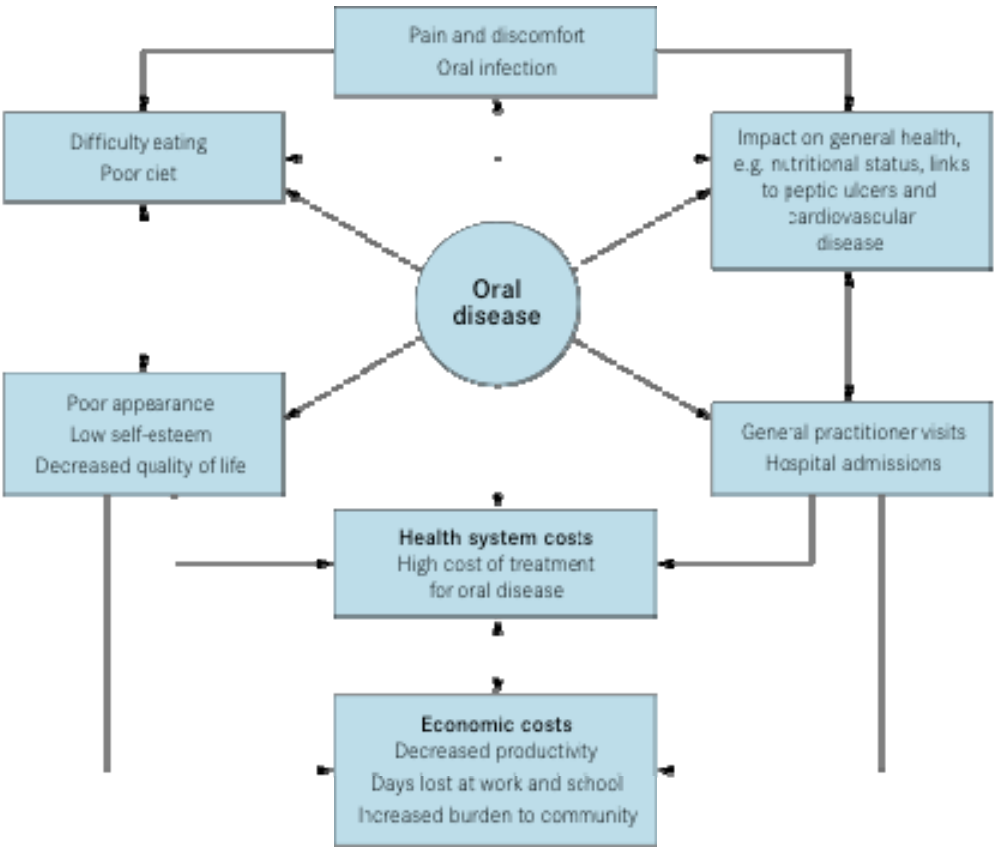
Figure 1: The oral health care continuum [2]



• Population health strategies • Community development • Supportive family environments • Individual/group education on healthy lifestyles (reduced sugar; alcohol; oral hygiene; etc) • Social marketing • Community development • Educating general health care workers	• Effective oral health hygiene (twice daily brushing, plus plaque removal) • Fluorides & fluoridation • Routine check-ups • Mouth guards • Dental sealants	• Ranges from basic to specialist services. • Fillings • Extractions • Oral surgery • Dentures • Treatment for gum disease, malocclusion, trauma and oral cancer.

Poor oral health impacts on the individual, families, the health system and the economy more generally as illustrated in Figure 2 (below).

Figure 2: Impact of oral disease [3]



Based on a targeted review of the literature we know that oral health problems (dental caries, periodontal disease and oral cancers) are:

- Almost entirely preventable because they result from life style and behaviour including poor dietary habits, smoking, alcohol consumption and poor oral hygiene [3].

- Costing Australia at similarly high levels to other diet-related disease such as heart disease and diabetes [4], and in Victoria this represented 6.9 per cent of total 2004-06 health expenditure [5].

- Associated with a number of health conditions. For example, periodontal disease (disease of the gums) may contribute to cardiovascular disease, preterm birth and low birth weight, while diabetes directly affects the periodontium (the tissues of the gum that support the teeth). Oral disease is also associated with aspiration pneumonia, hepatitis C, HIV infection, infective endocarditis, otitis media, and nutritional deficiencies in children

and older adults [4] (also refer to http://www.dhsv.org.au/news-stories/2010/04/30/evidence-links-heart-disease-and-oral-health/).

- Attributed to the highest rates of preventable admissions[1] into hospital for people under 18 years, and the second-highest for all ages [6].
- More prevalent in lower socio-economic populations [2, 6, 7].
- More prevalent in children in rural areas than in urban areas of Victoria, and include toothache, fillings and tooth extractions and treatments in hospital under general anaesthetic [8].
- More likely to go untreated for extended times (resulting in more complicated restorative treatments) if people have poor access to dental services such as those in rural and remote settings and those who are unable to afford the cost of available services [9].
- Increase rapidly in later adolescence and early adulthood with a four-fold increase in dental caries between 12 and 21 years of age; almost half of all teenagers have some signs of periodontal disease [4].
- Contributing to Australia being ranked as one of the highest among other OECD countries for adult dental caries. This result is in stark contrast to Australia's high ranking in other key health indicators (ie. life expectancy) [3, 9].
- Growing with the ageing of the population which increases the demand on dental services.
- Not necessarily providing the treatment required by high need groups in the community who are also the least able to access the services. These groups include Aboriginal and Torres Strait Islanders, people from low socio-economic groups, people with disabilities and mental health problems, and older persons [1].
- Less likely in areas that have fluoridated water supply [2, 3].
- Growing at rate that is not being met by the oral health workforce [1].

The consultation process and data analysis has found that all of these factors are relevant to the Loddon Mallee Region's oral health system.

[1] Ambulatory care sensitive conditions are avoidable if the right types of public health interventions and early management are delivered in an ambulatory care setting such as primary and community health.

Victoria's public oral health service system

Dental Health Services Victoria (DHSV) has responsibility for purchasing dental services on behalf of the State Government from over 60 organisations throughout Victoria, and for providing specialist and generalist clinical services through the Royal Dental Hospital. DHSV has a critical role in:

- Training, recruiting and retaining the oral health workforce;
- Quality assurance, including clinical leadership and ensuring compliance with relevant standards and evidence; and
- Oral health promotion.

Department of Health has lead responsibility for:

- Capital and service planning – planning best distribution of these services;
- Funding and accountability; and
- Strategic policy development.

Eligible Population in Loddon Mallee Region

Public dental services are provided directly to, or purchased for, the following eligible people in the population:

- Children and young people:
  - All children aged 0 – 12 years
  - Young people aged 13 – 17 years who are Health Care Card or Pensioner Concession Card holders or dependants of concession card holders
  - All children and young people up to 18 years of age in residential care provided by the Children Youth and Families division of the Department of Human Services (DHS)
  - All children enrolled in special or special development schools
  - All youth justice clients in custodial care, up to 18 years of age
- People aged 18 years and over, who are Health Care Card or Pensioner Concession Card holders or dependants of concession card holders
- All Refugees and Asylum Seekers

CentreLink and ABS Census data for 2006 indicates the eligible population for public dental services in the Loddon Mallee Region is approximately 124,402

persons. With the expected increase in the numbers in the older age cohorts, the number of eligible people will increase.

If we assume the same ratio of eligible to total population for adults and children for each of the LGAs then by 2016 the eligible population will be approximately 136,000 and by 2036 it will be 159,000 people. This is a conservative estimate that does not take into account the effect of an ageing population.

Table 1: Eligible population by LGA

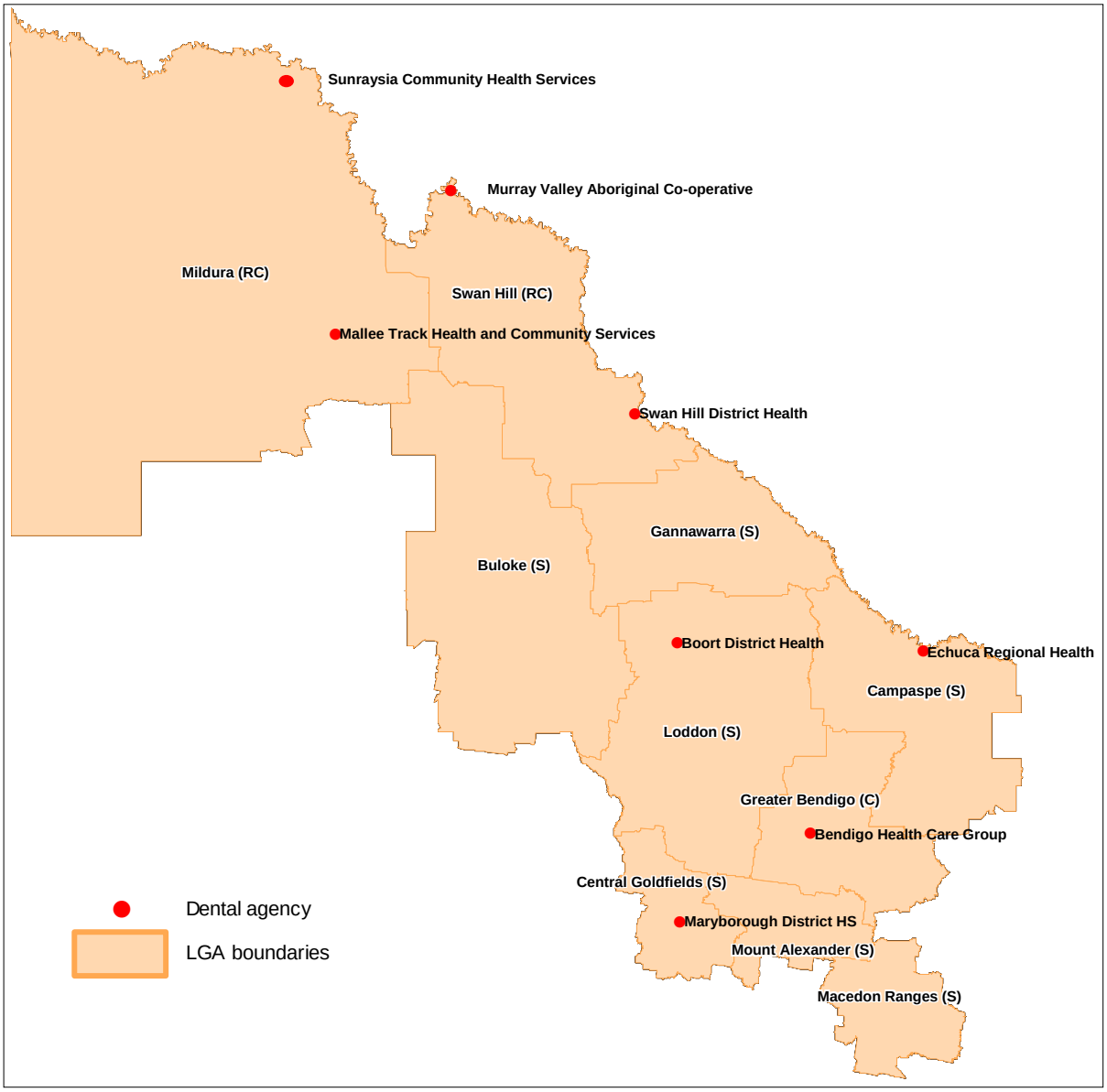
Integrated Area-based Planning Area (IAP)	LGA	Adults[2]	Children[3]	Total	% eligible
Bendigo Loddon PCP	Greater Bendigo	26,521	12,851	39,372	41%
	Loddon	3,204	2,184	5,388	67%
Campaspe PCP	Campaspe	9,837	6,175	16,012	43%
Central Victorian Health Alliance	Central Goldfields	4,327	1,382	5,709	45%
	Macedon Ranges	6,398	7,210	13,608	34%
	Mount Alexander	5,862	2,749	8,611	49%
Southern Mallee PCP	Buloke	1,725	1,019	2,744	39%
	Gannawarra	3,368	1,681	5,049	43%
	Swan Hill	2,874	1,682	4,556	21%
Northern Mallee PCP	Mildura	14,903	8,450	23,353	45%
Loddon Mallee Region TOTAL		*79,019*	*45,383*	*124,402*	*41%*
% of Eligible Population		6.6%	6.6%	6.6%	
STATE TOTAL		1,196,621	691,556	1,888,177	37%

[2] Source: Centrelink
[3] Source: ABS

Community oral health service providers

The following map shows oral health services specifically funded to provide services to eligible people. The Royal Dental Hospital of Melbourne provides more specialized dental services to people from across the State.

Figure 3: Location of dental agencies by local government area



The following table shows the number of dental chairs currently in use at each agency.

Table 2: Location of dental agencies by PCP Planning Area

		Public Dental Chairs		
Planning area	**Public Oral Health Agency**	**Suitable for All Patients**	**Suitable for Specific Patients [4]**	**Used for Student Placement [5]**
Northern Mallee	Mallee Track Health and Community Service	2	-	
	Sunraysia Community Health Services Ltd	8	-	(4)
Southern Mallee	Swan Hill District Health	-	-	
	Murray Valley Aboriginal Co-operative	-	1[6]	
Bendigo-Loddon	Bendigo Health Care Group (BHCG)	19	-	(10)
	Boort District Health	1	-	
Campaspe	Echuca Regional Health	4	-	
Central Victoria	Maryborough District Health Service	4	-	
Total		**38**	**1**	**(15)**

Primary Care Partnerships (PCP) Strategic Plans 2009-12

Oral health is not listed by the Department of Health as a priority health promotion issue for funded agencies. Consequently few of the PCPs in the Loddon Mallee Region are planning to implement health promotion strategies that focus specifically on oral health. The majority of those who are looking at oral health promotion are either establishing or further supporting the Smiles for Miles program in early childhood settings or advocating for the availability of clean and safe water.

The Loddon Mallee PCPs generally agree that addressing issues of nutrition and chronic disease promote oral health. One example is the Southern Mallee PCP (SMPCP) whose strategic direction states that "The SMPCP members and other key stakeholders will work together in a planned way for the next three years to prevent illness and ill-health of people in our communities through increased physical activity and nutrition."

[4] Refers to chairs reserved for an identified population

[5] It must be noted that 4 of the 8 chairs at Sunraysia Community Health Services Ltd and 10 of the 19 chairs at BHCG are used for student clinical placement and hence cannot be counted as 'full' chairs for public utilisation.

[6] Commonwealth Chair

Who delivers oral health services

Availability of a skilled oral health workforce is a key element in the provision of public dental care. The workforce includes specialists, dentists, therapists, hygienists, assistants, prosthetists and technicians. (Roles are defined in Attachment A).

The workforce profile for oral health services in Loddon Mallee Region is depicted in Table 3. These data have been compiled from information gathered at visits and indicate that some agencies have totally public funded staffing whilst others provide services through a 'mix' of public funding and private (often voucher driven) service provision.

Table 3: Workforce (May 2010)

Public Oral Health Agency	Total FTE May 10	Workforce					
		Dentist	Dental Therapist [7]	Dental Prosthetist	Dental Assistants	Receptionists/ management	U/grads [8]
Bendigo Health Care Group	28.91	5.60	2.6	2	10	4	4.71
Boort District Health	3.2	1	0.2	0	1	1	0
Echuca Regional Health	8.6	1.2	2	0	5	0.4	0
Mallee Track Health & Community Service [9]	1.8	0.4			0.8	0.6	
Maryborough District Health Service	1.75	0 [10]	2.20	0	2.2	1	
Murray Valley Aboriginal Co-operative [11]	0.6	0.3			0.3		
Sunraysia Community Health Services	8.0	0.80	1.0	0.40 [12]	3.8	2.0	
Swan Hill District Health	0.0	All oral health services currently provided through voucher system to private dentists. Recent plan agrees a 4 chair service in near future					

[7] Dental Therapist - also includes the recently introduced profession of Oral Health Therapist

[8] Undergraduate teaching at February 2010 (students undertaking clinical experience on agency patients) Source: DHSV

[9] Mildura private dentists 2 days/wk with dental assistant & receptionist. Also dental assistant 2 days / wk & receptionist 1 day/wk on Mallee Track workforce.

[10] At the time of consultation (May 2010), efforts were underway to fill this vacant dentist position.

[11] Dentist and Dental Assistant from North Richmond CHS 3 days twice a month. Varying dates and times.

[12] Dental Prosthetist contracted in as required.

Current and projected demand for public oral health services in Loddon Mallee

Public dental chairs - Current and projected gaps analysis

According to the planning principles set out in *Improving Victoria's oral health* (refer Attachment B), a clinic with a minimum of 4 public chairs is considered self-sufficient. Public oral health services are planned to a ratio of one dental chair per 5000 eligible people (DH 2007). These ratios do not include any weighting for differing levels of need (resulting from such factors as socio-economic status) but the document does state that relatively more resources should be directed to populations with greater need.

The total eligible population in the Loddon Mallee Region is approximately 124,400. Table 4 (below) demonstrates the placement of chairs on the basis of 1 to 5,000 eligible population by LGA against actual operating chairs.

Table 4: Public Dental Chair Gap Analysis

LGA	Total eligible population	% eligible	Number of chairs required[13]	Actual chairs	Fully productive chairs	Student chairs	Gap analysis[14]
Greater Bendigo	39,372	41%	8	19	9	10	1
Loddon	5,388	67%	1	1	1		0
Campaspe	16,012	43%	3	4	4		1
Central Goldfields	5,709	45%	1	4	4		3
Macedon Ranges	13,608	34%	3	0	0		-3
Mount Alexander	8,611	49%	2	0	0		-2
Buloke	2,744	39%	1	0	0		-1
Gannawarra	5,049	43%	1	0	0		-1
Swan Hill	4,556	21%	1	0	0		-1
Mildura	23,353	45%	5	10	6	4	1
Loddon Mallee Region TOTAL	**124,402**	**41%**	**25**	**38**	**24**	**14**	**-1**

[13] Calculated on the basis of 1 chair per 5000 eligible population.
[14] Calculated using the fully productive chairs only – this excludes student chairs.

Currently there is a total of 38 dental chairs (including the chairs at Mallee Track Health and Community Services which operates as a brokered service). However 14 of these chairs are teaching chairs in Bendigo and Mildura, which have a lower productivity than those operated by qualified dental clinicians.

Macedon Ranges and Mount Alexander local government areas have the largest gap between the supply of chairs and the eligible population. There are no public dental chairs in these two communities. The three adjoining LGAs of Buloke, Gannawarra and Swan Hill have a collective deficit of 3 chairs. However, these planning deficits are offset for Loddon Mallee by surplus chairs in Greater Bendigo, Central Goldfields, Campaspe and Mildura.

This pattern is not expected to change significantly in the future as illustrated in the following table showing the projected gap analysis (Table 5). As previously mentioned this estimate is conservative as it does not include population ageing. The gap relating to Buloke, Gannawarra and Swan Hill will be addressed when the four new chairs planned for Swan Hill are established.

Table 5: Public dental chair projected gap analysis (2021)

LGA	Projected eligible population 2021	Number of chairs required in 2021	Projected Gap analysis 2021	New chairs planned
Greater Bendigo	51,072	10	-1	10
Loddon	4,963	1	0	
Campaspe	17,228	3	1	
Central Goldfields	5,953	1	3	
Macedon Ranges	1,6174	3	-3	
Mount Alexander	1,0294	2	-2	
Buloke	2,388	0	0	
Gannawarra	4,688	1	-1	
Swan Hill	4,590	1	-1	4
Mildura	24,316	5	1	
Loddon Mallee Region TOTAL	14,1666	28	-4	14

Patient complexity

The variation in factors that influence demand may go some way to explaining differences in the complexity profile of each dental service (as shown in Table 6):

Table 6: Average number of visits, items, and percent complexity 2008-09 by agency [15]

Agency	Patients	Ave. visits per patient	Ave. items per VISIT	Ave. items per patient	Hours per patient	% complex [16]
Bendigo Health Care Group	5,799	2.4	3.1	7.5	1.4	3%
Boort District Health	1,081	2.9	2.9	8.4	2.2	6%
Echuca Regional Health	2,516	2.1	4.2	8.8	1.2	2%
Mallee Track Health	1,284	1.7	3.2	5.6	2.1	12%
Maryborough District Health	2,684	2.2	4.2	9.2	1.3	2%
Murray Valley Aboriginal	256	1.6	4.7	7.6	1.5	2%
Sunraysia Community Health	4,075	2.2	3.7	7.9	2.0	6%
Swan Hill District Health	641	1.7	3.2	5.4	1.8	6%

Cross border/inter planning area flow

Clients are not restricted in the areas they can access for oral health care. This can result in some clients appearing on more than one waiting list but both anecdotal and hard evidence indicates that this is not a major area of concern. Clinics in the Loddon Mallee Region often provide services for residents who travel from the Grampians Region and all clinics along the Murray River report a level of cross-border patient flow. There appear to be very few clinics in the immediate areas on the New South Wales and South Australian sides of the border. Cross border client attendances are reported and there is a process whereby the various state governments compensate each other for costs incurred.

Specialist Services

Access to specialist dental services for eligible residents of the Loddon-Mallee region is via the Royal Dental Hospital Melbourne (RDHM). A return trip equates to approximately 4 and 10 hours per visit for patients from Bendigo and Mildura respectively.

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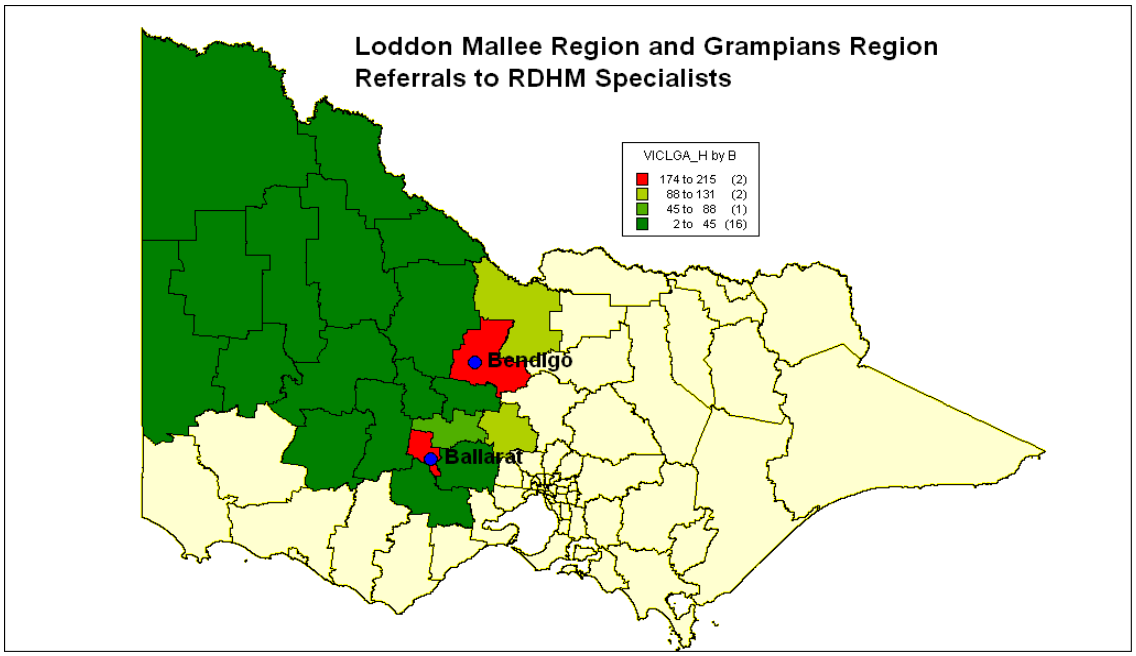
[15] This table excludes student output as this distorts the total time unit (TVUs) generated by a clinic.

[16] The 'percent complex' is based on the total TVU for each service provided where complex was classified as those that exceeded 45 minutes. For example "Comprehensive oral examination" had 12 minutes assigned to it and was categorised as non-complex whereas "Complete maxillary denture" was 100 minutes and was classified as complex.

Analysis of available data indicates that relatively few patient referrals for specialist services are received from the Loddon Mallee Region (Figure 4 below) and that the majority of those that are received are from Bendigo.

Loddon Mallee Region represents approximately 6.6% of the total eligible population yet accounts for only 2.3% of all specialist referrals to RDHM. This is not dissimilar to other rural areas.

Figure 4: RDHM referrals



Source: DHSV data for total specialist referrals 2007 (nb: only available as combined Loddon Mallee & Grampians Regions data.)

Other factors indicating unmet demand

There are a number of measures that indicate unmet demand. They include waiting lists, recall lists, use of vouchers and hospital admissions for dental health type diagnoses.

Wait lists

When eligible clients contact an oral health clinic to make an appointment for either general or denture care they are placed on a waiting list for treatment. The length of the waiting list differs at each clinic. When an individual's name reaches the top of the list they are offered an appointment. Each client can only be on the waiting list for one community dental clinic at a time but it is possible to transfer to the waiting list of another clinic without incurring penalty.

Waiting lists are not applicable to the following people who have priority access and are seen immediately:

- Children and young people under 18 years of age
- Aboriginal and Torres Strait Islander people
- Newly arrived refugees and asylum seekers
- Pregnant women
- Registered patients with a psychiatric illness or intellectual disability who have a written recommendation from their case manager

Care needs to be taken when comparing waiting and recall lists as a range of factors influence these including: productivity of oral health practitioners (i.e. oral health students do not tend to assess and treat clients as quickly as qualified oral health practitioners); availability of oral health clinicians; the relative need in the population; and complexity of clients.

Clients take their waiting times with them when transferring from one waiting list to another. For some agencies, such as Maryborough District Health Service, this has meant recent additions to the list have brought with them long waiting times which have skewed the overall waiting time result.

Table 7: Waiting Times (February 2010)

Public Oral Health Agency	**General Care Waiting List as at February 2010**		**Denture Care Waiting List as at February 2010**	
	Number waiting	Waiting time (months)	Number waiting	Waiting time (months)
Bendigo Health Care Group	2,940	22.6	551	29.6
Boort District Health	330	10.5	38	10.2
Echuca Regional Health	796	15.8	236	22.5
Maryborough District Health Service	1,460	29.6	125	19.9
Mallee Track Health and Community Service	331	7.8	68	7.0
Sunraysia Community Health Services Ltd	1,462	11.6	65	5.4
Swan Hill District Health	624	22.5	82	23.6
Loddon-Mallee Total/Average	7,943	17.2	1,165	16.9
State Total/Average	**117,554**	**19.6**	**16,172**	**20.4**

Recall Lists

All children up to the age of 12 have priority access to public dental care, together with eligible children up to the age of 17. Until recently the service for age-groups 6 to 14 was provided through the School Dental Service, which has now integrated with the Community Dental Program. All eligible children are offered services on a recall basis that depends on their oral health needs. After any requisite work is completed children are assessed as

'high risk' or 'low risk' and placed on a list for recall for checkups at an appropriate time.

Table 8: Children Recall Interval (December 2009)

Agency	Children due for Recall p/a	Low Risk (mth)	High Risk (mth)	Change in Low Risk over last Quarter	Change in High Risk over last Quarter
Bendigo Health Care Group	2,151	26.0	14.0	-3.0	-3.0
Boort District Health	299	34	22.0	0.0	0.0
Echuca Regional Health	746	23.0	11.0	0.0	0.0
Mallee Track Health and Community Service	160	36.0	24.0	3.0	3.0
Maryborough District Health Service	1,159	30.0	16.0	3.0	2.0
Murray Valley Aboriginal Co-operative [17]					
Sunraysia Community Health Services Ltd	869	30.0	14.0	3.0	0.0
Swan Hill District Health					
Loddon-Mallee Region	5,384	27.8	14.8	0.00	-0.7
State Total	**67,445**	**31.0**	**17.3**	**0.1**	**-0.2**

Vouchers

There is capacity within the public oral health system to provide care from a private dentist through the issuing of a voucher. Under this arrangement the eligible individual is required to pay the same minimal fee as would be paid at a community dental clinic. Not all private dentists participate in the voucher scheme.

Due to the scarcity of public dentists in rural Victoria, a proportion of the public oral health service is supplied through the voucher system. Vouchers are provided for general care, emergency care and denture care. Brokerage systems utilizing vouchers work well for some services. Swan Hill District Health has provided such a system for approximately nine years but is now looking to provide its own public oral health service.

Voucher systems are dependent on the willingness of private providers to undertake such a service and concerns are sometimes raised about potential ongoing viability. Where no dental service infrastructure exists, the utilisation of a voucher system can provide the only option for local oral care provision and as such cannot be dismissed. Conversely some agencies report there can be difficulties securing the services of private dentists willing to be part of this system.

[17] Recall figures are currently not applicable to Murray Valley Aboriginal Co-operative or to Swan Hill District Health.

Hospital admission rates - ambulatory care sensitive conditions

Oral health has a considerable impact on the number of hospital admissions for ambulatory care sensitive conditions (ACSCs). ACSCs are hospitalisations that are potentially avoidable for many patients through public health interventions, early disease management (usually provided in ambulatory settings such as primary care) and community support. Oral health related conditions account for the highest rate of ACSCs for under-18-year-olds and the second highest rate of ACSCs for all ages in Victoria.

According to ACSC data, dental conditions are ranked as the second most common cause of hospital admissions for Northern Mallee, Southern Mallee and Central Victorian PCP area in the Loddon Mallee Region, and the third most for Bendigo Loddon and Campaspe PCP. These admissions account for a total of 1,418 admissions considered preventable (DHS, 2004-5). Preschool aged children are the predominant group affected. The Region's admission rate is significantly higher than the state average. Between 2006 and 2009, the rate of such admissions increased for Buloke, Swan Hill and Macedon Ranges by 23%, 39% and 25%, respectively.

Child Oral Health

'Decayed Missing Filled Teeth' (DMFT for permanent teeth, dmft for deciduous teeth) is one indicator of oral health status. Data available for children attending the School Dental Service (SDS) indicates that the dmft for 6-year-old children (where the data is available) is significantly higher in Bendigo Loddon and Central Victoria IAP catchments.

Table 9: Loddon Mallee DMFT/dmft rate – children [18]

IAP	Age 6yrs dmft	Age 12yrs DMFT
Northern Mallee	NA	NA
Southern Mallee	NA	NA
Bendigo Loddon	4.83	1.89
Campaspe	3.06	1.15
Central Victoria	4.02	1.02
Statewide Average	**3.04**	**1.43**

The sample size for Northern and Southern Mallee was too small to be able to calculate a DMFT/dmft score. It is also noted that there has been no public dental service for children in Southern Mallee since mid-2006.

[18] Dental Health Status Data Collection *VISDED data 2005-07*

Factors influencing demand

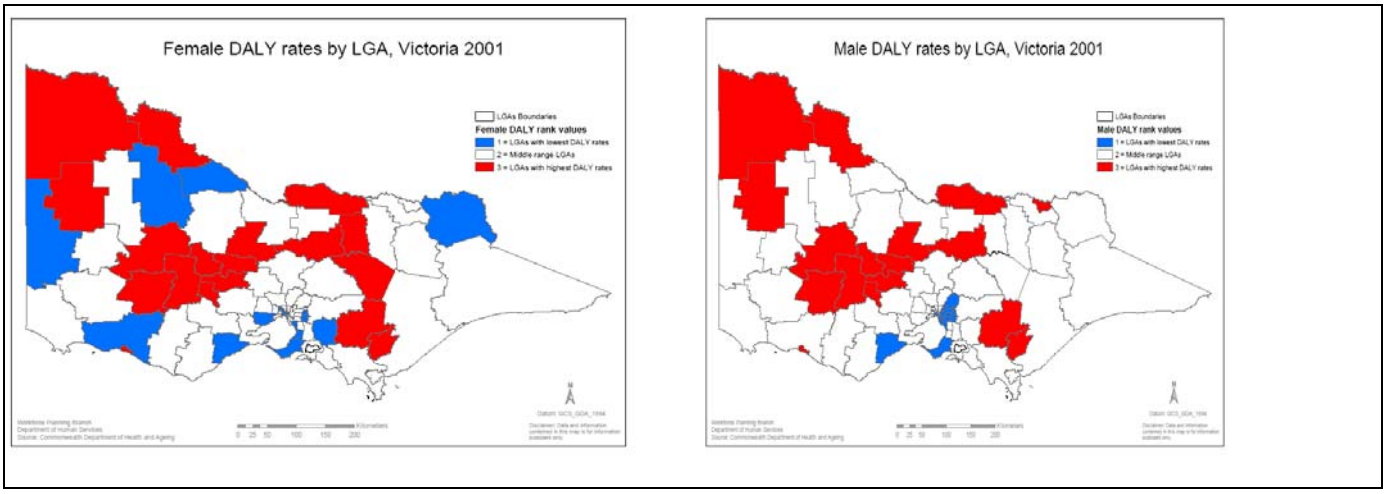
There is a substantial body of evidence that shows oral health is influenced by and associated with lifestyle, socio-economic status, chronic disease, fluoridation of water supplies, ageing and indigenous background. The following provides a profile on these factors for Loddon Mallee.

Health indices

'Burden of Disease' data such as the Disability Adjusted Life Years (DALY) estimates provide a measure of relative health disadvantage. The disability-adjusted life year (DALY) is a measure of overall disease burden originally developed by the World Health Organization. It extends the concept of potential years of life lost due to premature death to include equivalent years of 'healthy' life lost by virtue of being in states of poor health or disability.

The maps below show that a significant part of the Loddon Mallee Region is relatively disadvantaged with respect to health indicators. Areas with the highest DALY rates include Northern Mallee IAP as well as the Swan Hill LGA.

Figure 5: Burden of disease disability adjusted life years by LGA



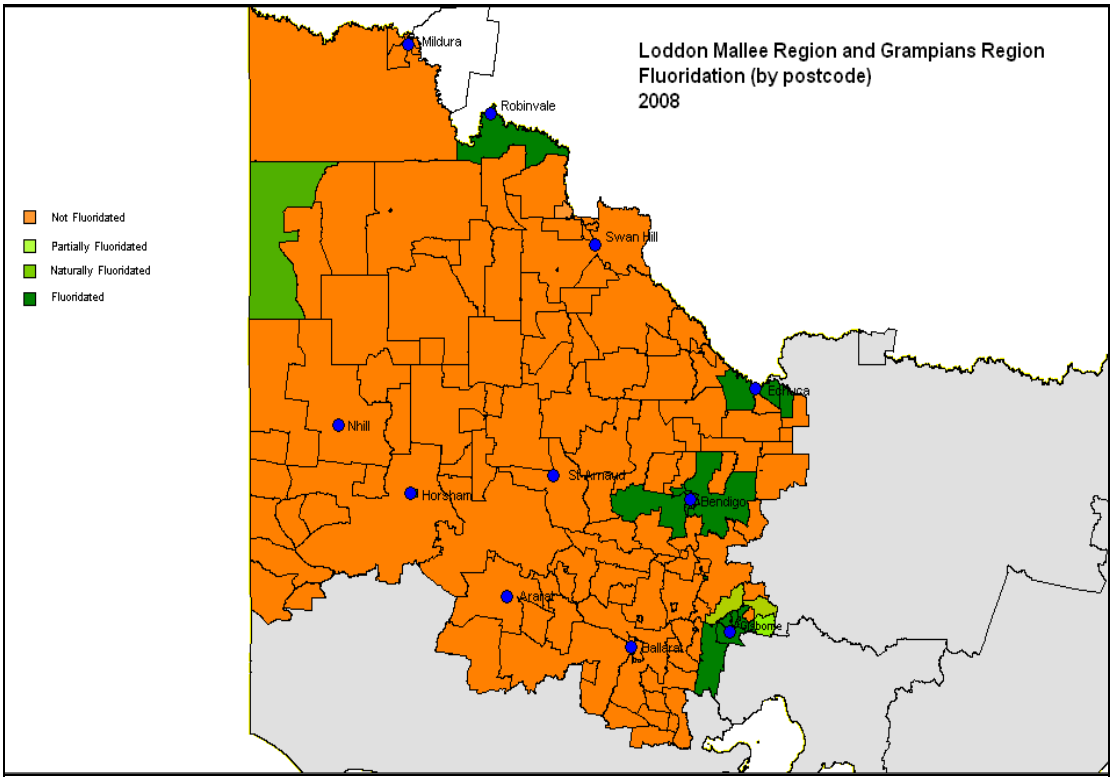
DALY estimates include a range of lifestyle related risk factors as well as socio-economic factors in their calculation. Oral disease shares common risk factors with a number of chronic health conditions, e.g. diabetes and obesity, and therefore such estimates are potentially useful in identifying populations at risk of oral disease.

Fluoridation

To ensure the experiences of the Victorian water fluoridation program (2004–10) can assist with future delivery of best practice programs and services, the Department of Health is currently undertaking a review of the program. The water fluoridation team will consider the views of key stakeholders, including expert advisors, advisory group members, Department of Health regions, endorsing organizations and local supporting organizations. The team will be in touch with all program partners in coming months[19].

As at May 2010, Robinvale, Bendigo, Castlemaine, Kyneton and Echuca were the only towns in the Loddon Mallee Region with access to fluoridated water. Swan Hill, Mildura, Kerang and Redcliffs, which collectively account for a sizeable proportion of the Region's population, are expecting to be fluoridated within the next few months.

Figure 6: Fluoridation of Loddon Mallee and Grampians Regions



(nb: only available as combined Loddon Mallee & Grampians Regions data.)

[19] (DH, May 2010)

Socio-economic status (SEIFA)

A consistent correlation between low socioeconomic status and poor oral health has been demonstrated in a number of research studies. ABS Socioeconomic Index for Areas (SEIFA) data can therefore be used to identify communities with relatively greater oral health needs or risk. The average SEIFA for Victoria is approximately 1000 and a higher score equates to less disadvantage.

Table 10: Socio-economic Index for Areas by LGA

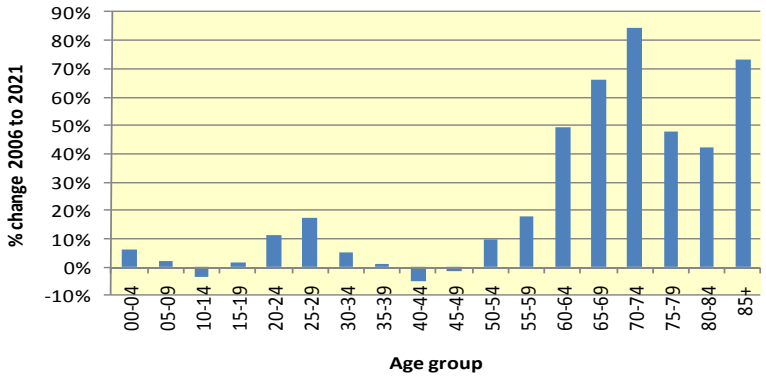
LGA	SEIFA
Greater Bendigo	984
Loddon	942
Campaspe	974
Central Goldfields	907
Macedon Ranges	1054
Mount Alexander	981
Buloke	971
Gannawarra	971
Swan Hill	959
Mildura	958

The SEIFA for all postcodes within the Southern Mallee IAP are below state average. Robinvale and Wycheproof have the greatest socioeconomic disadvantage compared to the rest of the IAP. The southern part of Loddon has a lower SEIFA score than the rest of the Loddon LGA which indicates that there are pockets of disadvantage.

Ageing

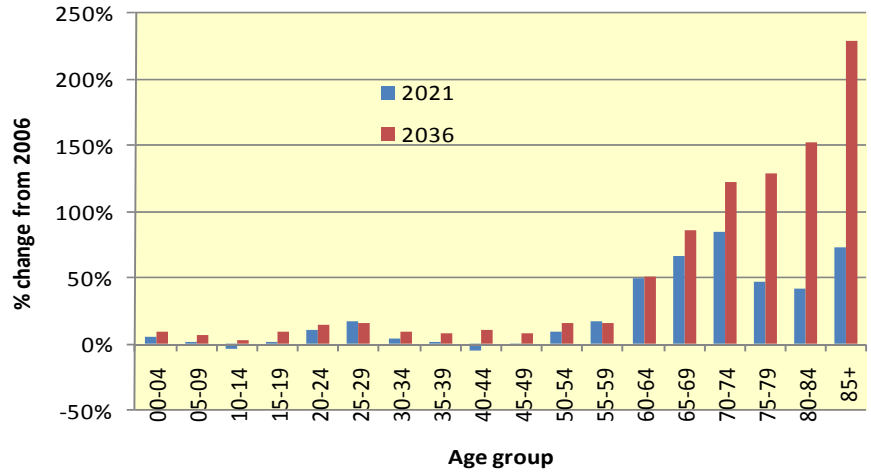
The age profile for Loddon Mallee has a greater percentage of 0 to 20 year olds and 40 plus year olds compared to the State but fewer 20 to 40 year olds. The population for the region is projected to increase over the next 15 years; in particular a large increase in people aged greater than 60 is projected (Figure 7). This pattern is important for planning oral health services because oral health problems increase with age.

Figure 7: Loddon Mallee population growth by age group 2006 to 2021



Ageing of the Loddon Mallee population is projected to increase even more over the next 30 years (Figure 8).

Figure 8: Loddon Mallee population percentage change from 2006 by age group



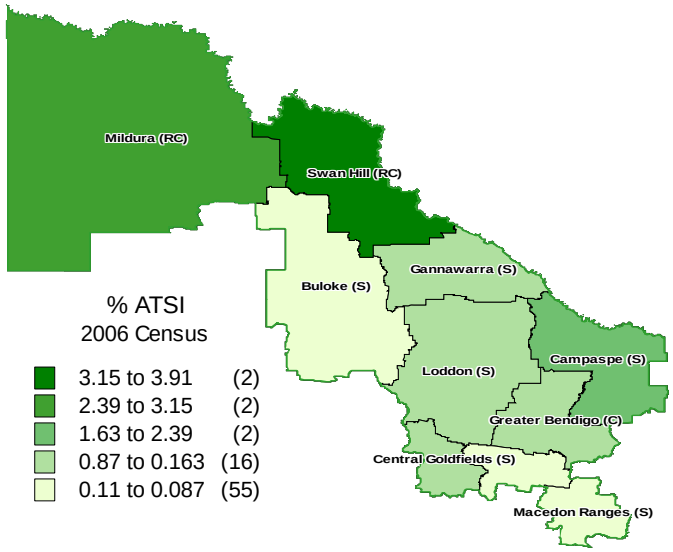
Aboriginal or Torres Strait Islander

Indigenous Australians have twice as many dental caries as the general population, more missing teeth and generally poorer periodontal health than average. The percentage of the population who are Aboriginal or Torres Strait Islander for Victoria is 0.61%. With the exception of Macedon Ranges all Loddon Mallee LGAs have a higher percentage than the State average (Table 8). The largest indigenous populations are in the Mildura, Swan Hill, Greater Bendigo, Campaspe and Gannawarra LGAs.

Table 11: Percent Aboriginal or Torres Strait Islander by LGA [20]

LGA	% ATSI (of total population)
Greater Bendigo	1.09%
Loddon	1.03%
Campaspe	1.82%
Central Goldfields	0.88%
Macedon Ranges	0.45%
Mount Alexander	0.76%
Buloke	0.70%
Gannawarra	1.39%
Swan Hill	3.91%
Mildura	2.87%
Victoria	**0.61%**

Figure 9: % of LGA population identifying as Aboriginal or Torres Strait Islander



Note: The number within parenthesis is the number of Victorian LGAs in this range

[20] People are counted as being Aboriginal or Torres Strait Islander if they identified themselves as such in the 2006 census.
Source: 2006 Census of Population and Housing, Basic Community Profile, ABS
Census table: B07 - Indigenous Status by Age by Sex. Population: Persons

Service and system strengths

The Loddon Mallee Region oral health system has a number of strengths upon which to plan and build. Examples include:

- The role played by DHSV in the provision of clinical governance (i.e. peer review and audit), evidence based clinical guidelines and triage protocols; integrated electronic database (Titanium) and related data analysis; and specialist dental advice to local oral health practitioners.

- The wealth of resources, research and educational material posted on the DHSV website (http://www.dhsv.org.au/).

- The close proximity of Latrobe University's School of Dentistry and Oral Health, which may enable a number of public oral health agencies to support clinical placement thereby strengthening their oral health workforce pipeline.

- Latrobe University is also engaging the regional community and service sector in important oral health research and resources development, creating links between oral health and generic health and community care. An example is "The strengthening knowledge of oral health project" aimed at improving the quality of life for rural mental health clients (refer to web site http://www.oralmentalhealth.com.au/).

- Workforce recruitment and retention is supported by the availability of incentives such as the Rural Workforce Allowance and professional development funding.

- The plans to place new chairs where they are most needed

- Co-location with other services such as HACC services and chronic disease management was seen as a system strength as it improved access for clients and facilitated identification of those clients in need of service provision. This also facilitated the provision of a case-management system.

- Funding for oral health services through the GP Management Plan available under the MBS Primary Care Items.

- The public/private brokerage service model extends the current rural public dental service capacity.

- The integration of the Community Dental Program and School Dental Services which has resulted in improved professional collaboration, broadening scope of practice of dental therapists into adult service provision and more efficient service delivery.

- The public dental chairs across Loddon Mallee Region are all in good to excellent condition.

- Priority groups are able to access affordable services and can apply to have fees waived if necessary. The organisations consulted were endeavouring to address special needs clients (such as mental health clients) more appropriately. The presence of oral health services in aboriginal health services such as the Murray Valley Aboriginal Cooperative was noted as a positive step.

- Some referral pathways are in place enabling clients to receive appropriate oral health services. This includes referral to private dentists for emergency services (through the voucher system) and referral to specialist service providers such as the Royal Dental Hospital Melbourne. It is noted that this area requires improvement.

- People can choose where they receive dental services and can identify their wait time through the Victorian Government Health Information website at www.health.vic.gov.au/yourhospitals/dental.

- Some excellent oral health promotion programs are in place. These include the 'Smiles for Miles', 'Go for Your Life' and 'Teen Dental' programs. The general consensus across the region was that these programs should continue and should be extended.

Opportunities to improve the oral health of the Loddon Mallee Region

Increase public dental chair numbers to meet demand now and in the future

According to the Government's planning principle of 1 chair to 5000 eligible population, an efficient model of provision is 4 chairs. Current and projected demand indicates that between the Mt Alexander and Macedon Ranges LGAs there is sufficient unmet demand to warrant five additional public dental chairs (refer to Tables 4 and 5).

Strategies to increase public dental chairs

Consider the costs and benefits of the following two options for future service and capital planning:

1. Establish a five-chair community dental service at Castlemaine Health to service the Macedon Ranges and Mt Alexander shires.

2. Extend the existing service located at Maryborough District Health Service.

Raise oral health promotion and prevention as a priority for everyone

Evidence suggests that greater investment in the promotion and prevention end of the oral health continuum will result in a reduction in restorative dental service demand. It is generally accepted that it is more cost effective to provide preventative periodic 'checkups' than to provide complex treatments following a lack of periodic checkups [9].

Oral diseases have similar risk factors to the national health priorities (cancer, diabetes and heart disease) - poor diet, smoking and alcohol consumption. Any efforts to reduce these risk factors will result, vicariously, in improved oral health. Nevertheless the importance of oral health should not be lost in the myriad health promotion messages or we risk missing the very people who do not relate to these risky behaviours or chronic diseases.

There is little mention of oral health promotion in the Region's Primary Care Partnership Plans – this may be why there is a generally held view that very little investment is being made on oral health promotion across the Region. It is important to read this in context as PCPs are required to select health promotion priorities that reflect the Victorian Governments Health Promotion Priorities. Currently Oral Health Promotion is not included as a priority in the state government's Health Promotion Priority List and as a consequence PCPs are not in the position to include this work in their Integrated Health Promotion Plans except as an adjunct to Nutrition.

Oral health promotion needs to be everyone's business. It is important to integrate oral health into holistic assessment of the individual within a multidisciplinary framework [3]. The importance of evidence based oral health promotion cannot be overemphasized. Health promotion for oral health also needs to extend into initiatives relating to general health. Further, it is accepted that oral health promotion strategies targeting early childhood provide the greatest opportunity to create healthy lifestyle habits. It is at this time that parents have most contact with primary care providers and are receptive to new health information [2]. Strategies included in existing maternal and child programs and childcare centres have been found to be successful [2].

The resources available for oral health promotion in the Loddon Mallee region include:

- Smiles for Miles is an initiative of Dental Health Services Victoria working in partnership with local organizations to improve the oral health of the youngest children in the community. The program is based on the World Health Organization's Health Promoting Schools Framework and is implemented through early childhood services such as kindergartens and childcare centres. The services currently receiving funding under this

program are Echuca Regional Health, Maryborough District Health Service, Swan Hill District Health and Sunraysia Community Health Service;

- Kids – 'Go for your life' is a healthy eating and physical activity program for Victorian children aged 0-12 years who attend Member early childhood services and primary schools. There are currently over 2,200 early childhood services and primary schools that are members of the program within Victoria, which means that there are over 320,000 children who are supported to create healthy habits for life;

- Health promotion focused on factors that influence oral health specifically; and

- Health promotion focused on the achievement of general good health, which can influence or be influenced by oral health.

Oral health problems have been shown to reduce in school-aged children as a result of school-based dental care [Allister et al, 1995 cited in 9]. Anecdotally, there appears to have been a decrease in the number of children who receive oral health promotion and preventative counseling in primary schools since the integration of the SDS into CDP. It is believed that this is because not all parents understand that children are eligible for, or even need, oral health checkups in the public system. Prior to integration, the SDS was delivered at school so every child was able to access these services.

The proportion of children receiving check-ups and treatment through public dental programs was found to be significantly lower in Victoria and New South Wales than in the smaller jurisdictions [4]. However, this may be because children are more likely to see private dentists (64%) than a public dentist (27%) in Victoria.

Rural children are less likely to drink tap water than their urban counterparts – presumably drinking water from unfluoridated sources such as tanks and bottles [8]. Furthermore nearly one third of children between 6 months and 12 years have never seen a dentist, thus missing opportunities for routine checkups and other preventative measures [8]. There appears to be a lack of awareness by parents of the importance of routine checkups for their children from a very early age (prior to 2 years) to prevent oral health problems [2, 8]. It is expected that this situation will improve with the enhanced focus Maternal and Child Health nurses are giving to infant oral health (refer to *Maternal and Child Health Service: Key Ages and Stages Framework*).

Maryborough District Health Service's oral health staff continue to be active in the community promoting oral health for youth. Following are some of the activities they undertake:

- Each year a reminder is posted into the secondary schools (2)

- Newsletters advertising the dental services as well as poster and flyers in the local Learning & Education Centre, which caters for early school leavers.
- They also regularly speak about the dental services at the Job Services Australia local network meetings.
- They advertise the dental service in the local newspaper 2- 3 times per year and on the local radio once or twice a year.
- The health service also participates in the local youth planning group with other providers of youth services.

Strategies to raise oral health promotion and prevention as a priority for everyone

Investigate ways to raise oral health and prevention as a priority for everyone, such as:

- Raising practitioner awareness of what comprises good evidence, how to access it, and how to evaluate their programs in view of the evidence.

- Developing a more concerted strategy to raise parental awareness of the importance of oral health for their children, their role in achieving this, and also the available services and resources to support them.

- Increasing oral health promotion through 'grass roots' involvement in community groups, regular education in schools and at pre-schools and playgroups.

- Exploring, in partnership with Divisions of General Practice, strategies to engage GPs in oral health and to encourage the use of Medicare Benefit Schedule items relating to enhanced primary care and chronic and complex condition management.

- Exploring the possibility of the provision of health promotion guidance by dental assistants and receptionists while clients are waiting for/receiving dental services.

Improve integration of oral health services

Integrating oral health services with other primary care services is a key priority for Victoria. There is evidence that such integration, plus private and public integration, can offer opportunities to:

- realize service efficiencies;
- pool resources and increase the range of services available;
- deliver more holistic oral health care that includes medical, behavioural and social dimensions;
- broaden the skills of local health care providers; and

- create inter-disciplinary teams [10].

Integrating public and private dental services has been found by Boort District Health to be an efficient way of delivering dental services with one chair. The cost of the local dental officer per patient, per hour, is comparable to other dental services across this Region. In this model the dentist is paid to provide services to the eligible population but maintains private practice rights. The service thus provides access to dental services for the entire community, not just those eligible for public dental services. This service provides a point from which Bendigo School Dental Services could deliver services into Boort and surrounding areas (as it already does with the SDS Program).

One model places dental hygienists with a primary care physician. This model has resulted in the provision of oral health promotion and dental services to patients attending for medical care, such as pregnant women, children receiving immunizations and adults with various chronic diseases [10]. Improved integration between local and regional health services, and universities has been found to enhance dental health services [10].

There appears to be an opportunity to improve integration and collaboration between oral health services across Loddon Mallee. This has the potential to facilitate:

- Formal evidence-based referral pathways and protocols;
- Coordination and sharing of resources such as recruitment efforts, clinical placements for students, clinical supervision and management, mobilizing the workforce for backfill and to gain more clinical exposure; and
- More even spread of waiting lists by encouraging patients to seek treatments from services that have lower waiting times and numbers.

Strategies to improve integration

Strategies to improve integration of the regional oral health service system include:

- Giving consideration to the establishment of a Regional Oral Health Network with responsibility for enhancing integration between dental service providers within the region, across community and human services, and education providers. The Network could comprise representation from public oral health providers, private dentists, PCPs, and Latrobe University, and could receive informed comment from other sources including Divisions of General Practice, local government, education providers, child care providers, and consumers (in particular those advocating on behalf of people with mental health problems and disabilities, older people and Aboriginal people). People and

organisations from more remote parts of the Region need to be actively supported to participate in this group.

Areas for initial consideration by this Network could include:

- Developing a directory of oral health services for the community;
- Developing shared care pathways ;
- Regional Workforce Plan (discussed under 'Improve workforce capacity');
- Monitoring and managing waiting and recall lists across the Region;
- Developing strategies to reduce the 'fail to attend' rate which ranges from 6% to 20% (i.e. SMS reminders);
- Monitoring the impact of cross border flows on service capacity; and
- Investigating the possibility of placing dental therapists or students in general practices to provide opportunistic assessment of children, older persons and people who have chronic diseases or disabilities. The role could also improve the health professionals' understanding of oral health, and the oral health services system.
- Facilitating the integration of oral health into other health programs/ services including general practice, mental health, indigenous health, disability services and chronic disease programs.

- Investigating the possibility of using e-health technology for dental services to support clinical supervision and referral decision-making.

Improve workforce capacity

The gap between the available health workforce, including oral health practitioners, and the demand for this workforce is growing at an accelerated rate owing to the ageing of the population [4]. Ensuring that health promotion and prevention is everyone's business will go some way to reducing the demand for such interventions. Care will need to be taken to ensure that any increase in prevention and education activity is reflected through an increase in workforce numbers, not as an increase in the workload of the current workforce.

Challenges in rural practice are associated with: the time and cost of accessing professional development (most is provided in Melbourne); professional isolation; and limited opportunities for undergraduates to gain health promotion experience and experience in non-dental services.

Rural recruitment innovation

There is evidence that recruitment of dentists is a significant challenge. (For example, at least one dental clinic has not had a dentist since January 2010.)

There appears to be little in the way of a collaborative, regional approach to recruitment and retention – or to oral health workforce planning in general.

Boort District Health has demonstrated innovative workforce recruitment by sponsoring overseas trained dentists for two years in order to meet the immigration requirements for residency (14 months sponsorship within a rural community).

Critical success factors in this model include:

- The opportunity to build clinical relationships between the dentist at Boort and the dentists at a partnering suburban dental service.
- Readily accessible clinical supervision, peer review and support from the Clinical Director (a position shared between Boort District Health and the partnering suburban dental service);
- Ongoing professional development at a partnering suburban dental service and the Royal Dental Hospital;
- A concerted effort to match the social needs of the dentist's family with the resources in the Boort community;
- Ensuring the dentist and their family has time during weekends to 'get out of town' is a key success factor in this model;
- Support in obtaining a Victorian driver's license so they are free to travel;
- Rights of private practice so that the dentist becomes an important part of the whole community.

Extending the scope of practice

Dental therapists and oral health therapists are critically important in maintaining dental services, particularly when there is no dentist. Health workforce shortages across the world are increasingly being managed through a shift in the scope of practice for these practitioners. There is potential for less complex work, traditionally undertaken by dentists, to be addressed through this mechanism. Examples include extension of the dental therapist role to include adult practice (already commencing in Victoria), performing assessments for referral purposes and taking dental impressions. Another example is extending the role of the dental assistant into oral health promotion so that they can opportunistically provide information to clients whilst they are at the dental service. (It is important to recognise that currently no standards exist for such a role extension and no pre-requisite training has been specified. Governance processes to clearly define such a role would need to be considered.) The key to the success of any role alteration and/or extension lies in keeping the community informed as to who in their oral health team is responsible for various aspects of their oral health care and education.

This shift in approach enables more effective utilisation of skills and expertise. It enables dentists to spend less time on tasks that can be performed by other appropriately trained oral health staff and more time on complex dental

treatments. Evidence indicates that the provision of more autonomy and more interesting work are important factors in oral health workforce recruitment and retention.

Data relating to work undertaken by oral health professionals is currently not sufficiently specific to enable analysis of the amount and type of work performed by the different groups (i.e. dental assistants, oral health therapists, dentists, and so on). Whilst some agencies report under each professional classification, others report all care as being delivered by dentists. It would prove a valuable exercise to encourage more accurate reporting of which professionals are carrying out oral health care in order to establish a true picture of oral health workforce utilisation.

Improving the oral health knowledge of broader workforce

A multidisciplinary team approach is needed, involving a range of oral health practitioners and other primary health care providers (medical and allied health) (Chalmers 2003)" cited in [4] p,31.

There is evidence that incorporating oral health knowledge into the training of other professionals [ie. doctors (general and emergency [10], maternal and child health nurses, child care workers and pharmacists] encourages them to provide oral health education and appropriate referrals [2, 11]. A number of initiatives (already introduced) aim at building the capacity of health workers in regular contact with the eligible community to provide incidental and opportunistic oral health education and referral [10]. These include:

- *Maternal and Child Health Service: Key Ages and Stages Framework* used by maternal and child health workers to guide their assessment and advice for new mothers. Oral health and 'tooth tips' feature at important points during the baby's development.

- DHSV resources posted on their website, including for example guidelines for teachers to work with their pupils in oral health promotion (refer to http://www.dhsv.org.au/kids-space/for-teachers/)

- Latrobe University's oral health education resources for undergraduate nurses and for multidisciplinary health professionals working with people who have mental health problems.

There appears to be limited awareness of these initiatives in the oral and general health sector; this diminishes uptake, effectiveness and impact.

Improving skills in managing children

The higher prevalence of children being treated in hospitals in rural areas under general anesthetic [8] may reflect difficulties incurred in managing children with complicated treatments (which are also more prevalent in rural areas) in a dental chair. It also may reflect the preferences of dentists to manage such cases under general anesthetic [3]. It was noted during the consultation process that if dentists were able to access more skills training in strategies to manage children then there would be fewer such hospital admissions.

Specialist oral health service provision

Oral health specialists in the Loddon Mallee Region currently provide services on a 'private fee for service' basis only, and are generally too expensive for the eligible population to utilize. As indicated previously, a surprisingly small proportion of Melbourne's specialist client base comes from the Loddon Mallee Region. Anecdotally this may be because the admission criteria is restrictive and does not account for the special social circumstances of those in greatest needs (e.g. indigenous people; costs associated with travel).

Improving the region's capacity to provide specialist services may result in a reduction in less optimal treatment (i.e. extractions), increased access to appropriate specialist services and reduce the impost of excessive travel on the eligible community. There are specialist dentists working in the private sector in Bendigo and Bendigo Health Care Group has the clinical infrastructure to support the safe practice of such specialists. The key barrier to accessing specialist dental services in the public program is the lack of willing specialists.

Strategies to improve workforce capacity

Strategies to improve the capacity of the workforce include:

- Considering developing a Regional Oral Health Workforce Plan that:
  - incorporates innovative recruitment and retention strategies,
  - facilitates student clinical placements across agencies and into the community;
  - attracts people from CALD (Culturally and Linguistically Diverse) and indigenous backgrounds into the workforce;
  - rotates the oral health workforce between private and public services; and
  - encourages regional recruitment efforts where costs are shared.

- Exploring innovative recruitment and retention strategies, such as:
  - Alternative outreach models that improve workforce conditions and ensure interaction with peers.

  - Linking in with universities and health networks to showcase the benefits of working in rural practice and develop graduate year positions
  - Attractive salary packaging options as incentives
  - Considering the potential of locum dental service provision.

- Considering the possibility of increasing clinical placements for dental health students by including more dental services and non-dental, community-based services in the clinical rotations (i.e. residential aged care; community care services; SRS; mental health services; GP clinics):

- Considering the creation of a Regional Oral Health Clinical Network (or two Sub-Regional Oral Health Clinical Networks - north and the south of the Region) that engages all oral health practitioners in regular forums designed to facilitate:
  - regional professional development;
  - review of clinical guidelines, current evidence and local practices;
  - discussion of strategies for embedding new evidence into practice;
  - overcoming professional isolation experienced by rural practitioners; and
  - collegiate support and networking.

- Considering holding an annual regional Oral Health Forum or Conference to engage all stakeholders, including practitioners, in showcasing best practice and systems, and raising new evidence. The first forum could be used to launch the Regional Integrated Oral Health Plan, and possibly also establish the Clinical Network(s).

- Investigating opportunities to build relationships between private and public services to support staff rotation, improve access in public services and improve training to private specialists.

- Investigating the opportunity of a shared position/s (or clinical Chair) between Bendigo Health Care Group, Sunraysia Community Health Services and Latrobe University to support a local oral health specialist to provide education, research and supervision, as well as public clinics in Bendigo and in Mildura.

- Exploring opportunities that enabe all dental health services staff to have access to high level, experienced clinical supervision and support, and to be appropriately credentialed, possibly through collaboration with other service providers.

- Exploring the possibilities for enhancing the scope of practice of the workforce through additional education and training.

- Promoting available resources designed to improve general care and health professionals' understanding of oral health promotion, hygiene and assessment.

Improve access to oral health services for high-needs groups

Some of the communities that are most vulnerable to oral disease are least able to access oral health services. These groups are:

- Elderly and frail people in both the community and residential aged care services;
- Residents of Disability Accommodation Services;
- People with mental health illnesses and other disabilities;
- Indigenous people; and
- People who do not have the resources to travel to available services (i.e. time, money or transport; childcare, and so on);

A small local study in Bendigo found that only ten percent of mental health clients had accessed dental services on an annual basis in the previous five years. "Sixty percent of clients indicated that their dental hygiene could be improved. Forty percent of clients were currently experiencing some degree of dental pain. Although the sample size of this local study was small, the findings are generally reflective of those reported elsewhere" [12]. This issue has been attributed to "the oral health and mental health attitudes and knowledge amongst mental health clients, general practitioners, community mental health nurses and workers, allied health professionals and dental professionals", which could be significantly improved [12].

There is evidence that oral health problems increase with ageing and that more people are retaining their natural teeth as they age. A study has found that aged care residents have more plaque on natural teeth than on dentures which is probably because it is more difficult to clean the natural teeth of older people [13]. This, along with altered diet and the challenges older people face in accessing oral health services, has a significant impact of the oral health and general wellbeing of the older age cohort.

Outreach models of service provision have been used to effectively improve access for more vulnerable groups. Examples include adolescents in South Australia [14] and residents of supported residential services [Hopcraft 2006 cited in 3]. Similarly, oral health practitioners and students have been rotated into remote communities to deliver dental services and to update the skills of the local providers [10].

There are some exemplary practices that overcome these barriers. Examples include:

- Latrobe University's Supportive Education Program for multidisciplinary health professionals and mental health consumers [12]

- Placement of oral health therapy students in the local residential aged care facilities in Bendigo.

The indigenous population has priority access to public oral health service provision with an oral health examination forming part of the annual health assessment to which they are entitled. Many aboriginal people are reluctant to access mainstream agencies for such services. One of the services available specifically for the Aboriginal communities in Loddon Mallee Region is Murray Valley Aboriginal Cooperative in Robinvale. This service is provided by a dental officer and a dental assistant who travel to Robinvale from North Richmond Community Health Service. This service is available approximately twice a month for periods of 3 days at a time. Referrals are through the Aboriginal Health Workers. People travel from Mildura and Swan Hill to utilize this service with an average of 20-30 people being seen over each 3 day period.

Nevertheless the indigenous community is under-represented in utilisation of local oral health services. There are many reasons for this and it is recommended that work is undertaken to better understand requirements and to encourage indigenous people to make better use of the locally available services.

Cultural awareness is also an issue for the CALD population in rural and remote Victoria. Access to oral health treatment can be restricted by the dearth of interpreting services in these areas. Although some services are available via telephone, CALD clients can find the combined pressures of attending a dental appointment and encountering communication issues both threatening and overwhelming.

Strategies to improve access for high needs groups

Strategies to improve access to oral health care could include:

- Exploring in partnership with Latrobe University the possibility of establishing a Mobile Domiciliary Service(s) staffed by oral health teachers and students who visit residential and community.

- Exploring the possibility of a partnership between Sunraysia Community Health Services and Community Services and Murray Valley Aboriginal Co-operative.

- Exploring strategies that facilitate better education and awareness of oral health issues for mental health consumers by both consumers and mental health service providers.

- Investigating any potential for improving transport and/or providing outreach services for high needs groups. Transport to oral health services remains a major block to accessing appropriate service.

- Exploring strategies that encourage better cultural awareness on the part of service providers for both CALD and Indigenous Australians.

- Exploring strategies that encourage a client focused and responsive approach on the part of oral health service providers.

Future Actions/Options

Objectives	Actions/Options
1. Improve access to public dental chairs	Explore the costs and benefits of the following two options for future service and capital planning: 1. Establish a five-chair community dental service at Castlemaine Health to service the Macedon Ranges and Mt Alexander shires. 2. Extend the existing service located at Maryborough District Health Service.
2. Raise oral health promotion and prevention as a priority for everyone.	Investigate ways to raise oral health and prevention as a priority for everyone, such as: • Raising practitioner awareness of what comprises good evidence, how to access it, and how to evaluate their programs in view of the evidence. • Developing of a more concerted strategy to raise parental awareness of the importance of oral health for their children, their role in achieving this, and also the available services and resources to support them. • Increasing oral health promotion through 'grass roots' involvement in community groups, regular education in schools and at pre-schools and playgroups. • Exploring, in partnership with Divisions of General Practice, strategies to engage GPs in oral health and to encourage the use of Medicare Benefit Schedule items relating to enhanced primary care and chronic and complex condition management. • Exploring the possibility of the provision of health promotion guidance by dental assistants and receptionists while clients are waiting for/receiving dental services.

Objectives	Actions/Options
3. Improve integration (across private and public sectors) to: • **realize service efficiencies;** • **pool resources and increase range of available services;** • **deliver more holistic oral health care that includes medical, behavioural and social dimensions;** • **broaden skills of local health care providers; and** • **create inter-disciplinary teams**	1. Consider establishing a Regional Oral Health Network with responsibility for enhancing integration between service providers within the region, across community and human services, and education providers (primary to higher education). Areas for initial consideration by this Network could include: • Developing a directory of oral health services for the community; • Developing shared care pathways ; • Regional Workforce Plan (discussed under 'Improve workforce capacity'); • Monitoring and managing waiting and recall lists across the Region; • Developing strategies to reduce the 'fail to attend' rate which ranges from 6% to 20% (i.e. SMS reminders); • Monitoring the impact of cross border flows on service capacity; and • Investigating the possibility of placing dental therapists or students in general practices to provide opportunistic assessment of children, older persons and people who have chronic diseases or disabilities. The role could also improve the health professionals' understanding of oral health, and the oral health services system. • Facilitating the integration of oral health into other health programs/ services including general practice, mental health, indigenous health, disability services and chronic disease programs. 2. Investigating the possibility of using e-health technology for dental services to support clinical supervision and referral decision-making.
4. Improve capacity of workforce to meet growing demand for promotion, prevention, intervention.	1. Consider developing a Regional Oral Health Workforce Plan incorporating innovative recruitment and retention strategies, student clinical placements across agencies and into the community; rotation of oral health workforce between private and public services, and regional recruitment efforts where costs are shared. 2. Explore innovative recruitment and retention strategies such as: use of outreach workforce models that ensure peer support; links with universities. 3. Consider the possibility of increasing the variety in placements for dental health students by

Objectives	Actions/Options
	including more dental services and non-dental, community-based services in clinical rotations 4. Consider creating a Regional Oral Health Clinical Network to engage oral health practitioners in regular forums designed to facilitate: • regional professional development; • review of clinical guidelines, current evidence and local practices; • discussion of strategies for embedding new evidence into practice; • overcoming professional isolation experienced by rural practitioners; and • Collegiate support and networking. 5. Consider holding an annual regional oral health conference / forum to showcase best practice. 6. Build relations between private and public services to support staff rotations and improve access in public services and training to private specialists. 7. Investigating the opportunity of a shared position/s (or clinical Chair) between BHCG, Sunraysia Community Health Services and University of Latrobe to support a local oral health specialist to provide education, research and supervision, and to service public clinics in Bendigo and Mildura. 8. Explore opportunities to enable all oral health service staff to have access to high level, experienced clinical supervision and support, possibly through collaboration with other service providers. 9. Explore the possibilities for enhancing the scope of practice of workforce through additional education and training. 10. Promote resources designed to improve general care and health professional understanding of oral health promotion, hygiene and assessment.
5. Improve access to oral health services for high needs groups including people who are Aboriginal, the elderly, refugees, people with disabilities and people with	1. Explore, in partnership with Latrobe University the possibility of establishing a Mobile Domiciliary Service(s) staffed by oral health teachers and students who visit residential and community. 2. Explore the possibility of a partnership between Sunraysia Community Health Services and Community Services and Murray Valley Aboriginal Co-operative.

Objectives	Actions/Options
mental health problems.	3. Explore strategies that facilitate better education and awareness of oral health issues for mental health consumers by both consumers and mental health service providers. 4. Investigate any potential for improving transport and/or providing outreach services for high needs groups. Transport to oral health services remains a major block to accessing appropriate service. 5. Explore strategies that encourage better cultural awareness on the part of service providers for both CALD and Indigenous Australians. 6. Explore strategies that encourage a client focused and responsive approach on the part of oral health service providers.

References

1. Australian Health Ministers' Conference, *National Oral Health Plan 2004-2013*, South Australian Department of Human Services, Editor. 2004: South Australia.
2. Department of Human Services, *Evidence-based health promotion - Resources for planning No. 1 Oral Health*, Department of Human Services, Editor. 2000, Health Development Section, Public Health Division: Melbourne.
3. Department of Human Services, *Improving Victoria'a oral health*, D.o.H. Services, Editor. 2007, Victorian Government: Melbourne.
4. Australian Health Ministers' Advisory Council (AHMAC), *Oral health of Australians: National planning for oral health improvement: Final Report*, Steering Committee for National Planning for Oral Health, Editor. 2001, South Australian Department of Human Services: South Australia.
5. Australian Institute of Health and Welfare, *Health expenditure Australia 2004-05*. 2006, AIHW: Canberra.
6. Department of Human Services, *The Victorian Oral Health Workforce - 2007*, Department of Human Services, Editor. 2008, Portfolio Services Division, Victorian Government,: Melbourne.
7. Maserejian NN, et al., *Rural and urban disparities in caries prevalence in children with unmet dental needs: the New England Children's Amalgam Trial.* J Public Health Dent., 2008. **68**(1): p. 7-13.
8. Department of Human Services, *2006 Victorian Child Health and Wellbeing Survey Technical Report*, Department of Human Services, Editor. 2007, Statewide Outcomes for Children Branch, Office for Children: Melbourne.
9. Spencer A.J, *What options do we have for organising, providing and funding better public dental care?*, Australian Health Policy Institute, Editor. 2001, University of Sydney,: NSW.
10. Beetstra S, et al., *A "health commons" approach to oral health for low-income populations in a rural state.* Am J Public Health, 2002. **92**(1): p. 12-3.
11. Kenny, A., et al. *Translating evidence to practice: improving oral health outcomes for rural mental health clients*. in *Rural Health: The place to be.* 2009. Cairns 17-20 May 2009.
12. Kenny, A., *Strengthening knowledge of oral health: The development of a supportive education program for multidiscplinary health professionals and mental health consumers. Final Report*. 2009, Faculty of Health Sciences, La Trobe University,.
13. Jablonski, R.A., et al., *Measuring the Oral Health of Nursing Home Elders.* Clinical Nursing Research,, 2009. **18**(3): p. 200-217.
14. South Australian Dental Service, Australian Dental Association SA Branch, and T.a.E. Department of Education, *Your mouth needs you - Visit your dentist*, Primary Health Care Advancement Program, Editor. 1998.

Attachment A: Oral Health workforce roles

Professional Group	Description
Dentist	Health care professional who provides preventative and restorative treatments for problems that affect the mouth and teeth.
Dental Assistant	Prepares patient, sterilizes and disinfects instruments, sets up instruments and assists the clinician during oral health procedures
Dental Hygienist	Works to prevent gum disease and tooth loss by educating patients and helping them to maintain oral hygiene. Performs examination of the mouth and builds a treatment program for the patient; explains how to keep teeth clean and when required removes plaque
Oral Health Therapist	Oral Health Therapists are qualified in both dental therapy and dental hygiene. They work as multi-skilled members of a dental team to provide a wide range of dental care in a variety of settings to children, adolescents and adults. Oral Health Therapists can also work in health promotion, education, research, management and policy development roles.
Dental Laboratory Technician	Works to produce replacement parts for the dentist (crowns, bridges or dentures). They work in a dental laboratory.
Oral Pathologist	Studies nature, cause and development of diseases associated with the mouth
Periodontist	Diagnoses and treats inflammatory and destructive diseases of surrounding and supporting tissue of teeth. Performs surgical procedures to remove diseased tissue, using dental instruments
Prosthetist	Measures jaw to determine size and shape of dentures required, makes impressions of patients' teeth, gums and jaws, constructs dentures, fits and modifies dentures and repairs dentures
Prosthodontist	Measures jaw to determine size and shape of prostheses required, makes impressions of patients' teeth, gums and jaws, constructs, fits and modifies and repairs prostheses
Paediatric Dentist	Provides oral health care for infants, children and adolescents
Endodontist:	Examines, diagnoses and treats diseases of nerve, pulp, and other dental tissue affecting vitality of teeth

Attachment B: Planning principles and parameters

Consistent with the approach described in Care in your community, oral health services will be planned so they are:

- Based on a single set of area-based planning catchments
- Informed by a single set of planning principles
- Supported by area-based planning networks
- Focused on three high-level areas of need
- Conducted on the basis of defined modes, settings and levels of care.

- Planning will be based on the catchments described in Care in your community (see Attachment 3 in that document) with a view to achieving self-sufficiency for community dental services within those catchments.

- Services will be planned to provide one dental chair (dentist, dental therapist and/or dental prosthetist plus assistant and support staff) per 5,000 eligible people (concession cardholders and dependants and children up to 12 years).

- Services will be planned on a minimum of four chairs for greater cost efficiencies and to facilitate recruitment of staff, except in rural areas where smaller clinics may be required to maintain accessibility (supported by a larger district or regional service).

- The greater proportion of resources will be directed to areas with greater eligible population numbers with higher levels of need using the Socio-Economic Index for Area and available population data.

- Community dental clinics will be co-located with Community Health Services, improving the range, level and quality of services delivered.

- Planning will identify which services in the specific local context can be delivered safely, effectively and efficiently in community-based settings, and which services should be delivered in hospital settings.

- Planning for delivery of dental care will start from the preferred options of providing services close to where people live, work, shop, meet or relax.

- Planning will maximize ease of access to services, co-locating services where possible and undertaking service development/redevelopment in locations that people can easily get to.

- Planning will deliver collaborative outcomes, based on partnerships focused on a population health approach.

Attachment C: Consultative Committee Membership

Name	Position
Peter Abraham	Chief Executive Officer, Boort District Health
Michael Delahunty	Chief Executive Officer, Echuca Regional Health
Dr Jagjit Dhaliwal	Director of Community Services, Mallee Track Health & Community Services
Dr Mark Gussy	Associate Professor of Oral Health, School of Dentistry and Oral Health, Latrobe University
Jeanette Grant	Executive Officer, Bendigo Loddon Primary Care Partnership
Liz Hamilton	Executive Director of Community & Continuing Care, Bendigo Health Care Group
Sonya Harmer	Dental Coordinator, Sunraysia Community Health Services
Anne Ketterer	Team Manager, Primary Health & Drugs, LMR Department of Health
Rachael Penno	Project Officer, Population Health & Service Planning, LMR Department of Health
Dr Colin Riley	Manager Agency Relationships, Dental Health Services Victoria
Paul Smith	Executive Officer, Primary Care Services, Swan Hill District Health Service
Mark Sullivan	Chief Operating Officer, Dental Health Services Victoria
Louisa Taylor	Director of Community Services, Maryborough District Health Service

Attachment D: Individual Consultations

Name	Position
Peter Abraham	Chief Executive Officer, Boort District Health
Graeme Allan	Manager, Community Dental Program, BHCG
Carmel Beck	Clinic Coordinator, Echuca Regional Health
Brett Belot	Project Officer, Bendigo Loddon Primary Care Partnership
Julie Bond	Dental Assistant, Maryborough District Health Service
Leanne Boyd	Mildura Rural City Council/Mallee Track Board
Anthea Brand	Health Promotion Officer, Sunraysia Community Health Service
Eileen Brownless	CEO, Castlemaine District Community Health Ltd
David Burns	Central Victorian Health Alliance
Jenny Collins	Department of Health Loddon Mallee
Ann-Maree Conners	Health and Aged Care Director, LMR Department of Health
Kerryn Dejussing	Department of Health (teleconference)
Dr Jagjit Dhaliwal	Director of Community Services, Mallee Track Health & Community Services
Julie Downey	Dental Therapist, Sunraysia Community Health Service
Anne Fahey	Manager, Day Services, Golden City Support Services, Mental Health Bendigo
Nola Fonua	Dental Assistant, Sunraysia Community Health Service
Catherine Fuller	Central Victorian Health Alliance
Alanna Glenn	Oral Health Therapist, Echuca Regional Health
John Goodley	Dentist, Echuca
Jeanette Grant	Bendigo Loddon Primary Care Partnership
Dr Mark Gussy	Associate Professor, School of Dentistry and Oral Health, Latrobe University
Bree Hamilton	Campaspe Primary Care Partnership
Sonya Harmer	Clinical Coordinator Dental, Sunraysia Community Health Service
Catherine James	Department of Health (teleconference)
Susanne Johnston	Northern Mallee Primary Care Partnership

Name	Position
Sue Kearney	Manager Health Promotion & Communication Dental Health Services Victoria
Anne Ketterer	Team Manager, Primary Health & Drugs, LMR Department of Health
Susan Kidd	Joint Appointment, Bendigo Health/Latrobe University
Rebecca Koren	Northern Mallee Primary Care Partnership
Lesley Knight	Dental Receptionist, Maryborough District Health Service
Jodi Leversha	Dental Therapist/Oral Health, Maryborough District Health Service
Chantelle Marsh	Dental Assistant, Maryborough District Health Service
Jane McCracken	Health Promotion Officer, Sunraysia Community Health Service
Robert McGlashan	Northern Mallee Primary Care Partnership
Kate McIntosh	Campaspe Primary Care Partnership
Graham McKechnie	Consumer Representative, Mallee Track
Eugene Megan	Bendigo Health Care Group
Jesse Merrett	Southern Mallee Primary Care Partnership
Yvonne Mooney	Dental Therapist, Maryborough District Health Service
Carol Mullins	Receptionist, Boort District Health Dental Clinic
Bronwyn Murray	Executive Officer, Southern Mallee Primary Care Partnership
Petrina Nettlefold	Central Victorian Health Alliance
Cathy Noble	Dental Administration, Swan Hill District Health Service
Scher Ozonal	Social Worker in Community Development, Sunraysia Community Health Service
Vicki Peiffer	Dental Assistant, Boort District Health Dental Clinic
Ted Rayment	CEO, Swan Hill District Health Service
Jackie Reddick	Chronic Disease Management, Sunraysia Community Health Service
Dr Colin Riley	Manager Agency Relationships, Dental Health Services Victoria
Narelle Rowe	Dental Therapist, Maryborough District Health Service
Alistair Sanderson	Department of Health (teleconference)
Paul Smith	Executive Officer, Primary Care Services, Swan Hill District Health Service
Chris Stevenson	Clinic Coordinator, BHCG Community Dental Program

Name	Position
Mark Sullivan	Chief Operating Officer, Dental Health Services Victoria
Louisa Taylor	Director, Community Services, Maryborough District Health Service
Dr George Thomas	Dentist, Boort District Health Dental Clinic
Jo Warnecke	Health Promotion, Echuca Regional Health
Debbie Webster	Aborigine Hospital Liaison Officer, BHCG

Attachment D: Workshop Attendees

Name	Position
Peter Abraham	Chief Executive Officer, Boort District Health
Megan Ballinger	Allied Health Promotion Team Leader, Castlemaine District Community Health
Carmel Beck	Clinic Coordinator, Echuca Regional Health
Aimee Brabazon	Operations Manager, BDAC
Liz Carr	Senior Advocate, Victorian Mental Illness Awareness Council
Mikaela Doolan	Outreach Worker, Mallee Health Care Network
Anne Fahey	Manager Day Services, Golden City Support Services
Ruth Fox	Director Primary Care, Robinvale District Health Services
Barbara Gibson-Thorpe	Aboriginal Health Aged Care Advisor, Department of Health
Alanna Glenn	Oral Health Therapist, Echuca Regional Health
John Goodley	Senior Dental Officer, Echuca Regional Health
Liz Hamilton	Executive Director, Bendigo Health Care Group
Sonya Harmer	Team Coordinator Dental Services, Sunraysia Community Health Services
Susanne Johnston	Project Officer, Northern Mallee Primary Care Partnership
Susan Kidd	Joint Appointment, Bendigo Health/Latrobe University
Brendan Landy	Consumer Consultant, Bendigo Health Care Group
Eugene Megan	Bendigo Health Care Group
Cagri Metin	Student, Sunraysia Community Health Service
Amy Nichol	Workforce Partnership Coordinator, Northern Mallee Primary Care Partnership
Di Parker	Regional Access & Access, CoGB
Steven Portelli	AHPACC, Sunraysia Community Health Service

Attachment E: LMR Oral Health Combined Table

IAP/PCP	LGA	Eligible Population										Wait Times (Feb 2010)			
												General Care		Denture Care	
		Adults	Children	Total Eligible	% Total Popn	SEIFA	ATSI (% of total LGA population)	Public Oral Health Agency	Workforce EFT (May 2010)	No of chairs	Child Recall Nos	Nos	Months	Nos	Months
Bendigo Loddon	Greater Bendigo	26,521	12,851	39,372	41%	984	1.09%	Bendigo Health Care Group (BHCG)	28.9	19	2,151	2,940	22.6	551	29.6
	Loddon	3,204	2,184	5,388	67%	942	1.03%	Boort District Health	3.2	1	299	330	10.5	38	10.2
Campaspe	Campaspe	9,837	6,175	16,012	43%	974	1.82%	Echuca Regional Health	8.6	4	746	796	15.8	236	22.5
Central Victoria	Central Goldfields	4,327	1,382	5,709	45%	907	0.88%	Maryborough District Health Service	5.4	4	1,159	1,460	29.6	125	19.9
	Macedon Ranges	6,398	7,210	13,608	34%	1054	0.45%								
	Mount Alexander	5,862	2,749	8,611	49%	981	0.76%								

Southern Mallee	Buloke	1,725	1,019	2,744	39%	971	0.70%								
	Gannawarra	3,368	1,681	5,049	43%	971	1.39%	Murray Valley Aboriginal Co-op	0.6	1	n/a	n/a	n/a	n/a	n/a
	Swan Hill	2,874	1,682	4,556	21%	959	3.91%	Swan Hill District Health	-	-	-	-	-	-	-
Northern Mallee	Mildura	14,903	8,450	23,353	45%	958	2.87%	Mallee Track Health & Community Service	1.8	2	160	331	7.8	68	7.0
								Sunraysia Community Health Services Ltd	8.0	8	869	1,462	11.6	65	5.4
LMR Total		79,019	45,383	124,402	41%				56.5	38	5,384				
% eligible population		6.6%	6.6%	6.6%											
State eligible population		1,196,621	691,556	1,888,177	37%						67,445				