health

Barwon-South Western Region Oral Health Plan

January 2011

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Department of Health

Barwon South-Western Region

Oral Health Plan

2010-2013

Forward

It is widely recognised that poor oral health affects overall health, eating, self esteem and social interaction. People in rural areas are also more likely to have poorer oral health than people living in metropolitan areas (Great South Coast Health and Wellbeing Profile, August 2010).

During 2010 and 2011, the Barwon South Western (BSW) region worked collaboratively to develop the BSW Oral Health Plan 2010-2013. The BSW Oral Health Plan aligns with area-based service planning and provides a framework for improved coordination of services and effective partnerships to address access and workforce challenges. The plan will inform future investment of human and capital resources, strengthen workforce partnerships and provide a platform for sustainable dental services across the region.

The BSW Regional Office wishes to acknowledge the contribution and assistance provided by public health services and Dr Michael Smith from Barwon Health, who was seconded to provide professional expertise in the development of this plan. Research was integral to the development of this plan and the department acknowledges the support of Lorne, Aireys Inlet and Apollo Bay primary schools and the BSW Department of Education and Early Childhood Development, Barwon Health Research and Ethics Committee and Dr Andrea De Sivla-Sanagorski of Deakin University. Appreciation is extended to the BSW Department of Health and Dental Health Services Victoria (DHSV), who provided information and ongoing support in the development of this plan.

In addition the department acknowledges and thanks the many individuals and organisations who generously gave of their time and provided valuable contributions along the way. The process required a commitment to improving the system and an honest reflection of current practices. This has resulted in the identification of key priorities and actions under the broad headings of partnerships, access, workforce and population health.

The BSW Oral Health Plan is a blueprint to building on the work to date and implementing the recommended priorities and actions.

I am pleased to present the BSW Oral Health Plan 2010-2013.

Chris Faulkner

Director Health & Aged Care
Department of Health
Barwon-South Western Region

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Executive Summary

The Barwon-South Western (BSW) region Oral Health Plan (the plan) provides a three year blue print for the development of the region's community oral health services. It will assist services in working together to address demand within limited resources. The plan was developed over six months between February to October 2010 in consultation with community oral health services and Dental Health Services Victoria (DHSV).

The plan comprises four sections addressing context, regional profile, service delivery and action plan. Key themes include the importance of community dental services working together to maximise access and improved coordination of the public dental workforce. To achieve these actions health services will need to collaborate in regional and sub-regional partnerships.

The plan recommends improving access to community dental services in isolated rural townships through the establishment of mobile or outreach services. The needs of priority groups including aboriginal people, people with disabilities and people living in residential aged care are also identified as areas requiring greater attention.

Certain aspects of the plan will require additional resources such as outreach (mobile) services, research and regional Coordination. The department will continue to discuss implementation of the action plan with health services, education institutions and DHSV.

Key issues and findings
A summary of the key findings of the report is provided below. Further details relating to each point can be found in Sections 2 and 3 of the plan and related appendices.

Client profile

- In 2009 children aged 0 to 17 years represent 53.0% of new patients receiving general care, ranging from 42.7%- 62.7%. (DHSV 2010).
- Patients aged 18–24 years are under represented at an agency level (1.6% – 4.0%) and regional level (2.9%) (DHSV 2010).
- Patients over 65 years of age accounted for 17.7% of patients seen in 2009. (DHSV 2010).
- Priority clients are under-represented including pregnant women, homeless people, aboriginal people and residential aged care clients.

Service Configuration

- Analysis of population planning ratios indicate the region as a whole currently falls within the 1:5000 threshold (1 chair per 5,000 eligible population). However the distribution of chairs does not reflect population catchments and further consideration is needed regarding services within the City of Greater Geelong.
- Residents of several rural townships in the region do not have reasonable access to local public or private dental services, travelling over 100km or for more than 1 hour to access public oral health services.

Demand management

- BSW region has higher waiting lists than the state average for general treatment and dentures with waiting times between 7 months up to 32 months at June 2009.
- Child recall & response rates vary dramatically between agencies with some agencies achieving higher rates than the state average.
- Integrated intake systems within primary care services are at best tenuous and limited by the lack of linkages between reporting software systems within health services.

Service coordination

- Referral systems for complex procedures are generally well developed amongst dental service providers.
- Information about dental services is somewhat ad hoc and informal amongst smaller health services and for specific population groups.

Partnerships

- Partnering and cooperation between health services varies widely across the region and requires greater coordination and development of consistent practice.
- There are examples of formal partnerships and joint staff recruitment that can provide the foundation for regional coordination.

Research and development

- There are several small scale projects addressing oral health promotion targeting priority groups however these projects are isolated and there is no formal mechanism for knowledge sharing amongst the region's dental professionals or managers.

Recommendations

It is recommended that oral health services in BSW region adopt a lead agency model that facilitates collaboration and enables the following actions to be implemented.

Service access and coordination

- Develop strategies to improve identification, access, referral pathways and services for all priority client groups.
- Improve access to oral health services for communities that do not have funded public services by the implementing mobile outreach services (single-chair mobile clinics).

Address demand

- Be responsive to waiting list demand management by:
  - implementing a lead agency model for rotation of dental staff to meet demand,
  - considering strategies to achieve full utilisation of infrastructure including after hours services where this is not already occurring, and
  - developing partnerships with private practices in areas not supported by funded public dental clinics.

Develop workforce

- Examples of public/private service models are operating in the region and further consideration should be given to how these models support workforce retention and improve access across the full spectrum of dental services.

- Improve recruitment and retention of dental staff through activities that:
  - Coordinate the provision of professional development opportunities including in clinical supervision and research (grant applications, implementation, evaluation & publication) across the region, and
  - Facilitate consistent practice across the region regarding application of regional and rural allowances.

- Facilitate discussion and regional approaches to public/private models informed by DHSV and DH initiatives.
- Facilitate clinical placements for undergraduate dental and oral health students.

Improve quality

- Coordinate implementation of integrated oral health promotion activities across the region.
- Ensure quality standards are maintained through appropriate clinical supervision and training.

1 Introduction

The importance of good oral health is recognised and supported in BSW. Like other rural regions BSW experiences significant challenges including:

- increasing numbers of potentially avoidable hospital admissions for oral health conditions
- variable demand for service across the region
- an ageing population in smaller rural communities and growing numbers of families in regional centres
- workforce challenges associated with the availability of dental professionals.

By developing a planned approach, the region will be able to develop appropriate service models that address these issues.

The BSW plan analyses current services, catchment profiles, partnership development and preventative efforts directed at reducing oral ill health. The plan provides a framework that will enable the following:

- Greater collaboration amongst public oral health services to maximise resources.
- Improved service coordination within and between health services.
- Appropriate engagement of the private sector in accordance with government policy.
- Enable a positive impact on waiting lists and wait times across the region.
- Identify opportunities to address workforce development, recruitment and retention in a coordinated and efficient manner.
- Provide a strategy for improved oral health promotion activity across BSW Region.

1.1 Policy context

Department of Health
Oral Health Service Planning Principles

In July 2007 the Department of Human Services (now Department of Health) formalised a set of planning and service delivery principles *"Improving Victoria's Oral Health,* summarised below:

- Catchment based planning for self sufficiency
- Resources directed to areas of greatest need and population
- Service planning ratio of one dental chair per 5000 eligible population
- Planning for a minimum of 4 chairs for efficiency and sustainability
- Co-location of school dental services
- Community-based settings and hospital based service settings
- Services provided close to where people live, work, shop, meet or relax
- Co-location of health services where possible to maximise access
- Collaborative approaches with a focus on population health.

Dental Health Services Victoria (DHSV)

DHSV purchases public dental health services on behalf of the department. In BSW region DHSV has funding and service agreements with 6 health services for provision of public dental services.

The DHSV draft strategic plan 2010-2013 is currently under development and will build on the themes articulated in the 2007-2010 Strategic Plan. The 5 goals of the 2010-2013 Strategic Plan are:

- Embed oral health initiatives within other health issues.
- Lead the emphasis from treatment interventions towards prevention of oral disease.
- Continue to develop universal access models for at-risk populations.
- Build capacity to undertake population health studies and gather information on at-risk population groups.
- Identify and implement new, innovative, best practice clinical models and low-cost, high quality, readily accessible provider models.

Commonwealth Government

The key national oral health policy is articulated in the *National oral health plan, healthy mouths healthy lives: Australia's oral health plan 2004-2013.*

The national policy addresses 7 action areas that align with Victoria's policy approach in relation to workforce, a population health approach and at-risk communities.

The Commonwealth supports specific initiatives through the Medicare Benefits System (MBS) for clients with chronic disease using the enhanced primary care items and teen dental vouchers for preventative dental treatment.

A Healthier Future for all Australians – Final Report June 2009.
In 2009 the Commonwealth Government commissioned the National Health and Hospitals Reform Commission to prepare the above report.

The report recommended a series of reforms which would impact health services and redesign the health service system. Specific recommendations were also made in relation to dental services including consideration of a universal scheme for access to basic dental services – 'Denticare Australia'.

The Denticare scheme would enable everyone to have choice of basic dental services – prevention, restoration, and the provision of dentures – paid for by Denticare through either a private health insurance plan or through public dental services.

In addition to Denticare, three other specific recommendations were made relating to oral health workforce, prevention and oral heath promotion;

1. Internships for graduating dentists and oral health professionals to provide a broader clinical experience and training, as well as to expand the public dental workforce.

2. The national expansion of preschool and school dental programs to improve the dental health of Australia's children.

3. Additional funding is made available for improved oral health promotion, with interventions to be decided based upon relative cost-effectiveness assessment.

These recommendations are yet to be implemented but would impact significantly on state funded public dental services.

Recent announcements through the Council of Australian Governments indicate that negotiations regarding future dental schemes (Denticare) is listed for consideration in the medium term, within the next 3 years.

1.2 Project approach

The BSW Oral Health Plan was lead by the BSW regional office in collaboration with Dr Michael Smith (Director Oral Health Services, Barwon Health) and regional health services.

The following objectives were endorsed for the project:

1. To identify potential service models and service mix based on current and projected need and population projections including:

- investigate operational issues such as hours of service in relation to demand, and optimal configuration of fixed and mobile chairs.

2. To explore, analyse and make recommendations regarding potential remote/rural service models that would be responsive to:

- improving access to services in rural areas, including outreach models.

- access for disadvantaged population groups including the aboriginal people, people with a disability and residents of aged care facilities.

3. To explore workforce issues to determine resource availability, training, recruitment and retention, staffing requirements with recommendations for workforce configuration planning.

4. To explore and identify key considerations regarding a regional model for integrated oral health promotion particularly as it relates to disadvantaged population groups including children, aboriginal people and the elderly.

A project plan was developed incorporating three stages for the project:

- **research –** collection of data regarding population profile, health status and service usage,
- **analysis** - of the issues affecting service delivery, and
- **option development** – discussion and exploration of models and issues with key stakeholders.

At each stage the plan was informed by feedback from health services providing community dental services. Other health services including small rural health services and aboriginal community controlled health services in the region were invited to participate in consultations.
Activities included:

- Investigation of policy context.
- Data collection & analysis.
- Consultation with regional DH Managers and Program & Service Advisors (PASAs).
- Meetings with CEO's, program managers and dental staff.
- Consultation with DH & DHSV.
- Presentations to DH CEO & Board meetings and regional Primary Health Managers meetings.
- Regional Oral Health Forum.
- Feedback incorporated into the final report.

1.3 Regional Planning Context

The BSW region comprises 9 Local Government Areas (LGAs) covering an area of 29,105 square kilometres from Geelong to the South Australian border. In 2009 the total permanent population was 373,191 people. (ABS Census, 2009).

The region is characterised by two sub-regional catchments - the Barwon sub-region and the Great South Coast (GSC) sub-region.

The Barwon sub-region comprises 4 LGAs; the City of Greater Geelong, Surfcoast Shire, Colac Otway Shire and the Borough of Queenscliffe. It contains the major regional city is Geelong. For the purpose of this document Golden Plains Shire is not within scope as it is part of the DH Grampians Region. Golden Plains Shire is however one of the five municipalities in G21 Regional Alliance and is therefore noted in data tables and maps.

1.3 Regional Planning Context cont'd

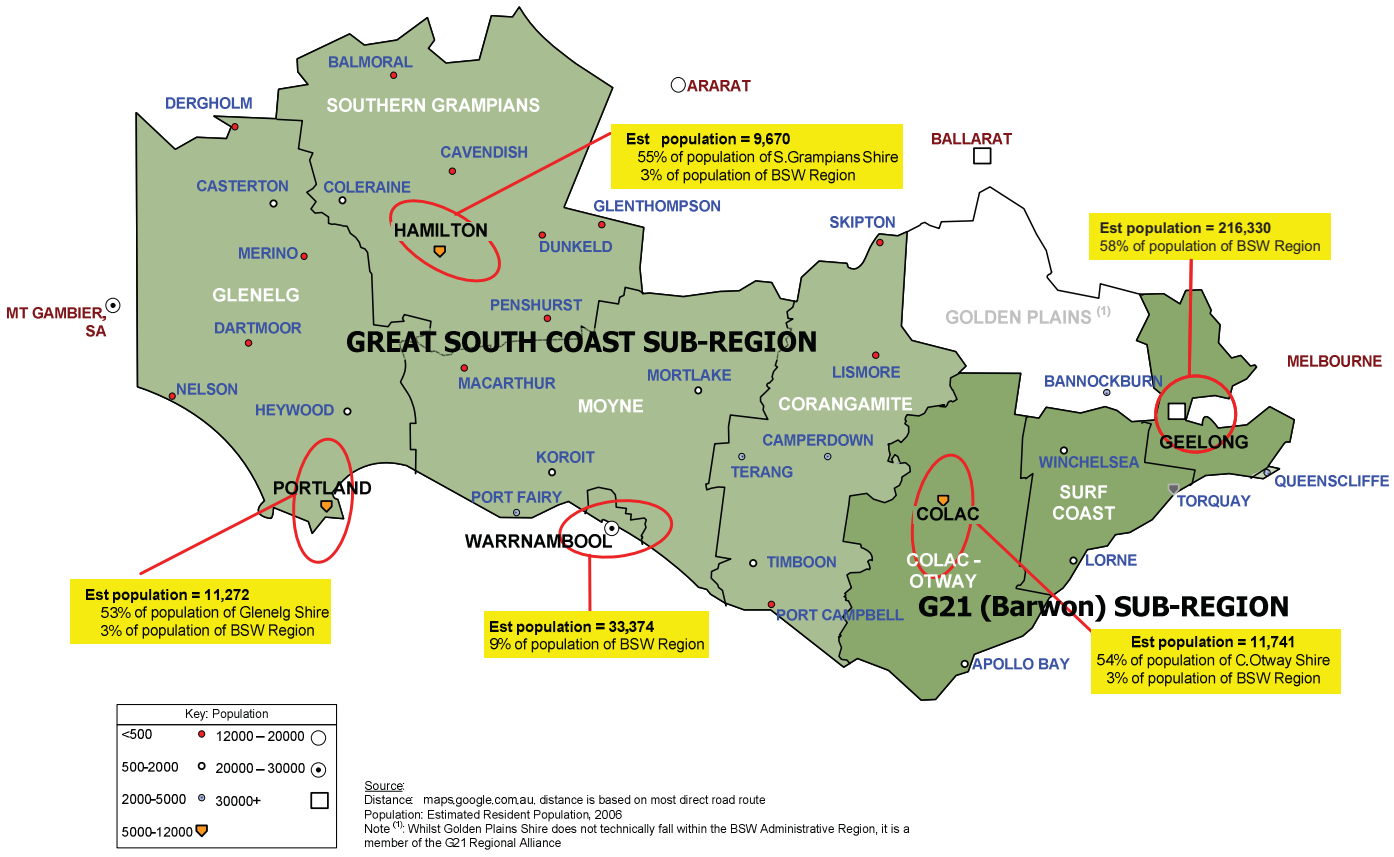
The Great South Coast sub-region comprises 5 municipalities; the City of Warrnambool, Glenelg Shire, Southern Grampians Shire, Corangamite Shire and Moyne Shire.

Warrnambool is the largest population centre in the south west and location of the sub-regional health service South West Healthcare. Hamilton and Portland are the other major townships followed by smaller farming and coastal communities throughout the sub-region.

BSW region has three Primary Care Partnerships (PCP); Southern Grampians – Glenelg PCP, South West PCP and the G21 Health and Wellbeing Pillar. PCPs facilitate discussion and collaboration between health services and other industry sectors. Projects are developed to improve service co-ordination, integrated chronic disease management, health promotion and partnerships.

Southern Grampians-Glenelg PCP has identified oral health promotion as a key area of work for 2009-2012.

Sub-regional catchments, Local Government Areas and townships in BSW region.



Source:
Distance: maps.google.com.au, distance is based on most direct road route
Population: Estimated Resident Population, 2006
Note (1): Whilst Golden Plains Shire does not technically fall within the BSW Administrative Region, it is a member of the G21 Regional Alliance

Regional Profile

2.1 Demographic characteristics

Of the 373,191 people living in BSW region in 2009 over half (58%) or 216,330 people resided in the City of Greater Geelong.

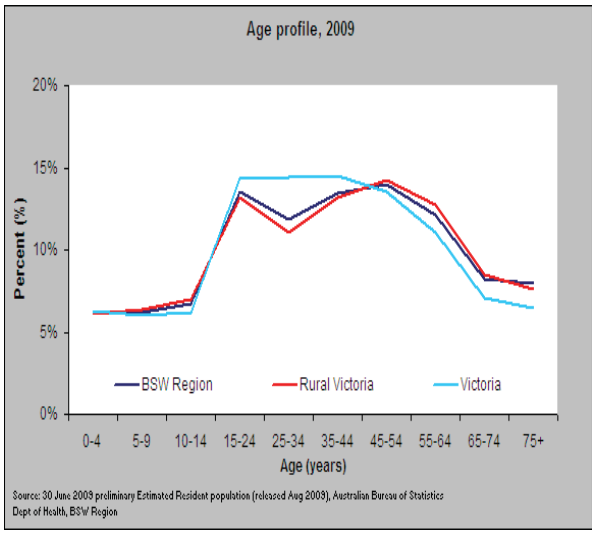
The next most populous municipality was Warrnambool with 9% of the regional population or 33,374 people (2009 ABS). The remaining 33% resided in smaller communities throughout the region.

The following table illustrates the distribution of males, females and total persons in each local government area (LGA) in the region. Golden Plains Shire is included in the table but not included in the BSW regional total as this municipality is not within BSW departmental boundaries. However residents of Golden Plains Shire, particularly Bannockburn are within 30 minutes of Geelong by car and currently access health services in BSW region.

Population distribution by LGA, BSW 2009

Local Government Area	Male	Female	Total
Southern Grampians	8,687	8,877	17,564
Glenelg	10,747	10,399	21,146
Warrnambool	16,247	17,127	33,374
Corangamite	8,832	8,668	17,500
Moyne	8,355	8,329	16,684
Colac-Otway	11,039	10,778	21,817
Greater Geelong	106,610	109,720	216,330
Surf Coast	12,926	12,532	25,458
Queenscliffe	1,533	1,785	3,318
(Golden Plains)	9,345	8,828	18,173
Total	184,976	188,215	373,191

BSW region's age profile is consistent with the profile of rural Victoria. There are fewer people in the middle years between 15 to 44 years of age compared to the Victorian average and slightly higher numbers of people aged 65 and over compared to the Victorian average.



Analysis of the 2006 Index of relative socio-economic disadvantage (SEIFA) indicates six municipalities in BSW region with at least one statistical area listed as "most disadvantaged" - Southern Grampians, Glenelg, Warrnambool, Corangamite, Colac-Otway and Geelong. Key characteristics of disadvantage are low household income levels, high rates of unemployment and lower education levels compared to the state average (Appendices 1 and 2).

Residents in these areas are more likely to experience poorer health outcomes than the rest of the population and are key users of community health services, including oral health services.

Ambulatory Care Sensitive Conditions (ACSC) data provides insight into health status in the region. ACSC data is sourced from hospital admission rates for preventable illness including diabetes, asthma, angina and preventable dental conditions.

In 2009 dental conditions rated in the top ten for preventable admission of all admitted children 0-14 years in BSW region (ACSC, 2009). ACSC data in the recently produced *Great South Coast Health and Wellbeing Profile 2010* indicates that in 2008/09 children aged 0-14 years in the GSC sub-region were admitted to hospital for dental conditions at twice the Victorian average.

2.2 Client profile of public dental services

Children up to 12 years of age and people over 65 years are the major users of public dental services in BSW region (DHSV, 2009).

- In 2008-09 children aged 0-17 years represented the greatest proportion of patients treated in community dental services or 53% of new clients (DHSV, 2009).
- Patients in the 25-64 age group represented 26.3% of new patients treated
- Patients in the 65+ years cohort represented 17.7% of new patients treated.

The 65+ age group are unlikely to fully benefit from the introduction of water fluoridation but will retain their natural teeth. They will require more restorative, preventive and periodontal dental services and are likely to have chronic conditions that will influence, and be influenced by their oral health.

2.2.1 Eligible population

Centrelink and ABS Census data 2006 indicates the eligible population for community dental services in BSW is approximately 143,000 persons or 7.5% of the eligible Victorian population, excluding eligible youth between 12-18 years.

Approximately half the eligible population in the region resides in one LGA, Greater Geelong. Within Geelong LGA, Corio has the biggest eligible population for community dental services (Appendix 2).

The total number of BSW patients treated (Emergency and General Courses of Care) in the 6 months to December 2009, represented 11.2% of the eligible patients.

New patients receiving General Care in 2008-09 (7,676 people) represent 5.4% of the total eligible population compared with State-wide market penetration of 4.8%.

Eligibility Criteria & Priority of Access

The following groups are eligible for public dental services:

- All children aged 0 -12 years
- Young people aged 13-17 years who are health care or pensioner concession card holders or dependants of concession card holders
- All children an young people up to 18 years of age in residential care provided by the Children Youth & Families division of the Department of Human Services.
- All youth justice clients in custodial care, up to 18 years of age
- People aged 18 years and over, who are health care or pensioner concession card holders or dependants of concession card holders
- All refuges and Asylum Seekers

Priority Access.

The following groups have priority access to care:

- Aboriginal and Torres Straight Islanders.
- Children and young people
- Homeless people and people at risk of homelessness.
- Pregnant women
- Refugees and Asylum Seekers.
- Registered clients of mental health and disability services, supported by a letter of recommendation from their case manager or staff of special development schools.

2.3 Population change

ABS population forecasts indicate the BSW population will increase by 83,043 people or 25% by 2026 (Appendix 3). This is slightly higher than the Victorian average increase of 24%. Increased numbers of children and adults over 65 years are likely to increase demand on community dental services.

In BSW the largest population growth across all ages will occur in the City of Greater Geelong, Surfcoast Shire and City of Warrnambool.

- In Geelong an additional 63,724 people or 31% are expected by 2026, including almost 10,000 children up to 14 years of age.
- Surfcoast Shire is expecting an increase of 11% or 11,979 by 2026.
- Up to 50,000 additional residents are expected to move to the new suburb of Armstrong Creek situated between Geelong and Surfcoast as it develops over the next decade.
- Warrnambool is expected to increase by 25% or an additional 7,728 residents.
- Rural municipalities including Southern Grampians Shire, Glenelg Shire, Moyne Shire, Colac Otway Shire and Corangamite Shire are expecting modest population growth of 12% or less than 2,100 people. The proportion of residents over 65 years will increase in these municipalities and conversely the number of children and adults up to 54 years is expected to decrease (Appendix 3).

The net effect of population changes in the GSC sub-region will not warrant additional fixed dental chairs. However services will need to review and adjust staffing profiles and models, including outreach/mobile services to meet the needs of the ageing population and geographically isolated communities. Greater consideration will need to be given to partnerships with private providers, residential aged care services and Home and Community Care programs.

2.4 Service profile

Six health services in BSW are funded to operate 38 dental chairs across the region. Services are delivered at 11 sites including 2 single chair clinics in aboriginal community controlled health services (ACCHOs) in Geelong and Warrnambool. The remaining 36 dental chairs are clustered in community health centres in Geelong, Portland, Warrnambool, Hamilton, Colac and Point Lonsdale. All of these services are managed by integrated health services with the exception of the Point Lonsdale clinic which is managed by Bellarine Community Health, the only stand alone registered community health centre in the region.

Public dental services offered include general dental care, emergency dental and dentures. In addition several health services provide surgical and theatre time for dental procedures requiring an anesthetic, funded separately through casemix. Clients may also be referred to the Royal Dental Hospital for complex and urgent procedures.

All health services also work in partnership with private dental providers. Emergency vouchers are issued for urgent, general and denture treatment for patients who cannot attend community dental clinics within available times or due to insufficient workforce.

Key findings:

- Analysis of health service oral health budgets for 2008-09 indicates that General Courses of Care made up the majority of treatment types or 82.7% of all procedures.
- Waiting lists currently apply for all services excluding emergency treatment and services to priority access clients.
- Co-payments are applicable for treatment in accordance with departmental fee polices.
- Recall systems operate for children at 12 and 24 months across all sites, however there is considerable variation between services regarding the numbers of children treated and recalled.

2.4.1 Barwon sub-region services

The following is a summary of public health services within the Barwon sub-region and their population catchments. The summary includes two categories of service providers; health services offering dental care as part of their primary health service and health services located within the sub-region who do not offer dental services but refer clients to public dental services. The latter category is important when considering client pathways and service coordination.

Barwon Health

The largest health service in BSW region. Locations: 19 dental chairs provided in 6 chair clinics in Community Health Centres at Belmont, Corio, Newcomb and a single chair at Wathaurong ACCHO.
Catchment: Total population of approximately 250,000 and in conjunction with the region's other healthcare providers, approx 337,000.

Colac Area Health

Location:5 chair dental clinic in Colac.
Catchment: An immediate population of 12,000 in Colac township plus surrounding areas across Colac-Otway LGA and parts of Corangamite and Surf Coast LGAs, approximately 30,000.

Otway Health & Community Services

Location: Apollo Bay.
Catchment: An immediate population of approximately 3,000 in Apollo-Bay and surrounds. Small permanent population which swells dramatically during holidays. Otway Health is not a provider of dental services.

Lorne Community Hospital

Location: Lorne.
Catchment: An immediate population of approximately 2,500 in township of Lorne and surrounding areas of Aireys Inlet, Deans Marsh and Wye River. Townships located in the vicinity have small permanent populations which swell dramatically with visitors and holiday home owners on weekends and during summer holidays. Not a provider of dental services.

Bellarine Community Health

Location: 2 chair dental clinic at the Community Health Centre, Point Lonsdale. The health service does not provide dental at the other campuses in Ocean Grove, Portarlington and Drysdale. The health service has an approximate catchment population of 50,000.

Barwon Aboriginal Community Controlled Health Organisations (ACCHOs)

Wathaurong Aboriginal Cooperative Incorporated (Geelong)
Wathaurong Health Service: Single-chair dental clinic funded by DHSV as Barwon Health's "19th chair".

Barwon sub-region service profile as at 30 June 2010

Agency	Clinic	Chairs	FTE	Clinic hours	After hours
BH	Belmont	6	6	Mon-Fri 8.30 – 5.00pm	Sat 8.30am - 2.00pm
	Corio	6	6	Mon-Fri 8.30 – 5.00pm	Mon 5.30pm – 8.00pm
	Newcomb	6	6	Mon-Fri 8.30 – 5.00pm	Thu 5.30pm – 8.00pm
BCH	Point Lonsdale	2	2	Mon-Fri 8.30 – 5.00pm	
CAH	Colac	5	5	Mon-Fri 8.30 – 5.00pm	Wed, Thur 5.15 – 8.00pm
Wathaurong Co-op	North Geelong	1			
	Total	26	25		

2.4.2 Great South Coast sub-region services

Western District Health Service
Location: 3 chair dental clinic staffed locally and by Barwon Health dentists on rotation. Coleraine campus: Single-chair dental privately operated.
Catchment: Sub-regional provision across LGAs of Southern Grampians and Glenelg, total population of approximately 20,000. Some usage by South Australian residents.

Casterton Memorial Hospital
Location: Casterton.
Catchment: An immediate population of 1,700 in Casterton township and, in conjunction with other healthcare providers, around 4,000. Not a provider of community dental services.

Heywood Rural Health
Location: Heywood
Catchment: An immediate population of 1,300 in Heywood township and, in conjunction with other healthcare providers, around 7,000 across surrounding rural area. Not a provider of dental services.

Portland District Health
Location: 2 chair dental clinic in Portland with plans to expand to 5 chairs as part of GP Superclinic in 2011.
Catchment: An immediate population of 10,000 in Portland township , with surrounding areas an estimated population of 20,000. Some usage by South Australian residents.

South West Healthcare
Location: 5-chair dental clinic in Warrnambool expected to increase to 6 chairs as part of redevelopment. SWH is the sub-regional health service for the GSC sub-region with a population base of almost 70,000 plus seasonal holiday population.

Moyne Health Service
Location: Port Fairy.
Catchment: Port Fairy township and surrounds, population of around 3000. Substantial population increase during holiday periods. Not a provider of dental services.

Timboon & District Healthcare
Location: Single-chair dental clinic staffed by SWH as private/public service model.
Catchment: An immediate population of 1,000 in Timboon township, with surrounding rural areas the population estimate is 8,000.

Terang & Mortlake Health Service
Location: Terang and Mortlake
Catchment: An immediate population of 3,000 in the townships of Terang and Mortlake, including surrounding rural areas the total population is estimated at 7000. Not a provider of dental services.

South West Aboriginal Community Controlled Health Organisations (ACCHOs)

Gunditjmara Aboriginal Cooperative Incorporated (Warrnambool)

Single-chair dental chair provided on a part time basis as a partnership between Gunditjmara and SWH.

Dhauwurd-Wurrung Elderly & Community Health Service Inc (Portland), **Kirrae Health Service** (Framlingham) and **Winda-Mara Aboriginal Corporation** (Heywood) – Refer clients to the Gunditjmara service and specialist services.

Great South Coast sub-region service profile as at June 2010

Agency	Clinic	Chairs	FTE	Clinic hours	After hours
WDHS (excluding Coleraine)	Hamilton	3	2.	Mon-Fri 8.30– 5.00pm	
PDH	Portland	2	1.30	Mon-Wed 7.30-4.00pm Thur 10.00-5.00pm Fri 7.30-5.00pm	Thur 5.00-8.30pm
TDHS	Timboon	1	0.10	Every 2nd Friday	Sat am (private practice)
WH	Warrnambool	5	4.80	Mon-Fri 8.30 –4.30pm	Weekdays 5.00-7.00pm Sat 9.00-12.00 noon
Gunditjmara Co-op	Warrnambool	1			
	Total	12	8.20		

2.4.3 Workforce Profile

Community dental clinics employ dentists, dental therapists, receptionists and dental nurses to provide clinical and health promotion activities. Clinical services are provided during office hours and for extended after hours and weekend services. Several clinicians outreach into isolated communities providing health education, dental assessments and referral.

Workforce is a key determinant of service continuity. Recruitment and retention of all dental professionals is an on-going challenge for services, particularly smaller 1, 2 and 3 chair clinics as well as services in the far south-west.

Several agencies work in partnership to effectively manage recruitment, professional development and management support to dental staff. Two different public/private models are currently offered to eligible dental staff at South West Healthcare and Barwon Health.

Oral health promotion activities are also provided by the majority of community dental services in BSW. Funding for this activity is limited and consequently interventions are targeted at preschool children and high risk groups. Most oral health promotion activity is integrated into the broader health promotion planning undertaken by health services.

Regional staffing profile including Oral Surgery Registrars (OSR) and private partnerships

Health Service	Clinic	Chairs (future)	DO	DO 1st yr	UGT	DT/H	ADT/ Pros	Private	OSR	Total FTE
BCH	Point Lonsdale	2	1.4			0.6				2.0
BH	Belmont	6	2.2	1.0		2.0	0.4	0.4		6.0
	Corio	6	3.2			2.0	0.6	0.2		6.0
	Newcomb	6	2.4	1.0		1.8	0.4		0.4	6.0
	Wathaurong	1								
CAH	Colac	5	3.0		1.0	0.6	0.4			5.0
WDHS	Hamilton	3 (>4)	1.0			1.0				2.0
PDH	Portland	2 (>5)	0.6			0.6	0.1			1.3
TDHS	Timboon	1						0.1		0.1
SWH	Warrnambool	5 (>6)	1.4	2.0		1.4				4.8
	Gunditjmara	1								
Total		**38(+5)**	**15.2**	**4.0**	**1.0**	**10**	**1.9**	**0.7**	**0.40**	**33.2**

3. Issues & Opportunities

3.1 Service Configuration

Departmental planning principles allow for one dental chair per 5,000 eligible population. Analysis of the 2006 eligible population data for BSW indicates the region had a total ratio of one dental chair per 4,212 people. However further analysis of catchments and distribution of dental chairs indicates that whilst the GSC sub-region is within population thresholds, parts of the Barwon sub-region, particularly the City of Greater Geelong, exceeds thresholds.

Key findings:

- Of the 38 public dental chairs in the region 12 are located in the GSC sub-region (32%) and 26 are in the Barwon sub-region (68%).
- In 2006 the region had 143,214 people eligible for community dental services. Of these, 39,362 people resided in the GSC sub-region (27%) and 103,852 in the Barwon sub-region (73%) (DHSV 2009, Appendix 3).
- The Great South Coast has approximately 1 dental chair per 3,280 eligible people and the Barwon sub-region has one chair per 3,994 people.
- The eligible population of the City of Greater Geelong in 2006 was 77,845 and a ratio of one chair to 4,324 people. Factoring in the eligible population of Surfcoast Shire of 16,720, increases the eligible population serviced by Barwon Health's clinics to 94,565 - a ratio of one chair to 5,253 people.
- Postcode data indicates the majority of clients attend public dental services within the LGA or an adjoining municipality.
- Postcode data for the Belmont, Corio and Newcombe sites indicates 88% of clients or 13,131 of the total 14,907 clients seen in 2009, resided in the City of Greater Geelong. The largest percentage of patients were from the northern suburbs of Corio 22%, North Geelong 10% and Lara 0.2%

Taking into account catchment, eligible population and planned future expansion the GSC sub-region is comparatively well supplied for fixed dental chairs. Distance between services and limited public transport options however impact service access and therefore require alternative models to be developed. Appropriate models would include mobile outreach services and private practice partnerships.

Service usage and demand is highest in the Northern suburbs of Geelong and growth corridors along the coastal fringes. There are currently no public dental clinics in Surfcoast Shire or the Ocean Grove township, however there are private providers in both communities.

Bellarine Community Health's 2010 Service Plan identifies future infrastructure requirements for a 4 chair dental clinic in Drysdale to service the northern part of the Bellarine Peninsula. The dental clinic would be part of a service hub incorporating youth focused, mental health and early years services developed in partnership with the City of Greater Geelong in this growth corridor.

Given current population growth trends it is likely the number of elderly eligible clients and children has increased since 2006. It is therefore reasonable to investigate further the supply and service configuration within the Barwon sub-region.

3.1.1 Outreach services

There is considerable evidence that oral health is poorer in rural communities than urban areas. BSW has several communities that would benefit from visiting mobile dental services managed by sub-regional lead agencies.

Several small rural communities in BSW are located over 100km from the nearest public or private dental clinic. The regional map below identifies population size by SLA, and the distance between key localities.

.

Two communities with neither public or private dental practices are Lorne and Apollo Bay on the Great Ocean Road. Both townships have populations of less than 2,000 people and both have established health services that could assist visiting services.

In 2009 Lorne Hospital and Otway Health & Community Services (Apollo Bay) raised concerns regarding the lack of public or private dental services.

As part of the development of the Oral Health Plan a trial outreach assessment service was conducted by Barwon Health targeting Lorne, Apollo Bay and Aireys Inlet primary school children.

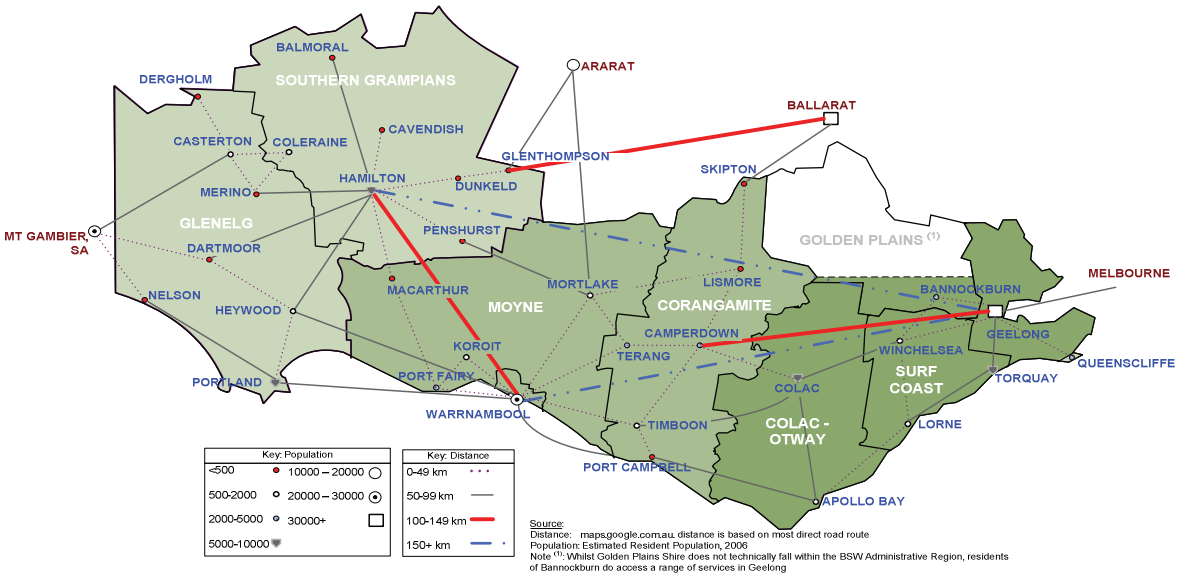
The aim of the trial was to test the effectiveness of an outreach service delivery model. The trial was also linked to a larger research project being undertaken by Deakin University – the SPLASH Project. Key aspects of the research were an Oral Health Literacy Survey and examination of children's teeth. Those needing further treatment were referred to Barwon Health or Colac Area Health.

The results of the outreach trial were considered by Deakin University and compared to previous surveys undertaken through the SPLASH project. The full results of the survey are available on request from the BSW regional office.

Seventy-two children were examined in the trial and 96 parents completed the questionnaire exploring their views about general dental health. The examinations identified the number of decayed, missing or filled (DMF) teeth and found 36% of the children examined had between 1 and 7 DMF teeth. Higher rates were observed in children from Apollo Bay.

The parents survey also identified that 5% of children had never visited a dentist. A further 9.7% attended a dentist when there was a reason such as toothache and 6% of children in the study had reportedly had teeth removed.

Population profile and distance between key localities, Barwon South-Western Region



3.2 Workforce challenges

A key requirement of a sustainable public dental service is the recruitment and retention of a skilled, multidisciplinary, motivated workforce. Staff must be supported by management to access evidence based, best practice information and offered opportunities for continuing professional and personal development. All participants in the dental workforce should be used to maximum advantage within their discipline's scope of practice.

The regional dental workforce includes dentists, receptionists, dental hygienists, oral health therapists, prosthetists (chair-side), dental technicians (laboratory), specialist services (e.g. BH Oral Surgery Registrar). The dental team operates within a community health setting and usually shares reception and line management within the broader community health team.

With the exception of the formal partnerships with ACCHOs and between Barwon Health, Colac Area Health and Western District Health Service, public dental clinics in BSW generally work in isolation. Greater collaboration is required if health services are to maximise effort and utilisation of facilities and reduce competition for staff and students. Agencies need to collaborate on the recruitment and retention of local, sub-regional and regional dental workforce.

To enable collaborative working relationships health services should formalise regional and sub-regional arrangements via Memoranda of Understanding (MOU). MOUs would assist agencies to discuss, plan and implement appropriate models for the following:

- Development of regional professional development programs linked to DHSV priorities and across all disciplines.
- On-going support to clinical staff undertaking management responsibilities
- Rotation of clinical staff at the sub-regional level
- Regional and sub-regional student placement opportunities
- Maximising chair utilisation through after-hours, evening and Saturday clinics
- Development of partnerships with private practice to:
  - increase the utilisation of vouchers in priority areas
  - explore the possibility of leasing underutilised private practice clinics
  - collaborate with private practice dentists to mentor dental staff.
- Investigation of public/private models of remuneration taking advantage of Teen Dental and MBS items (GP Care Plans/Enhanced Primary Care)
- Delivery of outreach services to isolated communities
- Sharing of service planning data at a regional and sub-regional level in consultation with the DH regional office.

3.3 Demand management

Trends over the last three financial years indicate that demand for dental services across the region continues to grow and is highest in Geelong. Barwon Health clinics, on average, register 500 new patients every month.

In June 2009 BSW region had higher waiting times than the state average for general and denture procedures. Average waiting times were between 7 months up to 32 months at June 2009 (DHSV, 2010).

Waiting time data reports indicate the number of adults waiting for service and exclude the number of children waiting for service. Demand must also consider child and adolescent recall lists.

Waiting lists are dependent upon many factors including:

- Number of eligible people
- Access to dental clinics
- Number of chairs
- Workforce mix and experience
- Acceptance of vouchers by private practices
- Length of waiting times – shorter waiting times encourage people to attend because they don't have to wait.

The following table lists waiting times for general care and denture care as at June 2010.

Health service	Denture Care (months)	General Care (months)	Number of chairs
Barwon Health - Belmont	34	24	6
Barwon Health - Corio	29	25	6
Barwon Health - Newcomb	28	20	6
Bellarine Community Health	10	25	2
Colac Area Health	25	19	5
Portland District Health	22	15	2
South West Healthcare	13	10	5
Western District Health Service	22	26	3
BSW regional average	22.8	20.5	35*
DHSV target for 2010-2011	22	23	

Source: Dental Care - Your Hospitals, Dept Health.

3.4 Oral Health Promotion

State funding is provided via DHSV to public dental health services for specific oral health promotion activities. DH also funds health services to undertake integrated health promotion which aligns with PCP catchment priorities and community needs.

Oral health promotion activity in BSW is targeted at pre-school and primary school age children. Specific initiatives targeting at risk communities such as aboriginal people and people with disabilities are also supported.

The DHSV Statewide Oral Health Promotion Strategic Plan 2008-2012 states:

"Poor oral health causes pain and suffering and affects quality of life and wellbeing. The underlying causes of oral disease are many and include nutrition, lifestyle, risk behaviours, hygiene, education, attitudes and health knowledge as well as access to oral health services. It is the poor that carry the greatest burden as oral disease is closely linked with socio-economic status."

DHSV has developed a 10-point plan as part of its Oral Health Promotion Strategy.

1. Develop and disseminate best-practice approaches, tools and resources.
2. Evaluate existing and pursue new, evidence-based health promoting approaches.
3. Enhance oral health awareness and literacy in the community.
4. Improve the capacity of individuals and populations to manage their oral health.
5. Develop regional leaders and oral health champions to drive local health promotion.
6. Target interventions at high risk groups.
7. Develop multi-sectorial partnerships to address underlying risk factors of oral disease.
8. Adopt a population health approach to underpin multiple integrated strategies.
9. Develop systems to monitor population oral health status.
10. Consider other settings, environments and approaches to address the underlying determinants of oral health.

Working cooperatively to plan and deliver oral health promotion activity would maximise resources and extend coverage across sub-regions. Health services will need to coordinate planning and interventions to enable this to occur.

3.5 Water Fluoridation

Water fluoridation improves the condition of teeth, particularly amongst children. By mid 2010, almost 90 per cent of Victorians will receive fluoridated drinking water. This important public health initiative helps provide protection against tooth decay, but is not always available, as some households do not have reticulated water and not all reticulated supplies can be fluoridated.

The National Oral Health Plan, Action Area One: Promoting Oral Health Across the Population identifies extending fluoridation of public water supplies to communities across Australia with populations of 1000 or more as a key action.

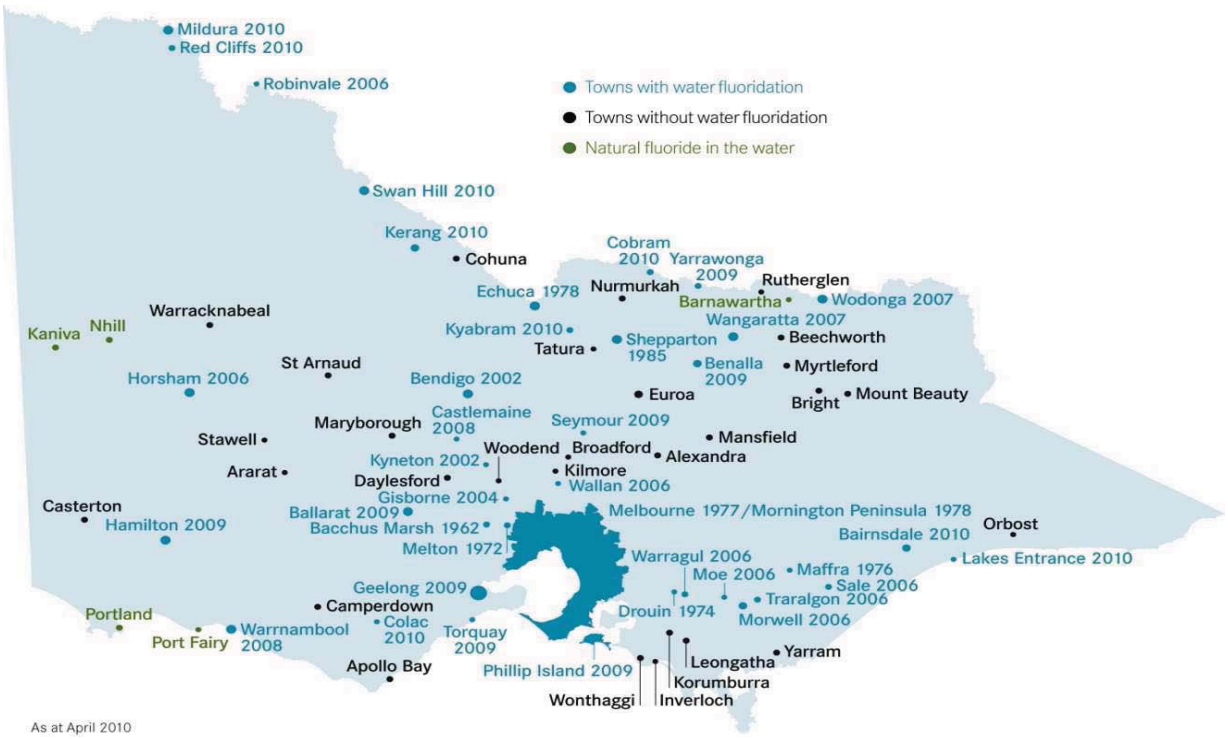
In BSW the townships of Camperdown, Apollo Bay and Hamilton do not have fluoridated water. These communities demonstrate corresponding high rates of dental caries amongst children.

Research commissioned as part of the oral health planning process through the Access – Oral Health study in Lorne, Apollo Bay and Aireys Inlet suggests that primary school age children in Lorne and Apollo Bay had higher incidence of dental caries than other children in the region. These townships do not have fluoridated water supplies or dental services (neither public or private). Residents in these townships have to travel over 70km each way to public dental clinics in Colac or Geelong.

In areas without fluoridation early intervention is critically important to reducing the risk of dental decay. Health promotion activities targeting expectant mothers, early childhood services and young families are key target groups for regional oral health promotion.

Outreach or mobile services to non-fluoridated communities with limited access to public or private dental clinics would also assist in reducing decay rates and improving overall oral health.

The following map illustrates the towns with and without water fluoridation as at July 2010.



Source: Department of Health, July 2010.

3.6 Regional coordination

The preferred coordination model for BSW is a layered approach based on regional and sub-regional lead agency roles. The model requires health services work together on common themes articulated in the Action Plan - Access, Workforce, Population Health and Service Configuration. Service delivery is coordinated and undertaken at the sub-regional level.

Factors supporting a sub-regional approach to service delivery include:

- The region's geographic characteristics including the location of population centres and travel distances
- Current service configurations and catchments
- Existing sub-regional area based planning approach supported by health services, local government and state government (DH, RDV & DHS).
- Existing partnerships.

Regional Dental Management Forum

An on-going Regional Dental Management Forum (RDMF) will be required to ensure consistency across the two sub-regions. The first step in achieving regional cooperation is the signing of an MOU affirming each agency's commitment to work collaboratively through the regional forum to implement the recommendations of the plan.

Successful implementation and sustainability of the plan is also dependent upon effective partnerships with the department, DHSV and tertiary institutions/education providers.

The roles and responsibilities of lead agencies, health services, DHSV and tertiary institutions (e.g. Deakin University, Latrobe University, University of Melbourne and RMIT) are summarised in the following table.

Tasks/roles	Lead	Health Services	DHSV	Tertiary
Facilitate BSW Regional Planning	✓		✓	
Wait list management	✓	✓	✓	
Manage recall and reminder for children, adolescents	✓	✓	✓	
Preventative and primary dental care		✓		
Specialist dental care	✓		✓	✓
Facilitate outreach services	✓	✓	✓	
Oral Health Promotion – planning	✓	✓	✓	✓
Oral Health Promotion – participation		✓		
Recruitment and retention strategies	✓	✓	✓	✓
Credentialling of clinical staff	✓	✓		
Coordinate undergraduate clinical placements	✓	✓		✓
Provide undergraduate clinical placements		✓		✓
Coordinate continuing professional development	✓			
Provide continuing professional development	✓		✓	✓
Provide support services to local clinics	✓		✓	
Identify and facilitate regional research opportunities	✓		✓	✓
Partnerships and links with other sectors	✓	✓	✓	✓

4 Action Plan

Objective	Actions	Responsibility	Priority
4.1 Partnerships			
4.1.1 Establish a Regional Dental Management Forum (RDMF) of key stakeholders.	Develop Terms of Reference for the RDMF, giving consideration to the involvement of small rural health services and private sector in addition to public health dental services and DHSV.	DH regional office to lead.	High
	Develop an MOU to be signed by all health services with in principle support of the sub-regional dental partnerships model and identified lead agencies.	DH regional office to lead	High
	Develop an agreed regional work-plan based on the themes in this report.	RDMF members	High
4.1.2 Establish the Barwon sub-regional dental partnership.	Revise and extend existing arrangements between Barwon Health and Colac Area Health to include Bellarine Community Health with Barwon Health as sub-regional lead agency.	DH regional office with BH, BCH & CAH	High
	Expand the current rural rotation model between Barwon Health & Colac Area Health to include Bellarine Community Health.	DH regional office with BH, BCH & CAH	High
4.1.3 Establish the Great South Coast sub-regional dental partnership.	Formalise arrangements for the Great South Coast sub-regional dental partnership between South West Healthcare, Portland District Health & Western District Health Service with South West Healthcare as sub-regional lead agency.	DH regional office, SWH, PDH & WDHS	High
	Develop a flexible sub-regional service delivery model that is adaptable to current staffing profiles and identified client needs and demands. Establish sub-regional workforce and service configuration priorities and agreed management responsibilities and funding arrangements.	DH regional office, SWH, PDH & WDHS	High

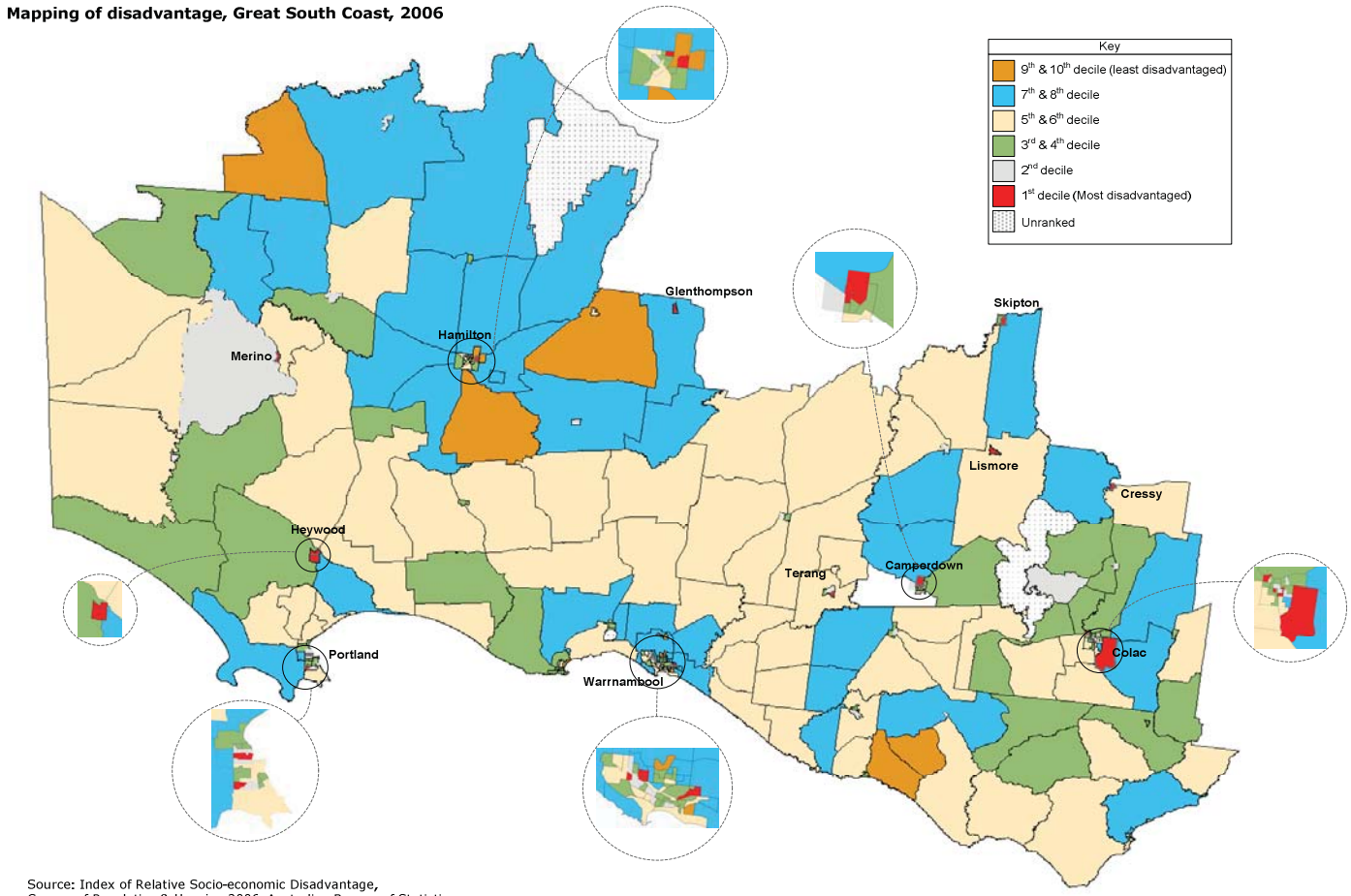
Objective	Actions	Responsibility	Priority
4.2 Access 4.2.1 Reduce the wait time for access to public oral health services across the region to meet performance indicators.	Sub-regional partnerships investigate and implement agreed models to manage waiting lists: • Rotation model • Maximising existing infrastructure • Increase hours of operation • Public/private models	All agencies	High
4.2.2 Reduce the recall interval for children to meet target.	Sub-regional partnerships investigate and implement strategies to manage wait lists.	All agencies	High
4.2.3 Increase the Child Recall Response Rate.	RDMF to investigate and implement strategies and best practice models.	All agencies DHSV	High
4.2.4 Increase the access of 18-24 year olds.	Establish a working group of the RDMF to investigate the low access of eligible 18-24 year olds and implement appropriate strategies.	All agencies DHSV	Medium
4.2.5 Increase access for priority client groups.	Establish base line access rates for priority groups. Implement demand management tools and develop strategies to strengthen referral pathways. Develop linkages with the Closing the Health gap regional working group and associate projects within ACCHOs.	RDMF	High
4.2.6 Maximise the existing chair capacity across the region.	Establish the utilisation rate of chairs in the region. Develop strategies to increase utilisation of chairs identified through assessment of utilisation rates. • Workforce models (eg. scope of practice, rotation) • Hours of operation (eg extended hours) • Public/private models	RDMF RDMF	High High

Objective	Actions	Responsibility	Priority
4.3 Workforce			
4.3.1 Develop a regional oral health workforce plan linked to the BSW regional workforce strategy.	Develop and implement strategies addressing: • Recruitment • Retention • Student placements & training chairs • Graduate programs • Supervision & mentor schemes • Sponsored employment schemes • Private partnerships • Appropriate resource allocation • Region wide and sub-regional approaches	DH regional office to lead with DHSV & RDMF	High
4.3.2 Provide local & regional continuing professional (CPD) development programs.	Establish a working group of the RDMF to set CPD priorities and actions, including regional training opportunities for all oral health staff.	RDMF	High
	Utilise approved training agencies to provide CPD activities including infection prevention training and clinical supervision training as a priority.	Working group	High
	Liaise with DHSV regarding training opportunities and regional professional development program.	Working group	High

Objective	Actions	Responsibility	Priority
4.4 Population Health			
4.4.1 Ensure oral health promotion is part of core business.	Establish a working group to develop a regional integrated oral health promotion plan.	RDMF	High
	Develop local partnerships to implement initiatives.	Working group	High
4.4.2 Support regional water fluoridation initiatives.	Support the continued fluoridation of water in BSW.	All agencies	High
4.4.3. Reduce avoidable dental hospital admissions.	Review ACSC data and investigate reasons for referrals and admissions.	RDMF	High
	Monitor trends and develop strategies to reduce admissions.	RDMF	High
	Identify CPD opportunities directed at treating children with special needs.	RDMF	High
4.4.4 Address the oral health care needs of residential aged care clients.	Investigate and implement appropriate models of care in residential aged care settings.	RDMF	Medium
4.4.5. Support regional research activities.	Continue to work collaboratively with regional networks, tertiary institutions and DHSV on regional projects addressing population oral health and prevention issues.	RDMF, DHSV, tertiary institutions	Medium

Objective	Actions	Responsibility	Priority
4.5 Service Configuration			
4.5.1 Give further consideration to the service requirements within the City of Greater Geelong	Further investigate service demand and optimal configuration. Consider opportunities arising from future developments such as the northern suburbs redevelopment.	Barwon Health, DH & DHSV Barwon Health, DH & DHSV	High Medium
4.5.2 Consider options for student placements at Western District Health Service	Investigate option for Hamilton clinic to increase from 3 to 4 dental chairs to support student placements.	WDHS, DH, DHSV Sub regional lead & Universities	Medium
4.5.3. Monitor service expansion at Portland District Health.	Monitor alignment of service expansion at Portland Super clinic with regional oral health workforce plan and student placement supports.	PDH & Superclinic partners	Medium
4.5.4 Establish outreach services in the Barwon sub-region	Seek funding to establish a mobile outreach dental service in the Barwon sub-region, initially to Lorne and Apollo Bay. Gradually extend the range of the mobile service to areas with limited access in Barwon sub-region.	Barwon sub-regional partners, DH & DHSV Barwon sub-regional partners	High Medium
4.5.5 Consider future need for outreach into the Great South Coast sub-region.	Consider 6the need for outreach services to isolated communities.	DH & Great South Coast sub-regional partners	Medium

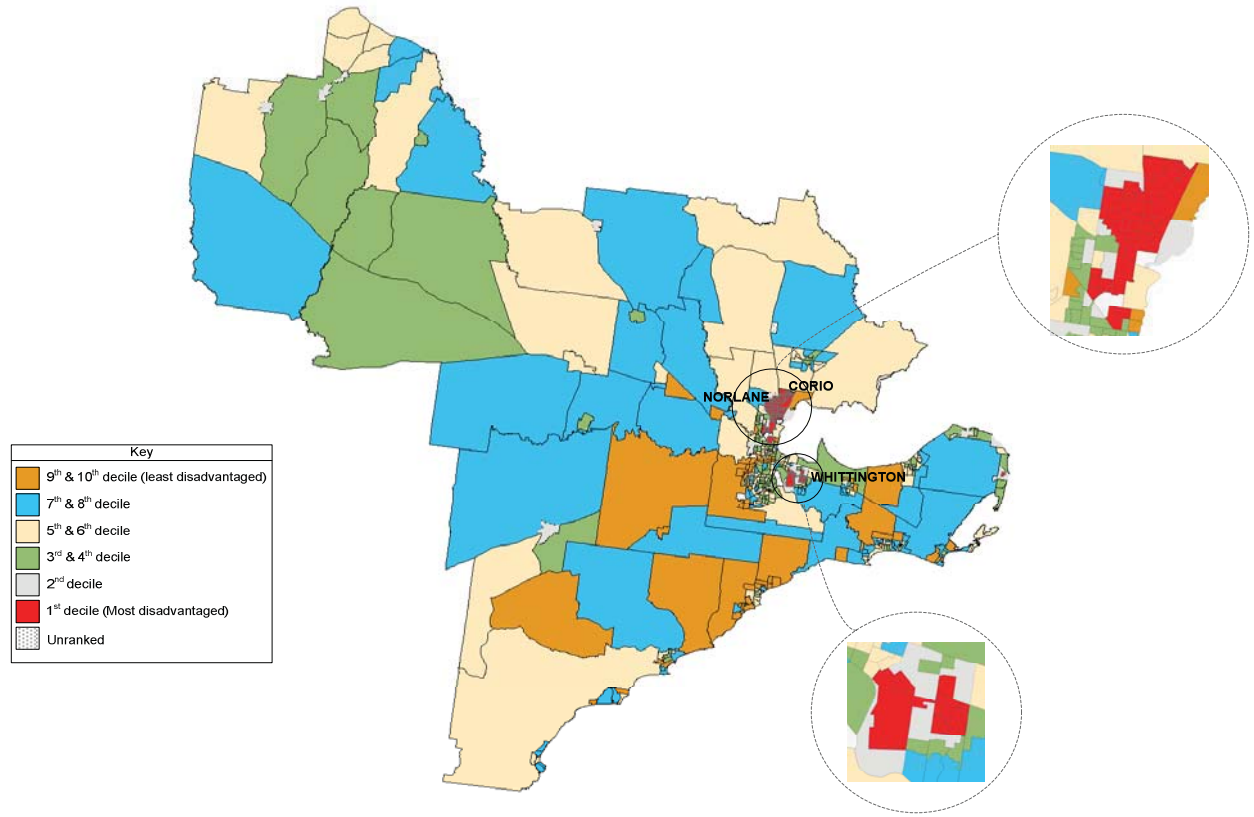
Appendix 1: Social Disadvantage maps, Index of relative socio economic disadvantage (SEIFA) 2006, Great South Coast.



Source: Index of Relative Socio-economic Disadvantage,
Census of Population & Housing 2006, Australian Bureau of Statistics

Appendix 2: Social Disadvantage maps, Index of relative socio economic disadvantage (SEIFA) 2006 Barwon sub-region.

Mapping of disadvantage, G21 (excluding Colac-Otway), 2006



Source: Index of Relative Socio-economic Disadvantage,
Census of Population & Housing 2006, Australian Bureau of Statistics

Appendix 3: Eligible population by sub-region and LGA 2006

Sub-region	LGA	Adults	Children	Total
Barwon	Colac-Otway	5,649	3,274	8,923
	Greater – Geelong	52,413	25,432	77,845
	Queenscliffe	266	98	364
	Surf Coast	10,171	6,549	16,720
Sub-region total	(excluding Wathaurong chair)			103,852
South West	Corangamite	3,410	2,602	6,012
	Warrnambool	8,458	4,640	13,098
	Moyne	2,748	2,877	5,625
	Glenelg	5,205	3,092	8,297
	Southern Grampians	3,917	2,413	6,330
Sub-region total	(excluding Gunditjmara chair)			39,362
	Total	92,237	50,977	143,214
% of State eligible population		7.71%	7.37%	7.58%
State Total		1,196,621	691,556	1,888,177

Source: DHSV and 2006 ABS Census population data

Appendix 4: Population forecast by LGA and age 2006 to 2026

Local Government Area	Year	00-04	05-09	10-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	Total
	2006	991	1,091	1,264	2,126	1,701	2,231	2,496	2,142	1,466	1,679	**17,187**
	2026	899	1,003	1,095	1,833	1,680	2,114	2,121	2,310	2,297	2,358	**17,709**
Southern Grampians	**% change**	**-9%**	**-8%**	**-13%**	**-14%**	**-1%**	**-5%**	**-15%**	**8%**	**57%**	**40%**	**3%**
	2006	1,173	1,417	1,574	2,327	2,206	2,993	3,149	2,475	1,666	1,545	**20,525**
	2026	1,060	1,167	1,171	1,789	2,116	2,478	2,661	3,313	3,285	2,921	**21,961**
Glenelg	**% change**	**-10%**	**-18%**	**-26%**	**-23%**	**-4%**	**-17%**	**-15%**	**34%**	**97%**	**89%**	**7%**
	2006	1,980	2,201	2,387	4,751	3,859	4,285	4,175	3,206	2,340	2,317	**31,501**
	2026	2,491	2,497	2,478	5,001	4,723	4,766	4,291	4,488	4,331	4,162	**39,229**
Warrnambool	**% change**	**26%**	**13%**	**4%**	**5%**	**22%**	**11%**	**3%**	**40%**	**85%**	**80%**	**25%**
	2006	1,063	1,279	1,390	1,807	1,737	2,406	2,409	2,086	1,598	1,396	**17,171**
	2026	1,031	1,025	984	1,716	2,077	1,907	1,966	2,452	2,325	2,403	**17,884**
Corangamite	**% change**	**-3%**	**-20%**	**-29%**	**-5%**	**20%**	**-21%**	**-18%**	**18%**	**45%**	**72%**	**4%**
	2006	1,009	1,161	1,326	1,844	1,610	2,272	2,437	2,035	1,182	1,126	**16,002**
	2026	965	1,083	1,181	1,791	1,688	2,189	2,415	2,580	2,216	1,851	**17,958**
Moyne	**% change**	**-4%**	**-7%**	**-11%**	**-3%**	**5%**	**-4%**	**-1%**	**27%**	**87%**	**64%**	**12%**
	2006	1,247	1,389	1,561	2,637	2,253	2,813	3,064	2,589	1,752	1,725	**21,030**
	2026	1,264	1,346	1,333	2,305	2,387	2,823	2,842	3,062	2,964	2,790	**23,116**
Colac-Otway	**% change**	**1%**	**-3%**	**-15%**	**-13%**	**6%**	**0%**	**-7%**	**18%**	**69%**	**62%**	**10%**
	2006	12407	12996	14009	28222	26076	28619	28117	22847	16240	16396	**205929**
	2026	15666	16411	16907	33484	30814	33155	32415	31951	29832	29019	**269653**
Greater Geelong	**% change**	**26%**	**26%**	**21%**	**19%**	**18%**	**16%**	**15%**	**40%**	**84%**	**77%**	**31%**
	2006	1565	1570	1627	2546	2641	3584	3572	2706	1620	1371	**22802**
	2026	1944	2102	2155	3631	3313	4649	4969	4925	4209	2885	**34781**
Surf Coast	**% change**	**24%**	**34%**	**32%**	**43%**	**25%**	**30%**	**39%**	**82%**	**160%**	**110%**	**53%**
	2006	135	173	153	247	213	339	426	479	443	542	**3150**
	2026	111	157	126	145	158	261	307	623	760	700	**3349**
Queenscliffe	**% change**	**-18%**	**-9%**	**-17%**	**-41%**	**-26%**	**-23%**	**-28%**	**30%**	**72%**	**29%**	**6%**
	2006	1165	1392	1499	1882	1822	2850	2772	2186	1029	480	**17077**
	2026	1231	1549	1804	2767	2210	3143	3543	3471	2715	1945	**24378**
Golden Plains	**% change**	**6%**	**11%**	**20%**	**47%**	**21%**	**10%**	**28%**	**59%**	**164%**	**305%**	**43%**
	2006	21570	23277	25291	46507	42296	49542	49845	40565	28307	28097	**355297**
	2026	25431	26790	27430	51694	48955	54343	53988	55704	52218	49088	**445641**
BSW Region total	**% change**	**18%**	**15%**	**8%**	**11%**	**16%**	**10%**	**8%**	**37%**	**84%**	**75%**	**25%**
	2006	83,968	93,768	102,685	176,332	154,111	192,358	198,941	165,801	111,699	103,655	**1,383,318**
	2026	94,387	101,500	104,468	188,114	176,678	202,673	202,314	223,162	216,396	200,636	**1,710,327**
Rural Victoria	**% change**	**12%**	**8%**	**2%**	**7%**	**15%**	**5%**	**2%**	**35%**	**94%**	**94%**	**24%**
	2006	316,130	321,546	336,496	716,649	734,170	769,756	700,067	549,435	353,847	330,204	**5,128,300**
	2026	392,520	393,020	388,823	797,820	909,927	944,176	826,966	778,095	659,776	620,056	**6,711,178**
Victoria	**% change**	**24%**	**22%**	**16%**	**11%**	**24%**	**23%**	**18%**	**42%**	**86%**	**88%**	**31%**

Source: 30 June 2006 revised Estimated Resident population (released Oct 2007), ABS.

Glossary of Terms

ABS	Australian Bureau of Statistics
ACCHO	Aboriginal Community Controlled Health Organisation
ADT/Pros	Advanced Dental Technician/Prosthetist
BCH	Bellarine Community Health
BH	Barwon Health
BSW	Barwon-South Western Region
CAH	Colac Area Health
CEO	Chief Executive Officer
CPD	Continuing Professional Development
DHS	Department of Human Services
DHSV	Dental Health Services Victoria
DO	Dental Officer (Dentist)
DO 1st year	Dental Officer (Dentist) – 1st year graduate
DH	Department of Health
DT/H	Dental Therapist/Hygienist
FTE	Full Time Equivalent
GSC	Great South Coast
OSR	Oral Surgery Registrar
LGA	Local Government Area
MOU	Memorandum of Understanding
PASA	Program & Service Advisor
PCP	Primary Care Partnership
Private	Private Practitioner (Dentist)
PDH	Portland District Health
RDMF	Regional Dental Management Forum
RDV	Regional Development Victoria
SWH	South West Healthcare
TDHS	Timboon & District Health Service
WDHS	Western District Health Service