

Canterbury

District Health Board

Te Poari Hauora o Waitaha

ORAL HEALTH STRATEGY

- **Part B – Detailed Oral Health Strategy**

September 2003

Part A of the Oral Health Strategy relates to a separate document on a Fluoridation Position statement for the CDHB

PART B – Detailed Oral Health Strategy

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1 Executive Summary

The aim of this plan is to improve oral health and reduce health inequalities. These will be achieved by population health approaches and ensuring existing personal health services are responsive to these aims. This plan does not anticipate increases in public funding, but focuses on the review (and adjustment when necessary) of existing resources. The pathways identified in He Korowai Oranga: The Maori Health Strategy will guide the implementation of this plan. These pathways are:

- Whanau, hapu , iwi, and community development
- Maori participation
- Effective service delivery
- Working across sectors

The vision of the Canterbury District Health Board (CDHB) is ‘To improve the health and wellbeing of people living in Canterbury’. Oral Health is one of the areas identified for ongoing work and development. This plan has been developed with stakeholders (providers and consumers) within the oral health sector and the equity lens applied.

Oral Health is an important but often overlooked component of a healthy lifestyle. Poor oral health has a significant impact on the functioning of individuals ability to eat a balanced diet and has a detrimental impact on appearance and self confidence. It is a particular issue for Maori, Pacific people, youth and the elderly and is identified in the New Zealand Health Strategy as one of the eight priority areas for Maori health gain. This strategy provides a framework for the public sector to take responsibility for the part it plays in reducing oral health inequalities that is consistent with national and district Maori Health Strategies.

Tooth decay progresses rapidly (usually over less than two years), consequently benefits from actions taken to improve oral health can be seen within a similar timeframe. Evidence supports the effectiveness of fluoridation and fissure sealing in improving oral health status, as discussed in the accompanying paper (Part A – Fluoridation position statement). Other oral public health and preventative measures have an uncertain outcome.

In Canterbury general dental practitioners who are paid by the patient provide most dental care. Publicly provided oral health services have a small but clinically essential role in oral health care for Canterbury. While the cost of the service is small in comparison to other health services, the School and Community Dental Service reaches almost every child in the Canterbury District. The Hospital Dental Service treats patients other dental providers can not treat and provides support to medical and surgical specialities which seek to treat the whole patient.

Provider arm services provide care predominantly to children (up to Year 9 – age 12) and those with special needs. Demand for these services is significant and increasing. Forecasting and planning for potential increased demand on these services needs to be recognised as part of additional health promotion.

Community and Public Health along with other Ministry of Health funded non-governmental organisations provide health promotion on improved oral health. Explicit funding for Oral Health Promotion is not provided. The 'Well Child' checks provided by GPs and other well child providers seek to link children into services at age 2yrs or earlier.

Existing Public Health programs are seen as the best way to deliver oral health education to communities as structures are already in place and feedback indicated that people (especially Pacific Peoples and Maori) are reluctant to see 'yet another' health professional and would prefer a more integrated approach.

Access to treatment for some groups is difficult due to issues regarding cost, the criteria for accessing emergency treatment and transport difficulties. Prevention measures such as regular brushing with fluoride toothpaste are also not well adopted due to priority/cost issues.

Recently completed research among older people in residential care has identified need in this area. Other work is underway in the areas of adolescent oral health and the Pacific Island community. An Oral Health survey of the adult population is required to ensure that planning services for this group is effective and targets those most in need.

Outcome measures for oral health services in New Zealand are reported for fluoridated and non-fluoridated 5- and 12-year-olds, and are based on the dmft/DMF index – this is a count of the number of teeth affected by tooth decay (either **d**ecayed, **m**issing (extracted), or **f**illed). The School and Community Dental Service has a comprehensive monitoring system that enables reporting to be further divided by ethnic group and socioeconomic status – which are important determinants of health inequalities in New Zealand. For Canterbury five-year-olds in 2002, average dmft scores were: Maori, 3.84; Pacific, 4.05; South East Asian, 4.07; and others (largely European), 1.85; with an overall average score of 2.16. As a comparison, for the same age group in Auckland the average dmft scores were: Maori, 2.03; Pacific 2.44; Other, 0.91; all combined, 1.29. It should be noted that 85% of the Auckland children received fluoridated water. The national average dmft score for five-year-olds was 2.08 in 2002.

Unfortunately there is very little oral health data for the population beyond childhood with most information being based on utilisation – for example, numbers of visits. For adolescents this lack of data should be rectified by changes to the Adolescent dental scheme, and its accompanying Regional Coordination scheme. For the rest of the population, measures of oral health status would need to be obtained by population surveys as advised in this report. These surveys could rely on any combination of normative and self-assessed oral health status, and reports of impacts of oral conditions. Current gaps in oral health data make planning and evaluation very difficult, and are a national problem.

Actions recommended to improve the Oral Health status of the people of the Canterbury district are:

Promotion/Prevention

1. Include Oral health promotion initiatives in existing networks (including food and nutrition activities and targeted programs for Maori and Pacific people) to build awareness. All initiatives to be consistent with National and District Maori Health Strategies.
2. The CDHB adopts:
 - The National Heart Foundation ‘Heartbeat Challenge’ in support of its ‘Healthy Hospitals’ initiative on:
 - Smoking (Smokefree sites by Dec 04).
 - Nutrition.
 - Physical Activity.
 - Policy on provision of drink and snack vending machines and how these relate to oral health care in hospitals.

Groups with identified need

3. Work to determine the oral health needs of older people, develop a plan to address needs identified as part of the LinkAGE framework and consider implementing the findings of the dependant elderly survey.
4. Await delivery of Adolescent Regional Co-ordination Service plan and support implementation. This Service will address concerns regarding Maori and Pacific adolescents’ utilisation of dental services.
5. Review the appropriateness of volumes for low-income dental treatment (outpatient visits – Hospital Dental Service)
6. Actively pursue opportunities to assist with the development of Maori and Pacific providers, this includes both oral health promotion, education and information.

Information Systems

7. Undertake an Oral Health Survey of the Canterbury District.
8. Provide information collection systems for provider arm services.

Provider arm services

9. Support the recommendations of the School Dental Clinic review. Consider these when planning community and school dental service delivery.
10. Establish a regular asset purchasing and maintenance program for provider arm equipment and facilities.
11. Review and streamline contract issues for the Hospital Dental Service/School and Community Dental Service.
12. Support training for Special Needs Dentistry.

Service Integration

13. Integration initiatives: work to ensure that oral health service development takes place within an integration approach to build capability and capacity across the oral health sector.

These recommendations are made independent of the issue of fluoridation discussed in Part A of the Oral Health Strategy. Financial implications for these recommendations can be found at the conclusion of Section 6 of this document. Once this strategy (Part A and Part B) are adopted by the CDHB Board, a detailed action plan will be implemented. Key actions and responsibilities are covered in section 6.

2 Introduction

The Canterbury District Health Board identifies Oral Health as one of a number of ongoing areas for focus in its strategic plan (October 2002). It is the one of the 13 Health priorities in the New Zealand Health Strategy, and forms an integral part of the Maori Health Strategy.

This plan was developed in consultation with an Oral Health group and stakeholders (listed in appendix 1) in the wider community and outlines the current status of Oral Health and Oral Health care in the Canterbury district. It defines specific actions, which will assist with the improvement of the oral health of the Canterbury population. This plan is cognisant of other CDHB plans/actions in the areas of children, maori, pacific people and older persons. Poor oral health/teeth is common in people who face inequalities in health status for a range of reasons. In line with CDHB policy for planning service development the equity lens (appendix 2) has been applied to this plan.

3 Oral Disease

3.1 Dental Decay

Dental decay involves the demineralisation and breakdown of calcified tooth tissue. When severe the result can be pain and infection with the eventual loss of vitality of the tooth and abscess formation. The major cause of decay is the consumption of sugars in the presence of certain bacteria. Reduced consumption of sugars in food and drink, and resistance induced by fluoride are factors, which counter the development of decay, especially in its early stages when the process is reversible. Tooth erosion is becoming more prevalent and may be related to a high intake of acidic food and drinks. It is now clear that higher levels of dental decay occur in a small proportion of the population, often in the children of socially disadvantaged families.

Elderly people suffer an increased risk of dental decay if their general health worsens. Many drugs commonly prescribed for elderly individuals have a side effect of causing a dry mouth. When there is reduced salivary function, the concentration of acid produced by bacteria on the teeth rises, increasing the risk of decay. Elderly people in poor health may change their diets to include a greater proportion of processed foods usually containing sugar that further increases the risk. Lack of effective toothbrushing because of physical or mental disability compounds the problem

3.2 Gum Disease

Gum disease, technically known as periodontal disease, not only affects the gums but also affects the tissue supporting the teeth, including the bone and the periodontal ligament, which attaches the roots of the teeth to the bone. The early stages of inflammation and bleeding of the gums may eventually lead to a loosening of teeth. Being a cumulative condition, gum disease tends to become more severe and more prevalent with increasing age. It is a major cause of tooth loss amongst older adults. For most people the destructive process progresses slowly and is amenable to stabilising treatment. However it is difficult to identify which individuals will suffer from an aggressive form of gum disease. Resistance to gum disease may vary between individuals but its prime cause is bacterial dental plaque. Tobacco smoking is associated with rapid progression and increased severity of gum disease.

3.3 Oral Cancer

The incidence of oral cancer peaked in the 1980s, and has declined slightly since then, although the number of cases per year is increasing due to population growth. Unfortunately, early oral cancer gives rise to few symptoms and the disease is often well-advanced before diagnosis. The risk of oral cancer is increased significantly by smoking and by high alcohol consumption. As with other cancers in the head and neck area, the incidence increases with age.

3.4 Malocclusion and congenital problems

There are a number of severe, relatively rare, developmental conditions such as clefts of the lip and/or palate (0.3% of the population). More frequently, malocclusion results from faulty development of the teeth and jaws, missing teeth (hypodontia),

tooth loss or accident. The most complex orthodontic cases may also require surgical/restorative treatment by plastic and oral and maxillofacial surgeons and other dental specialists. Specialist orthodontists working in private practice normally treat less complex cases.

3.5 Oral/facial trauma

Although the incidence of damage to the face and jaws has decreased with the introduction of compulsory wearing of seat belts in cars, interpersonal violence has increased. A retrospective survey was completed at Waikato base hospital reviewed data collected over the period 1988 to 1997. A total of 2553 facial fractures were processed, with an apparent decline in trauma caused by road traffic crashes but a concomitant increase in the injuries arising from interpersonal violence.

The Hospital Dental Service in Christchurch has treated the following numbers of facial fractures:

Year:	Number:
2001	226
2002	228
2003 (YTD)	56

4 Oral Health and Oral Health Care in Canterbury

4.1 The NZHS and toolkit

The New Zealand Health Strategy identifies thirteen population health objectives (appendix 3) for focus in the short to medium term. These health objectives are interlinked. Oral Health is no exception; for example, improved nutrition involving a reduction in consumption of foods high in sugar among children assists in a decrease in dental decay in this group.

Groups for focus within this plan have been identified using the Ministry of Health DHB toolkit 'Improve Oral Health' and the CDHB needs assessment. The groups are:

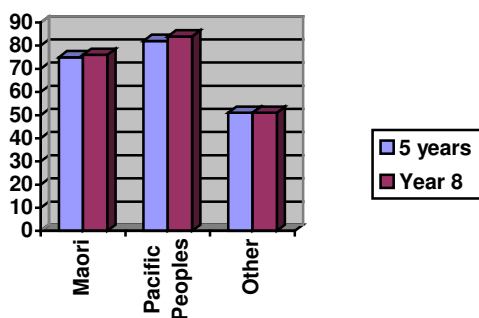
- Preschool children
- Adolescents
- Maori
- Pacific peoples
- People from lower socioeconomic groups
- People with psychiatric or intellectual disabilities
- New migrants
- Elderly people

4.2 Needs assessment

CDHB completed a preliminary needs assessment for the Canterbury district in October 2001 that fed into the CDHB's Strategic Plan. The CDHB will continue to develop and update the Health Needs Assessment with a full assessment being completed in 2004.

Results of the 2001 Needs Assessment indicate that there are significant inequities in the status of Oral Health across different ethnic and age groups and differing socioeconomic environments. These include;

4.2.1 Children



Percentage of children in each ethnic group with fillings

75% of Maori and 84% of Pacific Peoples children have fillings (at age 12) whereas only 51% of 12 year olds of other ethnicities have fillings. Recent data suggests that Asian children are emerging as a group with a significant amount of dental decay.

4.2.2 Low income groups

Most treatment provided to low income adults is provided by:

- Community based dentists with funding coming from WINZ.
- The Emergency Dental Services Contract.
- Out of the patients own pocket.

The Hospital Dental Service provides some treatment as part of the outpatient contract. WINZ provides a non-recoverable grant of \$300 annually, usually for the relief of pain and/or infection. Any other money available is on a recoverable basis. ACC funds treatment for accidents (but this often includes a substantial co-payment, even for children).

4.2.3 Maori and Pacific peoples

A diet high in sugar and low in nutritious food has been found to increase the rate of decay and especially effects these populations. For many, purchasing toothbrushes and fluoride toothpaste is not seen as a priority within the household budget. Discussion with Maori and Pacific Island communities identified common issues below relating to treatment of Oral Health problems. There are also concerns in 'drop offs' of adolescent attendance at dentists.

- Cost – due to severely limited resources, budgeting money for preventative treatment is not easy
- Transport – for many people getting to and from appointments is an additional cost and difficulty
- Attitude – many people feel uncomfortable and 'judged' by a health professional who may pass comment on the status of their health
- Access for mothers with many small children who need childcare to allow them to take one member of their family to the dental nurse
-

These communities describe their experience of health services as a 'silo' approach and comment on the consequent number of health professionals who may become involved in their and their family's healthcare. A 'holistic' community based approach to both education and treatment for the patient and family was identified as giving the health professional the 'best chance' of having a positive result.

4.2.4 Refugee and migrant communities

In addition to issues of cost, transport and attitude, refugee and migrant populations face additional barriers to treatment due to language difficulties. Interpreter services are not always available for all health professionals. Communication difficulties exacerbate an already stressful situation. Most refugees derive their income and support for dental care from WINZ benefits.

4.2.5 Mental Health and Intellectually Disabled consumers

Patients with mental health/intellectual disability problems experience similar difficulties to those groups described above. Cost of treatment and self-esteem issues make visits other than for emergency treatment an irregular occurrence. In addition, the persons presentation may mean that community dentists are unwilling to provide treatment so the only service option is the Hospital Dental Service.

Some people with an intellectual disability have been ‘grandparented’; those who reside in CDHB provider arm managed services have access to dental services provided by the Hospital Dental Service at the Hillmorton site. This is a minority of the Intellectually Disabled community, clarification of DSS responsibilities for this patient group is needed

Consumers who reside in CDHB mental health and intellectual disability services for a period of time receive annual check ups as part of the contracted outpatient volumes for the Hospital Dental Service.

4.2.6 Older Persons

An increasing number of older people are retaining their natural teeth with a consequent increase in complexity of oral care requirements for this group. People are also living longer. Historically older New Zealanders had none of their own teeth, and dental problems largely revolved around denture problems. Old teeth carry a lifetime's burden of accumulated deterioration, and when the ability of an older person to carry out tasks like tooth cleaning is compromised through illness or disability, deterioration in their oral health can be rapid. Further problems can occur when financial and mobility constraints decrease to access to dental care.

At present we do not have a clear picture of the oral health status and needs of the 65 and over population in Canterbury. The staff of the Hospital Dental Service have recently surveyed the oral health status and oral treatment needs of dependent older persons in Christchurch and are currently reviewing their findings. Dental care in resthomes is provided on demand and some homes have sought education sessions from Hospital Dental Service and the School and Community team for their staff in recent years.

4.2.7 Adolescents

Most dentists in the Canterbury district provide care to adolescents under either the General Dental Benefit or the Adolescent Oral Health Agreement. Enrolment occurs as they move from Year 8 (about age12) to Year 9 and is facilitated by the School & Community Dental Service. Current enrolment rates, at Year 9, are approximately 94%. This falls as adolescents reach year 10 and continues to decline each year.

Recent innovations in this area have been the development of a specification and contract for a Regional Co-ordination Service for Adolescent Oral Health. This requires the development of a comprehensive plan to improve uptake of services. Otago DHB is the lead provider for this contract and has appointed a coordinator to undertake this work. The School and Community Dental Service have been participating in the development of this plan which will be presented to the Otago DHB in the near future.

4.2.8 Promotion/prevention

Promotion of the Oral Health message currently occurs in a variety of settings, including General Practitioners' surgeries, Plunket Nurse visits, and within the school health education setting. Evidence of this work is seen in the increased rate of enrolment in the School Dental Service of pre-school children.

There is a focus on enrolling 'high-risk' pre-school children (prior to 2nd birthday). The School & Community Dental Service has done some education work with GPs to assist with identification of this group however the reality is that targeting 'at risk' children is difficult, and all children need to be enrolled (and attend) to ensure that the high-risk group is identified early on.

The current method of service delivery for children and adolescents (once enrolment is achieved) requires little initiative or taking of responsibility from the patient or family. The school dental therapist recalls the child on a regular basis and the community dentist sends an appointment regularly to the adolescent. This process, while effective for those age groups does not always engender the self-responsibility required at a later age to maintain preventative visits.

All concerned acknowledge that maintenance of oral health is not a priority for groups within our population once they reach 18 years of age and are no longer eligible for subsidised dental care. There are many reasons for this, commonly cited are:

- Cost – costs of annual check-ups and treatment are perceived as being too high to manage as an out-of-pocket expense
- Lack of understanding of the benefits of good Oral Health
- Reluctance to undergo what are perceived as unpleasant procedures when symptoms are not present

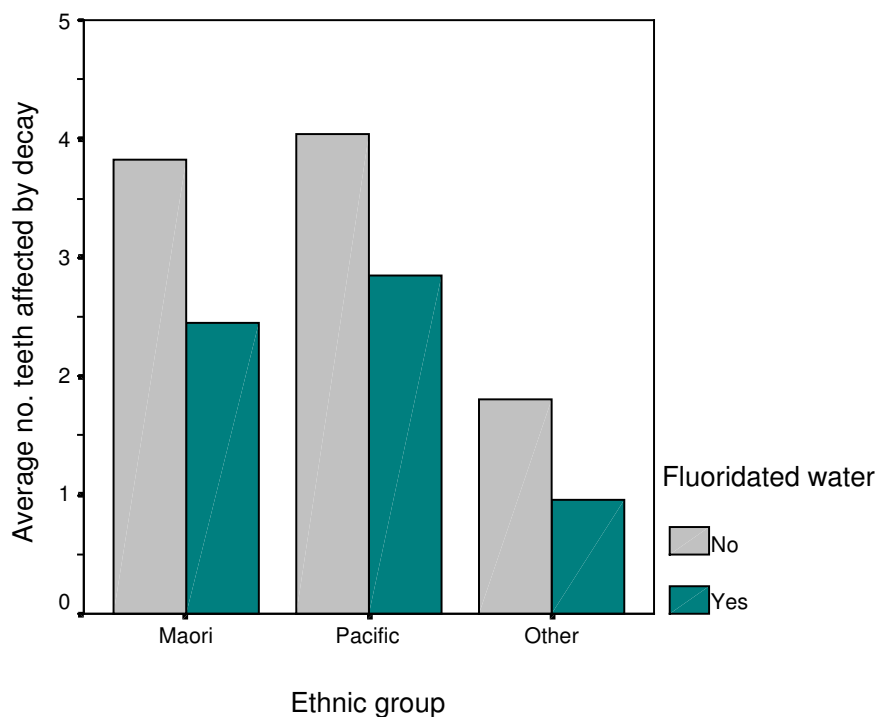
4.3 Fluoridation

Burnham Military Camp and Methven are the only communities in the district receiving a fluoridated water supply. Due to the transient nature of the population and small size of these communities, accurate and meaningful comparisons of the oral health of these communities with the rest of Canterbury are not able to be carried out.

Water fluoridation is internationally recognised as one of the major contributors to the prevention of dental disease. Evidence confirms that there are higher rates of dental disease in areas where water is not fluoridated. The Ministry of Health recognises the benefits for communities of fluoridated water and encourages the uptake of this treatment. Every Oral Health professional spoken to in the development of this plan identified fluoridation of water as the single most effective action that would improve the oral health of the population.

Preliminary results from a recent study comparing decay rates between Canterbury children and those in Wellington (which has mostly fluoridated water supplies) indicates that there are 30% fewer lesions in the teeth of Wellington children.

Five year old children from Canterbury and Wellington, 1996*



NB: *96% of Wellington children received fluoridated water compared to less than 4% of Canterbury children

The Ashburton District Council ceased fluoridating Ashburton's water supply in 2002, and the Christchurch City Council has decided not to fluoridate the city's water supply or revisit this decision in the foreseeable future. The Healthy Christchurch Project has a project team looking at options for targeting high risk children using other methods of improving oral health.

Further discussion regarding the issue of fluoridation is available in the accompanying paper.

4.4 Food and Nutrition

In addition to fluoridation, good eating habits are an effective method of assisting in the prevention of oral health problems. A high intake of convenience foods and drinks containing large amounts of sugar has resulted in significant amounts of dental decay in young children. While programs are in place to educate the population regarding healthy eating choices, there remains considerable work to be done to influence the current 'fast food' culture.

4.5 Research

Information regarding the current state of Oral Health in the New Zealand population is derived from a study for which the fieldwork was completed in 1988. The population age groups for the study were 12-13 yrs, 35-44 yrs, and 65-74 yrs. There

has not been any significant research undertaken since then to provide up-to-date data on the state of adult teeth either within the Canterbury district or nationally.

Staff from the School & Community Dental Service are presently actively involved in research within the Pacific Island community that aims to:

- Increase the understanding of the microbiological basis for dental caries.
- Evaluate the effectiveness of several methods for dental caries prevention in young children.

The ultimate goal of this research is to reduce the cost of providing dental services to children by providing more effective preventative treatment to those that need it.

Treatment provided to nine adults (8 Island born) as part of this research has shown that while 7 have no tooth decay, 2 have a moderate number of decayed teeth, 8 have periodontal disease. Periodontal disease is progressive, leads to tooth loss, is possibly associated with atherosclerosis and may complicate management of diabetes. Treatment is time consuming and requires ongoing follow-up, it does not fit into current criteria for 'emergency dental assistance'.

The Hospital Dental Service has undertaken a study to determine the dental needs of dependant older persons. This study will provide information on the current state of Oral Health within this population and assist with effective planning.

4.6 Services

Oral health care is delivered by a number of providers. School Dental Services, General Dental Practitioners and the Hospital Dental Service provide publicly funded care.

Community and Public Health

Community and Public Health aims to improve the health of people in Canterbury by working with populations.

Oral Health is inherent in the work of the Nutrition and Physical Activity Team at Community and Public Health. This team use a range of health promotion strategies (based on the Ottawa Charter) including working on healthy public policy, supporting community development and healthy environments and improving the personal skills of the community. For example they work with schools to improve the food served in the school canteen and develop resources to support the schools Health and Physical Education curriculum. Strengthening the links between the CDHB Oral Health Services and the Community and Public Health team would ensure continued focus on oral health promotion within promotional work.

Community and Public Health are also involved (with School and Community Dental Service) in facilitating Needs Assessments and Oral Health Education resources.

School Dental Service

The School and Community Dental Service provides the following school based dental services in CDHB and also for South Canterbury:

- Free basic dental care to enrolled pre-school, primary and intermediate school children.
- Dental Therapists act as a resource to organisations such as schools and pre-school groups for dental health education.
- A 'safety net' service is offered to high school students not enrolled with general dental practitioners in the General Dental Benefit Scheme (GDB).

The following CDHB contracts are also managed by the School and Community Dental Service:

- Sedation program.
- Emergency Dental Treatment.

Enrolment rates for the service are as follows:

- Pre-schoolers - 17 537 children (December 2002).
- School age - 54 429 children (December 2002).

The School and Community Dental Service currently operate from 162 clinic sites within the school environment. Provision and maintenance of facilities and equipment is difficult. Currently the buildings are provided and maintained from Vote: Education while the equipment and staff are supplied from Vote: Health. This has left the decision-making regarding clinic maintenance up to individual school boards of trustees with a resulting variation in standards.

While some new equipment has been purchased, a large proportion of equipment requires upgrading (eg. most sterilising equipment does not have a drying cycle, which is required for wrapped items). Developments in the requirements for health and safety and infection control have identified deficiencies in the current equipment, size and layout of aging school dental clinics.

The Ministry of Health has produced a framework to assist DHBs to review School Dental Clinics. An initial report (with recommendations) has been submitted to the Ministry of Health for consideration. It is anticipated that the framework will be signed off by the Minister of Health and presented to DHBs in October 2003. It will recommend ways to deal with the issue of old and inadequate buildings. And is expected to recommend that each DHB examine the viability of the current method of service delivery (i.e. clinics in many schools) given the cost of upgrading and maintaining facilities that comply with current standards. The School and Community Dental Service is currently planning to undertake an assessment of facilities in accordance with these guidelines.

Dental therapists, who are trained to deliver a limited number of services, provide care to children in schools, with more complex treatment being referred to General Dental Practitioners or the Hospital Dental Service.

General Dental Practitioners

General dental practitioners have a role in the provision of Public Dental Care in the following arenas:

- Special Dental Benefit work for 0 – 17 year olds.
- General Dental Benefit, 13 – 17 year olds.

- Adolescent Oral Health Agreement, 13 – 17 year olds.
- Emergency Dental Benefit, 18+ years.
- Low income.

A shortage of general dental practitioners willing to undertake this work nationally has resulted in a high workload for existing practitioners. This invariably leads to reluctance by these practitioners to take on new clients or those patients with special needs. These patients are generally referred on to the Hospital Dental Service.

Concerns regarding the risks involved in dentists administering general anaesthetics have resulted in a withdrawal of the provision of general anaesthetic services by all general dental practitioners but one, with a consequent increase in volumes for continuing service providers (Hospital Dental Service). This has happened progressively over the last few years.

Hospital Dental Service

The Hospital Dental Service has a small but clinically essential role in oral health care for the people of Canterbury. The service is located close to the Christchurch Hospital Campus and operates satellite clinics at Burwood and Hillmorton Hospitals. Services provided by the Hospital Dental Service are listed as follows:

- Inpatient and Outpatients from Christchurch Hospital, TPMH, Burwood and Hillmorton Hospitals.
- Special Needs Patients.
- Low income.
- Referrals for specialist treatment.
- Relief of Pain.
- Emergency Service – on call for pain and trauma.
- Support service for children's dentistry.

The Hospital Dental Service treats over 25000 outpatients and approximately 2000 inpatients annually with 28 part-time dentists and dental specialists and 25 support staff. Waiting lists exist for specialist treatments, especially orthodontic services (eg. for cleft palate patients) and procedures under general anaesthetic. Orthodontic services currently have a waiting list of 26 months. Recruitment and retention of orthodontic practitioners is an ongoing issue. Limited availability of anaesthetic staff within the hospital leads to the frequent cancellation of general anaesthetic lists. For the year Jan- Dec 2002 18% of lists were cancelled due to shortage of anaesthetic staff. A reduction in provision of general anaesthetic services by general dental practitioners has also put pressure on the waiting list over recent years. This has been in response to changing standards for administering general anaesthetics. There is only one community dental provider in Christchurch who will administer general anaesthetic to patients.

The Hospital Dental Service has become the default provider of a number of services (eg. General Anaesthetics and Special Needs Dentistry) due to an increasing reluctance by general dental practitioners to manage clients with these needs. (Special Needs Dentistry is the part of dentistry concerned with the oral health of people adversely affected by intellectual disability, medical, physical or psychiatric issues.)

Some time is spent completing work for clients accessing WINZ emergency services payments (for emergency dental care) as the service is perceived by WINZ and their customers to be significantly cheaper than general dental practitioners.

The Service also provides specialised support to other medical services including sleep apnoea diagnosis and appliances and advice regarding management of facial pain. Over a number of years they have developed considerable expertise in the area of prosthetic eye manufacture. This service is not available elsewhere in Canterbury and the Hospital Dental Service does not directly receive any funding to support this service (currently 0.5 fte technician).

A recent move into a new facility has highlighted issues relating to the equipment used. Some equipment is obsolete, unable to be serviced and no longer supports the requirements of a specialised service. Technological advances have resulted in the development of certain items that will provide a more cost-effective service to patients. Capital expenditure is required to upgrade equipment to meet the needs of modern dentistry and best practice guidelines.

Special Needs Dentistry is a highly specialised area and issues of recruitment and training are significant. As with other areas of medicine, a shortage of dentists, especially those wishing to practice in a 'public' setting is becoming critical and care needs to be taken to ensure that the Hospital Dental Service remains an up to date and well equipped facility to attract staff. In order to define requirements for implementation of an information system and identify service issues, the Hospital Dental Service is working with the Information Systems and Processes Team to complete a Service Provision Framework which will define processes, criteria and gaps.

The Clinical Director and Practice Manager for this service have written a document outlining their most significant concerns, which is attached (appendix 4) and outlines their volumes and issues with 7 contracts for service.

4.7 Information Systems

The School & Community Dental Service has focused on information collection and as a result have robust data on the treatment rates for 5 – 12 year olds in Canterbury. Use of a purpose developed software package and handheld 'PSION Series 3' computers (from 1995) has enabled those working remotely to contribute to this data collection. The hardware used is now obsolete and the system requires replacement.

The Hospital Dental Service does not have a computerised information system. The department currently uses a paper based diary and filing system to manage the workload of 28 dentists' (16.3 fte) which results in a significant amount of work for the support staff. In addition to this, identification of ACC claimants, and data relating to volumes and patient profiles, allowing efficient reporting and service planning, is difficult to obtain and verify.

Graduates of dental schools are well trained in and expect to have access to a computerised booking system and patient record in the treatment room. Process improvement and improved service delivery information for planning would be

tangible benefits of a computerised information system. A CAPEX request for introduction of an information system has been approved in principle for the 03/04 year.

4.8 Funding

Dental services are purchased by private individuals or through Public Health, Work and Income New Zealand or the Accident Compensation Corporation.

The table below outlines the treatment available, public funding sources and care providers for each age group of the population (excluding CDHB contracted services).

Age range	Target group:	Funding available:	Care provided by:
2 - 12	Children – preventative and basic treatments	Contract – School & Community Dental Service	School & Community Dental Service
2 - 12	Children – complex and emergency treatments	Special Dental Benefit (Sec 88)	General Dental Practitioner/ Hospital Dental Service
13 - 17	Adolescents - enrolment	Regional co-ordination scheme	Regional co-ordination scheme
13 – 17	Adolescents – prevention and restorative	General Dental Benefit (Sec 88)	General Dental Practitioner, Hospital Dental Service
13 –17	Adolescents – prevention and restorative	Adolescent Oral Health Agreement	General Dental Practitioner
18 +	Adults on low income – urgent Care	Emergency Dental Services Benefit	General Dental Practitioner (limited number), Hospital Dental Service
18 +	Adults on low income and their families – urgent Care	Special Needs Grant – WINZ	General Dental Practitioners, Hospital Dental Service
18 + (Low income)	Adults on low income – treatment	Outpatient attendances	Hospital Dental Service
18 +	Adults – range of services	No public funding	General Dental Practitioner

Total CDHB funded care is contracted for the 02/-3 year as follows:

Service	Contract value
Ashburton Hospital	\$ 12 011
Hospital Dental Service	\$ 3 885 760
School and Community Dental Service	\$ 5 788 511
TOTAL	\$ 9 686 382

4.9 Workforce

Dental Assistants

Dental assistants work alongside dental therapists and dentists and assist with procedures and administrative work. The supply of suitable persons for these positions is adequate. Training is available via a Dental Surgery Assistant Course held annually at Christchurch Polytechnic. The School and Community Dental Service provides on-the-job training and support to attend this course.

Dental Therapists

As already noted a national shortage of dental therapists and difficulties attracting new trainees exists. The number of dental therapists has dropped from 900 (in 1990) to approximately 550 in 2001. There are currently 62 dental therapists in the Canterbury region. Maintaining the current therapist workforce numbers will be a challenge as many reach retirement in the next 10-15 years. Dental Therapy training is offered in Auckland and Otago and will shortly be offered as a three year degree program instead of a two year diploma.

The passing of the Health Professionals Competency Assurance Act (HPCAA) will give registration to dental therapists. It may bring opportunities for them to move into independent practice. It may also increase the scope of services that dental therapists are currently providing (care to other age groups) and potentially the attractiveness of this profession.

Dentists

As with other Medical Staff, dentistry is suffering from an international shortage of professionals. Anecdotal evidence suggests that some years ago graduates of the Otago Dental School went on to practice in New Zealand whereas now most graduates move overseas to work. The high cost of training is seen as one significant barrier to recruitment into the profession by New Zealand residents. The Bachelor of Dental Science is a five-year program offered only at the University of Otago in Dunedin.

Special Needs Dentistry

The Royal Australasian College of Dental Surgeons has recently announced that it is offering an examination for Fellowship in Special Needs Dentistry. There is an opportunity to establish a training program in Christchurch for this specialist stream. There is currently no training program in the country for this specialty.

5 Drivers for change/ incentives for improvement

Reducing the rate of decay and improving the attitude of the community towards maintaining good oral health are the critical actions required to improve oral health, as well as child health, the health of the elderly and other groups in the CDHB community. Changes in tooth decay rates can be seen within 2 years of concerted effort.

Key drivers for change in the CDHB in the next 5 years are:

- Population projections:
 - There has been an increase in the number of pre-school children enrolled in the School & Community Dental Service as a result of their pre-school access program. Approximately 65% of the 1-4 year olds inclusive are enrolled with the service. Planning is under way to improve this figure.
 - An increase in the elderly population, and an increase in the proportion of elderly who will retain some their natural teeth, will increase service demand.
- Review of School Dental Clinic Stock provides support to impetus for review of service delivery and improve service integration.
- Changes to the Adolescent Dental funding scheme.
- Increased focus on Health Promotion with Community Nutrition and Healthy Schools Programs.
- Changing Government regulations and requirements, and professional standards impact on patient safety with regard to anaesthetics and sedation.
- Increased accountability and audit requirements impact on compliance, administrative and clinical costs.
- Changing profile of hospital patients with increased special needs patients. There is a need to ensure suitably qualified staff are recruited.

The Public Health Strategy discusses the need to address inequities in health status of specific groups within the population. Traditional funding and service delivery methods (both public and personal) reach some of the population. CDHB is required to ensure that strategies include appropriate service provision to specific groups. These groups are:

- Preschool children.
- Adolescents.
- Maori.
- Pacific peoples.
- People from lower socioeconomic groups.
- People with psychiatric or intellectual disabilities.
- New migrants.
- Elderly people.

In order to achieve an 'Improvement in Oral Health' in the Canterbury community we need to increase the focus on prevention and provide targeted treatment services. Key actions to achieve this focus are outlined under the following headings;

- Prevention/health promotion: Ensuring that Oral Health promotion is included with all public health initiatives relating to nutrition. CDHB develops a

position on water fluoridation and undertakes the National Health Foundation workplace challenge.

- Groups with identified need:
 - Support recommendations of the dental clinic review.
 - Support the Regional adolescent promotion plan.
 - Ensure that oral health promotion messages are delivered by relevant health services within existing networks in the Maori, Pacific and refugee communities.
 - Continue to develop relationships with community groups, PHOs and other health providers and work with them to identify and plan to address the needs in their community.
- Information: Work to ensure that provider arm services are supported by robust information systems and adequate data/information is available to plan.
- CDHB Provider Arm services: Ensure that facilities are equipped and maintained to an appropriate standard.
- Workforce: Support work alongside education providers to recruit and train oral health professionals. Support training for Special Needs Dentistry in Canterbury.
- Continue to research and work to identify the groups most at risk of oral health problems.

6 Recommendations and Action plan

In summary the following recommendations are made:

Recommendation	Cost	Responsibility
<p>Promotion/Prevention</p> <p>1. Oral health promotion initiatives are included in existing networks (including food and nutrition activities) to build awareness. All initiatives to be consistent with National and District Maori Health Strategies.</p>	<p>Nil – incorporate into existing service specifications</p>	<p>Planning and Funding Division</p>
<p>2. The CDHB adopts:</p> <ul style="list-style-type: none"> • The National Heart Foundation ‘Heartbeat Challenge’ in support of its ‘Healthy Hospitals’ initiative on: <ul style="list-style-type: none"> - Smoking (Smokefree sites by Dec 04). - Nutrition. - Physical Activity. • Policy on provision of drink and snack vending machines and how these relate to oral health care in hospitals. 	<p>Nil direct for <u>smoke free</u>– can be rolled into current smokefree policy development. <u>Nutrition</u> may require some alterations to current food service contracts which can be achieved on contract renewal. Some <u>physical activity</u> initiatives are in place – promotion of these can be achieved through existing communication channels</p>	<p>Community and Public Health</p>
<p>Groups with identified need</p> <p>3. Work to determine the oral health needs of older people, develop a plan to address needs identified as part of the LinkAGE framework and consider implementing the findings of the dependant elderly survey.</p>	<p>Recommendations will be developed as part of the current survey work. Funding for implementation needs determined and agreed as part of the LinkAGE project</p>	<p>Clinical Director, Hospital Dental Service</p>
<p>4. Await delivery of Adolescent Regional Co-ordination plan and support implementation. This service will address concerns regarding Maori and Pacific adolescent’s utilisation of dental services.</p>	<p>Nil – any cost incurred to implement that plan will be part of that contract.</p>	<p>Planning & Funding division</p>
<p>5. Review the appropriateness of volumes for low-income dental treatment (outpatient visits – Hospital Dental Service).</p>	<p>Nil cost to review. Review must be based on completed survey (5)</p>	<p>Planning & Funding Division</p>
<p>6. Actively pursue opportunities to assist with the development of Maori and Pacific providers, this includes both Oral Health promotion. Education and information.</p>	<p>Nil – can be provided within existing resources.</p>	<p>Planning and Funding Team and Oral Health Services.</p>

Recommendation	Cost	Responsibility
Information systems 7. Undertake an Oral Health Survey of the Canterbury District.	Requires further definition during development of project plan.	Clinical Directors – School & Community Dental Service and Hospital Dental Service
8. The CDHB commits to provide information collection systems for provider arm services.	CAPEX cost to provider arm (application approved in principle for 03/04) \$150K for software	CIO
Provider arm services 9. Support the recommendations of the School Dental Clinic review. Consider these when planning community and school dental service delivery.	This recommendation relates to support of that process. Requires cost determination and approval as part of the review process.	Manager, School & Community Dental Service
10. Establish a regular asset purchasing and maintenance program for provider arm equipment and facilities.	Operational cost to provider arm – asset management processes should be existing	Provider arm
11. Review and streamline contract issues for the Hospital Dental Service/School and Community Dental Service.	Nil – as part of the contract renegotiation process	Planning and Funding Division
12. The CDHB supports training for Special Needs Dentistry.	Nil - CTA has agreed to fund	CTA
Service integration 13. Integration initiatives: work to ensure that oral health service development takes place within an integration approach to build capability and capacity across the oral health sector.	Nil – can be included in existing work practice	Manager, Community and Public Health, School & Community Dental Service and Hospital Dental Service

Detailed action plan.

Issue/Action	Recommended Action/s	Rationale for action	Completion date/ Performance measure
FOR ALL ACTIONS			
	<ul style="list-style-type: none"> Measure effectiveness of actions. Forecast impact on future service needs and resources 		
6.1 PROMOTION/PREVENTION			
Fluoride <ul style="list-style-type: none"> Most water supplies in Canterbury are not fluoridated 	<ul style="list-style-type: none"> The Board of CDHB develop a position on water fluoridation Continue to work with the Healthy Christchurch project to look at interim alternatives to water fluoridation 	<ul style="list-style-type: none"> Water fluoridation is the single most effective tool for the prevention of tooth decay within a population. MOH statement of support for fluoridation 	Oct 03 - CDHB fluoridation position statement developed and implemented

Issue/Action	Recommended Action/s	Rationale for action	Completion date/ Performance measure
	<ul style="list-style-type: none"> Work with health educators and local government to educate communities about the benefits to teeth from drinking fluoridated water or taking fluoride tablets. 		
<ul style="list-style-type: none"> Education is required regarding the importance of twice daily brushing with fluoride toothpaste 	<ul style="list-style-type: none"> Reinforce Oral Health education in community health education initiatives <ul style="list-style-type: none"> Public Health Nurse Maori Primary Care nurse Pacific Primary Care Nurse Dental Assistants Well child providers General practice teams Work with schools to ensure that Oral Health education is included in the relevant curriculums eg Health, Science 	<ul style="list-style-type: none"> Encourages application of fluoride Oral Health education is effective when owned and supported in the community 	Ongoing - 100% community health initiatives include oral health education
<p>Food and Nutrition</p> <ul style="list-style-type: none"> Need to raise the profile of Oral Health within the context of improving eating habits CDHB can lead by example (adopt the Heartbeat Challenge Program) 	<ul style="list-style-type: none"> Ensure that the Oral Health Service participates in the development of environmental strategies ie. Community and Public Health activities CDHB develop policies on Nutrition, Physical Activity and Smoking as per the Heartbeat challenge program CDHB develop policies and procedures to address the environmental issues within the provider arm eg oral health care for inpatients, food and drink vending machines 	<ul style="list-style-type: none"> Includes Oral health in healthy lifestyle messages Displays CDHB commitment to supporting the health and wellbeing of staff 	<p>Ongoing - evidence of participation in development</p> <p>Dec 03 – NB: Smokefree plan due June 03</p>

Issue/Action	Recommended Action/s	Rationale for action	Completion date/ Performance measure
Promotion <ul style="list-style-type: none"> Limited understanding of the importance of maintaining good Oral Health 	<ul style="list-style-type: none"> Ensure that Oral Health information is included in other strategies Ensure that Oral Health services have input into the development of all Community and Public Health promotion and prevention programs 	<ul style="list-style-type: none"> Raising the profile will support the development of the prevention culture especially within priority groups. 	Ongoing - Reporting unit in Community and Public Health agreement with Ministry of Health
<ul style="list-style-type: none"> Promote government contracts offering subsidised dental treatment to general dental practitioners eg low-income, sedation 	<ul style="list-style-type: none"> Education for general dental practitioners on available contracts 	<ul style="list-style-type: none"> Increase uptake by general dental practitioners so availability of dental services is increased. 	
6.2 GROUPS WITH IDENTIFIED NEED			
Children (0-12) <ul style="list-style-type: none"> Increase the percentage of enrolments of pre-school age children 	<ul style="list-style-type: none"> Continue the registration program through General Practice and other well child providers Continue education sessions for Practice Nurses Support the Lift the Lip program Continue 0800 Tiny Teeth Service 	<ul style="list-style-type: none"> In the absence of a Child Health register, GPs/ well child providers facilitate registration into the service by 2 years of age 	June 04 - Increase numbers and evident reduction in average number of cavities in 2-5 year olds
Adolescents (13-17 yrs) <ul style="list-style-type: none"> Enrolment rates and input on the Adolescent Oral Health Scheme 	<ul style="list-style-type: none"> Await development and implementation of Regional Co-ordination plan expected 2003 Support health promotion messages 	<ul style="list-style-type: none"> This contract (held by Otago as lead DHB) is designed to address issues identified with provision of Oral Health care for Adolescents. 	Regional co-ordination plan developed Regional co-ordination plan implemented
Older People	<ul style="list-style-type: none"> Continue to determine the oral health status and needs of Canterbury older people Consider the findings of the dependant elderly survey, and designing delivery systems to meet their needs Work with the LinkAGE project team 		

Issue/Action	Recommended Action/s	Rationale for action	Completion date/ Performance measure
	and the School and Community Dental service to ensure opportunities for an integrated approach are utilised		
Maori & Pacific peoples <ul style="list-style-type: none"> • Affordability of treatment (preventative and restorative). 	<ul style="list-style-type: none"> • Review appropriateness of volumes for low income dental treatment following Oral Health Survey • Work with providers and communities to establish the Oral health status of their population and undertake oral health promotion activities • Support initiatives for dental services that better meet the needs of Maori and Pacific peoples. • Develop relationships between WINZ and CDHB to develop and align policies to ensure consistent application and access to assistance. • Review Emergency Low-income dental scheme. • Forecast impact on service/resources 	<ul style="list-style-type: none"> • Limited assistance is available for relief of pain and infection – patients need to be supported to seek review of oral status prior to onset of pain or infection • Provides some relief of pressure on the Hospital Dental Service • Ensure service is responsive to the needs of Maori and Pacific people. 	<p>Dec 04 – implemented outcomes of the Oral Health Survey.</p> <p>Dec 04</p>
<ul style="list-style-type: none"> • Access • Multiple health workers working on specific issues 	<ul style="list-style-type: none"> • Investigate additional points of access for target groups • Incorporate oral health education into existing delivery networks using Maori/Pacific Peoples workers especially 	<ul style="list-style-type: none"> • Takes place in a familiar environment, improves attendance, reduces cost barrier • Provides a more acceptable and holistic approach to the community 	<p>Dec 04</p> <p>Dec 03 - 100% identified health education streams incorporate oral health education</p>
Low income groups <ul style="list-style-type: none"> • Prohibitive cost 	<ul style="list-style-type: none"> • See above (Maori and Pacific peoples) 		

Issue/Action	Recommended Action/s	Rationale for action	Completion date/ Performance measure
6.3 INFORMATION SYSTEMS			
<ul style="list-style-type: none"> • Risk to current data collection for 5 – 12 year olds (School and Community Dental Service) • Hospital Dental Service manual booking and record systems • Current research 	<ul style="list-style-type: none"> • Business case to CDHB (submitted) • Business case for computerisation of systems to CDHB • Completion of Service Provision Framework project to provide structure for implementation • Act on outcome of current research initiatives regarding Pacific Island Communities and Elderly patients in residential care • Undertake an Oral Health Survey for the Canterbury District – consider using summer studentship 	<ul style="list-style-type: none"> • Quality Assurance • Best practice • Supports process improvement, service efficiency, quality assurance and planning • Accurate data collection regarding patient profiles, service activity and funding source • Will provide information for future service development and health promotion • Will obtain information on the current status of adult teeth, which groups have significant problems, utilisation of services and barriers to access • Contribute to 2004 needs analysis 	July 04
6.4 PROVIDER ARM SERVICES			
<p>Service Delivery</p> <ul style="list-style-type: none"> • Increasing demand on all aspects of Hospital and Dental Services 	<ul style="list-style-type: none"> • Incorporate service delivery review into completion of Service Provision Framework and contract review (outlined below). 	<ul style="list-style-type: none"> • Identifies areas for process improvement and suggests service delivery options to manage demand for services 	July 04
<ul style="list-style-type: none"> • School and Community service structure: planned review in response to issues regarding buildings, equipment and workforce 	<ul style="list-style-type: none"> • Await formal presentation of dental clinic review then commence service delivery review 	<ul style="list-style-type: none"> • Some preliminary work has been done around possible future service configuration – further development 	Oct 03 – Ministry of Health delivers review of school dental clinics to DHBs

Issue/Action	Recommended Action/s	Rationale for action	Completion date/ Performance measure
<ul style="list-style-type: none"> Issues relating to the age and standard of school clinic buildings and equipment available for use 	<ul style="list-style-type: none"> Await outcome of the review of dental clinics regarding buildings Support School and Community capital requests item relating to infection control, health and safety and information systems 	<p>awaits the outcome of the review of dental clinics</p> <ul style="list-style-type: none"> These investments are required to enable compliance with regulations and ensure availability of data for service planning 	
<p>Equipment</p> <ul style="list-style-type: none"> S & C requires upgrade of autoclaves and dental chairs Hospital Dental Service - upgrade of sterilisation process and various capital equipment requests Ageing equipment 	<ul style="list-style-type: none"> Support capital request using robust and transparent process Support capital request using robust and transparent process Implement regular asset maintenance and replacement program in Hospital Dental Service 	<ul style="list-style-type: none"> Required to meet infection control and Health & Safety requirements Ensures maintenance of current level of service and compliance with best practice guidelines, quality assurance Ensures equipment is maintained and 'current' 	<p>Dec 03 - Planned replacement program supported by CDHB</p> <p>Ongoing</p>
<p>Contracts</p> <ul style="list-style-type: none"> Suitability of funding provided to Hospital Dental Service given the complexity of cases and the 'secondary/tertiary nature of the service. 	<ul style="list-style-type: none"> Hospital Dental Service – review and negotiate contracts to ensure service requirements are met, contracts fiscally acceptable and fit with base contract <ul style="list-style-type: none"> Review Emergency Low-Income contract, uptake by patients and payment to cover provider arm. Review Dental Benefits, suitability of contract and Section 88 Adolescents contract Clarify DSS responsibilities for people with intellectual disability 	<ul style="list-style-type: none"> Ensure that level of funding matches requirements of a specialist service. 	<p>Commence Nov 03 - complete as part of 04/05 contract round</p>

Issue/Action	Recommended Action/s	Rationale for action	Completion date/ Performance measure
<p>Workforce</p> <ul style="list-style-type: none"> No Special Needs Dentistry training in Canterbury or New Zealand Declining number of dental therapists Increasing number of pre-school enrolments 	<ul style="list-style-type: none"> Support development of hospital training program for Special Needs Dentistry qualification (Hospital Dental Service) Develop and implement a plan to support the professional development of existing staff <ul style="list-style-type: none"> work with the university to recruit suitable students – may need to consider incentives (eg scholarships) to training Review appropriate staff skill requirements for each vacant position and recruit accordingly – especially regarding numbers of Maori and Pacific staff Regularly review workforce numbers and skill mix to ensure appropriate resources. 	<ul style="list-style-type: none"> Specialist position, supports specialty nature of Hospital Dental Service. Aids recruitment and retention of appropriate staff. Encourages retention 	<p>Ongoing - Plan developed and implemented</p> <p>Ongoing</p>
SERVICE INTEGRATION			
<ul style="list-style-type: none"> Service integration 	<ul style="list-style-type: none"> Ensure School and Community and Hospital Dental Service are represented on each others review project steering groups 	<ul style="list-style-type: none"> Ensures integration and coordination of planning 	<p>Underway as part of several service reviews. Complete Contract Review November</p>