

A PROGRESSIVE
DENTAL HEALTH
POLICY 2011



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INTRODUCTION

There is a great and growing need in New Zealand for accessible and affordable, high quality dental care. The results of the 2009 New Zealand Oral Health Survey show 44% of New Zealanders are not receiving any form of dental care, a serious situation which is only likely to get worse. The survey also shows that while dental care for under 14 year olds has improved, it has significantly worsened for those over 18.

Obesity and diabetes are increasing, and both are linked to an increase in the incidence of dental health problems, thus increasing the overall demand on dental services. In addition, the number of people over 65 years of age still having some or all of their natural teeth is increasing markedly, and will increase further as the 'baby boomer' generation grows older. Dental problems among this group will tend to be complex and, therefore, costly.



WHAT IS THE PLAN?

Free dental care is currently available in New Zealand from birth to 18 years. This 'Progressive' policy proposes to extend free care over time and on an incremental basis, with the most vulnerable groups, including pregnant women and those aged over 65 years, being given priority. Next will be those aged between 18 and 28, then those between 28 and 50, followed by those between 50 and 65 years old.

Prevention should be the thrust of a good oral health policy. Ensuring that all people have access to dental care will have a powerful preventive effect, and this should be supported by education, publicity and the fluoridation of all drinking water (following, and if supported by, a parliamentary inquiry). There should also be a bonding scheme for dentists and dental hygienists who are prepared to work in rural/provincial areas where dental professionals are in short supply in return for writing off student debt over a three to five year period of service.

The cost of extending free dental care to all would be around \$1 billion a year at current prices. The funding could come from either a levy on income, similar to ACC levies, a reduction in the \$17.86 billion tax cuts given to the most affluent New Zealanders by the National-led government over 4 years (average of \$4.46 billion per year), a levy on sugary soft drinks (such as we have on tobacco or alcohol) because of their contribution to the forthcoming diabetes epidemic, or a mix of all of these possible sources of funds.

Good oral health must also be reinstated as a priority goal for public health.



LIST OF POLICY RECOMMENDATIONS

- **Extend, incrementally, the provision of free dental health care to the whole population**
- **Finance free dental care through an ACC type levy, a reduction in tax cuts (as described in “What is the Plan”), a levy on sugary soft drinks, or a mix of all these possible funding sources**
- **Administer the extended dental healthcare provision in the same way as the current free dental services for those aged between 0 and 18 years**
- **Publicise the need for proper dental hygiene and dental care by means of advertising across all media, and through the widespread distribution of educational material to doctors and dental surgeries, Plunket rooms and schools**
- **Reinstate the requirement that school cafeterias provide only healthy food**
- **Extend to dentists and dental hygienists the Voluntary Bonding Scheme now applying to doctors and other health workers who agree to work in rural areas or provincial centres which have a serious shortage of dentists (in return for write-offs of student loans)**
- **Hold a full parliamentary inquiry to determine whether drinking water supplies, nationally, should be fluoridated as a national dental health measure, and**
- **Reinstate good oral health as a priority target for public health policy.**

A. CURRENT DENTAL HEALTH POLICY

Public Provision

Children

The Government's existing oral health policy is that children from birth up to the day before their 18th birthday have universal access to a range of oral health services, including preventive care, oral health education, treatment of oral disease and the restoration of teeth, to assist in the maintenance of a functional natural set of teeth.

The current policy seeks to bring about an improvement in the oral health status of the population, reduce inequalities in oral health, and improve access to oral health services for those in greatest need.¹

The mechanics of this policy are as follows:

- Pre-school children (via their parents) are entitled to free dental treatment (including check-ups) and are encouraged to enrol with the School Dental Service (SDS).
- District Health Boards (DHBs) provide access to oral health services for children up to Year 8 of their schooling through the SDS. The SDS operates clinics and also has mobile units to visit schools (primary/intermediate), so that children (3-12) may have check-ups and treatment. The SDS enrolls children from age 2 ½, provided the parents arrange it.
- A worrying statistic is that 2,668 children under 5 years of age required dental procedures, including the removal of teeth under general or local anesthetic, at our public hospitals.²
- DHBs also fund oral services for adolescents from Year 8 (usually age 13) up to the day before the individual's 18th birthday through the Combined Dental Agreement. These services are provided by private dentists. It is, however, up to adolescents to enrol.
- Moreover, private dentists must agree to provide their services at the fees agreed upon.
- The national goal is to achieve and maintain an 85 per cent utilisation rate compared to around 50 per cent at present.

¹ From a letter by Hon Tony Ryall, Minister of Health, dated 12 August 2009 to Sarah White, research librarian in the Parliamentary Library.

² Annual figures for year ending June 2008, Ministry of Health Database.

medication,
groceries,
rising power
bills, petrol,
minimum wage,
child care...

I can't afford Dental Care



The Wellington (Capital and Coast) and Hutt Valley District Health Boards (DHBs) reported that, in 2006, 36 and 65 per cent respectively of adolescents had utilised their free treatment (combined average 50 per cent). The national average in 2005 was 54 per cent.

An unofficial estimate of the costs of free dental care for those up to 18 years of age puts the amount at \$120 million per annum.

Adults on low incomes

Work and Income (WINZ) may provide an emergency dental grant of \$300 for relief of pain to those adults holding a community services card. Relief-of-pain contracts are held by a few preferred providers; however this provision varies from DHB to DHB. Frequently, a part payment is required from the patient.

Work and Income may also issue a loan, which is to be repaid, to cover more advanced work.

It appears that WINZ staff receive little dental advice to make professional judgments in these matters.

Hospitals often hold contracts to provide adults with dental services to relieve pain. In addition, under public funding, their services include special-needs dentistry and general anaesthetic services for adults with facial swellings caused by dental health problems.

For the year ended June 2009, DHBs allocated \$36.6 million (ex GST) for the provision of dental care in a hospital setting, and \$6.6 million (ex GST) for the provision of emergency dental treatment for low-income adults, almost totally for teeth extractions and pain relief.

Accidents

Public funding is also available for dental services following major accidents through ACC. At the discretion of the dental provider the patient may have to make a part- payment.

Anecdotal evidence from within the SDS indicates that this part-charge has prevented some children from attending for treatment. This makes it likely that it has also been a deterrent for some adults accessing this care.

During the year ended June 2009 the ACC spent \$27.7 million on dental treatment.

Private Provision

In all other cases dental care is provided privately by dentists in private practice. People usually pay the full cost themselves or take out insurance to cover the costs involved.

B. STATE OF DENTAL HEALTH

Although the number of dental cavities has declined dramatically in the developed world over the last few decades, they have by no means disappeared. Experts believe that this reduction is due primarily to the use of fluoride rather than changes in the consumption of sugar.³

Modern dentistry

Modern dentistry has played a major role in the decline of tooth decay since dentists generally attempt to instil proper dental hygiene amongst their patients.

Dentistry itself has been developing rapidly during the past century, with greater specialisation, better dental care products, more complex procedures, better equipment and chair side technology and a differentiation of roles, including the introduction of hygienists and assistants.

³ Murdoch Children's Research Institute, *Maternal and child oral health-systematic review and analysis; a report for the New Zealand Ministry of Health*, September 2008, p. 5.

Unmet care

However, there is significant evidence suggesting that there is a large amount of unmet dental care in New Zealand. In the dental health survey of 1988 it was found to be as high as 33 per cent. The dental health survey results published in December 2010 show that this level has grown to 44 per cent.

It should also be noted that in many rural areas there are fewer dentists per 100,000 people than in urban areas. Often, those living in rural areas must travel long distances to see a dentist. This becomes more of a problem when specialist dentistry services are required such as periodontists and orthodontists.

Young children

A 2008 review of maternal and child oral health concluded that early cavities in children “appears to be an on-going and significant problem” for children in New Zealand.

Available data on disease experience suggest that:

- Maori and Pacific children are less likely to be cavity-free at 5 years;
- Maori and Pacific children experience more dental cavities at 5 years;
- Water fluoridation and area of residence have moderating effects on the relationship between ethnicity and cavities.⁴



The 2004 School Dental Service Review found that at age five, the start of primary school, there is often a significant dental decay problem, with some children requiring treatments in hospital with a general anaesthetic for extensive fillings and/ or extractions.

A worrying statistic is that 2,668 children under 5 years of age required dental procedures, including the removal of teeth under general or local anesthetic, at our public hospitals.⁵

4 Murdoch Children's Research Institute, Op. cit., p.27.

5 Annual figures for year ending June 2008, Ministry of Health Database.

C. PROBLEMS OF DENTAL CARE

To a large extent dental problems result from what we eat and drink. There are three major problems: dental cavities, gum disease and gum erosion. Dental cavities are caused by a chronic microbial disease related to lifestyle.

Our diet produces an ecological change in the micro-organisms living in the body which encourages the development of tooth decay. The sugar and refined carbohydrates we consume are the key culprits in this regard.

As soon as it enters the mouth, bacteria (*Streptococcus Mutans* or SM for short) in plaque, start metabolising sugar and producing acid. The acid not only causes decay itself, but it corrodes tooth enamel, allowing further decay to take place in the softer tissue beneath the enamel.

SM flourish in an acidic environment and have a sticky coat enabling them to stick to teeth; the more sugar we eat, the more SM builds up. Moreover, it makes the mouth less appealing to more benign species of bacteria.

Although eating less sugar reduces the amount of SM, it is the lesser frequency rather than the lesser amount of sugar that has a beneficial effect, because it is the frequency of sugar consumption that is highly correlated with decay.⁶

In general, drinks containing high amounts of sugar (including fruit juices, milk shakes, and fizzy drinks) are not only associated with an increased risk of cavities, but also with weight and obesity problems.



⁶ S. O'Connell, *Sugar: the grass that changed the world*, Virgin Books, London, 2004, p.150.

D. THE FUTURE THREE EPIDEMICS⁷

Obesity

In most countries, the rates of overweight and obese people have been increasing in recent decades. The Social Report 2009⁸, based upon samples from 2006 and 2007, found that of 4.3 million people in New Zealand in 2008, 1.13 million were overweight and that an age-standardised 25 per cent of the population were obese (having a Body Mass Index (BMI) of 30 or more, calculated as the weight in kilograms divided by the square of the length in metres).

People who are overweight and obese tend to have worse dental problems. This may involve the following:

- They have more dental cavities between their teeth than normal weight individuals.⁹
- The early childhood habit of snacking is associated with more cavities in the mid-teens.¹⁰
- Greater consumption of sugar-sweetened drinks is associated with weight gains and obesity and is a risk factor for dental caries.¹¹
- Gastro-oesophageal reflux disease is an important health problem associated with overweight and obesity. As the BMI increases, acid exposure increases and stomach acid is more than a million times the amount contained in the mouth.¹²
- Drinking a litre or more of carbonated soft drinks in a week has been found to be associated with increased erosion of the molar teeth i.e. it is likely to arise from a combination of dietary exposure and gastro-oesophageal reflux.¹³

7 Based upon a paper by Assistant Professor P.J. Dennison, Sydney University, 2010.

8 Ministry of Social Development, 2009.

9 Alm A, Fahraeus C, Wendt L.K., Koch G., Andersson-Gare B, Birkhed D, Body adiposity status in teenagers and snacking habits in early *Journal of Paediatric Dentistry*, 18:189-96, 2008 (Alm et al., 2008).

10 Alm et al, 2008

11 Malik V.S., Schulze M.B., Hu. F.B., Intake of sugar-sweetened beverages and weight gain: a systematic review, *American Journal of Clinical Nutrition*, 84: 274-88, 2006. childhood in relation to approximal caries at 15 years of age, *International*

12 Ayazi S., Lipham J.C., Hagen J.A., Tang A.L., Zehetner J., Leers J.M., Oezcelik A., Abate E., Banki F., DeMeester S.R., DeMeester T.R., Obesity and gastroesophageal reflux: quantifying the association between Body Mass Index, esophageal acid exposure, and lower esophageal sphincter status in a large series of patients with reflux symptoms, *Journal of Gastrointestinal Surgery*, 13:1440-1447, 2009.

13 Jensdottir T., Arnadottir I.B., Thorsdottir I., Bardow A., Gudmundsson K., Theodors A., Holbrook, W.P., Relationship between dental erosion, soft drink consumption, and gastroesophageal reflux among Icelanders, *Clinical Oral Investigations*, 8 (2):91-6, 2004.



- People with obstructive sleep apnea (the incidence of which is much higher for obese people) are 80 per cent more likely to report night-time grinding or bruxism of teeth.¹⁴

Diabetes

According to Diabetes New Zealand 2008 about 270,000 people suffer from diabetes Type 2, whilst about one third of cases go undiagnosed.¹⁵ This means it affects at least 6.2% of the population.

The incidence has been increasing rapidly, also amongst young people. In 2008 it was estimated that 500 young people aged 10-18 had Type 2 diabetes.

Type 2 diabetes tends to cause or worsen gum disease. Diabetes (both types) is one condition where oral infections may be life-threatening.¹⁶ It should be noted that obesity is a major cause of the increasing incidence of Diabetes Type 2.



¹⁴ Kohler M.J. Differences in the associations between obesity and obstructive sleep apnea among children and adolescents, *Journal of Clinical Sleep Medicine*, 5:506-511, 2009.

¹⁵ www. Diabetes.org.nz

¹⁶ Diabetes: Australian facts, 2008, pp.46-47.



The elderly with their own teeth

Because of improved dental care and dentists preferring to assist people to keep their natural teeth for as long as possible, the baby-boom generation (born 1946-1965) are likely to keep their own teeth longer. In many cases, however, these teeth tend to be heavily restored, meaning that many will get decay from tooth crowns and exposed tooth roots.

Clearly, this means that many elderly with their own teeth will need expensive dental treatments, in many cases beyond what they had to spend on dental services in their younger years.

Given that, from 2011 to 2030, the baby-boom generation will retire, the proportion needing dental care will rise rapidly. Since 75 per cent of superannuitants live on New Zealand Superannuation as their only source of income, the costs of dental care will be prohibitive for many.

For people in rest homes, problems with dental care arise in particular when they suffer dementia or Alzheimer's disease.

The New Zealand Dental Association is about to implement training programmes for rest home workers on how to better manage dental care in rest homes.

Summary

Combining the three trends (obesity, diabetes and dental deterioration), it seems clear that there will be a growing need for dental care, especially among people on low incomes and the elderly. For the elderly, dental care will often be complex and, therefore, costly.

This reinforces the urgency of preventing any further rise in the incidence of obesity and of ensuring that those who need dental care are able to get it. Bad teeth are likely to compromise the overall health of many people and add significant cost to an already stretched public health system.

E. PREVENTION IS BETTER THAN CURE

The prevention of dental problems takes many forms. Doctors may warn expectant mothers of the dangers of consuming sweets which will cause decay in the teeth of their babies, and mothers who attend Plunket may learn that they should not put sugar into milk, or let their babies drink fruit juice.

Youngsters who attend dental clinics will learn proper tooth-brushing techniques and the need for regular check-ups.

Dentists will have to continue to reinforce messages to their patients, such as damage caused by dental decay is irreversible.

Sensible eating and drinking habits are crucially important to prevent or slow dental decay. School-based cafeteria should be stocked with healthy food and drink.

Prevention will be aided by four new policies. They are:

1. Providing free dental services

Modern dentistry offers complex and much more specialist services than ever before. The counterpart of this is that costs have been rising.

If the full benefits of all these services are to be realised, costs should not be a barrier to treatment.

The advantage of making dental treatments available free of charge is that as many people as possible will have access to dental services, so that dental decay may be arrested or slowed. In addition, other health problems that may arise from a lack of dental care can be avoided and general health costs reduced.

Those who object to the provision of free dental care should realise that, as a society, we have allowed the use of refined sugar in food since the end of the Middle Ages. As individuals we have little opportunity to change this and since we are dealing with a food system that has been shaped over the centuries, it is incumbent upon the community to accept the costs.





The current Dental Agreement will be extended in stages to all New Zealanders. Those for whom the financial burden is highest will get priority (pregnant mothers, the age groups from 18 to 28 and the elderly over 65).

The cost of extending free dental care to all would be around \$1 billion a year at current prices. The funding could come from either a levy on income, similar to ACC levies, a reduction in the \$17.8 billion tax cuts given to the most affluent New Zealanders by the National-led government over 4 years (average of \$4.46 billion per year), a levy on sugary soft drinks (such as we have on tobacco or alcohol) because of their contribution to the forthcoming diabetes epidemic, or a mix of all of these possible sources of funds.

2. Bonding of dentists working in provincial and rural areas

To overcome the shortage of dentists in rural areas, a bonding scheme should be introduced, whereby graduating dentists and dental hygienists who are prepared to set up in designated rural areas (or join existing practices) will receive payments towards the repayment of their student loans after three years of service in the designated area, or as a direct payment if they do not have student loans. This is analogous to the VBS for medical, nursing and midwifery graduates.

3. Parliamentary Inquiry into the need or otherwise for fluoridation as a National Dental Health Strategy

Current policy in New Zealand is that local authorities decide whether or not drinking water should be fluoridated.

At present, children using fluoridated water have a lower rate of tooth decay than children whose water is not fluoridated.

This conclusion was reached after a study of the dental records of 3,000 children aged between 2 and 12 years. The severity of decay was 32 per cent higher in non-fluoridated supplies.¹⁷

In 2005, studies carried out in Auckland and Southland showed there was a significant difference in decay rates between children in fluoridated and non-fluoridated areas.

¹⁷ Kay Blundell, Dental survey backs fluoridated water, *DominionPost*, 3 June 2010, p.A10.

Fluoridation is cost-effective, even for populations as small as 800-900 for which the costs of fluoridation equal the amount of dental costs saved. An uneven application of fluoridation results in worsening dental health.

It is proposed, therefore, that the issue of fluoridation as a preventative measure in dental healthcare should be a national rather than local issue. A full debate should take place as part of a Parliamentary Inquiry about the issue.

There will be those who object to this policy proposal on the grounds that they should not be forced to consume chemicals that they regard as dangerous to them. This concern, however, occurs in many areas of modern life, immunisations, for example.

By making fluoridation a national health issue, central government will also bear responsibility for fluoride being applied in the right amounts and to an appropriate quality.

A special team would need to be set up in the Ministry of Health charged with making arrangements for issuing standards for fluoridation, compliance, monitoring, enforcement and legal proceedings, if required processes are not followed.

4. Publicity

To make the policy of free dental care as effective as possible, government should regularly advertise across all media to show the importance of regular dental care. In addition, doctors, Plunket rooms and schools should be provided with educational materials to encourage proper dental hygiene.

In addition, a study should be undertaken of the cost/benefit of introducing an excise tax on refined sugar.

F. THE COSTS OF UNIVERSAL FREE DENTAL CARE

Costs of dental care for those over 18 years old

The cost of current free dental care to those under 18 has been estimated to be \$120 million in the current year.

The estimated cost of introducing free dental health care to those over 18 years of age, based on 2002-03 data, will be \$542 million, bringing the total cost of universal free dental care to an estimated \$670 million (estimate Parliamentary Library).

This might be an under-estimation if costs have risen because of factors other than inflation, such as new or more expensive treatment procedures and equipment. Using OECD data, the additional cost of extending free dental health care to all could be as high as between \$800 million and \$1 billion.



G. FINANCING THE PROPOSED POLICY

Accepting that the cost of extending free dental care to all could be around \$1 billion a year at current prices, the required funding could come from a levy on income, similar to ACC levies, a reduction in the \$17.8 billion tax cuts given to the most affluent New Zealanders by the National-led government over 4 years (average of \$4.4 billion per year), a levy on sugary soft drinks (such as we have on tobacco or alcohol) because of their contribution to the forthcoming diabetes epidemic, or a mix of all of these possible sources of funds.

The extension of the Volunteer Bonding Scheme (VBS) to dentists and dental hygienists will also require funds. In the absence of details about shortages of such professionals in rural areas and provincial centres with serious shortages that cannot, at this time, be costed.

However, the current Voluntary Bonding Scheme costing around \$7.5 million p.a. for over 500 doctors, midwives and nurses, indicates that such a scheme for improved dental services, should be able to be accommodated within the \$800 - \$1000 million estimated to obtain a free dental health service.

The current Dental Agreement will continue to apply, but will be amended to cover the incremental extension to other groups. There will need to be an agreed fee structure.

The introduction of State funding should make private insurance cover redundant. This should be reflected in a reduction in premiums charged by insurers for general health insurance if this includes cover for dental care.

Dentists will remain in charge of their own practices and professional procedures. They will not become Government employees.

Negotiations with the dental profession will be conducted to agree on an administrative system which would be required, over time, to introduce the free dental system.

I can't afford
Dental Care



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